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

DATA PACKAGE

METALS

PROJECT NAME : NJ SOIL PT

ALLIANCE TECHNICAL GROUP, LLC - NEWARK

284 Sheffiled Stree

Suite 1

Mountainside, NJ - 07092

Phone No: 908-789-8900

ORDER ID : Q1872

ATTENTION : Mohammad Ahmed

Laboratory Certification ID # 20012

Table Of Contents for Q1872

1) METALS DATA 2
2) Signature Page 4
3) Case Narrative 5
4) Qualifier Page 7
5) Conformance/Non Conformance 8
6) QA Checklist 9
7) Chronicle 10
8) Hit Summary 11
9) Sample Data 12
    9.1) HW0425-PT-MET-SOIL 13
10) METALS CALIBRATION DATA 14
    10.1) Initial and Continuing Calibration Verification 15
    10.2) CRDL Standard For AA & ICP 24
    10.3) Initial and Continuing Calibration Blank Summary 25
    10.4) Preparation Blank Summary 33
    10.5) Interference Check Sample 35
11) METALS QC DATA 37
    11.1) Matrix Spike Summary 38
    11.2) Post Digest Spike Summary 40
    11.3) Duplicate Sample Summary 41
    11.4) Laboratory Control Sample Summary 43
    11.5) ICP Serial Dilutions 45
12) METALS PREPARATION & INSTRUMENT DATA 46
    12.1) ICP Interelement Correction Factors 47
13) PREPARATION & ANALYTICAL SUMMARY 52
    13.1) Sample Preparation Summary 53
    13.2) Analysis Run Log 55
14) METALS RAW DATA 57
    14.1) METALS RAW DATA - ANALYTICAL 58
    14.2) LB135969 58
    14.3) LB135943 220
    14.4) METALS RAW DATA - PREP 222
        14.4.1) PB167748 222
        14.4.2) PB168173 225
15) Percent Solid 228

Table Of Contents for Q1872

16) Analytical Runlogs 238

17) Standard Prep Logs 244

18) Shipping Document 417

18.1) Chain Of Custody 418

18.2) Lab Certificate 420

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Cover Page

Order ID : Q1872

Project ID : NJ Soil PT

Client : Alliance Technical Group, LLC - Newark

Lab Sample Number	Client Sample Number
Q1872-01	HW0425-PT-AN-SOIL
Q1872-02	HW0425-PT-CORR-SOIL
Q1872-03	HW0425-PT-CN-SOIL
Q1872-04	HW0425-PT-CN-SOIL
Q1872-05	HW0425-PT-FP-SOIL
Q1872-06	HW0425-PT-CR6-SOIL
Q1872-07	HW0425-PT-NUT-SOIL
Q1872-08	HW0425-PT-NUT-SOIL
Q1872-09	HW0425-PT-OGR-SOIL
Q1872-10	HW0425-PT-MET-SOIL
Q1872-11	HW0425-PT-BNA-SOIL
Q1872-12	HW0425-PT-TRIAZINE-SOIL
Q1872-13	HW0425-PT-PAH-SOIL
Q1872-14	HW0425-PT-DIES-SOIL
Q1872-15	HW0425-PT-GAS-SOIL
Q1872-16	HW0425-PT-NJEPH-SOIL
Q1872-17	HW0425-PT-HERB-SOIL
Q1872-18	HW0425-PT-PCB-SOIL
Q1872-19	HW0425-PT-PCBO-SOIL
Q1872-20	HW0425-PT-PEST-SOIL
Q1872-21	HW0425-PT-CHLR-SOIL
Q1872-22	HW0425-PT-TXP-SOIL
Q1872-23	HW0425-PT-VOA-SOIL
Q1872-24	HW0425-PT-SOL-SOIL
Q1872-25	HW0425-PT-NO2-SOIL

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 10:02 am, Jul 23, 2025

Date: 6/26/2025

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

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

CASE NARRATIVE

Alliance Technical Group, LLC - Newark
Project Name: NJ Soil PT
Project # N/A
Order ID # Q1872
Test Name: Mercury,Metals ICP-Group1

A. Number of Samples and Date of Receipt:
24 Solid samples were received on 04/24/2025.
1 Solid sample was received on 04/28/2025.

B. Parameters:
According to the Chain of Custody document, the following analyses were requested: Ammonia, Anions Group1, Anions Group2, Corrosivity, Cyanide, Diesel Range Organics, EPH, Flash Point, Gasoline Range Organics, Herbicide Group1, Hexavalent Chromium, Mercury, Metals Group3, Metals ICP-Group1, Oil and Grease, PCB, PESTICIDE Group1, PESTICIDE Group2, PESTICIDE Group3, Phosphorus, Total, SVOCMS Group1, SVOCMS Group2, SVOCMS Group3, SVOCMS Group4, SVOCMS Group5, TKN, TOC, TS and VOCMS Group1. This data package contains results for Mercury,Metals ICP-Group1.

C. Analytical Techniques:
The analysis of Metals ICP-Group1 was based on method 6010D, digestion based on method 3050 (soils). The analysis and digestion of Mercury was based on method 7471B.

D. QA/ QC Samples:

The Holding Times were met for all analysis.
Sample HW0425-PT-MET-SOIL was diluted due to high concentrations for Mercury and Cadmium.
The Blank Spike met requirements for all parameters.
The Duplicate analysis met criteria for all parameters.
The Matrix Spike analysis met criteria for all parameters.
The Matrix Spike Duplicate analysis met criteria for all parameters.
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:

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 10:03 am, Jul 23, 2025

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

DATA REPORTING QUALIFIERS- INORGANIC

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

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

METALS CONFORMANCE/NON-CONFORMANCE SUMMARY

ORDER ID: Q1872 MATRIX: Solid

METHOD: 6010D,7471B

		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. The Holding Times were met for all analysis.			

ADDITIONAL COMMENTS:

QA REVIEW

REVIEWED
By Sohil Jodhani, QA/QC Director at 8:42 am, Jul 23, 2025

Date

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

APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: Q1872

	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:** 06/26/2025

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

LAB CHRONICLE

OrderID:	Q1872	**OrderDate:**	4/24/2025 1:26:50 PM
Client:	Alliance Technical Group, LLC - Newark	**Project:**	NJ Soil PT
Contact:	Mohammad Ahmed	**Location:**	QA Office,VOA Lab

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q1872-10	**HW0425-PT-MET-SOIL**	**SOIL**			**04/21/25**			**04/24/25**
			Mercury	7471B		05/28/25	05/29/25	
			Metals ICP-Group1	6010D		04/25/25	05/30/25	

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Hit Summary Sheet
SW-846

SDG No.: Q1872 **Order ID:** Q1872

Client: Alliance Technical Group, LLC - Newark **Project ID:** NJ Soil PT

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Client ID :	**HW0425-PT-MET-SOIL**							
Q1872-10	HW0425-PT-MET-SOIL	SOIL	Aluminum	12000		0.73	4.35	mg/Kg
Q1872-10	HW0425-PT-MET-SOIL	SOIL	Antimony	74.9		0.19	2.17	mg/Kg
Q1872-10	HW0425-PT-MET-SOIL	SOIL	Arsenic	153		0.17	0.87	mg/Kg
Q1872-10	HW0425-PT-MET-SOIL	SOIL	Barium	618		0.64	4.35	mg/Kg
Q1872-10	HW0425-PT-MET-SOIL	SOIL	Beryllium	120		0.022	0.26	mg/Kg
Q1872-10	HW0425-PT-MET-SOIL	SOIL	Boron	63.2		0.70	4.35	mg/Kg
Q1872-10	HW0425-PT-MET-SOIL	SOIL	Cadmium	263	D	0.10	1.30	mg/Kg
Q1872-10	HW0425-PT-MET-SOIL	SOIL	Calcium	14700		9.65	87.0	mg/Kg
Q1872-10	HW0425-PT-MET-SOIL	SOIL	Chromium	178		0.041	0.44	mg/Kg
Q1872-10	HW0425-PT-MET-SOIL	SOIL	Cobalt	82.9		0.087	1.30	mg/Kg
Q1872-10	HW0425-PT-MET-SOIL	SOIL	Copper	257		0.19	0.87	mg/Kg
Q1872-10	HW0425-PT-MET-SOIL	SOIL	Iron	10400		3.47	4.35	mg/Kg
Q1872-10	HW0425-PT-MET-SOIL	SOIL	Lead	113		0.11	0.52	mg/Kg
Q1872-10	HW0425-PT-MET-SOIL	SOIL	Magnesium	15400		10.4	87.0	mg/Kg
Q1872-10	HW0425-PT-MET-SOIL	SOIL	Manganese	929		0.12	0.87	mg/Kg
Q1872-10	HW0425-PT-MET-SOIL	SOIL	Mercury	22.3	D	0.38	0.67	mg/Kg
Q1872-10	HW0425-PT-MET-SOIL	SOIL	Molybdenum	26.3		0.70	8.70	mg/Kg
Q1872-10	HW0425-PT-MET-SOIL	SOIL	Nickel	230		0.11	1.74	mg/Kg
Q1872-10	HW0425-PT-MET-SOIL	SOIL	Potassium	10200		24.1	87.0	mg/Kg
Q1872-10	HW0425-PT-MET-SOIL	SOIL	Selenium	127		0.23	0.87	mg/Kg
Q1872-10	HW0425-PT-MET-SOIL	SOIL	Silver	22.6		0.10	0.44	mg/Kg
Q1872-10	HW0425-PT-MET-SOIL	SOIL	Sodium	2030		15.5	87.0	mg/Kg
Q1872-10	HW0425-PT-MET-SOIL	SOIL	Strontium	222		0.22	8.70	mg/Kg
Q1872-10	HW0425-PT-MET-SOIL	SOIL	Lithium	335		0.033	0.87	mg/Kg
Q1872-10	HW0425-PT-MET-SOIL	SOIL	Thallium	242		0.20	1.74	mg/Kg
Q1872-10	HW0425-PT-MET-SOIL	SOIL	Tin	100		0.23	1.74	mg/Kg
Q1872-10	HW0425-PT-MET-SOIL	SOIL	Titanium	370		0.27	1.74	mg/Kg
Q1872-10	HW0425-PT-MET-SOIL	SOIL	Vanadium	91.3		0.22	1.74	mg/Kg
Q1872-10	HW0425-PT-MET-SOIL	SOIL	Zinc	344		0.20	1.74	mg/Kg

SAMPLE DATA

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

Report of Analysis

Client:	Alliance Technical Group, LLC - Newark	Date Collected:	04/21/25
Project:	NJ Soil PT	Date Received:	04/24/25
Client Sample ID:	HW0425-PT-MET-SOIL	SDG No.:	Q1872
Lab Sample ID:	Q1872-10	Matrix:	SOIL
Level (low/med):	low	% Solid:	100

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.	Prep Met.
7429-90-5	Aluminum	12000		1	0.73	4.35	mg/Kg	04/25/25 10:00	05/30/25 18:37	6010D	SW3050
7440-36-0	Antimony	74.9		1	0.19	2.17	mg/Kg	04/25/25 10:00	05/30/25 18:37	6010D	SW3050
7440-38-2	Arsenic	153		1	0.17	0.87	mg/Kg	04/25/25 10:00	05/30/25 18:37	6010D	SW3050
7440-39-3	Barium	618		1	0.64	4.35	mg/Kg	04/25/25 10:00	05/30/25 18:37	6010D	SW3050
7440-41-7	Beryllium	120		1	0.022	0.26	mg/Kg	04/25/25 10:00	05/30/25 18:37	6010D	SW3050
7440-42-8	Boron	63.2		1	0.70	4.35	mg/Kg	04/25/25 10:00	05/30/25 18:37	6010D	SW3050
7440-43-9	Cadmium	263	D	5	0.10	1.30	mg/Kg	04/25/25 10:00	05/30/25 18:46	6010D	SW3050
7440-70-2	Calcium	14700		1	9.65	87.0	mg/Kg	04/25/25 10:00	05/30/25 18:37	6010D	SW3050
7440-47-3	Chromium	178		1	0.041	0.44	mg/Kg	04/25/25 10:00	05/30/25 18:37	6010D	SW3050
7440-48-4	Cobalt	82.9		1	0.087	1.30	mg/Kg	04/25/25 10:00	05/30/25 18:37	6010D	SW3050
7440-50-8	Copper	257		1	0.19	0.87	mg/Kg	04/25/25 10:00	05/30/25 18:37	6010D	SW3050
7439-89-6	Iron	10400		1	3.47	4.35	mg/Kg	04/25/25 10:00	05/30/25 18:37	6010D	SW3050
7439-92-1	Lead	113		1	0.11	0.52	mg/Kg	04/25/25 10:00	05/30/25 18:37	6010D	SW3050
7439-93-2	Lithium	335		1	0.033	0.87	mg/Kg	04/25/25 10:00	05/30/25 18:37	6010D	SW3050
7439-95-4	Magnesium	15400		1	10.4	87.0	mg/Kg	04/25/25 10:00	05/30/25 18:37	6010D	SW3050
7439-96-5	Manganese	929		1	0.12	0.87	mg/Kg	04/25/25 10:00	05/30/25 18:37	6010D	SW3050
7439-97-6	Mercury	22.3	D	50	0.38	0.67	mg/Kg	05/28/25 16:40	05/29/25 13:08	7471B	
7439-98-7	Molybdenum	26.3		1	0.70	8.70	mg/Kg	04/25/25 10:00	05/30/25 18:37	6010D	SW3050
7440-02-0	Nickel	230		1	0.11	1.74	mg/Kg	04/25/25 10:00	05/30/25 18:37	6010D	SW3050
7440-09-7	Potassium	10200		1	24.1	87.0	mg/Kg	04/25/25 10:00	05/30/25 18:37	6010D	SW3050
7782-49-2	Selenium	127		1	0.23	0.87	mg/Kg	04/25/25 10:00	05/30/25 18:37	6010D	SW3050
7440-22-4	Silver	22.6		1	0.10	0.44	mg/Kg	04/25/25 10:00	05/30/25 18:37	6010D	SW3050
7440-23-5	Sodium	2030		1	15.5	87.0	mg/Kg	04/25/25 10:00	05/30/25 18:37	6010D	SW3050
7440-24-6	Strontium	222		1	0.22	8.70	mg/Kg	04/25/25 10:00	05/30/25 18:37	6010D	SW3050
7440-28-0	Thallium	242		1	0.20	1.74	mg/Kg	04/25/25 10:00	05/30/25 18:37	6010D	SW3050
7440-31-5	Tin	100		1	0.23	1.74	mg/Kg	04/25/25 10:00	05/30/25 18:37	6010D	SW3050
7440-32-6	Titanium	370		1	0.27	1.74	mg/Kg	04/25/25 10:00	05/30/25 18:37	6010D	SW3050
7440-62-2	Vanadium	91.3		1	0.22	1.74	mg/Kg	04/25/25 10:00	05/30/25 18:37	6010D	SW3050
7440-66-6	Zinc	344		1	0.20	1.74	mg/Kg	04/25/25 10:00	05/30/25 18:37	6010D	SW3050

Color Before:	Light brown	Clarity Before:		Texture:	Fine
Color After:	Medium Yellow	Clarity After:		Artifacts:	No
Comments:	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

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

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Alliance Technical Group, LLC - Newark **SDG No.:** Q1872

Contract: ALLI03 **Lab Code:** CHEM **Case No.:** Q1872 **SAS No.:** Q1872

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
ICV21	Mercury	3.84	4.0	96	90 - 110	CV	05/29/2025	11:18	LB135943

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Alliance Technical Group, LLC - Newark **SDG No.:** Q1872

Contract: ALLI03 **Lab Code:** CHEM **Case No.:** Q1872 **SAS No.:** Q1872

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
CCV76	Mercury	4.83	5.0	97	90 - 110	CV	05/29/2025	11:22	LB135943
CCV77	Mercury	5.09	5.0	102	90 - 110	CV	05/29/2025	12:25	LB135943
CCV78	Mercury	5.16	5.0	103	90 - 110	CV	05/29/2025	13:01	LB135943
CCV79	Mercury	5.26	5.0	105	90 - 110	CV	05/29/2025	13:19	LB135943

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

Metals

- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Alliance Technical Group, LLC - Newark **SDG No.:** Q1872

Contract: ALLI03 **Lab Code:** CHEM **Case No.:** Q1872 **SAS No.:** Q1872

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
ICV01	Aluminum	2450	2500	98	90 - 110	P	05/30/2025	15:13	LB135969
	Antimony	1020	1000	102	90 - 110	P	05/30/2025	15:13	LB135969
	Arsenic	1030	1000	103	90 - 110	P	05/30/2025	15:13	LB135969
	Barium	490	520	94	90 - 110	P	05/30/2025	15:13	LB135969
	Beryllium	495	510	97	90 - 110	P	05/30/2025	15:13	LB135969
	Boron	2290	2500	92	90 - 110	P	05/30/2025	15:13	LB135969
	Cadmium	518	510	102	90 - 110	P	05/30/2025	15:13	LB135969
	Calcium	9850	10000	98	90 - 110	P	05/30/2025	15:13	LB135969
	Chromium	539	520	104	90 - 110	P	05/30/2025	15:13	LB135969
	Cobalt	520	520	100	90 - 110	P	05/30/2025	15:13	LB135969
	Copper	535	510	105	90 - 110	P	05/30/2025	15:13	LB135969
	Iron	10500	10000	105	90 - 110	P	05/30/2025	15:13	LB135969
	Lead	1010	1000	101	90 - 110	P	05/30/2025	15:13	LB135969
	Lithium	2460	2500	98	90 - 110	P	05/30/2025	15:13	LB135969
	Magnesium	5760	6000	96	90 - 110	P	05/30/2025	15:13	LB135969
	Manganese	504	520	97	90 - 110	P	05/30/2025	15:13	LB135969
	Molybdenum	2520	2500	101	90 - 110	P	05/30/2025	15:13	LB135969
	Nickel	524	530	99	90 - 110	P	05/30/2025	15:13	LB135969
	Potassium	10100	9900	102	90 - 110	P	05/30/2025	15:13	LB135969
	Selenium	1080	1000	108	90 - 110	P	05/30/2025	15:13	LB135969
	Silver	259	250	104	90 - 110	P	05/30/2025	15:13	LB135969
	Sodium	9750	10000	98	90 - 110	P	05/30/2025	15:13	LB135969
	Strontium	2390	2500	95	90 - 110	P	05/30/2025	15:13	LB135969
	Thallium	1090	1000	109	90 - 110	P	05/30/2025	15:13	LB135969
	Tin	2460	2500	98	90 - 110	P	05/30/2025	15:13	LB135969
	Titanium	2340	2500	94	90 - 110	P	05/30/2025	15:13	LB135969
	Vanadium	484	500	97	90 - 110	P	05/30/2025	15:13	LB135969
	Zinc	1000	1000	100	90 - 110	P	05/30/2025	15:13	LB135969

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Metals

- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Alliance Technical Group, LLC - Newark **SDG No.:** Q1872

Contract: ALLI03 **Lab Code:** CHEM **Case No.:** Q1872 **SAS No.:** Q1872

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
LLICV01	Aluminum	98.2	100	98	80 - 120	P	05/30/2025	15:21	LB135969
	Antimony	50.0	50.0	100	80 - 120	P	05/30/2025	15:21	LB135969
	Arsenic	20.5	20.0	102	80 - 120	P	05/30/2025	15:21	LB135969
	Barium	91.3	100	91	80 - 120	P	05/30/2025	15:21	LB135969
	Beryllium	5.89	6.0	98	80 - 120	P	05/30/2025	15:21	LB135969
	Boron	97.3	100	97	80 - 120	P	05/30/2025	15:21	LB135969
	Cadmium	6.08	6.0	101	80 - 120	P	05/30/2025	15:21	LB135969
	Calcium	1910	2000	95	80 - 120	P	05/30/2025	15:21	LB135969
	Chromium	10.2	10.0	102	80 - 120	P	05/30/2025	15:21	LB135969
	Cobalt	29.3	30.0	98	80 - 120	P	05/30/2025	15:21	LB135969
	Copper	21.5	20.0	107	80 - 120	P	05/30/2025	15:21	LB135969
	Iron	104	100	104	80 - 120	P	05/30/2025	15:21	LB135969
	Lead	11.3	12.0	94	80 - 120	P	05/30/2025	15:21	LB135969
	Lithium	21.2	20.0	106	80 - 120	P	05/30/2025	15:21	LB135969
	Magnesium	1920	2000	96	80 - 120	P	05/30/2025	15:21	LB135969
	Manganese	19.9	20.0	100	80 - 120	P	05/30/2025	15:21	LB135969
	Molybdenum	190	200	95	80 - 120	P	05/30/2025	15:21	LB135969
	Nickel	40.0	40.0	100	80 - 120	P	05/30/2025	15:21	LB135969
	Potassium	1920	2000	96	80 - 120	P	05/30/2025	15:21	LB135969
	Selenium	21.2	20.0	106	80 - 120	P	05/30/2025	15:21	LB135969
	Silver	10.1	10.0	101	80 - 120	P	05/30/2025	15:21	LB135969
	Sodium	1830	2000	92	80 - 120	P	05/30/2025	15:21	LB135969
	Strontium	19.9	20.0	99	80 - 120	P	05/30/2025	15:21	LB135969
	Thallium	33.2	40.0	83	80 - 120	P	05/30/2025	15:21	LB135969
	Tin	36.4	40.0	91	80 - 120	P	05/30/2025	15:21	LB135969
	Titanium	36.8	40.0	92	80 - 120	P	05/30/2025	15:21	LB135969
	Vanadium	36.9	40.0	92	80 - 120	P	05/30/2025	15:21	LB135969
	Zinc	40.5	40.0	101	80 - 120	P	05/30/2025	15:21	LB135969

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Alliance Technical Group, LLC - Newark **SDG No.:** Q1872

Contract: ALLI03 **Lab Code:** CHEM **Case No.:** Q1872 **SAS No.:** Q1872

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV01	Aluminum	9760	10000	98	90 - 110	P	05/30/2025	16:02	LB135969
	Antimony	5090	5000	102	90 - 110	P	05/30/2025	16:02	LB135969
	Arsenic	5110	5000	102	90 - 110	P	05/30/2025	16:02	LB135969
	Barium	9890	10000	99	90 - 110	P	05/30/2025	16:02	LB135969
	Beryllium	235	250	94	90 - 110	P	05/30/2025	16:02	LB135969
	Boron	4640	5000	93	90 - 110	P	05/30/2025	16:02	LB135969
	Cadmium	2500	2500	100	90 - 110	P	05/30/2025	16:02	LB135969
	Calcium	24400	25000	98	90 - 110	P	05/30/2025	16:02	LB135969
	Chromium	1020	1000	102	90 - 110	P	05/30/2025	16:02	LB135969
	Cobalt	2500	2500	100	90 - 110	P	05/30/2025	16:02	LB135969
	Copper	1280	1250	102	90 - 110	P	05/30/2025	16:02	LB135969
	Iron	5420	5000	108	90 - 110	P	05/30/2025	16:02	LB135969
	Lead	5010	5000	100	90 - 110	P	05/30/2025	16:02	LB135969
	Lithium	4790	5000	96	90 - 110	P	05/30/2025	16:02	LB135969
	Magnesium	24100	25000	96	90 - 110	P	05/30/2025	16:02	LB135969
	Manganese	2430	2500	97	90 - 110	P	05/30/2025	16:02	LB135969
	Molybdenum	5090	5000	102	90 - 110	P	05/30/2025	16:02	LB135969
	Nickel	2510	2500	100	90 - 110	P	05/30/2025	16:02	LB135969
	Potassium	27000	25000	108	90 - 110	P	05/30/2025	16:02	LB135969
	Selenium	5160	5000	103	90 - 110	P	05/30/2025	16:02	LB135969
	Silver	1280	1250	102	90 - 110	P	05/30/2025	16:02	LB135969
	Sodium	26700	25000	107	90 - 110	P	05/30/2025	16:02	LB135969
	Strontium	4970	5000	99	90 - 110	P	05/30/2025	16:02	LB135969
	Thallium	5190	5000	104	90 - 110	P	05/30/2025	16:02	LB135969
	Tin	5040	5000	101	90 - 110	P	05/30/2025	16:02	LB135969
	Titanium	4880	5000	98	90 - 110	P	05/30/2025	16:02	LB135969
	Vanadium	2460	2500	98	90 - 110	P	05/30/2025	16:02	LB135969
	Zinc	2680	2500	107	90 - 110	P	05/30/2025	16:02	LB135969
CCV02	Aluminum	10000	10000	100	90 - 110	P	05/30/2025	16:52	LB135969
	Antimony	5130	5000	103	90 - 110	P	05/30/2025	16:52	LB135969
	Arsenic	5140	5000	103	90 - 110	P	05/30/2025	16:52	LB135969
	Barium	9860	10000	99	90 - 110	P	05/30/2025	16:52	LB135969
	Beryllium	249	250	100	90 - 110	P	05/30/2025	16:52	LB135969
	Boron	4900	5000	98	90 - 110	P	05/30/2025	16:52	LB135969

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Alliance Technical Group, LLC - Newark **SDG No.:** Q1872

Contract: ALLI03 **Lab Code:** CHEM **Case No.:** Q1872 **SAS No.:** Q1872

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV02	Cadmium	2510	2500	100	90 - 110	P	05/30/2025	16:52	LB135969
	Calcium	24600	25000	99	90 - 110	P	05/30/2025	16:52	LB135969
	Chromium	1020	1000	102	90 - 110	P	05/30/2025	16:52	LB135969
	Cobalt	2510	2500	100	90 - 110	P	05/30/2025	16:52	LB135969
	Copper	1290	1250	103	90 - 110	P	05/30/2025	16:52	LB135969
	Iron	5250	5000	105	90 - 110	P	05/30/2025	16:52	LB135969
	Lead	5030	5000	101	90 - 110	P	05/30/2025	16:52	LB135969
	Lithium	4950	5000	99	90 - 110	P	05/30/2025	16:52	LB135969
	Magnesium	24500	25000	98	90 - 110	P	05/30/2025	16:52	LB135969
	Manganese	2450	2500	98	90 - 110	P	05/30/2025	16:52	LB135969
	Molybdenum	5120	5000	102	90 - 110	P	05/30/2025	16:52	LB135969
	Nickel	2510	2500	100	90 - 110	P	05/30/2025	16:52	LB135969
	Potassium	26400	25000	106	90 - 110	P	05/30/2025	16:52	LB135969
	Selenium	5210	5000	104	90 - 110	P	05/30/2025	16:52	LB135969
	Silver	1290	1250	103	90 - 110	P	05/30/2025	16:52	LB135969
	Sodium	26000	25000	104	90 - 110	P	05/30/2025	16:52	LB135969
	Strontium	4990	5000	100	90 - 110	P	05/30/2025	16:52	LB135969
	Thallium	5160	5000	103	90 - 110	P	05/30/2025	16:52	LB135969
	Tin	5050	5000	101	90 - 110	P	05/30/2025	16:52	LB135969
	Titanium	4920	5000	98	90 - 110	P	05/30/2025	16:52	LB135969
	Vanadium	2490	2500	100	90 - 110	P	05/30/2025	16:52	LB135969
	Zinc	2610	2500	104	90 - 110	P	05/30/2025	16:52	LB135969
CCV03	Aluminum	10200	10000	102	90 - 110	P	05/30/2025	17:41	LB135969
	Antimony	5110	5000	102	90 - 110	P	05/30/2025	17:41	LB135969
	Arsenic	5080	5000	102	90 - 110	P	05/30/2025	17:41	LB135969
	Barium	9790	10000	98	90 - 110	P	05/30/2025	17:41	LB135969
	Beryllium	272	250	109	90 - 110	P	05/30/2025	17:41	LB135969
	Boron	5390	5000	108	90 - 110	P	05/30/2025	17:41	LB135969
	Cadmium	2510	2500	100	90 - 110	P	05/30/2025	17:41	LB135969
	Calcium	25300	25000	101	90 - 110	P	05/30/2025	17:41	LB135969
	Chromium	1030	1000	103	90 - 110	P	05/30/2025	17:41	LB135969
	Cobalt	2510	2500	100	90 - 110	P	05/30/2025	17:41	LB135969
	Copper	1280	1250	102	90 - 110	P	05/30/2025	17:41	LB135969
	Iron	4910	5000	98	90 - 110	P	05/30/2025	17:41	LB135969

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Metals

- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Alliance Technical Group, LLC - Newark **SDG No.:** Q1872

Contract: ALLI03 **Lab Code:** CHEM **Case No.:** Q1872 **SAS No.:** Q1872

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
CCV03	Lead	5020	5000	100	90 - 110	P	05/30/2025	17:41	LB135969
	Lithium	5120	5000	102	90 - 110	P	05/30/2025	17:41	LB135969
	Magnesium	25600	25000	102	90 - 110	P	05/30/2025	17:41	LB135969
	Manganese	2510	2500	101	90 - 110	P	05/30/2025	17:41	LB135969
	Molybdenum	5140	5000	103	90 - 110	P	05/30/2025	17:41	LB135969
	Nickel	2510	2500	100	90 - 110	P	05/30/2025	17:41	LB135969
	Potassium	24200	25000	97	90 - 110	P	05/30/2025	17:41	LB135969
	Selenium	5130	5000	102	90 - 110	P	05/30/2025	17:41	LB135969
	Silver	1290	1250	103	90 - 110	P	05/30/2025	17:41	LB135969
	Sodium	24100	25000	96	90 - 110	P	05/30/2025	17:41	LB135969
	Strontium	4960	5000	99	90 - 110	P	05/30/2025	17:41	LB135969
	Thallium	4980	5000	100	90 - 110	P	05/30/2025	17:41	LB135969
	Tin	5020	5000	100	90 - 110	P	05/30/2025	17:41	LB135969
	Titanium	5000	5000	100	90 - 110	P	05/30/2025	17:41	LB135969
	Vanadium	2530	2500	101	90 - 110	P	05/30/2025	17:41	LB135969
	Zinc	2510	2500	100	90 - 110	P	05/30/2025	17:41	LB135969
CCV04	Aluminum	9760	10000	98	90 - 110	P	05/30/2025	18:28	LB135969
	Antimony	5120	5000	102	90 - 110	P	05/30/2025	18:28	LB135969
	Arsenic	5120	5000	102	90 - 110	P	05/30/2025	18:28	LB135969
	Barium	9930	10000	99	90 - 110	P	05/30/2025	18:28	LB135969
	Beryllium	239	250	95	90 - 110	P	05/30/2025	18:28	LB135969
	Boron	4730	5000	95	90 - 110	P	05/30/2025	18:28	LB135969
	Cadmium	2490	2500	100	90 - 110	P	05/30/2025	18:28	LB135969
	Calcium	24300	25000	97	90 - 110	P	05/30/2025	18:28	LB135969
	Chromium	1010	1000	102	90 - 110	P	05/30/2025	18:28	LB135969
	Cobalt	2490	2500	100	90 - 110	P	05/30/2025	18:28	LB135969
	Copper	1280	1250	102	90 - 110	P	05/30/2025	18:28	LB135969
	Iron	5320	5000	106	90 - 110	P	05/30/2025	18:28	LB135969
	Lead	4980	5000	100	90 - 110	P	05/30/2025	18:28	LB135969
	Lithium	4850	5000	97	90 - 110	P	05/30/2025	18:28	LB135969
	Magnesium	24000	25000	96	90 - 110	P	05/30/2025	18:28	LB135969
	Manganese	2430	2500	97	90 - 110	P	05/30/2025	18:28	LB135969
	Molybdenum	5100	5000	102	90 - 110	P	05/30/2025	18:28	LB135969
	Nickel	2490	2500	100	90 - 110	P	05/30/2025	18:28	LB135969

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Metals

- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Alliance Technical Group, LLC - Newark **SDG No.:** Q1872

Contract: ALLI03 **Lab Code:** CHEM **Case No.:** Q1872 **SAS No.:** Q1872

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV04	Potassium	26200	25000	105	90 - 110	P	05/30/2025	18:28	LB135969
	Selenium	5200	5000	104	90 - 110	P	05/30/2025	18:28	LB135969
	Silver	1280	1250	102	90 - 110	P	05/30/2025	18:28	LB135969
	Sodium	26400	25000	106	90 - 110	P	05/30/2025	18:28	LB135969
	Strontium	4970	5000	99	90 - 110	P	05/30/2025	18:28	LB135969
	Thallium	5110	5000	102	90 - 110	P	05/30/2025	18:28	LB135969
	Tin	5000	5000	100	90 - 110	P	05/30/2025	18:28	LB135969
	Titanium	4880	5000	98	90 - 110	P	05/30/2025	18:28	LB135969
	Vanadium	2460	2500	98	90 - 110	P	05/30/2025	18:28	LB135969
	Zinc	2510	2500	100	90 - 110	P	05/30/2025	18:28	LB135969
CCV05	Aluminum	10000	10000	100	90 - 110	P	05/30/2025	18:58	LB135969
	Antimony	5080	5000	102	90 - 110	P	05/30/2025	18:58	LB135969
	Arsenic	5070	5000	101	90 - 110	P	05/30/2025	18:58	LB135969
	Barium	9520	10000	95	90 - 110	P	05/30/2025	18:58	LB135969
	Beryllium	266	250	106	90 - 110	P	05/30/2025	18:58	LB135969
	Boron	5280	5000	106	90 - 110	P	05/30/2025	18:58	LB135969
	Cadmium	2480	2500	99	90 - 110	P	05/30/2025	18:58	LB135969
	Calcium	24200	25000	97	90 - 110	P	05/30/2025	18:58	LB135969
	Chromium	1000	1000	100	90 - 110	P	05/30/2025	18:58	LB135969
	Cobalt	2480	2500	99	90 - 110	P	05/30/2025	18:58	LB135969
	Copper	1280	1250	102	90 - 110	P	05/30/2025	18:58	LB135969
	Iron	4710	5000	94	90 - 110	P	05/30/2025	18:58	LB135969
	Lead	4960	5000	99	90 - 110	P	05/30/2025	18:58	LB135969
	Lithium	4990	5000	100	90 - 110	P	05/30/2025	18:58	LB135969
	Magnesium	24400	25000	98	90 - 110	P	05/30/2025	18:58	LB135969
	Manganese	2430	2500	97	90 - 110	P	05/30/2025	18:58	LB135969
	Molybdenum	5040	5000	101	90 - 110	P	05/30/2025	18:58	LB135969
	Nickel	2480	2500	99	90 - 110	P	05/30/2025	18:58	LB135969
	Potassium	24000	25000	96	90 - 110	P	05/30/2025	18:58	LB135969
	Selenium	5150	5000	103	90 - 110	P	05/30/2025	18:58	LB135969
	Silver	1260	1250	101	90 - 110	P	05/30/2025	18:58	LB135969
	Sodium	23200	25000	93	90 - 110	P	05/30/2025	18:58	LB135969
	Strontium	4880	5000	98	90 - 110	P	05/30/2025	18:58	LB135969
	Thallium	4950	5000	99	90 - 110	P	05/30/2025	18:58	LB135969

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Metals

- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Alliance Technical Group, LLC - Newark **SDG No.:** Q1872

Contract: ALLI03 **Lab Code:** CHEM **Case No.:** Q1872 **SAS No.:** Q1872

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	Tin	4970	5000	99	90 - 110	P	05/30/2025	18:58	LB135969
	Titanium	4850	5000	97	90 - 110	P	05/30/2025	18:58	LB135969
	Vanadium	2450	2500	98	90 - 110	P	05/30/2025	18:58	LB135969
	Zinc	2570	2500	103	90 - 110	P	05/30/2025	18:58	LB135969
CCV06	Aluminum	9730	10000	97	90 - 110	P	05/30/2025	19:30	LB135969
	Antimony	4980	5000	100	90 - 110	P	05/30/2025	19:30	LB135969
	Arsenic	4950	5000	99	90 - 110	P	05/30/2025	19:30	LB135969
	Barium	9770	10000	98	90 - 110	P	05/30/2025	19:30	LB135969
	Beryllium	246	250	98	90 - 110	P	05/30/2025	19:30	LB135969
	Boron	4890	5000	98	90 - 110	P	05/30/2025	19:30	LB135969
	Cadmium	2460	2500	98	90 - 110	P	05/30/2025	19:30	LB135969
	Calcium	24300	25000	97	90 - 110	P	05/30/2025	19:30	LB135969
	Chromium	985	1000	98	90 - 110	P	05/30/2025	19:30	LB135969
	Cobalt	2460	2500	98	90 - 110	P	05/30/2025	19:30	LB135969
	Copper	1250	1250	100	90 - 110	P	05/30/2025	19:30	LB135969
	Iron	4920	5000	98	90 - 110	P	05/30/2025	19:30	LB135969
	Lead	4930	5000	99	90 - 110	P	05/30/2025	19:30	LB135969
	Lithium	4830	5000	97	90 - 110	P	05/30/2025	19:30	LB135969
	Magnesium	24100	25000	96	90 - 110	P	05/30/2025	19:30	LB135969
	Manganese	2440	2500	97	90 - 110	P	05/30/2025	19:30	LB135969
	Molybdenum	4990	5000	100	90 - 110	P	05/30/2025	19:30	LB135969
	Nickel	2460	2500	98	90 - 110	P	05/30/2025	19:30	LB135969
	Potassium	24800	25000	99	90 - 110	P	05/30/2025	19:30	LB135969
	Selenium	5010	5000	100	90 - 110	P	05/30/2025	19:30	LB135969
	Silver	1230	1250	98	90 - 110	P	05/30/2025	19:30	LB135969
	Sodium	24200	25000	97	90 - 110	P	05/30/2025	19:30	LB135969
	Strontium	4930	5000	99	90 - 110	P	05/30/2025	19:30	LB135969
	Thallium	4850	5000	97	90 - 110	P	05/30/2025	19:30	LB135969
	Tin	4930	5000	99	90 - 110	P	05/30/2025	19:30	LB135969
	Titanium	4850	5000	97	90 - 110	P	05/30/2025	19:30	LB135969
	Vanadium	2440	2500	98	90 - 110	P	05/30/2025	19:30	LB135969
	Zinc	2520	2500	101	90 - 110	P	05/30/2025	19:30	LB135969

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Metals

- 2b -
CRDL STANDARD FOR AA & ICP

Client: Alliance Technical Group, LLC - Newark **SDG No.:** Q1872

Contract: ALLI03 **Lab Code:** CHEM **Case No.:** Q1872 **SAS No.:** Q1872

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	0.22	0.2	109	70 - 130	CV	05/29/2025	11:38	LB135943
CRI01	Aluminum	101	100	101	65 - 135	P	05/30/2025	15:30	LB135969
	Antimony	48.4	50.0	97	65 - 135	P	05/30/2025	15:30	LB135969
	Arsenic	19.3	20.0	97	65 - 135	P	05/30/2025	15:30	LB135969
	Barium	91.0	100	91	65 - 135	P	05/30/2025	15:30	LB135969
	Beryllium	5.97	6.0	100	65 - 135	P	05/30/2025	15:30	LB135969
	Boron	95.9	100	96	65 - 135	P	05/30/2025	15:30	LB135969
	Cadmium	5.90	6.0	98	65 - 135	P	05/30/2025	15:30	LB135969
	Calcium	1910	2000	96	65 - 135	P	05/30/2025	15:30	LB135969
	Chromium	10.1	10.0	101	65 - 135	P	05/30/2025	15:30	LB135969
	Cobalt	29.1	30.0	97	65 - 135	P	05/30/2025	15:30	LB135969
	Copper	20.9	20.0	104	65 - 135	P	05/30/2025	15:30	LB135969
	Iron	102	100	102	65 - 135	P	05/30/2025	15:30	LB135969
	Lead	11.0	12.0	92	65 - 135	P	05/30/2025	15:30	LB135969
	Lithium	20.3	20.0	101	65 - 135	P	05/30/2025	15:30	LB135969
	Magnesium	1900	2000	95	65 - 135	P	05/30/2025	15:30	LB135969
	Manganese	19.4	20.0	97	65 - 135	P	05/30/2025	15:30	LB135969
	Molybdenum	190	200	95	65 - 135	P	05/30/2025	15:30	LB135969
	Nickel	39.2	40.0	98	65 - 135	P	05/30/2025	15:30	LB135969
	Potassium	1880	2000	94	65 - 135	P	05/30/2025	15:30	LB135969
	Selenium	21.6	20.0	108	65 - 135	P	05/30/2025	15:30	LB135969
	Silver	9.55	10.0	96	65 - 135	P	05/30/2025	15:30	LB135969
	Sodium	1810	2000	90	65 - 135	P	05/30/2025	15:30	LB135969
	Strontium	19.9	20.0	100	65 - 135	P	05/30/2025	15:30	LB135969
	Thallium	29.9	40.0	75	65 - 135	P	05/30/2025	15:30	LB135969
	Tin	36.2	40.0	91	65 - 135	P	05/30/2025	15:30	LB135969
	Titanium	36.4	40.0	91	65 - 135	P	05/30/2025	15:30	LB135969
	Vanadium	36.9	40.0	92	65 - 135	P	05/30/2025	15:30	LB135969
	Zinc	40.3	40.0	101	65 - 135	P	05/30/2025	15:30	LB135969

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- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Alliance Technical Group, LLC - Newark **SDG No.:** Q1872

Contract: ALLI03 **Lab Code:** CHEM **Case No.:** Q1872 **SAS No.:** Q1872

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB21	Mercury	0.076	+/-0.2	U	0.20	CV	05/29/2025	11:20	LB135943

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- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Alliance Technical Group, LLC - Newark **SDG No.:** Q1872

Contract: ALLI03 **Lab Code:** CHEM **Case No.:** Q1872 **SAS No.:** Q1872

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB76	Mercury	0.076	+/-0.2	U	0.20	CV	05/29/2025	11:27	LB135943
CCB77	Mercury	0.076	+/-0.2	U	0.20	CV	05/29/2025	12:30	LB135943
CCB78	Mercury	0.076	+/-0.2	U	0.20	CV	05/29/2025	13:04	LB135943
CCB79	Mercury	0.076	+/-0.2	U	0.20	CV	05/29/2025	13:22	LB135943

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- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Alliance Technical Group, LLC - Newark **SDG No.:** Q1872

Contract: ALLI03 **Lab Code:** CHEM **Case No.:** Q1872 **SAS No.:** Q1872

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB01	Aluminum	11.3	+/-50	U	100	P	05/30/2025	15:26	LB135969
	Antimony	6.76	+/-25	U	50.0	P	05/30/2025	15:26	LB135969
	Arsenic	5.12	+/-10	U	20.0	P	05/30/2025	15:26	LB135969
	Barium	14.6	+/-50	U	100	P	05/30/2025	15:26	LB135969
	Beryllium	0.56	+/-3	U	6.00	P	05/30/2025	15:26	LB135969
	Boron	15.7	+/-50	U	100	P	05/30/2025	15:26	LB135969
	Cadmium	0.50	+/-3	U	6.00	P	05/30/2025	15:26	LB135969
	Calcium	234	+/-1000	U	2000	P	05/30/2025	15:26	LB135969
	Chromium	2.12	+/-5	U	10.0	P	05/30/2025	15:26	LB135969
	Cobalt	2.26	+/-15	U	30.0	P	05/30/2025	15:26	LB135969
	Copper	4.60	+/-10	U	20.0	P	05/30/2025	15:26	LB135969
	Iron	23.4	+/-50	U	100	P	05/30/2025	15:26	LB135969
	Lead	2.30	+/-6	U	12.0	P	05/30/2025	15:26	LB135969
	Magnesium	244	+/-1000	U	2000	P	05/30/2025	15:26	LB135969
	Manganese	5.94	+/-10	U	20.0	P	05/30/2025	15:26	LB135969
	Molybdenum	18.7	+/-100	U	200	P	05/30/2025	15:26	LB135969
	Nickel	3.06	+/-20	U	40.0	P	05/30/2025	15:26	LB135969
	Potassium	918	+/-1000	U	2000	P	05/30/2025	15:26	LB135969
	Selenium	9.64	+/-10	U	20.0	P	05/30/2025	15:26	LB135969
	Silver	1.62	+/-5	U	10.0	P	05/30/2025	15:26	LB135969
	Sodium	868	+/-1000	U	2000	P	05/30/2025	15:26	LB135969
	Strontium	4.63	+/-10	U	20.0	P	05/30/2025	15:26	LB135969
	Lithium	15.6	+/-10	U	20.0	P	05/30/2025	15:26	LB135969
	Thallium	4.38	+/-20	U	40.0	P	05/30/2025	15:26	LB135969
	Tin	5.14	+/-20	U	40.0	P	05/30/2025	15:26	LB135969
	Titanium	6.42	+/-20	U	40.0	P	05/30/2025	15:26	LB135969
	Vanadium	6.26	+/-20	U	40.0	P	05/30/2025	15:26	LB135969
	Zinc	16.7	+/-20	U	40.0	P	05/30/2025	15:26	LB135969

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- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Alliance Technical Group, LLC - Newark **SDG No.:** Q1872

Contract: ALLI03 **Lab Code:** CHEM **Case No.:** Q1872 **SAS No.:** Q1872

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB01	Aluminum	11.3	+/-50	U	100	P	05/30/2025	16:06	LB135969
	Antimony	6.76	+/-25	U	50.0	P	05/30/2025	16:06	LB135969
	Arsenic	5.12	+/-10	U	20.0	P	05/30/2025	16:06	LB135969
	Barium	14.6	+/-50	U	100	P	05/30/2025	16:06	LB135969
	Beryllium	0.56	+/-3	U	6.00	P	05/30/2025	16:06	LB135969
	Boron	15.7	+/-50	U	100	P	05/30/2025	16:06	LB135969
	Cadmium	0.50	+/-3	U	6.00	P	05/30/2025	16:06	LB135969
	Calcium	234	+/-1000	U	2000	P	05/30/2025	16:06	LB135969
	Chromium	2.12	+/-5	U	10.0	P	05/30/2025	16:06	LB135969
	Cobalt	2.26	+/-15	U	30.0	P	05/30/2025	16:06	LB135969
	Copper	4.60	+/-10	U	20.0	P	05/30/2025	16:06	LB135969
	Iron	23.4	+/-50	U	100	P	05/30/2025	16:06	LB135969
	Lead	2.30	+/-6	U	12.0	P	05/30/2025	16:06	LB135969
	Magnesium	244	+/-1000	U	2000	P	05/30/2025	16:06	LB135969
	Manganese	5.94	+/-10	U	20.0	P	05/30/2025	16:06	LB135969
	Molybdenum	18.7	+/-100	U	200	P	05/30/2025	16:06	LB135969
	Nickel	3.06	+/-20	U	40.0	P	05/30/2025	16:06	LB135969
	Potassium	918	+/-1000	U	2000	P	05/30/2025	16:06	LB135969
	Selenium	9.64	+/-10	U	20.0	P	05/30/2025	16:06	LB135969
	Silver	1.62	+/-5	U	10.0	P	05/30/2025	16:06	LB135969
	Sodium	868	+/-1000	U	2000	P	05/30/2025	16:06	LB135969
	Strontium	4.63	+/-10	U	20.0	P	05/30/2025	16:06	LB135969
	Lithium	15.6	+/-10	U	20.0	P	05/30/2025	16:06	LB135969
	Thallium	4.38	+/-20	U	40.0	P	05/30/2025	16:06	LB135969
	Tin	5.14	+/-20	U	40.0	P	05/30/2025	16:06	LB135969
	Titanium	6.42	+/-20	U	40.0	P	05/30/2025	16:06	LB135969
	Vanadium	6.26	+/-20	U	40.0	P	05/30/2025	16:06	LB135969
	Zinc	16.7	+/-20	U	40.0	P	05/30/2025	16:06	LB135969
CCB02	Aluminum	11.8	+/-50	J	100	P	05/30/2025	16:56	LB135969
	Antimony	6.76	+/-25	U	50.0	P	05/30/2025	16:56	LB135969
	Arsenic	5.12	+/-10	U	20.0	P	05/30/2025	16:56	LB135969
	Barium	14.6	+/-50	U	100	P	05/30/2025	16:56	LB135969
	Beryllium	0.56	+/-3	U	6.00	P	05/30/2025	16:56	LB135969
	Boron	15.7	+/-50	U	100	P	05/30/2025	16:56	LB135969
	Cadmium	0.50	+/-3	U	6.00	P	05/30/2025	16:56	LB135969
	Calcium	234	+/-1000	U	2000	P	05/30/2025	16:56	LB135969
	Chromium	2.12	+/-5	U	10.0	P	05/30/2025	16:56	LB135969
	Cobalt	2.26	+/-15	U	30.0	P	05/30/2025	16:56	LB135969
	Copper	4.60	+/-10	U	20.0	P	05/30/2025	16:56	LB135969

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Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Alliance Technical Group, LLC - Newark **SDG No.:** Q1872

Contract: ALLI03 **Lab Code:** CHEM **Case No.:** Q1872 **SAS No.:** Q1872

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB02	Iron	23.4	+/-50	U	100	P	05/30/2025	16:56	LB135969
	Lead	2.30	+/-6	U	12.0	P	05/30/2025	16:56	LB135969
	Magnesium	244	+/-1000	U	2000	P	05/30/2025	16:56	LB135969
	Manganese	5.94	+/-10	U	20.0	P	05/30/2025	16:56	LB135969
	Molybdenum	18.7	+/-100	U	200	P	05/30/2025	16:56	LB135969
	Nickel	3.06	+/-20	U	40.0	P	05/30/2025	16:56	LB135969
	Potassium	918	+/-1000	U	2000	P	05/30/2025	16:56	LB135969
	Selenium	9.64	+/-10	U	20.0	P	05/30/2025	16:56	LB135969
	Silver	1.62	+/-5	U	10.0	P	05/30/2025	16:56	LB135969
	Sodium	868	+/-1000	U	2000	P	05/30/2025	16:56	LB135969
	Strontium	4.63	+/-10	U	20.0	P	05/30/2025	16:56	LB135969
	Lithium	15.6	+/-10	U	20.0	P	05/30/2025	16:56	LB135969
	Thallium	4.38	+/-20	U	40.0	P	05/30/2025	16:56	LB135969
	Tin	5.14	+/-20	U	40.0	P	05/30/2025	16:56	LB135969
	Titanium	6.42	+/-20	U	40.0	P	05/30/2025	16:56	LB135969
	Vanadium	6.26	+/-20	U	40.0	P	05/30/2025	16:56	LB135969
	Zinc	16.7	+/-20	U	40.0	P	05/30/2025	16:56	LB135969
CCB03	Aluminum	11.3	+/-50	U	100	P	05/30/2025	17:45	LB135969
	Antimony	6.76	+/-25	U	50.0	P	05/30/2025	17:45	LB135969
	Arsenic	5.12	+/-10	U	20.0	P	05/30/2025	17:45	LB135969
	Barium	14.6	+/-50	U	100	P	05/30/2025	17:45	LB135969
	Beryllium	0.56	+/-3	U	6.00	P	05/30/2025	17:45	LB135969
	Boron	15.7	+/-50	U	100	P	05/30/2025	17:45	LB135969
	Cadmium	0.50	+/-3	U	6.00	P	05/30/2025	17:45	LB135969
	Calcium	234	+/-1000	U	2000	P	05/30/2025	17:45	LB135969
	Chromium	2.12	+/-5	U	10.0	P	05/30/2025	17:45	LB135969
	Cobalt	2.26	+/-15	U	30.0	P	05/30/2025	17:45	LB135969
	Copper	4.60	+/-10	U	20.0	P	05/30/2025	17:45	LB135969
	Iron	23.4	+/-50	U	100	P	05/30/2025	17:45	LB135969
	Lead	2.30	+/-6	U	12.0	P	05/30/2025	17:45	LB135969
	Magnesium	244	+/-1000	U	2000	P	05/30/2025	17:45	LB135969
	Manganese	5.94	+/-10	U	20.0	P	05/30/2025	17:45	LB135969
	Molybdenum	18.7	+/-100	U	200	P	05/30/2025	17:45	LB135969
	Nickel	3.06	+/-20	U	40.0	P	05/30/2025	17:45	LB135969
	Potassium	918	+/-1000	U	2000	P	05/30/2025	17:45	LB135969
	Selenium	9.64	+/-10	U	20.0	P	05/30/2025	17:45	LB135969
	Silver	1.62	+/-5	U	10.0	P	05/30/2025	17:45	LB135969
	Sodium	868	+/-1000	U	2000	P	05/30/2025	17:45	LB135969
	Strontium	4.63	+/-10	U	20.0	P	05/30/2025	17:45	LB135969

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- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Alliance Technical Group, LLC - Newark **SDG No.:** Q1872

Contract: ALLI03 **Lab Code:** CHEM **Case No.:** Q1872 **SAS No.:** Q1872

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB03	Lithium	15.6	+/-10	U	20.0	P	05/30/2025	17:45	LB135969
	Thallium	4.38	+/-20	U	40.0	P	05/30/2025	17:45	LB135969
	Tin	5.14	+/-20	U	40.0	P	05/30/2025	17:45	LB135969
	Titanium	6.42	+/-20	U	40.0	P	05/30/2025	17:45	LB135969
	Vanadium	6.26	+/-20	U	40.0	P	05/30/2025	17:45	LB135969
	Zinc	16.7	+/-20	U	40.0	P	05/30/2025	17:45	LB135969
CCB04	Aluminum	13.3	+/-50	J	100	P	05/30/2025	18:32	LB135969
	Antimony	6.76	+/-25	U	50.0	P	05/30/2025	18:32	LB135969
	Arsenic	5.12	+/-10	U	20.0	P	05/30/2025	18:32	LB135969
	Barium	14.6	+/-50	U	100	P	05/30/2025	18:32	LB135969
	Beryllium	0.56	+/-3	U	6.00	P	05/30/2025	18:32	LB135969
	Boron	15.7	+/-50	U	100	P	05/30/2025	18:32	LB135969
	Cadmium	0.50	+/-3	U	6.00	P	05/30/2025	18:32	LB135969
	Calcium	234	+/-1000	U	2000	P	05/30/2025	18:32	LB135969
	Chromium	2.12	+/-5	U	10.0	P	05/30/2025	18:32	LB135969
	Cobalt	2.26	+/-15	U	30.0	P	05/30/2025	18:32	LB135969
	Copper	4.60	+/-10	U	20.0	P	05/30/2025	18:32	LB135969
	Iron	23.4	+/-50	U	100	P	05/30/2025	18:32	LB135969
	Lead	2.30	+/-6	U	12.0	P	05/30/2025	18:32	LB135969
	Magnesium	244	+/-1000	U	2000	P	05/30/2025	18:32	LB135969
	Manganese	5.94	+/-10	U	20.0	P	05/30/2025	18:32	LB135969
	Molybdenum	18.7	+/-100	U	200	P	05/30/2025	18:32	LB135969
	Nickel	3.06	+/-20	U	40.0	P	05/30/2025	18:32	LB135969
	Potassium	918	+/-1000	U	2000	P	05/30/2025	18:32	LB135969
	Selenium	9.64	+/-10	U	20.0	P	05/30/2025	18:32	LB135969
	Silver	1.62	+/-5	U	10.0	P	05/30/2025	18:32	LB135969
	Sodium	868	+/-1000	U	2000	P	05/30/2025	18:32	LB135969
	Strontium	4.63	+/-10	U	20.0	P	05/30/2025	18:32	LB135969
	Lithium	15.6	+/-10	U	20.0	P	05/30/2025	18:32	LB135969
	Thallium	4.38	+/-20	U	40.0	P	05/30/2025	18:32	LB135969
	Tin	5.58	+/-20	J	40.0	P	05/30/2025	18:32	LB135969
	Titanium	6.42	+/-20	U	40.0	P	05/30/2025	18:32	LB135969
	Vanadium	6.26	+/-20	U	40.0	P	05/30/2025	18:32	LB135969
	Zinc	16.7	+/-20	U	40.0	P	05/30/2025	18:32	LB135969
CCB05	Aluminum	11.3	+/-50	U	100	P	05/30/2025	19:02	LB135969
	Antimony	6.76	+/-25	U	50.0	P	05/30/2025	19:02	LB135969
	Arsenic	5.12	+/-10	U	20.0	P	05/30/2025	19:02	LB135969
	Barium	14.6	+/-50	U	100	P	05/30/2025	19:02	LB135969
	Beryllium	0.56	+/-3	U	6.00	P	05/30/2025	19:02	LB135969

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- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Alliance Technical Group, LLC - Newark **SDG No.:** Q1872

Contract: ALLI03 **Lab Code:** CHEM **Case No.:** Q1872 **SAS No.:** Q1872

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB05	Boron	15.7	+/-50	U	100	P	05/30/2025	19:02	LB135969
	Cadmium	0.50	+/-3	U	6.00	P	05/30/2025	19:02	LB135969
	Calcium	234	+/-1000	U	2000	P	05/30/2025	19:02	LB135969
	Chromium	2.12	+/-5	U	10.0	P	05/30/2025	19:02	LB135969
	Cobalt	2.26	+/-15	U	30.0	P	05/30/2025	19:02	LB135969
	Copper	4.60	+/-10	U	20.0	P	05/30/2025	19:02	LB135969
	Iron	23.4	+/-50	U	100	P	05/30/2025	19:02	LB135969
	Lead	2.30	+/-6	U	12.0	P	05/30/2025	19:02	LB135969
	Magnesium	244	+/-1000	U	2000	P	05/30/2025	19:02	LB135969
	Manganese	5.94	+/-10	U	20.0	P	05/30/2025	19:02	LB135969
	Molybdenum	18.7	+/-100	U	200	P	05/30/2025	19:02	LB135969
	Nickel	3.06	+/-20	U	40.0	P	05/30/2025	19:02	LB135969
	Potassium	918	+/-1000	U	2000	P	05/30/2025	19:02	LB135969
	Selenium	9.64	+/-10	U	20.0	P	05/30/2025	19:02	LB135969
	Silver	1.62	+/-5	U	10.0	P	05/30/2025	19:02	LB135969
	Sodium	868	+/-1000	U	2000	P	05/30/2025	19:02	LB135969
	Strontium	4.63	+/-10	U	20.0	P	05/30/2025	19:02	LB135969
	Lithium	15.6	+/-10	U	20.0	P	05/30/2025	19:02	LB135969
	Thallium	4.38	+/-20	U	40.0	P	05/30/2025	19:02	LB135969
	Tin	5.14	+/-20	U	40.0	P	05/30/2025	19:02	LB135969
	Titanium	6.42	+/-20	U	40.0	P	05/30/2025	19:02	LB135969
	Vanadium	6.26	+/-20	U	40.0	P	05/30/2025	19:02	LB135969
	Zinc	16.7	+/-20	U	40.0	P	05/30/2025	19:02	LB135969
CCB06	Aluminum	11.3	+/-50	U	100	P	05/30/2025	19:34	LB135969
	Antimony	6.76	+/-25	U	50.0	P	05/30/2025	19:34	LB135969
	Arsenic	5.12	+/-10	U	20.0	P	05/30/2025	19:34	LB135969
	Barium	14.6	+/-50	U	100	P	05/30/2025	19:34	LB135969
	Beryllium	0.56	+/-3	U	6.00	P	05/30/2025	19:34	LB135969
	Boron	15.7	+/-50	U	100	P	05/30/2025	19:34	LB135969
	Cadmium	0.50	+/-3	U	6.00	P	05/30/2025	19:34	LB135969
	Calcium	234	+/-1000	U	2000	P	05/30/2025	19:34	LB135969
	Chromium	2.12	+/-5	U	10.0	P	05/30/2025	19:34	LB135969
	Cobalt	2.26	+/-15	U	30.0	P	05/30/2025	19:34	LB135969
	Copper	4.60	+/-10	U	20.0	P	05/30/2025	19:34	LB135969
	Iron	23.4	+/-50	U	100	P	05/30/2025	19:34	LB135969
	Lead	2.30	+/-6	U	12.0	P	05/30/2025	19:34	LB135969
	Magnesium	244	+/-1000	U	2000	P	05/30/2025	19:34	LB135969
	Manganese	5.94	+/-10	U	20.0	P	05/30/2025	19:34	LB135969
	Molybdenum	18.7	+/-100	U	200	P	05/30/2025	19:34	LB135969

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Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Alliance Technical Group, LLC - Newark **SDG No.:** Q1872

Contract: ALLI03 **Lab Code:** CHEM **Case No.:** Q1872 **SAS No.:** Q1872

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB06	Nickel	3.06	+/-20	U	40.0	P	05/30/2025	19:34	LB135969
	Potassium	918	+/-1000	U	2000	P	05/30/2025	19:34	LB135969
	Selenium	9.64	+/-10	U	20.0	P	05/30/2025	19:34	LB135969
	Silver	1.62	+/-5	U	10.0	P	05/30/2025	19:34	LB135969
	Sodium	868	+/-1000	U	2000	P	05/30/2025	19:34	LB135969
	Strontium	4.63	+/-10	U	20.0	P	05/30/2025	19:34	LB135969
	Lithium	15.6	+/-10	U	20.0	P	05/30/2025	19:34	LB135969
	Thallium	4.38	+/-20	U	40.0	P	05/30/2025	19:34	LB135969
	Tin	5.14	+/-20	U	40.0	P	05/30/2025	19:34	LB135969
	Titanium	6.42	+/-20	U	40.0	P	05/30/2025	19:34	LB135969
	Vanadium	6.26	+/-20	U	40.0	P	05/30/2025	19:34	LB135969
	Zinc	16.7	+/-20	U	40.0	P	05/30/2025	19:34	LB135969

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Metals
- 3b -
PREPARATION BLANK SUMMARY

Client: Alliance Technical Group, LLC - Newark **SDG No.:** Q1872

Instrument: CV1

Sample ID	Analyte	Result (mg/Kg)	Acceptance Limit	Conc Qual	CRQL mg/Kg	M	Analysis Date	Analysis Time	Run
PB168173BL		**SOLID**		**Batch Number:**	**PB168173**		**Prep Date:**	**05/28/2025**	
	Mercury	0.0080	<0.014	U	0.014	CV	05/29/2025	11:55	LB135943

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Metals
- 3b -
PREPARATION BLANK SUMMARY

Client: Alliance Technical Group, LLC - Newark **SDG No.:** Q1872

Instrument: P4

Sample ID	Analyte	Result (mg/Kg)	Acceptance Limit	Conc Qual	CRQL mg/Kg	M	Analysis Date	Analysis Time	Run
PB167748BL		**SOLID**		**Batch Number:**	**PB167748**		**Prep Date:**	**04/25/2025**	
	Aluminum	0.84	<2.5	U	5.00	P	05/30/2025	19:22	LB135969
	Antimony	0.22	<1.25	U	2.50	P	05/30/2025	19:22	LB135969
	Arsenic	0.19	<0.5	U	1.00	P	05/30/2025	19:22	LB135969
	Barium	0.73	<2.5	U	5.00	P	05/30/2025	19:22	LB135969
	Beryllium	0.025	<0.15	U	0.30	P	05/30/2025	19:22	LB135969
	Boron	0.80	<2.5	U	5.00	P	05/30/2025	19:22	LB135969
	Cadmium	0.024	<0.15	U	0.30	P	05/30/2025	19:22	LB135969
	Calcium	11.1	<50	U	100	P	05/30/2025	19:22	LB135969
	Chromium	0.050	<0.25	J	0.50	P	05/30/2025	19:22	LB135969
	Cobalt	0.10	<0.75	U	1.50	P	05/30/2025	19:22	LB135969
	Copper	0.22	<0.5	U	1.00	P	05/30/2025	19:22	LB135969
	Iron	3.99	<2.5	U	5.00	P	05/30/2025	19:22	LB135969
	Lead	0.13	<0.3	U	0.60	P	05/30/2025	19:22	LB135969
	Magnesium	12.0	<50	U	100	P	05/30/2025	19:22	LB135969
	Manganese	0.14	<0.5	U	1.00	P	05/30/2025	19:22	LB135969
	Molybdenum	0.81	<5	U	10.0	P	05/30/2025	19:22	LB135969
	Nickel	0.13	<1	U	2.00	P	05/30/2025	19:22	LB135969
	Potassium	27.7	<50	U	100	P	05/30/2025	19:22	LB135969
	Selenium	0.26	<0.5	U	1.00	P	05/30/2025	19:22	LB135969
	Silver	0.12	<0.25	U	0.50	P	05/30/2025	19:22	LB135969
	Sodium	17.8	<50	U	100	P	05/30/2025	19:22	LB135969
	Strontium	0.25	<5	U	10.0	P	05/30/2025	19:22	LB135969
	Lithium	0.038	<0.5	U	1.00	P	05/30/2025	19:22	LB135969
	Thallium	0.23	<1	U	2.00	P	05/30/2025	19:22	LB135969
	Tin	0.26	<1	U	2.00	P	05/30/2025	19:22	LB135969
	Titanium	0.31	<1	U	2.00	P	05/30/2025	19:22	LB135969
	Vanadium	0.25	<1	U	2.00	P	05/30/2025	19:22	LB135969
	Zinc	0.23	<1	U	2.00	P	05/30/2025	19:22	LB135969

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Metals
- 4 -
INTERFERENCE CHECK SAMPLE

Client: Alliance Technical Group, LLC - Newark **SDG No.:** Q1872

Contract: ALLI03 **Lab Code:** CHEM **Case No.:** Q1872 **SAS No.:** Q1872

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

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Low Limit (ug/L)	High Limit (ug/L)	Analysis Date	Analysis Time	Run Number
ICSA01	Aluminum	265000	255000	104	216000	294000	05/30/2025	15:34	LB135969
	Antimony	-10.5			-50	50	05/30/2025	15:34	LB135969
	Arsenic	7.93			-20	20	05/30/2025	15:34	LB135969
	Barium	5.59	6.0	93	-94	106	05/30/2025	15:34	LB135969
	Beryllium	1.08			-6	6	05/30/2025	15:34	LB135969
	Boron	11.9	1000	1	-100	100	05/30/2025	15:34	LB135969
	Cadmium	0.96	1.0	96	-5	7	05/30/2025	15:34	LB135969
	Calcium	250000	245000	102	208000	282000	05/30/2025	15:34	LB135969
	Chromium	50.5	52.0	97	42	62	05/30/2025	15:34	LB135969
	Cobalt	2.14			-30	30	05/30/2025	15:34	LB135969
	Copper	11.1	2.0	555	-18	22	05/30/2025	15:34	LB135969
	Iron	106000	101000	105	85600	116500	05/30/2025	15:34	LB135969
	Lead	-3.47			-12	12	05/30/2025	15:34	LB135969
	Magnesium	273000	255000	107	216000	294000	05/30/2025	15:34	LB135969
	Manganese	10.4	7.0	148	-13	27	05/30/2025	15:34	LB135969
	Molybdenum	0.57	1000		-200	200	05/30/2025	15:34	LB135969
	Nickel	2.67	2.0	134	-38	42	05/30/2025	15:34	LB135969
	Potassium	82.2			0	0	05/30/2025	15:34	LB135969
	Selenium	1.16			-20	20	05/30/2025	15:34	LB135969
	Silver	-0.97			-10	10	05/30/2025	15:34	LB135969
	Sodium	15.7			0	0	05/30/2025	15:34	LB135969
	Strontium	0.71			0	0	05/30/2025	15:34	LB135969
	Lithium	13.9	1000	1	-20	20	05/30/2025	15:34	LB135969
	Thallium	-1.62			-40	40	05/30/2025	15:34	LB135969
	Tin	-2.31	1000		-40	40	05/30/2025	15:34	LB135969
	Titanium	-0.43			0	0	05/30/2025	15:34	LB135969
	Vanadium	2.32			-40	40	05/30/2025	15:34	LB135969
	Zinc	-8.28			-40	40	05/30/2025	15:34	LB135969
ICSAB01	Aluminum	249000	247000	101	209000	285000	05/30/2025	15:49	LB135969
	Antimony	649	618	105	525	711	05/30/2025	15:49	LB135969
	Arsenic	115	104	111	88.4	120	05/30/2025	15:49	LB135969
	Barium	495	537	92	437	637	05/30/2025	15:49	LB135969
	Beryllium	545	495	110	420	570	05/30/2025	15:49	LB135969
	Boron	959	1000	96	850	1150	05/30/2025	15:49	LB135969
	Cadmium	1050	972	108	826	1120	05/30/2025	15:49	LB135969
	Calcium	231000	235000	98	199000	271000	05/30/2025	15:49	LB135969
	Chromium	586	542	108	460	624	05/30/2025	15:49	LB135969
	Cobalt	530	476	111	404	548	05/30/2025	15:49	LB135969
	Copper	539	511	106	434	588	05/30/2025	15:49	LB135969
	Iron	96800	99300	98	84400	114500	05/30/2025	15:49	LB135969
	Lead	49.0	49.0	100	37	61	05/30/2025	15:49	LB135969
	Magnesium	254000	248000	102	210000	286000	05/30/2025	15:49	LB135969

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Metals
- 4 -
INTERFERENCE CHECK SAMPLE

Client: Alliance Technical Group, LLC - Newark **SDG No.:** Q1872

Contract: ALLI03 **Lab Code:** CHEM **Case No.:** Q1872 **SAS No.:** Q1872

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

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Low Limit (ug/L)	High Limit (ug/L)	Analysis Date	Analysis Time	Run Number
ICSAB01	Manganese	504	507	99	430	584	05/30/2025	15:49	LB135969
	Molybdenum	1020	1000	102	850	1150	05/30/2025	15:49	LB135969
	Nickel	1050	954	110	810	1100	05/30/2025	15:49	LB135969
	Potassium	50.6			0	0	05/30/2025	15:49	LB135969
	Selenium	53.5	46.0	116	26	66	05/30/2025	15:49	LB135969
	Silver	223	201	111	170	232	05/30/2025	15:49	LB135969
	Sodium	-16.6			0	0	05/30/2025	15:49	LB135969
	Strontium	915			0	0	05/30/2025	15:49	LB135969
	Lithium	858	1000	86	850	1150	05/30/2025	15:49	LB135969
	Thallium	86.2	108	80	68	148	05/30/2025	15:49	LB135969
	Tin	1000	1000	100	850	1150	05/30/2025	15:49	LB135969
	Titanium	941			0	0	05/30/2025	15:49	LB135969
	Vanadium	498	491	101	417	565	05/30/2025	15:49	LB135969
	Zinc	1080	952	113	809	1095	05/30/2025	15:49	LB135969

METAL QC DATA

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metals
- 5a -
MATRIX SPIKE SUMMARY

client: Alliance Technical Group, LLC - Newark **level:** low **sdg no.:** Q1872

contract: ALLI03 **lab code:** CHEM **case no.:** Q1872 **sas no.:** Q1872

matrix: Solid **sample id:** Q2085-04 **client id:** SC-1-SED-051625MS

Percent Solids for Sample: 70.5 **Spiked ID:** Q2085-05 **Percent Solids for Spike Sample:** 70.5

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	mg/Kg	80 - 124	0.37		0.017	U	0.35	106		CV

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metals
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: Alliance Technical Group, LLC - Newark **level:** low **sdg no.:** Q1872

contract: ALLI03 **lab code:** CHEM **case no.:** Q1872 **sas no.:** Q1872

matrix: Solid **sample id:** Q2085-04 **client id:** SC-1-SED-051625MSD

Percent Solids for Sample: 70.5 **Spiked ID:** Q2085-06 **Percent Solids for Spike Sample:** 70.5

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	mg/Kg	80 - 124	0.41		0.017	U	0.37	110		CV

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Metals
- 5b -

Client: Alliance Technical Group, LLC - Newark **SDG No.:** Q1872

Contract: ALLI03 **Lab Code:** CHEM **Case No.:** Q1872 **SAS No.:** Q1872

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

Sample ID: **Spiked ID:**

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

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Metals

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: Alliance Technical Group, LLC - Newark **Level:** LOW **SDG No.:** Q1872

Contract: ALLI03 **Lab Code:** CHEM **Case No.:** Q1872 **SAS No.:** Q1872

Matrix: Solid **Sample ID:** Q2085-04 **Client ID:** SC-1-SED-051625DUP

Percent Solids for Sample: 70.5 **Duplicate ID** Q2085-04DUP **Percent Solids for Spike Sample:** 70.5

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	mg/Kg	20	0.017	U	0.018	U			CV

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

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Metals

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: Alliance Technical Group, LLC - Newark **Level:** LOW **SDG No.:** Q1872

Contract: ALLI03 **Lab Code:** CHEM **Case No.:** Q1872 **SAS No.:** Q1872

Matrix: Solid **Sample ID:** Q2085-05 **Client ID:** SC-1-SED-051625MSD

Percent Solids for Sample: 70.5 **Duplicate ID** Q2085-06 **Percent Solids for Spike Sample:** 70.5

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	mg/Kg	20	0.37		0.41		9		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: Alliance Technical Group, LLC - Newark **SDG No.:** Q1872

Contract: ALLI03 **Lab Code:** CHEM **Case No.:** Q1872 **SAS No.:** Q1872

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB167748BS							
Aluminum	mg/Kg	100	97.0		97	80 - 120	P
Antimony	mg/Kg	40.0	41.7		104	80 - 120	P
Arsenic	mg/Kg	40.0	40.7		102	80 - 120	P
Barium	mg/Kg	10.0	9.59		96	80 - 120	P
Beryllium	mg/Kg	10.0	10.1		101	80 - 120	P
Boron	mg/Kg	15.0	14.7		98	80 - 120	P
Cadmium	mg/Kg	10.0	10.1		101	80 - 120	P
Calcium	mg/Kg	50.0	50.4	J	101	80 - 120	P
Chromium	mg/Kg	20.0	20.5		102	80 - 120	P
Cobalt	mg/Kg	10.0	10.1		101	80 - 120	P
Copper	mg/Kg	15.0	16.0		107	80 - 120	P
Iron	mg/Kg	150	156		104	80 - 120	P
Lead	mg/Kg	50.0	49.3		99	80 - 120	P
Magnesium	mg/Kg	100	96.4	J	96	80 - 120	P
Manganese	mg/Kg	10.0	10.0		100	80 - 120	P
Molybdenum	mg/Kg	20.0	20.9		104	80 - 120	P
Nickel	mg/Kg	25.0	25.4		102	80 - 120	P
Potassium	mg/Kg	500	487		97	80 - 120	P
Selenium	mg/Kg	100	105		105	80 - 120	P
Silver	mg/Kg	3.8	3.81		100	80 - 120	P
Sodium	mg/Kg	150	141		94	80 - 120	P
Strontium	mg/Kg	10.0	9.71	J	97	80 - 120	P
Lithium	mg/Kg	10.0	9.94		99	80 - 120	P
Thallium	mg/Kg	100	101		101	80 - 120	P
Tin	mg/Kg	35.0	35.6		102	80 - 120	P
Titanium	mg/Kg	10.0	9.79		98	80 - 120	P
Vanadium	mg/Kg	15.0	14.8		99	80 - 120	P
Zinc	mg/Kg	10.0	9.46		95	80 - 120	P

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LABORATORY CONTROL SAMPLE SUMMARY

Client: Alliance Technical Group, LLC - Newark **SDG No.:** Q1872

Contract: ALLI03 **Lab Code:** CHEM **Case No.:** Q1872 **SAS No.:** Q1872

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB168173BS							
Mercury	mg/Kg	0.25	0.22		86	80 - 124	CV

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Metals

-9 -

ICP SERIAL DILUTIONS

SAMPLE NO.

SC-1-SED-051625L

Lab Name: Chemtech Consulting Group **Contract:** ALLI03

Lab Code: CHEM **Lb No.:** lb135943 **Lab Sample ID :** Q2085-04L **SDG No.:** Q1872

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

Concentration Units: mg/Kg

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Mercury	0.017	U	0.086	U			CV

METAL PREPARATION & INSTRUMENT DATA

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Metals
- 11 -
ICP INTERELEMENT CORRECTION FACTORS

Client: Alliance Technical Group, LLC - Newark **SDG No.:** Q1872

Contract: ALLI03 **Lab Code:** CHEM **Case No.:** Q1872 **SAS No.:** Q1872

Instrument ID: **Date:**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

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

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Metals
- 11 -
ICP INTERELEMENT CORRECTION FACTORS

Client: Alliance Technical Group, LLC - Newark **SDG No.:** Q1872

Contract: ALLI03 **Lab Code:** CHEM **Case No.:** Q1872 **SAS No.:** Q1872

Instrument ID: **Date:**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

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

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Metals
- 11 -
ICP INTERELEMENT CORRECTION FACTORS

Client: Alliance Technical Group, LLC - Newark **SDG No.:** Q1872

Contract: ALLI03 **Lab Code:** CHEM **Case No.:** Q1872 **SAS No.:** Q1872

Instrument ID: **Date:**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

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

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Metals
- 11 -
ICP INTERELEMENT CORRECTION FACTORS

Client: Alliance Technical Group, LLC - Newark **SDG No.:** Q1872

Contract: ALLI03 **Lab Code:** CHEM **Case No.:** Q1872 **SAS No.:** Q1872

Instrument ID: **Date:**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

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

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Metals
- 11 -
ICP INTERELEMENT CORRECTION FACTORS

Client: Alliance Technical Group, LLC - Newark **SDG No.:** Q1872

Contract: ALLI03 **Lab Code:** CHEM **Case No.:** Q1872 **SAS No.:** Q1872

Instrument ID: **Date:**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

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

METAL PREPARATION & ANALYICAL SUMMARY

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Metals
- 13 -
SAMPLE PREPARATION SUMMARY

Client: Alliance Technical Group, LLC - Newark **SDG No.:** Q1872

Contract: ALLI03 **Lab Code:** CHEM **Method:**

Case No.: Q1872 **SAS No.:** Q1872

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(g)	Final Sample Volume (mL)	Percent Solids
Batch Number:	**PB167748**						
PB167748BL	PB167748BL	MB	SOLID	04/25/2025	2.00	100.0	100.00
PB167748BS	PB167748BS	LCS	SOLID	04/25/2025	2.00	100.0	100.00
Q1872-10	HW0425-PT-MET-SOIL	SAM	SOLID	04/25/2025	2.30	100.0	100.00

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Metals
- 13 -
SAMPLE PREPARATION SUMMARY

Client: Alliance Technical Group, LLC - Newark **SDG No.:** Q1872

Contract: ALLI03 **Lab Code:** CHEM **Method:**

Case No.: Q1872 **SAS No.:** Q1872

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(g)	Final Sample Volume (mL)	Percent Solids
Batch Number:	**PB168173**						
PB168173BL	PB168173BL	MB	SOLID	05/28/2025	0.50	35.0	100.00
PB168173BS	PB168173BS	LCS	SOLID	05/28/2025	0.57	35.0	100.00
Q1872-10	HW0425-PT-MET-SOIL	SAM	SOLID	05/28/2025	0.52	35.0	100.00
Q2085-04DUP	SC-1-SED-051625DUP	DUP	SOLID	05/28/2025	0.55	35.0	70.50
Q2085-05	SC-1-SED-051625MS	MS	SOLID	05/28/2025	0.56	35.0	70.50
Q2085-06	SC-1-SED-051625MSD	MSD	SOLID	05/28/2025	0.54	35.0	70.50

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metals
- 14 -
ANALYSIS RUN LOG

Client: Alliance Technical Group, LLC - Newark **Contract:** ALLI03

Lab code: CHEM **Case no.:** Q1872 **Sas no.:** Q1872 **Sdg no.:** Q1872

Instrument id number: **Method:** **Run number:** LB135943

Start date: 05/29/2025 **End date:** 05/29/2025

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1053	HG
S0.2	S0.2	1	1055	HG
S2.5	S2.5	1	1057	HG
S5	S5	1	1110	HG
S7.5	S7.5	1	1112	HG
S10	S10	1	1115	HG
ICV21	ICV21	1	1118	HG
ICB21	ICB21	1	1120	HG
CCV76	CCV76	1	1122	HG
CCB76	CCB76	1	1127	HG
CRA	CRA	1	1138	HG
PB168173BL	PB168173BL	1	1155	HG
PB168173BS	PB168173BS	1	1158	HG
CCV77	CCV77	1	1225	HG
CCB77	CCB77	1	1230	HG
Q2085-04DUP	SC-1-SED-051625DUP	1	1232	HG
Q2085-05	SC-1-SED-051625MS	1	1243	HG
Q2085-06	SC-1-SED-051625MSD	1	1245	HG
Q2085-04L	SC-1-SED-051625L	5	1257	HG
CCV78	CCV78	1	1301	HG
CCB78	CCB78	1	1304	HG
Q1872-10	HW0425-PT-MET-SOIL	50	1308	HG
CCV79	CCV79	1	1319	HG
CCB79	CCB79	1	1322	HG

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metals
- 14 -
ANALYSIS RUN LOG

Client: Alliance Technical Group, LLC - Newark **Contract:** ALLI03

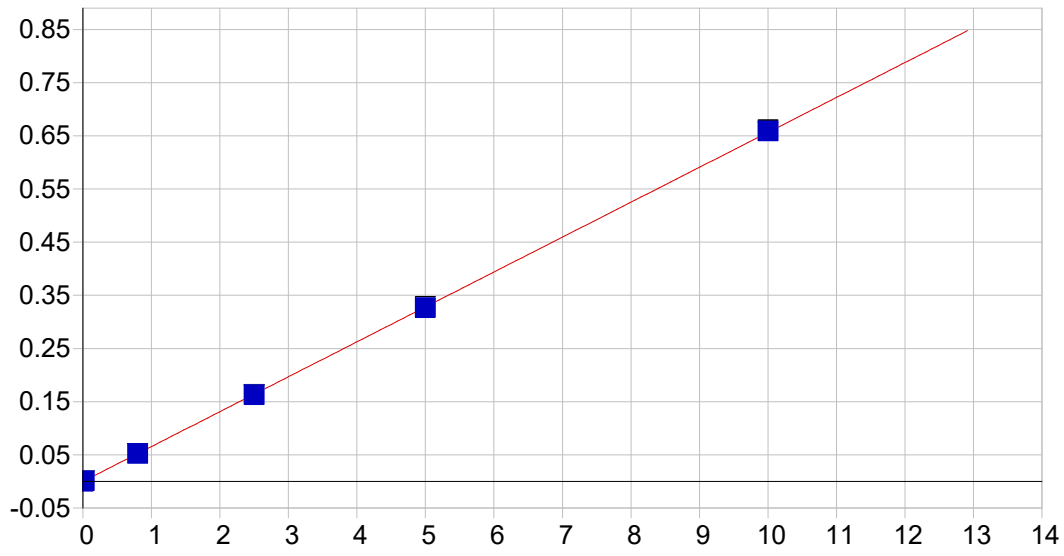
Lab code: CHEM **Case no.:** Q1872 **Sas no.:** Q1872 **Sdg no.:** Q1872

Instrument id number: **Method:** **Run number:** LB135969

Start date: 05/30/2025 **End date:** 05/30/2025

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1416	Ag,Al,As,B,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Li,Mg,Mn,Mo,Na,Ni,Pb,Sb,Se,Sn,Sr,Ti,Tl,V
S1	S1	1	1421	Ag,Al,As,B,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Li,Mg,Mn,Mo,Na,Ni,Pb,Sb,Se,Sn,Sr,Ti,Tl,V,Zn
S2	S2	1	1425	Ag,Al,As,B,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Li,Mg,Mn,Mo,Na,Ni,Pb,Sb,Se,Sn,Sr,Ti,Tl,V
S3	S3	1	1429	Ag,Al,As,B,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Li,Mg,Mn,Mo,Na,Ni,Pb,Sb,Se,Sn,Sr,Ti,Tl,V
S4	S4	1	1433	Ag,Al,As,B,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Li,Mg,Mn,Mo,Na,Ni,Pb,Sb,Se,Sn,Sr,Ti,Tl,V,Zn
S5	S5	1	1437	Ag,Al,As,B,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Li,Mg,Mn,Mo,Na,Ni,Pb,Sb,Se,Sn,Sr,Ti,Tl,V
ICV01	ICV01	1	1513	Ag,Al,As,B,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Li,Mg,Mn,Mo,Na,Ni,Pb,Sb,Se,Sn,Sr,Ti,Tl,V,Zn
LLICV01	LLICV01	1	1521	Ag,Al,As,B,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Li,Mg,Mn,Mo,Na,Ni,Pb,Sb,Se,Sn,Sr,Ti,Tl,V,Zn
ICB01	ICB01	1	1526	Ag,Al,As,B,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Li,Mg,Mn,Mo,Na,Ni,Pb,Sb,Se,Sn,Sr,Ti,Tl,V
CRI01	CRI01	1	1530	Ag,Al,As,B,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Li,Mg,Mn,Mo,Na,Ni,Pb,Sb,Se,Sn,Sr,Ti,Tl,V,Zn
ICSA01	ICSA01	1	1534	Ag,Al,As,B,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Li,Mg,Mn,Mo,Na,Ni,Pb,Sb,Se,Sn,Sr,Ti,Tl,V,Zn
ICSAB01	ICSAB01	1	1549	Ag,Al,As,B,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Li,Mg,Mn,Mo,Na,Ni,Pb,Sb,Se,Sn,Sr,Ti,Tl,V
CCV01	CCV01	1	1602	Ag,Al,As,B,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Li,Mg,Mn,Mo,Na,Ni,Pb,Sb,Se,Sn,Sr,Ti,Tl,V,Zn
CCB01	CCB01	1	1606	Ag,Al,As,B,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Li,Mg,Mn,Mo,Na,Ni,Pb,Sb,Se,Sn,Sr,Ti,Tl,V
CCV02	CCV02	1	1652	Ag,Al,As,B,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Li,Mg,Mn,Mo,Na,Ni,Pb,Sb,Se,Sn,Sr,Ti,Tl,V
CCB02	CCB02	1	1656	Ag,Al,As,B,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Li,Mg,Mn,Mo,Na,Ni,Pb,Sb,Se,Sn,Sr,Ti,Tl,V,Zn
CCV03	CCV03	1	1741	Ag,Al,As,B,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Li,Mg,Mn,Mo,Na,Ni,Pb,Sb,Se,Sn,Sr,Ti,Tl,V
CCB03	CCB03	1	1745	Ag,Al,As,B,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Li,Mg,Mn,Mo,Na,Ni,Pb,Sb,Se,Sn,Sr,Ti,Tl,V,Zn
CCV04	CCV04	1	1828	Ag,Al,As,B,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Li,Mg,Mn,Mo,Na,Ni,Pb,Sb,Se,Sn,Sr,Ti,Tl,V,Zn
CCB04	CCB04	1	1832	Ag,Al,As,B,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Li,Mg,Mn,Mo,Na,Ni,Pb,Sb,Se,Sn,Sr,Ti,Tl,V,Zn
Q1872-10	HW0425-PT-MET-SOIL	1	1837	Ag,Al,As,B,Ba,Be,Ca,Co,Cr,Cu,Fe,K,Li,Mg,Mn,Mo,Na,Ni,Pb,Sb,Se,Sn,Sr,Ti,Tl,V,Zn
Q1872-10	HW0425-PT-MET-SOIL	5	1846	Cd
CCV05	CCV05	1	1858	Ag,Al,As,B,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Li,Mg,Mn,Mo,Na,Ni,Pb,Sb,Se,Sn,Sr,Ti,Tl,V,Zn
CCB05	CCB05	1	1902	Ag,Al,As,B,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Li,Mg,Mn,Mo,Na,Ni,Pb,Sb,Se,Sn,Sr,Ti,Tl,V,Zn
PB167748BL	PB167748BL	1	1922	Ag,Al,As,B,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Li,Mg,Mn,Mo,Na,Ni,Pb,Sb,Se,Sn,Sr,Ti,Tl,V,Zn
PB167748BS	PB167748BS	1	1926	Ag,Al,As,B,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Li,Mg,Mn,Mo,Na,Ni,Pb,Sb,Se,Sn,Sr,Ti,Tl,V,Zn
CCV06	CCV06	1	1930	Ag,Al,As,B,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Li,Mg,Mn,Mo,Na,Ni,Pb,Sb,Se,Sn,Sr,Ti,Tl,V,Zn
CCB06	CCB06	1	1934	Ag,Al,As,B,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Li,Mg,Mn,Mo,Na,Ni,Pb,Sb,Se,Sn,Sr,Ti,Tl,V,Zn

METAL
RAW DATA

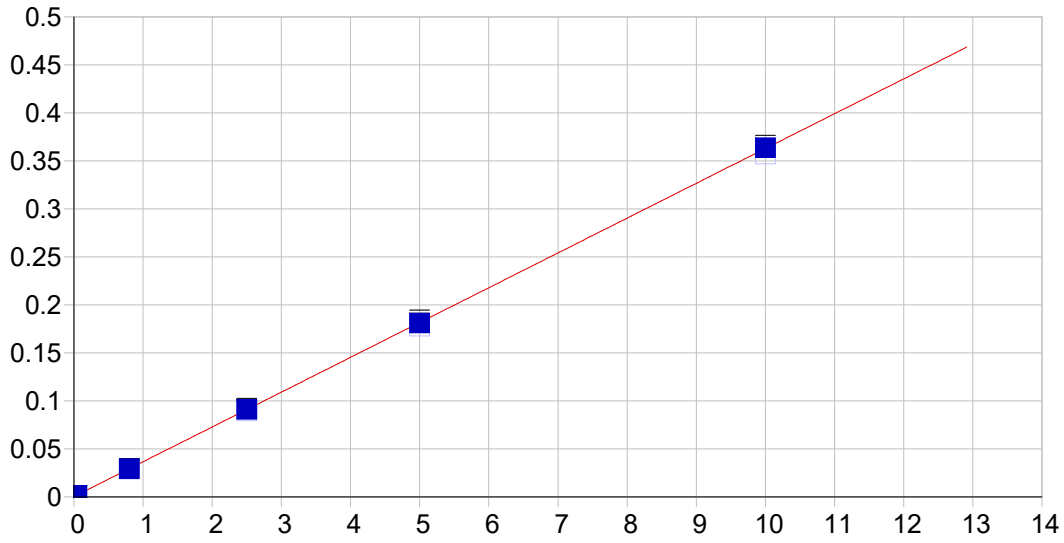


As 189.042 {479}

Date of Fit:	5/30/2025 14:40:50	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000121	Re-Slope:	1.000000
A1 (Gain):	0.065664	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999987	Status:	OK.
Std Error of Est:	0.000008		
Predicted MDL:	0.002361		
Predicted MQL:	0.007871		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00012	.000	1
S1	.02000	.02108	.001	5.38	.00126	.000	1
S3	2.5000	2.4823	-.018	-.709	.16270	.001	1
S4	5.0000	4.9760	-.024	-.480	.32627	.002	1
S5	10.000	10.043	.043	.428	.65862	.002	1
S2	.80000	.79790	-.002	-.263	.05222	.000	1

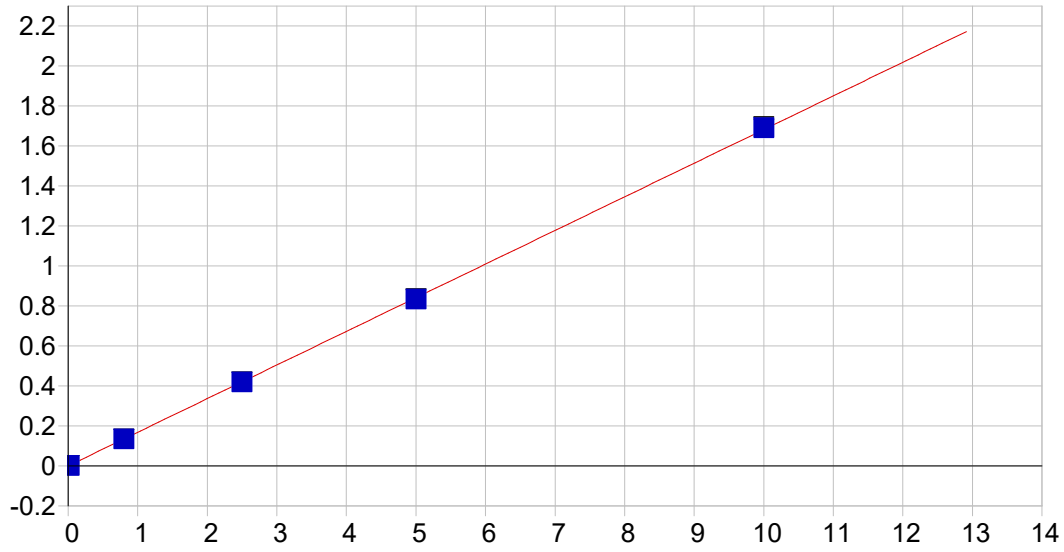


Tl 190.856 {477}

Date of Fit:	5/30/2025 14:40:50	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000376	Re-Slope:	1.000000
A1 (Gain):	0.036252	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999982	Status:	OK.
Std Error of Est:	0.000007		
Predicted MDL:	0.003577		
Predicted MQL:	0.011922		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00038	.000	1
S1	.04000	.03546	-.005	-11.3	.00157	.000	1
S3	2.5000	2.5041	.004	.166	.08949	.001	1
S4	5.0000	4.9838	-.016	-.324	.17772	.003	1
S5	10.000	10.019	.019	.195	.35694	.003	1
S2	.80000	.79689	-.003	-.388	.02873	.000	1

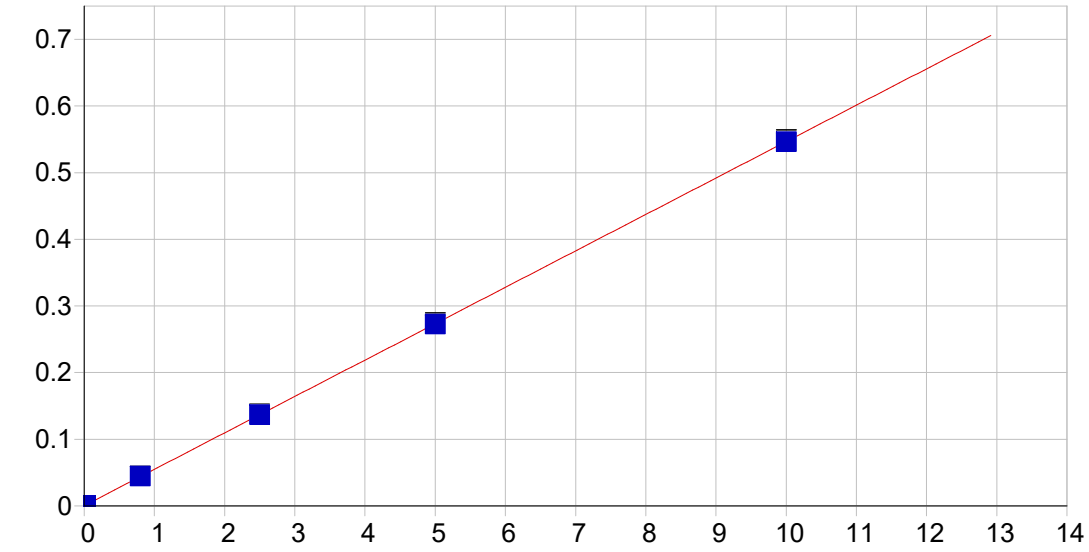


Pb 220.353 {453}

Date of Fit:	5/30/2025 14:40:50	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000057	Re-Slope:	1.000000
A1 (Gain):	0.168227	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999981	Status:	OK.
Std Error of Est:	0.000019		
Predicted MDL:	0.001967		
Predicted MQL:	0.006557		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00006	.000	1
S1	.01200	.01102	-.001	-8.21	.00187	.000	1
S3	2.5000	2.4940	-.006	-.241	.41918	.001	1
S4	5.0000	4.9597	-.040	-.805	.83355	.002	1
S5	10.000	10.052	.052	.517	1.6893	.006	1
S2	.80000	.79558	-.004	-.553	.13376	.001	1

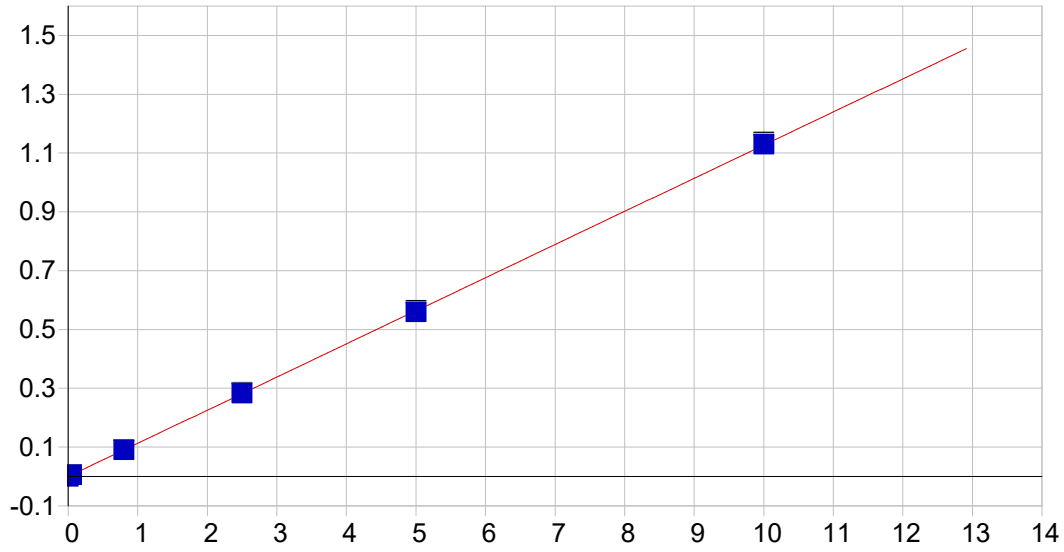


Se 196.090 {472}

Date of Fit:	5/30/2025 14:40:50	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000277	Re-Slope:	1.000000
A1 (Gain):	0.054630	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999990	Status:	OK.
Std Error of Est:	0.000006		
Predicted MDL:	0.003518		
Predicted MQL:	0.011727		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00028	.000	1
S1	.02000	.02222	.002	11.1	.00149	.000	1
S3	2.5000	2.5014	.001	.057	.13688	.001	1
S4	5.0000	4.9900	-.010	-.199	.27278	.002	1
S5	10.000	9.9978	-.002	-.022	.54626	.003	1
S2	.80000	.80851	.009	1.06	.04443	.000	1

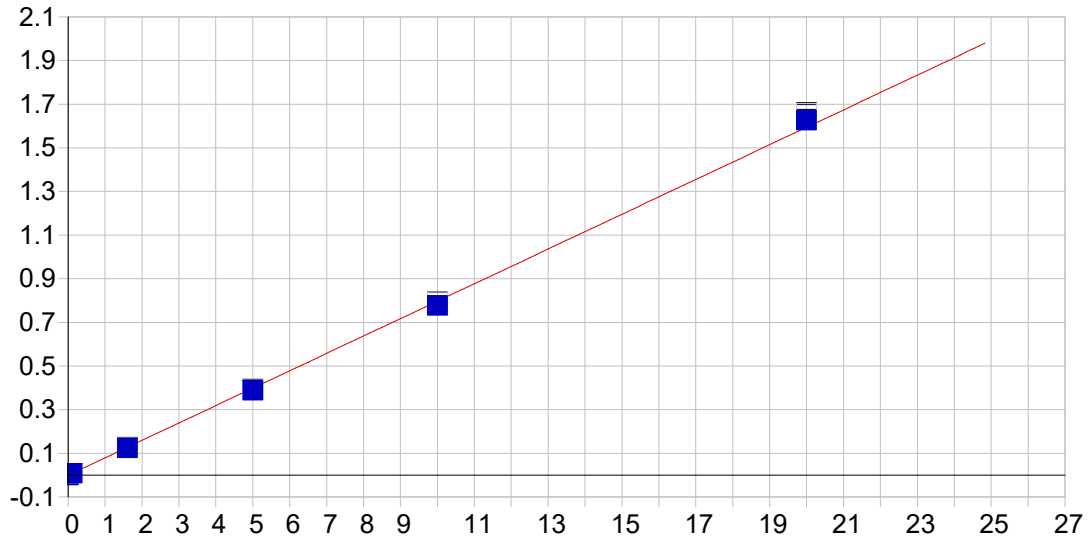


Sb 206.833 {463}

Date of Fit:	5/30/2025 14:40:50	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000172	Re-Slope:	1.000000
A1 (Gain):	0.112691	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999989	Status:	OK.
Std Error of Est:	0.000019		
Predicted MDL:	0.002334		
Predicted MQL:	0.007779		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00017	.000	1
S1	.05000	.04983	-.000	-.345	.00580	.000	1
S3	2.5000	2.5111	.011	.442	.28391	.002	1
S4	5.0000	4.9639	-.036	-.722	.56109	.004	1
S5	10.000	10.028	.028	.277	1.1333	.005	1
S2	.80000	.79748	-.003	-.315	.09029	.000	1

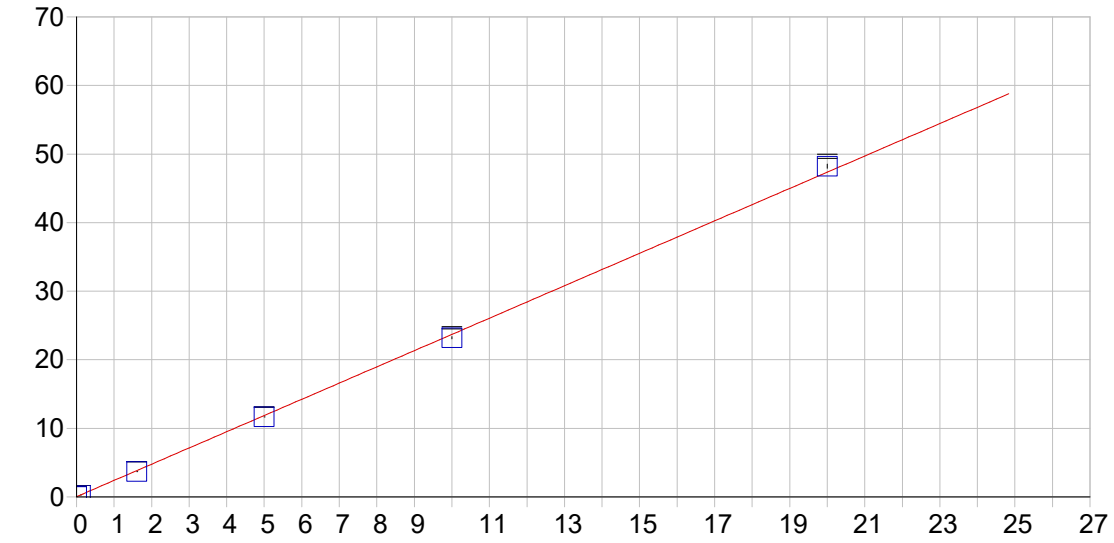


Al 396.152 { 85}

Date of Fit:	5/30/2025 14:40:50	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000132	Re-Slope:	1.000000
A1 (Gain):	0.079708	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999767	Status:	OK.
Std Error of Est:	0.000130		
Predicted MDL:	0.008564		
Predicted MQL:	0.028545		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00013	.001	1
S1	.10000	.10097	.001	.975	.00853	.000	1
S3	5.0000	4.8817	-.118	-2.37	.39671	.000	1
S4	10.000	9.7586	-.241	-2.41	.79316	.000	1
S5	20.000	20.400	.400	2.00	1.6569	.004	1
S2	1.6000	1.5583	-.042	-2.61	.12655	.000	1

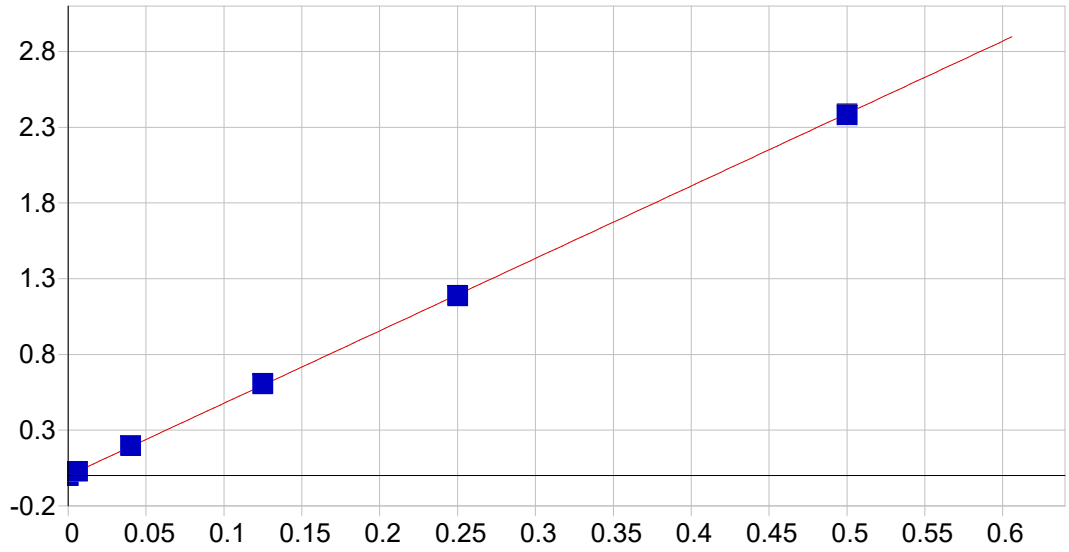


Ba 493.409 { 68}

Date of Fit:	5/30/2025 14:40:50	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.042592	Re-Slope:	1.000000
A1 (Gain):	2.365466	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999784	Status:	OK.
Std Error of Est:	0.003646		
Predicted MDL:	0.000896		
Predicted MQL:	0.002986		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.04262	.001	1
S1	.10000	.09405	-.006	-5.95	.26508	.002	1
S3	5.0000	4.9094	-.091	-1.81	11.656	.011	1
S4	10.000	9.7891	-.211	-2.11	23.198	.167	1
S5	20.000	20.371	.371	1.86	48.230	.282	1
S2	1.6000	1.5364	-.064	-3.97	3.6770	.006	1

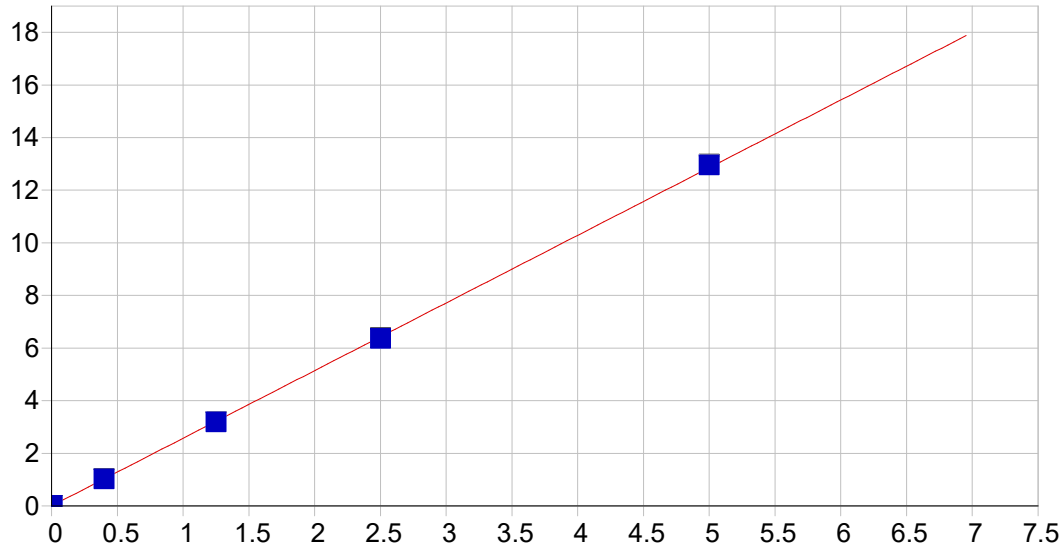


Be 234.861 {144}

Date of Fit:	5/30/2025 14:40:50	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000366	Re-Slope:	1.000000
A1 (Gain):	4.781384	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999949	Status:	OK.
Std Error of Est:	0.000139		
Predicted MDL:	0.000052		
Predicted MQL:	0.000173		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00037	.000	1
S1	.00600	.00611	.000	1.81	.02863	.000	1
S3	.12500	.12678	.002	1.42	.60312	.004	1
S4	.25000	.24835	-.002	-.658	1.1818	.003	1
S5	.50000	.49835	-.002	-.331	2.3717	.005	1
S2	.04000	.04141	.001	3.53	.19679	.001	1

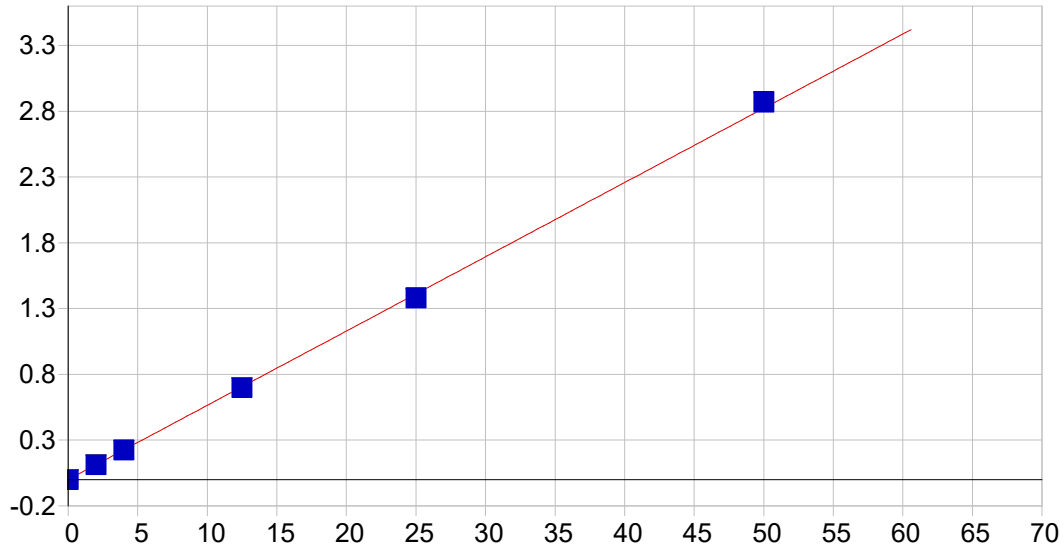


Cd 226.502 {449}

Date of Fit:	5/30/2025 14:40:50	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000106	Re-Slope:	1.000000
A1 (Gain):	2.571385	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999967	Status:	OK.
Std Error of Est:	0.000190		
Predicted MDL:	0.000093		
Predicted MQL:	0.000310		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00011	.000	1
S1	.00600	.00607	.000	1.15	.01578	.000	1
S3	1.2500	1.2409	-.009	-.725	3.1936	.010	1
S4	2.5000	2.4749	-.025	-1.00	6.3692	.018	1
S5	5.0000	5.0368	.037	.735	12.962	.032	1
S2	.40000	.39728	-.003	-.680	1.0225	.002	1

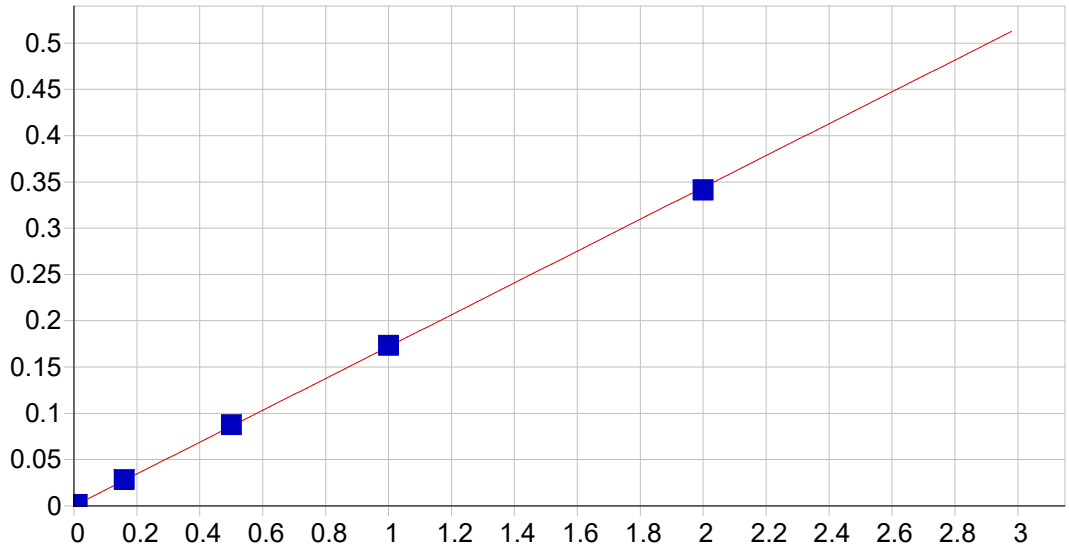


Ca 373.690 { 90}

Date of Fit:	5/30/2025 14:40:50	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000328	Re-Slope:	1.000000
A1 (Gain):	0.056452	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999842	Status:	OK.
Std Error of Est:	0.000532		
Predicted MDL:	0.009414		
Predicted MQL:	0.031381		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00011	.000	.000	.00033	.001	1
S2	4.0000	3.9528	-.047	-1.18	.22347	.000	1
S3	12.500	12.343	-.157	-1.26	.69710	.003	1
S4	25.000	24.437	-.563	-2.25	1.3798	.001	1
S5	50.000	50.815	.815	1.63	2.8689	.005	1
S1	2.0000	1.9528	-.047	-2.36	.11057	.000	1

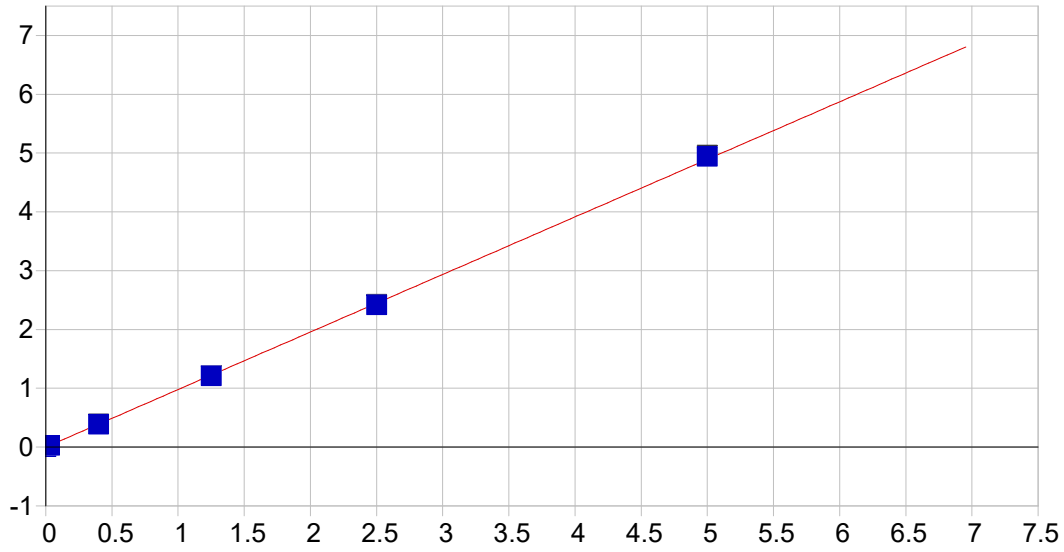


Cr 267.716 {126}

Date of Fit:	5/30/2025 14:40:50	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000086	Re-Slope:	1.000000
A1 (Gain):	0.172000	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999943	Status:	OK.
Std Error of Est:	0.000014		
Predicted MDL:	0.000454		
Predicted MQL:	0.001512		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00009	.000	1
S1	.01000	.00995	-.000	-.485	.00180	.000	1
S3	.50000	.50826	.008	1.65	.08757	.000	1
S4	1.0000	1.0058	.006	.584	.17323	.000	1
S5	2.0000	1.9822	-.018	-.890	.34130	.001	1
S2	.16000	.16375	.004	2.34	.02827	.000	1

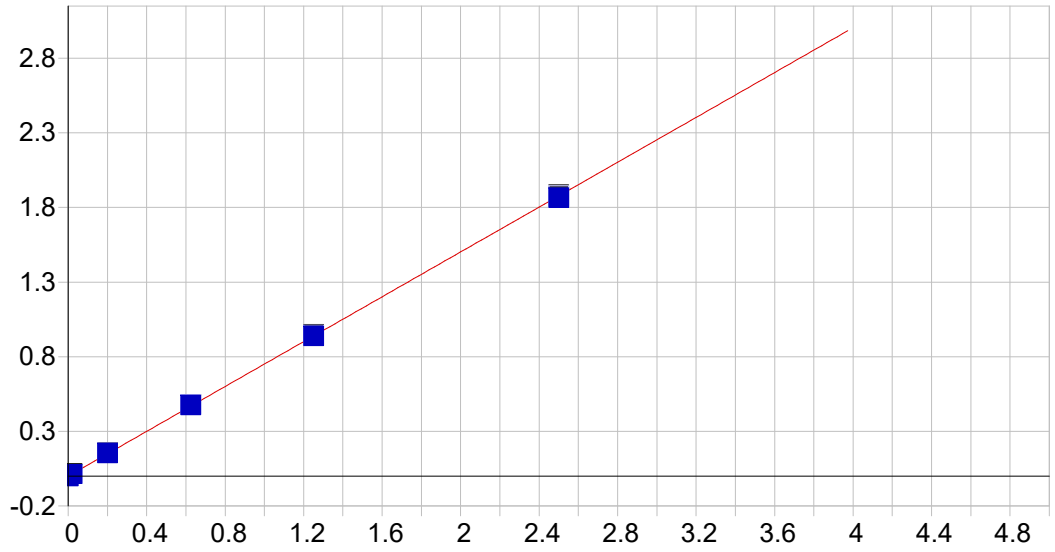


Co 228.616 {448}

Date of Fit:	5/30/2025 14:40:50	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000026	Re-Slope:	1.000000
A1 (Gain):	0.978656	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999945	Status:	OK.
Std Error of Est:	0.000209		
Predicted MDL:	0.000261		
Predicted MQL:	0.000870		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00003	.000	1
S1	.03000	.02984	-.000	-.521	.02911	.000	1
S3	1.2500	1.2374	-.013	-1.01	1.2131	.003	1
S4	2.5000	2.4684	-.032	-1.26	2.4199	.006	1
S5	5.0000	5.0478	.048	.955	4.9484	.017	1
S2	.40000	.39657	-.003	-.857	.38880	.000	1

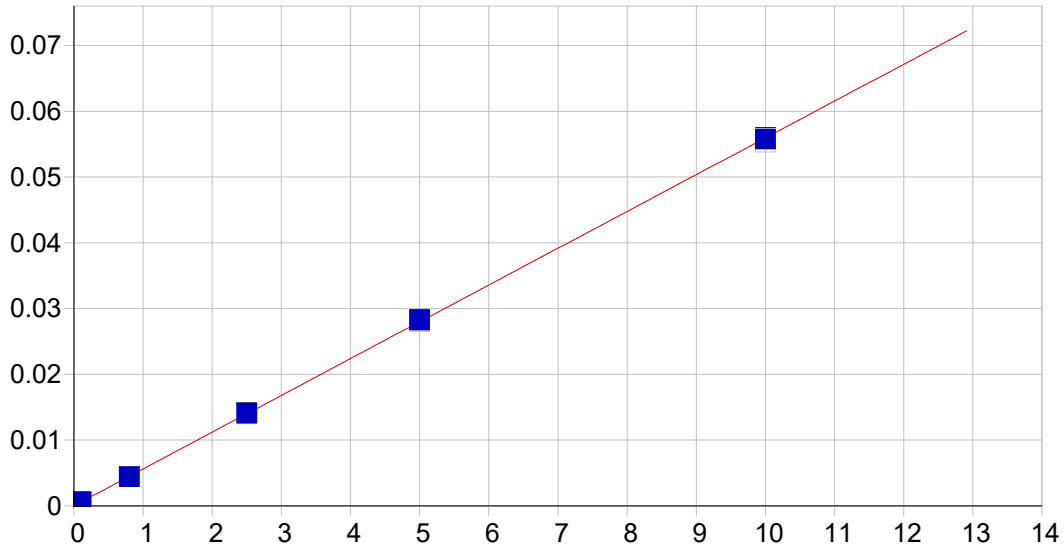


Cu 224.700 {450}

Date of Fit:	5/30/2025 14:40:50	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000700	Re-Slope:	1.000000
A1 (Gain):	0.751380	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999946	Status:	OK.
Std Error of Est:	0.000093		
Predicted MDL:	0.000425		
Predicted MQL:	0.001416		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00070	.000	1
S1	.02000	.02135	.001	6.73	.01549	.000	1
S3	.62500	.63425	.009	1.48	.47929	.001	1
S4	1.2500	1.2504	.000	.030	.94565	.004	1
S5	2.5000	2.4833	-.017	-.670	1.8789	.006	1
S2	.20000	.20577	.006	2.89	.15501	.000	1

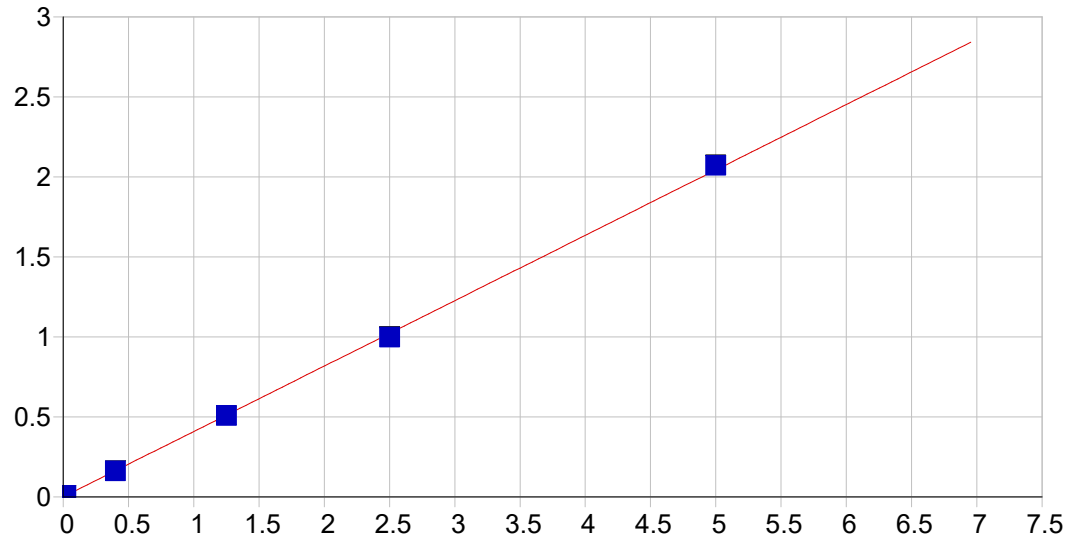


Fe 240.488 {140}

Date of Fit:	5/30/2025 14:40:50	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000032	Re-Slope:	1.000000
A1 (Gain):	0.005592	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999981	Status:	OK.
Std Error of Est:	0.000002		
Predicted MDL:	0.004901		
Predicted MQL:	0.016336		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00003	.000	1
S1	.10000	.09849	-.002	-1.51	.00058	.000	1
S3	2.5000	2.5117	.012	.466	.01396	.000	1
S4	5.0000	5.0392	.039	.784	.02797	.000	1
S5	10.000	9.9614	-.039	-.386	.05526	.000	1
S2	.80000	.78931	-.011	-1.34	.00441	.000	1

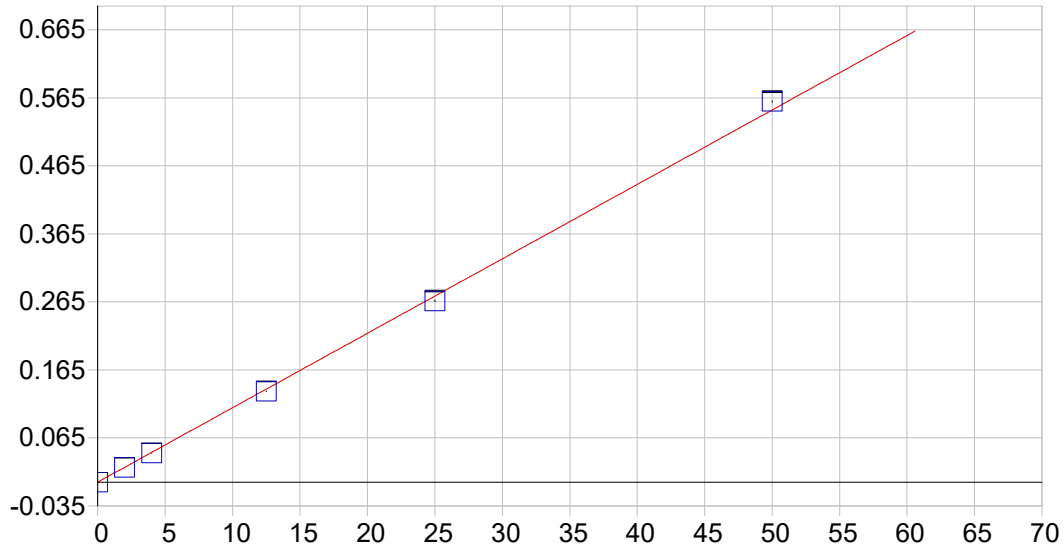


Mn 257.610 {131}

Date of Fit:	5/30/2025 14:40:50	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000210	Re-Slope:	1.000000
A1 (Gain):	0.408672	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999866	Status:	OK.
Std Error of Est:	0.000111		
Predicted MDL:	0.000464		
Predicted MQL:	0.001547		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00021	.000	1
S1	.02000	.02036	.000	1.82	.00854	.000	1
S3	1.2500	1.2401	-.010	-.791	.50711	.001	1
S4	2.5000	2.4412	-.059	-2.35	.99808	.004	1
S5	5.0000	5.0704	.070	1.41	2.0727	.002	1
S2	.40000	.39789	-.002	-.527	.16285	.001	1

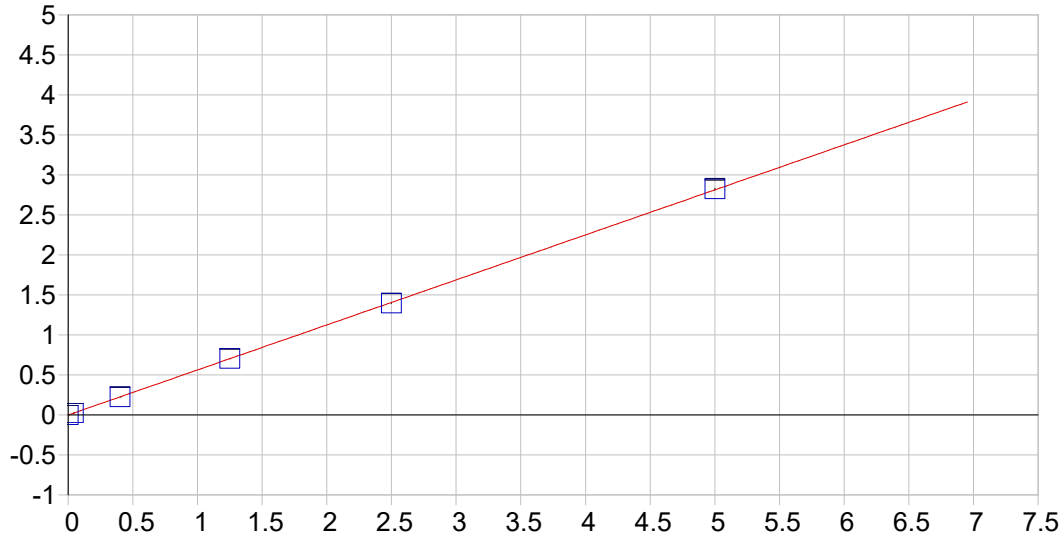


Mg 279.079 {121}

Date of Fit:	5/30/2025 14:40:50	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000098	Re-Slope:	1.000000
A1 (Gain):	0.010947	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999708	Status:	OK.
Std Error of Est:	0.000140		
Predicted MDL:	0.022636		
Predicted MQL:	0.075454		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00015	.000	.000	-.00010	.000	1
S2	4.0000	3.8899	-.110	-2.75	.04249	.000	1
S3	12.500	12.197	-.303	-2.42	.13343	.001	1
S4	25.000	24.328	-.672	-2.69	.26622	.001	1
S5	50.000	51.125	1.13	2.25	.55959	.001	1
S1	2.0000	1.9603	-.040	-1.98	.02136	.000	1

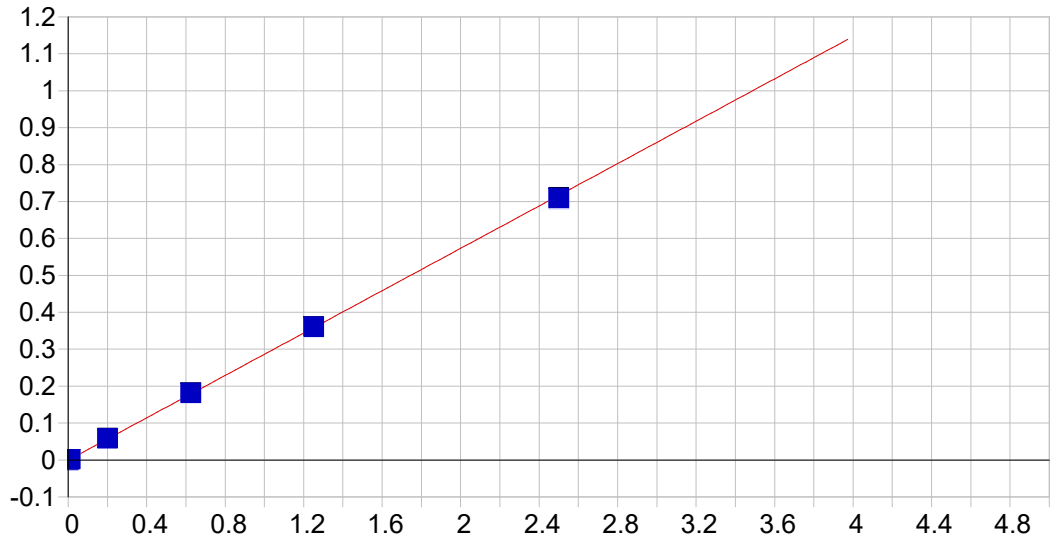


Ni 231.604 {446}

Date of Fit:	5/30/2025 14:40:50	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000422	Re-Slope:	1.000000
A1 (Gain):	0.562655	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999986	Status:	OK.
Std Error of Est:	0.000070		
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	-.00042	.000	1
S1	.04000	.04040	.000	.995	.02231	.000	1
S3	1.2500	1.2510	.001	.078	.70345	.002	1
S4	2.5000	2.4787	-.021	-.851	1.3943	.003	1
S5	5.0000	5.0188	.019	.375	2.8234	.009	1
S2	.40000	.40112	.001	.281	.22527	.000	1

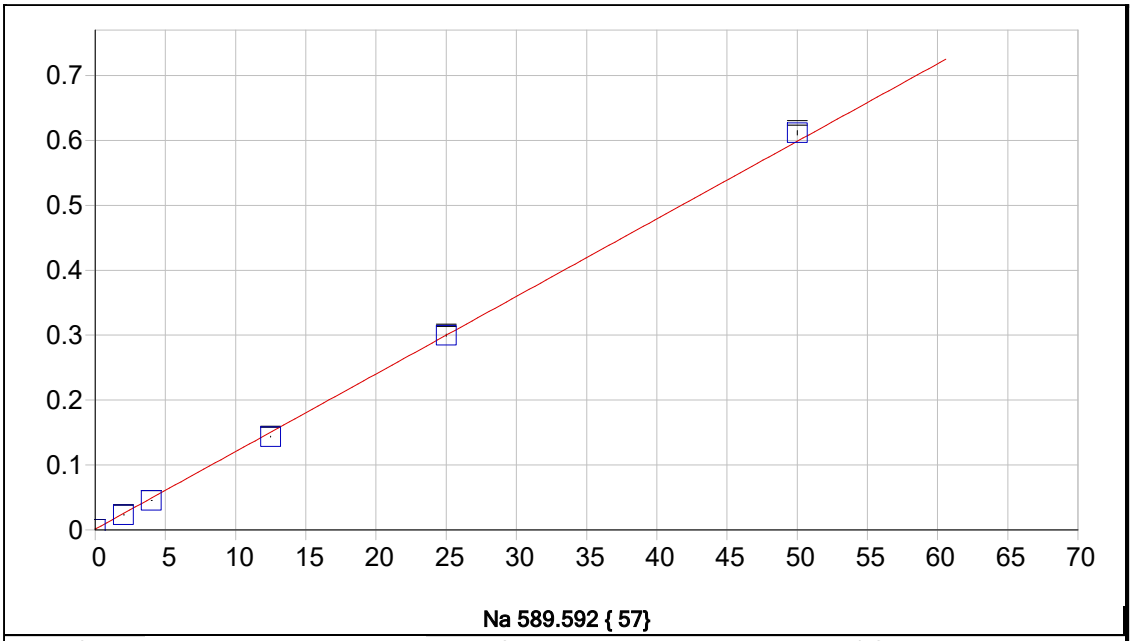


Ag 328.068 {103}

Date of Fit:	5/30/2025 14:40:50	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000529	Re-Slope:	1.000000
A1 (Gain):	0.286870	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999918	Status:	OK.
Std Error of Est:	0.000030		
Predicted MDL:	0.000452		
Predicted MQL:	0.001506		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00053	.000	1
S1	.01000	.00921	-.001	-7.86	.00209	.000	1
S3	.62500	.63471	.010	1.55	.18075	.000	1
S4	1.2500	1.2597	.010	.779	.35926	.000	1
S5	2.5000	2.4749	-.025	-1.00	.70625	.002	1
S2	.20000	.20644	.006	3.22	.05844	.000	1

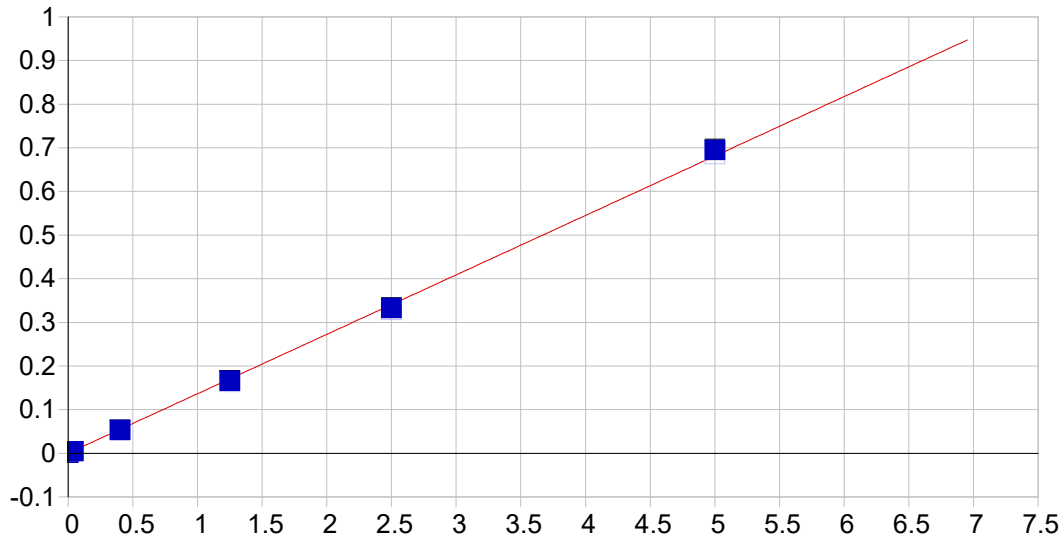


Na 589.592 { 57}

Date of Fit:	5/30/2025 14:40:50	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001260	Re-Slope:	1.000000
A1 (Gain):	0.011946	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999505	Status:	OK.
Std Error of Est:	0.000199		
Predicted MDL:	0.019412		
Predicted MQL:	0.064707		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00039	.000	.000	.00126	.000	1
S2	4.0000	3.6917	-.308	-7.71	.04536	.000	1
S3	12.500	11.906	-.594	-4.75	.14349	.001	1
S4	25.000	24.991	-.009	-.034	.29981	.002	1
S5	50.000	51.093	1.09	2.19	.61163	.003	1
S1	2.0000	1.8180	-.182	-9.10	.02298	.000	1

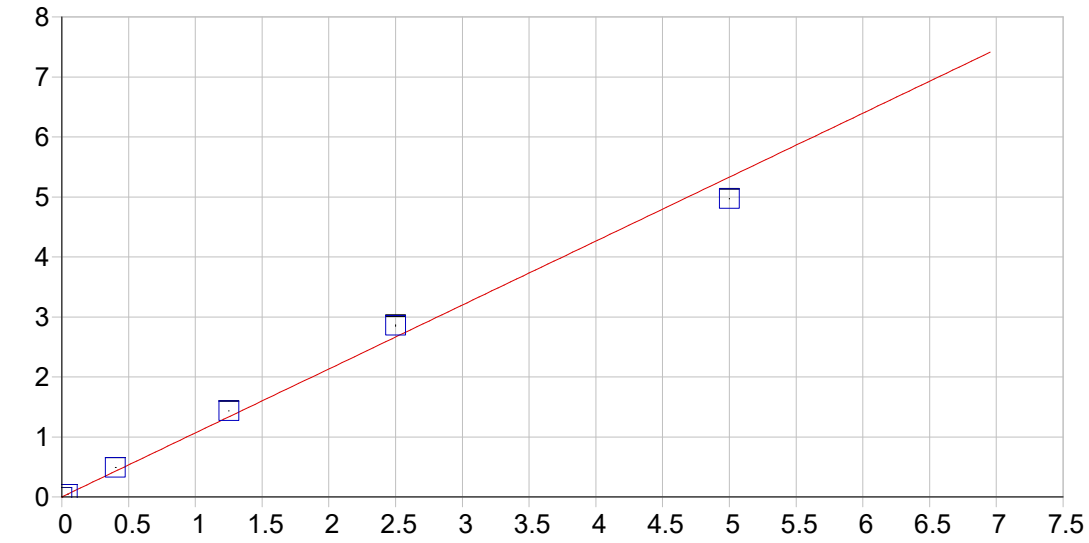


V 292.402 {115}

Date of Fit:	5/30/2025 14:40:50	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000118	Re-Slope:	1.000000
A1 (Gain):	0.136197	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999726	Status:	OK.
Std Error of Est:	0.000074		
Predicted MDL:	0.002123		
Predicted MQL:	0.007075		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00012	.000	1
S1	.04000	.03588	-.004	-10.3	.00480	.000	1
S3	1.2500	1.2187	-.031	-2.51	.16361	.001	1
S4	2.5000	2.4439	-.056	-2.24	.32800	.001	1
S5	5.0000	5.1027	.103	2.05	.68516	.002	1
S2	.40000	.38876	-.011	-2.81	.05227	.000	1

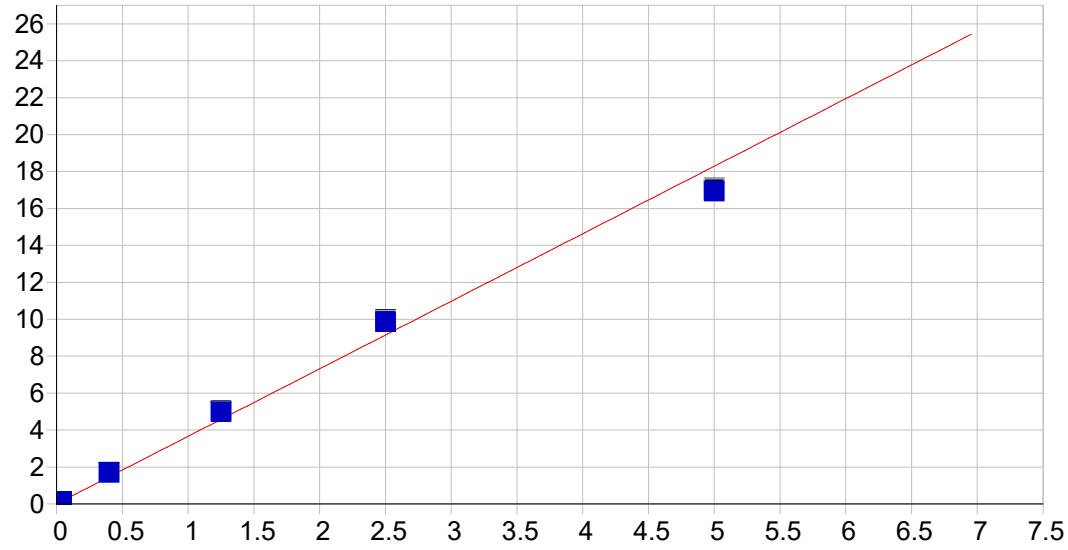


Zn 206.200 {464}

Date of Fit:	5/30/2025 14:40:50	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000780	Re-Slope:	1.000000
A1 (Gain):	1.065731	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.997200	Status:	OK.
Std Error of Est:	0.001875		
Predicted MDL:	0.000191		
Predicted MQL:	0.000637		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00077	.000	1
S1	.04000	.04113	.001	2.82	.04461	.000	1
S3	1.2500	1.3461	.096	7.68	1.4353	.005	1
S4	2.5000	2.6799	.180	7.20	2.8569	.013	1
S5	5.0000	4.6639	-.336	-6.72	4.9712	.005	1
S2	.40000	.45903	.059	14.8	.48998	.001	1

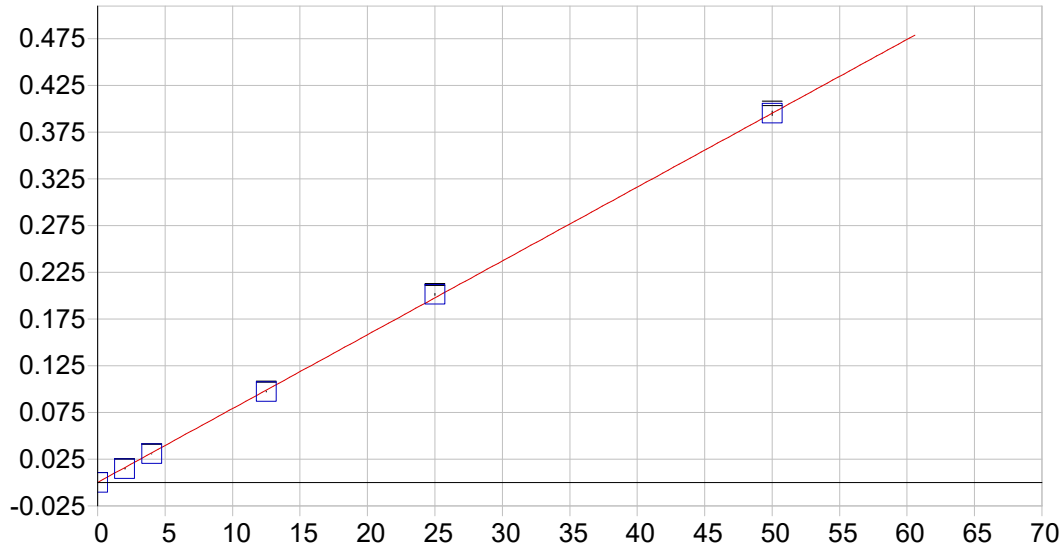


Zn 213.856 {158}

Date of Fit:	5/30/2025 14:40:50	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.003229	Re-Slope:	1.000000
A1 (Gain):	3.656934	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.996682	Status:	OK.
Std Error of Est:	0.007057		
Predicted MDL:	0.000331		
Predicted MQL:	0.001104		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00319	.002	1
S1	.04000	.04090	.001	2.24	.15381	.002	1
S3	1.2500	1.3621	.112	8.96	5.0160	.025	1
S4	2.5000	2.6955	.196	7.82	9.9242	.051	1
S5	5.0000	4.6301	-.370	-7.40	17.063	.046	1
S2	.40000	.46137	.061	15.3	1.7006	.015	1

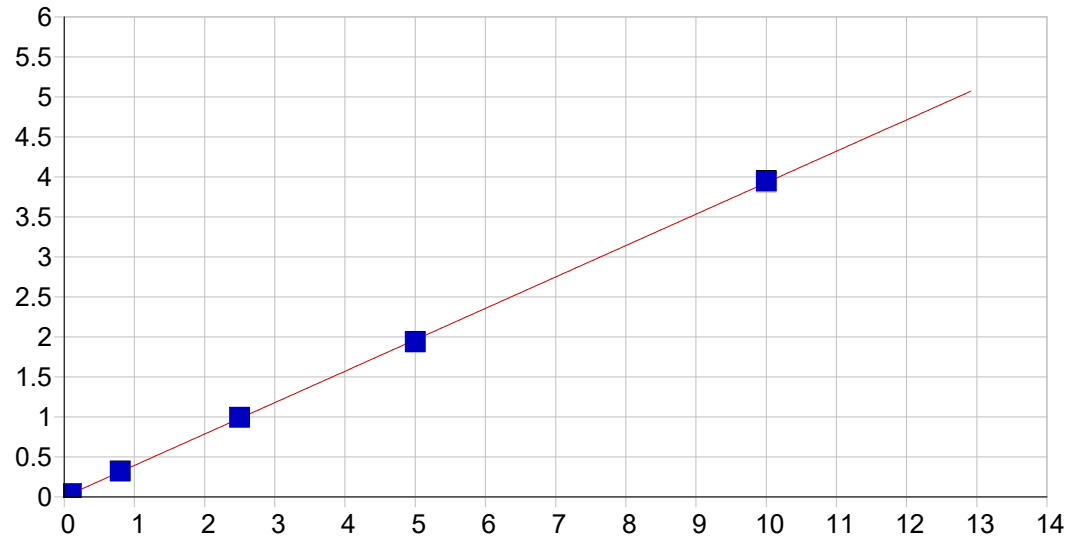


K 766.490 { 44}

Date of Fit:	5/30/2025 14:40:50	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000131	Re-Slope:	1.000000
A1 (Gain):	0.007903	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999853	Status:	OK.
Std Error of Est:	0.000072		
Predicted MDL:	0.037440		
Predicted MQL:	0.124800		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00021	.000	.000	.00013	.000	1
S2	4.0000	3.8784	-.122	-3.04	.03078	.000	1
S3	12.500	12.306	-.194	-1.55	.09738	.000	1
S4	25.000	25.468	.468	1.87	.20140	.001	1
S5	50.000	50.003	.003	.006	.39530	.002	1
S1	2.0000	1.8448	-.155	-7.76	.01471	.000	1

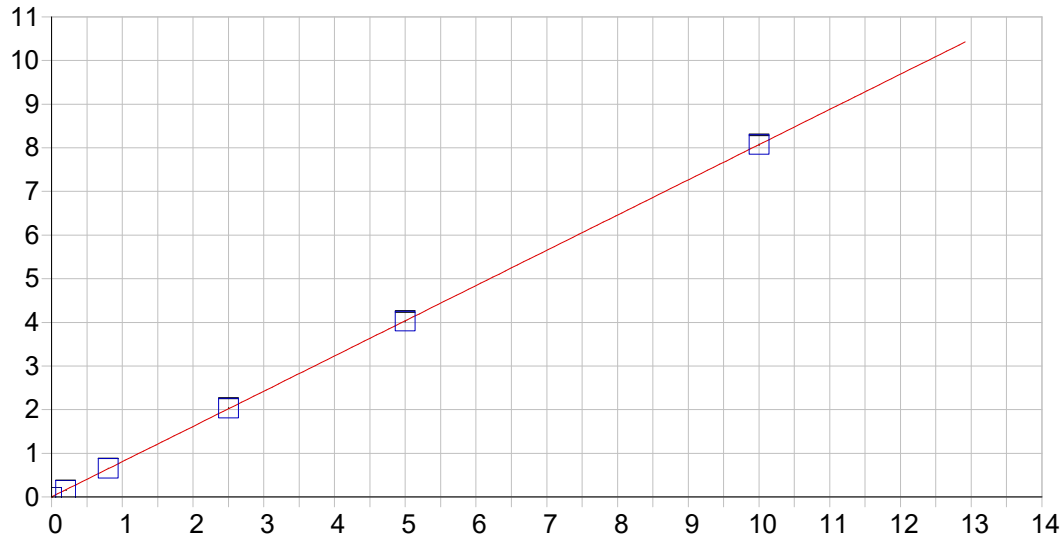


B 249.678 {135}

Date of Fit:	5/30/2025 14:40:50	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000616	Re-Slope:	1.000000
A1 (Gain):	0.392641	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999953	Status:	OK.
Std Error of Est:	0.000199		
Predicted MDL:	0.000820		
Predicted MQL:	0.002735		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00062	.000	1
S1	.10000	.09696	-.003	-3.04	.03845	.000	1
S3	2.5000	2.5199	.020	.794	.98648	.007	1
S4	5.0000	4.9277	-.072	-1.45	1.9283	.007	1
S5	10.000	10.041	.041	.415	3.9292	.012	1
S2	.80000	.81400	.014	1.75	.31909	.002	1

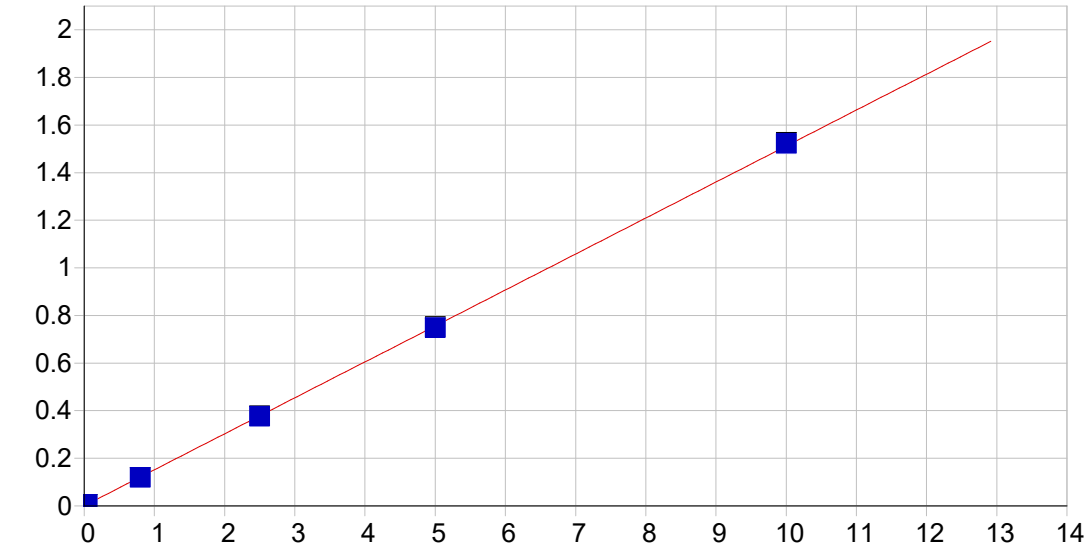


Mo 202.030 {467}

Date of Fit:	5/30/2025 14:40:50	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000229	Re-Slope:	1.000000
A1 (Gain):	0.807269	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999971	Status:	OK.
Std Error of Est:	0.000455		
Predicted MDL:	0.000266		
Predicted MQL:	0.000888		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00024	.000	1
S1	.20000	.18808	-.012	-5.96	.15206	.000	1
S3	2.5000	2.5180	.018	.720	2.0329	.010	1
S4	5.0000	4.9845	-.016	-.311	4.0240	.018	1
S5	10.000	9.9977	-.002	-.023	8.0711	.021	1
S2	.80000	.81173	.012	1.47	.65551	.002	1

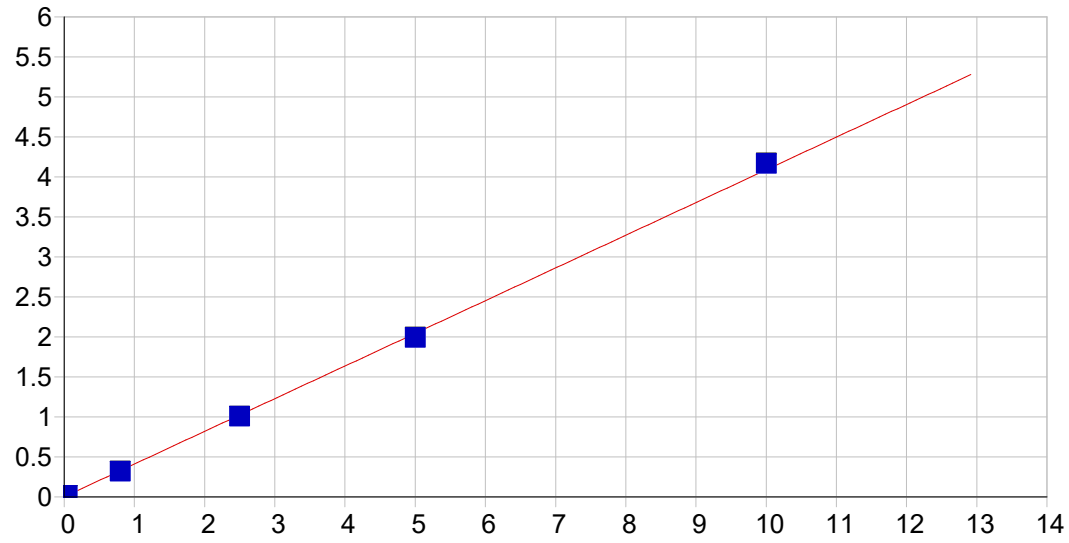


Sn 189.989 {478}

Date of Fit:	5/30/2025 14:40:50	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000604	Re-Slope:	1.000000
A1 (Gain):	0.151107	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999960	Status:	OK.
Std Error of Est:	0.000045		
Predicted MDL:	0.000755		
Predicted MQL:	0.002518		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00060	.000	1
S1	.04000	.03701	-.003	-7.48	.00619	.000	1
S3	2.5000	2.4900	-.010	-.398	.37648	.001	1
S4	5.0000	4.9540	-.046	-.920	.74842	.003	1
S5	10.000	10.073	.073	.727	1.5211	.005	1
S2	.80000	.78621	-.014	-1.72	.11928	.000	1

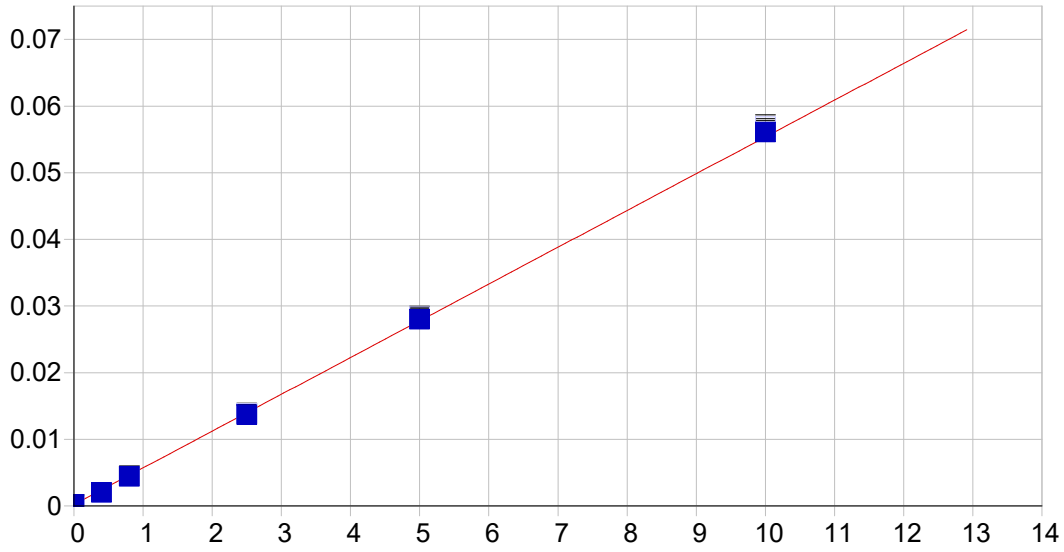


Ti 336.121 {100}

Date of Fit:	5/30/2025 14:40:50	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001763	Re-Slope:	1.000000
A1 (Gain):	0.408622	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999769	Status:	OK.
Std Error of Est:	0.000291		
Predicted MDL:	0.000815		
Predicted MQL:	0.002717		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00177	.000	1
S1	.04000	.03704	-.003	-7.40	.01689	.000	1
S3	2.5000	2.4596	-.040	-1.62	1.0064	.001	1
S4	5.0000	4.8699	-.130	-2.60	1.9910	.003	1
S5	10.000	10.193	.193	1.93	4.1654	.007	1
S2	.80000	.78030	-.020	-2.46	.32049	.001	1

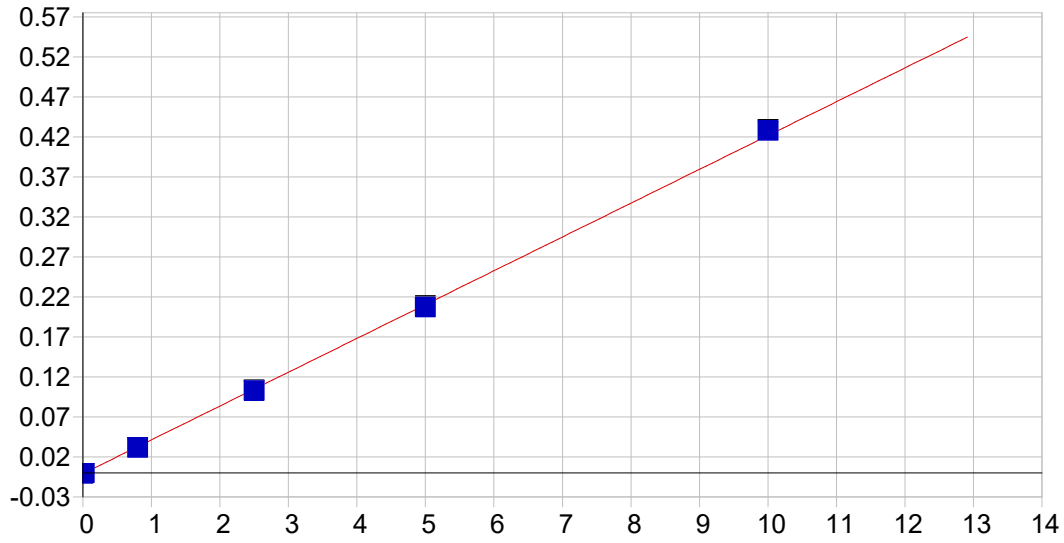


Si 288.158 {117}

Date of Fit:	5/30/2025 14:40:50	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000193	Re-Slope:	1.000000
A1 (Gain):	0.005518	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999532	Status:	OK.
Std Error of Est:	0.000018		
Predicted MDL:	0.008927		
Predicted MQL:	0.029758		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00009	.000	.000	.00019	.000	1
S1	.40000	.32668	-.073	-18.3	.00200	.000	1
S3	2.5000	2.4434	-.057	-2.26	.01388	.000	1
S4	5.0000	5.0353	.035	.706	.02839	.000	1
S5	10.000	10.127	.127	1.27	.05690	.000	1
S2	.80000	.76632	-.034	-4.21	.00449	.000	1

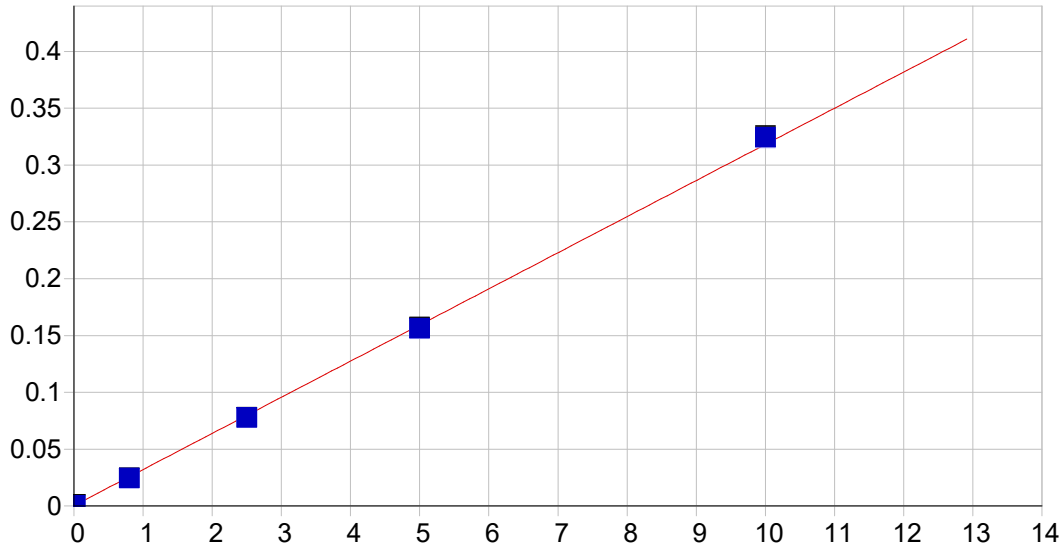


P 177.495 {490}

Date of Fit:	5/30/2025 14:40:50	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000942	Re-Slope:	1.000000
A1 (Gain):	0.042250	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999858	Status:	OK.
Std Error of Est:	0.000017		
Predicted MDL:	0.002671		
Predicted MQL:	0.008903		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00094	.000	1
S1	.02000	.02059	.001	2.94	-.00007	.000	1
S3	2.5000	2.4587	-.041	-1.65	.10292	.001	1
S4	5.0000	4.9250	-.075	-1.50	.20711	.001	1
S5	10.000	10.147	.147	1.47	.42769	.001	1
S2	.80000	.76889	-.031	-3.89	.03154	.000	1

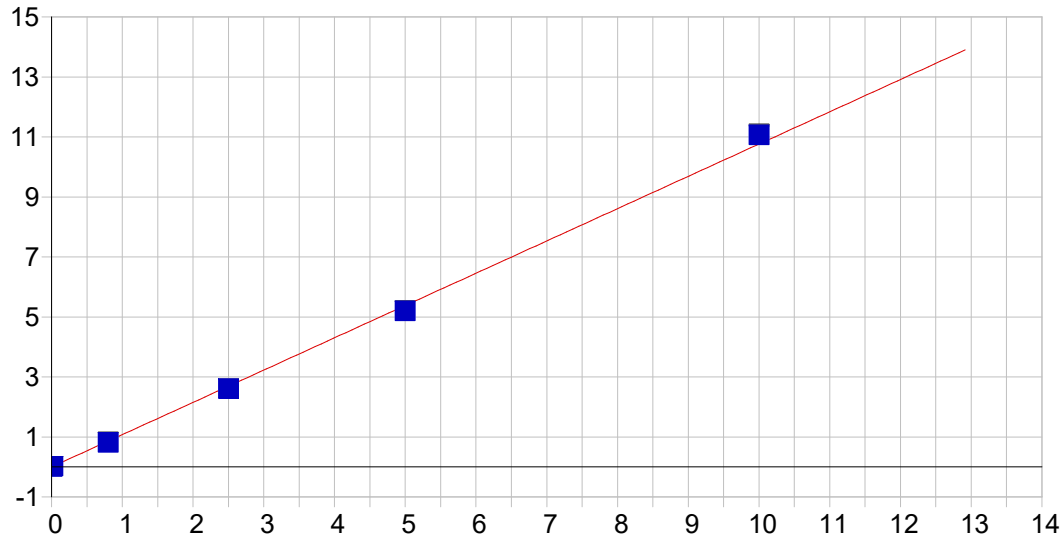


S 182.034 {485}

Date of Fit:	5/30/2025 14:40:50	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000235	Re-Slope:	1.000000
A1 (Gain):	0.031802	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999728	Status:	OK.
Std Error of Est:	0.000017		
Predicted MDL:	0.003257		
Predicted MQL:	0.010856		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00024	.000	1
S1	.02000	.02296	.003	14.8	.00094	.000	1
S3	2.5000	2.4357	-.064	-2.57	.07749	.000	1
S4	5.0000	4.9047	-.095	-1.91	.15580	.001	1
S5	10.000	10.198	.198	1.98	.32371	.001	1
S2	.80000	.75909	-.041	-5.11	.02431	.000	1

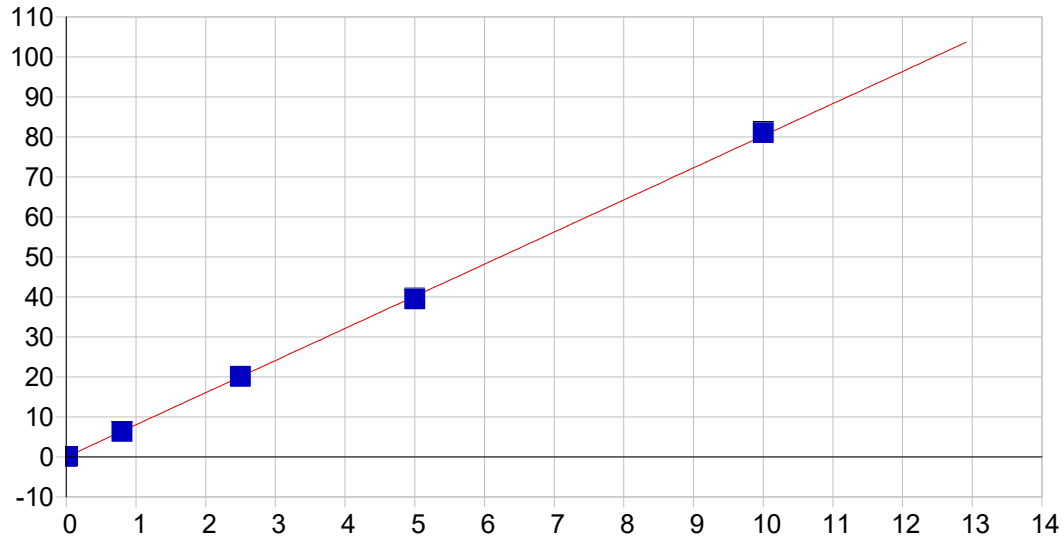


Li 670.784 { 50}

Date of Fit:	5/30/2025 14:40:50	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001794	Re-Slope:	1.000000
A1 (Gain):	1.076311	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999520	Status:	OK.
Std Error of Est:	0.000782		
Predicted MDL:	0.001029		
Predicted MQL:	0.003431		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00179	.000	1
S5	10.000	10.280	.280	2.80	11.067	.027	1
S4	5.0000	4.8318	-.168	-3.36	5.2008	.011	1
S3	2.5000	2.4253	-.075	-2.99	2.6096	.006	1
S1	.02000	.02097	.001	4.85	.02111	.001	1
S2	.80000	.76181	-.038	-4.77	.81849	.001	1

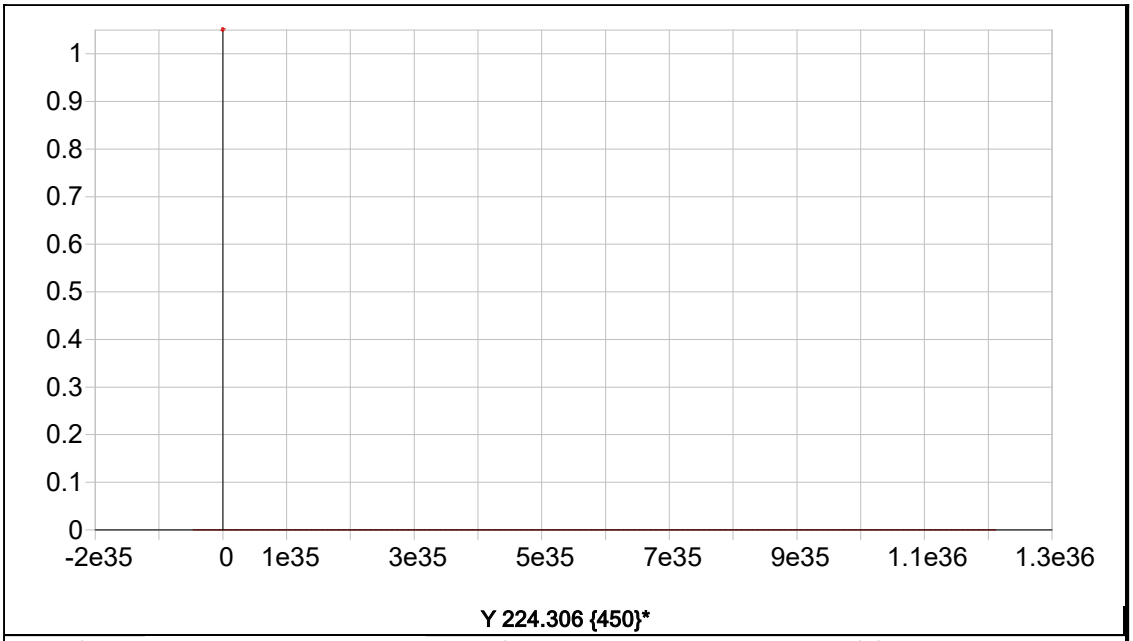


Sr 407.771 { 83}

Date of Fit:	5/30/2025 14:40:50	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000498	Re-Slope:	1.000000
A1 (Gain):	8.029351	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999931	Status:	OK.
Std Error of Est:	0.002207		
Predicted MDL:	0.000082		
Predicted MQL:	0.000274		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00050	.000	1
S1	.02000	.02032	.000	1.61	.16345	.001	1
S3	2.5000	2.5020	.002	.079	20.108	.029	1
S4	5.0000	4.9142	-.086	-1.72	39.496	.193	1
S5	10.000	10.094	.094	.944	81.128	.230	1
S2	.80000	.78911	-.011	-1.36	6.3417	.010	1

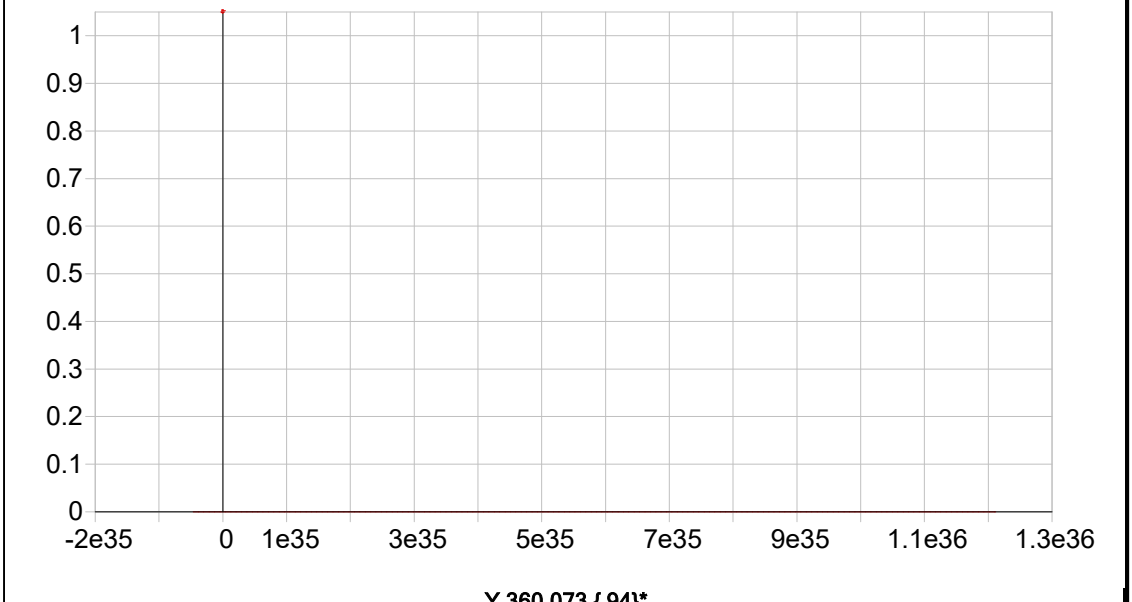


Y 224.306 {450}*

Date of Fit:	5/30/2025 14:40:50	Type of Fit:	Linear	Weighting:	1/Conc

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

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



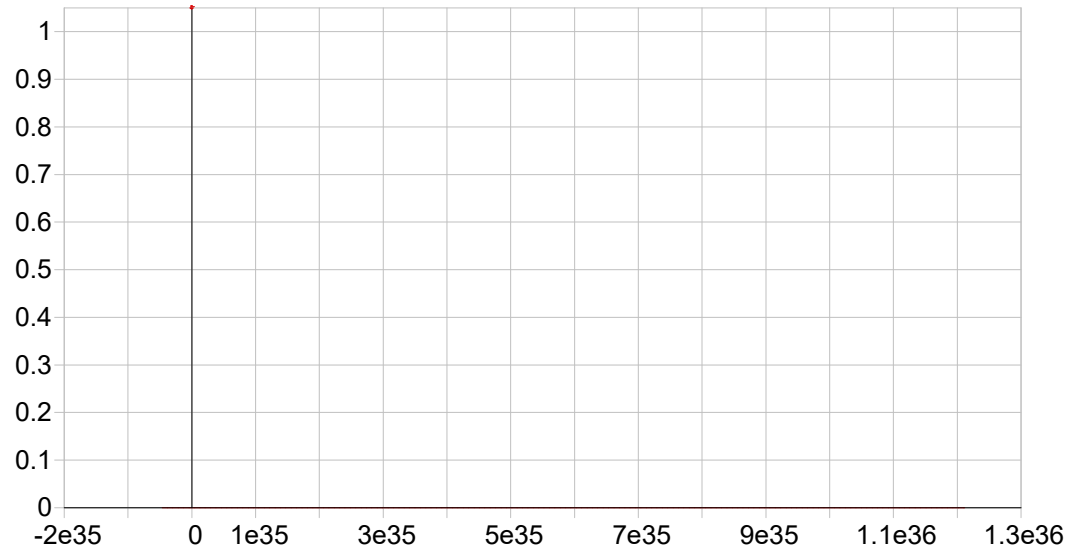
Y 360.073 { 94}*

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

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

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

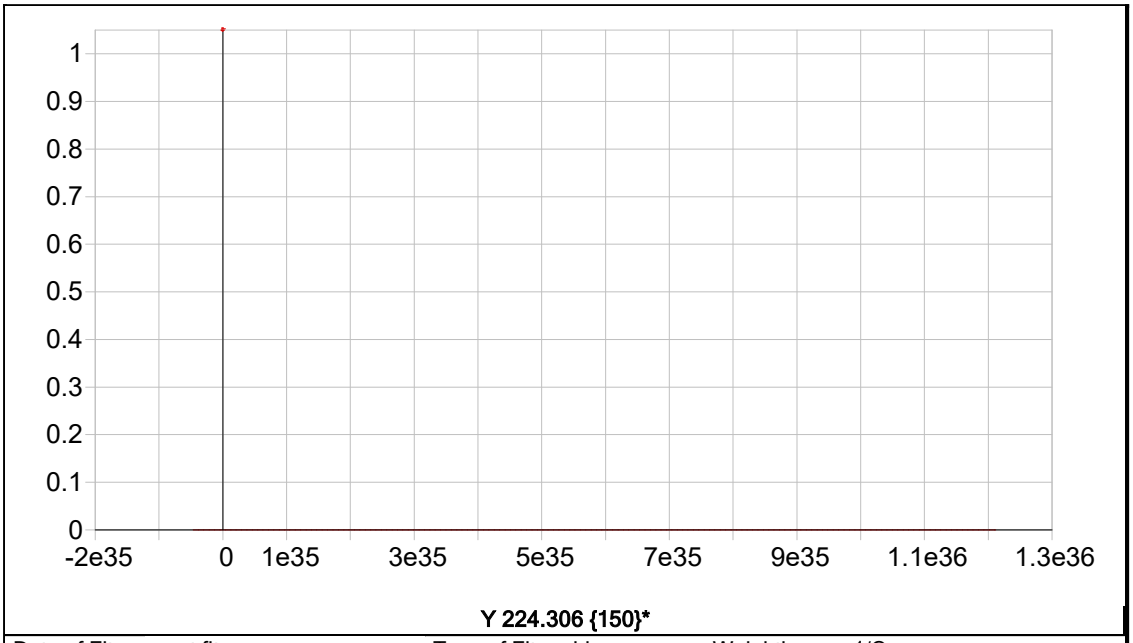
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis



Y 371.030 { 91}*

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

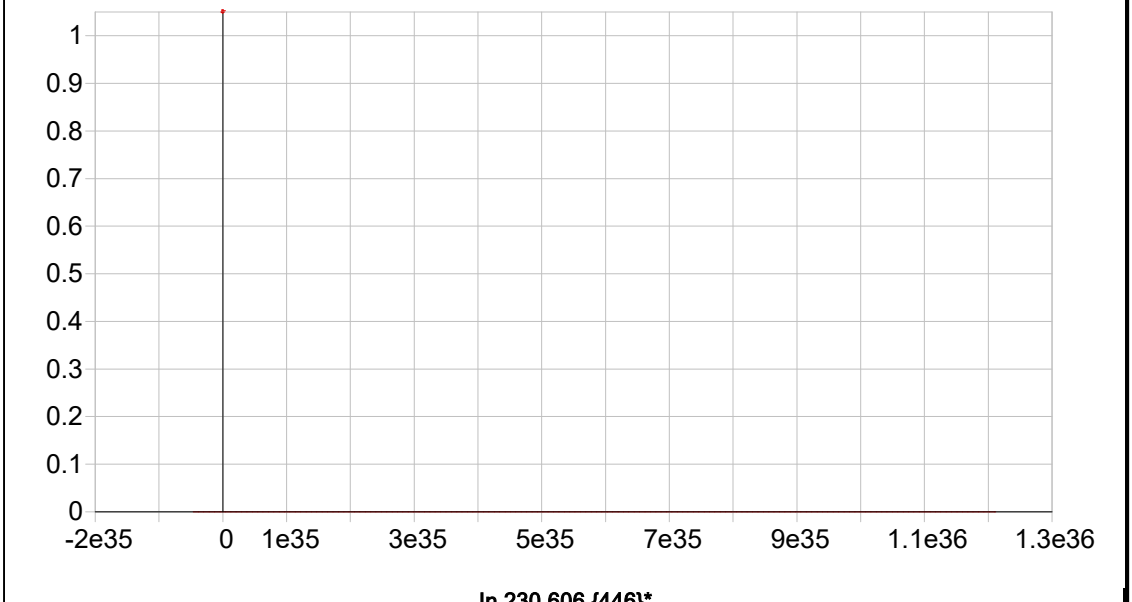
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis



Y 224.306 {150}*

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

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



In 230.606 {446}*

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

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

Sample Name: S0 Acquired: 5/30/2025 14:16:43 Type: Cal
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: IR Corr. Factor: 1.000000
User: Jaswal 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	**-.00012**	**.00038**	**.00006**	**.00028**	**.00017**	**-.00013**	**.04262**	**-.00037**
Stddev	.00006	.00003	.00007	.00006	.00020	.00054	.00121	.00008
%RSD	45.918	8.8427	117.09	19.854	117.18	405.43	2.8288	20.858
#1	-.00013	.00034	.00012	.00028	-.00006	.00004	.04345	-.00041
#2	-.00006	.00039	-.00001	.00033	.00025	-.00073	.04124	-.00042
#3	-.00017	.00040	.00006	.00022	.00032	.00030	.04317	-.00028

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	**.00011**	**.00033**	**.00009**	**.00003**	**-.00070**	**.00003**	**.00021**	**-.00010**
Stddev	.00004	.00064	.00004	.00018	.00029	.00001	.00006	.00014
%RSD	34.172	190.74	44.710	670.62	41.074	31.614	28.339	141.41
#1	.00007	.00032	.00010	-.00008	-.00038	.00004	.00023	.00001
#2	.00012	.00098	.00012	-.00008	-.00080	.00003	.00026	-.00025
#3	.00014	-.00029	.00004	.00024	-.00093	.00002	.00014	-.00004

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	**-.00042**	**-.00053**	**.00126**	**.00012**	**.00319**	**.00013**	**.00062**	**.00024**
Stddev	.00014	.00005	.00010	.00019	.00170	.00018	.00019	.00019
%RSD	33.295	9.5787	7.8411	159.97	53.281	135.85	31.294	79.368
#1	-.00035	-.00048	.00138	.00025	.00477	.00025	.00056	.00035
#2	-.00033	-.00053	.00120	.00021	.00139	.00022	.00083	.00034
#3	-.00058	-.00058	.00122	-.00010	.00341	-.00007	.00046	.00002

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00060**	**.00177**	**.00019**	**-.00094**	**.00024**	**-.00179**	**-.00050**
Stddev	.00007	.00026	.00004	.00011	.00003	.00038	.00040
%RSD	11.426	14.484	19.937	11.456	12.420	21.295	81.262
#1	.00053	.00171	.00024	-.00093	.00023	-.00199	-.00005
#2	.00066	.00154	.00017	-.00084	.00021	-.00135	-.00083
#3	.00062	.00205	.00017	-.00106	.00027	-.00204	-.00061

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: S0 Acquired: 5/30/2025 14:16:43 Type: Cal
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: IR Corr. Factor: 1.000000
User: Jaswal 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	2913.1	61695.	11813.	2201.6	4063.5
Stddev	9.4	507.	45.	28.9	9.9
%RSD	.32257	.82251	.38228	1.3132	.24284
#1	2920.4	61337.	11766.	2180.1	4071.8
#2	2902.5	61471.	11856.	2190.2	4052.6
#3	2916.4	62275.	11815.	2234.5	4066.0

Sample Name: S1 Acquired: 5/30/2025 14:21:06 Type: Cal
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: IR Corr. Factor: 1.000000
User: Jaswal 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	**.00126**	**.00157**	**.00187**	**.00149**	**.00580**	**.00853**	**.26508**	**.02863**
Stddev	.00007	.00006	.00017	.00004	.00036	.00035	.00172	.00035
%RSD	5.5565	4.0064	8.9925	2.9040	6.2743	4.1076	.64906	1.2320
#1	.00132	.00155	.00207	.00151	.00538	.00892	.26400	.02831
#2	.00118	.00151	.00178	.00152	.00599	.00843	.26706	.02856
#3	.00126	.00164	.00177	.00144	.00603	.00825	.26416	.02901

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	**.01578**	**.11057**	**.00180**	**.02911**	**.01549**	**.00058**	**.00854**	**.02136**
Stddev	.00021	.00009	.00002	.00024	.00019	.00003	.00017	.00017
%RSD	1.3134	.08325	1.2206	.82836	1.2287	5.3445	1.9793	.77855
#1	.01601	.11067	.00177	.02888	.01568	.00054	.00865	.02118
#2	.01562	.11051	.00181	.02909	.01530	.00060	.00861	.02151
#3	.01571	.11053	.00182	.02936	.01549	.00059	.00834	.02140

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	**.02231**	**.00209**	**.02298**	**.00480**	**.15381**	**.01471**	**.03845**	**.15206**
Stddev	.00023	.00001	.00005	.00005	.00244	.00012	.00036	.00032
%RSD	1.0087	.43952	.22908	.98344	1.5875	.83124	.92741	.20881
#1	.02233	.00210	.02292	.00485	.15639	.01458	.03820	.15185
#2	.02207	.00209	.02301	.00477	.15154	.01473	.03830	.15191
#3	.02252	.00209	.02300	.00478	.15350	.01482	.03886	.15243

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	**.00619**	**.01689**	**.00200**	**-.00007**	**.00094**	**.02111**	**.16345**
Stddev	.00011	.00038	.00002	.00003	.00011	.00112	.00134
%RSD	1.7144	2.2749	1.2467	47.586	11.334	5.3148	.81954
#1	.00607	.01686	.00202	-.00006	.00098	.02240	.16499
#2	.00628	.01728	.00198	-.00011	.00102	.02052	.16277
#3	.00621	.01652	.00200	-.00005	.00082	.02041	.16258

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: S1 Acquired: 5/30/2025 14:21:06 Type: Cal
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: IR Corr. Factor: 1.000000
User: Jaswal 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	**2911.0**	**61849.**	**11533.**	**2166.5**	**4027.0**
Stddev	9.8	86.	15.	13.3	8.2
%RSD	.33619	.13850	.13314	.61534	.20433
#1	2904.3	61760.	11533.	2151.1	4029.6
#2	2906.5	61856.	11517.	2175.0	4017.7
#3	2922.2	61931.	11548.	2173.3	4033.5

Sample Name: S2 Acquired: 5/30/2025 14:25:24 Type: Cal
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: IR Corr. Factor: 1.000000
User: Jaswal 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	**.05222**	**.02873**	**.13376**	**.04443**	**.09029**	**.12655**	**3.6770**	**.19679**
Stddev	.00007	.00019	.00052	.00016	.00037	.00010	.0056	.00100
%RSD	.13913	.66326	.39128	.35214	.41436	.08185	.15102	.50638
#1	.05228	.02860	.13435	.04436	.08987	.12647	3.6773	.19574
#2	.05213	.02895	.13353	.04432	.09039	.12651	3.6713	.19692
#3	.05223	.02865	.13338	.04461	.09060	.12666	3.6823	.19772

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	**1.0225**	**.22347**	**.02827**	**.38880**	**.15501**	**.00441**	**.16285**	**.04249**
Stddev	.0020	.00050	.00006	.00018	.00049	.00003	.00122	.00031
%RSD	.19139	.22258	.22812	.04733	.31426	.69576	.74626	.73819
#1	1.0247	.22305	.02821	.38896	.15450	.00441	.16172	.04213
#2	1.0214	.22402	.02834	.38860	.15505	.00444	.16270	.04260
#3	1.0213	.22335	.02827	.38883	.15548	.00438	.16413	.04273

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	**.22527**	**.05844**	**.04536**	**.05227**	**1.7006**	**.03078**	**.31909**	**.65551**
Stddev	.00045	.00012	.00021	.00018	.0154	.00017	.00231	.00173
%RSD	.19935	.20657	.47354	.34734	.90277	.56378	.72451	.26364
#1	.22560	.05836	.04535	.05208	1.6941	.03089	.31680	.65421
#2	.22476	.05838	.04558	.05228	1.7181	.03088	.31906	.65486
#3	.22545	.05858	.04515	.05245	1.6895	.03058	.32142	.65747

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	**.11928**	**.32049**	**.00449**	**.03154**	**.02431**	**.81849**	**6.3417**
Stddev	.00045	.00061	.00005	.00008	.00007	.00135	.0097
%RSD	.37442	.19125	1.0845	.24409	.29852	.16543	.15228
#1	.11919	.31997	.00448	.03159	.02427	.81693	6.3383
#2	.11889	.32035	.00454	.03157	.02427	.81931	6.3343
#3	.11977	.32117	.00444	.03145	.02439	.81924	6.3526

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: S2 Acquired: 5/30/2025 14:25:24 Type: Cal
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: IR Corr. Factor: 1.000000
User: Jaswal 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	**2899.3**	**60893.**	**11310.**	**2141.3**	**4012.4**
Stddev	15.2	110.	60.	4.1	14.1
%RSD	.52548	.18072	.52858	.19305	.35177
#1	2904.8	61005.	11367.	2141.1	4012.6
#2	2911.0	60785.	11316.	2145.4	4026.4
#3	2882.1	60890.	11248.	2137.2	3998.1

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: S3 Acquired: 5/30/2025 14:29:27 Type: Cal
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: IR Corr. Factor: 1.000000
User: Jaswal 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	**.16270**	**.08949**	**.41918**	**.13688**	**.28391**	**.39671**	**11.656**	**.60312**
Stddev	.00098	.00123	.00063	.00093	.00203	.00040	.011	.00423
%RSD	.60167	1.3799	.14946	.67971	.71609	.10066	.09816	.70152
#1	.16164	.08809	.41870	.13583	.28223	.39716	11.654	.59861
#2	.16287	.09041	.41894	.13720	.28333	.39651	11.645	.60378
#3	.16358	.08998	.41989	.13761	.28617	.39644	11.668	.60699

Elem	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3.1936**	**.69710**	**.08757**	**1.2131**	**.47929**	**.01396**	**.50711**	**.13343**
Stddev	.0104	.00251	.00003	.0034	.00122	.00008	.00057	.00057
%RSD	.32713	.36035	.03723	.27801	.25460	.60793	.11232	.42395
#1	3.1869	.69940	.08755	1.2109	.47788	.01405	.50777	.13380
#2	3.1882	.69748	.08756	1.2115	.48006	.01394	.50681	.13370
#3	3.2056	.69442	.08761	1.2170	.47992	.01388	.50676	.13278

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	**.70345**	**.18075**	**.14349**	**.16361**	**5.0160**	**.09738**	**.98648**	**2.0329**
Stddev	.00215	.00012	.00072	.00106	.0250	.00042	.00673	.0097
%RSD	.30630	.06792	.50416	.64648	.49807	.43486	.68223	.47837
#1	.70166	.18078	.14432	.16330	4.9881	.09768	.97878	2.0235
#2	.70284	.18086	.14315	.16479	5.0363	.09690	.98937	2.0324
#3	.70584	.18062	.14300	.16275	5.0236	.09757	.99127	2.0429

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	**.37648**	**1.0064**	**.01388**	**.10292**	**.07749**	**2.6096**	**20.108**
Stddev	.00121	.0011	.00005	.00057	.00035	.0062	.029
%RSD	.32165	.10824	.39137	.55673	.45547	.23861	.14324
#1	.37509	1.0056	.01391	.10247	.07715	2.6094	20.089
#2	.37710	1.0077	.01392	.10273	.07746	2.6035	20.094
#3	.37726	1.0061	.01382	.10357	.07785	2.6160	20.141

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: S3 Acquired: 5/30/2025 14:29:27 Type: Cal
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: IR Corr. Factor: 1.000000
User: Jaswal 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	**2883.0**	**60879.**	**11384.**	**2115.2**	**3927.8**
Stddev	7.3	314.	12.	19.1	8.9
%RSD	.25468	.51571	.10193	.90076	.22576
#1	2889.9	60555.	11380.	2093.2	3933.2
#2	2883.8	60901.	11374.	2124.8	3932.6
#3	2875.3	61182.	11397.	2127.5	3917.5

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: S4 Acquired: 5/30/2025 14:33:33 Type: Cal
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: IR Corr. Factor: 1.000000
User: Jaswal 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	**.32627**	**.17772**	**.83355**	**.27278**	**.56109**	**.79316**	**23.198**	**1.1818**
Stddev	.00241	.00343	.00207	.00179	.00380	.00009	.167	.0028
%RSD	.73957	1.9273	.24831	.65793	.67639	.01093	.71789	.23816
#1	.32524	.17494	.83406	.27118	.55797	.79307	23.245	1.1806
#2	.32454	.17667	.83128	.27246	.55998	.79318	23.337	1.1797
#3	.32903	.18154	.83532	.27472	.56532	.79324	23.013	1.1850

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	**6.3692**	**1.3798**	**.17323**	**2.4199**	**.94565**	**.02797**	**.99808**	**.26622**
Stddev	.0182	.0007	.00021	.0059	.00401	.00011	.00364	.00121
%RSD	.28594	.05074	.12139	.24184	.42359	.39393	.36449	.45395
#1	6.3756	1.3790	.17334	2.4203	.94323	.02799	.99451	.26503
#2	6.3486	1.3802	.17336	2.4138	.94345	.02808	1.0018	.26745
#3	6.3833	1.3803	.17298	2.4255	.95028	.02786	.99797	.26619

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	**1.3943**	**.35926**	**.29981**	**.32800**	**9.9242**	**.20140**	**1.9283**	**4.0240**
Stddev	.0033	.00035	.00177	.00055	.0508	.00100	.0072	.0182
%RSD	.23751	.09816	.59148	.16822	.51225	.49601	.37429	.45248
#1	1.3933	.35899	.29960	.32771	9.9475	.20103	1.9274	4.0154
#2	1.3916	.35966	.30168	.32864	9.8659	.20253	1.9216	4.0117
#3	1.3979	.35913	.29815	.32766	9.9592	.20064	1.9360	4.0449

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	**.74842**	**1.9910**	**.02839**	**.20711**	**.15580**	**5.2008**	**39.496**
Stddev	.00345	.0032	.00009	.00143	.00113	.0107	.193
%RSD	.46141	.16248	.33379	.68934	.72650	.20560	.48897
#1	.74827	1.9902	.02835	.20615	.15517	5.1988	39.712
#2	.74504	1.9945	.02850	.20642	.15512	5.2124	39.341
#3	.75194	1.9882	.02832	.20875	.15711	5.1913	39.433

Sample Name: S4 Acquired: 5/30/2025 14:33:33 Type: Cal
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: IR Corr. Factor: 1.000000
User: Jaswal 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	**2825.7**	**59416.**	**11383.**	**2063.4**	**3803.4**
Stddev	17.0	103.	33.	6.4	18.0
%RSD	.60017	.17338	.28662	.30778	.47322
#1	2831.7	59514.	11417.	2068.2	3807.2
#2	2838.9	59309.	11379.	2056.2	3819.2
#3	2806.6	59424.	11352.	2065.7	3783.8

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: S5 Acquired: 5/30/2025 14:37:45 Type: Cal
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: IR Corr. Factor: 1.000000
User: Jaswal 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	**.65862**	**.35694**	**1.6893**	**.54626**	**1.1333**	**1.6569**	**48.230**	**2.3717**
Stddev	.00193	.00259	.0062	.00294	.0047	.0045	.282	.0051
%RSD	.29233	.72453	.36654	.53795	.41668	.26966	.58368	.21603
#1	.65683	.35698	1.6858	.54410	1.1289	1.6608	48.178	2.3677
#2	.65837	.35434	1.6856	.54508	1.1326	1.6520	47.977	2.3775
#3	.66066	.35951	1.6964	.54961	1.1383	1.6578	48.533	2.3700

Elem	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**12.962**	**2.8689**	**.34130**	**4.9484**	**1.8789**	**.05526**	**2.0727**	**.55959**
Stddev	.032	.0047	.00059	.0170	.0055	.00026	.0016	.00099
%RSD	.24818	.16290	.17221	.34413	.29353	.46320	.07709	.17694
#1	12.933	2.8718	.34196	4.9365	1.8744	.05546	2.0745	.56042
#2	12.956	2.8636	.34085	4.9407	1.8772	.05497	2.0714	.55849
#3	12.996	2.8715	.34109	4.9679	1.8850	.05535	2.0723	.55985

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	**2.8234**	**.70625**	**.61163**	**.68516**	**17.063**	**.39530**	**3.9292**	**8.0711**
Stddev	.0094	.00184	.00338	.00231	.046	.00236	.0121	.0211
%RSD	.33386	.26060	.55227	.33665	.26960	.59670	.30909	.26099
#1	2.8155	.70773	.61526	.68783	17.021	.39740	3.9304	8.0513
#2	2.8209	.70683	.60859	.68390	17.112	.39275	3.9407	8.0686
#3	2.8339	.70419	.61104	.68377	17.055	.39575	3.9165	8.0933

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	**1.5211**	**4.1654**	**.05690**	**.42769**	**.32371**	**11.067**	**81.128**
Stddev	.0048	.0066	.00027	.00147	.00140	.027	.230
%RSD	.31628	.15851	.47694	.34482	.43126	.24465	.28382
#1	1.5181	4.1725	.05696	.42652	.32288	11.098	81.246
#2	1.5186	4.1594	.05661	.42721	.32293	11.048	81.276
#3	1.5267	4.1645	.05714	.42935	.32532	11.055	80.863

Sample Name: S5 Acquired: 5/30/2025 14:37:45 Type: Cal
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: IR Corr. Factor: 1.000000
User: Jaswal 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	2769.7	60922.	11070.	2075.8	3643.6
Stddev	8.2	151.	28.	6.3	13.1
%RSD	.29577	.24800	.24952	.30206	.36024
#1	2774.4	60903.	11099.	2076.0	3650.6
#2	2774.5	61081.	11066.	2082.0	3651.7
#3	2760.3	60781.	11044.	2069.5	3628.4

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: ICV01 Acquired: 5/30/2025 15:13:09 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.031732**	**1.088597**	**1.007592**	**1.075281**	**1.023607**	**2.452131**
Stddev	.005220	.006949	.003068	.004983	.005328	.009724
%RSD	.5059219	.6383407	.3045135	.4634313	.5205381	.3965394
#1	1.025766	1.083867	1.006254	1.070399	1.017785	2.449759
#2	1.033972	1.085348	1.005420	1.075084	1.024795	2.443813
#3	1.035458	1.096575	1.011102	1.080360	1.028241	2.462821

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4901772**	**.4951007**	**.5183228**	**9.853692**	**.5391266**	**.5196601**
Stddev	.0012685	.0030962	.0013000	.052827	.0022535	.0009921
%RSD	.2587888	.6253738	.2507992	.5361130	.4179822	.1909095
#1	.4905933	.4925549	.5194272	9.808395	.5374416	.5203551
#2	.4887529	.4941997	.5168902	9.840959	.5382520	.5185240
#3	.4911854	.4985475	.5186510	9.911721	.5416863	.5201013

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5347780**	**10.48881**	**.5035119**	**5.758451**	**.5242800**	**.2591482**
Stddev	.0020872	.02124	.0031142	.062974	.0013764	.0014097
%RSD	.3902958	.2025112	.6184909	1.093593	.2625371	.5439742
#1	.5333990	10.47286	.5041402	5.708330	.5250608	.2579017
#2	.5337556	10.51292	.5001315	5.737887	.5226907	.2588647
#3	.5371793	10.48065	.5062640	5.829136	.5250885	.2606780

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.754165**	**.4844740**	**1.002867**	**10.09216**	**2.292238**	**2.517511**
Stddev	.024097	.0026537	.001287	.02187	.014240	.006540
%RSD	.2470456	.5477589	.1283543	.2166930	.6212296	.2597910
#1	9.780248	.4840291	1.001863	10.11356	2.281244	2.511995
#2	9.732732	.4820709	1.002418	10.06985	2.287147	2.515802
#3	9.749515	.4873221	1.004318	10.09308	2.308324	2.524736

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: ICV01 Acquired: 5/30/2025 15:13:09 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.458536**	**2.343344**	F **2.208133**	F **.0090891**	F **.0097543**	**2.462197**
Stddev	.007741	.016523	.009260	.0019157	.0031765	.010649
%RSD	.3148430	.7050943	.4193811	21.07679	32.56490	.4325038
#1	2.462526	2.337145	2.207130	.0092201	.0133141	2.469733
#2	2.449614	2.330817	2.199416	.0071113	.0087398	2.450014
#3	2.463466	2.362070	2.217855	.0109359	.0072090	2.466843

Elem	Sr4077
Units	ppm
Avg	**2.385075**
Stddev	.010910
%RSD	.4574318
#1	2.393454
#2	2.389032
#3	2.372738

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2881.899**	**60978.44**	**12234.98**	**2108.428**	**3967.740**
Stddev	24.504	80.90	60.67	7.808	28.474
%RSD	.8502745	.1326679	.4958692	.3703348	.7176316
#1	2904.180	61070.98	12276.19	2113.771	3990.170
#2	2885.861	60921.10	12263.44	2099.467	3977.344
#3	2855.655	60943.25	12165.31	2112.047	3935.706

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: LLICV01 Acquired: 5/30/2025 15:21:57 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: LLICV01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0205095**	**.0332178**	**.0112999**	**.0212166**	**.0499982**	**.0982228**	**.0913392**
Stddev	.0004099	.0038938	.0020556	.0044281	.0015615	.0039178	.0005970
%RSD	1.998572	11.72193	18.19105	20.87105	3.123089	3.988705	.6535693
#1	.0204475	.0294075	.0091051	.0237841	.0509117	.1025043	.0920246
#2	.0201342	.0371899	.0131799	.0237623	.0481952	.0948168	.0909330
#3	.0209469	.0330559	.0116148	.0161034	.0508877	.0973474	.0910600

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0058890**	**.0060799**	**1.908921**	**.0102081**	**.0293149**	**.0214542**	**.1042007**
Stddev	.0000796	.0000769	.002129	.0004198	.0001510	.0005182	.0039872
%RSD	1.351337	1.265564	.1115088	4.112929	.5151795	2.415212	3.826491
#1	.0059296	.0060425	1.907292	.0097270	.0294000	.0210919	.1040507
#2	.0059401	.0060288	1.911330	.0103972	.0291406	.0212230	.1002906
#3	.0057973	.0061684	1.908142	.0105003	.0294043	.0220477	.1082608

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0199189**	**1.918951**	**.0399641**	**.0101327**	**1.831041**	**.0369028**	**.0404910**
Stddev	.0000649	.013993	.0002098	.0005370	.025589	.0004765	.0007656
%RSD	.3257177	.7291963	.5248864	5.299492	1.397512	1.291292	1.890913
#1	.0199763	1.931350	.0402064	.0102966	1.848611	.0365523	.0396117
#2	.0199320	1.921722	.0398449	.0095329	1.801682	.0374454	.0410106
#3	.0198485	1.903779	.0398412	.0105686	1.842829	.0367106	.0408506

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.917583**	**.0972951**	**.1904930**	**.0364349**	**.0368043**	**.3404015**	**.0187217**
Stddev	.023379	.0011524	.0005107	.0005104	.0002325	.0009275	.0018735
%RSD	1.219166	1.184405	.2681002	1.400871	.6316145	.2724587	10.00734
#1	1.904544	.0975081	.1899036	.0367727	.0369317	.3398742	.0208292
#2	1.903632	.0983261	.1907690	.0366843	.0369452	.3414724	.0172450
#3	1.944573	.0960511	.1908062	.0358478	.0365360	.3398580	.0180907

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: LLICV01 Acquired: 5/30/2025 15:21:57 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: LLICV01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0229365	.0211974	.0198663
Stddev	.0034138	.0008155	.0001405
%RSD	14.88354	3.847111	.7071006
#1	.0207058	.0216274	.0200270
#2	.0212372	.0217079	.0198053
#3	.0268664	.0202569	.0197667

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2937.207	61379.84	12183.42	2124.466	4128.873
Stddev	5.878	557.21	86.48	29.265	7.224
%RSD	.2001244	.9077985	.7098555	1.377502	.1749545
#1	2937.072	61860.26	12175.43	2148.491	4128.892
#2	2943.152	61510.26	12101.20	2133.032	4136.087
#3	2931.398	60768.99	12273.62	2091.874	4121.640

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: ICB01 Acquired: 5/30/2025 15:26:14 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal 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	**-.001224**	**-.004306**	**.0004841**	**-.001446**	**.0002801**	**.0062722**	**-.000997**
Stddev	.002303	.003340	.0010119	.003181	.0009562	.0064606	.000454
%RSD	188.2334	77.55337	209.0341	220.0566	341.3739	103.0044	45.54656
#1	.000935	-.002554	.0006332	.002188	.0011070	.0126856	-.001223
#2	-.003648	-.008157	.0014132	-.003730	.0005005	.0063654	-.000475
#3	-.000958	-.002207	-.000594	-.002795	-.000767	-.000235	-.001295

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000217**	**-.000043**	**.0087867**	**.0002381**	**.0001862**	**.0002063**	**.0023126**
Stddev	.0000609	.000066	.0075219	.0004175	.0000865	.0000855	.0047152
%RSD	280.9711	153.5073	85.60497	175.3702	46.44059	41.43004	203.8871
#1	.0000363	-.000058	.0087010	.0005695	.0002324	.0003033	.0034726
#2	.0000740	.000029	.0013081	.0003755	.0000864	.0001736	.0063396
#3	-.000045	-.000101	.0163510	-.000231	.0002397	.0001420	-.002874

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002687**	**-.015923**	**.0002325**	**.0004932**	**-.031375**	**-.000748**	**.0006974**
Stddev	.0003394	.005870	.0003313	.0000571	.005680	.001019	.0000659
%RSD	126.3198	36.86447	142.4653	11.57421	18.10458	136.1487	9.452988
#1	-.000061	-.021946	.0005089	.0004541	-.030729	-.000582	.0006246
#2	.000617	-.010219	.0003235	.0004667	-.037351	.000177	.0007530
#3	.000249	-.015603	-.000135	.0005587	-.026046	-.001840	.0007146

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0272291**	**.0022298**	**.0001025**	**.0019093**	**.0005750**	**.0022976**	**-.000024**
Stddev	.0433053	.0006951	.0001063	.0005007	.0000598	.0033584	.001573
%RSD	159.0403	31.17362	103.7226	26.22234	10.39236	146.1722	6555.851
#1	-.003884	.0025831	.0000343	.0014756	.0005450	.0040869	.001767
#2	.076687	.0014290	.0002249	.0024572	.0005361	.0043825	-.001182
#3	.008884	.0026774	.0000481	.0017951	.0006438	-.001577	-.000657

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: ICB01 Acquired: 5/30/2025 15:26:14 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICB01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0011396	.0000206	.0000310
Stddev	.0016028	.0001009	.0000770
%RSD	140.6383	489.5871	248.3317
#1	.0022164	.0000614	-.000055
#2	.0019048	.0000947	.000093
#3	-.000702	-.000094	.000055

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2961.288	64420.89	11971.61	2163.544	4205.956
Stddev	3.066	228.28	35.66	7.914	4.573
%RSD	.1035354	.3543594	.2978824	.3657896	.1087229
#1	2962.280	64578.42	11936.57	2164.461	4209.593
#2	2963.734	64525.16	12007.86	2170.959	4200.822
#3	2957.848	64159.09	11970.38	2155.211	4207.453

Sample Name: CRI01 Acquired: 5/30/2025 15:30:34 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal 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	**.0193392**	**.0299093**	**.0110134**	**.0215868**	**.0483894**	**.1014401**	**.0909552**
Stddev	.0004746	.0004927	.0022322	.0044300	.0006197	.0075334	.0013680
%RSD	2.454196	1.647320	20.26809	20.52185	1.280541	7.426449	1.504030
#1	.0195585	.0302611	.0085411	.0208523	.0484282	.0928239	.0916810
#2	.0187946	.0301206	.0128808	.0263382	.0489887	.1047126	.0918073
#3	.0196645	.0293462	.0116183	.0175700	.0477513	.1067839	.0893773

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0059728**	**.0059040**	**1.912129**	**.0100784**	**.0290769**	**.0208542**	**.1019084**
Stddev	.0000289	.0001040	.005921	.0001795	.0000396	.0002458	.0060180
%RSD	.4843633	1.761215	.3096566	1.781384	.1363422	1.178881	5.905315
#1	.0060005	.0058736	1.911086	.0099484	.0290312	.0206201	.1049142
#2	.0059751	.0060198	1.918503	.0102832	.0291013	.0208322	.1058314
#3	.0059428	.0058186	1.906799	.0100035	.0290983	.0211103	.0949796

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0193813**	**1.897290**	**.0392434**	**.0095546**	**1.806947**	**.0369126**	**.0403303**
Stddev	.0005709	.031067	.0003398	.0001785	.004050	.0016876	.0007708
%RSD	2.945399	1.637420	.8659986	1.868529	.2241082	4.571981	1.911286
#1	.0188452	1.863742	.0388903	.0094511	1.810208	.0385025	.0399212
#2	.0199815	1.925066	.0395682	.0094520	1.808218	.0351418	.0412194
#3	.0193171	1.903063	.0392718	.0097608	1.802414	.0370936	.0398502

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.883737**	**.0958951**	**.1899424**	**.0362474**	**.0363849**	**.3365633**	**.0190463**
Stddev	.015406	.0005594	.0004851	.0002090	.0000789	.0029950	.0010266
%RSD	.8178465	.5833758	.2554124	.5765461	.2168044	.8898696	5.390130
#1	1.894304	.0954459	.1902770	.0364587	.0364506	.3336184	.0190490
#2	1.866060	.0965217	.1901641	.0362426	.0362974	.3364655	.0200715
#3	1.890848	.0957177	.1893860	.0360408	.0364066	.3396059	.0180182

Sample Name: CRI01 Acquired: 5/30/2025 15:30:34 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CRI01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0223795	.0202772	.0198948
Stddev	.0030753	.0005974	.0002121
%RSD	13.74172	2.946151	1.066160
#1	.0259273	.0208027	.0198252
#2	.0207382	.0196275	.0201330
#3	.0204731	.0204013	.0197264

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2953.235	61520.46	11904.42	2124.665	4168.646
Stddev	4.076	58.82	71.33	3.810	11.307
%RSD	.1380040	.0956109	.5991745	.1793021	.2712386
#1	2955.987	61587.37	11893.09	2120.619	4181.232
#2	2948.553	61497.13	11839.44	2125.193	4159.346
#3	2955.164	61476.88	11980.74	2128.183	4165.360

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: ICSA01 Acquired: 5/30/2025 15:34:51 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICSA01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0079276**	**-.001620**	**-.003469**	**.0011641**	**-.010467**	**265.4145**	**.0055921**
Stddev	.0024092	.002823	.000635	.0028283	.005427	3.3453	.0007406
%RSD	30.39053	174.2514	18.30833	242.9485	51.84563	1.260424	13.24307
#1	.0079588	-.003736	-.002991	-.000647	-.007540	268.8216	.0050992
#2	.0103211	.001586	-.003227	.004423	-.007132	262.1345	.0064437
#3	.0055029	-.002710	-.004190	-.000284	-.016729	265.2874	.0052333

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0010788**	**.0009558**	**249.9011**	**.0505328**	**.0021398**	**.0110663**	**106.2587**
Stddev	.0000819	.0002425	1.1897	.0003671	.0002303	.0008568	.5027
%RSD	7.591210	25.36771	.4760572	.7264157	10.76166	7.742776	.4731299
#1	.0011710	.0011304	251.1233	.0509410	.0019361	.0120125	106.6325
#2	.0010505	.0010580	249.8331	.0504275	.0020937	.0108434	106.4565
#3	.0010147	.0006789	248.7468	.0502299	.0023897	.0103429	105.6872

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0103611**	**272.9013**	**.0026701**	**-.000969**	**.0156872**	**.0023164**	**-.008276**
Stddev	.0002502	1.1550	.0004167	.000541	.0085505	.0019277	.000721
%RSD	2.415260	.4232176	15.60744	55.84152	54.50610	83.22108	8.706887
#1	.0106457	273.7992	.0029559	-.001579	.0240461	.0011699	-.009003
#2	.0102617	273.3063	.0021919	-.000780	.0069572	.0012373	-.008262
#3	.0101757	271.5983	.0028624	-.000547	.0160582	.0045420	-.007562

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0822154**	**.0118534**	**.0005674**	**-.002312**	**-.000427**	**.0178236**	**.0075776**
Stddev	.0355433	.0020745	.0002810	.000786	.000246	.0038342	.0023274
%RSD	43.23187	17.50153	49.52649	33.99970	57.64824	21.51187	30.71396
#1	.0463745	.0122515	.0008911	-.001591	-.000338	.0138259	.0074159
#2	.0828185	.0137001	.0004258	-.003151	-.000705	.0214701	.0053353
#3	.1174533	.0096087	.0003854	-.002196	-.000238	.0181748	.0099816

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: ICSA01 Acquired: 5/30/2025 15:34:51 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICSA01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**-.009629**	**.0138579**	**.0007063**
Stddev	.002618	.0004269	.0003534
%RSD	27.18328	3.080464	50.03132
#1	-.007235	.0140299	.0010769
#2	-.012424	.0141721	.0003732
#3	-.009229	.0133719	.0006688

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2674.201**	**56188.15**	**11404.77**	**1929.929**	**3485.797**
Stddev	3.988	176.06	47.79	10.633	5.412
%RSD	.1491167	.3133351	.4190176	.5509670	.1552696
#1	2676.035	55993.25	11351.97	1917.658	3484.557
#2	2676.941	56235.55	11445.05	1935.693	3491.722
#3	2669.626	56335.66	11417.30	1936.435	3481.112

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: ICSAB01 Acquired: 5/30/2025 15:49:52 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICSAB01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1152373**	**.0862443**	**.0490397**	**.0535195**	**.6494342**	**249.0488**
Stddev	.0027707	.0030496	.0022641	.0048188	.0064212	.3970
%RSD	2.404320	3.536012	4.616868	9.003773	.9887375	.1593955
#1	.1172510	.0862097	.0464264	.0518060	.6453528	248.8331
#2	.1120775	.0832122	.0504124	.0589609	.6461141	249.5069
#3	.1163835	.0893111	.0502802	.0497917	.6568358	248.8063

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4952599**	**.5449604**	**1.045902**	**231.2528**	**.5859549**	**.5300704**
Stddev	.0013207	.0011041	.008635	.2830	.0024794	.0038030
%RSD	.2666582	.2026030	.8256062	.1223812	.4231465	.7174581
#1	.4952010	.5456454	1.042551	230.9321	.5868407	.5293815
#2	.4966090	.5455492	1.039445	231.3584	.5878697	.5266589
#3	.4939696	.5436867	1.055711	231.4678	.5831542	.5341707

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5387447**	**96.83925**	**.5036985**	**253.8275**	**1.046421**	**.2232793**
Stddev	.0034495	.20363	.0012923	.5056	.008790	.0002477
%RSD	.6402918	.2102722	.2565538	.1991927	.8399621	.1109229
#1	.5364950	96.60564	.5028322	253.4315	1.042758	.2230839
#2	.5370228	96.97919	.5030796	253.6540	1.040056	.2231962
#3	.5427162	96.93290	.5051838	254.3970	1.056450	.2235578

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.016646**	**.4982004**	**1.076827**	**.0506279**	**.9592695**	**1.015282**
Stddev	.004995	.0012143	.009195	.0092429	.0018642	.006050
%RSD	30.00909	.2437316	.8539352	18.25648	.1943368	.5959199
#1	-.021463	.4983461	1.087410	.0413547	.9579041	1.012384
#2	-.011490	.4969198	1.072284	.0506888	.9613934	1.011225
#3	-.016986	.4993352	1.070788	.0598401	.9585111	1.022236

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: ICSAB01 Acquired: 5/30/2025 15:49:52 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal 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	**1.004148**	**.9411903**	**.9366049**	F **.0073603**	F **-.002190**	**.8583727**
Stddev	.006765	.0018602	.0050281	.0037703	.002635	.0012504
%RSD	.6736890	.1976405	.5368410	51.22406	120.3402	.1456689
#1	1.002004	.9402622	.9329569	.0030588	-.002320	.8582915
#2	.998714	.9399768	.9423405	.0100922	.000508	.8596617
#3	1.011725	.9433319	.9345174	.0089300	-.004758	.8571649

Elem	Sr4077
Units	ppm
Avg	**.9152528**
Stddev	.0009924
%RSD	.1084277
#1	.9149750
#2	.9163545
#3	.9144289

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2594.331**	**54560.79**	**10922.61**	**1868.885**	**3414.389**
Stddev	15.792	49.35	11.49	7.087	26.390
%RSD	.6087199	.0904451	.1051949	.3792236	.7729015
#1	2602.802	54614.41	10931.32	1875.282	3425.085
#2	2604.081	54517.28	10926.92	1870.106	3433.753
#3	2576.111	54550.70	10909.59	1861.266	3384.331

Sample Name: ICSADLX20 Acquired: 5/30/2025 15:53:54 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal 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	**-.001202**	**-.006644**	**-.002144**	**.0001430**	**.0002166**	**11.03352**	**-.000779**
Stddev	.002034	.002838	.000260	.0024693	.0005510	.02215	.000319
%RSD	169.2103	42.71477	12.13406	1726.320	254.4291	.2007579	40.95169
#1	-.001315	-.006238	-.001845	.0012789	.0007463	11.02803	-.000439
#2	-.003177	-.004030	-.002268	-.002690	-.000354	11.05790	-.001071
#3	.000886	-.009662	-.002318	.001840	.000257	11.01464	-.000827

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000956**	**.0000059**	**10.80624**	**.0023281**	**.0002027**	**.0012323**	**4.510927**
Stddev	.0000331	.0000200	.02945	.0002191	.0000548	.0002654	.012476
%RSD	34.59972	336.3351	.2725378	9.411259	27.04220	21.53358	.2765719
#1	.0001294	-.000014	10.79767	.0021035	.0001723	.0010637	4.523745
#2	.0000942	.000026	10.83902	.0025413	.0002660	.0015382	4.510213
#3	.0000633	.000006	10.78202	.0023396	.0001699	.0010950	4.498824

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0007180**	**11.17609**	**.0002818**	**-.000048**	**-.076244**	**.0000382**	**.0084072**
Stddev	.0002735	.05693	.0003456	.000156	.022283	.0017991	.0003391
%RSD	38.09053	.5093954	122.6251	327.2515	29.22593	4704.310	4.034019
#1	.0008586	11.13942	.0000617	-.000067	-.058076	-.001591	.0080292
#2	.0008926	11.24167	.0001036	-.000193	-.069549	-.000263	.0086850
#3	.0004028	11.14718	.0006801	.000117	-.101107	.001969	.0085073

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000244**	**.0026228**	**.0004328**	**-.001267**	**.0009238**	**-.002229**	**-.000006**
Stddev	.003631	.0001123	.0001385	.000374	.0011267	.004045	.001077
%RSD	1485.349	4.283594	31.99945	29.50504	121.9637	181.4867	18689.97
#1	.000266	.0027104	.0005255	-.001668	.0013951	-.001814	-.000490
#2	-.004103	.0026618	.0002736	-.000929	.0017382	.001593	.001228
#3	.003104	.0024961	.0004992	-.001205	-.000362	-.006465	-.000756

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: ICSADLX20 Acquired: 5/30/2025 15:53:54 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICSADLX20 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0012842	.0013918	.0001763
Stddev	.0002074	.0005732	.0000935
%RSD	16.15152	41.18683	53.04572
#1	.0012984	.0011722	.0002790
#2	.0014841	.0009608	.0000962
#3	.0010700	.0020424	.0001537

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2893.692	60556.63	11675.16	2099.873	4029.305
Stddev	5.184	220.98	33.20	5.954	7.854
%RSD	.1791483	.3649145	.2843844	.2835249	.1949151
#1	2897.865	60359.58	11664.80	2093.001	4030.857
#2	2895.322	60514.75	11648.38	2103.476	4036.267
#3	2887.889	60795.55	11712.31	2103.143	4020.791

Sample Name: ICSABDLX20 Acquired: 5/30/2025 15:58:12 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal 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	**.0053060**	**.0003954**	**.0018035**	**.0046652**	**.0317139**	**12.15920**	**.0249230**
Stddev	.0012836	.0028068	.0004097	.0038274	.0004112	.03672	.0007440
%RSD	24.19102	709.8745	22.71512	82.04074	1.296725	.3019633	2.985087
#1	.0050928	.0035186	.0017623	.0042107	.0321864	12.19902	.0253338
#2	.0041424	-.001916	.0022322	.0010854	.0314361	12.12668	.0240642
#3	.0066829	-.000416	.0014160	.0086996	.0315194	12.15189	.0253710

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0266770**	**.0534087**	**12.00170**	**.0297996**	**.0266635**	**.0288293**	**5.134344**
Stddev	.0001188	.0002282	.02909	.0006911	.0001887	.0001908	.034378
%RSD	.4451427	.4272117	.2423566	2.319083	.7077003	.6617791	.6695618
#1	.0266953	.0531558	12.03000	.0296552	.0265179	.0286248	5.143509
#2	.0265502	.0535993	11.97188	.0305514	.0265959	.0288606	5.163210
#3	.0267856	.0534709	12.00321	.0291920	.0268767	.0290025	5.096312

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0278754**	**12.33916**	**.0531278**	**.0108811**	**-.075375**	**.0257154**	**.0942709**
Stddev	.0003000	.04338	.0002765	.0002950	.008604	.0018369	.0010891
%RSD	1.076225	.3515649	.5203814	2.711261	11.41521	7.143166	1.155277
#1	.0275440	12.33453	.0529143	.0107885	-.065618	.0250540	.0940602
#2	.0281284	12.29828	.0530289	.0106436	-.078632	.0243007	.0954500
#3	.0279538	12.38467	.0534401	.0112114	-.081876	.0277913	.0933026

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0188241**	**.0502095**	**.0524790**	**.0494303**	**.0504115**	**.0433646**	**-.000059**
Stddev	.0269766	.0002726	.0003156	.0007993	.0010767	.0081905	.001049
%RSD	143.3090	.5428626	.6014149	1.616966	2.135824	18.88762	1786.831
#1	.0419406	.0505134	.0522827	.0498419	.0515116	.0513254	-.001113
#2	.0253478	.0501283	.0528431	.0485091	.0493598	.0438063	.000986
#3	-.010816	.0499866	.0523112	.0499397	.0503633	.0349622	-.000049

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: ICSABDLX20 Acquired: 5/30/2025 15:58:12 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICSABDLX20 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0026276	.0395320	.0465089
Stddev	.0014974	.0005931	.0002059
%RSD	56.98619	1.500229	.4428155
#1	.0035608	.0394147	.0466278
#2	.0009005	.0390063	.0466278
#3	.0034216	.0401749	.0462711

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2882.788	60846.32	12046.93	2096.486	4015.642
Stddev	9.120	309.47	49.96	11.951	13.795
%RSD	.3163634	.5086080	.4147239	.5700309	.3435253
#1	2890.033	60742.76	12004.08	2087.979	4030.523
#2	2872.547	60601.92	12101.81	2091.330	4003.281
#3	2885.784	61194.29	12034.91	2110.149	4013.122

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: CCV01 Acquired: 5/30/2025 16:02:26 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.114770**	**5.188629**	**5.013956**	**5.162637**	**5.091130**	**9.756070**	**9.885509**
Stddev	.011141	.039360	.006428	.013680	.006358	.022198	.125535
%RSD	.2178116	.7585845	.1281958	.2649885	.1248932	.2275299	1.269894
#1	5.122378	5.214061	5.013969	5.161828	5.088068	9.730589	9.744867
#2	5.101983	5.143292	5.007522	5.149380	5.086882	9.771219	9.986228
#3	5.119949	5.208534	5.020377	5.176705	5.098440	9.766401	9.925432

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2345953**	**2.503353**	**24.43455**	**1.019284**	**2.497657**	**1.276393**	**5.423889**
Stddev	.0013976	.004630	.10338	.003012	.002850	.001101	.020493
%RSD	.5957480	.1849686	.4230711	.2955175	.1140963	.0862560	.3778341
#1	.2331129	2.502905	24.34420	1.017213	2.498941	1.275223	5.440101
#2	.2347841	2.498962	24.41218	1.022740	2.494391	1.277409	5.430712
#3	.2358889	2.508191	24.54728	1.017900	2.499639	1.276547	5.400855

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.430228**	**24.07437**	**2.506746**	**1.276669**	**26.67480**	**2.461008**	**2.681380**
Stddev	.010474	.13885	.003522	.002014	.09991	.005695	.003775
%RSD	.4309719	.5767539	.1405043	.1577601	.3745545	.2314247	.1408017
#1	2.422380	24.03422	2.507878	1.275110	26.69537	2.455570	2.679001
#2	2.426182	23.96001	2.502797	1.278943	26.76282	2.460525	2.679405
#3	2.442120	24.22887	2.509563	1.275954	26.56620	2.466930	2.685733

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**27.03437**	**4.642449**	**5.093340**	**5.035781**	**4.879180**	**5.324242**	**4.898331**
Stddev	.15362	.022577	.007583	.009229	.021641	.018970	.007167
%RSD	.5682433	.4863065	.1488775	.1832621	.4435301	.3563025	.1463078
#1	27.11044	4.619807	5.096798	5.037223	4.855605	5.344444	4.905215
#2	27.13511	4.642580	5.084645	5.025917	4.883795	5.321475	4.898865
#3	26.85756	4.664959	5.098578	5.044204	4.898142	5.306807	4.890912

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: CCV01 Acquired: 5/30/2025 16:02:26 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	5.015163	4.788130	4.965970
Stddev	.015461	.012872	.095998
%RSD	.3082940	.2688305	1.933113
#1	5.021318	4.775346	4.864104
#2	4.997571	4.801088	4.979045
#3	5.026598	4.787957	5.054760

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2797.649	59420.51	12194.67	2031.052	3784.813
Stddev	9.706	147.76	72.79	4.732	11.916
%RSD	.3469245	.2486715	.5968779	.2329783	.3148261
#1	2792.657	59492.73	12272.35	2035.776	3779.244
#2	2791.455	59250.53	12183.63	2026.312	3776.701
#3	2808.834	59518.28	12128.03	2031.069	3798.493

Sample Name: CCB01 Acquired: 5/30/2025 16:06:38 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal 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	**.0008886**	**-.004862**	**-.000251**	**.0015699**	**.0006132**	**.0087920**	**-.001239**
Stddev	.0013135	.001510	.001204	.0024211	.0018826	.0067960	.000542
%RSD	147.8169	31.05234	480.3935	154.2169	307.0160	77.29766	43.72795
#1	.0023678	-.005353	.001136	-.000894	.0011806	.0110300	-.001671
#2	.0004393	-.006066	-.001028	.001658	-.001488	.0141867	-.001416
#3	-.000141	-.003168	-.000859	.003946	.002147	.0011592	-.000631

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000363**	**-.000004**	**.0073548**	**.0013984**	**.0001292**	**-.000257**	**.0032330**
Stddev	.0000478	.000022	.0046651	.0004032	.0001416	.000034	.0034172
%RSD	131.5987	518.0538	63.42930	28.83089	109.5804	13.21783	105.6994
#1	.0000849	.000013	.0025290	.0013094	.0002578	-.000286	-.000548
#2	.0000347	.000004	.0076948	.0010471	.0001525	-.000220	.006100
#3	-.000011	-.000029	.0118406	.0018386	-.000023	-.000265	.004147

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0009285**	**-.017363**	**.0014265**	**.0001018**	**-.071741**	**-.000629**	**.0006755**
Stddev	.0001768	.016853	.0002908	.0003048	.004167	.001937	.0003115
%RSD	19.04817	97.06808	20.38800	299.2869	5.808935	307.8208	46.10865
#1	.0007724	-.023978	.0016826	-.000227	-.071184	.000956	.0007790
#2	.0011205	-.029905	.0014866	.000159	-.067880	-.000055	.0009220
#3	.0008925	.001795	.0011104	.000374	-.076159	-.002788	.0003254

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0145219**	**.0117204**	**.0005027**	**.0028827**	**.0007210**	**.0084731**	**.0011779**
Stddev	.0112632	.0005935	.0000740	.0006766	.0004882	.0046816	.0004428
%RSD	77.56040	5.063425	14.73081	23.47183	67.71454	55.25268	37.58840
#1	.0266590	.0112661	.0005806	.0023574	.0010955	.0098954	.0008156
#2	.0044062	.0123918	.0004943	.0026444	.0001688	.0122786	.0010467
#3	.0125005	.0115032	.0004332	.0036461	.0008987	.0032453	.0016714

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: CCB01 Acquired: 5/30/2025 16:06:38 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0001950	-.000485	.0000670
Stddev	.0030686	.000916	.0000167
%RSD	1573.570	188.8937	24.94808
#1	.0017682	-.001541	.0000817
#2	.0021581	.000011	.0000705
#3	-.003341	.000076	.0000488

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2955.992	62846.09	12187.99	2145.299	4177.778
Stddev	17.584	123.41	30.26	6.316	17.300
%RSD	.5948752	.1963628	.2482864	.2944057	.4140861
#1	2976.120	62709.18	12191.55	2140.249	4197.702
#2	2948.246	62948.76	12216.31	2152.381	4169.062
#3	2943.611	62880.34	12156.10	2143.267	4166.571

Sample Name: Q2127-11 Acquired: 5/30/2025 16:10:58 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0872739**	**-.030636**	**.7239969**	**.0048271**	**-.008146**	**107.1125**	**.4513403**
Stddev	.0024211	.003494	.0020269	.0020490	.001209	.3570	.0032640
%RSD	2.774088	11.40335	.2799643	42.44818	14.84661	.3333204	.7231861
#1	.0860300	-.034582	.7220864	.0029288	-.007155	107.4985	.4530957
#2	.0857276	-.027939	.7237812	.0045533	-.009493	107.0448	.4533510
#3	.0900640	-.029386	.7261230	.0069993	-.007789	106.7941	.4475742

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0073018**	**.0049759**	**48.91815**	**.1593178**	**.0817261**	**.1964147**	**199.8648**
Stddev	.0000172	.0001060	.22624	.0007133	.0005879	.0013571	1.0780
%RSD	.2348072	2.130406	.4624934	.4477074	.7193547	.6909244	.5393554
#1	.0072942	.0049670	49.15062	.1589207	.0816511	.1973528	199.9851
#2	.0072897	.0048746	48.90513	.1588914	.0811793	.1948586	200.8776
#3	.0073214	.0050860	48.69869	.1601412	.0823479	.1970326	198.7318

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.653320**	**14.41982**	**.1246757**	**-.002237**	**3.316899**	**.2471073**	**.5241794**
Stddev	.009079	.06548	.0003111	.000346	.036937	.0049804	.0057164
%RSD	.5491327	.4540988	.2494927	15.46650	1.113611	2.015497	1.090547
#1	1.662149	14.48367	.1249269	-.002402	3.303427	.2510922	.5205444
#2	1.653799	14.42297	.1243277	-.001839	3.358681	.2487059	.5212255
#3	1.644010	14.35283	.1247723	-.002470	3.288589	.2415239	.5307685

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**8.533079**	**.0143453**	**.0045978**	**.0125770**	**.9949585**	**7.023828**	**3.744075**
Stddev	.019513	.0083268	.0002789	.0006342	.0043272	.024198	.013529
%RSD	.2286779	58.04542	6.066567	5.042884	.4349149	.3445105	.3613517
#1	8.520679	.0142496	.0049146	.0120745	.9986843	7.022246	3.739225
#2	8.555571	.0227196	.0043888	.0132896	.9959790	7.048779	3.733639
#3	8.522986	.0060668	.0044902	.0123669	.9902123	7.000461	3.759360

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: Q2127-11 Acquired: 5/30/2025 16:10:58 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	3.364003	.1736152	.0171291
Stddev	.017636	.0013115	.0007658
%RSD	.5242581	.7553920	4.470634
#1	3.383922	.1742875	.0179082
#2	3.357713	.1744542	.0163774
#3	3.350375	.1721039	.0171017

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3112.876	67289.28	13164.63	2256.261	3835.768
Stddev	5.119	84.42	48.94	9.871	5.315
%RSD	.1644485	.1254564	.3717707	.4374758	.1385767
#1	3110.581	67362.33	13117.64	2248.272	3839.732
#2	3118.741	67196.86	13215.31	2267.295	3837.844
#3	3109.305	67308.67	13160.95	2253.215	3829.728

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: Q2127-11DUP Acquired: 5/30/2025 16:15:01 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0890924**	**-.028066**	**.7210599**	**.0078343**	**-.007538**	**106.9027**	**.4602584**
Stddev	.0014931	.005899	.0017776	.0059518	.004453	.2873	.0029160
%RSD	1.675845	21.01821	.2465239	75.97152	59.07512	.2687499	.6335567
#1	.0887882	-.034743	.7228147	.0075127	-.011970	106.5902	.4571016
#2	.0907142	-.023562	.7192603	.0020497	-.003064	106.9624	.4628511
#3	.0877749	-.025892	.7211046	.0139403	-.007580	107.1554	.4608227

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0072621**	**.0038027**	**49.12146**	**.1598050**	**.0830605**	**.1929258**	**209.7197**
Stddev	.0001112	.0002154	.10255	.0005431	.0002183	.0002133	.2100
%RSD	1.531769	5.664992	.2087612	.3398186	.2628460	.1105407	.1001480
#1	.0071630	.0036644	49.01491	.1591780	.0831557	.1927443	209.7130
#2	.0073824	.0040509	49.21946	.1601245	.0832150	.1931607	209.5130
#3	.0072408	.0036927	49.13001	.1601125	.0828107	.1928724	209.9329

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.683489**	**14.31792**	**.1252907**	**-.000116**	**3.576010**	**.2469068**	**.5416571**
Stddev	.008979	.02161	.0003371	.000162	.006131	.0019151	.0018444
%RSD	.5333738	.1508950	.2690750	139.5294	.1714477	.7756356	.3405021
#1	1.674061	14.32941	.1253093	-.000074	3.576888	.2447340	.5398205
#2	1.691940	14.33135	.1256181	-.000295	3.581655	.2483493	.5416418
#3	1.684465	14.29300	.1249447	.000021	3.569488	.2476370	.5435091

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**8.936945**	**.0377364**	**.0045406**	**.0141624**	**1.000954**	**7.194865**	**3.852429**
Stddev	.074414	.0047595	.0002579	.0001378	.003579	.022531	.003748
%RSD	.8326601	12.61252	5.679350	.9733532	.3575246	.3131573	.0972986
#1	8.905611	.0420036	.0042574	.0143115	.997167	7.201511	3.856756
#2	9.021902	.0326034	.0047619	.0140396	1.004280	7.169758	3.850173
#3	8.883322	.0386022	.0046024	.0141361	1.001415	7.213326	3.850357

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: Q2127-11DUP Acquired: 5/30/2025 16:15:01 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**3.474171**	**.1786615**	**.0113459**
Stddev	.011100	.0005653	.0012135
%RSD	.3194911	.3164082	10.69518
#1	3.481215	.1790504	.0101446
#2	3.479923	.1780130	.0125712
#3	3.461376	.1789211	.0113218

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3051.800**	**64471.85**	**13109.65**	**2229.476**	**3757.089**
Stddev	1.421	62.63	41.82	9.878	6.092
%RSD	.0465755	.0971461	.3190167	.4430536	.1621506
#1	3053.440	64404.67	13147.72	2223.635	3764.124
#2	3050.936	64528.62	13064.89	2240.880	3753.569
#3	3051.024	64482.26	13116.34	2223.911	3753.575

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: Q2127-11LX5 Acquired: 5/30/2025 16:19:07 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0151892**	**-.005888**	**.1676102**	**.0007649**	**-.002965**	**22.23340**	**.0942443**
Stddev	.0012919	.003778	.0010162	.0013339	.002510	.00089	.0004436
%RSD	8.505396	64.16120	.6062942	174.3862	84.67147	.0040125	.4706638
#1	.0140279	-.009527	.1682012	.0002414	-.001075	22.23408	.0937427
#2	.0149590	-.001986	.1681925	-.000228	-.005813	22.23239	.0944055
#3	.0165808	-.006151	.1664367	.002281	-.002006	22.23372	.0945848

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0015434**	**.0003856**	**10.10894**	**.0335052**	**.0146284**	**.0448717**	**39.51365**
Stddev	.0000675	.0000498	.01279	.0003891	.0000831	.0003451	.17598
%RSD	4.371336	12.92482	.1265297	1.161330	.5680028	.7690718	.4453626
#1	.0016054	.0004431	10.11216	.0339524	.0145361	.0452456	39.31382
#2	.0015532	.0003566	10.11982	.0332440	.0146517	.0448041	39.64548
#3	.0014715	.0003571	10.09485	.0333193	.0146973	.0445655	39.58166

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3328744**	**3.042823**	**.0250294**	**-.000341**	**.5374714**	**.0515377**	**.1253235**
Stddev	.0012101	.006994	.0002731	.000230	.0130813	.0024729	.0017248
%RSD	.3635353	.2298426	1.091079	67.30257	2.433864	4.798169	1.376262
#1	.3327309	3.042602	.0251789	-.000348	.5264182	.0520801	.1236139
#2	.3317424	3.049925	.0251951	-.000567	.5519138	.0488387	.1270631
#3	.3341498	3.035943	.0247142	-.000108	.5340822	.0536943	.1252934

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.678403**	**-.002702**	**.0009465**	**.0029183**	**.2197801**	**1.837156**	**.7371596**
Stddev	.016927	.000747	.0000313	.0007337	.0009791	.003211	.0037362
%RSD	1.008506	27.63242	3.304759	25.14121	.4454828	.1747607	.5068334
#1	1.676185	-.003525	.0009228	.0032420	.2196205	1.833602	.7406549
#2	1.696329	-.002068	.0009348	.0034345	.2208292	1.839846	.7376021
#3	1.662694	-.002514	.0009820	.0020784	.2188906	1.838019	.7332220

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: Q2127-11LX5 Acquired: 5/30/2025 16:19:07 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.5226632	.0354152	.0045521
Stddev	.0010279	.0014332	.0002082
%RSD	.1966705	4.046786	4.573372
#1	.5238144	.0343190	.0047916
#2	.5218372	.0370370	.0044147
#3	.5223380	.0348897	.0044499

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2938.822	64764.98	12116.30	2200.637	4002.011
Stddev	17.083	102.28	35.54	11.400	13.390
%RSD	.5812862	.1579306	.2933151	.5180312	.3345831
#1	2955.963	64870.35	12080.35	2206.629	4011.246
#2	2921.798	64666.09	12117.12	2207.790	3986.655
#3	2938.704	64758.50	12151.42	2187.490	4008.134

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: Q2127-11MS Acquired: 5/30/2025 16:23:20 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7703562**	**1.788870**	**2.443430**	**1.639608**	**.3100372**	**138.0489**	**.6817399**
Stddev	.0019996	.022241	.004461	.000782	.0027528	.3050	.0037091
%RSD	.2595676	1.243310	.1825705	.0477031	.8878928	.2209231	.5440669
#1	.7725471	1.782221	2.448149	1.638937	.3116966	138.3003	.6815399
#2	.7686297	1.813677	2.442859	1.640467	.3068596	138.1368	.6855449
#3	.7698916	1.770711	2.439282	1.639420	.3115554	137.7096	.6781348

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1789235**	**.1949440**	**84.92527**	**.5623598**	**.2803173**	**.4891445**	**227.3989**
Stddev	.0005165	.0003103	.19419	.0022323	.0008974	.0006865	.7961
%RSD	.2886819	.1591740	.2286552	.3969507	.3201451	.1403519	.3501100
#1	.1791669	.1952307	85.01550	.5609306	.2808703	.4885763	226.9118
#2	.1792733	.1946145	85.05792	.5649321	.2792818	.4889499	228.3176
#3	.1783302	.1949869	84.70238	.5612167	.2807996	.4899074	226.9672

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.200012**	**32.18427**	**.6294279**	**.0655539**	**6.037406**	**.5974619**	**.7958943**
Stddev	.008237	.15966	.0006434	.0003027	.039787	.0010032	.0048923
%RSD	.3744088	.4960820	.1022277	.4617530	.6590000	.1679113	.6146927
#1	2.199301	32.34861	.6293780	.0657413	6.036449	.5983667	.7944175
#2	2.208581	32.17445	.6288108	.0657158	6.077662	.5976359	.8013549
#3	2.192153	32.02974	.6300948	.0652047	5.998106	.5963831	.7919106

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**19.07069**	**.2002182**	**.3461077**	**.6554851**	**1.257302**	**12.66776**	**10.02230**
Stddev	.08128	.0020011	.0004857	.0015594	.002064	.04164	.03120
%RSD	.4262109	.9994500	.1403199	.2378966	.1641635	.3286813	.3112661
#1	19.01142	.2008605	.3462169	.6570806	1.257897	12.62302	10.01427
#2	19.16335	.2018193	.3465294	.6554102	1.259003	12.70537	10.05673
#3	19.03731	.1979748	.3455767	.6539645	1.255005	12.67489	9.99591

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: Q2127-11MS Acquired: 5/30/2025 16:23:20 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.765367	.3981932	.2547850
Stddev	.002760	.0018513	.0010983
%RSD	.0997919	.4649260	.4310635
#1	2.768539	.3989150	.2555221
#2	2.764048	.3995748	.2553101
#3	2.763515	.3960897	.2535227

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3073.347	66273.76	13021.45	2247.646	3721.580
Stddev	2.555	104.37	25.52	10.912	7.349
%RSD	.0831355	.1574820	.1960173	.4854838	.1974596
#1	3073.745	66309.48	12995.78	2247.041	3715.230
#2	3070.616	66156.22	13021.74	2237.049	3719.881
#3	3075.680	66355.58	13046.82	2258.848	3729.630

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: Q2127-11MSD Acquired: 5/30/2025 16:27:20 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7826612**	**1.859947**	**1.493202**	**1.670503**	**.3183636**	**136.0165**	**.7140336**
Stddev	.0022615	.046227	.004104	.003678	.0027736	.1279	.0027198
%RSD	.2889515	2.485402	.2748709	.2201641	.8711893	.0940641	.3809021
#1	.7821818	1.859310	1.493271	1.672634	.3191740	135.9376	.7141324
#2	.7851240	1.814042	1.497271	1.672619	.3152751	135.9478	.7112659
#3	.7806779	1.906490	1.489063	1.666256	.3206417	136.1641	.7167027

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1809286**	**.1990673**	**57.31676**	**.5371707**	**.2830202**	**.4569302**	**251.8515**
Stddev	.0010349	.0005820	.08676	.0008540	.0010209	.0008821	.8909
%RSD	.5720135	.2923855	.1513651	.1589736	.3607291	.1930454	.3537416
#1	.1818597	.1990192	57.36138	.5376370	.2825189	.4577776	250.8663
#2	.1798143	.1996719	57.21677	.5361851	.2841949	.4569958	252.6004
#3	.1811118	.1985108	57.37212	.5376900	.2823469	.4560171	252.0880

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.039105**	**17.64522**	**.6413305**	**.0697888**	**6.514210**	**.5350538**	**.7724568**
Stddev	.007178	.06609	.0017617	.0001426	.028768	.0027213	.0044105
%RSD	.2361784	.3745344	.2746954	.2043124	.4416149	.5086101	.5709660
#1	3.043781	17.56897	.6397821	.0699509	6.484011	.5342755	.7706760
#2	3.030840	17.68598	.6432473	.0696827	6.517327	.5380795	.7774793
#3	3.042693	17.68070	.6409620	.0697328	6.541292	.5328064	.7692152

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**19.47989**	**.2403044**	**.3550809**	**.6860662**	**1.157680**	**11.43976**	**10.02744**
Stddev	.06527	.0034454	.0008919	.0009848	.001151	.06859	.01831
%RSD	.3350556	1.433771	.2511935	.1435381	.0994644	.5995793	.1825933
#1	19.40631	.2368059	.3540552	.6869528	1.157356	11.36467	10.02026
#2	19.50257	.2436941	.3555135	.6862395	1.156726	11.49912	10.01380
#3	19.53080	.2404133	.3556741	.6850063	1.158959	11.45548	10.04825

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: Q2127-11MSD Acquired: 5/30/2025 16:27:20 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**2.889390**	**.4135208**	**.2042498**
Stddev	.018959	.0011179	.0019898
%RSD	.6561613	.2703326	.9742130
#1	2.875971	.4131038	.2058554
#2	2.881119	.4126714	.2020236
#3	2.911079	.4147873	.2048702

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3110.038**	**65559.97**	**13311.26**	**2269.350**	**3743.093**
Stddev	2.390	42.11	48.01	1.471	4.496
%RSD	.0768487	.0642365	.3607076	.0648038	.1201154
#1	3109.858	65606.97	13263.47	2268.368	3742.520
#2	3107.742	65525.66	13359.49	2268.642	3738.911
#3	3112.512	65547.29	13310.82	2271.041	3747.848

Sample Name: Q2127-11A Acquired: 5/30/2025 16:31:18 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7645480**	**1.933020**	**1.748608**	**1.691495**	**.6991162**	**108.9289**	**.6274413**
Stddev	.0037159	.015967	.005649	.009748	.0041407	.2136	.0008113
%RSD	.4860278	.8260151	.3230720	.5762789	.5922688	.1960679	.1292983
#1	.7684088	1.948042	1.755127	1.700905	.7038481	108.9036	.6280239
#2	.7642388	1.916252	1.745154	1.681441	.6973432	108.7291	.6265147
#3	.7609963	1.934767	1.745543	1.692139	.6961572	109.1540	.6277852

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1828070**	**.1941432**	**48.09348**	**.5200912**	**.2679722**	**.4607093**	**195.0228**
Stddev	.0003936	.0001099	.03646	.0012022	.0005908	.0013817	.1564
%RSD	.2152834	.0566002	.0758153	.2311541	.2204847	.2998990	.0801738
#1	.1827663	.1941777	48.05599	.5208755	.2686543	.4622192	194.9841
#2	.1824354	.1940202	48.09561	.5187071	.2676422	.4595081	195.1949
#3	.1832193	.1942318	48.12882	.5206909	.2676201	.4604006	194.8895

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.722951**	**16.14229**	**.6053186**	**.0670855**	**5.783471**	**.5049310**	**.7451442**
Stddev	.001872	.03510	.0015692	.0006603	.008451	.0016747	.0046057
%RSD	.1086551	.2174112	.2592430	.9842040	.1461282	.3316685	.6180919
#1	1.723042	16.10537	.6063074	.0663774	5.789960	.5066158	.7483525
#2	1.721035	16.14627	.6061393	.0676842	5.786539	.5049107	.7398668
#3	1.724776	16.17522	.6035092	.0671948	5.773915	.5032666	.7472132

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**17.83234**	**.2539413**	**.3702904**	**.6811230**	**1.221679**	**10.23367**	**9.103075**
Stddev	.03716	.0026423	.0007860	.0011575	.002547	.00469	.035704
%RSD	.2083950	1.040512	.2122716	.1699382	.2084512	.0458359	.3922137
#1	17.86016	.2509083	.3707647	.6820729	1.221066	10.22893	9.140823
#2	17.79014	.2551706	.3693831	.6814623	1.219495	10.23378	9.069847
#3	17.84672	.2557450	.3707234	.6798337	1.224476	10.23831	9.098555

Sample Name: Q2127-11A Acquired: 5/30/2025 16:31:18 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**2.613977**	**.3581164**	**.1903291**
Stddev	.006862	.0003651	.0006337
%RSD	.2625036	.1019566	.3329548
#1	2.618866	.3582683	.1908095
#2	2.606133	.3576998	.1896109
#3	2.616932	.3583811	.1905668

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3134.240**	**65715.24**	**12854.94**	**2258.099**	**3857.267**
Stddev	3.160	180.72	37.04	8.299	5.828
%RSD	.1008073	.2750071	.2881523	.3675320	.1510970
#1	3132.137	65685.91	12851.59	2248.546	3853.642
#2	3132.710	65908.82	12893.54	2263.534	3854.168
#3	3137.873	65550.97	12819.68	2262.217	3863.990

Sample Name: PB168179BL Acquired: 5/30/2025 16:35:17 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000007**	**-.003125**	**-.001012**	**.0042535**	**-.001425**	**.0000988**	**-.002445**
Stddev	.001010	.000560	.001022	.0019468	.002418	.0059788	.000711
%RSD	13504.59	17.90632	101.0218	45.76974	169.7216	6053.945	29.09621
#1	-.001173	-.003734	-.000313	.0027747	.001245	-.003684	-.002365
#2	.000526	-.003009	-.000537	.0064592	-.003467	.006992	-.001777
#3	.000625	-.002633	-.002185	.0035266	-.002053	-.003011	-.003193

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000031**	**-.000033**	**-.004659**	**-.000068**	**-.000007**	**-.000202**	**.0040433**
Stddev	.0000336	.000029	.005884	.000060	.000141	.000201	.0052850
%RSD	1067.388	86.44076	126.3014	88.74842	2063.774	99.37776	130.7088
#1	-.000018	-.000020	.002017	-.000131	.000011	-.000178	.0095268
#2	.000042	-.000067	-.009090	-.000060	.000125	-.000014	-.001018
#3	-.000015	-.000014	-.006902	-.000012	-.000156	-.000413	.003621

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000263**	**-.016079**	**-.000049**	**.0000909**	**-.081156**	**.0000512**	**.0002121**
Stddev	.000353	.015491	.000070	.0000464	.007775	.0016387	.0001364
%RSD	133.9292	96.34310	144.8523	51.03546	9.579743	3197.478	64.32228
#1	-.000290	.001680	-.000120	.0001342	-.076163	-.001030	.0003660
#2	-.000602	-.026815	.000020	.0000420	-.090114	-.000752	.0001063
#3	.000102	-.023102	-.000046	.0000965	-.077192	.001937	.0001639

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0041021**	**.0021673**	**.0000381**	**-.000560**	**.0007299**	**.0122435**	**.0022683**
Stddev	.0057942	.0001144	.0002751	.000533	.0000744	.0084724	.0024316
%RSD	141.2489	5.279920	722.4709	95.17617	10.19216	69.19897	107.2015
#1	.0090792	.0022728	-.000161	-.000230	.0008142	.0210762	.0050753
#2	-.002259	.0020457	.000352	-.000275	.0006734	.0041845	.0009228
#3	.005486	.0021836	-.000077	-.001174	.0007020	.0114698	.0008068

Sample Name: PB168179BL Acquired: 5/30/2025 16:35:17 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0010197	.0001489	.0000154
Stddev	.0007843	.0005072	.0000990
%RSD	76.91194	340.6146	643.2829
#1	.0002641	.0007128	-.000060
#2	.0018298	.0000042	-.000021
#3	.0009652	-.000270	.000127

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2935.464	63256.23	11881.39	2173.770	4119.133
Stddev	35.432	268.01	44.87	12.155	48.200
%RSD	1.207045	.4236970	.3776238	.5591750	1.170150
#1	2894.981	63058.24	11931.47	2159.916	4063.827
#2	2960.838	63149.23	11844.88	2178.746	4152.183
#3	2950.571	63561.22	11867.81	2182.647	4141.390

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: PB168179BS Acquired: 5/30/2025 16:39:37 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7839865**	**2.006554**	**.9568509**	**1.993425**	**.8223763**	**1.898795**
Stddev	.0032898	.008230	.0023124	.011544	.0079427	.023295
%RSD	.4196249	.4101404	.2416647	.5790831	.9658170	1.226839
#1	.7809849	2.004366	.9545314	1.980140	.8135471	1.872349
#2	.7875036	1.999639	.9591561	2.001006	.8289403	1.907760
#3	.7834710	2.015656	.9568654	1.999129	.8246413	1.916275

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1834582**	**.1960795**	**.1953880**	**.9973278**	**.4080184**	**.1962209**
Stddev	.0018985	.0011790	.0003535	.0147303	.0022329	.0007421
%RSD	1.034819	.6012620	.1809148	1.476979	.5472497	.3782000
#1	.1814120	.1953477	.1950084	.9845300	.4105005	.1956660
#2	.1838002	.1954514	.1957078	.9940238	.4073818	.1970638
#3	.1851624	.1974396	.1954477	1.013430	.4061729	.1959329

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3094290**	**3.021964**	**.1947050**	**1.873055**	**.4930918**	**.0740862**
Stddev	.0019000	.016790	.0009227	.030962	.0011901	.0001611
%RSD	.6140299	.5556104	.4739024	1.653008	.2413614	.2174721
#1	.3075369	3.003810	.1936725	1.837602	.4917481	.0741747
#2	.3113368	3.036935	.1949934	1.886785	.4940133	.0741836
#3	.3094133	3.025148	.1954490	1.894777	.4935139	.0739002

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.794993**	**.2891246**	**.1937706**	**9.361750**	**.2835447**	**.4165380**
Stddev	.011610	.0025523	.0023250	.058777	.0035801	.0018188
%RSD	.4153917	.8827800	1.199886	.6278398	1.262611	.4366530
#1	2.799806	.2864446	.1959052	9.325037	.2815137	.4144381
#2	2.803422	.2915266	.1912932	9.429542	.2814420	.4176184
#3	2.781750	.2894025	.1941132	9.330672	.2876784	.4175575

Sample Name: PB168179BS Acquired: 5/30/2025 16:39:37 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7080315	.1928259	.8623081	5.599605	F -.003239	.1901231
Stddev	.0006015	.0020848	.0110773	.014739	.000031	.0011472
%RSD	.0849495	1.081195	1.284615	.2632105	.9651225	.6034177
#1	.7073549	.1904584	.8498090	5.585866	-.003250	.1888250
#2	.7082345	.1936317	.8662043	5.615172	-.003204	.1910009
#3	.7085053	.1943875	.8709109	5.597776	-.003263	.1905435

Elem	Sr4077
Units	ppm
Avg	.1853902
Stddev	.0018742
%RSD	1.010939
#1	.1832264
#2	.1865007
#3	.1864437

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2916.049	62431.94	12149.11	2169.983	4086.055
Stddev	18.232	146.55	123.76	10.419	16.986
%RSD	.6252434	.2347321	1.018710	.4801499	.4157058
#1	2934.801	62488.09	12261.40	2176.291	4102.819
#2	2898.385	62542.11	12169.51	2175.700	4068.855
#3	2914.962	62265.62	12016.41	2157.956	4086.491

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: PB168167BL Acquired: 5/30/2025 16:43:38 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0009176**	**-.003561**	**-.000863**	**.0035334**	**-.000802**	**.0061087**	**-.000010**
Stddev	.0022417	.001688	.000445	.0014722	.000399	.0017690	.000144
%RSD	244.3009	47.40389	51.60275	41.66458	49.76896	28.95920	1458.400
#1	-.001612	-.004546	-.000521	.0045945	-.001177	.0060057	.000145
#2	.002659	-.004525	-.001367	.0018527	-.000848	.0043933	-.000141
#3	.001705	-.001612	-.000702	.0041530	-.000382	.0079269	-.000033

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000316**	**.0000200**	**.0083315**	**.0030647**	**.0000637**	**.0001685**	**.0055966**
Stddev	.0000224	.0000453	.0031029	.0000568	.0001386	.0002982	.0046675
%RSD	70.90460	226.8498	37.24323	1.852945	217.4704	176.9805	83.39717
#1	.0000259	-.000032	.0053862	.0030160	-.000003	.0002812	.0099147
#2	.0000562	.000044	.0115710	.0030509	-.000028	-.000170	.0062306
#3	.0000126	.000048	.0080372	.0031271	.000223	.000394	.0006446

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004441**	**-.015563**	**.0015127**	**.0000381**	**-.084400**	**-.000464**	**.0004180**
Stddev	.0002903	.009589	.0000807	.0001589	.007691	.002843	.0000661
%RSD	65.36512	61.61284	5.334638	417.1546	9.112422	613.2712	15.80142
#1	.0001131	-.026426	.0015396	.0001864	-.093080	-.003478	.0003577
#2	.0005639	-.008278	.0014219	.0000575	-.081687	.002169	.0004078
#3	.0006553	-.011984	.0015764	-.000130	-.078433	-.000081	.0004886

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0240506**	**.0012263**	**.0001630**	**-.000452**	**.0008292**	**-.001045**	**.0008863**
Stddev	.0111867	.0002336	.0001793	.000486	.0002835	.005085	.0016577
%RSD	46.51295	19.05099	109.9956	107.6075	34.18777	486.7053	187.0314
#1	.0111973	.0014671	.0002533	-.000698	.0011062	-.004617	.0026954
#2	.0293655	.0012112	-.000043	-.000767	.0008419	.004777	-.000560
#3	.0315890	.0010006	.000279	.000108	.0005396	-.003293	.000523

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: PB168167BL Acquired: 5/30/2025 16:43:38 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0022176	.0004254	.0000861
Stddev	.0014525	.0000970	.0000254
%RSD	65.49947	22.79770	29.47816
#1	.0006934	.0005067	.0000764
#2	.0035858	.0003181	.0000671
#3	.0023736	.0004515	.0001150

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2908.850	63556.79	12088.05	2204.000	4074.085
Stddev	11.378	276.90	89.95	19.140	8.638
%RSD	.3911601	.4356688	.7441637	.8684034	.2120223
#1	2918.516	63695.37	12032.42	2215.412	4081.115
#2	2911.723	63737.03	12039.89	2214.684	4076.699
#3	2896.310	63237.96	12191.83	2181.903	4064.443

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: PB168167BS Acquired: 5/30/2025 16:47:58 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8062717**	**2.049965**	**.9763817**	**2.050754**	**.7954257**	**1.962123**
Stddev	.0054201	.025925	.0024081	.006596	.0014769	.012968
%RSD	.6722359	1.264676	.2466314	.3216373	.1856728	.6609016
#1	.8018842	2.020589	.9738832	2.048975	.7944364	1.973296
#2	.8046003	2.059664	.9786878	2.045230	.7947174	1.947903
#3	.8123306	2.069643	.9765739	2.058057	.7971234	1.965169

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1884494**	**.2060691**	**.1991565**	**1.006550**	**.4125270**	**.1999824**
Stddev	.0005420	.0009439	.0002535	.008425	.0008113	.0001616
%RSD	.2876360	.4580626	.1272735	.8370531	.1966655	.0808241
#1	.1887756	.2071558	.1992875	1.015111	.4121152	.2000764
#2	.1878237	.2054534	.1988643	.998268	.4120042	.1997957
#3	.1887489	.2055980	.1993176	1.006270	.4134616	.2000750

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3160764**	**3.005678**	**.1979118**	**1.918494**	**.5014979**	**.0755342**
Stddev	.0009074	.004717	.0006464	.039092	.0007450	.0003764
%RSD	.2870895	.1569489	.3266229	2.037643	.1485620	.4982709
#1	.3152633	3.002151	.1982619	1.956412	.5021917	.0759344
#2	.3159108	3.003846	.1971659	1.920745	.5015915	.0754811
#3	.3170553	3.011036	.1983077	1.878325	.5007105	.0751873

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.724523**	**.2963858**	**.1939197**	**9.455836**	**.2970566**	**.4012595**
Stddev	.013989	.0017259	.0008865	.023103	.0021738	.0009634
%RSD	.5134454	.5823277	.4571287	.2443254	.7317800	.2400858
#1	2.713111	.2983433	.1944635	9.430382	.2995666	.4002817
#2	2.720329	.2950832	.1943989	9.461645	.2958125	.4012892
#3	2.740130	.2957307	.1928968	9.475479	.2957905	.4022077

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: PB168167BS Acquired: 5/30/2025 16:47:58 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6748887**	**.1881607**	**.8098876**	**5.704173**	F **-.004602**	**.1994868**
Stddev	.0017513	.0003056	.0049036	.012408	.001701	.0017591
%RSD	.2594947	.1624006	.6054671	.2175209	36.97621	.8818389
#1	.6743689	.1878688	.8155183	5.690980	-.006138	.1977321
#2	.6734561	.1884783	.8065558	5.705929	-.002773	.1994779
#3	.6768410	.1881351	.8075888	5.715609	-.004894	.2012504

Elem	Sr4077
Units	ppm
Avg	**.1910288**
Stddev	.0009828
%RSD	.5145007
#1	.1912628
#2	.1899501
#3	.1918735

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2897.824**	**62016.11**	**11749.28**	**2138.740**	**4066.770**
Stddev	14.383	64.11	28.57	2.833	13.367
%RSD	.4963316	.1033717	.2431553	.1324445	.3286912
#1	2911.340	62053.09	11718.06	2141.066	4078.492
#2	2899.424	61942.09	11755.68	2139.570	4069.606
#3	2882.708	62053.16	11774.11	2135.586	4052.213

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: CCV02 Acquired: 5/30/2025 16:52:00 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV02 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.139242**	**5.159418**	**5.030485**	**5.207186**	**5.131631**	**10.01016**	**9.860084**
Stddev	.008572	.043254	.004336	.025679	.026004	.03177	.038755
%RSD	.1667939	.8383574	.0861914	.4931369	.5067373	.3174148	.3930541
#1	5.137358	5.193465	5.028350	5.190455	5.105517	10.03686	9.829020
#2	5.131768	5.110747	5.027630	5.194351	5.131853	10.01861	9.847720
#3	5.148599	5.174041	5.035474	5.236751	5.157523	9.97502	9.903513

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2486778**	**2.511917**	**24.64111**	**1.024337**	**2.510087**	**1.289578**	**5.254417**
Stddev	.0012238	.002845	.05653	.001545	.003223	.005010	.027668
%RSD	.4921241	.1132411	.2294172	.1507997	.1284080	.3884802	.5265752
#1	.2480213	2.509765	24.66454	1.023868	2.507391	1.286633	5.257420
#2	.2500898	2.510843	24.68215	1.026061	2.509214	1.286739	5.225369
#3	.2479224	2.515142	24.57663	1.023080	2.513657	1.295362	5.280461

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.453445**	**24.50898**	**2.513611**	**1.287944**	**25.95737**	**2.490886**	**2.607867**
Stddev	.004767	.05115	.003511	.002116	.14892	.006088	.027116
%RSD	.1943133	.2086900	.1396692	.1642554	.5737018	.2444136	1.039787
#1	2.449821	24.49895	2.510405	1.285945	25.98374	2.489101	2.580712
#2	2.458846	24.56441	2.513066	1.290159	25.79704	2.497667	2.634944
#3	2.451669	24.46360	2.517362	1.287728	26.09135	2.485890	2.607946

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**26.39750**	**4.895536**	**5.123056**	**5.045768**	**4.914998**	**5.256929**	**4.927028**
Stddev	.13021	.029189	.013403	.011710	.007600	.014874	.009580
%RSD	.4932628	.5962469	.2616143	.2320746	.1546308	.2829497	.1944343
#1	26.44968	4.874313	5.114487	5.042095	4.914196	5.255800	4.933259
#2	26.24929	4.928824	5.116181	5.036335	4.922967	5.242651	4.915997
#3	26.49353	4.883471	5.138501	5.058874	4.907830	5.272335	4.931829

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: CCV02 Acquired: 5/30/2025 16:52:00 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV02 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**5.061087**	**4.948132**	**4.990874**
Stddev	.008249	.006894	.046223
%RSD	.1629834	.1393352	.9261521
#1	5.052848	4.955544	4.955251
#2	5.061069	4.946943	5.043107
#3	5.069345	4.941910	4.974264

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2808.749**	**59803.20**	**11784.12**	**2044.813**	**3801.970**
Stddev	9.860	68.82	54.84	6.905	7.937
%RSD	.3510569	.1150854	.4653734	.3376762	.2087696
#1	2816.443	59881.30	11797.59	2051.229	3807.190
#2	2812.171	59776.85	11723.80	2037.506	3805.885
#3	2797.634	59751.43	11830.97	2045.703	3792.836

Sample Name: CCB02 Acquired: 5/30/2025 16:56:12 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal 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	**-.001235**	**-.002173**	**-.000708**	**.0024012**	**-.000935**	**.0118136**	**-.001764**
Stddev	.000967	.002300	.000844	.0023637	.001340	.0061475	.000505
%RSD	78.27957	105.8395	119.2393	98.43510	143.2655	52.03765	28.64192
#1	-.002258	.000474	-.001160	.0043657	-.000203	.0068663	-.002294
#2	-.001109	-.003316	.000266	-.000222	-.002482	.0186958	-.001288
#3	-.000337	-.003676	-.001230	.003060	-.000121	.0098788	-.001711

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000366**	**.0000262**	**.0057858**	**.0004110**	**.0003063**	**.0002102**	**.0041964**
Stddev	.0000164	.0000504	.0013130	.0002710	.0001337	.0000556	.0036231
%RSD	44.83642	192.2573	22.69411	65.94887	43.65826	26.47386	86.33665
#1	.0000408	-.000026	.0042732	.0007179	.0004081	.0002111	.0057565
#2	.0000185	.000074	.0064521	.0002046	.0001548	.0002653	.0000547
#3	.0000505	.000031	.0066320	.0003105	.0003559	.0001541	.0067782

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0007229**	**-.026540**	**.0006815**	**.0002057**	**-.083972**	**-.000013**	**.0026224**
Stddev	.0003917	.003250	.0001094	.0005692	.011880	.001112	.0002208
%RSD	54.18405	12.24585	16.05538	276.7611	14.14815	8284.391	8.419694
#1	.0008882	-.027380	.0006241	-.000451	-.095882	-.001223	.0023924
#2	.0002757	-.029288	.0006128	.000526	-.083913	.000218	.0028326
#3	.0010049	-.022953	.0008077	.000543	-.072121	.000964	.0026422

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.012005**	**.0097794**	**.0005847**	**.0032116**	**.0006093**	**.0074334**	**.0001999**
Stddev	.024774	.0004326	.0002567	.0003284	.0002865	.0052109	.0026429
%RSD	206.3722	4.423367	43.89803	10.22586	47.01013	70.10121	1321.914
#1	.001097	.0094321	.0005723	.0033784	.0008382	.0072034	.0009972
#2	-.040579	.0102639	.0008473	.0028333	.0007017	.0127555	.0023525
#3	.003467	.0096420	.0003345	.0034231	.0002881	.0023413	-.002750

Sample Name: CCB02 Acquired: 5/30/2025 16:56:12 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB02 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0008359	-.000660	.0000607
Stddev	.0015890	.000470	.0000839
%RSD	190.0960	71.17250	138.1777
#1	-.000827	-.000270	.0001561
#2	.002339	-.000529	-.000001
#3	.000995	-.001181	.000027

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2935.426	62963.38	12034.65	2148.403	4159.536
Stddev	4.563	358.37	17.61	11.362	6.728
%RSD	.1554535	.5691744	.1463081	.5288764	.1617480
#1	2934.383	63376.95	12053.69	2161.518	4159.058
#2	2940.420	62768.85	12031.34	2141.523	4166.490
#3	2931.474	62744.34	12018.94	2142.168	4153.060

Sample Name: PB168117BL Acquired: 5/30/2025 17:00:32 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0009357**	**-.003029**	**-.001488**	**.0020573**	**-.000311**	**.0061285**	**-.001665**
Stddev	.0007400	.000540	.000938	.0006279	.000811	.0034324	.000826
%RSD	79.08311	17.82563	63.04163	30.52149	260.6043	56.00796	49.61113
#1	.0001473	-.002804	-.001456	.0022971	.000111	.0087546	-.001728
#2	.0010447	-.002638	-.002441	.0025299	-.001246	.0073863	-.000809
#3	.0016152	-.003646	-.000566	.0013448	.000202	.0022446	-.002457

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000470**	**-.000058**	**.0079388**	**.0000521**	**.0000218**	**-.000022**	**.0056618**
Stddev	.0000344	.000061	.0040233	.0002397	.0001422	.000073	.0014349
%RSD	73.17890	104.8913	50.67932	460.0678	652.1959	334.7747	25.34247
#1	.0000581	-.000038	.0054052	-.000170	-.000104	-.000034	.0069716
#2	.0000084	-.000126	.0125779	.000306	.000176	.000057	.0041282
#3	.0000744	-.000010	.0058332	.000019	-.000006	-.000088	.0058857

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000270**	**-.024525**	**.0000906**	**-.000004**	**-.063391**	**-.000301**	**.0003730**
Stddev	.000229	.017627	.0002154	.000278	.002764	.002064	.0000557
%RSD	84.86023	71.87511	237.6329	7758.703	4.359898	686.1319	14.93968
#1	-.000006	-.038008	.0000109	-.000240	-.063704	.002002	.0003091
#2	-.000417	-.030989	-.000073	.000302	-.065986	-.000918	.0003981
#3	-.000388	-.004578	.000335	-.000074	-.060485	-.001987	.0004118

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0176343**	**.0060219**	**.0001369**	**.0000738**	**.0003666**	**.0032079**	**.0005198**
Stddev	.0123289	.0005441	.0001313	.0002653	.0001008	.0079763	.0028897
%RSD	69.91447	9.035322	95.86037	359.3356	27.49926	248.6473	555.9014
#1	.0076590	.0066033	.0001074	.0003376	.0002716	.0110763	.0003172
#2	.0314181	.0055250	.0000230	.0000769	.0003560	-.004872	-.002263
#3	.0138257	.0059375	.0002805	-.000193	.0004724	.003420	.003505

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: PB168117BL Acquired: 5/30/2025 17:00:32 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0004703	.0001381	.0000126
Stddev	.0016401	.0007922	.0001107
%RSD	348.7046	573.7217	878.9787
#1	-.001408	-.000489	.0000677
#2	.001617	.001028	-.000115
#3	.001202	-.000125	.000085

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2939.962	62139.24	12470.00	2123.830	4170.319
Stddev	13.141	258.58	24.73	10.051	12.822
%RSD	.4469726	.4161282	.1983145	.4732468	.3074513
#1	2945.941	62071.37	12455.60	2114.196	4175.820
#2	2949.050	61921.36	12455.85	2123.043	4179.472
#3	2924.895	62424.98	12498.56	2134.251	4155.664

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: PB168117BS Acquired: 5/30/2025 17:04:52 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8382094**	**2.106872**	**1.002738**	**2.143467**	**.8552971**	**1.938663**
Stddev	.0017469	.015878	.007742	.013362	.0060942	.012228
%RSD	.2084059	.7536344	.7721324	.6233628	.7125281	.6307216
#1	.8393001	2.109740	1.000615	2.138558	.8517150	1.926714
#2	.8361946	2.089755	.996278	2.133255	.8518426	1.951151
#3	.8391336	2.121120	1.011320	2.158589	.8623338	1.938123

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1927354**	**.1941777**	**.2058527**	**1.011019**	**.4177497**	**.2048572**
Stddev	.0012032	.0001861	.0009705	.002368	.0010645	.0009633
%RSD	.6243029	.0958361	.4714574	.2342047	.2548232	.4702331
#1	.1917421	.1941148	.2061750	1.008440	.4166315	.2050223
#2	.1940734	.1940312	.2047620	1.011524	.4187508	.2038220
#3	.1923907	.1943871	.2066210	1.013095	.4178668	.2057273

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3248323**	**3.255260**	**.1975876**	**1.908384**	**.5182016**	**.0760954**
Stddev	.0013065	.019584	.0007673	.020239	.0026477	.0001970
%RSD	.4022160	.6016128	.3883287	1.060526	.5109383	.2589483
#1	.3241363	3.269272	.1981454	1.888677	.5191434	.0762665
#2	.3240211	3.263625	.1979047	1.929116	.5152117	.0761397
#3	.3263395	3.232882	.1967126	1.907359	.5202496	.0758800

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.984169**	**.2947058**	**.1993235**	**10.15877**	**.2852544**	**.4261151**
Stddev	.014725	.0006608	.0025747	.07578	.0003739	.0029507
%RSD	.4934237	.2242248	1.291728	.7459298	.1310635	.6924628
#1	2.970725	.2939674	.1967225	10.08520	.2855182	.4249104
#2	2.999905	.2949084	.1993768	10.23658	.2848266	.4239573
#3	2.981876	.2952416	.2018711	10.15454	.2854184	.4294775

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: PB168117BS Acquired: 5/30/2025 17:04:52 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7259489**	**.1970539**	**.9130501**	**6.033357**	F **-.002913**	**.1969146**
Stddev	.0029852	.0008425	.0126442	.035827	.003874	.0009339
%RSD	.4112087	.4275257	1.384834	.5938144	132.9917	.4742742
#1	.7276751	.1967715	.9100758	6.027736	-.006204	.1958365
#2	.7225019	.1980012	.9021582	6.000673	.001356	.1974302
#3	.7276697	.1963888	.9269163	6.071662	-.003891	.1974770

Elem	Sr4077
Units	ppm
Avg	**.1931157**
Stddev	.0005308
%RSD	.2748500
#1	.1926029
#2	.1936628
#3	.1930814

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2817.972**	**61248.48**	**12540.00**	**2124.677**	**3916.779**
Stddev	14.056	44.71	12.86	5.436	19.317
%RSD	.4988080	.0730040	.1025208	.2558336	.4931858
#1	2828.834	61237.75	12528.81	2124.823	3924.346
#2	2822.985	61210.10	12554.04	2119.170	3931.166
#3	2802.096	61297.58	12537.15	2130.038	3894.824

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: Q2101-01 Acquired: 5/30/2025 17:08:53 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0885590**	**-.050101**	**.1493586**	**.0069980**	**.0683618**	**59.24233**
Stddev	.0014583	.003549	.0007877	.0041202	.0015069	.08804
%RSD	1.646650	7.082930	.5274169	58.87731	2.204278	.1486083
#1	.0869293	-.048003	.1490142	.0030092	.0696679	59.25310
#2	.0897407	-.048101	.1502598	.0067466	.0687044	59.32449
#3	.0890071	-.054198	.1488016	.0112382	.0667131	59.14940

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1611084**	**.0104069**	**.0027752**	**8.027859**	**.1202569**	**.0722317**
Stddev	.0011694	.0000215	.0001648	.011910	.0002363	.0000284
%RSD	.7258644	.2064058	5.938177	.1483576	.1964769	.0392918
#1	.1621099	.0104210	.0028923	8.019789	.1204304	.0722566
#2	.1613919	.0103822	.0028466	8.022251	.1203525	.0722008
#3	.1598232	.0104176	.0025868	8.041538	.1199878	.0722377

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1912714**	**263.9262**	**.9396191**	**8.147196**	**.0915115**	**.0000863**
Stddev	.0012941	1.2582	.0021663	.034494	.0002673	.0000933
%RSD	.6765657	.4767304	.2305518	.4233825	.2920980	108.1170
#1	.1927646	263.7155	.9377813	8.123696	.0918045	.0000668
#2	.1904747	262.7867	.9420076	8.186796	.0914493	.0000043
#3	.1905750	265.2765	.9390683	8.131094	.0912808	.0001878

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.455115**	**.3111757**	**.2629995**	**6.283248**	**.0618627**	**.0011958**
Stddev	.005180	.0008588	.0014300	.032433	.0095134	.0001916
%RSD	.2109913	.2759707	.5437435	.5161786	15.37825	16.02048
#1	2.449552	.3103051	.2616679	6.265251	.0631711	.0010552
#2	2.455991	.3120221	.2645110	6.263805	.0517628	.0011183
#3	2.459800	.3111998	.2628196	6.320689	.0706542	.0014140

Sample Name: Q2101-01 Acquired: 5/30/2025 17:08:53 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0070918	2.266577	F 16.14253	4.024960	1.579877	.1842331
Stddev	.0006391	.003704	.10869	.011956	.003252	.0009464
%RSD	9.011793	.1634081	.6733439	.2970555	.2058348	.5136854
#1	.0077937	2.266963	16.14383	4.037918	1.581257	.1834838
#2	.0069383	2.270073	16.03319	4.022610	1.582211	.1839188
#3	.0065435	2.262696	16.25057	4.014354	1.576162	.1852966

Elem	Sr4077
Units	ppm
Avg	-.208982
Stddev	.001315
%RSD	.6291890
#1	-.208833
#2	-.207748
#3	-.210365

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3096.249	67405.08	13422.72	2289.416	3845.323
Stddev	11.964	158.74	59.43	5.554	8.630
%RSD	.3864160	.2355001	.4427937	.2425829	.2244285
#1	3082.434	67524.52	13450.67	2285.089	3836.299
#2	3103.022	67465.77	13354.46	2295.679	3846.173
#3	3103.289	67224.95	13463.03	2287.480	3853.496

Sample Name: Q2101-01DUP Acquired: 5/30/2025 17:12:59 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1083446**	**-.071652**	**.1226612**	**.0012194**	**.0073703**	**87.87941**
Stddev	.0024771	.003741	.0025808	.0020725	.0006059	.15856
%RSD	2.286308	5.220647	2.103984	169.9604	8.221516	.1804247
#1	.1062221	-.075189	.1214569	.0027049	.0078495	87.99649
#2	.1110664	-.067736	.1256240	.0021015	.0066892	87.69898
#3	.1077454	-.072031	.1209027	-.001148	.0075723	87.94277

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2463226**	**.0177830**	**.0098423**	**9.669433**	**.1919682**	**.2048606**
Stddev	.0012032	.0000642	.0002516	.020396	.0008141	.0009069
%RSD	.4884857	.3609671	2.556225	.2109330	.4240884	.4426797
#1	.2464014	.0177301	.0098919	9.687104	.1910345	.2049661
#2	.2450818	.0178544	.0095696	9.647115	.1923406	.2039056
#3	.2474845	.0177646	.0100654	9.674081	.1925295	.2057101

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2535218**	**374.9656**	**2.256422**	**14.52237**	**.1691475**	**-.002982**
Stddev	.0004220	1.0193	.004797	.05036	.0008252	.000468
%RSD	.1664686	.2718426	.2125882	.3467952	.4878628	15.69271
#1	.2537776	373.9849	2.261925	14.57749	.1690062	-.003519
#2	.2530347	376.0196	2.254218	14.47876	.1684021	-.002762
#3	.2537531	374.8922	2.253124	14.51085	.1700343	-.002664

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.008556**	**.4142443**	**.3450426**	**8.660933**	**.0444988**	**.0007527**
Stddev	.021659	.0028433	.0015196	.051507	.0035108	.0001125
%RSD	1.078341	.6863843	.4404091	.5947032	7.889558	14.95004
#1	1.986062	.4144049	.3435460	8.607780	.0405889	.0008000
#2	2.029270	.4113241	.3449974	8.664401	.0455264	.0006243
#3	2.010337	.4170039	.3465842	8.710618	.0473810	.0008339

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: Q2101-01DUP Acquired: 5/30/2025 17:12:59 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0047421	3.352438	F 17.23520	7.755795	.8000120	.2717485
Stddev	.0015910	.006095	.06367	.011481	.0020544	.0012565
%RSD	33.55110	.1818029	.3693985	.1480375	.2567914	.4623639
#1	.0065780	3.356291	17.20496	7.748072	.8000361	.2712249
#2	.0038822	3.345411	17.30835	7.750325	.8020542	.2731821
#3	.0037660	3.355612	17.19229	7.768989	.7979457	.2708385

Elem	Sr4077
Units	ppm
Avg	-.311568
Stddev	.001079
%RSD	.3462644
#1	-.310614
#2	-.312739
#3	-.311352

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3325.290	71383.76	14267.35	2457.322	3739.378
Stddev	5.956	261.93	42.64	6.725	8.141
%RSD	.1790993	.3669354	.2988946	.2736816	.2177078
#1	3331.043	71458.05	14222.06	2464.700	3741.520
#2	3325.676	71092.71	14273.25	2451.535	3746.234
#3	3319.151	71600.53	14306.74	2455.732	3730.380

Sample Name: Q2101-01LX5 Acquired: 5/30/2025 17:17:04 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0187637**	**-.011705**	**.0287886**	**.0014822**	**.0128068**	**12.54370**	**.0343944**
Stddev	.0012357	.003159	.0010945	.0015770	.0013407	.02113	.0001191
%RSD	6.585828	26.98594	3.802023	106.3923	10.46899	.1684154	.3462276
#1	.0196591	-.012595	.0275254	.0029032	.0127474	12.54665	.0344692
#2	.0192781	-.014322	.0293839	-.000214	.0114968	12.56320	.0344568
#3	.0173538	-.008196	.0294565	.001758	.0141763	12.52126	.0342571

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0024042**	**-.000411**	**1.719134**	**.0267125**	**.0140169**	**.0423567**	**55.85380**
Stddev	.0000267	.000096	.002958	.0000960	.0001392	.0003453	.55805
%RSD	1.108687	23.47321	.1720563	.3594329	.9928828	.8151879	.9991269
#1	.0024325	-.000356	1.721203	.0268150	.0140867	.0420000	55.56567
#2	.0024004	-.000522	1.715746	.0266978	.0138567	.0423809	56.49703
#3	.0023796	-.000354	1.720452	.0266247	.0141074	.0426893	55.49872

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2011241**	**1.745996**	**.0179406**	**-.000390**	**.4398343**	**.0672091**	**.0679747**
Stddev	.0007122	.029582	.0001504	.000195	.0081262	.0010182	.0006847
%RSD	.3541046	1.694293	.8382447	50.05698	1.847558	1.515040	1.007243
#1	.2019011	1.731978	.0178276	-.000271	.4491624	.0660342	.0682219
#2	.2005024	1.779981	.0178829	-.000616	.4342902	.0678354	.0685015
#3	.2009688	1.726029	.0181113	-.000284	.4360501	.0677577	.0672008

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.262875**	**.0090408**	**.0001396**	**.0001288**	**.4802041**	**3.364248**	**.8101784**
Stddev	.013829	.0034383	.0000938	.0007706	.0014554	.054792	.0113289
%RSD	1.095054	38.03118	67.17407	598.1456	.3030848	1.628646	1.398320
#1	1.250223	.0074373	.0000987	-.000302	.4813164	3.332175	.8020336
#2	1.277638	.0129880	.0000732	-.000330	.4807390	3.427514	.8053855
#3	1.260765	.0066971	.0002469	.001018	.4785569	3.333055	.8231159

Sample Name: Q2101-01LX5 Acquired: 5/30/2025 17:17:04 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.3133466	.0381275	-.044287
Stddev	.0031467	.0009742	.000556
%RSD	1.004220	2.555113	1.254805
#1	.3168764	.0375225	-.043937
#2	.3108353	.0392513	-.044927
#3	.3123282	.0376086	-.043996

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2998.561	63590.28	12393.72	2215.132	4065.371
Stddev	7.309	380.62	63.15	12.640	5.785
%RSD	.2437652	.5985528	.5095627	.5706070	.1422898
#1	3000.224	63616.02	12343.90	2209.221	4065.586
#2	3004.895	63197.44	12464.75	2206.530	4071.045
#3	2990.563	63957.38	12372.50	2229.644	4059.482

Sample Name: Q2101-01MS Acquired: 5/30/2025 17:21:20 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7805376**	**1.924354**	**1.078837**	**1.580636**	**.3887477**	**95.44276**	**.3781030**
Stddev	.0010608	.007475	.004542	.004832	.0024625	.07501	.0018048
%RSD	.1359093	.3884336	.4210081	.3056690	.6334313	.0785933	.4773209
#1	.7795747	1.919239	1.083476	1.576836	.3897086	95.45806	.3772392
#2	.7803632	1.920891	1.074399	1.578999	.3905848	95.50895	.3801773
#3	.7816748	1.932933	1.078635	1.586074	.3859496	95.36128	.3768925

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1914633**	**.2125321**	**10.26127**	**.5703796**	**.3223749**	**.5100838**	**353.2802**
Stddev	.0003446	.0001450	.02410	.0019137	.0005971	.0001750	1.5178
%RSD	.1799823	.0682358	.2348274	.3355143	.1852091	.0343015	.4296359
#1	.1916866	.2125051	10.26426	.5688524	.3216940	.5098967	353.0237
#2	.1916370	.2126888	10.28374	.5697600	.3228091	.5101111	351.9069
#3	.1910665	.2124026	10.23582	.5725263	.3226217	.5102435	354.9099

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.329292**	**13.31361**	**.6759223**	**.0591704**	**4.463095**	**.6918252**	**.5030629**
Stddev	.003898	.03351	.0009292	.0004547	.034791	.0044856	.0058222
%RSD	.2932588	.2516635	.1374679	.7684180	.7795173	.6483746	1.157346
#1	1.327023	13.35160	.6749758	.0594013	4.438620	.6960182	.4965968
#2	1.333793	13.30098	.6768331	.0586467	4.447746	.6923621	.5047022
#3	1.327059	13.28826	.6759581	.0594633	4.502921	.6870953	.5078897

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**15.99129**	**.1695739**	**.3390499**	**.7015417**	**3.302424**	**6.716047**	**13.09348**
Stddev	.07826	.0061122	.0010499	.0025841	.006059	.036281	.03215
%RSD	.4894180	3.604452	.3096720	.3683476	.1834770	.5402146	.2455634
#1	15.96137	.1715503	.3381048	.6999265	3.298489	6.745221	13.06665
#2	15.93240	.1627180	.3388647	.7001765	3.309401	6.675422	13.08468
#3	16.08010	.1744533	.3401801	.7045221	3.299381	6.727497	13.12912

Sample Name: Q2101-01MS Acquired: 5/30/2025 17:21:20 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.9433330	.4428946	-.122779
Stddev	.0052747	.0010153	.001492
%RSD	.5591543	.2292458	1.215449
#1	.9434871	.4424262	-.123058
#2	.9379829	.4421980	-.121167
#3	.9485289	.4440595	-.124112

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3341.089	71839.13	13588.14	2446.651	3776.522
Stddev	6.456	161.09	58.92	7.377	2.547
%RSD	.1932333	.2242382	.4336128	.3015333	.0674387
#1	3347.219	71727.13	13561.37	2447.960	3778.707
#2	3341.697	72023.75	13547.36	2453.286	3773.725
#3	3334.350	71766.52	13655.69	2438.706	3777.133

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: Q2101-01MSD Acquired: 5/30/2025 17:25:19 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7783033**	**1.899262**	**1.050051**	**1.592201**	**.3013307**	**92.61908**
Stddev	.0030198	.011230	.003099	.008430	.0028157	.14463
%RSD	.3879939	.5912924	.2951020	.5294835	.9344335	.1561533
#1	.7756832	1.902110	1.049559	1.583208	.2985246	92.78385
#2	.7816059	1.886882	1.047228	1.593473	.3013117	92.51311
#3	.7776207	1.908794	1.053366	1.599924	.3041559	92.56029

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3709787**	**.1685364**	**.2008842**	**9.664592**	**.5077499**	**.3057774**
Stddev	.0010442	.0001547	.0010549	.024428	.0025923	.0011967
%RSD	.2814628	.0918192	.5251040	.2527586	.5105544	.3913767
#1	.3721838	.1684487	.1997456	9.691485	.5052758	.3046523
#2	.3704099	.1687151	.2010786	9.658515	.5104462	.3056452
#3	.3703425	.1684454	.2018283	9.643776	.5075278	.3070348

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4835259**	**365.3514**	**1.184805**	**11.90968**	**.6497085**	**.0692295**
Stddev	.0017176	.7014	.006146	.02820	.0020733	.0005016
%RSD	.3552164	.1919922	.5187516	.2367974	.3191056	.7246099
#1	.4820819	366.1610	1.190552	11.87745	.6479617	.0697997
#2	.4830705	364.9681	1.185537	11.92982	.6491641	.0688562
#3	.4854252	364.9251	1.178325	11.92178	.6519996	.0690325

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.705767**	**.6837697**	**.4844059**	**16.76995**	**.3565090**	**.3220789**
Stddev	.019237	.0041442	.0020521	.04373	.0016775	.0008478
%RSD	.4087915	.6060791	.4236399	.2607428	.4705247	.2632365
#1	4.727081	.6837206	.4866405	16.81539	.3549480	.3212937
#2	4.689693	.6879383	.4839714	16.72816	.3562964	.3219650
#3	4.700527	.6796503	.4826059	16.76631	.3582827	.3229779

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: Q2101-01MSD Acquired: 5/30/2025 17:25:19 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6840129**	**3.242348**	F **17.61183**	**12.61768**	**.9899764**	**.4288899**
Stddev	.0012811	.012104	.03118	.04685	.0051027	.0005492
%RSD	.1872897	.3733059	.1770279	.3712749	.5154310	.1280542
#1	.6827595	3.256001	17.64520	12.58043	.9869860	.4295147
#2	.6839592	3.238109	17.58344	12.60234	.9870750	.4284838
#3	.6853200	3.232933	17.60686	12.67028	.9958682	.4286710

Elem	Sr4077
Units	ppm
Avg	**-.136501**
Stddev	.000288
%RSD	.2112599
#1	-.136172
#2	-.136710
#3	-.136622

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3222.708**	**70500.33**	**14862.35**	**2389.554**	**3715.121**
Stddev	7.276	96.33	3.61	8.524	10.111
%RSD	.2257744	.1366358	.0242814	.3567026	.2721601
#1	3228.701	70577.96	14860.92	2381.826	3723.655
#2	3224.811	70530.51	14859.67	2388.140	3717.753
#3	3214.612	70392.53	14866.45	2398.697	3703.954

Sample Name: Q2101-01A Acquired: 5/30/2025 17:29:18 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7950092**	**1.885505**	**1.374110**	**1.728229**	**.8001377**	**60.01809**
Stddev	.0042895	.013177	.000594	.005114	.0024423	.40579
%RSD	.5395491	.6988498	.0431966	.2958882	.3052309	.6761070
#1	.7913488	1.888348	1.373604	1.726730	.8010303	60.22444
#2	.7939496	1.871139	1.373961	1.724032	.7973746	60.27922
#3	.7997291	1.897028	1.374763	1.733924	.8020080	59.55059

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3323565**	**.1824304**	**.1965444**	**9.119412**	**.4967376**	**.2694662**
Stddev	.0020025	.0008408	.0005029	.054511	.0050267	.0003009
%RSD	.6025265	.4609112	.2558919	.5977468	1.011942	.1116763
#1	.3329594	.1826715	.1964688	9.120754	.4964427	.2691345
#2	.3339884	.1831243	.1960835	9.173239	.5019052	.2695424
#3	.3301218	.1814953	.1970808	9.064241	.4918648	.2697217

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4587480**	**266.7519**	**1.103669**	**9.878592**	**.7092795**	**.0714910**
Stddev	.0027112	2.8673	.006529	.061934	.0004518	.0007765
%RSD	.5909935	1.074887	.5915886	.6269562	.0636972	1.086146
#1	.4605721	266.4017	1.104231	9.882393	.7097316	.0713511
#2	.4556326	269.7782	1.109899	9.938538	.7088280	.0723279
#3	.4600394	264.0758	1.096877	9.814844	.7092789	.0707940

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.181023**	**.5718346**	**5.446268**	**18.83850**	**.3294417**	**.3819491**
Stddev	.052316	.0050421	.068592	.22751	.0045743	.0003672
%RSD	1.009763	.8817382	1.259433	1.207709	1.388499	.0961369
#1	5.178296	.5763272	5.411941	18.84995	.3257628	.3822724
#2	5.234648	.5727953	5.525247	19.06007	.3345634	.3815499
#3	5.130123	.5663812	5.401616	18.60547	.3279988	.3820249

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: Q2101-01A Acquired: 5/30/2025 17:29:18 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7046146	2.410126	F 16.95314	9.487653	1.581870	.3652626
Stddev	.0013918	.014120	.21229	.030502	.005733	.0037699
%RSD	.1975267	.5858744	1.252195	.3214913	.3624236	1.032096
#1	.7030208	2.415573	16.94194	9.520826	1.576403	.3660884
#2	.7052324	2.420711	17.17080	9.481318	1.581370	.3685510
#3	.7055905	2.394093	16.74667	9.460817	1.587836	.3611482

Elem	Sr4077
Units	ppm
Avg	-.036218
Stddev	.001502
%RSD	4.147589
#1	-.035092
#2	-.037923
#3	-.035638

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3126.563	66490.93	13343.59	2274.215	3867.535
Stddev	3.025	594.01	59.98	20.529	4.835
%RSD	.0967634	.8933684	.4494768	.9026960	.1250209
#1	3123.540	66575.59	13316.37	2285.920	3869.471
#2	3126.557	65859.14	13302.06	2250.510	3862.031
#3	3129.591	67038.07	13412.36	2286.215	3871.102

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: Q2100-01 Acquired: 5/30/2025 17:33:14 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1213534**	**-.179602**	**.1111763**	**-.013917**	**-.048184**	**53.82763**	**.1161690**
Stddev	.0007742	.001905	.0012250	.002652	.003852	.15222	.0006034
%RSD	.6380103	1.060519	1.101878	19.05868	7.993579	.2827929	.5194504
#1	.1220707	-.177644	.1097917	-.015816	-.052172	53.72768	.1166897
#2	.1214568	-.179713	.1116183	-.015049	-.047894	54.00282	.1155077
#3	.1205326	-.181449	.1121191	-.010887	-.044485	53.75239	.1163095

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0167261**	**.0211290**	**14.24764**	**.2935315**	**.0631490**	**.5057370**	**952.0145**
Stddev	.0001517	.0008409	.12150	.0014722	.0003141	.0025726	6.9991
%RSD	.9070766	3.979686	.8527656	.5015427	.4973935	.5086920	.7351851
#1	.0168971	.0203512	14.35942	.2920527	.0628138	.5043697	958.3378
#2	.0166736	.0210146	14.26517	.2935450	.0631970	.5041367	953.2115
#3	.0166076	.0220212	14.11832	.2949969	.0634365	.5087046	944.4941

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.645942**	**1.988667**	**.0890032**	**-.028582**	**5.033617**	**.6401552**	**.4622810**
Stddev	.014033	.001691	.0010977	.002360	.019719	.0040155	.0029864
%RSD	.5303696	.0850079	1.233315	8.255241	.3917436	.6272748	.6460035
#1	2.654524	1.987009	.0877358	-.026709	5.053816	.6441274	.4607357
#2	2.653556	1.990388	.0896548	-.027805	5.032617	.6402407	.4603839
#3	2.629748	1.988604	.0896188	-.031232	5.014417	.6360977	.4657234

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.366420**	**^ *******	**-.005755**	**.0146993**	**1.214392**	**12.13328**	**4.520608**
Stddev	.032934	-----	.000408	.0007639	.003034	.05768	.022064
%RSD	.9783225	-----	7.096131	5.196750	.2498621	.4753734	.4880703
#1	3.346702	^ -----	-.005953	.0155760	1.215082	12.14577	4.514313
#2	3.404441	^ -----	-.006025	.0141772	1.217022	12.07038	4.545134
#3	3.348118	^ -----	-.005285	.0143447	1.211073	12.18369	4.502375

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: Q2100-01 Acquired: 5/30/2025 17:33:14 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.775008	.4868194	-.852455
Stddev	.010897	.0031923	.006532
%RSD	.6139378	.6557488	.7662530
#1	1.763095	.4894747	-.858434
#2	1.777455	.4877059	-.853447
#3	1.784474	.4832775	-.845484

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3004.250	65566.11	12758.46	2239.009	3683.110
Stddev	6.840	187.88	25.99	17.392	5.136
%RSD	.2276662	.2865568	.2037081	.7767559	.1394456
#1	2998.764	65400.10	12752.05	2225.256	3679.335
#2	3011.914	65770.07	12736.28	2258.559	3681.036
#3	3002.074	65528.15	12787.06	2233.213	3688.958

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: Q2100-02 Acquired: 5/30/2025 17:37:27 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1272863**	**-.130139**	**.3315631**	**-.007254**	**-.036593**	**71.88630**	**.3009372**
Stddev	.0036028	.004765	.0034013	.002901	.002596	.12041	.0003041
%RSD	2.830436	3.661308	1.025836	39.98971	7.094432	.1675013	.1010506
#1	.1265330	-.135473	.3350249	-.009428	-.033613	71.80715	.3011608
#2	.1312061	-.126304	.3282257	-.003960	-.038364	71.82687	.3005909
#3	.1241197	-.128640	.3314388	-.008375	-.037802	72.02487	.3010598

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0137044**	**.0157079**	**30.72698**	**.1670335**	**.0626361**	**.3442357**	**731.2907**
Stddev	.0001146	.0005342	.02564	.0018963	.0003089	.0017736	4.9333
%RSD	.8359766	3.400944	.0834456	1.135307	.4932286	.5152206	.6746036
#1	.0137841	.0158113	30.72451	.1680050	.0625641	.3451738	733.3629
#2	.0135731	.0161830	30.70267	.1682472	.0623696	.3453433	725.6592
#3	.0137561	.0151296	30.75377	.1648482	.0629747	.3421901	734.8499

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.886843**	**10.36445**	**.0596998**	**-.019539**	**12.64250**	**.4181544**	**.2773942**
Stddev	.003201	.05541	.0004136	.001486	.09435	.0021741	.0016582
%RSD	.1108863	.5346409	.6928059	7.607078	.7462949	.5199239	.5977777
#1	2.890130	10.39745	.0597330	-.018961	12.67203	.4186385	.2785521
#2	2.886665	10.30047	.0592705	-.021228	12.71855	.4157790	.2781358
#3	2.883735	10.39543	.0600958	-.018429	12.53692	.4200455	.2754946

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.918718**	**^ *****	**-.002315**	**.0216707**	**.4441725**	**9.712024**	**3.184421**
Stddev	.048229	-----	.000220	.0002816	.0015877	.029864	.020959
%RSD	.6970772	-----	9.519262	1.299649	.3574422	.3074972	.6581798
#1	6.882895	^ -----	-.002313	.0213732	.4442706	9.734875	3.202811
#2	6.973556	^ -----	-.002095	.0219332	.4457088	9.722964	3.188853
#3	6.899703	^ -----	-.002536	.0217058	.4425381	9.678233	3.161601

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: Q2100-02 Acquired: 5/30/2025 17:37:27 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**8.427527**	**.4167492**	**-.582707**
Stddev	.024461	.0026169	.004853
%RSD	.2902478	.6279391	.8328669
#1	8.455722	.4179964	-.584815
#2	8.414884	.4137420	-.577156
#3	8.411975	.4185092	-.586150

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2978.672**	**64936.83**	**12837.50**	**2223.960**	**3637.393**
Stddev	3.485	22.78	46.89	6.345	3.698
%RSD	.1170016	.0350740	.3652863	.2852816	.1016770
#1	2982.533	64911.59	12866.92	2221.377	3634.375
#2	2977.726	64955.83	12862.16	2231.188	3641.519
#3	2975.759	64943.08	12783.43	2219.314	3636.286

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: CCV03 Acquired: 5/30/2025 17:41:39 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV03 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.077431**	**4.984298**	**5.023836**	**5.125501**	**5.110601**	**10.23577**	**9.790620**
Stddev	.040783	.072191	.033373	.047933	.040371	.11773	.158196
%RSD	.8032193	1.448369	.6642926	.9351885	.7899425	1.150180	1.615788
#1	5.062690	4.964847	5.008765	5.094042	5.077986	10.18415	9.669484
#2	5.046068	4.923825	5.000656	5.101792	5.098063	10.37049	9.969596
#3	5.123535	5.064222	5.062086	5.180668	5.155753	10.15267	9.732779

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2719466**	**2.507768**	**25.29868**	**1.031438**	**2.511760**	**1.279045**	**4.906901**
Stddev	.0027523	.014546	.31078	.001881	.013102	.009640	.036814
%RSD	1.012086	.5800527	1.228431	.1824110	.5216154	.7536503	.7502570
#1	.2715552	2.499950	25.19723	1.032750	2.504589	1.270843	4.867743
#2	.2748736	2.498801	25.64750	1.029282	2.503809	1.276629	4.940808
#3	.2694109	2.524551	25.05130	1.032281	2.526882	1.289662	4.912153

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.513888**	**25.61314**	**2.507409**	**1.291206**	**24.07635**	**2.528434**	**2.512583**
Stddev	.027158	.40870	.015183	.001987	.17726	.023733	.021407
%RSD	1.080326	1.595654	.6055335	.1539120	.7362496	.9386491	.8519733
#1	2.510458	25.42507	2.500114	1.290633	24.18862	2.522899	2.488605
#2	2.542598	26.08202	2.497250	1.289568	23.87200	2.554446	2.529772
#3	2.488607	25.33234	2.524863	1.293417	24.16843	2.507958	2.519372

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.24841**	**5.387876**	**5.139450**	**5.024923**	**4.996181**	**4.984302**	**4.830607**
Stddev	.14629	.057215	.034034	.035891	.041036	.016419	.033395
%RSD	.6032967	1.061923	.6622192	.7142509	.8213497	.3294069	.6913147
#1	24.29571	5.369083	5.117249	5.010853	4.986737	4.965624	4.815298
#2	24.08432	5.452124	5.122467	4.998199	5.041116	4.990825	4.807611
#3	24.36520	5.342421	5.178634	5.065717	4.960690	4.996456	4.868911

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: CCV03 Acquired: 5/30/2025 17:41:39 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV03 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**4.950823**	**5.118305**	**4.961234**
Stddev	.040907	.027474	.061616
%RSD	.8262763	.5367705	1.241941
#1	4.926631	5.116468	4.918151
#2	4.927783	5.146651	5.031810
#3	4.998054	5.091796	4.933742

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2838.886**	**60051.38**	**10769.46**	**2057.923**	**3856.373**
Stddev	16.946	259.87	120.70	12.302	22.563
%RSD	.5969410	.4327539	1.120750	.5977883	.5850897
#1	2851.129	60324.53	10822.74	2071.844	3868.771
#2	2845.984	60022.41	10631.29	2048.513	3870.020
#3	2819.544	59807.21	10854.35	2053.414	3830.329

Sample Name: CCB03 Acquired: 5/30/2025 17:45:49 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal 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	**-.000656**	**-.003866**	**-.000063**	**.0031545**	**.0010283**	**.0058998**	**-.000028**
Stddev	.000847	.001421	.000606	.0034078	.0023510	.0060773	.000494
%RSD	129.1676	36.76676	966.1020	108.0280	228.6303	103.0083	1776.804
#1	.000317	-.005099	-.000540	.0027764	.0027421	-.000570	.000125
#2	-.001227	-.002311	-.000268	.0067356	-.001652	.011489	.000372
#3	-.001057	-.004186	.000620	-.000048	.001995	.006780	-.000580

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000196**	**.0000397**	**.0000907**	**.0002702**	**.0001902**	**.0009413**	**.0080941**
Stddev	.0000500	.0000712	.0009485	.0002388	.0001650	.0003428	.0044389
%RSD	255.5814	179.4939	1045.860	88.36234	86.74299	36.41824	54.84214
#1	.0000512	-.000042	.0010454	.0001015	.0000977	.0010803	.0064264
#2	-.000038	.000089	-.000851	.0005434	.0003807	.0005508	.0131253
#3	.000046	.000072	.000078	.0001657	.0000922	.0011928	.0047304

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002254**	**-.008248**	**.0004736**	**.0000804**	**-.080366**	**.0002412**	**.0024155**
Stddev	.0001705	.013931	.0003192	.0004569	.012583	.0007136	.0004340
%RSD	75.67226	168.9015	67.40078	568.3508	15.65727	295.8826	17.96539
#1	.0002796	-.003130	.0001201	.0006080	-.074255	-.000331	.0022026
#2	.0000343	.002400	.0007407	-.000185	-.072007	.000014	.0021290
#3	.0003621	-.024013	.0005600	-.000182	-.094838	.001041	.0029147

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0302378**	**.0097100**	**.0007354**	**.0041580**	**.0006602**	**.0062157**	**.0008852**
Stddev	.0116097	.0001105	.0003319	.0004103	.0004696	.0101716	.0021143
%RSD	38.39455	1.138349	45.13085	9.867030	71.12634	163.6423	238.8582
#1	.0335597	.0096375	.0004194	.0046290	.0011243	.0162281	-.000652
#2	.0398245	.0096552	.0010812	.0039665	.0006708	-.004108	.000011
#3	.0173293	.0098372	.0007055	.0038784	.0001854	.006527	.003296

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: CCB03 Acquired: 5/30/2025 17:45:49 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB03 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0018173	-.000010	.0000938
Stddev	.0006076	.000386	.0000748
%RSD	33.43564	3921.694	79.76316
#1	.0015668	.000234	.0000581
#2	.0025101	-.000455	.0000434
#3	.0013749	.000191	.0001797

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2961.472	62094.43	12283.05	2170.877	4130.106
Stddev	2.023	292.35	45.23	12.214	1.222
%RSD	.0682960	.4708075	.3682404	.5626153	.0295933
#1	2959.778	62431.77	12290.27	2182.090	4129.265
#2	2960.928	61914.94	12234.64	2172.679	4131.508
#3	2963.712	61936.58	12324.24	2157.863	4129.544

Sample Name: Q2100-03 Acquired: 5/30/2025 17:50:10 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1757858**	**-.110251**	**.4042232**	**.0010155**	**-.027389**	**56.72491**	**.3135909**
Stddev	.0021035	.004015	.0023675	.0026976	.002361	.41709	.0038773
%RSD	1.196647	3.641706	.5856957	265.6384	8.618710	.7352888	1.236403
#1	.1737383	-.114219	.4060395	-.001609	-.024827	57.19291	.3178213
#2	.1756779	-.110342	.4050845	.000876	-.027862	56.58939	.3127452
#3	.1779413	-.106191	.4015456	.003780	-.029477	56.39243	.3102064

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0093309**	**.0133489**	**33.41611**	**.2081092**	**.0463687**	**.3356246**	**473.3060**
Stddev	.0000838	.0003971	.23280	.0015903	.0003487	.0021647	2.0865
%RSD	.8981742	2.974680	.6966564	.7641777	.7520178	.6449897	.4408332
#1	.0094169	.0129993	33.68166	.2072773	.0464241	.3331276	475.5506
#2	.0092495	.0137806	33.31943	.2099429	.0466864	.3369715	471.4255
#3	.0093264	.0132669	33.24722	.2071073	.0459956	.3367748	472.9418

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7518194**	**5.665152**	**.0445302**	**-.005998**	**13.53590**	**.4725817**	**.1957577**
Stddev	.0044931	.060604	.0001453	.000493	.08516	.0051114	.0035144
%RSD	.5976239	1.069763	.3263721	8.225178	.6291216	1.081581	1.795294
#1	.7570071	5.734116	.0446285	-.005446	13.54834	.4784216	.1949463
#2	.7491714	5.640954	.0443633	-.006395	13.61415	.4689215	.1996069
#3	.7492797	5.620386	.0445989	-.006153	13.44520	.4704021	.1927200

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.530120**	**.0320707**	**-.000742**	**.0192954**	**.2628036**	**9.367918**	**2.185916**
Stddev	.021321	.0037572	.000251	.0005027	.0017995	.064520	.003525
%RSD	.3265096	11.71542	33.86890	2.605143	.6847334	.6887293	.1612774
#1	6.515362	.0277408	-.000973	.0193386	.2645353	9.364902	2.182173
#2	6.554565	.0339991	-.000474	.0187725	.2629323	9.433892	2.189174
#3	6.520433	.0344721	-.000780	.0197750	.2609432	9.304959	2.186401

Sample Name: Q2100-03 Acquired: 5/30/2025 17:50:10 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	3.006766	.2774941	-.202294
Stddev	.004048	.0014597	.001473
%RSD	.1346346	.5260155	.7279874
#1	3.002095	.2790572	-.201928
#2	3.008938	.2761666	-.201039
#3	3.009264	.2772585	-.203916

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3345.072	71704.16	14201.69	2491.005	3693.498
Stddev	7.708	148.59	121.53	1.427	4.970
%RSD	.2304204	.2072257	.8557558	.0572860	.1345557
#1	3351.323	71658.99	14064.61	2489.427	3693.923
#2	3336.460	71583.40	14296.26	2492.205	3688.329
#3	3347.433	71870.10	14244.19	2491.382	3698.241

Sample Name: Q2100-04 Acquired: 5/30/2025 17:54:24 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1401096**	**-.102102**	**.1835512**	**-.002136**	**-.028225**	**54.16123**	**.2393048**
Stddev	.0036866	.004699	.0023672	.005895	.000300	.08384	.0013662
%RSD	2.631210	4.602597	1.289648	275.9211	1.064189	.1548024	.5708855
#1	.1436574	-.099598	.1810969	-.008641	-.028571	54.16817	.2405056
#2	.1362984	-.107524	.1837362	.002853	-.028034	54.07413	.2378185
#3	.1403729	-.099186	.1858204	-.000621	-.028070	54.24138	.2395903

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0088763**	**.0117544**	**11.62211**	**.1803318**	**.0296299**	**.2672080**	**544.6590**
Stddev	.0001702	.0004306	.02293	.0001939	.0000918	.0014840	2.6231
%RSD	1.917104	3.662936	.1972920	.1075286	.3098577	.5553707	.4815950
#1	.0089820	.0117153	11.63190	.1801189	.0295694	.2660602	545.9708
#2	.0086800	.0113447	11.59592	.1803781	.0297355	.2666801	546.3674
#3	.0089668	.0122032	11.63853	.1804984	.0295847	.2688838	541.6388

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8152962**	**5.521871**	**.0306253**	**-.008341**	**4.941866**	**.3368835**	**.1622896**
Stddev	.0018714	.021067	.0005181	.000757	.010558	.0004254	.0020236
%RSD	.2295316	.3815245	1.691803	9.072852	.2136484	.1262617	1.246920
#1	.8157214	5.509619	.0307573	-.008064	4.943311	.3373212	.1638564
#2	.8132488	5.546197	.0300539	-.007761	4.930659	.3368576	.1600049
#3	.8169184	5.509796	.0310645	-.009197	4.951626	.3364717	.1630074

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.461129**	**-.005786**	**-.004647**	**.0142531**	**.1925037**	**9.866849**	**1.090428**
Stddev	.006626	.008738	.000292	.0009323	.0005878	.004523	.006267
%RSD	.1025460	151.0126	6.279519	6.541120	.3053360	.0458398	.5747646
#1	6.457117	-.004495	-.004472	.0132356	.1930100	9.861988	1.097331
#2	6.457494	.002234	-.004984	.0144573	.1918591	9.870934	1.088861
#3	6.468777	-.015098	-.004485	.0150664	.1926418	9.867624	1.085094

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: Q2100-04 Acquired: 5/30/2025 17:54:24 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.389337	.3119299	-.434306
Stddev	.000618	.0014405	.002842
%RSD	.0445013	.4618112	.6544118
#1	1.389251	.3131079	-.435674
#2	1.389993	.3123578	-.436205
#3	1.388765	.3103238	-.431039

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3316.007	69954.79	13743.56	2426.517	3811.288
Stddev	5.509	177.44	39.21	13.697	.455
%RSD	.1661245	.2536434	.2852662	.5644567	.0119384
#1	3321.510	70141.67	13774.38	2435.538	3810.775
#2	3310.492	69934.07	13756.88	2433.256	3811.447
#3	3316.019	69788.62	13699.44	2410.756	3811.642

Sample Name: Q2130-01 Acquired: 5/30/2025 17:58:41 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0475771**	**-.052532**	**.1688802**	**.0040188**	**-.008035**	**100.3443**	**.4311491**
Stddev	.0047081	.001086	.0012737	.0016116	.003046	.2475	.0012552
%RSD	9.895627	2.066952	.7542227	40.10209	37.90731	.2466962	.2911259
#1	.0437655	-.053340	.1676697	.0054503	-.008021	100.5680	.4325971
#2	.0461259	-.052958	.1702089	.0043329	-.011087	100.3866	.4303691
#3	.0528399	-.051298	.1687620	.0022733	-.004996	100.0783	.4304813

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0076982**	**.0042138**	**48.10943**	**.1284116**	**.1389907**	**.5806697**	**257.1481**
Stddev	.0000789	.0001713	.02378	.0002100	.0004756	.0032799	.6517
%RSD	1.025595	4.065416	.0494227	.1634971	.3421823	.5648470	.2534336
#1	.0076158	.0040310	48.08292	.1282582	.1386686	.5768825	257.6431
#2	.0077731	.0043706	48.11648	.1286509	.1387666	.5825926	256.4097
#3	.0077059	.0042399	48.12888	.1283257	.1395370	.5825339	257.3914

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.522955**	**49.76544**	**.2448099**	**.0014464**	**6.295359**	**.4720431**	**.4182908**
Stddev	.004153	.08610	.0010947	.0001281	.042502	.0023188	.0039707
%RSD	.1646232	.1730063	.4471772	8.857192	.6751343	.4912318	.9492783
#1	2.526282	49.68887	.2435845	.0013333	6.344099	.4718975	.4167537
#2	2.524283	49.74881	.2456913	.0015855	6.275963	.4698004	.4153184
#3	2.518300	49.85864	.2451538	.0014204	6.266015	.4744312	.4228003

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.864272**	**.5799548**	**.0036799**	**-.008807**	**6.976862**	**2.619154**	**4.815475**
Stddev	.048126	.0037936	.0003617	.000964	.013885	.018326	.004912
%RSD	.8206598	.6541246	9.828369	10.94545	.1990083	.6997020	.1020103
#1	5.917808	.5807653	.0040936	-.008002	6.988988	2.635060	4.820724
#2	5.850407	.5758214	.0034235	-.009875	6.979882	2.599114	4.810989
#3	5.824600	.5832776	.0035227	-.008544	6.961716	2.623289	4.814712

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: Q2130-01 Acquired: 5/30/2025 17:58:41 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.297307	.2567734	.0393323
Stddev	.002726	.0007701	.0013292
%RSD	.1186695	.2998980	3.379434
#1	2.299864	.2575453	.0398010
#2	2.297619	.2560052	.0403637
#3	2.294438	.2567696	.0378322

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3102.751	66511.99	13605.28	2287.241	3675.280
Stddev	16.335	159.32	26.04	11.026	11.372
%RSD	.5264665	.2395300	.1913739	.4820853	.3094318
#1	3121.538	66329.41	13599.96	2284.410	3688.397
#2	3091.908	66583.85	13582.31	2277.905	3668.169
#3	3094.806	66622.73	13633.56	2299.406	3669.275

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: Q2136-01 Acquired: 5/30/2025 18:02:47 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0823213**	**-.045574**	**.1745738**	**.0140329**	**-.015350**	**197.9173**	**.6066360**
Stddev	.0027391	.003855	.0004528	.0022912	.002033	.1407	.0035156
%RSD	3.327348	8.459673	.2593703	16.32692	13.24528	.0710949	.5795307
#1	.0825715	-.048840	.1740639	.0114211	-.013167	198.0795	.6081831
#2	.0794656	-.041321	.1749290	.0157036	-.017189	197.8281	.6026121
#3	.0849267	-.046560	.1747285	.0149741	-.015694	197.8444	.6091127

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0092908**	**.0013513**	**8.725099**	**.1908690**	**.1269482**	**.2547451**	**345.7342**
Stddev	.0000062	.0000978	.010057	.0008046	.0002733	.0009648	1.0369
%RSD	.0670086	7.235335	.1152626	.4215632	.2152591	.3787261	.2999070
#1	.0092943	.0012400	8.714187	.1904870	.1266333	.2539111	346.5246
#2	.0092836	.0014235	8.727114	.1903265	.1271222	.2558017	344.5602
#3	.0092945	.0013902	8.733995	.1917935	.1270892	.2545227	346.1178

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.602146**	**38.31301**	**.2322617**	**.0067173**	**2.256724**	**.3392513**	**.4867936**
Stddev	.008298	.20214	.0008017	.0003137	.024703	.0014749	.0046717
%RSD	.2303620	.5276018	.3451595	4.670336	1.094657	.4347577	.9596788
#1	3.601934	38.14626	.2313505	.0064863	2.253315	.3409525	.4869125
#2	3.593957	38.53783	.2325758	.0065911	2.233903	.3384706	.4820637
#3	3.610548	38.25493	.2328588	.0070745	2.282955	.3383308	.4914048

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.195986**	**.2147984**	**.0032468**	**.0062503**	**2.449557**	**4.017564**	**6.889234**
Stddev	.019378	.0018193	.0003266	.0009977	.005986	.018112	.022778
%RSD	.3127528	.8469723	10.05944	15.96220	.2443718	.4508154	.3306382
#1	6.216799	.2167622	.0030097	.0053757	2.452368	4.029337	6.871191
#2	6.192698	.2131705	.0036193	.0073370	2.442683	3.996708	6.881683
#3	6.178463	.2144624	.0031113	.0060382	2.453620	4.026647	6.914830

Sample Name: Q2136-01 Acquired: 5/30/2025 18:02:47 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.9352146	.3449050	-.259334
Stddev	.0033594	.0015254	.000593
%RSD	.3592089	.4422629	.2286182
#1	.9352912	.3461439	-.259925
#2	.9318176	.3432013	-.258739
#3	.9385351	.3453699	-.259337

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3284.951	67713.05	14851.36	2380.306	3800.582
Stddev	3.193	214.12	36.22	8.313	6.236
%RSD	.0971898	.3162174	.2438567	.3492574	.1640768
#1	3286.711	67581.87	14882.01	2371.295	3801.785
#2	3286.877	67960.14	14860.68	2381.946	3806.129
#3	3281.266	67597.15	14811.39	2387.677	3793.833

Sample Name: Q2137-01 Acquired: 5/30/2025 18:07:01 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0826638	-.092659	.2173736	-.001561	-.003839	10.88136
Stddev	.0016346	.000800	.0014917	.002584	.000908	.00718
%RSD	1.977383	.8635285	.6862453	165.4616	23.65546	.0660269
#1	.0807822	-.091920	.2161639	-.003501	-.002822	10.88713
#2	.0837336	-.092548	.2169165	-.002554	-.004126	10.88362
#3	.0834756	-.093509	.2190404	.001371	-.004569	10.87331

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 27.26906	.0072064	.0046165	59.24007	2.296622	.0772321
Stddev	.12631	.0001268	.0007769	.30192	.006299	.0003112
%RSD	.4631829	1.760005	16.82857	.5096516	.2742602	.4029418
#1	27.12863	.0073193	.0039246	59.53057	2.299692	.0770599
#2	27.30518	.0072308	.0044680	58.92790	2.300797	.0775914
#3	27.37337	.0070692	.0054570	59.26172	2.289377	.0770452

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.371830	682.4000	3.471865	11.02122	1.035334	-.003497
Stddev	.014457	3.1003	.020407	.06244	.003025	.001096
%RSD	.4287689	.4543266	.5877769	.5665446	.2921984	31.35617
#1	3.371507	685.9800	3.489975	11.07113	1.037223	-.002235
#2	3.357537	680.6055	3.449754	10.95120	1.031845	-.004215
#3	3.386446	680.6146	3.475865	11.04132	1.036935	-.004041

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	20.69569	.1093230	6.595779	7.496862	.3454199	.4015806
Stddev	.10753	.0015218	.024310	.052982	.0120433	.0021562
%RSD	.5196006	1.392050	.3685696	.7067169	3.486571	.5369281
#1	20.81567	.1101574	6.622758	7.551992	.3581545	.4020423
#2	20.66342	.1102451	6.589005	7.492268	.3438915	.3992309
#3	20.60799	.1075665	6.575576	7.446327	.3342138	.4034685

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: Q2137-01 Acquired: 5/30/2025 18:07:01 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1823712	.5101307	3.252322	5.925889	F 42.30501	.4077260
Stddev	.0026632	.0027081	.011046	.017458	.10274	.0022552
%RSD	1.460302	.5308732	.3396384	.2946105	.2428558	.5531250
#1	.1843995	.5132377	3.260296	5.913828	42.27429	.4103293
#2	.1793553	.5082708	3.256957	5.917930	42.22113	.4064820
#3	.1833589	.5088835	3.239714	5.945908	42.41960	.4063668

Elem	Sr4077
Units	ppm
Avg	-.033522
Stddev	.002244
%RSD	6.692735
#1	-.036006
#2	-.032918
#3	-.031643

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2701.883	58464.88	11640.25	1970.272	3724.231
Stddev	9.675	84.22	7.35	3.513	8.570
%RSD	.3580855	.1440491	.0631537	.1782925	.2301141
#1	2700.104	58414.00	11648.00	1967.919	3722.818
#2	2712.324	58418.54	11633.37	1968.586	3733.420
#3	2693.221	58562.09	11639.38	1974.309	3716.455

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: Q2138-01 Acquired: 5/30/2025 18:11:21 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0645816**	**-.028254**	**.0698495**	**-.006538**	**.0020410**	**85.95077**
Stddev	.0019863	.004525	.0007625	.003386	.0022747	.15050
%RSD	3.075598	16.01424	1.091688	51.78975	111.4468	.1751030
#1	.0627933	-.030114	.0701225	-.006511	.0019152	85.78394
#2	.0642320	-.023096	.0689880	-.009936	.0043760	85.99202
#3	.0667195	-.031552	.0704379	-.003165	-.000168	86.07634

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4188594**	**.0066160**	**.0015724**	**659.8500**	**.1402120**	**.0456640**
Stddev	.0002006	.0001753	.0001956	3.2169	.0003691	.0003565
%RSD	.0478934	2.649989	12.44224	.4875131	.2632148	.7807648
#1	.4188148	.0064301	.0017465	660.3535	.1398428	.0459956
#2	.4186849	.0066395	.0013607	656.4111	.1402121	.0457096
#3	.4190786	.0067784	.0016101	662.7854	.1405809	.0452869

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0850947**	**189.9169**	**1.223984**	**57.97474**	**.1015876**	**.0035572**
Stddev	.0006808	1.2452	.002843	.19249	.0000911	.0011248
%RSD	.8000983	.6556393	.2322398	.3320168	.0896625	31.61995
#1	.0858612	188.4825	1.226671	57.75274	.1015457	.0025503
#2	.0845601	190.5485	1.221008	58.09502	.1015250	.0047711
#3	.0848628	190.7198	1.224272	58.07647	.1016921	.0033502

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4775061**	**.1419836**	**.2605215**	**4.366964**	**.2653437**	**.0035418**
Stddev	.0242353	.0026083	.0020532	.012142	.0050167	.0000991
%RSD	5.075384	1.837074	.7880942	.2780418	1.890628	2.798901
#1	.4500786	.1397420	.2608919	4.371200	.2602891	.0034980
#2	.4864091	.1448464	.2583084	4.353271	.2703216	.0036553
#3	.4960307	.1413622	.2623642	4.376420	.2654202	.0034721

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: Q2138-01 Acquired: 5/30/2025 18:11:21 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000453	2.801221	F 14.14801	4.200172	F 33.47727	.0383052
Stddev	.000914	.004738	.12864	.011600	.07506	.0000688
%RSD	201.5699	.1691325	.9092192	.2761750	.2242057	.1796115
#1	.000558	2.802057	13.99949	4.204212	33.52419	.0382366
#2	-.000697	2.796121	14.22395	4.187093	33.39071	.0383742
#3	-.001221	2.805486	14.22060	4.209213	33.51693	.0383048

Elem	Sr4077
Units	ppm
Avg	.9983009
Stddev	.0016916
%RSD	.1694519
#1	1.000167
#2	.996869
#3	.997867

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2701.991	57630.12	12965.34	2002.246	3336.064
Stddev	19.348	349.24	46.16	27.660	15.377
%RSD	.7160678	.6060082	.3560121	1.381429	.4609368
#1	2718.379	57978.88	12941.69	2029.105	3346.511
#2	2706.947	57631.08	13018.53	2003.782	3343.275
#3	2680.647	57280.40	12935.80	1973.850	3318.407

Sample Name: Q2139-01 Acquired: 5/30/2025 18:15:35 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001435**	**-.011974**	**.0381009**	**.0053137**	**.0014859**	**5.469682**	**.1080824**
Stddev	.001740	.002721	.0011223	.0010454	.0016424	.001621	.0005906
%RSD	121.2977	22.72219	2.945573	19.67292	110.5336	.0296430	.5464078
#1	-.001718	-.014345	.0390817	.0062241	-.000399	5.467935	.1079325
#2	-.003016	-.009003	.0383442	.0055451	.002608	5.471139	.1087335
#3	.000430	-.012573	.0368770	.0041721	.002249	5.469971	.1075813

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0021609**	**.0206058**	**10.94508**	**.0322340**	**.0104445**	**.9705105**	**5.896047**
Stddev	.0000598	.0009125	.03403	.0006100	.0004191	.0051637	.052098
%RSD	2.769786	4.428275	.3108960	1.892363	4.012663	.5320579	.8836119
#1	.0020954	.0198897	10.95758	.0323567	.0100610	.9764010	5.868852
#2	.0022126	.0216332	10.97110	.0327733	.0108919	.9667654	5.956116
#3	.0021748	.0202945	10.90657	.0315720	.0103805	.9683650	5.863174

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3310436**	**7.990578**	**.0136517**	**.0000698**	**.5046807**	**.0248340**	**.8980556**
Stddev	.0032329	.039731	.0000642	.0000891	.0102394	.0002234	.0105449
%RSD	.9765764	.4972197	.4701192	127.6770	2.028880	.8996688	1.174187
#1	.3320327	7.953207	.0137257	.0000944	.5036318	.0250549	.8896911
#2	.3336663	8.032309	.0136112	-.000029	.5154042	.0246081	.9099008
#3	.3274317	7.986218	.0136181	.000144	.4950062	.0248389	.8945750

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9944666**	**.0102735**	**.0037224**	**.0079360**	**.0891292**	**2.057722**	**3.439209**
Stddev	.0292564	.0003497	.0002847	.0003986	.0008950	.009229	.117170
%RSD	2.941921	3.404177	7.648368	5.022125	1.004110	.4485129	3.406881
#1	1.017187	.0099723	.0034817	.0076227	.0896340	2.059512	3.354874
#2	.961455	.0106571	.0036487	.0083845	.0896578	2.065926	3.572997
#3	1.004757	.0101912	.0040367	.0078006	.0880959	2.047729	3.389755

Sample Name: Q2139-01 Acquired: 5/30/2025 18:15:35 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	5.775216	.0039585	.0160591
Stddev	.132587	.0002060	.0001522
%RSD	2.295789	5.204706	.9479179
#1	5.687151	.0039976	.0162105
#2	5.927704	.0041423	.0160606
#3	5.710793	.0037358	.0159061

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3055.537	62652.57	11853.14	2134.266	4122.738
Stddev	177.716	487.20	48.36	21.476	151.763
%RSD	5.816198	.7776185	.4080201	1.006234	3.681128
#1	2907.751	62904.12	11847.86	2144.758	3995.071
#2	3252.728	62091.02	11807.64	2109.561	4290.533
#3	3006.132	62962.59	11903.93	2148.478	4082.610

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: Q2141-01 Acquired: 5/30/2025 18:19:46 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.201920**	**-.087846**	**.2613526**	**-.024702**	**.0055350**	**214.9461**
Stddev	.006777	.004109	.0016571	.004684	.0057690	2.0613
%RSD	.5638764	4.677001	.6340522	18.96243	104.2284	.9589998
#1	1.202543	-.086698	.2599382	-.021293	.0121915	215.5612
#2	1.194852	-.084434	.2631758	-.030043	.0019848	212.6473
#3	1.208363	-.092407	.2609436	-.022770	.0024286	216.6299

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.126455**	**.0122591**	**.0361046**	**1632.602**	**.9894313**	**.1637658**
Stddev	.003282	.0000771	.0001047	3.694	.0065436	.0003060
%RSD	.2913412	.6287307	.2901032	.2262470	.6613474	.1868457
#1	1.130133	.0122539	.0361566	1636.576	.9875113	.1635209
#2	1.123824	.0121848	.0359840	1631.956	.9840625	.1641088
#3	1.125408	.0123387	.0361731	1629.274	.9967201	.1636677

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7989738**	**317.0736**	**4.746799**	**81.24436**	**.5528395**	**-.006155**
Stddev	.0008228	1.7261	.009816	.15019	.0019111	.000396
%RSD	.1029855	.5443953	.2067920	.1848640	.3456932	6.426677
#1	.7982643	316.5383	4.754323	81.37804	.5506327	-.006273
#2	.7987812	315.6786	4.735695	81.27320	.5539292	-.006478
#3	.7998758	319.0040	4.750377	81.08184	.5539564	-.005713

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**12.78007**	**.6380909**	**2.384559**	**13.72540**	**1.743048**	**.0253745**
Stddev	.07376	.0015064	.011852	.06808	.005400	.0002253
%RSD	.5771378	.2360796	.4970506	.4960262	.3097787	.8877366
#1	12.75587	.6397884	2.383706	13.70679	1.742345	.0254590
#2	12.72145	.6369132	2.373157	13.66856	1.738035	.0251192
#3	12.86289	.6375712	2.396816	13.80085	1.748765	.0255453

Sample Name: Q2141-01 Acquired: 5/30/2025 18:19:46 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1023446	12.00234	2.580545	14.47442	F 81.24988	.2137709
Stddev	.0021890	.01684	.016331	.03150	.12374	.0016147
%RSD	2.138812	.1403318	.6328374	.2176027	.1523012	.7553474
#1	.1048586	12.01991	2.583078	14.48550	81.33323	.2120477
#2	.1013140	11.98634	2.563096	14.43888	81.10769	.2140161
#3	.1008611	12.00075	2.595462	14.49888	81.30872	.2152491

Elem	Sr4077
Units	ppm
Avg	4.437234
Stddev	.027166
%RSD	.6122207
#1	4.467510
#2	4.429201
#3	4.414991

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3187.301	69007.02	13481.44	2329.787	2934.900
Stddev	6.168	324.64	24.54	4.445	2.149
%RSD	.1935134	.4704478	.1820069	.1907726	.0732125
#1	3183.836	69067.06	13456.40	2325.320	2932.551
#2	3194.422	69297.45	13505.45	2329.833	2936.767
#3	3183.645	68656.55	13482.47	2334.209	2935.381

Sample Name: PB168199BL Acquired: 5/30/2025 18:24:14 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001037**	**-.001547**	**.0004066**	**.0026407**	**-.001766**	**.0148441**	**-.002139**
Stddev	.0020249	.002041	.0013516	.0033162	.002530	.0063039	.000215
%RSD	1952.353	131.9094	332.4116	125.5804	143.2226	42.46758	10.05730
#1	-.000195	.000576	-.001148	-.000879	.000995	.0206262	-.002384
#2	.002261	-.001723	.001069	.003094	-.003971	.0081235	-.001985
#3	-.001755	-.003493	.001299	.005707	-.002323	.0157827	-.002046

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000009**	**-.000026**	**.0775846**	**-.000016**	**-.000044**	**.0001859**	**.0164990**
Stddev	.000003	.000083	.0018264	.000199	.000244	.0001330	.0030377
%RSD	27.94748	318.1370	2.354110	1242.822	556.3682	71.55538	18.41164
#1	-.000011	-.000045	.0782396	-.000155	-.000305	.0002792	.0129933
#2	-.000011	-.000098	.0755209	-.000105	-.000005	.0000336	.0183535
#3	-.000006	.000065	.0789931	.000212	.000178	.0002450	.0181501

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000003**	**-.014713**	**.0001464**	**.0001504**	**-.096100**	**-.001487**	**.0015304**
Stddev	.000294	.016207	.0001642	.0003076	.022518	.001598	.0002704
%RSD	8464.796	110.1550	112.1899	204.5017	23.43224	107.4670	17.67113
#1	-.000259	-.007848	.0000903	-.000009	-.098018	-.003059	.0017709
#2	-.000069	-.003068	.0003313	.000505	-.117598	.000135	.0015827
#3	.000318	-.033222	.0000175	-.000045	-.072684	-.001537	.0012376

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.005495**	**.0048560**	**.0001166**	**-.000494**	**.0014300**	**.0006557**	**.0016370**
Stddev	.032759	.0000868	.0000940	.000291	.0002089	.0039040	.0013284
%RSD	596.1599	1.786915	80.57784	58.93021	14.60833	595.3689	81.15104
#1	-.042997	.0049346	.0002000	-.000829	.0015712	.0040210	.0031612
#2	.017541	.0048704	.0001352	-.000360	.0015288	.0015707	.0010238
#3	.008970	.0047629	.0000148	-.000295	.0011900	-.003625	.0007259

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: PB168199BL Acquired: 5/30/2025 18:24:14 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0078911	-.000054	.0002635
Stddev	.0030192	.000735	.0000491
%RSD	38.26015	1353.669	18.62465
#1	.0075834	.000771	.0002350
#2	.0050376	-.000636	.0002353
#3	.0110523	-.000298	.0003201

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2900.134	61101.74	11731.74	2108.262	4080.750
Stddev	6.045	183.97	53.59	3.745	13.649
%RSD	.2084530	.3010911	.4567633	.1776173	.3344680
#1	2906.291	61169.80	11686.20	2109.303	4095.456
#2	2899.905	61241.98	11790.79	2111.377	4078.302
#3	2894.207	60893.43	11718.24	2104.108	4068.490

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: CCV04 Acquired: 5/30/2025 18:28:34 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV04 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.119961**	**5.113785**	**4.979901**	**5.204699**	**5.116882**	**9.760127**	**9.933563**
Stddev	.020693	.008546	.017747	.020973	.022283	.005478	.012210
%RSD	.4041664	.1671081	.3563766	.4029569	.4354865	.0561261	.1229168
#1	5.109474	5.117869	4.976092	5.203713	5.098428	9.766452	9.945542
#2	5.106611	5.119522	4.964368	5.184237	5.110580	9.757013	9.934013
#3	5.143798	5.103964	4.999244	5.226148	5.141638	9.756916	9.921134

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2385007**	**2.487254**	**24.25293**	**1.014535**	**2.487210**	**1.280583**	**5.322383**
Stddev	.0016793	.007900	.08410	.000831	.009604	.005517	.009180
%RSD	.7040982	.3176212	.3467730	.0819015	.3861255	.4308545	.1724735
#1	.2391823	2.483548	24.28777	1.015325	2.483795	1.278182	5.317536
#2	.2397321	2.481888	24.31400	1.014611	2.479780	1.276674	5.316642
#3	.2365878	2.496326	24.15700	1.013669	2.498054	1.286894	5.332970

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.425702**	**24.00320**	**2.487417**	**1.278929**	**26.44694**	**2.456468**	**2.512495**
Stddev	.007245	.20879	.009781	.002629	.18073	.009143	.010922
%RSD	.2986949	.8698371	.3932378	.2055710	.6833867	.3721936	.4347220
#1	2.431951	24.14875	2.485073	1.278331	26.37892	2.458822	2.514210
#2	2.427395	24.09688	2.479020	1.281806	26.31008	2.464204	2.522458
#3	2.417760	23.76398	2.498157	1.276651	26.65181	2.446378	2.500816

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**26.17463**	**4.729643**	**5.096995**	**4.995300**	**4.878466**	**5.342941**	**4.896237**
Stddev	.19685	.039959	.014884	.009639	.006394	.039398	.011756
%RSD	.7520641	.8448543	.2920138	.1929611	.1310623	.7373846	.2401065
#1	26.09197	4.735790	5.086638	4.988518	4.876568	5.330161	4.900519
#2	26.03258	4.766171	5.090296	4.991047	4.885594	5.311520	4.882940
#3	26.39933	4.686966	5.114051	5.006334	4.873236	5.387143	4.905252

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: CCV04 Acquired: 5/30/2025 18:28:34 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV04 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**5.019476**	**4.845068**	**4.965928**
Stddev	.008995	.005390	.012666
%RSD	.1791946	.1112392	.2550511
#1	5.009903	4.841935	4.953398
#2	5.020772	4.841977	4.965662
#3	5.027752	4.851291	4.978725

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2802.594**	**59475.29**	**12087.21**	**2031.004**	**3806.183**
Stddev	8.895	164.66	63.49	8.134	10.578
%RSD	.3173715	.2768550	.5252512	.4004853	.2779112
#1	2806.861	59371.03	12039.18	2032.641	3809.305
#2	2808.550	59665.12	12063.26	2038.195	3814.848
#3	2792.369	59389.74	12159.19	2022.176	3794.395

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: CCB04 Acquired: 5/30/2025 18:32:45 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB04 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0016025**	**-.001388**	**.0007026**	**.0016007**	**.0002784**	**.0133303**	**-.003616**
Stddev	.0004972	.002221	.0008063	.0005109	.0018633	.0023772	.000983
%RSD	31.02357	159.9823	114.7591	31.91884	669.1803	17.83287	27.19119
#1	.0019005	-.002764	.0016316	.0010694	-.000245	.0106750	-.003344
#2	.0010286	.001174	.0001847	.0016443	.002347	.0140556	-.002797
#3	.0018785	-.002574	.0002915	.0020885	-.001267	.0152604	-.004706

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000056**	**.0000177**	**.0151568**	**.0000932**	**-.000168**	**.0010290**	**.0159765**
Stddev	.0000293	.0000498	.0021694	.0002180	.000067	.0002541	.0031799
%RSD	523.5008	281.7589	14.31320	234.0415	40.11989	24.69448	19.90331
#1	-.000011	.0000337	.0138510	-.000132	-.000237	.0008450	.0186870
#2	.000039	.0000575	.0139582	.000109	-.000102	.0009230	.0124762
#3	-.000011	-.000038	.0176610	.000303	-.000165	.0013189	.0167663

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002809**	**.0019639**	**.0001943**	**.0000101**	**-.081798**	**.0014636**	**.0024227**
Stddev	.0001404	.0038192	.0001477	.0001415	.013653	.0007469	.0001596
%RSD	49.98304	194.4703	76.02165	1400.127	16.69083	51.03310	6.587603
#1	.0004234	.0031430	.0000831	.0001363	-.066530	.0022900	.0022637
#2	.0002764	.0050546	.0003620	.0000368	-.092833	.0008367	.0025829
#3	.0001428	-.002306	.0001380	-.000143	-.086032	.0012641	.0024216

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000700**	**.0089623**	**.0006565**	**.0055847**	**.0010489**	**.0009579**	**.0029270**
Stddev	.015365	.0002409	.0000977	.0000761	.0004732	.0037190	.0015711
%RSD	2195.298	2.687927	14.87907	1.362127	45.11895	388.2211	53.67561
#1	.017028	.0088769	.0006579	.0056534	.0006191	.0036985	.0047149
#2	-.010183	.0092343	.0005582	.0055029	.0015560	.0024508	.0022993
#3	-.008945	.0087758	.0007535	.0055978	.0009715	-.003276	.0017668

Sample Name: CCB04 Acquired: 5/30/2025 18:32:45 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB04 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0039071	.0003420	.0001604
Stddev	.0003497	.0006149	.0000262
%RSD	8.950406	179.7654	16.30273
#1	.0036347	.0003279	.0001783
#2	.0043014	-.000266	.0001726
#3	.0037850	.000964	.0001304

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2905.657	62002.06	12974.04	2116.940	4091.046
Stddev	6.950	139.81	29.55	9.364	6.195
%RSD	.2391750	.2254988	.2277802	.4423559	.1514267
#1	2898.285	62018.45	12984.48	2111.461	4086.395
#2	2912.089	61854.77	12940.68	2111.605	4098.078
#3	2906.597	62132.95	12996.95	2127.753	4088.666

Sample Name: Q1872-10 Acquired: 5/30/2025 18:37:05 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.529852**	**5.563525**	**2.606585**	**2.915617**	**1.722122**	**276.0322**
Stddev	.008696	.016779	.003545	.005862	.002777	1.4257
%RSD	.2463472	.3015839	.1360057	.2010428	.1612642	.5165069
#1	3.519970	5.546263	2.610285	2.909181	1.719135	276.5330
#2	3.536334	5.579775	2.606252	2.917022	1.722604	274.4236
#3	3.533251	5.564537	2.603219	2.920649	1.724626	277.1399

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**14.20304**	**2.763005**	F **5.983085**	**337.5435**	**4.093887**	**1.905553**
Stddev	.13652	.003250	.004749	.5761	.004779	.001909
%RSD	.9611884	.1176435	.0793808	.1706880	.1167427	.1001582
#1	14.04936	2.762400	5.980183	338.1342	4.099113	1.903356
#2	14.24951	2.766515	5.988566	337.5133	4.092810	1.906496
#3	14.31027	2.760099	5.980505	336.9831	4.089738	1.906806

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.901032**	**238.2597**	**21.37205**	**353.9659**	**5.282722**	**.5204957**
Stddev	.010221	.7917	.06912	2.0973	.003863	.0017397
%RSD	.1732053	.3322683	.3234329	.5925122	.0731169	.3342361
#1	5.891692	238.7201	21.35068	356.0644	5.280911	.5221124
#2	5.899453	238.7133	21.44933	353.9635	5.287158	.5207201
#3	5.911950	237.3456	21.31613	351.8698	5.280098	.5186548

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**46.71859**	**2.100662**	**7.906076**	**234.2008**	**1.452513**	**.6037803**
Stddev	.30421	.007592	.023738	1.1826	.006395	.0009574
%RSD	.6511559	.3613969	.3002481	.5049690	.4402947	.1585735
#1	46.55282	2.104487	7.878744	234.0448	1.457698	.6027261
#2	47.06968	2.105580	7.921532	235.4536	1.454474	.6040189
#3	46.53327	2.091919	7.917952	233.1038	1.445366	.6045959

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: Q1872-10 Acquired: 5/30/2025 18:37:05 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.306534**	**8.508447**	F **18.31465**	**15.54570**	**9.295832**	**7.707396**
Stddev	.005324	.040677	.13366	.04217	.026405	.055436
%RSD	.2308247	.4780771	.7297990	.2712879	.2840567	.7192538
#1	2.300648	8.503285	18.40529	15.54915	9.297321	7.672938
#2	2.311014	8.551459	18.37750	15.58605	9.321462	7.771344
#3	2.307941	8.470598	18.16115	15.50192	9.268714	7.677907

Elem	Sr4077
Units	ppm
Avg	**5.116887**
Stddev	.033241
%RSD	.6496267
#1	5.087595
#2	5.110052
#3	5.153014

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3030.481**	**66896.34**	**13464.43**	**2219.183**	**3181.003**
Stddev	3.357	136.39	4.50	3.107	2.063
%RSD	.1107808	.2038866	.0334385	.1400121	.0648609
#1	3032.756	66741.09	13460.94	2221.095	3179.323
#2	3032.062	66996.90	13469.51	2215.597	3180.382
#3	3026.625	66951.04	13462.85	2220.855	3183.306

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: Q1872-10RE Acquired: 5/30/2025 18:41:34 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.408297**	**5.241831**	**2.523089**	**2.811480**	**1.883039**	**259.8847**
Stddev	.001216	.010147	.003599	.006671	.003024	1.3302
%RSD	.0356906	.1935851	.1426246	.2372674	.1605909	.5118495
#1	3.409263	5.230159	2.526356	2.804577	1.884912	259.8226
#2	3.408698	5.248558	2.523679	2.817891	1.879551	258.5866
#3	3.406931	5.246776	2.519232	2.811972	1.884654	261.2448

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**14.08434**	**2.507390**	F **5.787747**	**325.3853**	**3.988541**	**1.830150**
Stddev	.06037	.006697	.004321	2.3842	.010298	.002141
%RSD	.4286140	.2670773	.0746535	.7327311	.2582015	.1170091
#1	14.02824	2.499739	5.792591	326.1606	4.000415	1.832575
#2	14.07656	2.510240	5.786360	322.7099	3.982041	1.828519
#3	14.14822	2.512189	5.784291	327.2853	3.983166	1.829356

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.674118**	**246.9073**	**20.69439**	**338.4837**	**5.077194**	**.5450866**
Stddev	.004093	.6560	.06740	.8311	.004908	.0022562
%RSD	.0721381	.2657007	.3256880	.2455423	.0966751	.4139078
#1	5.678599	247.4610	20.62590	338.9122	5.082587	.5474878
#2	5.670576	246.1827	20.69663	337.5258	5.076005	.5430108
#3	5.673180	247.0781	20.76064	339.0131	5.072989	.5447611

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**49.70813**	**2.035652**	**7.772313**	**245.9648**	**1.432475**	**.5996020**
Stddev	.09320	.008647	.043609	.6194	.002112	.0007652
%RSD	.1874875	.4247739	.5610822	.2518060	.1474326	.1276089
#1	49.66042	2.025859	7.734045	246.3260	1.433958	.6003971
#2	49.64845	2.038865	7.819792	245.2496	1.430057	.5995380
#3	49.81552	2.042233	7.763104	246.3187	1.433409	.5988709

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: Q1872-10RE Acquired: 5/30/2025 18:41:34 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.324462**	**7.980536**	F **15.30750**	**14.75139**	**9.083351**	**7.357879**
Stddev	.004541	.031821	.06760	.01780	.012474	.039131
%RSD	.1953759	.3987270	.4416183	.1206358	.1373237	.5318269
#1	2.328412	7.951340	15.38374	14.77159	9.077159	7.317496
#2	2.325475	7.975813	15.25487	14.73803	9.075184	7.360517
#3	2.319500	8.014454	15.28388	14.74455	9.097709	7.395625

Elem	Sr4077
Units	ppm
Avg	**4.925731**
Stddev	.097711
%RSD	1.983682
#1	4.828728
#2	4.924330
#3	5.024134

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3045.809**	**65866.18**	**14403.78**	**2170.501**	**3221.991**
Stddev	2.523	299.40	37.89	3.610	1.137
%RSD	.0828277	.4545634	.2630566	.1663184	.0353008
#1	3048.061	65583.33	14416.99	2166.342	3221.444
#2	3043.083	66179.76	14433.30	2172.345	3221.231
#3	3046.283	65835.45	14361.06	2172.817	3223.299

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: Q1872-10DLX5 Acquired: 5/30/2025 18:46:02 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7907862**	**1.155920**	**.5303306**	**.6718768**	**.3739011**	**61.21237**	**3.269395**
Stddev	.0049882	.017285	.0016024	.0042308	.0035917	.14551	.020888
%RSD	.6307866	1.495315	.3021500	.6296934	.9606130	.2377097	.6388855
#1	.7866258	1.137182	.5285920	.6671650	.3701830	61.09817	3.247312
#2	.7894167	1.159339	.5306516	.6731152	.3741690	61.16274	3.272038
#3	.7963160	1.171241	.5317482	.6753501	.3773515	61.37620	3.288836

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6386144**	**1.211883**	**78.80006**	**1.012713**	**.3818309**	**1.429664**	**58.36875**
Stddev	.0018425	.004943	.14691	.020109	.0015866	.004064	1.10067
%RSD	.2885214	.4078635	.1864337	1.985699	.4155139	.2842346	1.885722
#1	.6365020	1.206843	78.64938	.996273	.3800172	1.425360	57.40277
#2	.6394511	1.212084	78.80792	1.035135	.3825143	1.430197	59.56703
#3	.6398902	1.216723	78.94288	1.006731	.3829613	1.433434	58.13645

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.057594**	**79.42403**	**1.079634**	**.1174178**	**9.738567**	**.4927152**	**1.976759**
Stddev	.017842	.18301	.004550	.0026182	.179343	.0012082	.042593
%RSD	.3527666	.2304181	.4214587	2.229821	1.841573	.2452105	2.154676
#1	5.041400	79.22908	1.075972	.1153855	9.556231	.4940403	1.940455
#2	5.054661	79.45088	1.078203	.1203723	9.914759	.4916748	2.023646
#3	5.076720	79.59213	1.084728	.1164954	9.744710	.4924307	1.966177

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**50.60332**	**.3738683**	**.1402879**	**.4500510**	**1.994212**	**4.395919**	**2.980604**
Stddev	.96510	.0026794	.0008836	.0024084	.008188	.068936	.023028
%RSD	1.907180	.7166670	.6298758	.5351423	.4105833	1.568191	.7725929
#1	49.70957	.3711009	.1392688	.4472821	1.985937	4.330031	2.954651
#2	51.62667	.3764500	.1408402	.4516593	1.994388	4.467545	2.998593
#3	50.47371	.3740539	.1407547	.4512117	2.002310	4.390182	2.988567

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: Q1872-10DLX5 Acquired: 5/30/2025 18:46:02 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.717486	1.629820	1.191235
Stddev	.007912	.008382	.006719
%RSD	.4606782	.5143176	.5640651
#1	1.710455	1.622175	1.184836
#2	1.715948	1.628501	1.190634
#3	1.726054	1.638783	1.198234

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2888.908	60086.33	12340.30	2052.586	3707.894
Stddev	6.882	1099.51	7.35	35.034	9.596
%RSD	.2382063	1.829880	.0595659	1.706804	.2587981
#1	2893.169	60960.59	12348.28	2083.104	3716.000
#2	2892.585	58851.91	12333.81	2014.331	3710.382
#3	2880.969	60446.48	12338.81	2060.323	3697.299

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: Q1872-10DLREX5 Acquired: 5/30/2025 18:50:05 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8006639**	**1.142345**	**.5271881**	**.6795449**	**.4088117**	**59.19346**	**3.231148**
Stddev	.0051527	.011377	.0002499	.0043779	.0039093	.40750	.018447
%RSD	.6435587	.9959310	.0473962	.6442437	.9562580	.6884259	.5709050
#1	.8010546	1.133923	.5273600	.6839635	.4083511	59.18299	3.237531
#2	.7953269	1.137824	.5269015	.6752088	.4051531	59.60609	3.245556
#3	.8056102	1.155287	.5273029	.6794623	.4129309	58.79129	3.210357

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6263391**	**1.208102**	**77.07066**	**.9686927**	**.3753159**	**1.435298**	**55.73965**
Stddev	.0050165	.001466	.47422	.0011282	.0001820	.003391	.03595
%RSD	.8009162	.1213268	.6153030	.1164652	.0484992	.2362489	.0645011
#1	.6289240	1.206737	77.25245	.9691501	.3752108	1.436702	55.75387
#2	.6295360	1.207917	77.42709	.9695203	.3752107	1.431431	55.69876
#3	.6205574	1.209651	76.53244	.9674076	.3755261	1.437762	55.76632

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.952714**	**77.63708**	**1.071814**	**.1189699**	**9.509603**	**.4784199**	**1.918679**
Stddev	.031192	.48461	.001641	.0002009	.022194	.0040097	.012868
%RSD	.6298046	.6241983	.1530598	.1688656	.2333819	.8381224	.6706694
#1	4.974279	77.69728	1.070452	.1190694	9.484361	.4758741	1.924843
#2	4.966915	78.08877	1.071354	.1187387	9.518392	.4830420	1.927306
#3	4.916948	77.12518	1.073635	.1191016	9.526056	.4763437	1.903888

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**49.33245**	**.3655980**	**.1396169**	**.4619636**	**1.913570**	**3.776619**	**3.003660**
Stddev	.12721	.0015817	.0002309	.0006899	.010607	.005779	.006916
%RSD	.2578726	.4326193	.1653512	.1493432	.5543218	.1530231	.2302530
#1	49.19097	.3669463	.1398831	.4619555	1.917462	3.770422	2.996256
#2	49.43740	.3659908	.1394955	.4626575	1.921682	3.781861	3.004769
#3	49.36900	.3638570	.1394720	.4612778	1.901567	3.777574	3.009954

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: Q1872-10DLREX5 Acquired: 5/30/2025 18:50:05 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.800213	1.603444	1.167694
Stddev	.011108	.010157	.006184
%RSD	.6170283	.6334434	.5295545
#1	1.791936	1.601020	1.168130
#2	1.812837	1.614594	1.173648
#3	1.795865	1.594719	1.161304

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2810.264	61259.81	12390.96	2084.894	3616.109
Stddev	4.630	75.97	97.40	6.679	5.391
%RSD	.1647660	.1240076	.7860297	.3203614	.1490733
#1	2810.579	61292.42	12348.48	2077.444	3621.129
#2	2814.729	61172.98	12322.01	2086.894	3616.787
#3	2805.484	61314.02	12502.38	2090.345	3610.411

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: Q2137-01DLX5 Acquired: 5/30/2025 18:54:07 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0160168**	**-.018159**	**.0448415**	**.0037753**	**-.003173**	**2.118383**	**5.543941**
Stddev	.0011755	.002747	.0008569	.0056476	.001884	.001001	.051307
%RSD	7.338885	15.12777	1.911055	149.5931	59.38590	.0472747	.9254596
#1	.0162128	-.015375	.0448047	.0078963	-.001088	2.117243	5.493032
#2	.0170819	-.020868	.0457163	-.002662	-.003675	2.118780	5.595637
#3	.0147557	-.018234	.0440036	.006092	-.004755	2.119125	5.543155

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0014271**	**-.001652**	**11.68039**	**.4595564**	**.0152891**	**.6985540**	**149.2807**
Stddev	.0000189	.000120	.03511	.0013900	.0002637	.0031297	.0985
%RSD	1.321824	7.244141	.3005997	.3024617	1.724995	.4480222	.0659651
#1	.0014281	-.001519	11.69489	.4600556	.0154249	.7013706	149.2912
#2	.0014078	-.001752	11.64036	.4606277	.0149851	.6951849	149.1774
#3	.0014455	-.001686	11.70593	.4579857	.0154571	.6991066	149.3736

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6915805**	**2.128692**	**.2100145**	**.0030436**	**4.102439**	**.0226432**	**1.382042**
Stddev	.0028695	.003083	.0003923	.0004286	.005875	.0006360	.009586
%RSD	.4149139	.1448426	.1867984	14.08298	.1431996	2.808605	.6935819
#1	.6916663	2.127406	.2104177	.0032071	4.107820	.0228787	1.370979
#2	.6886691	2.132210	.2096341	.0025573	4.096171	.0231277	1.387270
#3	.6944061	2.126459	.2099915	.0033664	4.103325	.0219230	1.387877

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.516199**	**.1404213**	**.0786369**	**.0347504**	**.1009039**	**.6811615**	**1.181725**
Stddev	.021531	.0009093	.0001490	.0008242	.0005756	.0140081	.004859
%RSD	1.420050	.6475161	.1894649	2.371812	.5704567	2.056502	.4111430
#1	1.509420	.1406819	.0786080	.0341933	.1013983	.6939567	1.176434
#2	1.540303	.1411718	.0785045	.0356972	.1002720	.6661942	1.182755
#3	1.498873	.1394102	.0787982	.0343606	.1010414	.6833336	1.185987

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: Q2137-01DLX5 Acquired: 5/30/2025 18:54:07 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	8.593642	.0880834	-.020875
Stddev	.009332	.0006759	.000282
%RSD	.1085936	.7672913	1.352496
#1	8.594220	.0888362	-.020837
#2	8.584034	.0875288	-.021174
#3	8.602672	.0878853	-.020613

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2829.681	60590.45	12949.83	2044.128	3959.523
Stddev	13.901	128.56	11.97	3.936	9.204
%RSD	.4912512	.2121838	.0924151	.1925291	.2324612
#1	2818.898	60601.11	12939.79	2048.669	3953.259
#2	2845.370	60456.89	12963.07	2041.710	3970.091
#3	2824.776	60713.36	12946.64	2042.006	3955.220

Sample Name: CCV05 Acquired: 5/30/2025 18:58:26 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV05 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.066085**	**4.949425**	**4.964902**	**5.154017**	**5.076248**	**10.02833**	**9.521418**
Stddev	.003125	.033976	.012332	.002349	.004289	.01670	.087536
%RSD	.0616807	.6864655	.2483771	.0455735	.0844908	.1665516	.9193628
#1	5.069162	4.984775	4.954607	5.153875	5.080638	10.01103	9.535695
#2	5.062915	4.946487	4.961530	5.151742	5.072068	10.02959	9.600938
#3	5.066177	4.917013	4.978569	5.156433	5.076038	10.04436	9.427620

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2661546**	**2.476716**	**24.24147**	**1.001922**	**2.475518**	**1.275920**	**4.706363**
Stddev	.0013163	.009134	.02613	.003611	.008620	.002979	.024486
%RSD	.4945637	.3687880	.1077796	.3603630	.3481905	.2334485	.5202679
#1	.2652613	2.472659	24.21130	.998580	2.472322	1.275254	4.704510
#2	.2676662	2.470313	24.25653	1.005751	2.468953	1.273332	4.682855
#3	.2655363	2.487175	24.25659	1.001435	2.485279	1.279176	4.731722

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.428337**	**24.43586**	**2.479632**	**1.259604**	**23.17042**	**2.452569**	**2.573255**
Stddev	.006140	.07524	.007007	.002059	.09151	.006952	.004830
%RSD	.2528478	.3078879	.2825698	.1634784	.3949554	.2834738	.1876883
#1	2.421763	24.35599	2.476940	1.258875	23.27397	2.444571	2.578740
#2	2.429324	24.50539	2.474371	1.261929	23.10041	2.455972	2.569640
#3	2.433923	24.44619	2.487586	1.258010	23.13688	2.457165	2.571384

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.02966**	**5.275640**	**5.039348**	**4.972285**	**4.849191**	**4.799388**	**4.881607**
Stddev	.03144	.021077	.010232	.013909	.006073	.022733	.007255
%RSD	.1308580	.3995138	.2030479	.2797268	.1252457	.4736578	.1486093
#1	24.03443	5.259606	5.035018	4.975338	4.855077	4.779431	4.877682
#2	23.99610	5.299514	5.031993	4.957104	4.849550	4.794599	4.877161
#3	24.05845	5.267801	5.051033	4.984414	4.842946	4.824134	4.889979

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: CCV05 Acquired: 5/30/2025 18:58:26 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV05 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	5.008866	4.989896	4.878320
Stddev	.010191	.013223	.056735
%RSD	.2034670	.2649984	1.163001
#1	5.020610	5.000275	4.828835
#2	5.003642	4.994405	4.940242
#3	5.002346	4.975008	4.865883

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2792.935	60327.89	10756.63	2057.313	3784.934
Stddev	10.541	258.73	69.45	9.664	15.189
%RSD	.3774311	.4288683	.6456741	.4697621	.4012897
#1	2798.665	60605.55	10814.76	2060.930	3789.885
#2	2799.371	60093.57	10679.72	2046.361	3797.029
#3	2780.770	60284.56	10775.40	2064.647	3767.888

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: CCB05 Acquired: 5/30/2025 19:02:37 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB05 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002392**	**-.003999**	**-.000725**	**.0019965**	**-.001760**	**.0054383**	**-.003130**
Stddev	.0016632	.001117	.000929	.0028121	.001384	.0063490	.000652
%RSD	695.2380	27.93689	128.1034	140.8517	78.64588	116.7473	20.82641
#1	-.000260	-.003213	-.000441	.0005943	-.000360	.0112548	-.002458
#2	-.001117	-.005278	-.001764	.0052340	-.001791	-.001335	-.003172
#3	.002095	-.003506	.000028	.0001612	-.003128	.006395	-.003759

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000145**	**.0000450**	**.0102677**	**.0014551**	**-.000027**	**.0001692**	**.0061986**
Stddev	.0000365	.0000282	.0146837	.0000711	.000224	.0001003	.0031341
%RSD	251.1393	62.53015	143.0081	4.885796	826.9242	59.26094	50.56101
#1	-.000001	.0000226	.0107664	.0013801	.000048	.0001941	.0089055
#2	-.000012	.0000766	-.004659	.0014636	.000150	.0000589	.0069252
#3	.000056	.0000359	.024696	.0015216	-.000279	.0002548	.0027650

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0011518**	**-.008759**	**.0014566**	**.0000086**	**-.065855**	**-.000717**	**.0009817**
Stddev	.0003524	.010482	.0002280	.0002946	.002909	.000126	.0001400
%RSD	30.59160	119.6744	15.64973	3421.105	4.417860	17.53817	14.25983
#1	.0007450	-.004180	.0017087	.0003210	-.062580	-.000858	.0010484
#2	.0013578	-.001346	.0012651	-.000264	-.066845	-.000615	.0010759
#3	.0013528	-.020751	.0013959	-.000031	-.068140	-.000679	.0008208

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0273450**	**.0095509**	**.0008151**	**.0036166**	**.0009687**	**.0134402**	**.0022179**
Stddev	.0349207	.0005963	.0001385	.0005806	.0007645	.0048324	.0022717
%RSD	127.7041	6.243576	16.99265	16.05360	78.92200	35.95484	102.4258
#1	.0332258	.0100594	.0007825	.0038420	.0002158	.0188990	.0036147
#2	.0589520	.0088946	.0009671	.0040508	.0017443	.0097094	-.000403
#3	-.010143	.0096986	.0006959	.0029572	.0009460	.0117122	.003442

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: CCB05 Acquired: 5/30/2025 19:02:37 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB05 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0011115	.0011318	.0001734
Stddev	.0034560	.0006126	.0000143
%RSD	310.9388	54.12339	8.267896
#1	.0008680	.0016692	.0001665
#2	-.002216	.0012613	.0001639
#3	.004683	.0004648	.0001899

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2866.566	62170.43	12687.08	2141.256	3998.482
Stddev	10.030	140.81	63.48	15.345	12.434
%RSD	.3499003	.2264876	.5003263	.7166223	.3109638
#1	2873.685	62007.89	12671.85	2124.044	4003.534
#2	2870.919	62255.42	12632.60	2153.506	4007.594
#3	2855.095	62247.97	12756.79	2146.218	3984.317

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: PB168199BS Acquired: 5/30/2025 19:18:25 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8040690**	**2.042104**	**.9808649**	**2.062554**	**.8214333**	**1.967786**
Stddev	.0036193	.016161	.0016950	.003233	.0035034	.007796
%RSD	.4501227	.7914062	.1728053	.1567245	.4264953	.3961753
#1	.8041265	2.023446	.9800292	2.060001	.8175764	1.976787
#2	.8004212	2.051702	.9797499	2.061473	.8223049	1.963423
#3	.8076591	2.051166	.9828154	2.066189	.8244185	1.963149

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1907792**	**.2064380**	**.2006086**	**1.018016**	**.4185521**	**.2013074**
Stddev	.0012160	.0005099	.0002767	.008305	.0002938	.0004537
%RSD	.6373893	.2470099	.1379228	.8157855	.0701974	.2253985
#1	.1915895	.2070063	.2005286	1.008435	.4188121	.2016854
#2	.1913672	.2062871	.2003807	1.022455	.4186108	.2008042
#3	.1893810	.2060205	.2009164	1.023159	.4182333	.2014326

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3181463**	**3.111388**	**.2006903**	**1.948461**	**.5059359**	**.0768357**
Stddev	.0014395	.015965	.0012165	.009081	.0011936	.0007352
%RSD	.4524795	.5131088	.6061755	.4660429	.2359233	.9568956
#1	.3171564	3.095263	.2011142	1.956403	.5051143	.0767740
#2	.3174848	3.127188	.1993185	1.938561	.5053883	.0775998
#3	.3197977	3.111714	.2016381	1.950420	.5073050	.0761332

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.799848**	**.2983302**	**.1933110**	**9.712618**	**.2995444**	**.4167941**
Stddev	.023448	.0014847	.0015371	.057894	.0019496	.0011386
%RSD	.8374897	.4976810	.7951195	.5960675	.6508496	.2731912
#1	2.819112	.2975989	.1942684	9.724980	.3005338	.4155248
#2	2.806692	.3000387	.1915380	9.763332	.3008008	.4171319
#3	2.773738	.2973528	.1941265	9.649542	.2972984	.4177257

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: PB168199BS Acquired: 5/30/2025 19:18:25 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6977773**	**.1957529**	**.8542392**	**5.738476**	F **-.008854**	**.1989305**
Stddev	.0019199	.0006561	.0017995	.006711	.001593	.0009172
%RSD	.2751460	.3351561	.2106564	.1169550	17.98892	.4610764
#1	.6957331	.1963806	.8542833	5.736505	-.007266	.1999225
#2	.6995424	.1950717	.8524180	5.732970	-.008844	.1981131
#3	.6980565	.1958063	.8560162	5.745952	-.010452	.1987561

Elem	Sr4077
Units	ppm
Avg	**.1944858**
Stddev	.0004967
%RSD	.2553861
#1	.1949958
#2	.1944582
#3	.1940035

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2918.349**	**61230.25**	**11833.10**	**2114.616**	**4096.848**
Stddev	8.635	160.38	52.37	13.243	8.446
%RSD	.2958996	.2619256	.4425747	.6262449	.2061587
#1	2920.596	61144.46	11778.85	2101.959	4097.979
#2	2925.638	61131.01	11837.07	2113.512	4104.672
#3	2908.812	61415.27	11883.36	2128.376	4087.894

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: PB167748BL Acquired: 5/30/2025 19:22:27 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000322**	**-.000809**	**-.000961**	**.0008192**	**.0001247**	**.0070802**	**-.002596**
Stddev	.000203	.000665	.001278	.0040583	.0012490	.0045500	.001181
%RSD	63.21904	82.18579	132.9805	495.4025	1001.854	64.26398	45.47616
#1	-.000556	-.001198	-.001650	-.002717	.0010560	.0123217	-.002305
#2	-.000203	-.000041	.000514	-.000076	-.001295	.0047719	-.003895
#3	-.000205	-.001187	-.001747	.005250	.000613	.0041470	-.001588

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000438**	**-.000033**	**.0042513**	**.0010050**	**.0000698**	**.0001768**	**-.002856**
Stddev	.0000189	.000050	.0036006	.0001558	.0001185	.0001191	.003420
%RSD	43.21360	149.8890	84.69329	15.50012	169.7696	67.33311	119.7459
#1	.0000227	.000019	.0053653	.0010993	-.000056	.0002964	-.005491
#2	.0000592	-.000039	.0071633	.0008252	.000179	.0000583	-.004086
#3	.0000496	-.000080	.0002254	.0010905	.000087	.0001758	.001009

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000599**	**-.018824**	**.0005410**	**-.000098**	**-.086581**	**-.000036**	**.0000940**
Stddev	.0001823	.018021	.0001648	.000314	.007290	.001701	.0003618
%RSD	304.2339	95.73372	30.45496	319.1415	8.420183	4693.766	384.7315
#1	.0001074	.000285	.0004236	-.000009	-.078166	.001532	-.000289
#2	.0002138	-.035511	.0007294	-.000447	-.090988	.000205	.000429
#3	-.000141	-.021246	.0004701	.000161	-.090589	-.001845	.000142

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.006524**	**.0023242**	**.0000141**	**-.002081**	**.0009153**	**-.003131**	**.0018897**
Stddev	.008699	.0004767	.0001186	.000597	.0004880	.004607	.0011454
%RSD	133.3390	20.50942	841.6883	28.70212	53.31473	147.1293	60.61178
#1	-.011545	.0027270	.0001481	-.001743	.0013926	-.004883	.0018587
#2	-.011549	.0024476	-.000078	-.002770	.0009360	-.006605	.0030503
#3	.003521	.0017979	-.000028	-.001729	.0004173	.002095	.0007602

Sample Name: PB167748BL Acquired: 5/30/2025 19:22:27 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0028895	.0006144	.0000963
Stddev	.0005181	.0001871	.0000182
%RSD	17.92894	30.44736	18.90175
#1	.0031359	.0008197	.0000753
#2	.0022942	.0005699	.0001061
#3	.0032383	.0004536	.0001075

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2950.101	64541.37	11891.65	2198.919	4155.622
Stddev	12.196	98.82	24.47	9.977	18.867
%RSD	.4134093	.1531099	.2057384	.4537314	.4540186
#1	2951.943	64505.70	11872.66	2209.029	4161.333
#2	2961.271	64465.34	11883.03	2189.080	4170.973
#3	2937.089	64653.07	11919.26	2198.647	4134.558

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: PB167748BS Acquired: 5/30/2025 19:26:47 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8140690**	**2.010502**	**.9867306**	**2.090587**	**.8345116**	**1.940804**
Stddev	.0027778	.025480	.0044420	.010523	.0017451	.003423
%RSD	.3412221	1.267367	.4501709	.5033445	.2091172	.1763891
#1	.8136340	1.981689	.9820310	2.078494	.8335802	1.943701
#2	.8115344	2.019749	.9873010	2.095608	.8334299	1.941685
#3	.8170387	2.030068	.9908598	2.097659	.8365248	1.937027

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1918334**	**.2013003**	**.2025758**	**1.007855**	**.4097321**	**.2022596**
Stddev	.0006409	.0004479	.0005946	.007018	.0006792	.0005390
%RSD	.3341109	.2225054	.2935427	.6963067	.1657766	.2664803
#1	.1925682	.2016098	.2019062	1.005652	.4093102	.2016559
#2	.1915421	.2015043	.2027789	1.002203	.4093705	.2024304
#3	.1913897	.2007867	.2030423	1.015710	.4105156	.2026924

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3196158**	**3.116752**	**.2003352**	**1.928470**	**.5083929**	**.0761204**
Stddev	.0007597	.001539	.0002311	.010623	.0025073	.0006012
%RSD	.2376919	.0493862	.1153729	.5508603	.4931883	.7898333
#1	.3190843	3.118265	.2001395	1.923236	.5061921	.0767093
#2	.3192773	3.116801	.2002761	1.940695	.5078642	.0761443
#3	.3204860	3.115188	.2005902	1.921480	.5111224	.0755076

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.828333**	**.2961179**	**.1892635**	**9.748539**	**.2943266**	**.4177255**
Stddev	.006792	.0014272	.0022754	.054804	.0018547	.0008816
%RSD	.2401395	.4819879	1.202219	.5621774	.6301408	.2110459
#1	2.828190	.2947006	.1900658	9.755403	.2927841	.4170646
#2	2.821614	.2975549	.1910291	9.690626	.2963845	.4173855
#3	2.835195	.2960981	.1866957	9.799588	.2938113	.4187265

Reviewed By:jaswal
On:6/3/2025 6:07:18 AM
Inst Id :P4
LB :LB135969

Sample Name: PB167748BS Acquired: 5/30/2025 19:26:47 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7110302**	**.1957780**	**.8500475**	**5.913351**	F **-.003853**	**.1987938**
Stddev	.0012659	.0007178	.0039490	.041644	.002026	.0005617
%RSD	.1780341	.3666221	.4645623	.7042339	52.57641	.2825809
#1	.7096028	.1965283	.8480466	5.868200	-.001814	.1981742
#2	.7114711	.1957076	.8545964	5.921602	-.003880	.1992699
#3	.7120166	.1950980	.8474994	5.950252	-.005866	.1989374

Elem	Sr4077
Units	ppm
Avg	**.1942714**
Stddev	.0001676
%RSD	.0862434
#1	.1944490
#2	.1942489
#3	.1941162

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2872.676**	**61914.45**	**12032.73**	**2155.153**	**3990.792**
Stddev	10.332	132.43	12.87	5.994	15.178
%RSD	.3596610	.2138952	.1069221	.2781421	.3803337
#1	2882.619	61827.05	12030.59	2148.301	4007.001
#2	2873.414	62066.82	12021.07	2157.734	3988.463
#3	2861.995	61849.49	12046.53	2159.425	3976.913

Sample Name: CCV06 Acquired: 5/30/2025 19:30:49 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.953689**	**4.846267**	**4.933046**	**5.009547**	**4.979737**	**9.734534**	**9.770965**
Stddev	.035355	.047220	.010244	.037944	.029780	.022761	.033762
%RSD	.7137200	.9743621	.2076692	.7574300	.5980251	.2338139	.3455359
#1	4.934279	4.807041	4.921424	4.993853	4.970579	9.755812	9.790412
#2	4.932290	4.833082	4.936949	4.981967	4.955611	9.737253	9.790504
#3	4.994498	4.898678	4.940765	5.052820	5.013020	9.710535	9.731980

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2455807**	**2.460822**	**24.27773**	**.9852039**	**2.463169**	**1.254573**	**4.919162**
Stddev	.0015636	.006796	.11809	.0006011	.005726	.004004	.011853
%RSD	.6366843	.2761505	.4863927	.0610181	.2324810	.3191130	.2409641
#1	.2464458	2.453424	24.38314	.9857659	2.457558	1.254595	4.924531
#2	.2465205	2.462257	24.29992	.9852758	2.462946	1.250559	4.905574
#3	.2437757	2.466785	24.15012	.9845700	2.469004	1.258566	4.927381

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.435516**	**24.11066**	**2.459959**	**1.230515**	**24.16560**	**2.441450**	**2.524798**
Stddev	.008119	.16475	.005018	.002064	.18372	.007353	.004786
%RSD	.3333728	.6833256	.2040058	.1677458	.7602422	.3011577	.1895780
#1	2.441932	24.20958	2.455113	1.232785	24.14842	2.449934	2.530213
#2	2.438230	24.20194	2.459631	1.230010	23.99107	2.436933	2.521133
#3	2.426388	23.92047	2.465134	1.228751	24.35730	2.437484	2.523049

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.75444**	**4.894789**	**4.991955**	**4.929899**	**4.846972**	**4.902562**	**4.809909**
Stddev	.15864	.032594	.023479	.018252	.012190	.033029	.022232
%RSD	.6408352	.6658968	.4703331	.3702212	.2514996	.6737032	.4622061
#1	24.66891	4.918495	4.988120	4.909355	4.861047	4.868152	4.799623
#2	24.65693	4.908252	4.970630	4.936099	4.839828	4.905523	4.794683
#3	24.93749	4.857620	5.017116	4.944243	4.840040	4.934011	4.835421

Sample Name: CCV06 Acquired: 5/30/2025 19:30:49 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**4.911517**	**4.830903**	**4.932683**
Stddev	.022908	.013821	.029441
%RSD	.4664062	.2860920	.5968648
#1	4.887208	4.836384	4.956589
#2	4.914639	4.815183	4.941663
#3	4.932703	4.841144	4.899797

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2853.159**	**62013.50**	**11566.67**	**2128.425**	**3850.568**
Stddev	12.992	60.95	65.04	9.927	4.525
%RSD	.4553390	.0982877	.5622658	.4664247	.1175048
#1	2847.633	62017.18	11528.77	2125.147	3849.846
#2	2868.000	62072.53	11529.49	2139.577	3855.409
#3	2843.844	61950.79	11641.77	2120.551	3846.447

Sample Name: CCB06 Acquired: 5/30/2025 19:34:59 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000394**	**-.004014**	**.0004868**	**.0012865**	**.0016238**	**.0048082**	**-.001325**
Stddev	.001066	.001301	.0031913	.0011879	.0004870	.0035402	.000527
%RSD	270.4513	32.41953	655.4924	92.33825	29.98965	73.62846	39.77697
#1	.000711	-.004996	-.002172	.0000107	.0010875	.0011830	-.001606
#2	-.001416	-.002538	-.000394	.0023608	.0020384	.0082568	-.001652
#3	-.000477	-.004508	.004026	.0014879	.0017455	.0049849	-.000717

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000247**	**-.000025**	**.0013443**	**-.000318**	**-.000055**	**-.000019**	**-.002652**
Stddev	.0000189	.000021	.0034961	.000258	.000274	.000131	.000307
%RSD	76.69169	85.98439	260.0688	81.32626	502.8525	701.2138	11.56563
#1	.0000175	-.000018	.0022302	-.000153	-.000371	-.000154	-.002649
#2	.0000461	-.000008	.0043122	-.000616	.000117	.000108	-.002347
#3	.0000104	-.000049	-.002510	-.000185	.000090	-.000011	-.002961

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000280**	**-.022171**	**.0001818**	**.0000272**	**-.080130**	**-.000378**	**.0002742**
Stddev	.0002962	.009627	.0003840	.0001099	.007556	.001473	.0004992
%RSD	1056.853	43.42016	211.1842	404.3135	9.429116	389.7333	182.0720
#1	.0001729	-.030045	-.000199	.0000111	-.088782	.000397	.0003052
#2	.0002239	-.025028	.000176	.0001442	-.076779	-.002077	-.000240
#3	-.000313	-.011439	.000568	-.000074	-.074830	.000546	.000757

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.021540**	**.0093670**	**.0003829**	**-.000306**	**.0003549**	**.0008473**	**.0018301**
Stddev	.012182	.0007268	.0003676	.000750	.0006516	.0060515	.0010422
%RSD	56.55251	7.758830	96.01106	244.5834	183.5910	714.2187	56.94765
#1	-.007798	.0085447	.0006412	-.000001	.0006115	.0059973	.0029607
#2	-.031012	.0099233	-.000038	.000242	.0008392	.0023624	.0016217
#3	-.025811	.0096330	.000545	-.001161	-.000386	-.005818	.0009078

Sample Name: CCB06 Acquired: 5/30/2025 19:34:59 Type: Unk
Method: NON EPA-6010-200.7 NEW LR(v77) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.000955	-.000968	.0001775
Stddev	.001101	.000520	.0000299
%RSD	115.3166	53.72736	16.86779
#1	-.001785	-.000417	.0002111
#2	.000294	-.001451	.0001674
#3	-.001373	-.001036	.0001538

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2945.240	62006.43	12139.17	2170.860	4106.713
Stddev	10.140	114.19	38.29	9.474	14.139
%RSD	.3442696	.1841643	.3154558	.4364206	.3442837
#1	2950.352	61899.63	12164.91	2167.334	4117.235
#2	2951.807	62126.80	12157.45	2163.654	4112.262
#3	2933.563	61992.87	12095.17	2181.592	4090.641

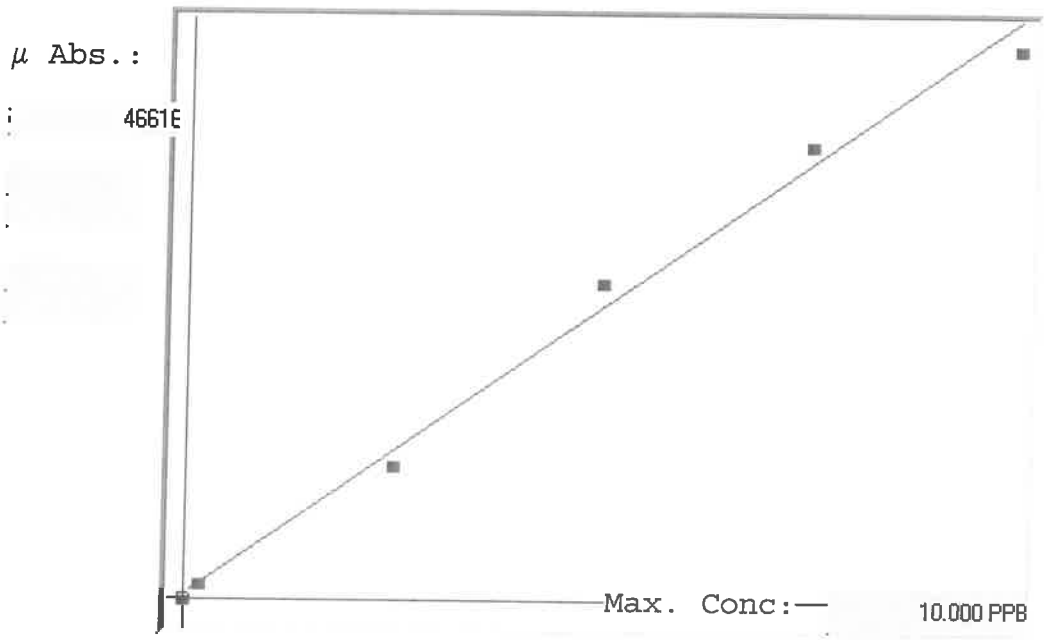
Reviewed By:jaswal
On:6/23/2025 3:08:02 AM
Inst Id :CV1
LB :LB135943

LB 135943

7471B

INSTRUMENT ID: CV1

Linear



A= 0.0000e+000

B= 2.0595e-004

C= -8.4496e-002

Rho= 0.9961807

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	-0.061	-0.061	115	0.000	115					-2
0.2	0.200	0.197	-0.003	1367	0.0 %	1367					-16
2.5	2.500	2.251	-0.249	11341	0.0 %	11341					9
5.0	5.000	5.454	0.454	26892	0.0 %	26892					6
7.5	7.500	7.842	0.342	38488	0.0 %	38488					-5
10.0	10.000	9.516	-0.484	46616	0.0 %	46616					

Reviewed By:jaswal
On:6/23/2025 3:08:02 AM
Inst Id :CV1
LB :LB135943

LB13543 INSTRUMENT ID : CV1

Method: 7471B Operator: Admin Date of Analysis: 29 May 2025 10:40:03

Sample ID	Extended ID	µ Abs.	Conc.	Stnd Conc	Method	Units	Date	Type	Type
0.0 - 1	50	115	-	0.00000	7471B	PPB	29 May 2025 10:53:23	S	Std
0.2 - 1	50.2	1367	-	0.20000	7471B	PPB	29 May 2025 10:55:40	S	Std
2.5 - 1	52.5	11341	-	2.50000	7471B	PPB	29 May 2025 10:57:57	S	Std
5.0 - 1	55	26892	-	5.00000	7471B	PPB	29 May 2025 11:10:25	S	Std
7.5 - 1	57.5	38488	-	7.50000	7471B	PPB	29 May 2025 11:12:44	S	Std
10.0 - 1	510	46616	-	10.00000	7471B	PPB	29 May 2025 11:15:24	S	Std
ICV21 - 1	ICV21	19052	3.8393		-7471B	PPB	29 May 2025 11:18:20	U	SMPL
ICB21 - 1	ICB21	171	-0.0493		-7471B	PPB	29 May 2025 11:20:35	U	SMPL
CCV76 - 1	CCV76	23874	4.8325		-7471B	PPB	29 May 2025 11:22:52	U	SMPL
CCB76 - 1	CCB76	259	-0.0312		-7471B	PPB	29 May 2025 11:27:46	U	SMPL
CRA - 1	CRA	1465	0.2172		-7471B	PPB	29 May 2025 11:38:10	U	SMPL
HighStd - 1	HighStd	45896	9.3680		-7471B	PPB	29 May 2025 11:45:44	U	SMPL
ChkStd - 1	ChkStd	31902	6.4858		-7471B	PPB	29 May 2025 11:50:51	U	SMPL
PB168173BL - 1	PB168173BL	283	-0.0262		-7471B	PPB	29 May 2025 11:55:53	U	SMPL
PB168173BS - 1	PB168173BS	17394	3.4979		-7471B	PPB	29 May 2025 11:58:09	U	SMPL
Q1872-10 - 1	HW0425-PT-MET-SOIL	739022	HIGH		-7471B	PPB	29 May 2025 12:00:25	X	
Q2085-01 - 1	SC-4-SED-051525	-385	-0.1638		-7471B	PPB	29 May 2025 12:02:19	U	SMPL
Q2085-02 - 1	SC-3-SED-051525	765	0.0731		-7471B	PPB	29 May 2025 12:05:29	U	SMPL
Q2085-03 - 1	SC-2-SED-051525	-73	-0.0995		-7471B	PPB	29 May 2025 12:07:48	U	SMPL
Q2085-04 - 1	SC-1-SED-051625	609	0.0409		-7471B	PPB	29 May 2025 12:10:05	U	SMPL
CCV77 - 1	CCV77	25128	5.0907		-7471B	PPB	29 May 2025 12:25:30	U	SMPL
CCB77 - 1	CCB77	211	-0.0410		-7471B	PPB	29 May 2025 12:30:37	U	SMPL
Q2085-04DUP - 1	SC-1-SED-051625DUP	577	0.0343		-7471B	PPB	29 May 2025 12:32:51	U	SMPL
Q2085-05 - 1	Q2085-04MS	20738	4.1866		-7471B	PPB	29 May 2025 12:43:33	U	SMPL
Q2085-06 - 1	Q2085-04MSD	21927	4.4315		-7471B	PPB	29 May 2025 12:45:50	U	SMPL
Q2085-07 - 1	SC-COMP-SED-051625	780	0.0761		-7471B	PPB	29 May 2025 12:48:09	U	SMPL
Q2085-08 - 1	DUPE-1-SC	748	0.0696		-7471B	PPB	29 May 2025 12:50:27	U	SMPL
Q2127-01 - 1	COMP-1	2646	0.4605		-7471B	PPB	29 May 2025 12:52:45	U	SMPL
Q2127-11 - 1	COMP-2	1540	0.2327		-7471B	PPB	29 May 2025 12:55:03	U	SMPL
Q2085-04LX5 - 1		-55	-0.0958		-7471B	PPB	29 May 2025 12:57:23	U	SMPL
Q2085-04A - 1		21076	4.2562		-7471B	PPB	29 May 2025 12:59:41	U	SMPL
CCV78 - 1	CCV78	25487	5.1647		-7471B	PPB	29 May 2025 13:01:57	U	SMPL
CCB78 - 1	CCB78	7	-0.0831		-7471B	PPB	29 May 2025 13:04:15	U	SMPL
Q1872-10DLX25 - 1	HW0425-PT-MET-SOIL	64634	13.2271		-7471B	PPB	29 May 2025 13:06:34	U	SMPL
Q1872-10DL2X50 - 1	HW0425-PT-MET-SOIL	32513	6.6117		-7471B	PPB	29 May 2025 13:08:49	U	SMPL
CCV7 - 1	CCV7	25937	5.2573		-7471B	PPB	29 May 2025 13:19:41	U	SMPL
CCB79 - 1	CCB79	233	-0.0365		-7471B	PPB	29 May 2025 13:22:01	U	SMPL

Alliance TECHNICAL GROUP

Soil/Sludge Metals Preparation Sheet

PB167748

SOP ID : M3050B-Digestion-20

SDG No : N/A

Matrix : SOIL

Pippete ID: ICP A

Balance ID : M SC-2

Filter paper ID : N/A

pH Strip ID : N/A

Hood ID : #3

Block ID: 1. HOT BLOCK #2 2. N/A

Start Digest Date: 04/25/2025 **Time :** 10:00 **Temp :** 96 °C

End Digest Date: 04/25/2025 **Time :** 12:05 **Temp :** 96 °C

Digestion tube ID: M6054

Block thermometer ID: MET-DIG. #2

Dig Technician Signature: SLS

Supervisor Signature:

Temp : 1. 96°C 2. N/A

Standared Name	MLS USED	STD REF. # FROM LOG
LFS-1	1.00	M6007
LFS-2	1.00	M6015
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	5.00	M6158
1:1 HNO3	10.00	MP84041
30% H2O2	3.00	M6162
CONC: HCL	10.00	M6151
PTFE Boiling Stones	N/A	M5581
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# CELL# 96 C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
04/25/2025 13:05	SLS.met.dig	SC Modell 2025
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

Soil/Sludge Metals Preparation Sheet

PB167748

Lab Sample ID	Client Sample ID	pH	Initial Weight (g)	Final Vol (ml)	Color Before	Color After	Texture	Artifact	Comment	Prep Pos
PB167748BL	PBS748	N/A	2.00	100	Colorless	Colorless	Fine	No	N/A	1
PB167748BS	LCS748	N/A	2.00	100	Colorless	Colorless	Fine	No	M6005,M6015	2
Q1872-10	HW0425-PT-MET-SOIL	N/A	2.30	100	Light brown	Medium Yellow	Fine	No	N/A	3

WORKLIST(Hardcopy Internal Chain)

WorkList Name : pb167748 **WorkList ID :** 190373 **Department :** Digestion **Date :** 04-24-2025 10:05:44

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1872-10	HW0425-PT-MET-SOIL	Solid	Metals ICP-Group1	Cool 4 deg C	ALLI03	QA Of	04/21/2025	6010D

Date/Time 042525 0:10 09:10

Raw Sample Received by: SKSm Td. dy

Raw Sample Relinquished by: [illegible]

Date/Time 04/25/25 11:10

Raw Sample Received by: [illegible]

Raw Sample Relinquished by: SLS.Mtdg

Alliance TECHNICAL GROUP

Soil/Sludge Mercury Preparation Sheet

PB168173

SOP ID : M7471B-Mercury-18

SDG No : NA

Start Digest Date: 05/28/2025 **Time :** 16:40 **Temp :** 95 °C

Matrix : SOIL

End Digest Date: 05/28/2025 **Time :** 17:10 **Temp :** 94 °C

Pippete ID: HG A

Digestion tube ID: M5595

Balance ID : M SC-3

Block thermometer ID: HG-DIG#3

Filter paper ID : NA

Dig Technician Signature: MB

pH Strip ID : NA

Supervisor Signature: 12

Hood ID : #1

Temp : **1.** 95°C **2.** N/A

Block ID: **1.** HG HOT BLOCK#3 **2.** N/A

Standared Name	MLS USED	STD REF. # FROM LOG
ICV	30mL	MP85787
CCV	30mL	MP85789
CRA	30mL	MP85791
Blank Spike	0.48mL	MP85780
Matrix Spike	0.48mL	MP85780

Chemical Used	ML/SAMPLE USED	Lot Number
AQUA REGIA	1.5mL	MP85793
KMnO4 (5%)	4.5mL	MP85241
Hydroxylamine HCL (12%)	2.0mL	MP85243
PTFE Boiling Stones	----------	M4583
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	MP85781
0.05 ppb	S0.05	N/A	N/A
0.2 ppb	S0.2	30mL	MP85782
2.5 ppb	S2.5	30mL	MP85783
5.0 ppb	S5.0	30mL	MP85784
7.5 ppb	S7.5	30mL	MP85785
10.0 ppb	S10.0	30mL	MP85786
ICV	ICV	30mL	MP85787
ICB	ICB	30mL	MP85788
CCV	CCV	30mL	MP85789
CCB	CCB	30mL	MP85790
CRI	CRI	30mL	MP85791
CHK STD	CHK STD	30mL	MP85792

Extraction Conformance/Non-Conformance Comments:

N/A

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
5/28/25 @ 17:40	MB - DIG - GMS	MB - metal GMS
	Preparation Group	**Analysis Group**

Lab Sample ID	Client Sample ID	Initial Weight (g)	Final Vol (ml)	pH	Comment	Prep Pos
PB168173BL	PBS173	0.50	35	NA	N/A	3-1
PB168173BS	LCS173	0.57	35	NA	MP85780	2
Q1872-10	HW0425-PT-MET-SOIL	0.52	35	NA	N/A	3
Q2085-01	SC-4-SED-051525	0.59	35	NA	N/A	4
Q2085-02	SC-3-SED-051525	0.60	35	NA	N/A	5
Q2085-03	SC-2-SED-051525	0.59	35	NA	N/A	6
Q2085-04	SC-1-SED-051625	0.58	35	NA	N/A	7
Q2085-04DUP	SC-1-SED-051625DUP	0.55	35	NA	N/A	8
Q2085-05	Q2085-04MS	0.56	35	NA	MP85780	9
Q2085-06	Q2085-04MSD	0.54	35	NA	MP85780	10
Q2085-07	SC-COMP-SED-051625	0.60	35	NA	N/A	11
Q2085-08	DUPE-1-SC	0.58	35	NA	N/A	12
Q2127-01	COMP-1	0.55	35	NA	N/A	13
Q2127-11	COMP-2	0.52	35	NA	N/A	14

WORKLIST(Hardcopy Internal Chain)

WorkList Name : 052725_771 **WorkList ID :** 189758 **Department :** Digestion **Date :** 05-27-2025 09:25:53

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1872-10	HW0425-PT-MET-SOIL	Solid	Mercury	Cool 4 deg C	ALLI03	QA Of	04/21/2025	7471B
Q2085-01	SC-4-SED-051525	Solid	Mercury	Cool 4 deg C	USAR03	L41	05/15/2025	7471B
Q2085-02	SC-3-SED-051525	Solid	Mercury	Cool 4 deg C	USAR03	L41	05/15/2025	7471B
Q2085-03	SC-2-SED-051525	Solid	Mercury	Cool 4 deg C	USAR03	L41	05/15/2025	7471B
Q2085-04	SC-1-SED-051625	Solid	Mercury	Cool 4 deg C	USAR03	L41	05/15/2025	7471B
Q2085-05	Q2085-04MS	Solid	Mercury	Cool 4 deg C	USAR03	L41	05/16/2025	7471B
Q2085-06	Q2085-04MSD	Solid	Mercury	Cool 4 deg C	USAR03	L41	05/16/2025	7471B
Q2085-07	SC-COMP-SED-051625	Solid	Mercury	Cool 4 deg C	USAR03	L41	05/16/2025	7471B
Q2085-08	DUPE-1-SC	Solid	Mercury	Cool 4 deg C	USAR03	L41	05/16/2025	7471B
Q2127-01	COMP-1	Solid	Mercury	Cool 4 deg C	PSEG03	L41	05/23/2025	7471B
Q2127-11	COMP-2	Solid	Mercury	Cool 4 deg C	PSEG03	L41	05/23/2025	7471B

Date/Time 5/28/25 @ 16:20

Raw Sample Received by: [illegible]

Raw Sample Relinquished by: [illegible]

Date/Time 5/28/25 @ 16:50

Raw Sample Received by: [illegible]

Raw Sample Relinquished by: [illegible]

PERCENT SOLID

Supervisor: Iwona
Analyst: jignesh
Date: 4/25/2025

OVENTEMP IN Celsius(°C): 107
Time IN: 17:00
In Date: 04/24/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 08:25
Out Date: 04/25/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLID- OVEN

QC: LB135545

Lab ID	Client SampleID	Dish #	Dish Wt(g) (A)	Sample Wt(g)	Dish + Sample Wt(g) (B)	Dish+Dry Sample Wt(g) (C)	% Solid	Comments
Q1869-01	MH-F	1	1.14	10.43	11.57	10.47	89.5	
Q1869-02	MH-F-EPH	2	1.18	9.96	11.14	10.12	89.8	
Q1869-03	MH-F-VOC	3	1.16	10.28	11.44	10.4	89.9	
Q1871-01	MH-A	4	1.14	9.59	10.73	9.86	90.9	
Q1871-02	MH-A-EPH	5	1.18	9.97	11.15	10.25	91.0	
Q1871-03	MH-A-VOC	6	1.15	10.22	11.37	10.47	91.2	
Q1871-05	MH-B	7	1.18	10.31	11.49	10.58	91.2	
Q1871-06	MH-B-EPH	8	1.16	9.63	10.79	10.05	92.3	
Q1871-07	MH-B-VOC	9	1.18	10.35	11.53	10.75	92.5	
Q1872-01	HW0425-PT-AN-SOIL	31	1.00	1.00	2.00	2.00	100.0	
Q1872-02	HW0425-PT-CORR-SOIL	32	1.00	1.00	2.00	2.00	100.0	
Q1872-03	HW0425-PT-CN-SOIL	33	1.00	1.00	2.00	2.00	100.0	
Q1872-04	HW0425-PT-CN-SOIL	34	1.00	1.00	2.00	2.00	100.0	
Q1872-05	HW0425-PT-FP-SOIL	35	1.00	1.00	2.00	2.00	100.0	
Q1872-06	HW0425-PT-CR6-SOIL	36	1.00	1.00	2.00	2.00	100.0	
Q1872-07	HW0425-PT-NUT-SOIL	37	1.00	1.00	2.00	2.00	100.0	
Q1872-08	HW0425-PT-NUT-SOIL	38	1.00	1.00	2.00	2.00	100.0	
Q1872-09	HW0425-PT-OGR-SOIL	39	1.00	1.00	2.00	2.00	100.0	
Q1872-10	HW0425-PT-MET-SOIL	40	1.00	1.00	2.00	2.00	100.0	
Q1872-11	HW0425-PT-BNA-SOIL	41	1.00	1.00	2.00	2.00	100.0	
Q1872-12	HW0425-PT-TRIAZINE-SOIL	42	1.00	1.00	2.00	2.00	100.0	
Q1872-13	HW0425-PT-PAH-SOIL	43	1.00	1.00	2.00	2.00	100.0	
Q1872-14	HW0425-PT-DIES-SOIL	44	1.00	1.00	2.00	2.00	100.0	
Q1872-15	HW0425-PT-GAS-SOIL	45	1.00	1.00	2.00	2.00	100.0	
Q1872-16	HW0425-PT-NJEPH-SOIL	46	1.00	1.00	2.00	2.00	100.0	
Q1872-17	HW0425-PT-HERB-SOIL	47	1.00	1.00	2.00	2.00	100.0	
Q1872-18	HW0425-PT-PCB-SOIL	48	1.00	1.00	2.00	2.00	100.0	
Q1872-19	HW0425-PT-PCBO-SOIL	49	1.00	1.00	2.00	2.00	100.0	

Alliance TECHNICAL GROUP

PERCENT SOLID

Supervisor: Iwona
Analyst: jignesh
Date: 4/25/2025

OVENTEMP IN Celsius(°C): 107
Time IN: 17:00
In Date: 04/24/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 08:25
Out Date: 04/25/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLID- OVEN

QC: LB135545

Lab ID	Client SampleID	Dish #	Dish Wt(g) (A)	Sample Wt(g)	Dish + Sample Wt(g) (B)	Dish+Dry Sample Wt(g) (C)	% Solid	Comments
Q1872-20	HW0425-PT-PEST-SOIL	50	1.00	1.00	2.00	2.00	100.0	
Q1872-21	HW0425-PT-CHLR-SOIL	51	1.00	1.00	2.00	2.00	100.0	
Q1872-22	HW0425-PT-TXP-SOIL	52	1.00	1.00	2.00	2.00	100.0	
Q1872-23	HW0425-PT-VOA-SOIL	53	1.00	1.00	2.00	2.00	100.0	
Q1872-25	HW0425-PT-NO2-SOIL	54	1.00	1.00	2.00	2.00	100.0	
Q1873-01	CAM-40619	10	1.14	10.70	11.84	4.97	35.8	
Q1873-02	CAM-40620	11	1.15	10.42	11.57	6.19	48.4	
Q1873-03	CAM-40619-20	12	1.18	10.21	11.39	4.77	35.2	
Q1874-01	VNJ-236	13	1.19	10.45	11.64	10.89	92.8	
Q1874-03	RT1491	14	1.19	11.16	12.35	11.43	91.8	
Q1874-05	HT3727	15	1.16	10.63	11.79	11.06	93.1	
Q1875-01	AUD-25-0053	16	1.14	10.75	11.89	11.19	93.5	
Q1875-03	AUD-25-0054	17	1.14	10.02	11.16	10.52	93.6	
Q1875-04	AUD-25-0024	18	1.14	10.03	11.17	10.77	96.0	
Q1876-01	AUD-25-0058	19	1.00	1.00	2.00	2.00	100.0	wipe sample
Q1876-02	AUD-25-0059	20	1.00	1.00	2.00	2.00	100.0	wipe sample
Q1876-03	AUD-25-0060	21	1.00	1.00	2.00	2.00	100.0	wipe sample
Q1876-04	AUD-25-0061	22	1.00	1.00	2.00	2.00	100.0	wipe sample
Q1876-05	AUD-25-0062	23	1.00	1.00	2.00	2.00	100.0	wipe sample
Q1876-06	AUD-25-0063	24	1.00	1.00	2.00	2.00	100.0	wipe sample
Q1876-07	AUD-25-0064	25	1.00	1.00	2.00	2.00	100.0	wipe sample
Q1876-08	AUD-25-0065	26	1.00	1.00	2.00	2.00	100.0	wipe sample
Q1876-09	AUD-25-0066	27	1.00	1.00	2.00	2.00	100.0	wipe sample
Q1877-01	AU-6-042425	55	1.14	10.25	11.39	10.72	93.5	
Q1877-02	AU-6-042425	28	1.14	10.21	11.35	10.54	92.1	
Q1878-01	TR-4-042425	29	1.14	10.17	11.31	11.2	98.9	
Q1878-02	TR-4-042425-E2	30	1.19	10.28	11.47	10.92	94.6	

PERCENT SOLID

Supervisor: Iwona
Analyst: jignesh
Date: 4/25/2025

OVENTEMP IN Celsius(°C): 107
Time IN: 17:00
In Date: 04/24/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 08:25
Out Date: 04/25/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLID- OVEN

QC: LB135545

Lab ID	Client SampleID	Dish #	Dish Wt(g) (A)	Sample Wt(g)	Dish + Sample Wt(g) (B)	Dish+Dry Sample Wt(g) (C)	% Solid	Comments

$$\% \text{ Solid} = \frac{(C-A) * 100}{(B-A)}$$

WORKLIST(Hardcopy Internal Chain)

LB 135545

WorkList Name : %1-042425 **WorkList ID :** 189122 **Department :** Wet-Chemistry **Date :** 04-24-2025 08:52:24

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1869-01	MH-F	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/24/2025	Chemtech -SO
Q1869-02	MH-F-EPH	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/24/2025	Chemtech -SO
Q1869-03	MH-F-VOC	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/24/2025	Chemtech -SO
Q1871-01	MH-A	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/24/2025	Chemtech -SO
Q1871-02	MH-A-EPH	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/24/2025	Chemtech -SO
Q1871-03	MH-A-VOC	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/24/2025	Chemtech -SO
Q1871-05	MH-B	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/24/2025	Chemtech -SO
Q1871-06	MH-B-EPH	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/24/2025	Chemtech -SO
Q1871-07	MH-B-VOC	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/24/2025	Chemtech -SO
Q1872-01	HW0425-PT-AN-SOIL	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/24/2025	Chemtech -SO
Q1872-02	HW0425-PT-CORR-SOIL	Solid	Percent Solids	Cool 4 deg C	ALLI03	QA Of	04/21/2025	Chemtech -SO
Q1872-03	HW0425-PT-CN-SOIL	Solid	Percent Solids	Cool 4 deg C	ALLI03	QA Of	04/21/2025	Chemtech -SO
Q1872-04	HW0425-PT-CN-SOIL	Solid	Percent Solids	Cool 4 deg C	ALLI03	QA Of	04/21/2025	Chemtech -SO
Q1872-05	HW0425-PT-FP-SOIL	Solid	Percent Solids	Cool 4 deg C	ALLI03	QA Of	04/21/2025	Chemtech -SO
Q1872-06	HW0425-PT-CR6-SOIL	Solid	Percent Solids	Cool 4 deg C	ALLI03	QA Of	04/21/2025	Chemtech -SO
Q1872-07	HW0425-PT-NUT-SOIL	Solid	Percent Solids	Cool 4 deg C	ALLI03	QA Of	04/21/2025	Chemtech -SO
Q1872-08	HW0425-PT-NUT-SOIL	Solid	Percent Solids	Cool 4 deg C	ALLI03	QA Of	04/21/2025	Chemtech -SO
Q1872-09	HW0425-PT-OGR-SOIL	Solid	Percent Solids	Cool 4 deg C	ALLI03	QA Of	04/21/2025	Chemtech -SO
Q1872-10	HW0425-PT-MET-SOIL	Solid	Percent Solids	Cool 4 deg C	ALLI03	QA Of	04/21/2025	Chemtech -SO
Q1872-11	HW0425-PT-BNA-SOIL	Solid	Percent Solids	Cool 4 deg C	ALLI03	QA Of	04/21/2025	Chemtech -SO
Q1872-12	HW0425-PT-TRIAZINE-SOIL	Solid	Percent Solids	Cool 4 deg C	ALLI03	QA Of	04/21/2025	Chemtech -SO

Date/Time 04/24/25 1530

Raw Sample Received by:

Raw Sample Relinquished by:

Date/Time 04/24/25 1725

Raw Sample Received by:

Raw Sample Relinquished by:

Q1872-METALS

WORKLIST(Hardcopy Internal Chain)

135545

WorkList Name : %1-042425 **WorkList ID :** 189122 **Department :** Wet-Chemistry **Date :** 04-24-2025 08:52:24

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1872-13	HW0425-PT-PAH-SOIL	Solid	Percent Solids	Cool 4 deg C	ALLI03	QA Of	04/21/2025	Chemtech -SO
Q1872-14	HW0425-PT-DIES-SOIL	Solid	Percent Solids	Cool 4 deg C	ALLI03	QA Of	04/21/2025	Chemtech -SO
Q1872-15	HW0425-PT-GAS-SOIL	Solid	Percent Solids	Cool 4 deg C	ALLI03	QA Of	04/21/2025	Chemtech -SO
Q1872-16	HW0425-PT-NJEPH-SOIL	Solid	Percent Solids	Cool 4 deg C	ALLI03	QA Of	04/21/2025	Chemtech -SO
Q1872-17	HW0425-PT-HERB-SOIL	Solid	Percent Solids	Cool 4 deg C	ALLI03	QA Of	04/21/2025	Chemtech -SO
Q1872-18	HW0425-PT-PCB-SOIL	Solid	Percent Solids	Cool 4 deg C	ALLI03	QA Of	04/21/2025	Chemtech -SO
Q1872-19	HW0425-PT-PCBO-SOIL	Solid	Percent Solids	Cool 4 deg C	ALLI03	QA Of	04/21/2025	Chemtech -SO
Q1872-20	HW0425-PT-PEST-SOIL	Solid	Percent Solids	Cool 4 deg C	ALLI03	QA Of	04/21/2025	Chemtech -SO
Q1872-21	HW0425-PT-CHLR-SOIL	Solid	Percent Solids	Cool 4 deg C	ALLI03	QA Of	04/21/2025	Chemtech -SO
Q1872-22	HW0425-PT-TXP-SOIL	Solid	Percent Solids	Cool 4 deg C	ALLI03	QA Of	04/21/2025	Chemtech -SO
Q1872-23	HW0425-PT-VOA-SOIL	Solid	Percent Solids	Cool 4 deg C	ALLI03	QA Of	04/21/2025	Chemtech -SO
Q1872-25	HW0425-PT-NO2-SOIL	Solid	Percent Solids	Cool 4 deg C	ALLI03	QA Of	04/21/2025	Chemtech -SO
Q1873-01	CAM-40619	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/24/2025	Chemtech -SO
Q1873-02	CAM-40620	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/24/2025	Chemtech -SO
Q1873-03	CAM-40619-20	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/24/2025	Chemtech -SO
Q1874-01	VNJ-236	Solid	Percent Solids	Cool 4 deg C	PSEG03	L51	04/24/2025	Chemtech -SO
Q1874-03	RT1491	Solid	Percent Solids	Cool 4 deg C	PSEG03	L51	04/24/2025	Chemtech -SO
Q1874-05	HT3727	Solid	Percent Solids	Cool 4 deg C	PSEG03	L51	04/24/2025	Chemtech -SO
Q1875-01	AUD-25-0053	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/24/2025	Chemtech -SO
Q1875-03	AUD-25-0054	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/24/2025	Chemtech -SO
Q1875-04	AUD-25-0024	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/24/2025	Chemtech -SO

232 of 420

Date/Time 04/24/25 15:30

Raw Sample Received by: JD WDC

Raw Sample Relinquished by: SH

Date/Time 04/24/25 17:25

Raw Sample Received by: SH

Raw Sample Relinquished by: JD WDC

WORKLIST(Hardcopy Internal Chain)

VB 135545

WorkList Name : %1-042425 **WorkList ID :** 189122 **Department :** Wet-Chemistry **Date :** 04-24-2025 08:52:24

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1876-01	AUD-25-0058	Solid	Percent Solids	Cool 4 deg C	PSEG03	L31	04/24/2025	Chemtech -SO
Q1876-02	AUD-25-0059	Solid	Percent Solids	Cool 4 deg C	PSEG03	L31	04/24/2025	Chemtech -SO
Q1876-03	AUD-25-0060	Solid	Percent Solids	Cool 4 deg C	PSEG03	L31	04/24/2025	Chemtech -SO
Q1876-04	AUD-25-0061	Solid	Percent Solids	Cool 4 deg C	PSEG03	L31	04/24/2025	Chemtech -SO
Q1876-05	AUD-25-0062	Solid	Percent Solids	Cool 4 deg C	PSEG03	L31	04/24/2025	Chemtech -SO
Q1876-06	AUD-25-0063	Solid	Percent Solids	Cool 4 deg C	PSEG03	L31	04/24/2025	Chemtech -SO
Q1876-07	AUD-25-0064	Solid	Percent Solids	Cool 4 deg C	PSEG03	L31	04/24/2025	Chemtech -SO
Q1876-08	AUD-25-0065	Solid	Percent Solids	Cool 4 deg C	PSEG03	L31	04/24/2025	Chemtech -SO
Q1876-09	AUD-25-0066	Solid	Percent Solids	Cool 4 deg C	PSEG03	L31	04/24/2025	Chemtech -SO
Q1877-01	AU-6-042425	Solid	Percent Solids	Cool 4 deg C	PSEG03	L31	04/24/2025	Chemtech -SO
Q1877-02	AU-6-042425	Solid	Percent Solids	Cool 4 deg C	PSEG05	L41	04/24/2025	Chemtech -SO
Q1878-01	TR-4-042425	Solid	Percent Solids	Cool 4 deg C	PSEG05	L41	04/24/2025	Chemtech -SO
Q1878-02	TR-4-042425-E2	Solid	Percent Solids	Cool 4 deg C	PSEG05	L41	04/24/2025	Chemtech -SO

Date/Time 04/24/25 15:30

Raw Sample Received by: [signature]

Raw Sample Relinquished by: [signature] SM

Date/Time 04/24/25 17:25

Raw Sample Received by: [signature] SM

Raw Sample Relinquished by: [signature] ~~17:35~~

PERCENT SOLID

Supervisor: Iwona
Analyst: jignesh
Date: 4/29/2025

OVENTEMP IN Celsius(°C): 107
Time IN: 17:25
In Date: 04/28/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 08:37
Out Date: 04/29/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLID- OVEN

QC: LB135575

Lab ID	Client SampleID	Dish #	Dish Wt(g) (A)	Sample Wt(g)	Dish + Sample Wt(g) (B)	Dish+Dry Sample Wt(g) (C)	% Solid	Comments
Q1872-24	HW0425-PT-SOL-SOIL	8	0.92	10.30	11.22	8.82	76.7	
Q1901-01	B-170-SB00	1	1.14	5.55	6.69	6.28	92.6	
Q1901-02	B-167-SB01	2	1.14	10.22	11.36	9.58	82.6	
Q1901-03	B-170-SB01	3	1.19	10.31	11.5	9.75	83.0	
Q1901-04	B-167-SB02	4	1.15	9.78	10.93	6.35	53.2	
Q1901-05	B-170-SB02	5	1.14	10.16	11.3	8.77	75.1	
Q1902-01	343	6	1.19	10.23	11.42	10.7	93.0	
Q1902-02	343	7	1.13	10.19	11.32	10.33	90.3	
Q1903-01	COMP-4	9	1.18	11.14	12.32	10.46	83.3	
Q1903-02	COMP-5	10	1.16	10.50	11.66	9.44	78.9	
Q1903-03	COMP-6	11	1.17	10.60	11.77	10.06	83.9	
Q1904-01	VNJ-210	12	1.19	10.39	11.58	10.6	90.6	
Q1905-01	MH-G	13	1.15	10.35	11.5	10.38	89.2	
Q1905-02	MH-G-EPH	14	1.16	9.65	10.81	9.71	88.6	
Q1905-03	MH-G-VOC	15	1.16	10.33	11.49	10.36	89.1	
Q1905-05	MH-H	16	1.12	10.03	11.15	10.5	93.5	
Q1905-06	MH-H-EPH	17	1.13	10.30	11.43	10.5	91.0	
Q1905-07	MH-H-VOC	18	1.12	10.03	11.15	10.01	88.6	
Q1906-01	WC-4	19	1.15	9.85	11.00	10.14	91.3	
Q1906-02	WC-4-EPH	20	1.16	9.97	11.13	10.17	90.4	
Q1906-03	WC-4-VOC	21	1.18	9.99	11.17	9.91	87.4	
Q1906-05	WC-5	22	1.16	10.82	11.98	10.19	83.5	
Q1906-06	WC-5-EPH	23	1.13	10.41	11.54	9.94	84.6	
Q1906-07	WC-5-VOC	24	1.18	10.47	11.65	11.63	99.8	
Q1906-09	WC-6	25	1.14	10.04	11.18	10.4	92.2	
Q1906-10	WC-6-EPH	26	1.15	10.77	11.92	10.23	84.3	
Q1906-11	WC-6-VOC	27	1.14	10.47	11.61	10.86	92.8	
Q1906-13	WC-7	28	1.14	10.85	11.99	10.31	84.5	

Alliance TECHNICAL GROUP

PERCENT SOLID

Supervisor: Iwona
Analyst: jignesh
Date: 4/29/2025

OVENTEMP IN Celsius(°C): 107
Time IN: 17:25
In Date: 04/28/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 08:37
Out Date: 04/29/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLID- OVEN

QC: LB135575

Lab ID	Client SampleID	Dish #	Dish Wt(g) (A)	Sample Wt(g)	Dish + Sample Wt(g) (B)	Dish+Dry Sample Wt(g) (C)	% Solid	Comments
Q1906-14	WC-7-EPH	29	1.12	9.86	10.98	9.7	87.0	
Q1906-15	WC-7-VOC	30	1.13	10.27	11.4	10.23	88.6	
Q1907-01	CO-8R-WC	31	1.13	10.26	11.39	9.81	84.6	

$$\% \text{ Solid} = \frac{(C-A) * 100}{(B-A)}$$

WORKLIST(Hardcopy Internal Chain)

VB B5575

WorkList Name : %1-042825 **WorkList ID :** 189159 **Department :** Wet-Chemistry **Date :** 04-28-2025 07:59:12

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1872-24	HW0425-PT-SOL-SOIL	Solid	Percent Solids	Cool 4 deg C	ALLI03	QA Of	04/21/2025	Chemtech -SO
Q1903-01	COMP-4	Solid	Percent Solids	Cool 4 deg C	POWE02	L51	04/25/2025	Chemtech -SO
Q1903-02	COMP-5	Solid	Percent Solids	Cool 4 deg C	POWE02	L51	04/25/2025	Chemtech -SO
Q1903-03	COMP-6	Solid	Percent Solids	Cool 4 deg C	POWE02	L51	04/25/2025	Chemtech -SO
Q1901-01	B-170-SB00	Solid	Percent Solids	Cool 4 deg C	PORT06	L51	04/26/2025	Chemtech -SO
Q1901-02	B-167-SB01	Solid	Percent Solids	Cool 4 deg C	PORT06	L51	04/26/2025	Chemtech -SO
Q1901-03	B-170-SB01	Solid	Percent Solids	Cool 4 deg C	PORT06	L51	04/26/2025	Chemtech -SO
Q1901-04	B-167-SB02	Solid	Percent Solids	Cool 4 deg C	PORT06	L51	04/26/2025	Chemtech -SO
Q1901-05	B-170-SB02	Solid	Percent Solids	Cool 4 deg C	PORT06	L51	04/26/2025	Chemtech -SO
Q1902-01	343	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/28/2025	Chemtech -SO
Q1902-02	343	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/28/2025	Chemtech -SO
Q1904-01	VNJ-210	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/28/2025	Chemtech -SO
Q1905-01	MH-G	Solid	Percent Solids	Cool 4 deg C	PSEG03	L51	04/28/2025	Chemtech -SO
Q1905-02	MH-G-EPH	Solid	Percent Solids	Cool 4 deg C	PSEG03	L51	04/28/2025	Chemtech -SO
Q1905-03	MH-G-VOC	Solid	Percent Solids	Cool 4 deg C	PSEG03	L51	04/28/2025	Chemtech -SO
Q1906-13	WC-7	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/28/2025	Chemtech -SO
Q1906-14	WC-7-EPH	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/28/2025	Chemtech -SO
Q1906-15	WC-7-VOC	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/28/2025	Chemtech -SO
Q1906-05	WC-5	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/28/2025	Chemtech -SO
Q1906-06	WC-5-EPH	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/28/2025	Chemtech -SO
Q1906-07	WC-5-VOC	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/28/2025	Chemtech -SO

Date/Time 04/28/25 16:15

Raw Sample Received by: -80 deg C

Raw Sample Relinquished by:

Date/Time 04/28/25 17:30

Raw Sample Received by:

Raw Sample Relinquished by: -80 deg C

WORKLIST(Hardcopy Internal Chain)

WB 1355775

WorkList Name : %1-042825 **WorkList ID :** 189159 **Department :** Wet-Chemistry **Date :** 04-28-2025 07:59:12

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1906-09	WC-6	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/28/2025	Chemtech -SO
Q1906-10	WC-6-EPH	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/28/2025	Chemtech -SO
Q1906-11	WC-6-VOC	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/28/2025	Chemtech -SO
Q1905-05	MH-H	Solid	Percent Solids	Cool 4 deg C	PSEG03	L51	04/28/2025	Chemtech -SO
Q1905-06	MH-H-EPH	Solid	Percent Solids	Cool 4 deg C	PSEG03	L51	04/28/2025	Chemtech -SO
Q1905-07	MH-H-VOC	Solid	Percent Solids	Cool 4 deg C	PSEG03	L51	04/28/2025	Chemtech -SO
Q1906-01	WC-4	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/28/2025	Chemtech -SO
Q1906-02	WC-4-EPH	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/28/2025	Chemtech -SO
Q1906-03	WC-4-VOC	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/28/2025	Chemtech -SO
Q1907-01	CO-8R-WC	Solid	Percent Solids	Cool 4 deg C	WALS01	L51	04/28/2025	Chemtech -SO

Date/Time 04/28/25 16:15

Raw Sample Received by: JD WDC

Raw Sample Relinquished by:

Date/Time 04/28/25 17:30

Raw Sample Received by:

Raw Sample Relinquished by: JD WDC

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 # LB135943

Review By	MOHAN	Review On	6/3/2025 4:41:40 PM
Supervise By	jaswal	Supervise On	6/23/2025 3:08:02 AM

STD. NAME	STD REF.#
ICAL Standard	MP85781,MP85782,MP85783,MP85784,MP85785,MP85786
ICV Standard	MP85787
CCV Standard	MP85789
ICSA Standard	
CRI Standard	MP85791
LCS Standard	
Chk Standard	MP85788,MP85790,MP85792,MP85796

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	05/29/25 10:53		MOHAN	OK
2	S0.2	S0.2	CAL2	05/29/25 10:55		MOHAN	OK
3	S2.5	S2.5	CAL3	05/29/25 10:57		MOHAN	OK
4	S5	S5	CAL4	05/29/25 11:10		MOHAN	OK
5	S7.5	S7.5	CAL5	05/29/25 11:12		MOHAN	OK
6	S10	S10	CAL6	05/29/25 11:15		MOHAN	OK
7	ICV21	ICV21	ICV	05/29/25 11:18		MOHAN	OK
8	ICB21	ICB21	ICB	05/29/25 11:20		MOHAN	OK
9	CCV76	CCV76	CCV	05/29/25 11:22		MOHAN	OK
10	CCB76	CCB76	CCB	05/29/25 11:27		MOHAN	OK
11	CRA	CRA	CRDL	05/29/25 11:38		MOHAN	OK
12	HighStd	HighStd	HIGH STD	05/29/25 11:45		MOHAN	OK
13	ChkStd	ChkStd	SAM	05/29/25 11:50		MOHAN	OK
14	PB168173BL	PB168173BL	MB	05/29/25 11:55		MOHAN	OK
15	PB168173BS	PB168173BS	LCS	05/29/25 11:58		MOHAN	OK
16	Q1872-10	HW0425-PT-MET-SO	SAM	05/29/25 12:00	Hg High	MOHAN	Dilution
17	Q2085-01	SC-4-SED-051525	SAM	05/29/25 12:02		MOHAN	OK
18	Q2085-02	SC-3-SED-051525	SAM	05/29/25 12:05		MOHAN	OK

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

Instrument ID: CV1

Daily Analysis Runlog For Sequence/QCBatch ID # LB135943

Review By	MOHAN	Review On	6/3/2025 4:41:40 PM
Supervise By	jaswal	Supervise On	6/23/2025 3:08:02 AM

STD. NAME	STD REF.#
ICAL Standard	MP85781,MP85782,MP85783,MP85784,MP85785,MP85786
ICV Standard	MP85787
CCV Standard	MP85789
ICSA Standard	
CRI Standard	MP85791
LCS Standard	
Chk Standard	MP85788,MP85790,MP85792,MP85796

19	Q2085-03	SC-2-SED-051525	SAM	05/29/25 12:07		MOHAN	OK
20	Q2085-04	SC-1-SED-051625	SAM	05/29/25 12:10		MOHAN	OK
21	CCV77	CCV77	CCV	05/29/25 12:25		MOHAN	OK
22	CCB77	CCB77	CCB	05/29/25 12:30		MOHAN	OK
23	Q2085-04DUP	SC-1-SED-051625DU	DUP	05/29/25 12:32		MOHAN	OK
24	Q2085-05	SC-1-SED-051625MS	MS	05/29/25 12:43		MOHAN	OK
25	Q2085-06	SC-1-SED-051625MS	MSD	05/29/25 12:45		MOHAN	OK
26	Q2085-07	SC-COMP-SED-0516	SAM	05/29/25 12:48		MOHAN	OK
27	Q2085-08	DUPE-1-SC	SAM	05/29/25 12:50		MOHAN	OK
28	Q2127-01	COMP-1	SAM	05/29/25 12:52		MOHAN	OK
29	Q2127-11	COMP-2	SAM	05/29/25 12:55		MOHAN	OK
30	Q2085-04L	SC-1-SED-051625L	SD	05/29/25 12:57		MOHAN	OK
31	Q2085-04A	SC-1-SED-051625A	PS	05/29/25 12:59		MOHAN	OK
32	CCV78	CCV78	CCV	05/29/25 13:01		MOHAN	OK
33	CCB78	CCB78	CCB	05/29/25 13:04		MOHAN	OK
34	Q1872-10DL	HW0425-PT-MET-SO	SAM	05/29/25 13:06	25X for Hg still High	MOHAN	Dilution
35	Q1872-10DL2	HW0425-PT-MET-SO	SAM	05/29/25 13:08	50X Hg	MOHAN	Confirms
36	CCV79	CCV79	CCV	05/29/25 13:19		MOHAN	OK
37	CCB79	CCB79	CCB	05/29/25 13:22		MOHAN	OK

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

Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB135969

Review By	Janvi	Review On	6/2/2025 2:55:11 PM
Supervise By	jaswal	Supervise On	6/3/2025 6:07:18 AM

STD. NAME	STD REF.#
ICAL Standard	MP85545,MP85552,MP85549,MP85548,MP85547,MP85546
ICV Standard	MP85553
CCV Standard	MP85556
ICSA Standard	MP85554,MP85555
CRI Standard	MP85552
LCS Standard	
Chk Standard	MP85557,MP85558

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	05/30/25 14:16		Jaswal	OK
2	S1	S1	CAL2	05/30/25 14:21		Jaswal	OK
3	S2	S2	CAL3	05/30/25 14:25		Jaswal	OK
4	S3	S3	CAL4	05/30/25 14:29		Jaswal	OK
5	S4	S4	CAL5	05/30/25 14:33		Jaswal	OK
6	S5	S5	CAL6	05/30/25 14:37		Jaswal	OK
7	ICV01	ICV01	ICV	05/30/25 15:13		Jaswal	OK
8	LLICV01	LLICV01	LLICV	05/30/25 15:21		Jaswal	OK
9	ICB01	ICB01	ICB	05/30/25 15:26		Jaswal	OK
10	CRI01	CRI01	CRDL	05/30/25 15:30		Jaswal	OK
11	ICSA01	ICSA01	ICSA	05/30/25 15:34		Jaswal	OK
12	ICSAB01	ICSAB01	ICSAB	05/30/25 15:49		Jaswal	OK
13	ICSADL	ICSADL	ICSA	05/30/25 15:53		Jaswal	OK
14	ICSABDL	ICSABDL	ICSAB	05/30/25 15:58		Jaswal	OK
15	CCV01	CCV01	CCV	05/30/25 16:02		Jaswal	OK
16	CCB01	CCB01	CCB	05/30/25 16:06		Jaswal	OK
17	Q2127-11	COMP-2	SAM	05/30/25 16:10		Jaswal	OK
18	Q2127-11DUP	COMP-2DUP	DUP	05/30/25 16:15		Jaswal	OK

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

Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB135969

Review By	Janvi	Review On	6/2/2025 2:55:11 PM
Supervise By	jaswal	Supervise On	6/3/2025 6:07:18 AM

STD. NAME	STD REF.#
ICAL Standard	MP85545,MP85552,MP85549,MP85548,MP85547,MP85546
ICV Standard	MP85553
CCV Standard	MP85556
ICSA Standard	MP85554,MP85555
CRI Standard	MP85552
LCS Standard	
Chk Standard	MP85557,MP85558

19	Q2127-11L	COMP-2L	SD	05/30/25 16:19		Jaswal	OK
20	Q2127-11MS	COMP-2MS	MS	05/30/25 16:23		Jaswal	OK
21	Q2127-11MSD	COMP-2MSD	MSD	05/30/25 16:27		Jaswal	OK
22	Q2127-11A	COMP-2A	PS	05/30/25 16:31		Jaswal	OK
23	PB168179BL	PB168179BL	MB	05/30/25 16:35		Jaswal	OK
24	PB168179BS	PB168179BS	LCS	05/30/25 16:39		Jaswal	OK
25	PB168167BL	PB168167BL	MB	05/30/25 16:43		Jaswal	OK
26	PB168167BS	PB168167BS	LCS	05/30/25 16:47		Jaswal	OK
27	CCV02	CCV02	CCV	05/30/25 16:52		Jaswal	OK
28	CCB02	CCB02	CCB	05/30/25 16:56		Jaswal	OK
29	PB168117BL	PB168117BL	MB	05/30/25 17:00		Jaswal	OK
30	PB168117BS	PB168117BS	LCS	05/30/25 17:04		Jaswal	OK
31	Q2101-01	TP-1-MHE	SAM	05/30/25 17:08		Jaswal	OK
32	Q2101-01DUP	TP-1-MHEDUP	DUP	05/30/25 17:12		Jaswal	OK
33	Q2101-01L	TP-1-MHEL	SD	05/30/25 17:17		Jaswal	OK
34	Q2101-01MS	TP-1-MHEMS	MS	05/30/25 17:21		Jaswal	OK
35	Q2101-01MSD	TP-1-MHEMSD	MSD	05/30/25 17:25		Jaswal	OK
36	Q2101-01A	TP-1-MHEA	PS	05/30/25 17:29		Jaswal	OK
37	Q2100-01	TP-16	SAM	05/30/25 17:33		Jaswal	OK
38	Q2100-02	TP-22	SAM	05/30/25 17:37		Jaswal	OK

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

Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB135969

Review By	Janvi	Review On	6/2/2025 2:55:11 PM
Supervise By	jaswal	Supervise On	6/3/2025 6:07:18 AM

STD. NAME	STD REF.#
ICAL Standard	MP85545,MP85552,MP85549,MP85548,MP85547,MP85546
ICV Standard	MP85553
CCV Standard	MP85556
ICSA Standard	MP85554,MP85555
CRI Standard	MP85552
LCS Standard	
Chk Standard	MP85557,MP85558

39	CCV03	CCV03	CCV	05/30/25 17:41		Jaswal	OK
40	CCB03	CCB03	CCB	05/30/25 17:45		Jaswal	OK
41	Q2100-03	TP-21	SAM	05/30/25 17:50		Jaswal	OK
42	Q2100-04	TP-45	SAM	05/30/25 17:54		Jaswal	OK
43	Q2130-01	TP-3	SAM	05/30/25 17:58		Jaswal	OK
44	Q2136-01	OR-646-COMP-52	SAM	05/30/25 18:02		Jaswal	OK
45	Q2137-01	MOO-25-0151	SAM	05/30/25 18:07	Ba High	Jaswal	Dilution
46	Q2138-01	SMALL-CONCRETE-I	SAM	05/30/25 18:11		Jaswal	OK
47	Q2139-01	BELL-25-0010	SAM	05/30/25 18:15		Jaswal	OK
48	Q2141-01	VNJ-215	SAM	05/30/25 18:19		Jaswal	OK
49	PB168199BL	PB168199BL	MB	05/30/25 18:24		Jaswal	OK
50	CCV04	CCV04	CCV	05/30/25 18:28		Jaswal	OK
51	CCB04	CCB04	CCB	05/30/25 18:32		Jaswal	OK
52	Q1872-10	HW0425-PT-MET-SO	SAM	05/30/25 18:37	Cd High	Jaswal	Dilution
53	Q1872-10RE	HW0425-PT-MET-SO	SAM	05/30/25 18:41	Not Use	Jaswal	Not Ok
54	Q1872-10DL	HW0425-PT-MET-SO	SAM	05/30/25 18:46	5X For Cd	Jaswal	Confirms
55	Q1872-10DLRE	HW0425-PT-MET-SO	SAM	05/30/25 18:50	Not Use	Jaswal	Not Ok
56	Q2137-01DL	MOO-25-0151DL	SAM	05/30/25 18:54	5X For Ba	Jaswal	Confirms
57	CCV05	CCV05	CCV	05/30/25 18:58		Jaswal	OK
58	CCB05	CCB05	CCB	05/30/25 19:02		Jaswal	OK

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

Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB135969

Review By	Janvi	Review On	6/2/2025 2:55:11 PM
Supervise By	jaswal	Supervise On	6/3/2025 6:07:18 AM

STD. NAME	STD REF.#
ICAL Standard	MP85545,MP85552,MP85549,MP85548,MP85547,MP85546
ICV Standard	MP85553
CCV Standard	MP85556
ICSA Standard	MP85554,MP85555
CRI Standard	MP85552
LCS Standard	
Chk Standard	MP85557,MP85558

59	PB168199BS	PB168199BS	LCS	05/30/25 19:18		Jaswal	OK
60	PB167748BL	PB167748BL	MB	05/30/25 19:22		Jaswal	OK
61	PB167748BS	PB167748BS	LCS	05/30/25 19:26		Jaswal	OK
62	CCV06	CCV06	CCV	05/30/25 19:30		Jaswal	OK
63	CCB06	CCB06	CCB	05/30/25 19:34		Jaswal	OK

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

Prep Standard - Chemical Standard Summary

Order ID : Q1872

Test : Mercury,Metals ICP-Group1

Prepbatch ID : PB167748,PB168173,

Sequence ID/Qc Batch ID: LB135943,LB135969,

Standard ID :
MP84041,MP85241,MP85243,MP85545,MP85546,MP85547,MP85548,MP85549,MP85551,MP85552,MP85553,MP85554,MP85555,MP85556,MP85557,MP85558,MP85780,MP85781,MP85782,MP85783,MP85784,MP85785,MP85786,MP85787,MP85788,MP85789,MP85790,MP85791,MP85792,MP85793,MP85796,

Chemical ID :
M4251,M4583,M4916,M5062,M5429,M5466,M5467,M5470,M5471,M5581,M5658,M5747,M5748,M5751,M5798,M5799,M5800,M5801,M5811,M5814,M5815,M5816,M5817,M5820,M5875,M5882,M5884,M5942,M5959,M5962,M5970,M5985,M5997,M6007,M6015,M6021,M6023,M6028,M6030,M6032,M6058,M6076,M6077,M6126,M6127,M6128,M6137,M6138,M6142,M6144,M6145,M6146,M6150,M6151,M6152,M6155,M6158,M6159,M6161,M6162,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	MP84041	01/14/2025	07/14/2025	Eman Mughal	None	None	Sarabjit Jaswal 01/16/2025

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
65	POTASSIUM PERMANGANATE SOLUTION 5 %	MP85241	04/16/2025	10/16/2025	Mohan Bera	METALS_SCALE_3 (M SC-3)	None	Sarabjit Jaswal 04/29/2025

FROM 100.00000gram of M4916 + 2000.00000ml 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
67	SODIUM CHLORIDE - HYDROXYL- CHLORIDE SOLUTION	MP85243	04/16/2025	06/25/2025	Mohan Bera	METALS_SCALE_3 (M SC-3)	None	Sarabjit Jaswal 04/29/2025

FROM 2000.00000ml of W3112 + 240.00000gram of M4251 + 240.00000gram of M5884 = Final Quantity: 2000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
902	ICP AES CAL BLK (SO/ICB/CCB)	MP85545	05/02/2025	06/02/2025	Janvi Patel	METALS_SCALE_3 (M SC-3)	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 05/07/2025

FROM 125.00000ml of M6151 + 2350.00000ml of W3112 + 25.00000ml of M6158 = Final Quantity: 2500.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
907	ICP AES STD S (S5)	MP85546	05/02/2025	06/02/2025	Janvi Patel	METALS_SCALE_3 (M SC-3)	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 05/07/2025

FROM 5.00000ml of M5466 + 5.00000ml of M5471 + 5.00000ml of M5816 + 5.00000ml of M5820 + 5.00000ml of M5875 + 5.00000ml of M5970 + 5.00000ml of M5997 + 5.00000ml of M6076 + 5.00000ml of M6146 + 455.00000ml of MP85545 = Final Quantity: 500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
910	ICP AES STD S4	MP85547	05/02/2025	06/02/2025	Janvi Patel	METALS_SCALE_3 (M SC-3)	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 05/07/2025

FROM 50.00000ml of MP85545 + 50.00000ml of MP85546 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
909	ICP AES STD S3	MP85548	05/02/2025	06/02/2025	Janvi Patel	METALS_SCALE_3 (M SC-3)	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 05/07/2025

FROM 25.00000ml of MP85546 + 75.00000ml of MP85545 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3913	ICP AES STD S2	MP85549	05/02/2025	06/02/2025	Janvi Patel	METALS_SCALE_3 (M SC-3)	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 05/07/2025

FROM 16.00000ml of MP85546 + 184.00000ml of MP85545 = Final Quantity: 200.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2950	ICP AES S1/CRI STOCK STD	MP85551	05/02/2025	06/02/2025	Janvi Patel	METALS_SCALE_2 (M SC-2)	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 05/07/2025

FROM 0.03000ml of M5798 + 0.03000ml of M6028 + 0.04000ml of M6137 + 0.05000ml of M5658 + 0.05000ml of M5811 + 0.05000ml of M6030 + 0.05000ml of M6159 + 0.06000ml of M5747 + 0.10000ml of M5471 + 0.10000ml of M5751 + 0.10000ml of M5801 + 0.10000ml of M5820 + 0.10000ml of M5962 + 0.10000ml of M5970 + 0.10000ml of M6128 + 0.15000ml of M5800 + 0.20000ml of M5748 + 0.20000ml of M5799 + 0.20000ml of M6021 + 0.20000ml of M6023 + 0.20000ml of M6145 + 0.25000ml of M5466 + 0.25000ml of M6146 + 0.50000ml of M5814 + 0.50000ml of M6032 + 1.00000ml of M5942 + 1.00000ml of M6127 + 1.00000ml of M6138 + 1.00000ml of M6142 + 1.00000ml of M6144 + 2.00000ml of M5816 + 89.29000ml of MP85545 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2951	ICP AES S1/CRI WORK STD	MP85552	05/02/2025	06/02/2025	Janvi Patel	METALS_SCALE_3 (M SC-3)	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 05/07/2025

FROM 2.00000ml of MP85551 + 98.00000ml of MP85545 = 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
912	ICP AES ICV SOLN	MP85553	05/02/2025	06/02/2025	Janvi Patel	METALS_SCALE_3 (M SC-3)	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 05/07/2025

FROM 0.02500ml of M5429 + 0.02500ml of M5815 + 0.02500ml of M5817 + 0.10000ml of M5467 + 0.25000ml of M5470 + 0.25000ml of M6058 + 10.00000ml of M6150 + 89.32500ml of MP85545 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
904	ICP AES ICSA SOLN	MP85554	05/02/2025	06/02/2025	Janvi Patel	METALS_SCALE_3 (M SC-3)	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 05/07/2025

FROM 25.00000ml of M6152 + 225.00000ml of MP85545 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3494	ICP AES ICSAB SOLN-1	MP85555	05/02/2025	06/02/2025	Janvi Patel	METALS_SCALE_3 (M SC-3)	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 05/07/2025

FROM 0.01000ml of M5815 + 0.01000ml of M5817 + 0.10000ml of M5470 + 0.10000ml of M5970 + 0.10000ml of M6077 + 10.00000ml of M6152 + 10.00000ml of M6155 + 79.68000ml of MP85545 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
911	ICP AES CCV SOLN	MP85556	05/02/2025	06/02/2025	Janvi Patel	METALS_SCALE_3 (M SC-3)	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 05/07/2025

FROM 50.00000ml of MP85545 + 50.00000ml of MP85546 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
919	ICP AES INTERNAL STD	MP85557	05/02/2025	06/02/2025	Janvi Patel	METALS_SCALE_3 (M SC-3)	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 05/07/2025

FROM 1.00000ml of M5959 + 10.00000ml of M5985 + 1969.00000ml of W3112 + 20.00000ml of M6158 = Final Quantity: 2000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
903	ICP AES RINSE SOLN	MP85558	05/02/2025	06/02/2025	Janvi Patel	METALS_SCALE_3 (M SC-3)	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 05/07/2025

FROM 200.00000ml of M6158 + 9800.00000ml of W3112 = Final Quantity: 10000.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
871	MERCURY INTERMEDIATE B 250PPB WORKING STD.	MP85780	05/28/2025	05/29/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 06/14/2025

FROM 1.00000ml of M6162 + 2.50000ml of M5062 + 96.50000ml of W3112 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1340	Hg 0.00 PPB STD	MP85781	05/28/2025	05/29/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 06/14/2025

FROM 2.50000ml of M6162 + 247.50000ml of W3112 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1341	Hg 0.2 PPB STD	MP85782	05/28/2025	05/29/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 06/14/2025

FROM 2.50000ml of M6162 + 247.30000ml of W3112 + 0.20000ml of MP85780 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1342	Hg 2.5 PPB STD	MP85783	05/28/2025	05/29/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 06/14/2025

FROM 2.50000ml of M6162 + 245.00000ml of W3112 + 2.50000ml of MP85780 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1343	Hg 5.0 PPB STD	MP85784	05/28/2025	05/29/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 06/14/2025

FROM 2.50000ml of M6162 + 242.50000ml of W3112 + 5.00000ml of MP85780 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1344	Hg 7.5 PPB STD	MP85785	05/28/2025	05/29/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 06/14/2025

FROM 2.50000ml of M6162 + 240.00000ml of W3112 + 7.50000ml of MP85780 = 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
1345	Hg 10.0 PPB STD	MP85786	05/28/2025	05/29/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 06/14/2025

FROM 2.50000ml of M6162 + 237.50000ml of W3112 + 10.00000ml of MP85780 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1346	Hg ICV SOLUTION	MP85787	05/28/2025	05/29/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 06/14/2025

FROM 2.50000ml of M6161 + 2.50000ml of M6162 + 245.00000ml of W3112 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1351	ICB (Hg 0.00 PPB SOLUTION)	MP85788	05/28/2025	05/29/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 06/14/2025

FROM 2.50000ml of M6162 + 247.50000ml of W3112 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1358	CCV (Hg 5.0 PPB SOLUTION)	MP85789	05/28/2025	05/29/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 06/14/2025

FROM 485.00000ml of W3112 + 5.00000ml of M6162 + 10.00000ml of MP85780 = Final Quantity: 500.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1352	CCB (Hg 0.00 PPB SOLUTION)	MP85790	05/28/2025	05/29/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 06/14/2025

FROM 495.00000ml of W3112 + 5.00000ml of M6162 = Final Quantity: 500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1349	CRA/CRI (Hg 0.2 PPB SOLUTION)	MP85791	05/28/2025	05/29/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 06/14/2025

FROM 2.50000ml of M6162 + 247.30000ml of W3112 + 0.20000ml of MP85780 = 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
1350	CHK STD (Hg 7.0 PPB SOLUTION)	MP85792	05/28/2025	05/29/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 06/14/2025

FROM 2.50000ml of M6162 + 240.50000ml of W3112 + 7.00000ml of MP85780 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
887	AQUA REGIA FOR HG ON 7471A	MP85793	05/28/2025	05/29/2025	Mohan Bera	None	None	Sarabjit Jaswal 06/14/2025

FROM 100.00000ml of M6162 + 1900.00000ml of M6151 = Final Quantity: 200.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
68	STANNOUS CHLORIDE SOLUTION	MP85796	05/29/2025	05/30/2025	Mohan Bera	METALS_SCALE_3 (M SC-3)	None	Sarabjit Jaswal 06/14/2025

FROM 450.00000ml of W3112 + 50.00000gram of M5882 + 50.00000ml of M6151 = 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 #
Seidler Chemical	BA-2196-01 / Hydroxylamine Hydrochloride, Crystal (cs/4x500g)	0000215387	06/25/2025	12/19/2018 / mohan	12/05/2018 / mohan	M4251

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Labpure	0919120 / Boiling Stones	26275770	07/07/2025	07/03/2020 / mohan	05/07/2020 / mohan	M4583

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3227-05 / Potassium Permanganate (2.5kg)	210800	03/31/2026	11/30/2022 / mohan	07/28/2021 / mohan	M4916

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 #
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.	57038 / Sr, 1000 PPM, 125 ml	082922	08/29/2025	04/14/2025 / jaswal	03/16/2023 / jaswal	M5470

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	082922	08/29/2025	04/14/2025 / jaswal	03/16/2023 / jaswal	M5471

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	26397-103 / PTFE BOILING STONES	W126678	03/20/2026	03/20/2025 / jaswal	06/12/2023 / jaswal	M5581

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58024 / Chromium, Cr, 500 ml, 1000 PPM	060523	06/05/2026	08/28/2023 / jaswal	08/25/2023 / jaswal	M5658

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	/ Lead (Pb) 1000PPM	100923	10/09/2026	05/20/2024 / Jaswal	12/20/2023 / jaswal	M5747

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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.	/ 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.	58029 / Cu, 1000 PPM, 500 ml	071723	07/17/2026	10/01/2024 / Jaswal	08/25/2023 / jaswal	M5751

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57004 / Be, 1000 PPM, 125 ml	102523	10/25/2026	02/09/2024 / bin	02/09/2024 / bin	M5798

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57050 / Sn, 1000 PPM, 125 ml	071123	07/11/2026	02/09/2024 / bin	02/09/2024 / bin	M5799

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57027 / CO, 1000 PPM, 125 ml	091923	09/19/2026	05/31/2024 / bin	02/09/2024 / bin	M5800

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

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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.	58126 / Fe, 10000 PPM, 500 ml	051523	05/15/2026	02/06/2025 / kareem	01/03/2024 / jaswal	M5811

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57005 / B, 1000 PPM, 125 ml	071123	07/11/2026	03/26/2024 / Sohil	01/03/2024 / jaswal	M5814

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57115 / P, 10000 PPM, 125 ml	041723	04/17/2026	05/21/2024 / Jaswal	02/09/2024 / jaswal	M5815

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57016 / S, 1000 PPM, 125 ml	122923	12/29/2026	05/20/2024 / Jaswal	02/09/2024 / jaswal	M5816

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.	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 #
Seidler Chemical	BA-3624-05 / Sodium Chloride, Crystal (cs/4x2.5kg)	0000281938	07/06/2026	04/30/2024 / mohan	04/25/2024 / mohan	M5884

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	06/18/2024 / Jaswal	02/22/2024 / Jaswal	M5942

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

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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	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	CLPP-CAL-3 / CLP CAL SOLUTION #3, 125mL	T2-MEB727800	12/21/2027	02/03/2025 / JANVI	02/22/2024 / kareem	M5997

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	05/27/2026	05/27/2025 / Janvi	05/14/2024 / Jaswal	M6007

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	06/19/2025 / MOHAN	05/14/2024 / Jaswal	M6015

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

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57081 / Tl, 1000 PPM, 125 ml	0624724	06/27/2027	08/05/2024 / kareem	08/05/2024 / Jaswal	M6023

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57048 / Cd, 1000 PPM, 125 ml	070124	07/01/2027	08/05/2024 / kareem	08/05/2024 / Jaswal	M6028

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57047 / Ag, 1000 PPM, 125 ml	122823	12/28/2026	08/05/2024 / kareem	08/05/2024 / Jaswal	M6030

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57056 / Ba, 1000 PPM, 125 ml	010924	01/09/2027	01/14/2025 / Jaswal	08/05/2024 / Jaswal	M6032

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	V2-MEB746173	01/29/2026	01/29/2025 / JANVI	08/22/2024 / Jaswal	M6058

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	Z9651Q / CHEM-CLP-4/.25L	V2-MEB746762	01/01/2026	01/01/2025 / kareem	09/19/2024 / kareem	M6076

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	Z9651Q / CHEM-CLP-4/.25L	V2-MEB746762	09/06/2029	01/23/2025 / kareem	09/19/2024 / kareem	M6077

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 #
Absolute Standards, Inc.	58112 / Mg, 10000 PPM, 500 ml	112124	11/21/2027	01/13/2025 / kareem	01/13/2025 / kareem	M6127

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	101124	10/11/2027	01/13/2025 / kareem	01/13/2025 / kareem	M6128

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGSI1-1 / SILICON 125mL 1000ug/mL	V2-SI744713	07/10/2029	01/14/2025 / Jaswal	10/03/2024 / Jaswal	M6137

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	121824	12/18/2027	04/17/2025 / Janvi	01/13/2025 / Jaswal	M6138

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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	103024	10/30/2027	05/06/2025 / JANVI	01/13/2025 / Jaswal	M6142

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	072424	07/24/2027	01/23/2025 / kareem	01/13/2025 / Jaswal	M6144

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	121724	12/17/2027	02/04/2025 / jaswal	01/13/2025 / Jaswal	M6145

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	071724	07/17/2027	01/31/2025 / kareem	10/18/2024 / kareem	M6146

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	ICV-1 / ICV (ICP/ICPMS) STOCK SOLN	ICV1-1014	07/07/2025	02/07/2025 / JANVI	04/20/2021 / JANVI	M6150

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)	22G2862015	08/18/2025	02/18/2025 / Sagar	01/15/2025 / Sagar	M6151

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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	PART A / ICSA (ICP) STOCK SOLN	ICSA-1211	08/24/2025	02/24/2025 / kareem	04/20/2021 / kareem	M6152

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	06/20/2025	02/10/2025 / kareem	02/09/2024 / kareem	M6155

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	24D1062002	03/25/2029	03/10/2025 / Eman	02/02/2025 / Sagar	M6158

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	011325	03/18/2026	03/18/2025 / kareem	02/09/2025 / kareem	M6159

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	ICV-5 / ICV (HG) STOCK SOLN	ICV 5 0415	07/31/2025	05/01/2025 / mohan	03/30/2024 / mohan	M6161

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)	24H0162012	11/27/2025	05/27/2025 / Sagar	04/27/2025 / Sagar	M6162

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	DIW / DI Water	Daily Lab-Certified	07/03/2029	07/03/2024 / Iwona	07/03/2024 / Iwona	W3112

ThermoFisher SCIENTIFIC

M5882 M3

Certificate of Analysis

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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.

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M6032

R 8/5/24

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CERTIFIED WEIGHT REPORT:

Part Number:	**57056**		**Lot #**		
Lot Number:	**010924**		**Solvent:**	24002546	Nitric Acid
Description:	**Barium (Ba)**				
			2%	40.0 (mL)	Nitric Acid
Expiration Date:	010927				
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		

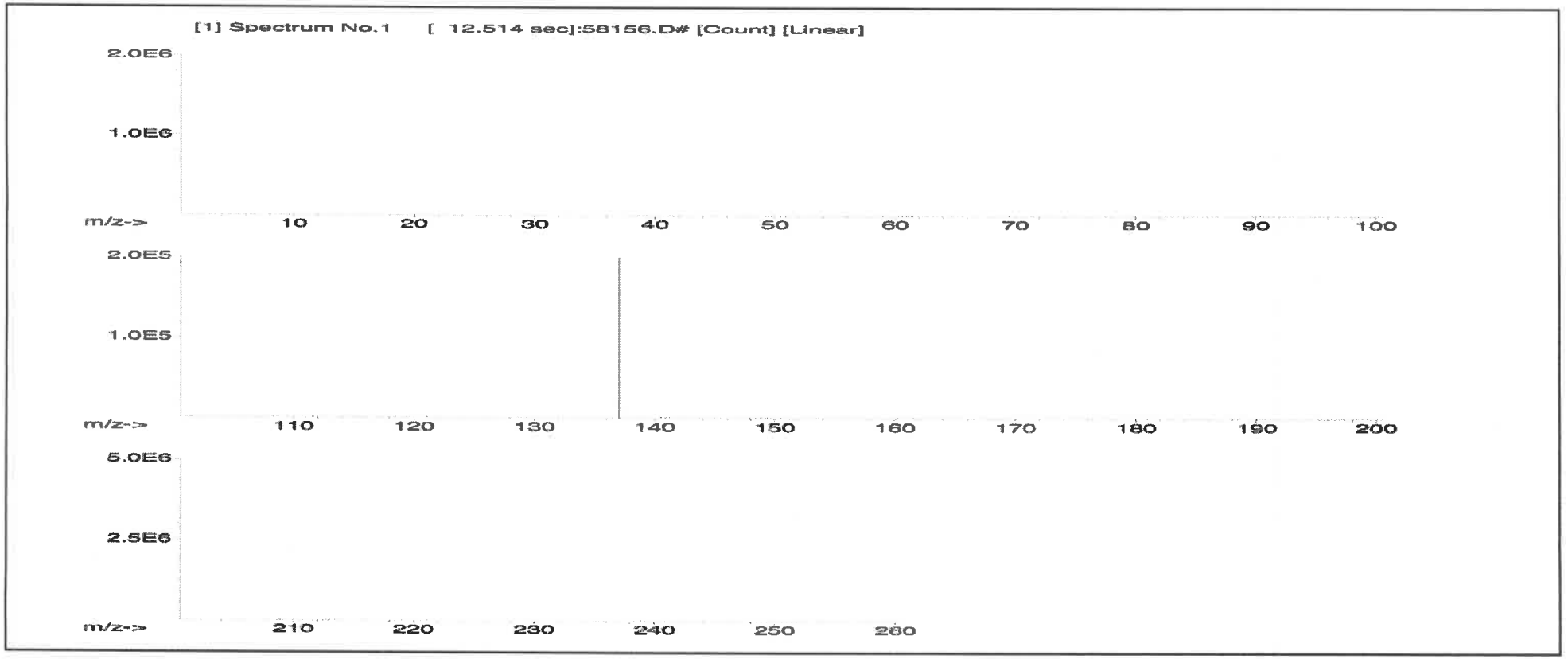
Giovanni Esposito

Formulated By:	Giovanni Esposito	010924

Pedro Rentas

Reviewed By:	Pedro L. Rentas	010924

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	3.82441	**1000.1**	**2.0**	10022-31-8	0.5 mg/m3	orl-rat 355 mg/kg	3104a



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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	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:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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R 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 0.100 Flask Uncertainty

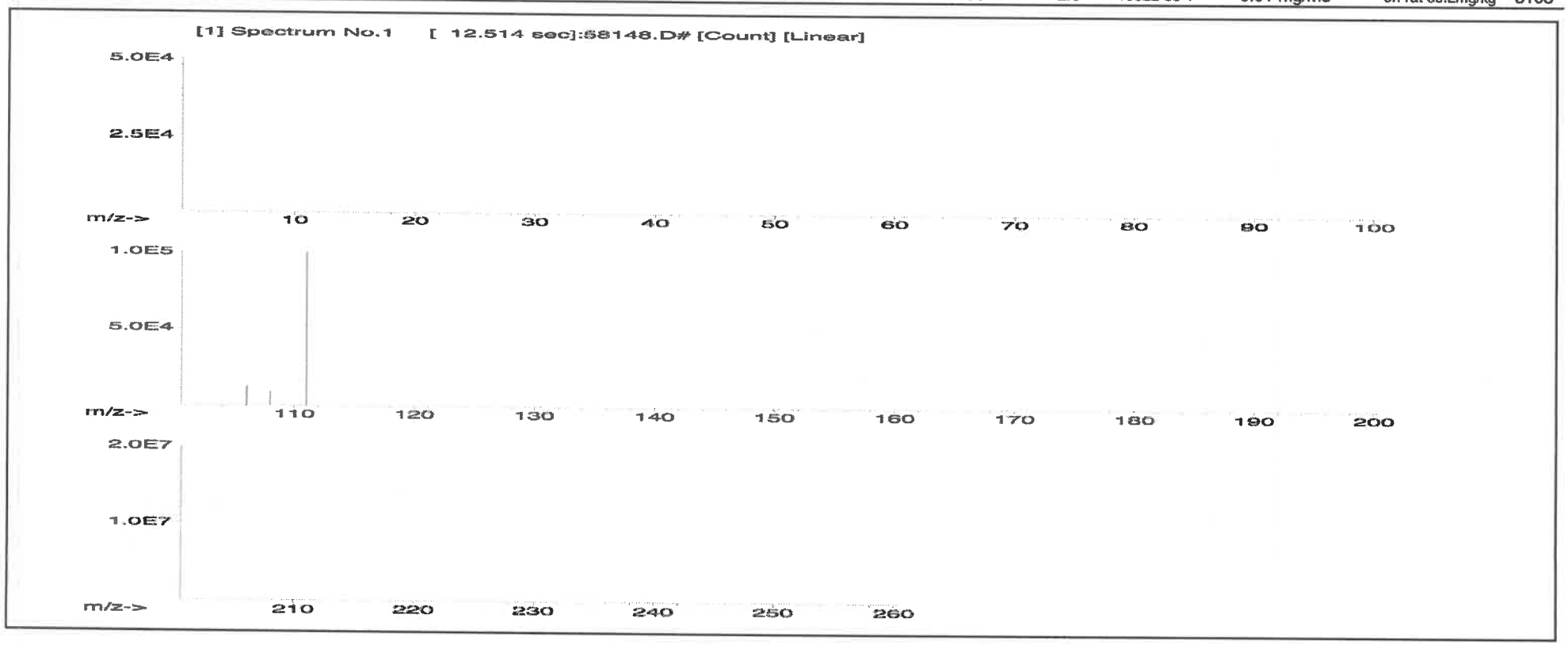
		Lot #	
Solvent:	24002546	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

Aleah O'Brady
Formulated By: Aleah O'Brady 070124

Pedro Rentas
Reviewed By: Pedro L. Rentas 070124

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Cadmium nitrate tetrahydrate (Cd)	IN024	CDM092021A1	1000	99.999	0.10	36.5	5.4797	5.4804	**1000.1**	**2.0**	10022-68-1	0.01 mg/m3	orl-rat 60.2mg/kg	3108



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AR-1539 Certificate Number
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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	T	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

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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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CLPP-CAL-1
Lot Number:	T2-MEB714417
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	5 000 µg/mL ea: Calcium, Potassium, Magnesium, Sodium, 2 000 µg/mL ea: Aluminum, Barium, 1 000 µg/mL ea: Iron, 500 µg/mL ea: Nickel, Vanadium, Zinc, Cobalt, Manganese, 250 µg/mL ea: Silver, Copper, 200 µg/mL ea: Chromium, 50 µg/mL ea: Beryllium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	2 000 ± 7 µg/mL	Barium, Ba	2 000 ± 9 µg/mL
Beryllium, Be	50.00 ± 0.26 µg/mL	Calcium, Ca	5 000 ± 22 µg/mL
Chromium, Cr	200.0 ± 1.0 µg/mL	Cobalt, Co	500.0 ± 2.4 µg/mL
Copper, Cu	250.0 ± 1.0 µg/mL	Iron, Fe	1 000 ± 4 µg/mL
Magnesium, Mg	5 000 ± 20 µg/mL	Manganese, Mn	500.0 ± 2.0 µg/mL
Nickel, Ni	500.0 ± 2.2 µg/mL	Potassium, K	5 000 ± 19 µg/mL
Silver, Ag	250.0 ± 1.1 µg/mL	Sodium, Na	5 000 ± 18 µg/mL
Vanadium, V	499.7 ± 2.2 µg/mL	Zinc, Zn	500.0 ± 2.2 µg/mL

Density: 1.118 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cr	Calculated		See Sec. 4.2
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
V	IC Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Note: This solution contains Silver (Ag), please refer to our Sample Preparation Guide for more information.

https://www.inorganicventures.com/sample-preparation-guide/samples-containing-silver

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 27, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 27, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

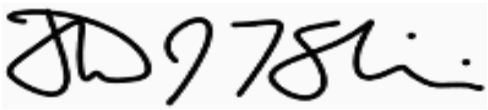
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R : 01/03/24. M5810, M5811

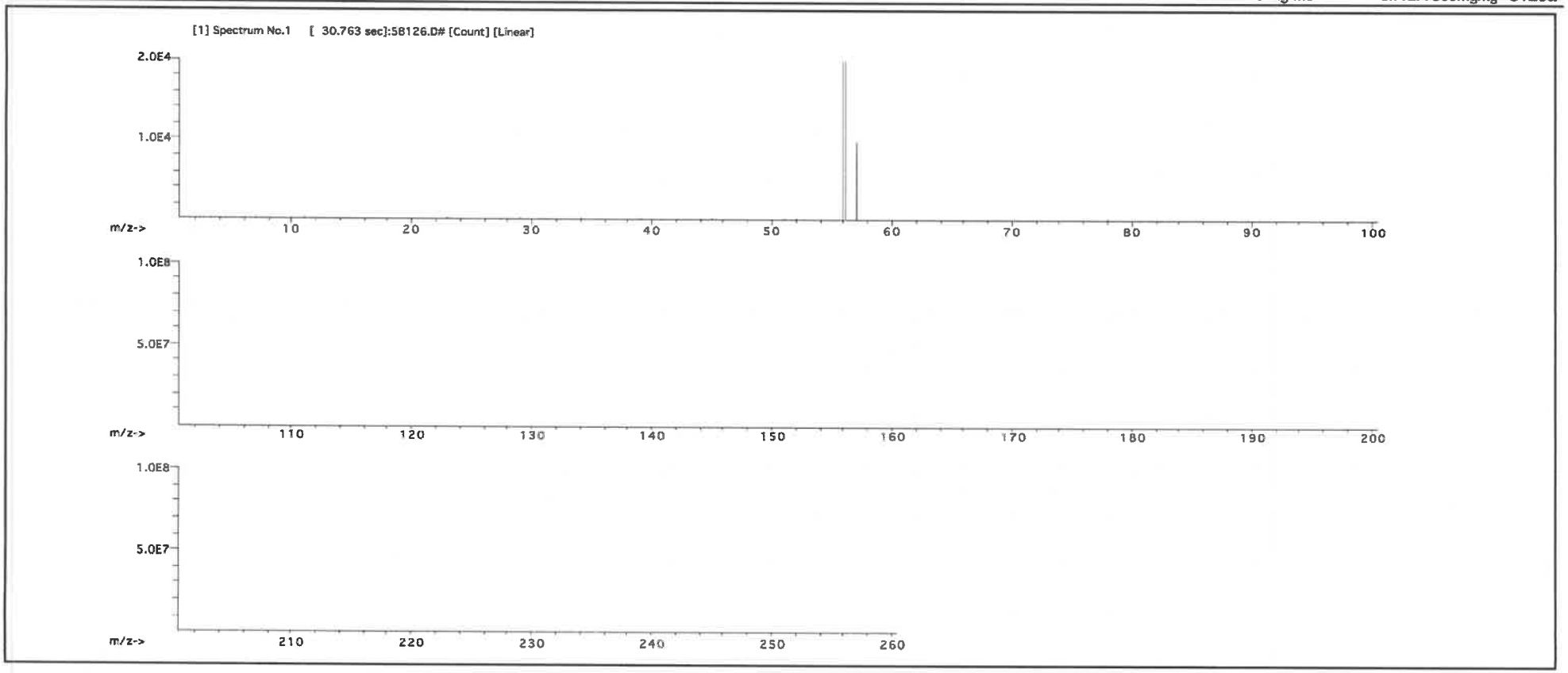
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

			Lot #	
Part Number:	**58126**	**Solvent:**	21110221	Nitric Acid
Lot Number:	**051523**			
Description:	**Iron (Fe)**	5.0%	250.0 (mL)	Nitric Acid
Expiration Date:	051526			
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):	5000.1	0.12	Flask Uncertainty	

Giovanni Esposito		
Formulated By:	Giovanni Esposito	051523
Pedro Rentas		
Reviewed By:	Pedro L. Rentas	051523

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	2302010-500	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



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	<0.10	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	<0.10
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:

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

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Certificate of Analysis

RD:05/14/2024

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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:	WW-LFS-1
Lot Number:	T2-MEB723367
Matrix:	5% (v/v) HNO3

Value / Analyte(s):	1 000 µg/mL ea: Potassium,	
	600 µg/mL ea: Phosphorus,	
	300 µg/mL ea: Sodium,	Iron,
	200 µg/mL ea: Magnesium, Cerium, Thallium,	Aluminum, Selenium,
	100 µg/mL ea: Lead,	Calcium,
	80 µg/mL ea: Arsenic,	
	70 µg/mL ea: Mercury,	
	50 µg/mL ea: Nickel,	
	40 µg/mL ea: Chromium,	
	30 µg/mL ea: Copper, Vanadium,	Boron,
	20 µg/mL ea: Zinc, Barium, Cadmium, Manganese,	Strontium, Beryllium, Cobalt, Lithium,
	7.5 µg/mL ea: Silver	

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	200.0 ± 0.7 µg/mL	Arsenic, As	80.0 ± 0.7 µg/mL
Barium, Ba	20.00 ± 0.09 µg/mL	Beryllium, Be	20.00 ± 0.13 µg/mL
Boron, B	30.00 ± 0.18 µg/mL	Cadmium, Cd	20.00 ± 0.09 µg/mL
Calcium, Ca	100.0 ± 0.4 µg/mL	Cerium, Ce	200.0 ± 0.8 µg/mL
Chromium, Cr	40.00 ± 0.30 µg/mL	Cobalt, Co	20.00 ± 0.10 µg/mL
Copper, Cu	30.00 ± 0.13 µg/mL	Iron, Fe	300.0 ± 1.3 µg/mL
Lead, Pb	100.0 ± 0.4 µg/mL	Lithium, Li	20.00 ± 0.08 µg/mL
Magnesium, Mg	200.0 ± 0.8 µg/mL	Manganese, Mn	20.00 ± 0.08 µg/mL
Mercury, Hg	70.0 ± 0.3 µg/mL	Nickel, Ni	50.00 ± 0.22 µg/mL
Phosphorus, P	600.0 ± 2.7 µg/mL	Potassium, K	1 000 ± 4 µg/mL
Selenium, Se	200.0 ± 1.3 µg/mL	Silver, Ag	7.50 ± 0.03 µg/mL
Sodium, Na	300.0 ± 1.4 µg/mL	Strontium, Sr	20.01 ± 0.08 µg/mL
Thallium, Tl	200.0 ± 1.4 µg/mL	Vanadium, V	30.00 ± 0.13 µg/mL
Zinc, Zn	20.00 ± 0.09 µg/mL		

Density: 1.034 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Ag	Calculated		See Sec. 4.2
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
B	ICP Assay	3107	190605
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Ce	ICP Assay	3110	090504
Ce	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
Hg	ICP Assay	3133	160921
Hg	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Li	ICP Assay	3129a	100714
Li	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	Traceable to 3152A	S2-NA700842
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Sr	EDTA	928	928
Sr	ICP Assay	Traceable to 3153a	K2-SR650985
Tl	ICP Assay	3158	151215
V	IC Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 30, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **August 30, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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RD:05/14/2024

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 863.01 ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	WW-LFS-2
Lot Number:	U2-MEB731108
Matrix:	5% (v/v) HNO3 tr. HF
Value / Analyte(s):	200 µg/mL ea: Silica, 80 µg/mL ea: Antimony, 70 µg/mL ea: Tin, 40 µg/mL ea: Molybdenum, 20 µg/mL ea: Titanium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	80.1 ± 0.6 µg/mL	Molybdenum, Mo	40.03 ± 0.18 µg/mL
Silica, SiO2	200.2 ± 1.3 µg/mL	Tin, Sn	70.0 ± 0.4 µg/mL
Titanium, Ti	20.01 ± 0.13 µg/mL		

Density: 1.025 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	ICP Assay	3134	130418
Mo	Calculated		See Sec. 4.2
Sb	ICP Assay	3102a	140911
SiO2	ICP Assay	3150	130912
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	3162a	130925
Ti	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 17, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- March 17, 2028

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Hydroxylamine Hydrochloride, Crystal
BAKER ANALYZED® A.C.S. Reagent
Suitable for Mercury Determination
(hydroxylammonium chloride)

M4251
JB

Material No.: 2196-01
Batch No.: 0000215387
Manufactured Date: 2018/06/27
Retest Date: 2025/06/25
Revision No: 1

Certificate of Analysis

Meets ACS Reagent Chemical Requirements,

Test	Specification	Result
Assay ($NH_2OH \cdot HCl$) (by $KMnO_4$ titrn)	>= 96.0 %	99.1
Clarity of Alcohol Solution	Passes Test	PT
Residue after Ignition	<= 0.050 %	0.017
Titrable Free Acid (meq/g)	<= 0.25	0.19
Ammonium (NH_4)	Passes Test	PT
Sulfur Compounds (as SO_4)	<= 0.005 %	< 0.003
Trace Impurities - ACS - Heavy Metals (as Pb)	<= 5 ppm	4
Trace Impurities - Iron (Fe)	<= 5 ppm	< 3
Trace Impurities - Mercury (Hg)	<= 0.050 ppm	< 0.005

For Laboratory, Research or Manufacturing Use

Country of Origin: CN
Packaging Site: Paris Mfg Ctr & DC

ISO
Phillipsburg, NJ 9001:2015, FSSC22000
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Gliwice, Poland 9001:2015, 13485:2012
Selangor, Malaysia 9001:2008
Dehradun, India, 9001:2008, 14001:2004, 13485:2003
Mumbai, India, 9001:2015, 17025:2005
Panoli, India 9001:2015

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

M45P3
Exp Dt. 5 '24
MB

SAINT-GOBAIN

Manufacturer:
Saint-Gobain Performance Plastics
11 Sicho Drive
Poestenkill, NY 12140

Certificate of Conformance

Part Number/ Revision:	D1069103 0	**Customer Part Number/ Revision:**	1069103 N/A
Description:	*PTFE BOILING STONES-450 GRAMS		
Lot Number:	26275770	**Lot Quantity:**	10 EA
Date of Manufacture (MM/DD/YY)	03/23/20	**Expiration Date: (MM/DD/YY)**	N/A
Post Processing Run Number: (Refer to the attached Certificate for Additional Detail)		N/A	

We certify the material listed above confirms in full with the following specifications:

All items have been manufactured, inspected, tested, and accepted in accordance with our Quality Management system, ISO 9001-2015. Documentation substantiating this certification is kept on record per the Company's retention policy and is available for review.
All materials and processes used in manufacturing conform to the materials and/or manufacturing specifications and notes indicated on the purchase order, drawing, specifications, quality assurance requirements, or other applicable documents effective on the date of manufacture.
Saint-Gobain does not warrant the product for any particular application and it is the responsibility of the user to conduct tests that are deemed necessary to determine the suitability of the product for any particular use. Saint-Gobain's sole responsibility shall be for failure to manufacture the product in accordance with specifications and requirements of the buyer, and from defects in material and workmanship. This warranty is expressly made in lieu of any and all other warranties and Saint-Gobain's sole liability shall be to replace any product not in conformance with the specification and requirements of the buyer.

Quality Approval:	Jonathan Kimble	**Date:**	05/13/20

M4913-16
MB

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 – 0120632

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	P279	Quality Test / Release Date	01/12/2021
Lot Number	210306		
Description	POTASSIUM PERMANGANATE, A.C.S.		
Country of Origin	United States	Suggested Retest Date	Jan/2026

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	Dark purple to purple green crystals
ASSAY	%	>= 99	99.3
CHLORIDE & CHLORATE	%	<= 0.005	<0.005
IDENTIFICATION	PASS/FAIL	= PASS TEST	pass test
INSOLUBLE MATTER	%	<= 0.2	<0.2
MERCURY (Hg)	ppm	<= 0.05	<0.004
SULFATE (SO4)	%	<= 0.02	<0.02

Julian Burton

Julian Burton - Quality Control Manager – 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.

INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

M5062
M5063
M3

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Mass Spec Solution
Catalog Number:	MSHG-10PPM
Lot Number:	S2-HG709270
Matrix:	10% (v/v) HCl
Value / Analyte(s):	10 µg/mL ea: Mercury
Starting Material:	Hg metal
Starting Material Lot#:	1959
Starting Material Purity:	99.9994%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10.001 ± 0.053 µg/mL

Density: 1.020 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Hg	ICP Assay	3133	160921
Hg	EDTA	928	928
Hg	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \Sigma(w_i)(X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance.

$$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a)\,(u_{char\ a})$$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

O	Ag		0.000011	M	Eu	<	0.000201	O	Na		0.000004	M	Se	<	0.015915	O	Zn	<	0.001510
O	Al		0.000001	O	Fe		0.000001	M	Nb	<	0.000201	O	Si		0.000005	M	Zr	<	0.000201
M	As	<	0.000402	M	Ga	<	0.000201	M	Nd	<	0.000201	M	Sm	<	0.000201				
M	Au	<	0.003631	M	Gd	<	0.000201	M	Ni	<	0.000402	M	Sn	<	0.001007				
M	B	<	0.001208	M	Ge	<	0.000201	M	Os	<	0.000605	M	Sr	<	0.000201				
M	Ba	<	0.000201	M	Hf	<	0.000201	O	P	<	0.032370	M	Ta	<	0.000201				
M	Be	<	0.000201	s	Hg	<		M	Pb	<	0.000201	M	Tb	<	0.000201				
M	Bi	<	0.000201	M	Ho	<	0.000201	M	Pd	<	0.000403	M	Te	<	0.002216				
O	Ca		0.000007	M	In	<	0.000201	M	Pr	<	0.000201	M	Th	<	0.000201				
M	Cd	<	0.000201	M	Ir	<	0.000201	M	Pt	<	0.000402	M	Ti	<	0.000402				
M	Ce	<	0.000201	O	K		0.000020	M	Rb	<	0.000201	O	Tl	<	0.016508				
M	Co	<	0.000201	M	La	<	0.000201	M	Re	<	0.000201	M	Tm	<	0.000201				
O	Cr	<	0.003021	O	Li	<	0.000107	M	Rh	<	0.000201	M	U	<	0.008058				
M	Cs	<	0.001208	M	Lu	<	0.000201	M	Ru	<	0.000201	M	V	<	0.000201				
M	Cu	<	0.000402	O	Mg		0.000001	O	S	<	0.053950	M	W	<	0.000604				
M	Dy	<	0.000201	M	Mn	<	0.000604	M	Sb	<	0.001208	M	Y	<	0.000201				
M	Er	<	0.000201	M	Mo		0.000009	M	Sc	<	0.000201	M	Yb	<	0.000201				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 200.59 +2 4 Hg(OH)(aq) 1+

Chemical Compatibility - Stable in HNO3. Avoid basic media forming insoluble carbonate. The sulfide, basic carbonate, oxalate, phosphate, arsenite, arsenate and iodide are insoluble in water.

Stability - 2-100 ppb levels not stable in 1% HNO3 / LDPE container, stable in 10% HNO3 packaged in borosilicate glass. 1-100 ppm levels stable in 7% HNO3 packaged in borosilicate glass. 1000-10,000 ppm solutions are chemically stable for years in 5-10% HNO3 / LDPE container.

Hg Containing Samples (Preparation and Solution) - Metal (soluble in HNO3); Oxide (Soluble in HNO3); Ores and Organic based (The literature has more references to the preparation of Hg containing samples than any other element. Please consult the literature for your specific sample type, since such preparations are prone to error. Or e-mail our technical staff and we will contact you to discuss your particular sample preparation questions in further detail.).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 202 amu	9 ppt	n/a	186W16O
ICP-OES 184.950 nm	0.03 / 0.005 µg/mL	1	
ICP-OES 194.227 nm	0.03 / 0.005 µg/mL	1	V
ICP-OES 253.652 nm	0.1 / 0.03 µg/mL	1	Ta, Co, Th ,Rh , Fe, U

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

September 22, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- September 22, 2026

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5429 R1 01/26/23 BH

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 57103
Lot Number: 070622
Description: Lithium (Li)

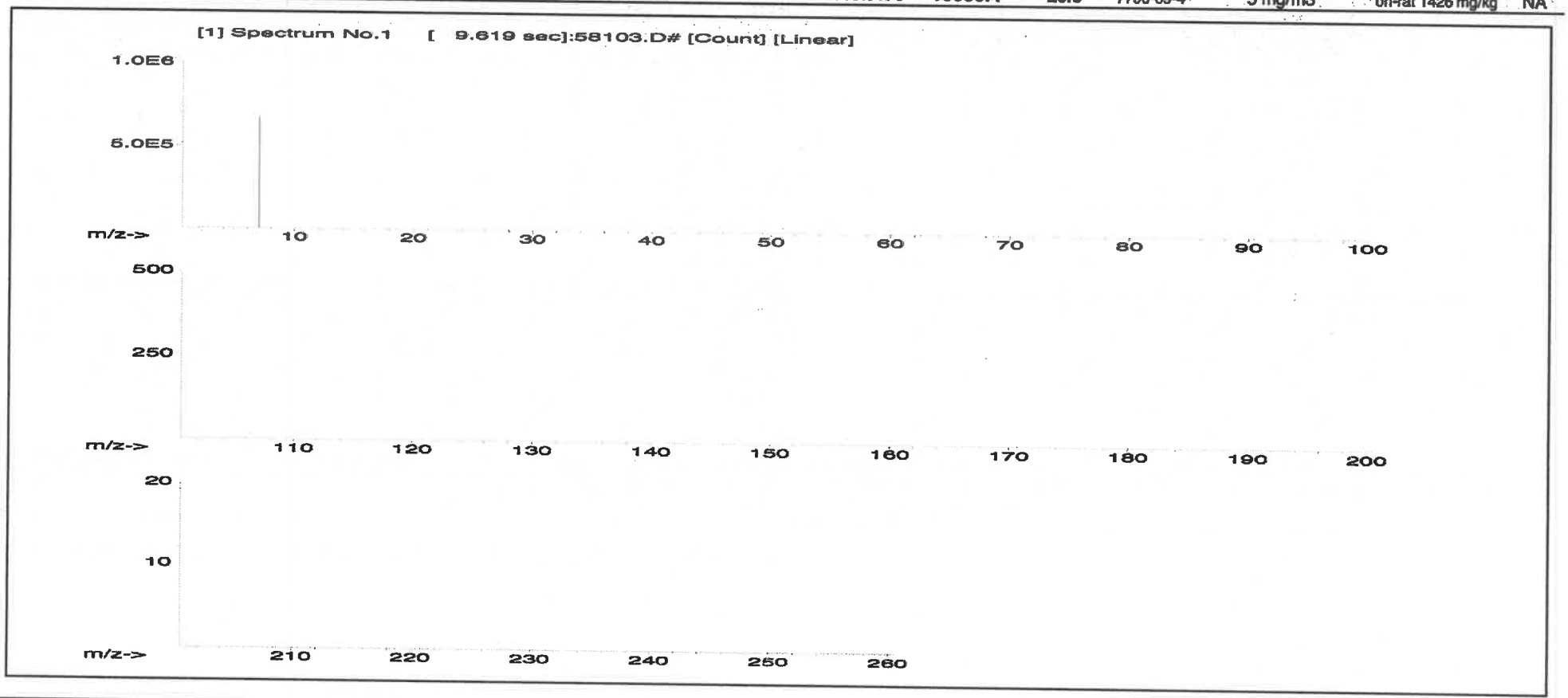
Expiration Date: 070625
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 1000.12

	Lot #			
Solvent:	20510011	Nitric Acid		
2%	20.0 (mL)	Nitric Acid		

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By:	Lawrence Barry	070622
Reviewed By:	Pedro L. Rentas	070622

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lithium nitrate (Li)	IN019	LIZ042018A1	10000	99.999	0.10	10.0	100.0134	100.0173	**10000.4**	**20.0**	7790-69-4	5 mg/m3	orl-rat 1426 mg/kg	NA



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	T	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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M 5466

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R: 03/01/23 BH

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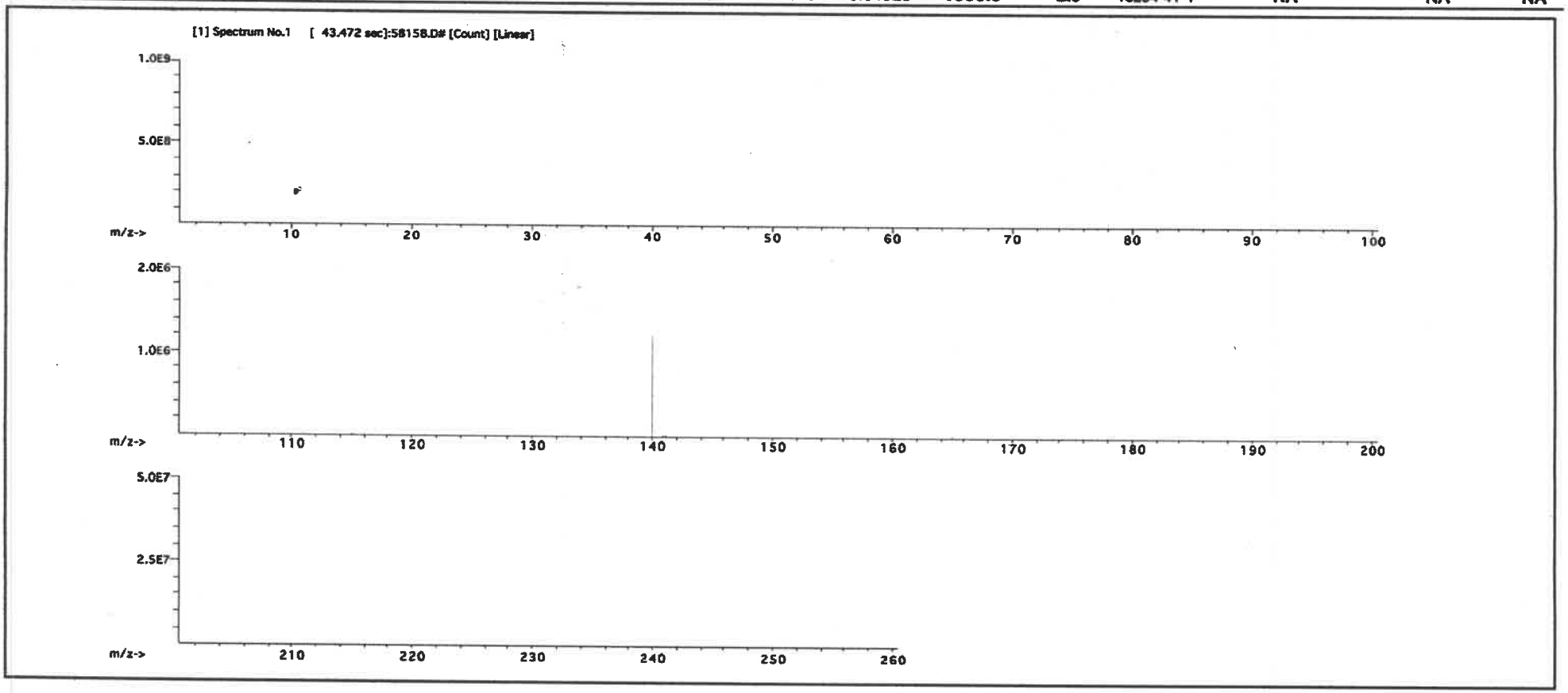
CERTIFIED WEIGHT REPORT:

Part Number:	**57058**			**Lot #**	
Lot Number:	**061322**	**Solvent:**	20510011	Nitric Acid	
Description:	**Cerium (Ce)**				
		2%	20.0 (mL)	Nitric Acid	
Expiration Date:	061325				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	1000				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	1000.12	0.058	Flask Uncertainty		

Formulated By:	Lawrence Barry	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.

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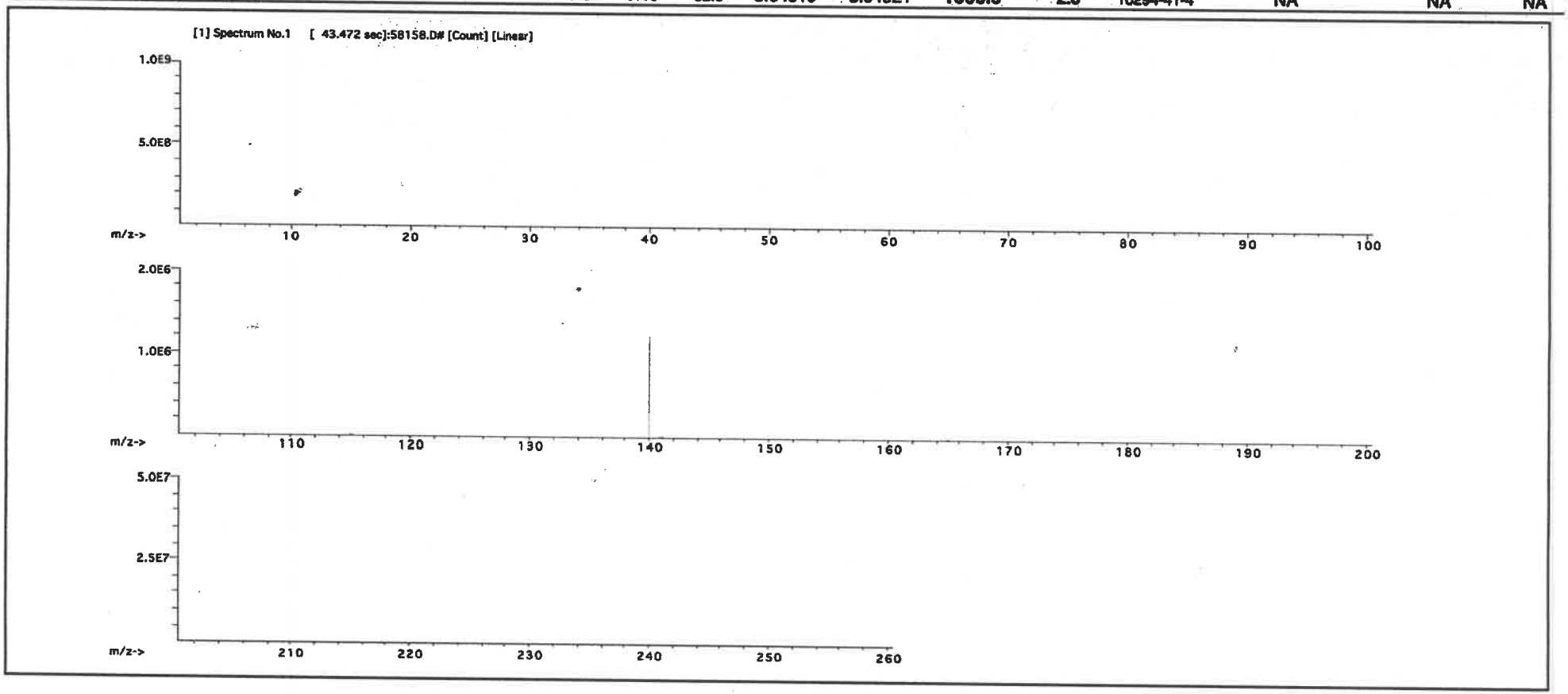
CERTIFIED WEIGHT REPORT:

Part Number:	57058		**Lot #**	
Lot Number:	020623	**Solvent:**	21110221	Nitric Acid
Description:	Cerium (Ce)			
		2%	20.0 (mL)	Nitric Acid
Expiration Date:	020626			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	1000			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	1000.12	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	020623
Reviewed By:	Pedro L. Rentas	020623

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Cerium nitrate hexahydrate (Ce)	IN146	Z512CEB1	1000	99.999	0.10	32.8	3.04919	3.04921	1000.0	2.0	10294-41-4	NA	NA	NA



Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	T	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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JENSEN INERT PRODUCTS

MATERIAL CERTIFICATE OF COMPLIANCE

DATE: JUNE 12, 2023

CUSTOMER:	PCI SCIENTIFIC SUPPLY, INC
PURCHASE ORDER NO.	6054931
CATALOG NO.	BOI5021-450L
PRODUCT DESCRIPTION:	BOILING STONES, TFE, 454GMS
QUANTITY:	10 EACH
LOT NO.	W126678
SPECIFICATION (S):	Made from Virgin PTFE Resin

We certify that we have complied with the terms and conditions of the above Purchase Order and the Part Specifications in the manufacturing of the above product.

Laura Valencia

Laura Valencia
Quality Assurance Inspector

F:U:J:CF:PCISCI:COC-55114-BOI5021-061223

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Email: jensen@jenseninert.com Visit our Web Site at www.jenseninert.com

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M5658 R ! 8/25/23

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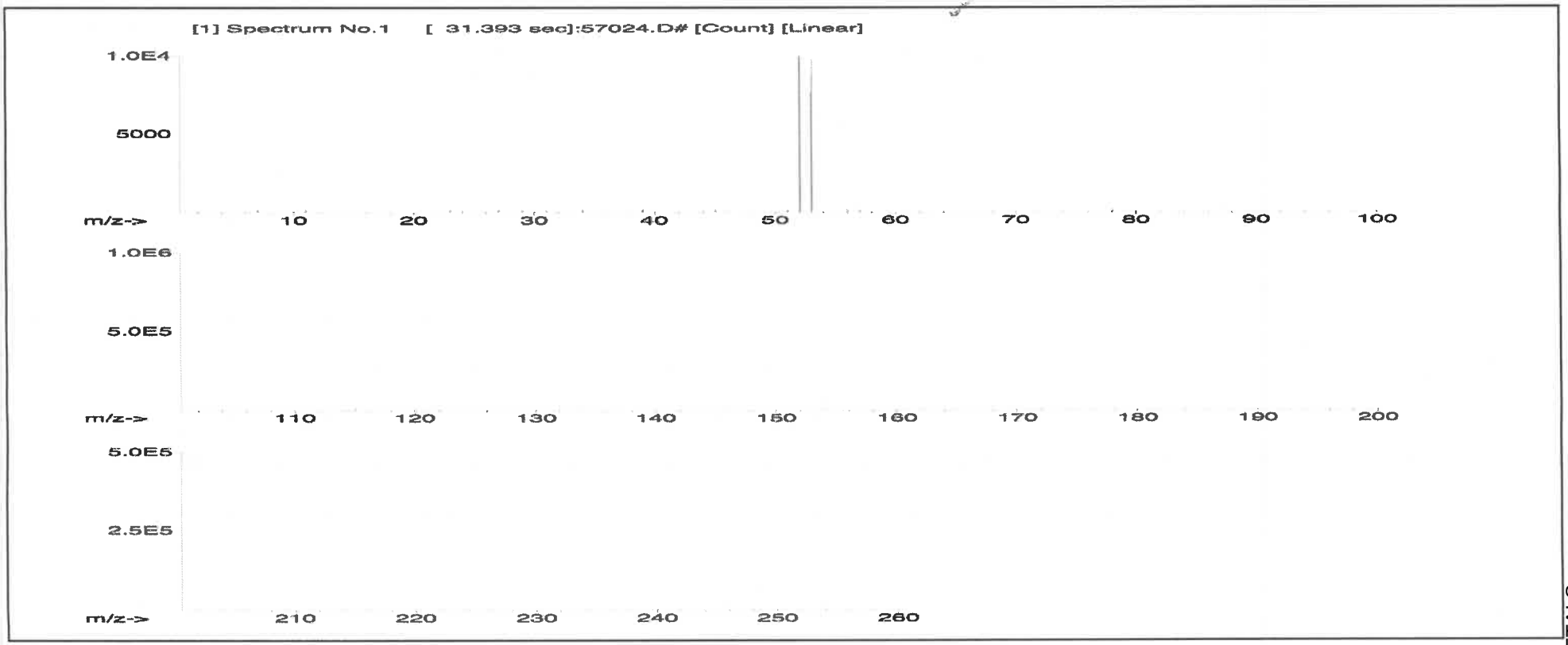
CERTIFIED WEIGHT REPORT:

		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:

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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

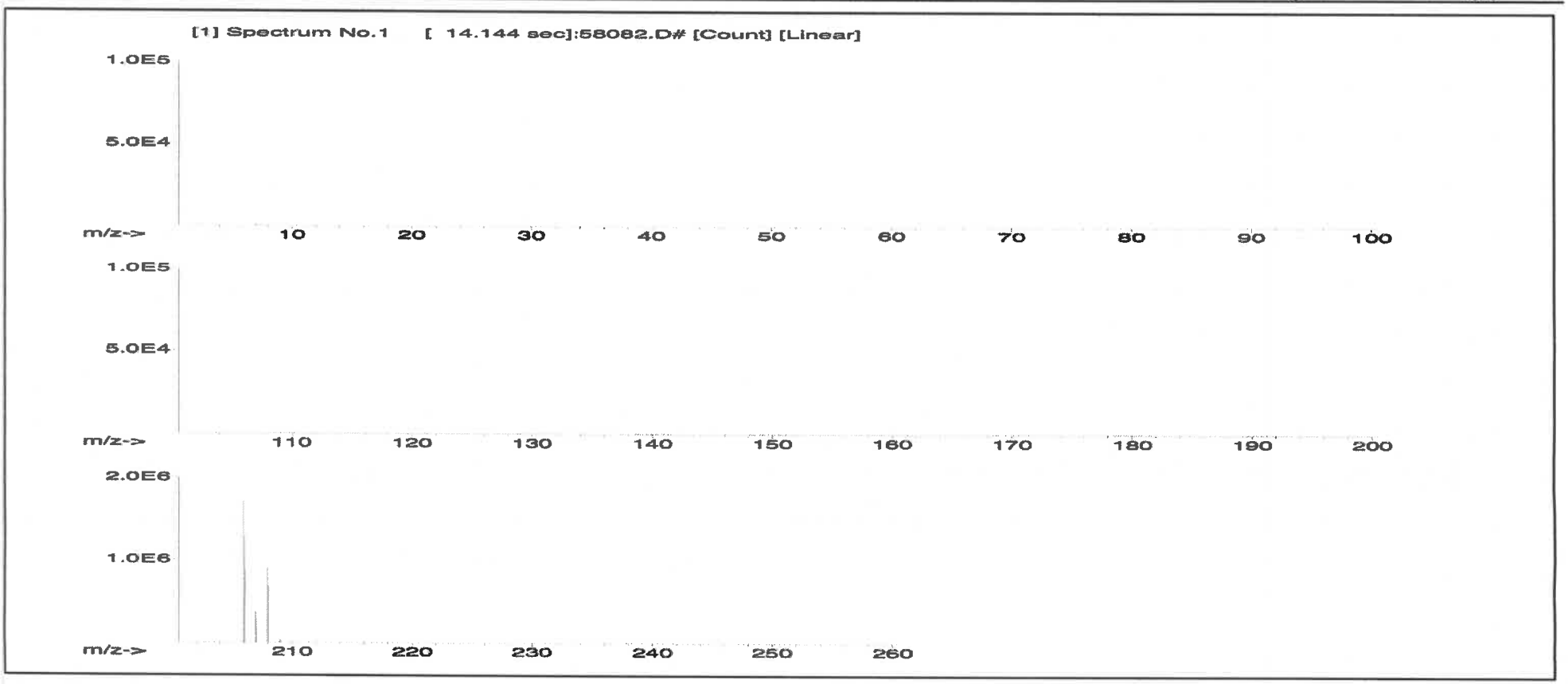
Weight shown below was diluted to (mL): 3000.41 0.06 Flask Uncertainty

	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:

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R: 12/20/23 M5748

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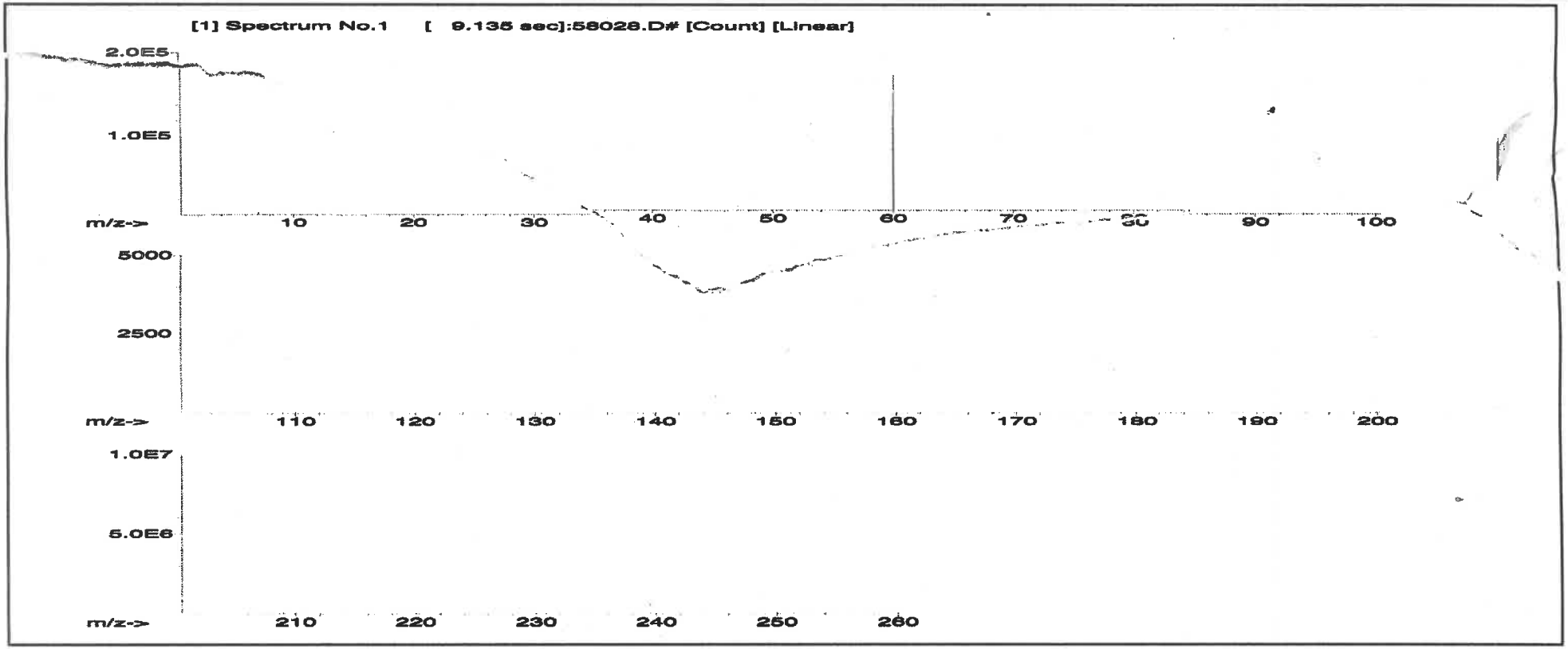
CERTIFIED WEIGHT REPORT:

		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:

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R: 8/25/23 M5751

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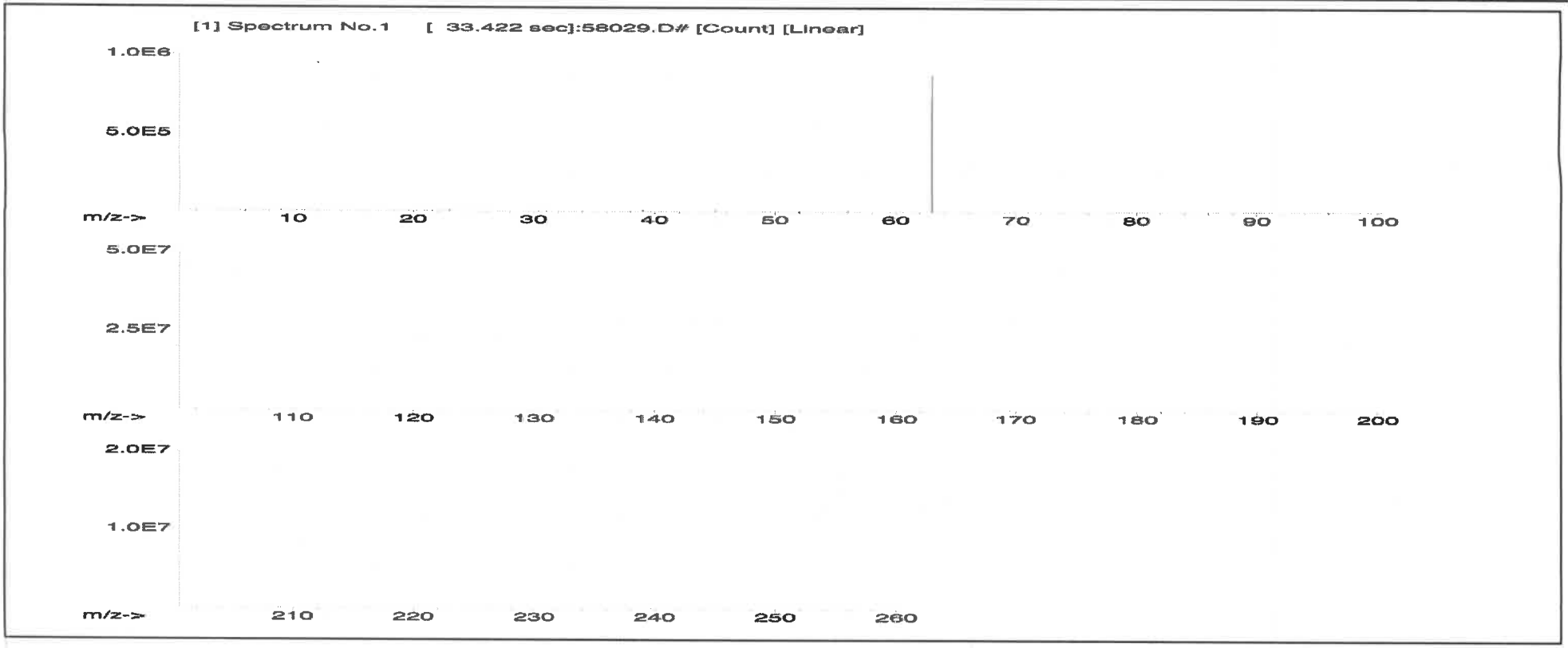
CERTIFIED WEIGHT REPORT:

Part Number:	**58029**		**Lot #**	**Solvent:**	
Lot Number:	**071723**		21110221	Nitric Acid	
Description:	**Copper (Cu)**		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	071726				
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 071723
Reviewed By:	Pedro L. Rentas 071723

313 of 420

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	022723	0.1000	200.0	0.084	1000	10000.5	**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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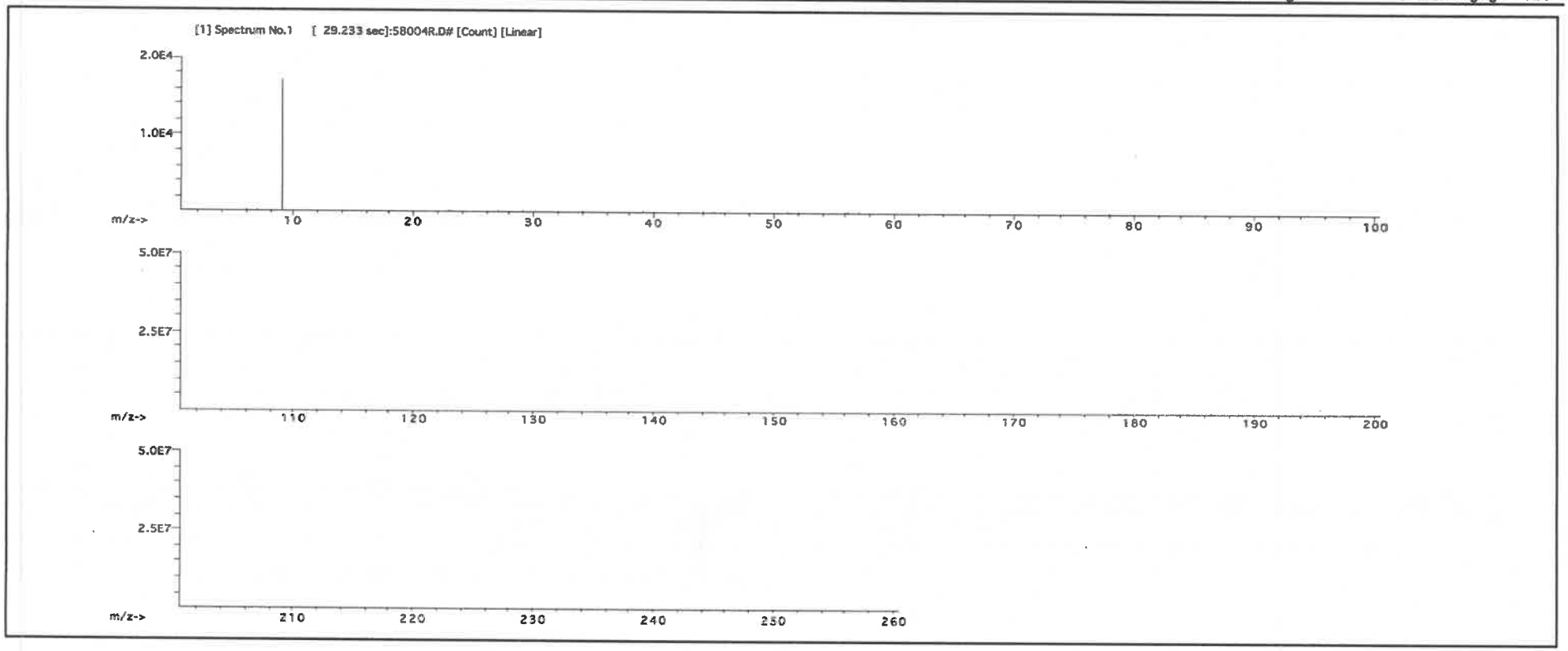
CERTIFIED WEIGHT REPORT:

		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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CERTIFIED WEIGHT REPORT:

Part Number: 57050
Lot Number: 071123
Description: Tin (Sn)

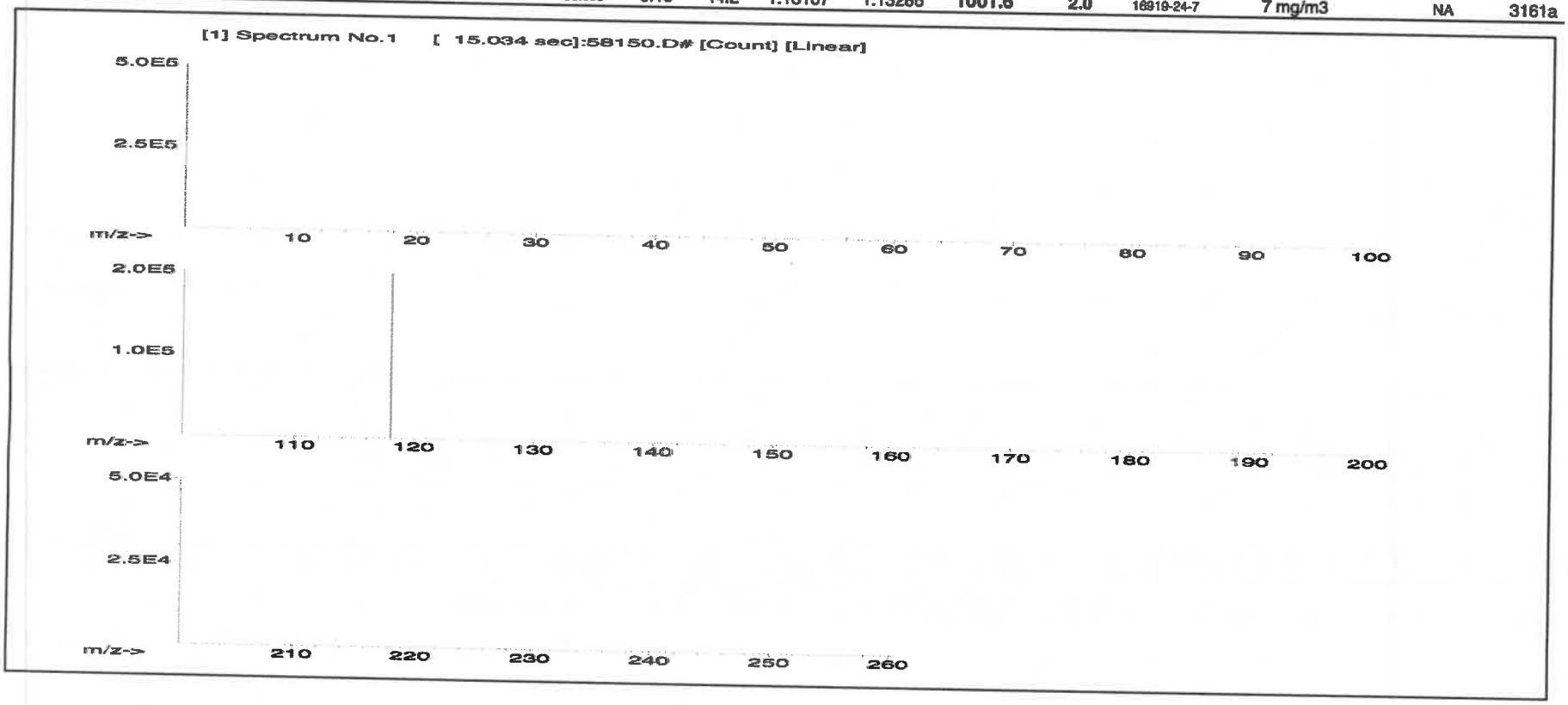
Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 499.93

	Lot #	
Solvents:	21110221	Nitric Acid
	22D0562008	Hydrochloric acid
2%	10.0	Nitric Acid
6%	30.0	Hydrochloric acid
	(mL)	

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By:	Benson Chan	071123
Reviewed By:	Pedro L. Rentas	071123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium hexafluorostannate(IV) (Sn)	IN010	SND042023A1	1000	99.999	0.10	44.2	1.13107	1.13286	**1001.6**	**2.0**	16919-24-7	7 mg/m3	NA	3161a



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<500	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	T	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

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Certified by:

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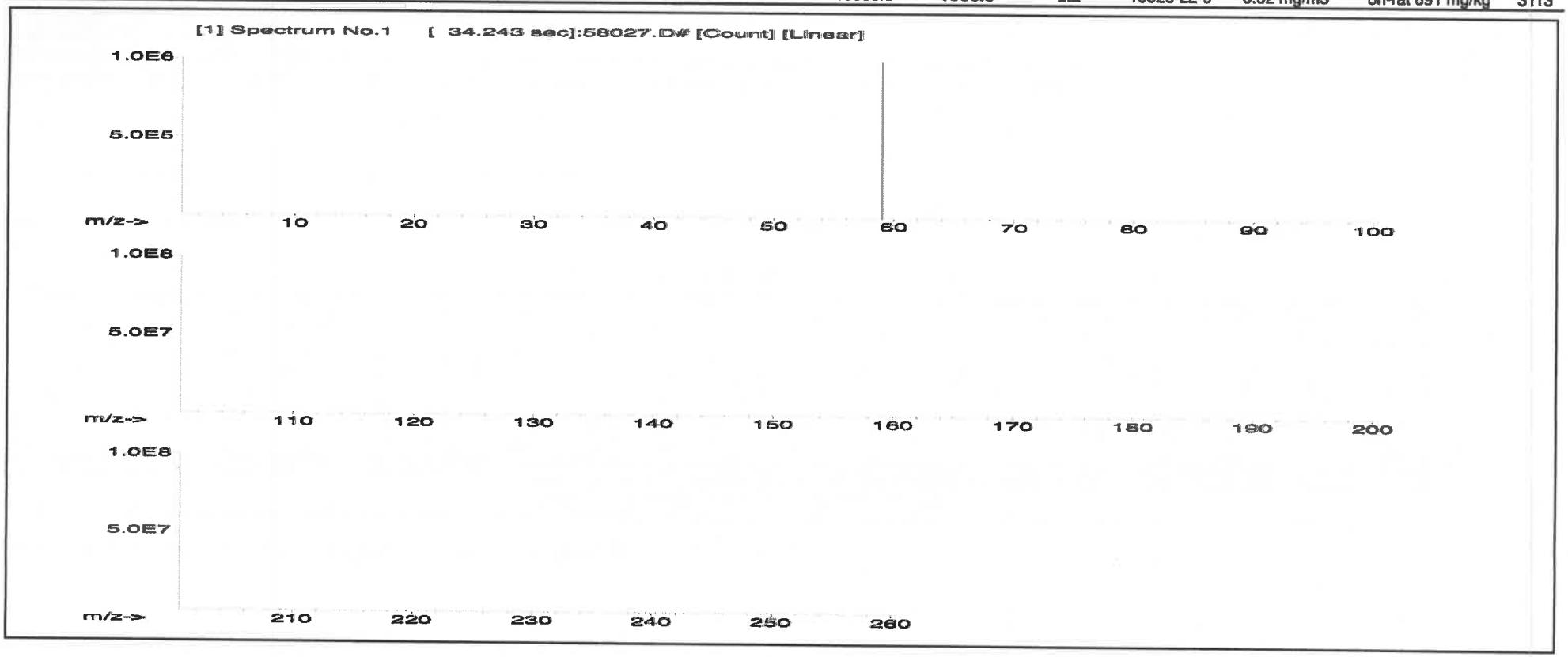
CERTIFIED WEIGHT REPORT:

		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:

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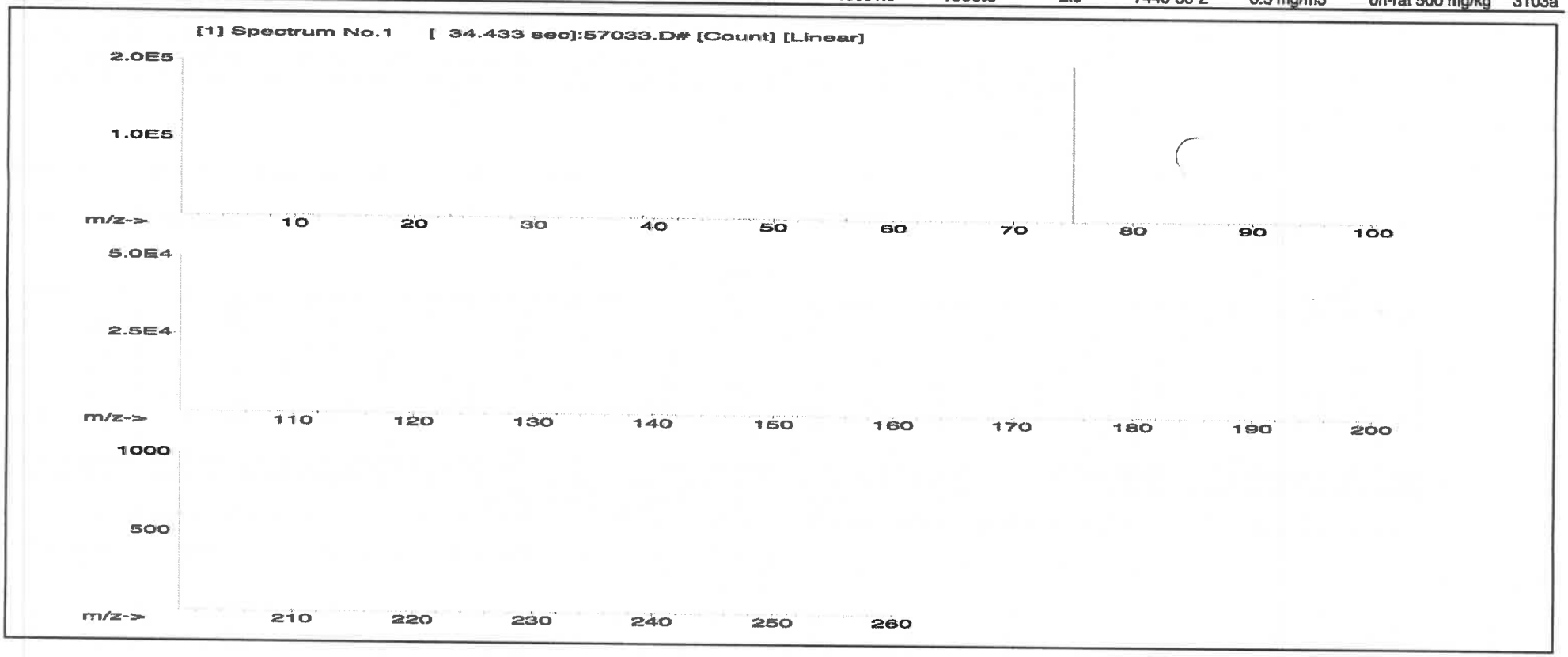
CERTIFIED **WEIGHT** REPORT:

		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:

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CERTIFIED WEIGHT REPORT:

Part Number: 57005
Lot Number: 071123
Description: Boron (B)

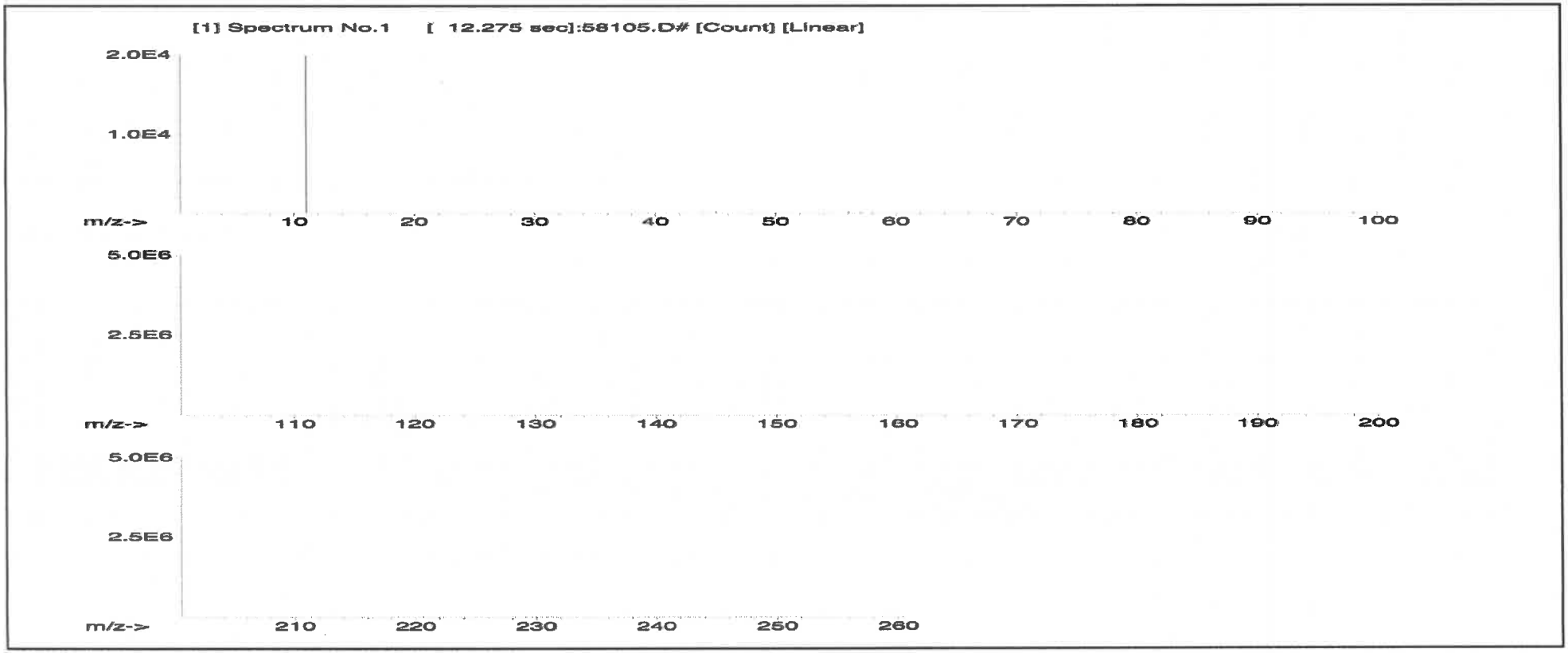
Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

Weight shown below was diluted to (mL): 1999.48 0.058 Flask Uncertainty

	Lot #			
Solvent:	MKBQ8597V	Ammonium hydroxide		
	2.0%	40.0 (mL)	Ammonium hydroxide	
		5E-05	Balance Uncertainty	

Formulated By:	Benson Chan	071123
Reviewed By:	Pedro L. Rentas	071123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Boric acid (B)	IN018	BV092016A1	1000	99.9999	0.10	17.3	11.55772	11.56201	**1000.4**	**2.0**	10043-35-3	2 mg/m3	orl-rat 2660 mg/kg	3107



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	T	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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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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Certified Reference Material CRM

R1 02/09/24. M58165

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AR-1539 Certificate Number
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CERTIFIED WEIGHT REPORT:

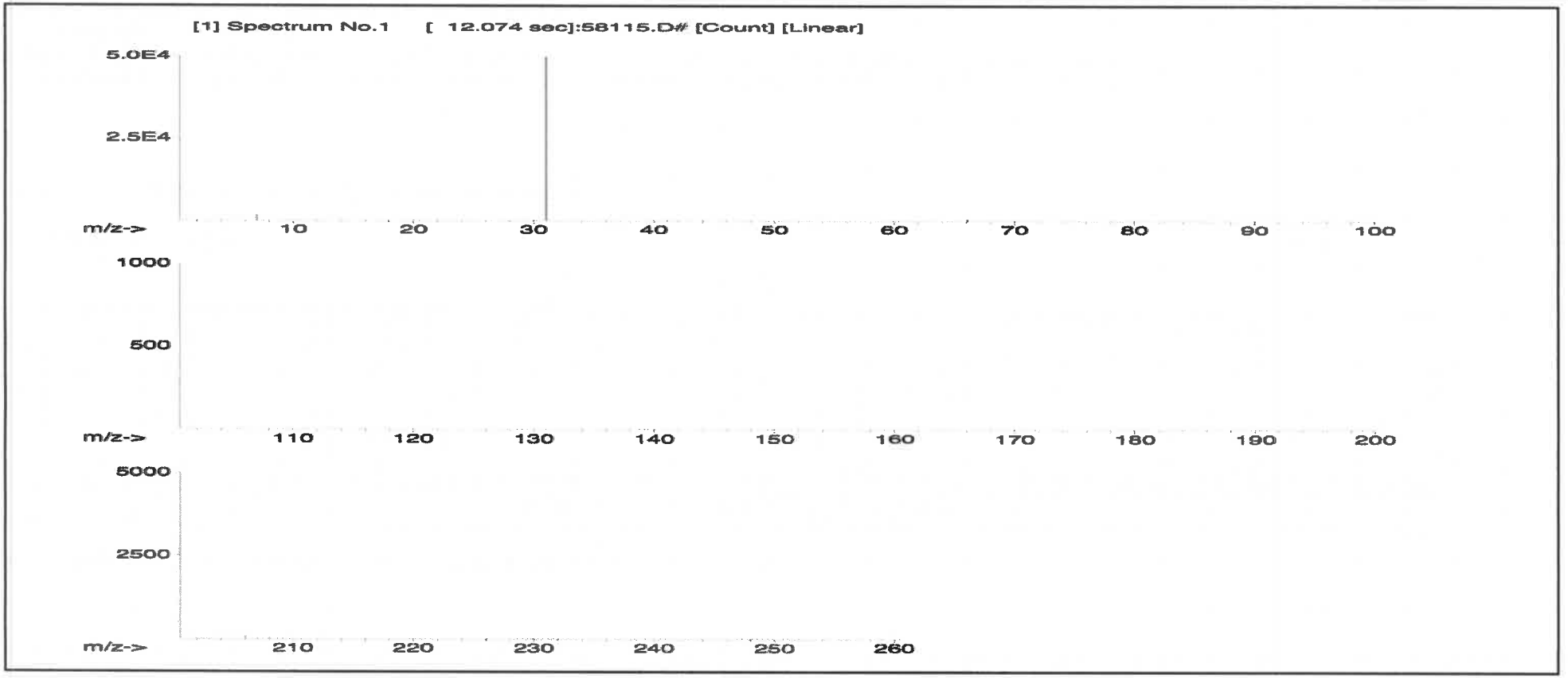
Part Number: 57115
Lot Number: 041723
Description: Phosphorous (P)

Expiration Date: 041726
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:	21110221	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	
	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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ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	T	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
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Certified Reference Material CRM

R: 02/09/24 M5816

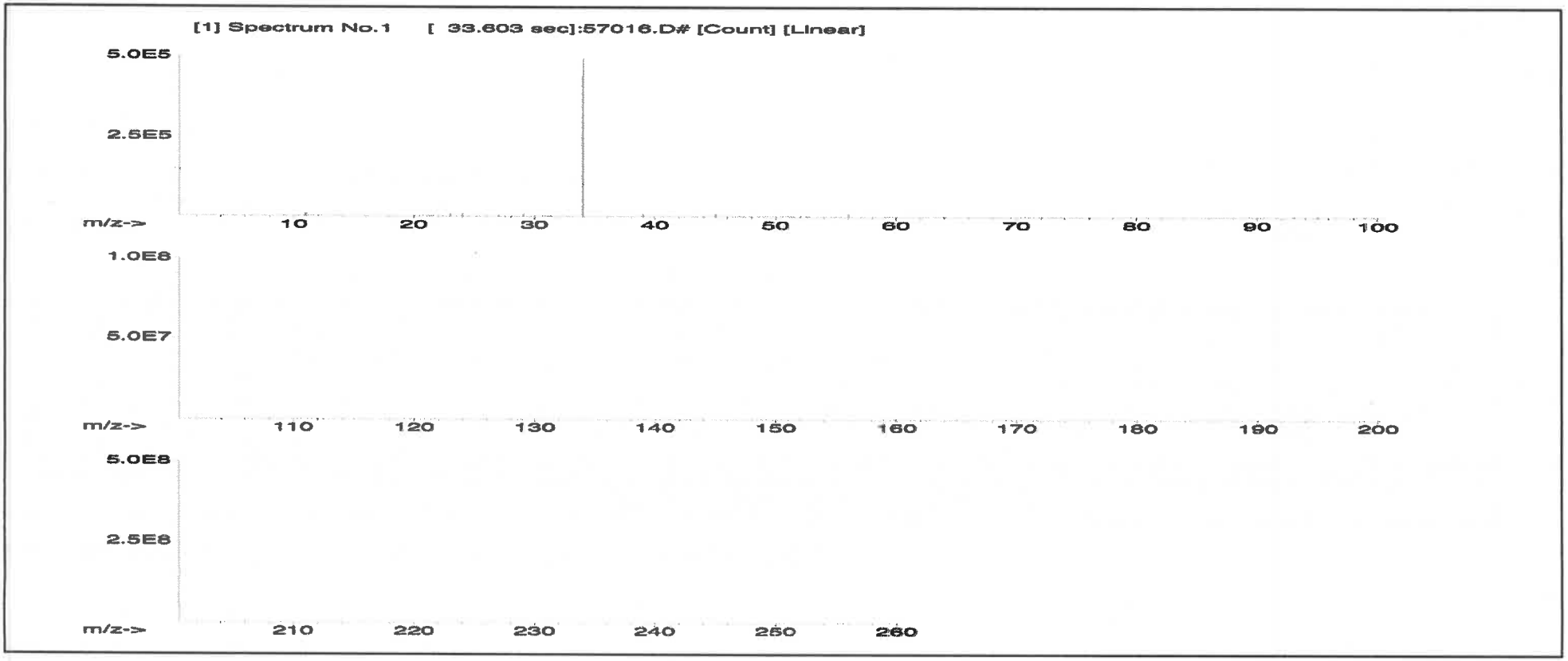
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number:	**57016**		**Lot #**	
Lot Number:	**122923**	**Solvent:**	122923	ASTM Type 1 Water
Description:	**Sulfur (S)**			
Expiration Date:	122926			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	4000.0	0.06	Flask Uncertainty	

Formulated By:	Benson Chan	122923
Reviewed By:	Pedro L. Rentas	122923

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium sulfate (S)	IN117	SLBR7225V	1000	99.9	0.10	24.3	16.4979	16.4980	**1000.0**	**2.0**	7783-20-2	NA	orl-rat 4250mg/kg	3181



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Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	T	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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Certified Reference Material CRM

R: 02/09/24 M5817

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

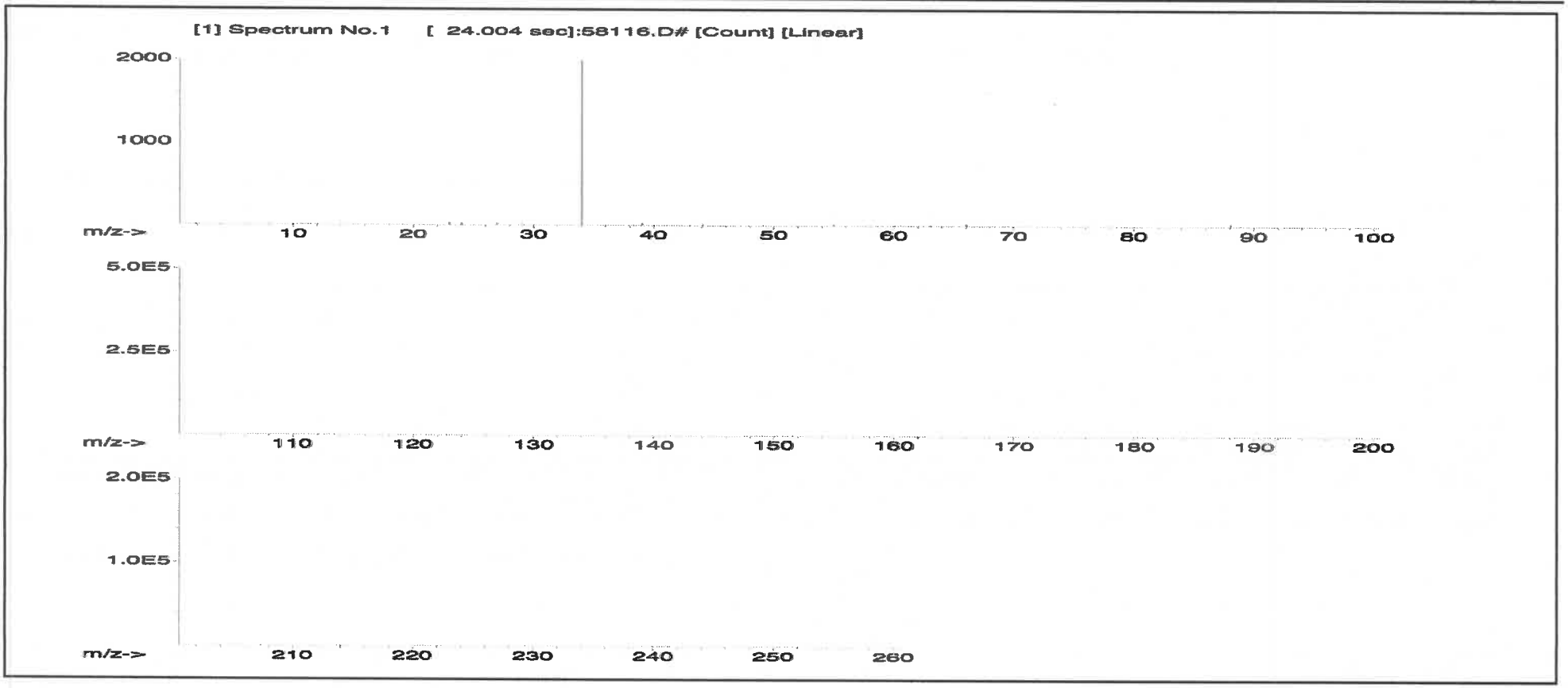
Part Number: 57116
Lot Number: 071123
Description: Sulfur (S)

Lot #
Solvent: 071123 ASTM Type 1 Water

Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB 5E-05 Balance Uncertainty
Weight shown below was diluted to (mL): 1999.48 0.058 Flask Uncertainty

Formulated By:	Lawrence Barry	071123
Reviewed By:	Pedro L. Rentas	071123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium sulfate (S)	IN117	SLBR7225V	10000	99.9	0.10	24.3	82.4675	82.4682	**10000.1**	**20.0**	7783-20-2	NA	ori-rat 4250mg/kg	3181



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Certified Reference Material CRM

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AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	T	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

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Certified Reference Material CRM

R: 02/09/24 M5820

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
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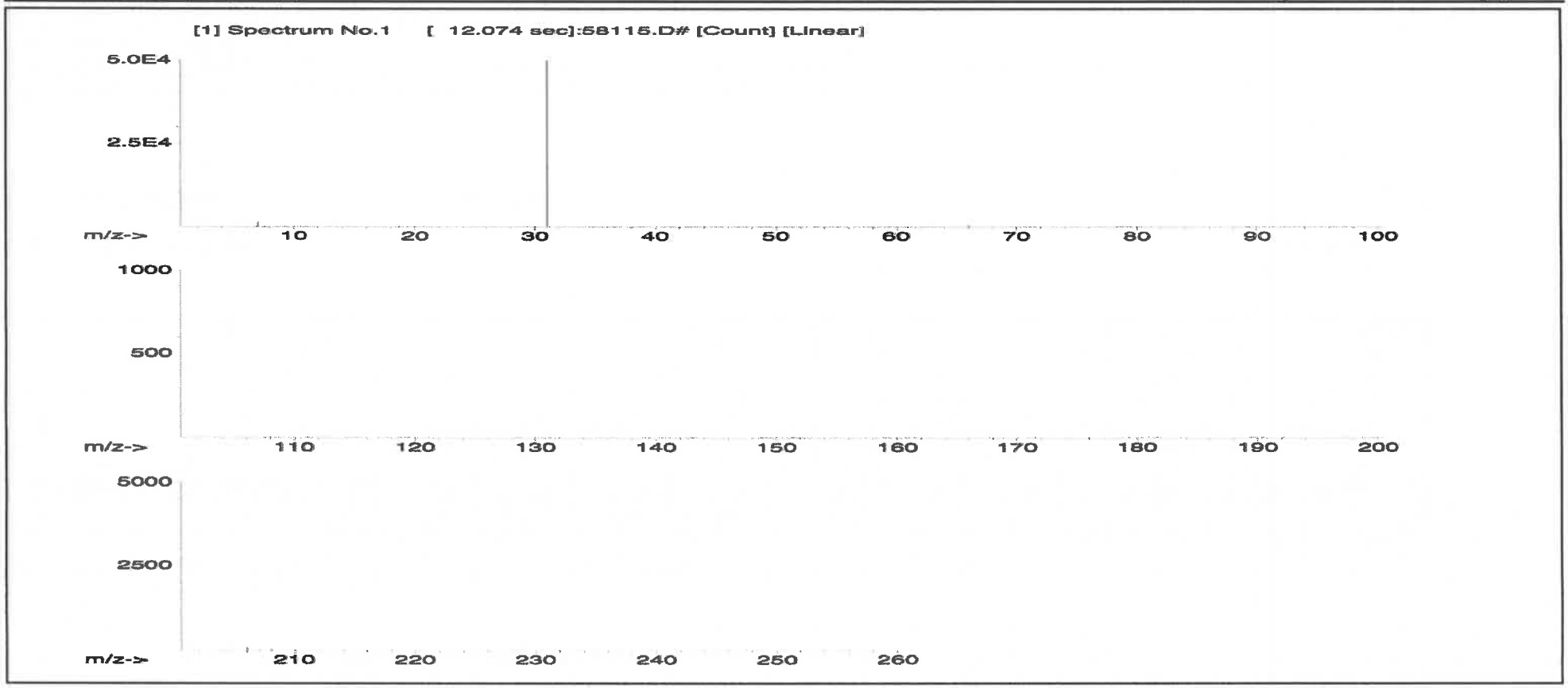
CERTIFIED WEIGHT REPORT:

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
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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:

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Sodium Chloride, Crystal
BAKER ANALYZED® A.C.S. Reagent

MT884
MB

avantor™ | J.T.Baker®

Material No.: 3624-01
Batch No.: 0000281938
Manufactured Date: 2021-06-07
Retest Date: 2026-06-07
Revision No.: 1

Certificate of Analysis

Test	Specification	Result
Assay (NaCl) (by Ag titrn)	≥ 99.0 %	100.0 %
pH of 5% Solution at 25°C	5.0 - 9.0	6.3
Insoluble Matter	≤ 0.005 %	0.003 %
Iodide (I)	≤ 0.002 %	< 0.002 %
Bromide (Br)	≤ 0.01 %	< 0.01 %
Chlorate and Nitrate (as NO_3)	≤ 0.003 %	< 0.001 %
ACS - Phosphate (PO_4)	≤ 5 ppm	< 5 ppm
Sulfate (SO_4)	≤ 0.004 %	< 0.004 %
Barium (Ba)	Passes Test	Passes Test
ACS - Heavy Metals (as Pb)	≤ 5 ppm	< 5 ppm
Iron (Fe)	≤ 2 ppm	< 1 ppm
Calcium (Ca)	≤ 0.002 %	< 0.001 %
Magnesium (Mg)	≤ 0.001 %	< 0.001 %
Potassium (K)	≤ 0.005 %	0.001 %

For Laboratory,Research,or Manufacturing Use
Meets Reagent Specifications for testing USP/NF monographs
Country of Origin: USA
Packaging Site: Paris Mfg Ctr & DC

James T 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 Mansford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone 610.386.1700

INORGANIC VENTURES™
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Certificate of Analysis

R: 02/22/24 M5942

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:	Single Analyte Custom Grade Solution
Catalog Number:	CGTI1
Lot Number:	T2-TI719972
Matrix:	2% (v/v) HNO3 tr. HF
Value / Analyte(s):	1 000 µg/mL ea: Titanium
Starting Material:	Ti Metal
Starting Material Lot#:	2094
Starting Material Purity:	99.9975%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1002 ± 5 µg/mL

Density: 1.012 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **1002 ± 4 µg/mL**
ICP Assay NIST SRM 3162a Lot Number: 130925

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

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	<	0.000536	M	Eu	<	0.000268	O	Na	<	0.032670	M	Se		0.001204	O	Zn	<	0.003267
O	Al		0.000872	O	Fe		0.003225	O	Nb	<	0.043560	O	Si		0.004735	O	Zr	<	0.043560
M	As	<	0.008586	M	Ga	<	0.000268	M	Nd	<	0.000268	M	Sm	<	0.000268				
M	Au	<	0.004577	M	Gd	<	0.000268	O	Ni	<	0.010890	M	Sn		0.000096				
O	B	<	0.008929	M	Ge	<	0.002146	M	Os	<	0.000269	O	Sr		0.000096				
M	Ba	<	0.002683	M	Hf		0.002161	O	P	<	0.054450	M	Ta		0.010560				
M	Be	<	0.005366	M	Hg	<	0.003231	M	Pb	<	0.001073	M	Tb	<	0.000268				
M	Bi	<	0.001609	M	Ho	<	0.000268	M	Pd	<	0.000268	M	Te	<	0.001341				
O	Ca		0.000676	M	In	<	0.002683	M	Pr	<	0.000268	M	Th	<	0.053663				
M	Cd	<	0.000268	M	Ir	<	0.000269	M	Pt	<	0.000536	s	Ti	<					
M	Ce	<	0.000268	M	K		0.001172	M	Rb	<	0.000268	M	Tl	<	0.000268				
M	Co	<	0.004293	M	La	<	0.000268	M	Re	<	0.000268	M	Tm	<	0.000268				
M	Cr		0.000752	O	Li	<	0.027225	M	Rh	<	0.000268	M	U	<	0.000268				
M	Cs	<	0.000268	M	Lu	<	0.000268	M	Ru	<	0.000269	M	V	<	0.019855				
O	Cu	<	0.010890	O	Mg	<	0.005445	i	S	<		M	W		0.000473				
M	Dy	<	0.000268	O	Mn	<	0.003267	M	Sb	<	0.006976	M	Y	<	0.002146				
M	Er	<	0.000268	M	Mo		0.000774	O	Sc	<	0.004900	M	Yb	<	0.000536				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 47.87 +4 6 Ti(F)6-2

Chemical Compatibility - Soluble in concentrated HCl, HF, H3PO4 H2SO4 and HNO3. Avoid neutral to basic media. Unstable at ppm levels with metals that would pull F- away (i.e. Do not mix with Alkaline or Rare Earths or high levels of transition elements unless they are fluorinated). Stable with most inorganic anions with a tendency to hydrolyze forming the hydrated oxide in all dilute acids except HF.

Stability - 2-100 ppb levels stable (Alone or mixed with all other metals) as the Ti(F)6-2 for months in 1% HNO3 / LDPE container. 1-10,000 ppm single element solutions as the Ti(F)6-2 chemically stable for years in 2-5% HNO3 / trace HF in an LDPE container.

Ti Containing Samples (Preparation and Solution) - Metal (Soluble in H2O / HF caution -powder reacts violently); Oxide - low temperature history anatase or rutile (Dissolved by heating in 1:1:1 H2O / HF / H2SO4); Oxide - high temperature history (~800EC) brookite (fuse in Pt0 with K2S2O7); Ores (fuse in Pt0 with KF + K2S2O7 - no KF if silica not present); Organic Matrices (Dry ash at 450EC in Pt0 and dissolve by heating with 1:1:1 H2O / HF / H2SO4 or fuse ash with pyrosulfate if oxide is as plastic pigment and likely in brookite crystalline form).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 48 amu	14 ppt	N/A	32S16O, 32S14N, 14N16O18O, 14N17N2, 36Ar12C, 48Ca, [96X=2 (where X = Zr, Mo, Ru)]
ICP-OES 323.452 nm	0.0054 / 0.00092 µg/mL	1	Ce, Ar, Ni
ICP-OES 334.941 nm	0.0038 / 0.000028 µg/mL	1	Nb, Ta, Cr, U
ICP-OES 336.121 nm	0.0053 / 0.000034 µg/mL	1	W, Mo, Co

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 17, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **June 17, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

M5959 R: 6/14/24.

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 863.01 ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGY10
Lot Number:	V2-Y740548
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Yttrium
Starting Material:	Yttrium Oxide
Starting Material Lot#:	2661 and 06230520YL
Starting Material Purity:	99.9984%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10000 ± 30 µg/mL

Density: 1.032 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	**10011 ± 25 µg/mL** EDTA NIST SRM 928 Lot Number: 928
Assay Method #2	**9997 ± 50 µg/mL** ICP Assay NIST SRM 3167a Lot Number: 190730
Assay Method #3	**9984 ± 31 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

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.

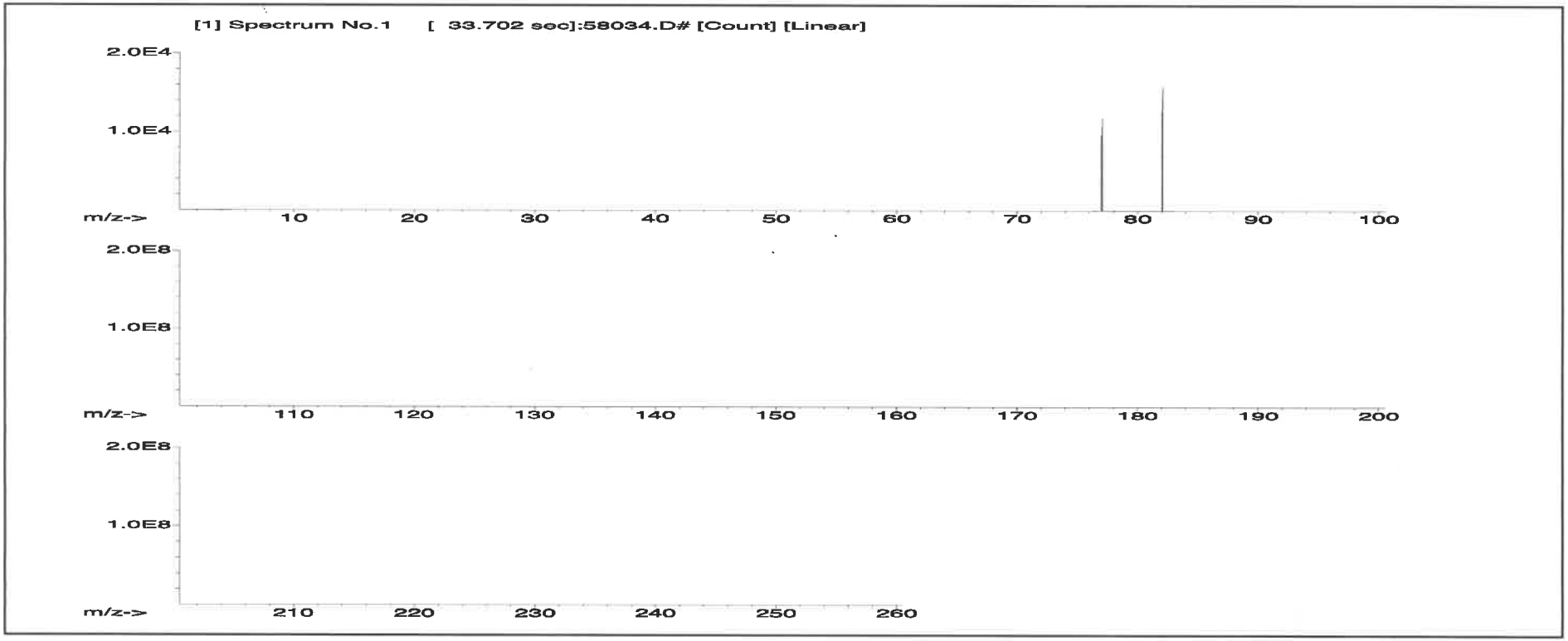
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																		
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	T	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5970, M5971 R: 7/01/24

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

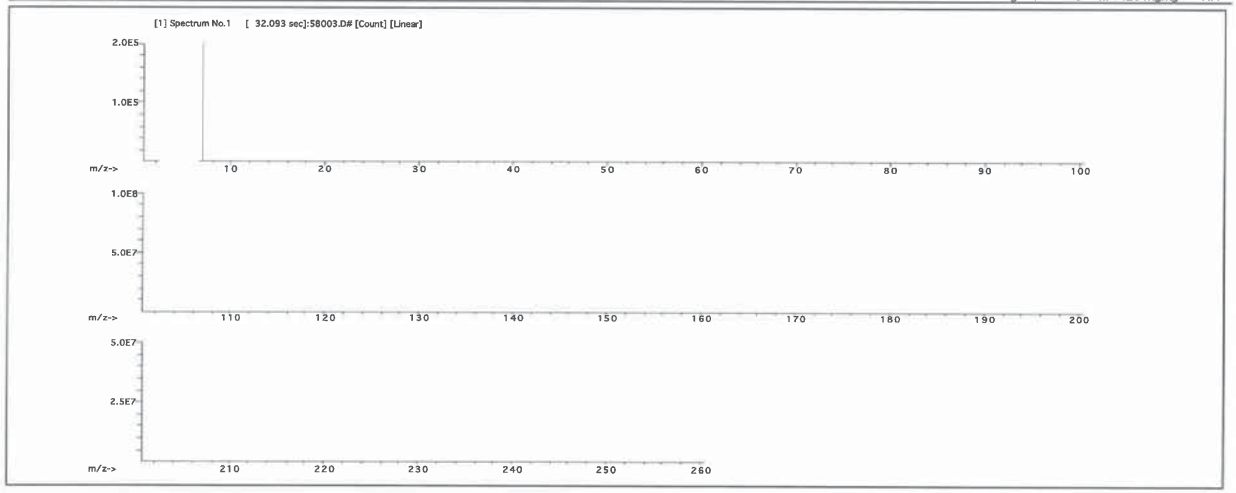
Part Number: 57003
Lot Number: 062124
Description: Lithium (Li)
Expiration Date: 062127
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Volume shown below was diluted to (mL): 250.11

Lot #	Solvent:		
24002546	Nitric Acid		
2.0%	5.0 (mL)	Nitric Acid	
		5E-05	Balance Uncertainty
		0.016	Flask Uncertainty

Giovanni Esposito
Formulated By: Giovanni Esposito 062124

Pedro Rentas
Reviewed By: Pedro L. Rentas 062124

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lithium nitrate (Li)	58103	070622	0.1000	25.0	0.004	1000	10000.4	**1000.0**	**2.0**	7790-69-4	5 mg/m3	orl-rat 1426 mg/kg	NA



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	T	Ni	<0.02	Pr	<0.02	Sc	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Refine your results. Redefine your industry.

Certificate of Analysis

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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

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Certificate of Analysis

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MS-997

1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CLPP-CAL-3
Lot Number:	T2-MEB727800
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 ± 7 µg/mL	Cadmium, Cd	500.0 ± 2.2 µg/mL
Lead, Pb	1 000 ± 4 µg/mL	Selenium, Se	1 000 ± 6 µg/mL
Thallium, Tl	1 000 ± 7 µg/mL		

Density: 1.042 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
As	ICP Assay	3103a	100818
As	Calculated		See Sec. 4.2
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Tl	ICP Assay	3158	151215

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i}^2) / (\Sigma(1/(u_{char\ i}^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i}^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

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**

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

December 21, 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

- December 21, 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:	CHEM-CLP-4
Lot Number:	V2-MEB746172
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 ± 5 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	1 000 ± 6 µg/mL		

Density: 1.032 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
B	ICP Assay	3107	190605
B	Calculated		See Sec. 4.2
Mo	ICP Assay	traceable to 3134	U2-MO739068
Si	ICP Assay	Traceable to 3150	S2-SI702546
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	traceable to 3162a	T2-TI725816

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

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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 (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

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4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 12, 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

- August 12, 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 Approved By:

Joseph Burns
Custom VS Manager

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Refine your results. Redefine your industry.

Certificate of Analysis

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Christiansburg, VA 24073 USA
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F: 540-585-3012
info@inorganicventures.com

EXP.: 9/6/2029

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:	V2-MEB746762
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 ± 5 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	1 000 ± 6 µg/mL		

Density: 1.033 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
B	ICP Assay	3107	190605
B	Calculated		See Sec. 4.2
Mo	ICP Assay	traceable to 3134	U2-MO739068
Si	ICP Assay	Traceable to 3150	S2-SI702546
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	traceable to 3162a	T2-TI725816

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

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7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

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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.

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

September 06, 2024

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- September 06, 2029

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Lot Number:	V2-MEB746762
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Value / Analyte(s):	1 000 µg/mL ea: Boron, Molybdenum, Silicon, Tin, Titanium

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Titanium, Ti	1 000 ± 6 µg/mL		

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ANALYTE	METHOD	NIST SRM#	SRM LOT#
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$u_{char\ a}$ = the standard uncertainty of characterization Method A

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

September 06, 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

- September 06, 2029

- The date after which this CRM/RM should not be used.

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12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Joseph Burns
Custom VS Manager

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

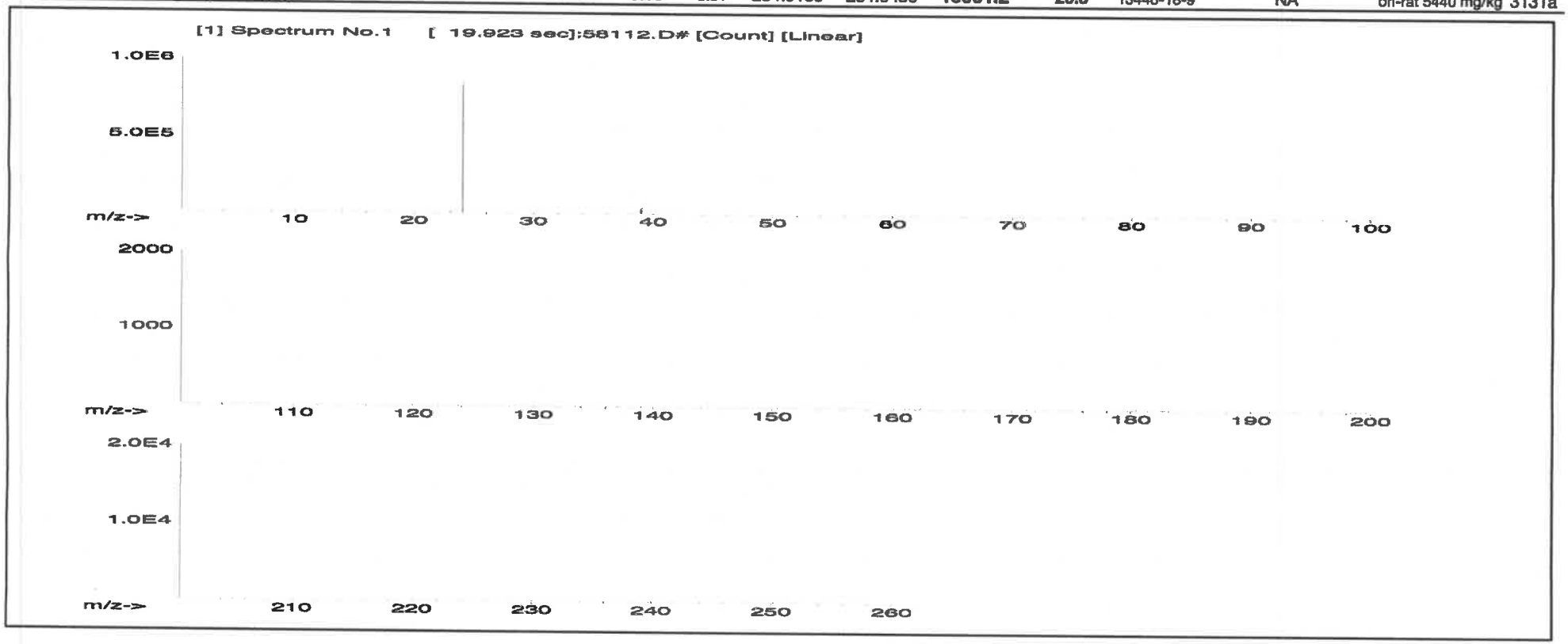
R -> 1/13/25
M 6127

Part Number:	**58112**		**Lot #**		
Lot Number:	**112124**	**Solvent:**	24012496	Nitric Acid	
Description:	**Magnesium (Mg)**	2%	40.0 (mL)	Nitric Acid	
Expiration Date:	112127				
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):	2000.07	0.100	Flask Uncertainty		

Giovanni Esposito

Formulated By:	Giovanni Esposito	112124
Reviewed By:	Pedro L. Rentas	112124

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	234.9183	234.9459	**10001.2**	**20.0**	13446-18-9	NA	orl-rat 5440 mg/kg	3131a



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	T	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

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CERTIFIED WEIGHT REPORT:

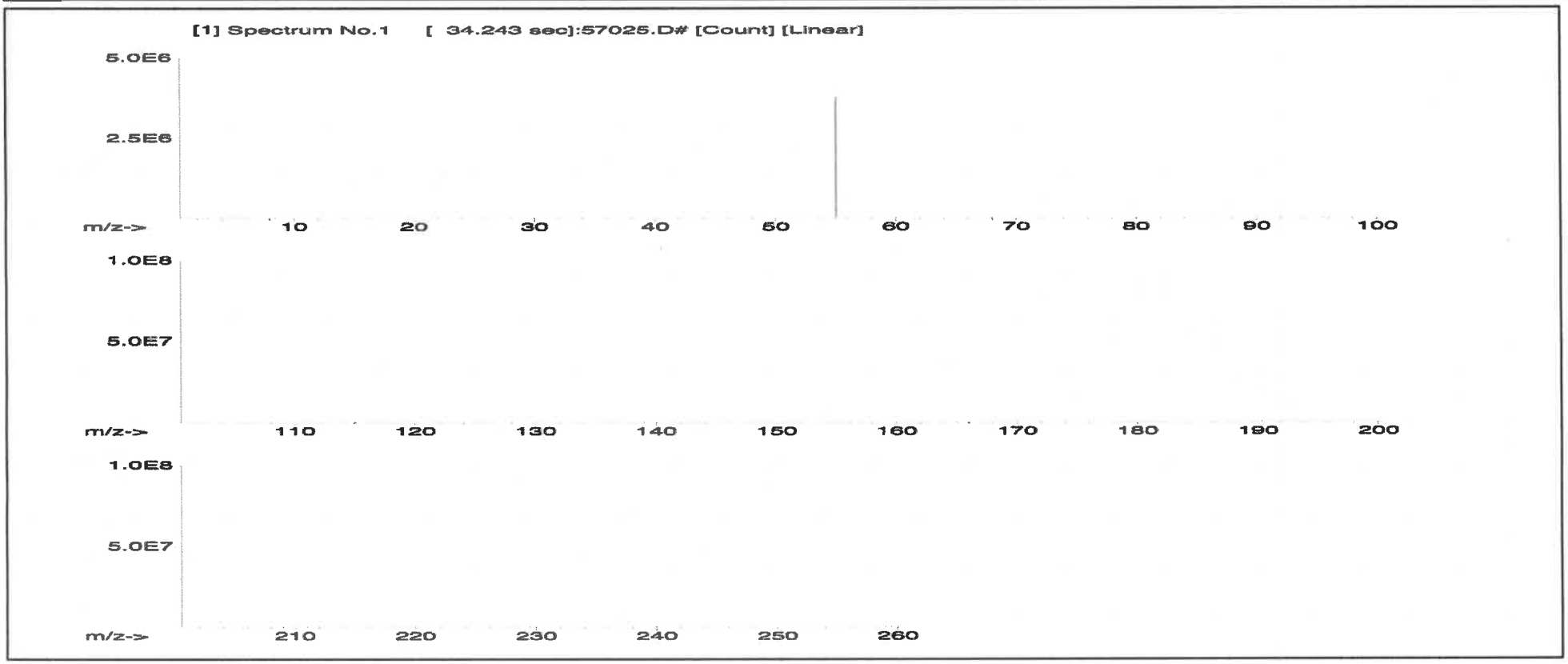
R->1/13/28

M6128

Part Number:	**58025**	**Solvent:**	**Lot #** 24002546	Nitric Acid
Lot Number:	**101124**			
Description:	**Manganese (Mn)**	2%	80.0 (mL)	Nitric Acid
Expiration Date:	101127			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	4000.2	0.10	Flask Uncertainty	

Giovanni Esposito		
Formulated By:	Giovanni Esposito	101124
Pedro Rentas		
Reviewed By:	Pedro L. Rentas	101124

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. Manganese(II) nitrate hydrate (Mn)	IN031	MNM092020A1	1000	99.999	0.10	20.8	19.2322	19.2344	**1000.1**	**2.0**	15710-66-4	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:

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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inorganicventures.com

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F: 540-585-3012
info@inorganicventures.com

M6137 R→10/3/24

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 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSI1
Lot Number:	V2-SI744713
Matrix:	tr. HNO3 tr. HF
Value / Analyte(s):	1 000 µg/mL ea: Silicon
Starting Material:	Silica
Starting Material Lot#:	1771
Starting Material Purity:	99.9981%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 999 ± 6 µg/mL

Density: 1.003 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **999 ± 5 µg/mL**
ICP Assay NIST SRM Traceable to 3150 Lot Number: S2-SI702546

Assay Method #2 **1000 ± 7 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2 (u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000310	M	Eu	<	0.000310	O	Na		0.001656	M	Se	<	0.022000	M	Zn	<	0.002500
M	Al		0.010787	M	Fe	<	0.027000	M	Nb	<	0.001300	s	Si	<		O	Zr	<	0.001900
M	As	<	0.001900	M	Ga	<	0.001300	M	Nd	<	0.000310	M	Sm	<	0.000310				
M	Au	<	0.000910	M	Gd	<	0.000310	M	Ni	<	0.005500	M	Sn		0.000096				
M	B		0.016180	M	Ge	<	0.001900	M	Os	<	0.000610	O	Sr		0.000092				
M	Ba		0.000096	M	Hf		0.000423	i	P	<		M	Ta		0.002542				
O	Be	<	0.000570	M	Hg	<	0.000610	M	Pb	<	0.000310	M	Tb	<	0.000310				
M	Bi	<	0.000310	M	Ho	<	0.000610	M	Pd	<	0.000610	M	Te	<	0.000910				
O	Ca		0.011557	M	In	<	0.000310	M	Pr	<	0.000310	M	Th	<	0.001900				
M	Cd	<	0.000310	M	Ir	<	0.000310	M	Pt	<	0.000310	M	Ti		0.001078				
M	Ce	<	0.000610	O	K		0.000577	M	Rb	<	0.009100	M	Tl	<	0.000310				
M	Co	<	0.001600	M	La	<	0.000310	M	Re	<	0.000310	M	Tm	<	0.000310				
M	Cr	<	0.010000	O	Li	<	0.000460	M	Rh	<	0.000310	M	U	<	0.000310				
M	Cs	<	0.000310	M	Lu	<	0.000310	M	Ru	<	0.000310	O	V	<	0.001300				
M	Cu	<	0.002500	O	Mg		0.001348	O	S	<	0.570000	M	W	<	0.001900				
M	Dy	<	0.000310	M	Mn	<	0.002500	M	Sb	<	0.000310	M	Y	<	0.000310				
M	Er	<	0.000310	M	Mo	<	0.000310	O	Sc	<	0.000590	M	Yb	<	0.000310				

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 - 28.09 +4 6 Si(OH)x(F)y2-

Chemical Compatibility -Soluble in HCl, HF, H3PO4 H2SO4 and HNO3 as the Si(OH)x(F)y2-. 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 silicic acid (silicic acid is soluble up to ∼100 ppm in water) in all dilute acids except HF.

Stability - 2-100 ppb levels - stability unknown - (alone or mixed with all other metals) as the Si(OH)x(F)y2-. 1-10,000 ppm single element solutions as the Si(OH)x(F)y2- chemically stable for years in 2-5 % HNO3 / trace HF in a LDPE container.

Si Containing Samples (Preparation and Solution) -Metal (Soluble in 1:1:1 H2O / HF / HNO3); Oxide - SiO2, amorphic (dissolve by heating in 1:1:1 H2O / HF / HNO3); Oxide - quartz (fuse in Pt0 with Na2CO3); Geological Samples(fuse in Pt0with Na2CO3 followed by HCl solution of the fuseate); Organic Matrices containing silicates and non volatile silicon compounds (dry ash at 4500C in Pt0 and dissolve by gently warming with 1:1:1 H2O / HF / H2SO4 or fuse / ash with Na2CO3 and dissolve fuseate with HCl / H2O); Silicone Oils - dimethyl silicones depolymerize to form volatile monomer units when heated (Measure directly in alcoholic KOH / xylene mixture where sample is treated first with the KOH at 60-1000C to "unzip" the Si- O-Si polymeric structure or digest with conc. H2SO4 / H2O2 followed by cooling and dissolution of the dehydrated silica with HF.) Note that the direct analysis of silicone oils in an organic solvent will result in false high results due to high vapor pressure of volatile monomer units like hexamethylcyclotrisiloxane. The KOH forms the K2+Si(CH3)2O= salt which is not volatile at room temperature.

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 28 amu	4000 - 8000 ppt	N/A	N2, 12C16O
ICP-OES 212.412 nm	0.02/0.01 µg/mL	1	Hf, Os, Mo, Ta
ICP-OES 251.611 nm	0.012/0.003 µg/mL	1	Ta, U, Zn, Th
ICP-OES 288.158 nm	0.03/0.004 µg/mL	1	Ta, Ce, Cr, Cd, Th

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 10, 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

- **July 10, 2029**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Custom Processing Supervisor

Certificate Approved By:

Muzzammil Khan
Stock Laboratory Supervisor

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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M6138
R->1/13/25

CERTIFIED WEIGHT REPORT:

Part Number: 58120
Lot Number: 121824
Description: Calcium (Ca)

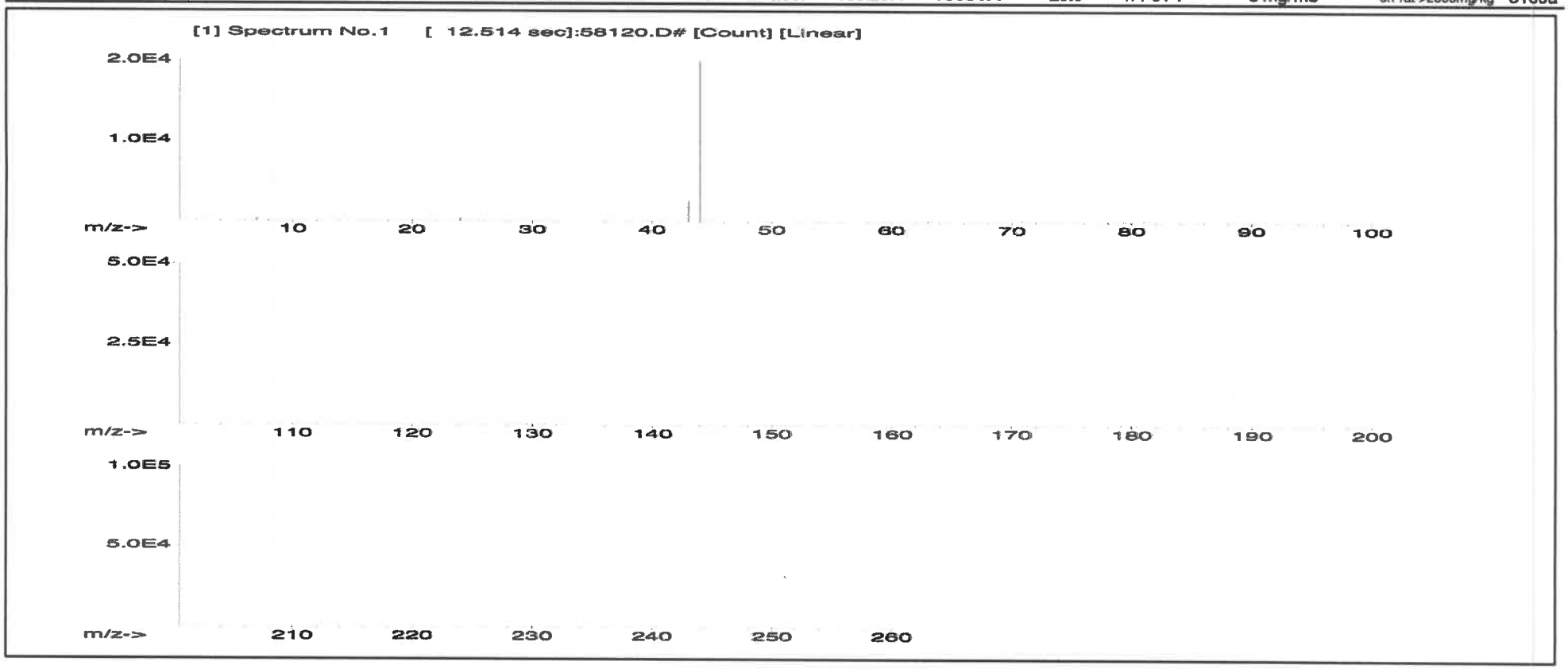
Expiration Date: 121827
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 4000.1

	Lot #			
Solvent:	24012496	Nitric Acid		
2%	80.0 (mL)	Nitric Acid		
			5E-05	Balance Uncertainty
			0.15	Flask Uncertainty

Giovanni Esposito

Formulated By:	Giovanni Esposito	121824
Reviewed By:	Pedro L. Rentas	121824

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	CAD03203B3	10000	99.999	0.10	39.9	100.2537	100.2677	**10001.4**	**20.0**	471-34-1	5 mg/m3	orl-rat >2000mg/kg	3109a



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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	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	30	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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Part # **58120** Lot # **121824**

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CERTIFIED WEIGHT REPORT:

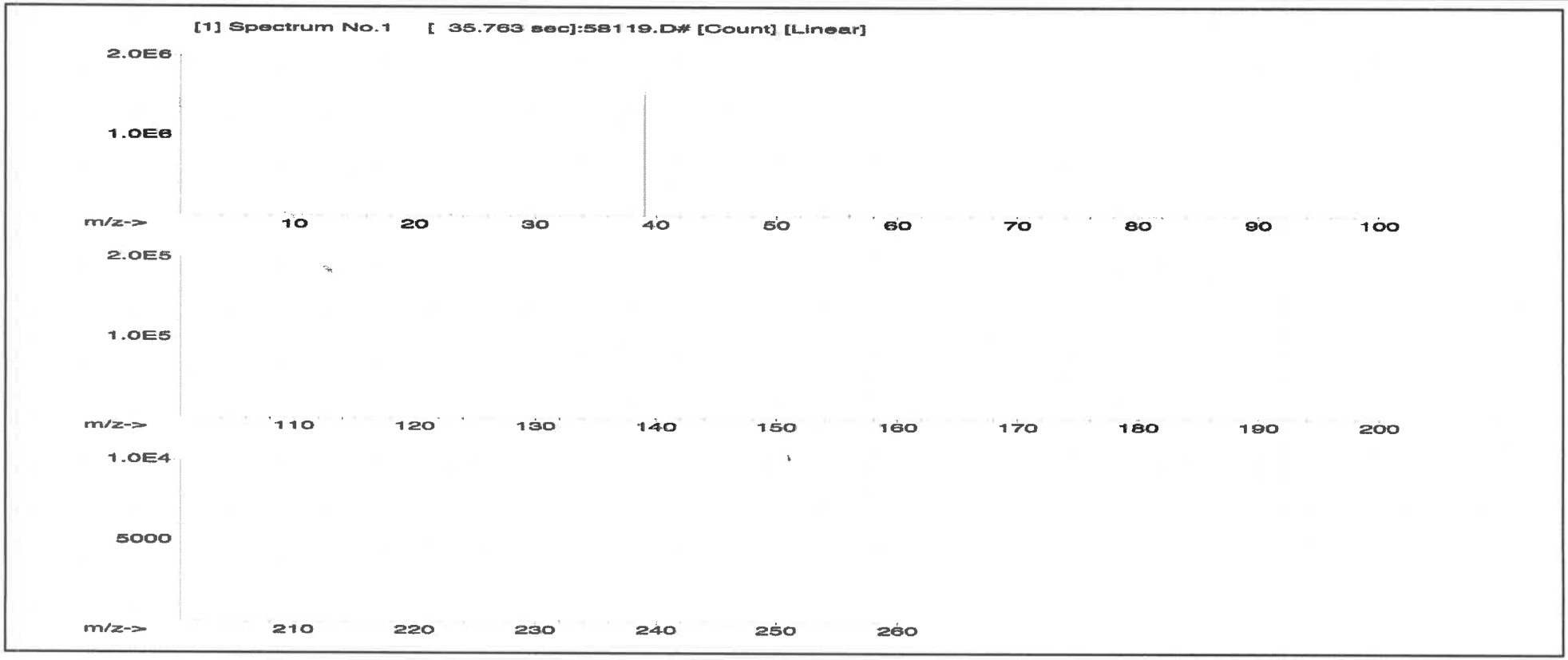
R-> 1/13/25

Part Number:	**57119**		**Lot #**		
Lot Number:	**103024**	**Solvent:**	24002546	Nitric Acid	
Description:	**Potassium (K)**	2%	80.0 (mL)	Nitric Acid	
Expiration Date:	103027				
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):	4000.1	0.15	Flask Uncertainty		

M6141
M6142
M6143

Giovanni Esposito	
Formulated By:	Giovanni Esposito 103024
Pedro Rentas	
Reviewed By:	Pedro L. Rentas 103024

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	KD062022A1	10000	99.999	0.10	37.7	106.1040	######	**10001.1**	**20.0**	7757-79-1	5 mg/m3	orl-rat 3750 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).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

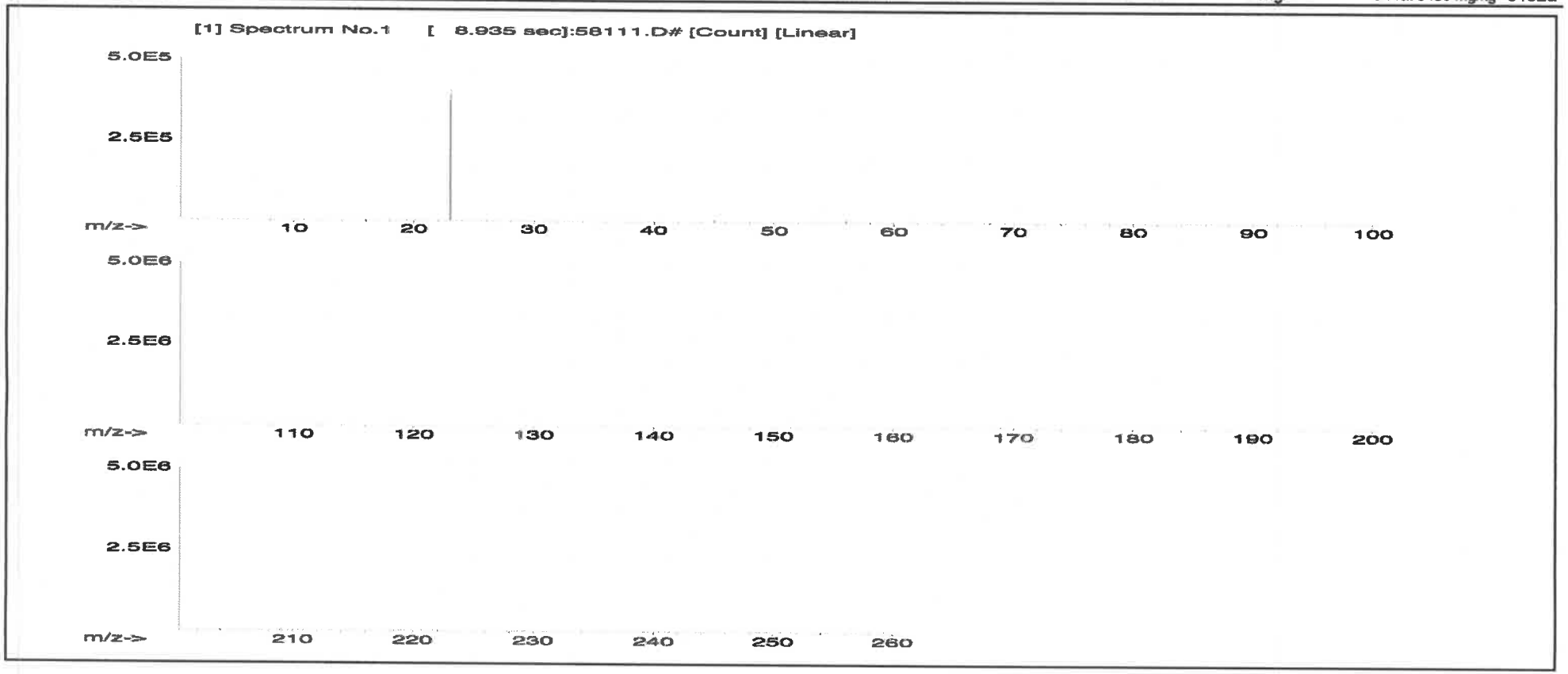
R->1/13/25

MG144

Part Number:	**58111**		**Lot #**		
Lot Number:	**072424**	**Solvent:**	24002546	Nitric Acid	
Description:	**Sodium (Na)**	2%	80.0 (mL)	Nitric Acid	
Expiration Date:	072427				
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):	4000.2	0.10	Flask Uncertainty		

Formulated By:	Benson Chan	072424
Reviewed By:	Pedro L. Rentas	072424

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	148.7096	######	**10000.0**	**20.0**	7631-99-4	5 mg/m3	orl-rat 3430 mg/kg	3152a



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	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	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:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
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Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 58030
Lot Number: 121724
Description: Zinc (Zn)

R → 1/13/25

M6145

Expiration Date: 121727
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.1

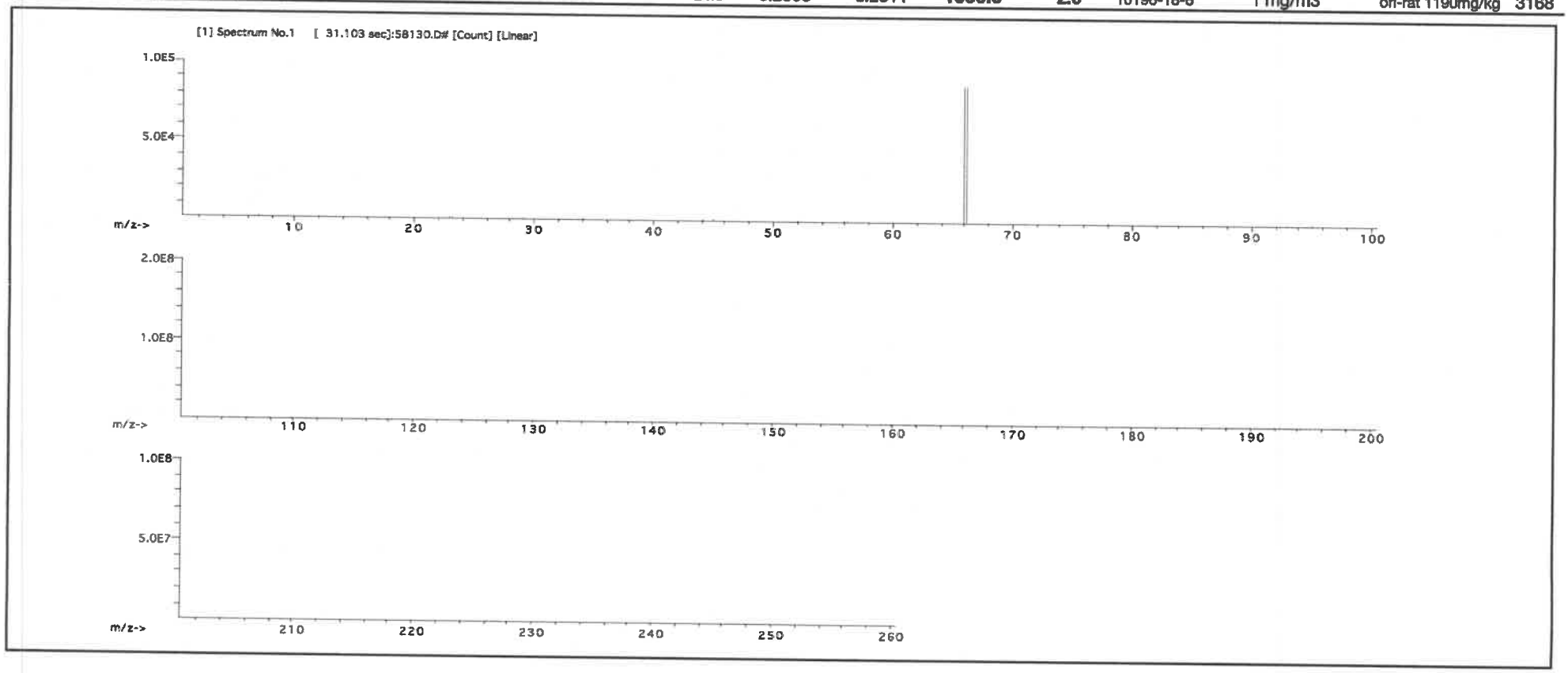
	Lot #	
Solvent:	24012496	Nitric Acid
2%	40.0 (mL)	Nitric Acid

5E-05 Balance Uncertainty
0.10 Flask Uncertainty

Aleah O'Brady
Formulated By: Aleah O'Brady 121724

Reviewed By: Pedro L. Rentas 121724

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	8.2308	8.2311	**1000.0**	**2.0**	10196-18-6	1 mg/m3	ori-rat 1190mg/kg	3168



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www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	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:

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).

R : 4/20/21

QATS LABORATORY INORGANIC REFERENCE MATERIAL INITIAL CALIBRATION VERIFICATION SOLUTIONS (ICV1, ICV5, AND ICV6)

M6150

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

(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

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

M6151

R→ 1/15/25

Material No.: 9530-33
Batch No.: 22G2862015
Manufactured Date: 2022-06-15
Retest Date: 2027-06-14
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
ACS – Assay (as HCl) (by acid-base titrn)	36.5 – 38.0 %	37.9 %
ACS – Color (APHA)	≤ 10	5
ACS – Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS – Specific Gravity at 60°/60°F	1.185 – 1.192	1.191
ACS – Bromide (Br)	≤ 0.005 %	< 0.005 %
ACS – Extractable Organic Substances	≤ 5 ppm	< 1 ppm
ACS – Free Chlorine (as Cl_2)	≤ 0.5 ppm	< 0.5 ppm
Phosphate (PO_4)	≤ 0.05 ppm	< 0.03 ppm
Sulfate (SO_4)	≤ 0.5 ppm	< 0.3 ppm
Sulfite (SO_3)	≤ 0.8 ppm	0.3 ppm
Ammonium (NH_4)	≤ 3 ppm	< 1 ppm
Trace Impurities – Arsenic (As)	≤ 0.010 ppm	< 0.003 ppm
Trace Impurities – Aluminum (Al)	≤ 10.0 ppb	1.3 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 3.0 ppb
Trace Impurities – Barium (Ba)	≤ 1.0 ppb	0.2 ppb
Trace Impurities – Beryllium (Be)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Bismuth (Bi)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Boron (B)	≤ 20.0 ppb	< 5.0 ppb
Trace Impurities – Cadmium (Cd)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities – Calcium (Ca)	≤ 50.0 ppb	163.0 ppb
Trace Impurities – Chromium (Cr)	≤ 1.0 ppb	0.7 ppb
Trace Impurities – Cobalt (Co)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities – Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities – Gallium (Ga)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Germanium (Ge)	≤ 3.0 ppb	< 2.0 ppb
Trace Impurities – Gold (Au)	≤ 4.0 ppb	0.6 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities – Iron (Fe)	≤ 15 ppb	6 ppb

>>> Continued on page 2 >>>

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

Material No.: 9530-33
Batch No.: 22G2862015

Test	Specification	Result
Trace Impurities – Lead (Pb)	≤ 1.0 ppb	< 0.5 ppb
Trace Impurities – Lithium (Li)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Magnesium (Mg)	≤ 10.0 ppb	2.9 ppb
Trace Impurities – Manganese (Mn)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities – Mercury (Hg)	≤ 0.5 ppb	0.1 ppb
Trace Impurities – Molybdenum (Mo)	≤ 10.0 ppb	< 3.0 ppb
Trace Impurities – Nickel (Ni)	≤ 4.0 ppb	< 0.3 ppb
Trace Impurities – Niobium (Nb)	≤ 1.0 ppb	0.8 ppb
Trace Impurities – Potassium (K)	≤ 9.0 ppb	< 2.0 ppb
Trace Impurities – Selenium (Se), For Information Only		< 1.0 ppb
Trace Impurities – Silicon (Si)	≤ 100.0 ppb	< 10.0 ppb
Trace Impurities – Silver (Ag)	≤ 1.0 ppb	0.5 ppb
Trace Impurities – Sodium (Na)	≤ 100.0 ppb	2.3 ppb
Trace Impurities – Strontium (Sr)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Tantalum (Ta)	≤ 1.0 ppb	1.6 ppb
Trace Impurities – Thallium (Tl)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities – Tin (Sn)	≤ 5.0 ppb	4.0 ppb
Trace Impurities – Titanium (Ti)	≤ 1.0 ppb	1.5 ppb
Trace Impurities – Vanadium (V)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Zinc (Zn)	≤ 5.0 ppb	0.8 ppb
Trace Impurities – Zirconium (Zr)	≤ 1.0 ppb	0.3 ppb

>>> Continued on page 3 >>>

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

Material No.: 9530-33
Batch No.: 22G2862015

Test	Specification	Result

For Laboratory,Research,or Manufacturing Use
Product Information (not specifications):
Appearance (clear, fuming liquid)
Meets ACS Specifications
Storage Condition: Store below 25 °C.

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

James T Ethier

Jamie Ethier
Vice President Global Quality

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

R-02102/2025

M-6158

Material No.: 9606-03
Batch No.: 24D1062002
Manufactured Date: 2024-03-26
Retest Date: 2029-03-25
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (HNO_3)	69.0 - 70.0 %	69.7 %
Appearance	Passes Test	Passes Test
Color (APHA)	≤ 10	5
Residue after Ignition	≤ 2 ppm	1 ppm
Chloride (Cl)	≤ 0.08 ppm	< 0.03 ppm
Phosphate (PO_4)	≤ 0.10 ppm	< 0.03 ppm
Sulfate (SO_4)	≤ 0.2 ppm	< 0.2 ppm
Trace Impurities - Aluminum (Al)	≤ 40.0 ppb	< 1.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities - Barium (Ba)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Beryllium (Be)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Bismuth (Bi)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Boron (B)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities - Cadmium (Cd)	≤ 50 ppb	< 1 ppb
Trace Impurities - Calcium (Ca)	≤ 50.0 ppb	2.3 ppb
Trace Impurities - Chromium (Cr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities - Cobalt (Co)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Copper (Cu)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Gallium (Ga)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Germanium (Ge)	≤ 20 ppb	< 10 ppb
Trace Impurities - Gold (Au)	≤ 20 ppb	< 5 ppb
Heavy Metals (as Pb)	≤ 100 ppb	100 ppb
Trace Impurities - Iron (Fe)	≤ 40.0 ppb	< 1.0 ppb
Trace Impurities - Lead (Pb)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Lithium (Li)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Magnesium (Mg)	≤ 20 ppb	< 1 ppb
Trace Impurities - Manganese (Mn)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Nickel (Ni)	≤ 20.0 ppb	< 5.0 ppb

>>> Continued on page 2 >>>

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24D1062002

Test	Specification	Result
Trace Impurities - Niobium (Nb)	≤ 50.0 ppb	< 1.0 ppb
Trace Impurities - Potassium (K)	≤ 50 ppb	16 ppb
Trace Impurities - Silicon (Si)	≤ 50 ppb	< 10 ppb
Trace Impurities - Silver (Ag)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities - Sodium (Na)	≤ 150.0 ppb	< 5.0 ppb
Trace Impurities - Strontium (Sr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities - Tantalum (Ta)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities - Thallium (Tl)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities - Tin (Sn)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Titanium (Ti)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Vanadium (V)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Zinc (Zn)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities - Zirconium (Zr)	≤ 10.0 ppb	< 1.0 ppb
Particle Count - 0.5 µm and greater	≤ 60 par/ml	10 par/ml
Particle Count - 1.0 µm and greater	≤ 10 par/ml	3 par/ml

>>> Continued on page 3 >>>

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24D1062002

Test	Specification	Result

For Microelectronic Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Jamie Croak
Director Quality Operations, Biosciences Production

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

M-6162

R. Date :- 04/27/2025

Material No.: 9606-03
Batch No.: 24H0162012
Manufactured Date: 2024-06-28
Retest Date: 2029-06-27
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	< 1.0 ppb
Trace Impurities – Boron (B)	≤ 10.0 ppb	0.1 ppb
Trace Impurities – Cadmium (Cd)	≤ 50 ppb	< 1 ppb
Trace Impurities – Calcium (Ca)	≤ 50.0 ppb	0.3 ppb
Trace Impurities – Chromium (Cr)	≤ 30.0 ppb	0.1 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	< 1 ppb
Trace Impurities – Gold (Au)	≤ 20 ppb	< 1 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities – Iron (Fe)	≤ 40.0 ppb	< 1.0 ppb
Trace Impurities – Lead (Pb)	≤ 20.0 ppb	< 1.0 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	< 1.0 ppb

>>> Continued on page 2 >>>

For questions on this Certificate of Analysis please contact Technical Services at 855 282 6867 or +1 610 386 1700

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24H0162012

Test	Specification	Result
Trace Impurities - Niobium (Nb)	≤ 50.0 ppb	< 1.0 ppb
Trace Impurities - Potassium (K)	≤ 50 ppb	< 1 ppb
Trace Impurities - Silicon (Si)	≤ 50 ppb	1 ppb
Trace Impurities - Silver (Ag)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities - Sodium (Na)	≤ 150.0 ppb	< 1.0 ppb
Trace Impurities - Strontium (Sr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities - Tantalum (Ta)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Thallium (Tl)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Tin (Sn)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities - Titanium (Ti)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Vanadium (V)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Zinc (Zn)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities - Zirconium (Zr)	≤ 10.0 ppb	< 1.0 ppb
Particle Count - 0.5 µm and greater	≤ 60 par/ml	13 par/ml
Particle Count - 1.0 µm and greater	≤ 10 par/ml	5 par/ml

>>> Continued on page 3 >>>

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24H0162012

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

M6030

R: 8/5/24

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

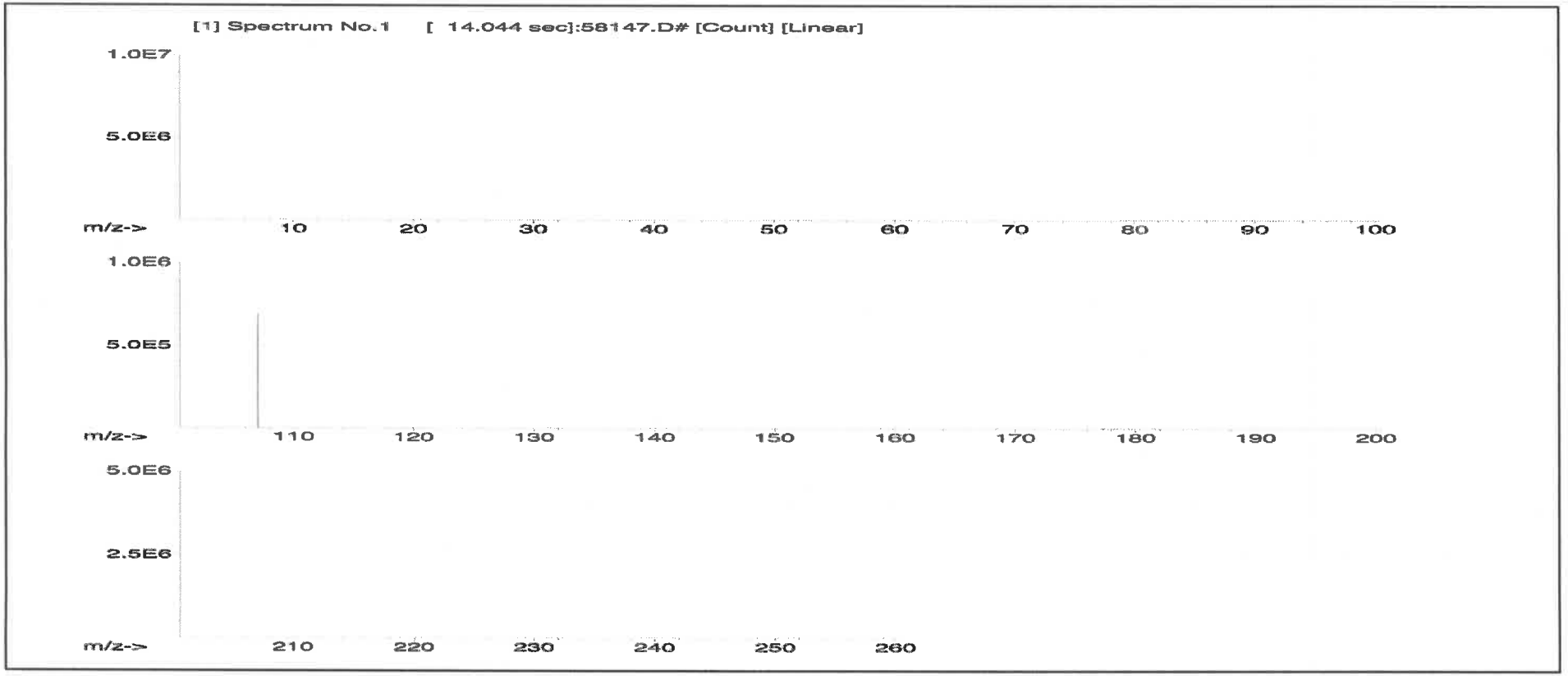
Part Number: 57047
Lot Number: 122823
Description: Silver (Ag)

Expiration Date: 122826
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 4000.30

	Lot #		
Solvent:	24002546	Nitric Acid	
2%	80.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	
	0.058	Flask 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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Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	T	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

R: 10/18/24

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

MG146

		Lot #	Solvent:	
Part Number:	**57051**	24002546	Nitric Acid	
Lot Number:	**071724**			
Description:	**Antimony (Sb)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	071727			
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):	2000.26	0.058	Flask Uncertainty	

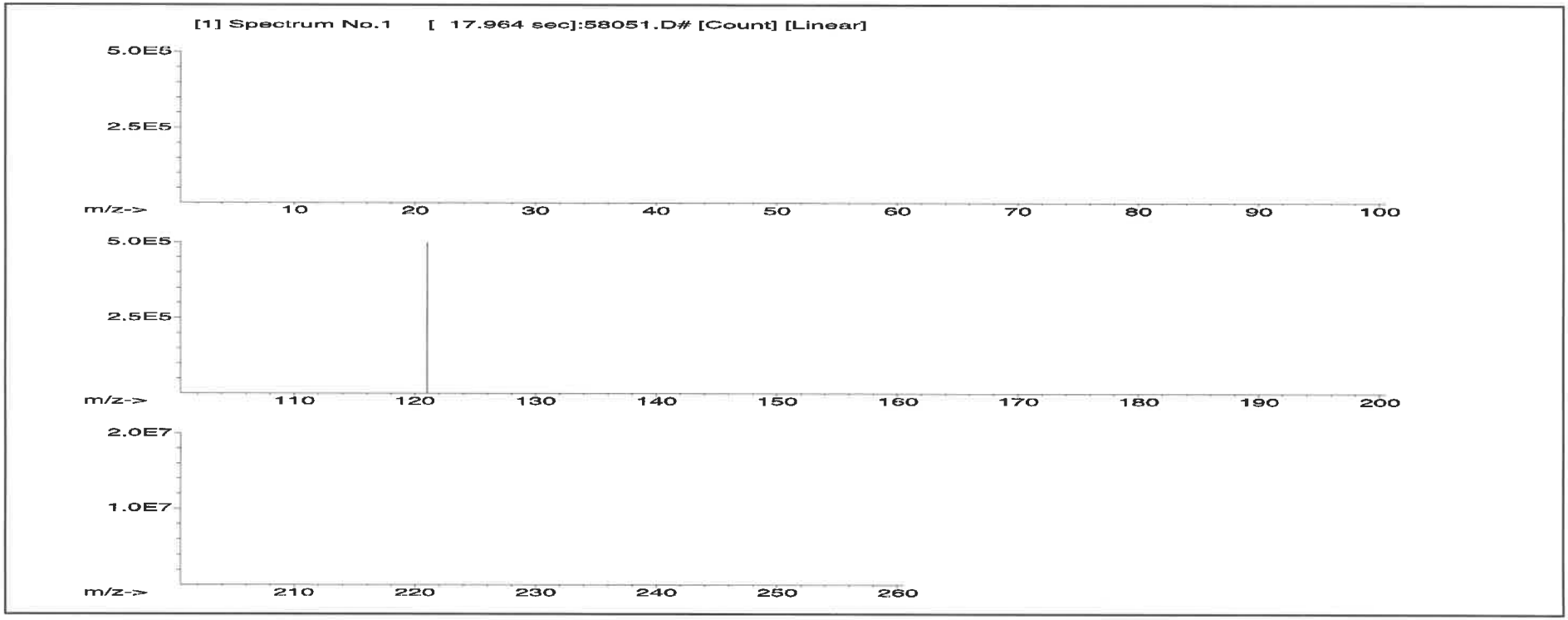
Giovanni Esposito

Formulated By:	Giovanni Esposito	071724

Pedro Rentas

Reviewed By:	Pedro L. Rentas	071724

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	060324	0.1000	200.0	0.084	1000	10001.4	**1000.0**	**2.2**	7440-36-0	0.5 mg/m3	orl-rat 7000 mg/kg	3102a



Absolute Standards, Inc.
800-368-1131
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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	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	T	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* 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).

APTIM

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
"An ISO 9001:2015 Certified Program"

Instructions for QATS Reference Material: *ICP-AES ICS*

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.

M6152

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,

The Quality Assurance Technical Support (QATS) contract is operated by APTIM Federal Services, LLC.

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

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.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
"An ISO 9001:2015 Certified Program"

APTIM

Instructions for QATS Reference Material: *ICP-AES ICS*

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.

M6155

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

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.

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

R: 8/5/24 M6019

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 885.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSR1
Lot Number:	U2-SR730227
Matrix:	0.1% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Strontium
Starting Material:	SrCO3
Starting Material Lot#:	M2-2192
Starting Material Purity:	99.9993%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1001 ± 3 µg/mL

Density: 1.000 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **998 ± 4 µg/mL**
ICP Assay NIST SRM Traceable to 3153a Lot Number: K2-SR650985

Assay Method #2 **1001 ± 3 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **1001 ± 2 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	<	0.001980	M	Eu	<	0.000495	O	Na		0.000200	M	Se	<	0.013862	O	Zn		0.000143
O	Al		0.000370	O	Fe		0.000410	M	Nb	<	0.000495	i	Si	<		M	Zr	<	0.000495
M	As	<	0.000495	M	Ga	<	0.000495	M	Nd	<	0.000495	M	Sm	<	0.000495				
M	Au	<	0.000989	M	Gd	<	0.000495	O	Ni	<	0.007631	M	Sn	<	0.000990				
M	B	<	0.039606	M	Ge	<	0.000495	M	Os	<	0.000494	s	Sr	<					
M	Ba		0.006486	M	Hf	<	0.000495	i	P	<		M	Ta	<	0.000495				
M	Be	<	0.000990	M	Hg	<	0.000989	M	Pb	<	0.002970	M	Tb	<	0.000495				
M	Bi	<	0.000495	M	Ho	<	0.000495	M	Pd	<	0.003957	M	Te	<	0.027724				
O	Ca		0.004255	M	In	<	0.000495	M	Pr	<	0.000495	M	Th	<	0.000990				
M	Cd		0.001339	M	Ir	<	0.000494	M	Pt	<	0.002970	M	Ti	<	0.005940				
M	Ce	<	0.004950	O	K	<	0.008184	M	Rb	<	0.002970	M	Tl	<	0.000495				
M	Co	<	0.000495	M	La	<	0.000495	M	Re	<	0.000495	M	Tm	<	0.000495				
O	Cr	<	0.003207	O	Li	<	0.000884	O	Rh	<	0.012829	M	U	<	0.001485				
M	Cs	<	0.000990	M	Lu	<	0.002970	M	Ru	<	0.000989	M	V	<	0.001980				
M	Cu		0.000099	O	Mg		0.000064	i	S	<		M	W	<	0.003960				
M	Dy	<	0.000495	O	Mn		0.000066	M	Sb	<	0.014852	O	Y	<	0.000995				
M	Er	<	0.000495	M	Mo	<	0.001980	M	Sc	<	0.001980	M	Yb	<	0.000495				

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 - 87.62 +2 6 $Sr(H_2O)_{6}^{+2}$

Chemical Compatibility - Soluble in HCl, and HNO_3. Avoid H_2SO_4, HF and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicate, carbonate, hydroxide, oxide, fluoride, sulfate, oxalate, chromate, arsenate and tungstate in neutral aqueous media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1 - 3.5% HNO_3 / LDPE container.

Sr Containing Samples (Preparation and Solution) -Metal (Best dissolved in diluted HNO_3); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (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 88 amu	1200 ppt	N/A	72Ge16O, 176Yb+2, 176Lu+2 , 176Hf+2
ICP-OES 407.771 nm	0.0004 / 0.00006 µg/mL	1	U, Ce
ICP-OES 421.552 nm	0.0008 / 0.00004 µg/mL	1	Rb
ICP-OES 460.733 nm	0.07 / 0.003 µg/mL	1	Ce

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 03, 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 03, 2028**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

R: 8/5/24 M6019

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

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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 885.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSR1
Lot Number:	U2-SR730227
Matrix:	0.1% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Strontium
Starting Material:	SrCO3
Starting Material Lot#:	M2-2192
Starting Material Purity:	99.9993%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1001 ± 3 µg/mL

Density: 1.000 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **998 ± 4 µg/mL**
ICP Assay NIST SRM Traceable to 3153a Lot Number: K2-SR650985

Assay Method #2 **1001 ± 3 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **1001 ± 2 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	<	0.001980	M	Eu	<	0.000495	O	Na		0.000200	M	Se	<	0.013862	O	Zn		0.000143
O	Al		0.000370	O	Fe		0.000410	M	Nb	<	0.000495	i	Si	<		M	Zr	<	0.000495
M	As	<	0.000495	M	Ga	<	0.000495	M	Nd	<	0.000495	M	Sm	<	0.000495				
M	Au	<	0.000989	M	Gd	<	0.000495	O	Ni	<	0.007631	M	Sn	<	0.000990				
M	B	<	0.039606	M	Ge	<	0.000495	M	Os	<	0.000494	s	Sr	<					
M	Ba		0.006486	M	Hf	<	0.000495	i	P	<		M	Ta	<	0.000495				
M	Be	<	0.000990	M	Hg	<	0.000989	M	Pb	<	0.002970	M	Tb	<	0.000495				
M	Bi	<	0.000495	M	Ho	<	0.000495	M	Pd	<	0.003957	M	Te	<	0.027724				
O	Ca		0.004255	M	In	<	0.000495	M	Pr	<	0.000495	M	Th	<	0.000990				
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O	Cr	<	0.003207	O	Li	<	0.000884	O	Rh	<	0.012829	M	U	<	0.001485				
M	Cs	<	0.000990	M	Lu	<	0.002970	M	Ru	<	0.000989	M	V	<	0.001980				
M	Cu		0.000099	O	Mg		0.000064	i	S	<		M	W	<	0.003960				
M	Dy	<	0.000495	O	Mn		0.000066	M	Sb	<	0.014852	O	Y	<	0.000995				
M	Er	<	0.000495	M	Mo	<	0.001980	M	Sc	<	0.001980	M	Yb	<	0.000495				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

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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.

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- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 87.62 +2 6 $Sr(H_2O)_{6}^{+2}$

Chemical Compatibility - Soluble in HCl, and HNO_3. Avoid H_2SO_4, HF and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicate, carbonate, hydroxide, oxide, fluoride, sulfate, oxalate, chromate, arsenate and tungstate in neutral aqueous media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1 - 3.5% HNO_3 / LDPE container.

Sr Containing Samples (Preparation and Solution) -Metal (Best dissolved in diluted HNO_3); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (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 88 amu	1200 ppt	N/A	72Ge16O, 176Yb+2, 176Lu+2 , 176Hf+2
ICP-OES 407.771 nm	0.0004 / 0.00006 µg/mL	1	U, Ce
ICP-OES 421.552 nm	0.0008 / 0.00004 µg/mL	1	Rb
ICP-OES 460.733 nm	0.07 / 0.003 µg/mL	1	Ce

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 03, 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 03, 2028**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M6023

R ! 8/5/24

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

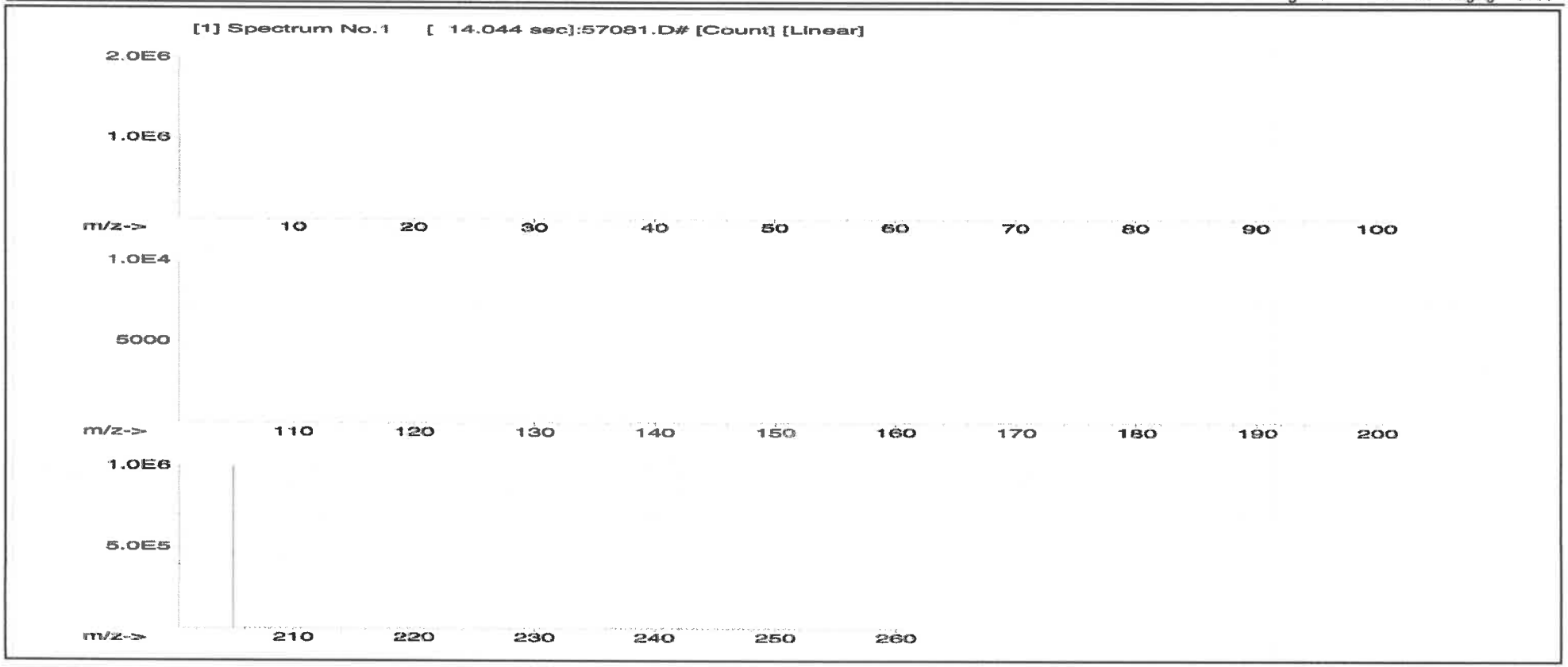
CERTIFIED WEIGHT REPORT:

Part Number:	**57081**			**Lot #**	
Lot Number:	**062724**		**Solvent:**	24002546	Nitric Acid
Description:	**Thallium (Tl)**				
			2%	40.0 (mL)	Nitric Acid
Expiration Date:	062727				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.1	0.10	Flask Uncertainty		

Aleah O'Brady

Formulated By:	Aleah O'Brady	062724
Reviewed By:	Pedro L. Rentas	062724

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Thallium nitrate (Tl)	IN037	BCCF4399	1000	99.999	0.10	77.0	2.5975	2.5977	**1000.1**	**2.0**	10102-45-1	0.1 mg/m3	orl-mus 15mg/kg	3158



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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	T	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M6021

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Rc. 8/5/24

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57023**			
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	

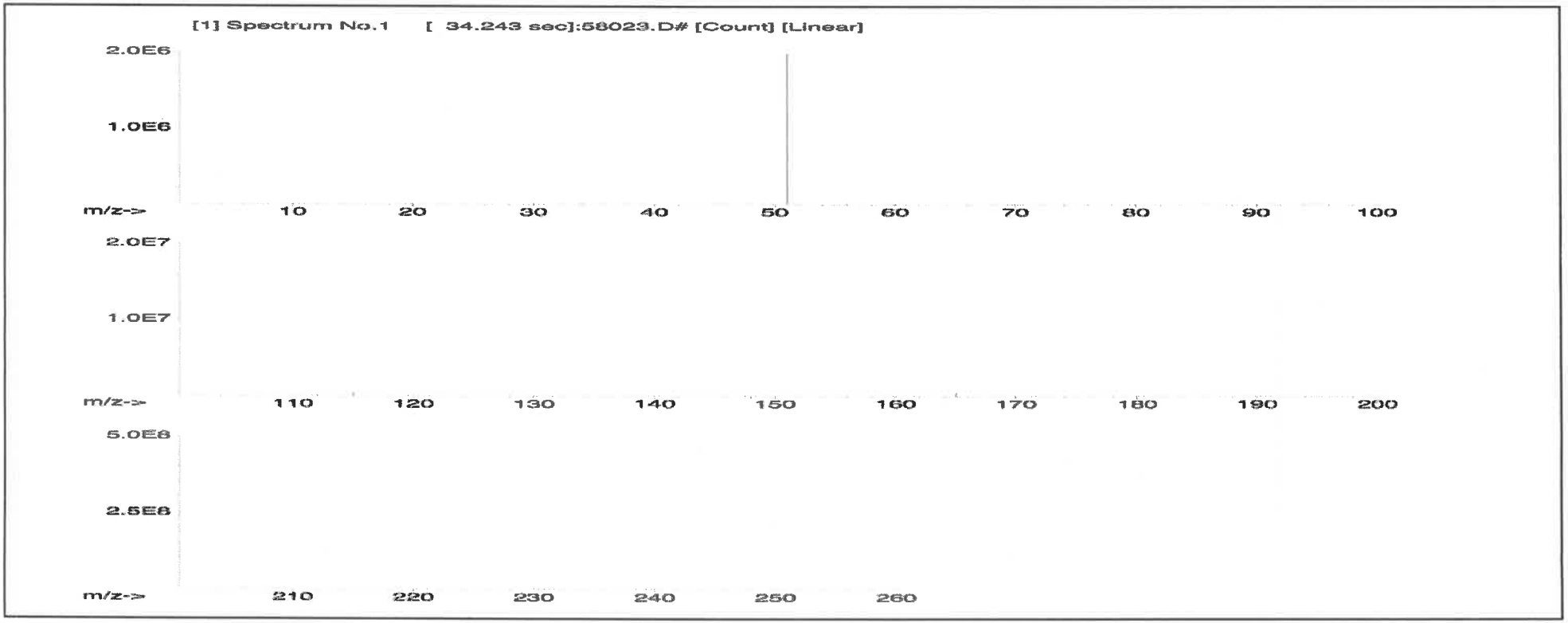
Aleah O'Brady

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



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	T
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

SHIPPING DOCUMENTS

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Certified Reference Materials

Packing List

Date	Order #
04/21/2025	333293

6390 Joyce Dr., #100
Golden, CO 80403

Tel: +1-303-940-0033
Fax: +1-303-940-0043
info@phenova.com
www.phenova.com

Received by: SJ
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Ship To

Alliance Tech Group - Newark
ATTN: Sohil Jodhani
284 Sheffield St., #1
Mountainside, NJ 07092
USA

Customer PO #	Terms	PT Acct #	Customer #	Ship Via	F.O.B.
PO2-1668	Net 30	ZCM-100	1500470	FedEx Collect 2nd Day	Golden, CO

Qty Ordered	Qty Shipped	Qty Backorder	Part Number	Part Description	Study Number	Lot Number
1	1	0	PT-MET-SOIL	SOIL/HW Trace Metals	HW0425	7100-04
1	1	0	PT-CR6-SOIL	SOIL/HW Hexavalent Chromium	HW0425	7100-05B
1	1	0	PT-CN-SOIL	SOIL/HW Cyanide	HW0425	7100-06
1	1	0	PT-CORR-SOIL	SOIL/HW Corrosivity/pH	HW0425	7100-11
1	1	0	PT-FP-SOIL	SOIL/HW Flash Point	HW0425	7100-10
1	1	0	PT-AN-SOIL	SOIL/HW Anions	HW0425	7100-08
1	1	0	PT-NUT-SOIL	SOIL/HW Nutrients	HW0425	7100-09B
1	1	0	PT-SOL-SOIL	SOIL/HW Solids	HW0425	7100-31
1	1	0	PT-NO2-SOIL	SOIL/HW Nitrite as N	HW0425	7100-71
1	1	0	PT-GAS-SOIL	SOIL/HW Gasoline	HW0425	7100-96
1	1	0	PT-OGR-SOIL	SOIL/HW Oil and Grease	HW0425	7100-94
1	1	0	PT-VOA-SOIL	SOIL/HW Volatiles	HW0425	7100-12
1	1	0	PT-BNA-SOIL	SOIL/HW BNAs	HW0425	7100-13
1	1	0	PT-PEST-SOIL	SOIL/HW Pesticides	HW0425	7100-14
1	1	0	PT-CHLR-SOIL	SOIL/HW Chlordane	HW0425	7100-15
1	1	0	PT-TXP-SOIL	SOIL/HW Toxaphene	HW0425	7100-16
1	1	0	PT-PCB-SOIL	SOIL/HW PCBs	HW0425	7100-17
1	1	0	PT-PCBO-SOIL	SOIL/HW PCBs in Oil	HW0425	7100-88
1	1	0	PT-HERB-SOIL	SOIL/HW Herbicides	HW0425	7100-18
1	1	0	PT-PAH-SOIL	SOIL/HW PAHs	HW0425	7100-22
1	1	0	PT-TRIAZINE-SOIL	SOIL/HW Triazine Pesticides	HW0425	7100-106
1	1	0	PT-NJEPH-SOIL	NJ EPH in SOIL	HW0425	7100-105

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Packing List

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04/25/2025	337220

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Golden, CO 80403

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Ship To

Alliance Tech Group - Newark
ATTN: Sohil Jodhani
284 Sheffield St., #1
Mountainside, NJ 07092
USA

Received by: SJ
4/28/2025 9:40

Customer PO #	Terms	PT Acct #	Customer #	Ship Via	F.O.B.
CPR	Net 30	ZCM-100	1500470	FedEx Next Day	Golden, CO

Qty Ordered	Qty Shipped	Qty Backorder	Part Number	Part Description	Study Number	Lot Number
1	1	0	PT-DIES-SOIL	SOIL/HW Diesel in Soil	HW0425	7100-100

284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Laboratory Certification

Certified By	License No.
CAS EPA CLP Contract	68HERH20D0011
Connecticut	PH-0830
DOD ELAP (ANAB)	L2219
Maine	2024021
Maryland	296
New Hampshire	255424 Rev 1
New Jersey	20012
New York	11376
Pennsylvania	68-00548
Soil Permit	525-24-234-08441
Texas	T104704488