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

DATA PACKAGE

METALS

PROJECT NAME : RAYMARK SUPERFUND SITE

NOBIS GROUP

585 Middlesex Street

Lowell, MA - 01851

Phone No: 978-683-0891

ORDER ID : Q2879

ATTENTION : Adam Roy

Laboratory Certification ID # 20012

Table Of Contents for Q2879

1) METALS DATA 2

2) Signature Page 4

3) Case Narrative 5

4) Qualifier Page 7

5) Conformance/Non Conformance 8

6) QA Checklist 10

7) Chronicle 11

8) Hit Summary 14

9) Sample Data 20

- 9.1) OU4-TS-GRILLO-TSCP03-081425 21
- 9.2) OU4-TS-GRILLO-TSCP04-081425 22
- 9.3) OU4-TS-GRILLO-TSCP05-081425 23
- 9.4) OU4-TS-GRILLO-TSCP06-081425 24
- 9.5) OU4-TS-GRILLO-TSCP07-081425 25
- 9.6) OU4-TS-GRILLO-TSCP08-081425 26
- 9.7) OU4-TS-GRILLO-TSCP09-081425 27
- 9.8) OU4-TS-GRILLO-TSCP10-081425 28
- 9.9) OU4-TS-GRILLO-TSCP11-081425 29

10) METALS CALIBRATION DATA 30

- 10.1) Initial and Continuing Calibration Verification 31
- 10.2) CRDL Standard For AA & ICP 40
- 10.3) Initial and Continuing Calibration Blank Summary 41
- 10.4) Preparation Blank Summary 48
- 10.5) Interference Check Sample 50

11) METALS QC DATA 52

- 11.1) Matrix Spike Summary 53
- 11.2) Post Digest Spike Summary 55
- 11.3) Duplicate Sample Summary 56
- 11.4) Laboratory Control Sample Summary 58
- 11.5) ICP Serial Dilutions 60

12) METALS PREPARATION & INSTRUMENT DATA 61

- 12.1) ICP Interelement Correction Factors 62

13) PREPARATION & ANALYTICAL SUMMARY 67

- 13.1) Sample Preparation Summary 68
- 13.2) Analysis Run Log 70

14) METALS RAW DATA 73
14.1) METALS RAW DATA - ANALYTICAL 74
14.2) LB136886 74
14.3) LB136858 278
14.4) METALS RAW DATA - PREP 280
14.4.1) PB169280 280
14.4.2) PB169281 283
15) Percent Solid 286
16) Analytical Runlogs 289
17) Standard Prep Logs 297
18) Shipping Document 473
18.1) Chain Of Custody 474
18.2) Lab Certificate 475
18.3) Internal COC 476

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

Cover Page

Order ID : Q2879

Project ID : Raymark Superfund Site

Client : Nobis Group

Lab Sample Number	Client Sample Number
Q2879-01	OU4-TS-GRILLO-TSCP03-081425
Q2879-02	OU4-TS-GRILLO-TSCP03-081425
Q2879-03	OU4-TS-GRILLO-TSCP04-081425
Q2879-04	OU4-TS-GRILLO-TSCP04-081425
Q2879-05	OU4-TS-GRILLO-TSCP05-081425
Q2879-06	OU4-TS-GRILLO-TSCP05-081425
Q2879-07	OU4-TS-GRILLO-TSCP06-081425
Q2879-08	OU4-TS-GRILLO-TSCP06-081425
Q2879-09	OU4-TS-GRILLO-TSCP07-081425
Q2879-10	OU4-TS-GRILLO-TSCP07-081425
Q2879-11	OU4-TS-GRILLO-TSCP08-081425
Q2879-12	OU4-TS-GRILLO-TSCP08-081425
Q2879-13	OU4-TS-GRILLO-TSCP09-081425
Q2879-14	OU4-TS-GRILLO-TSCP09-081425
Q2879-15	OU4-TS-GRILLO-TSCP10-081425
Q2879-16	OU4-TS-GRILLO-TSCP10-081425
Q2879-17	OU4-TS-GRILLO-TSCP11-081425
Q2879-18	OU4-TS-GRILLO-TSCP11-081425

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

Signature : _____

Date: 8/25/2025

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

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

CASE NARRATIVE

Nobis Group
Project Name: Raymark Superfund Site
Project # N/A
Order ID # Q2879
Test Name: Mercury,Metals ICP-TAL

A. Number of Samples and Date of Receipt:
18 Solid samples were received on 08/15/2025.

B. Parameters:
According to the Chain of Custody document, the following analyses were requested: Cyanide, Herbicide Group1, Mercury, Metals ICP-TAL, METALS-TAL, PCB, Pesticide-TCL, SPLP Extraction, SPLP Mercury, SPLP MetalGroup3, SVOCMS Group3 and VOCMS Group3. This data package contains results for Mercury,Metals ICP-TAL.

C. Analytical Techniques:
The analysis of Metals ICP-TAL 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.
The Blank Spike met requirements for all compounds.
The Duplicate (PL-02-081525-DUP) analysis met criteria for all compounds except for Aluminum, Barium, Beryllium, Cadmium, Cobalt, Copper, Iron and Potassium due to Sample matrix interference.
The Matrix Spike (PL-02-081525MS) analysis met criteria for all compounds except for Antimony, Beryllium, Cobalt, Potassium and Zinc due to Chemical Interference during Digestion process.
The Matrix Spike Duplicate (PL-02-081525MSD) analysis met criteria for all compounds except for Antimony, Beryllium, Cobalt, Potassium, Vanadium and Zinc due to Chemical Interference during Digestion process.
The Blank analysis did not indicate the presence of lab contamination.
The Calibration met the requirements.
The Serial Dilution (PL-02-081525-L) met criteria for all compounds except for Manganese due to sample matrix interference.

E. Additional Comments:
The Post Digest Spike (PL-02-081525-A) analysis met criteria for all compounds except for Beryllium and Vanadium due to unknown chemical interference of matrix with the addition of spike amount after digestion and before analysis; matrix has suppression effect during addition of spike.

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_____

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

DATA REPORTING QUALIFIERS- INORGANIC

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

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

QA Control # A3040961

ALLIANCE 284 Sheffield Street, Mountainside New Jersey 07092

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

METALS CONFORMANCE/NON-CONFORMANCE SUMMARY

ORDER ID: Q2879 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.		✓	
	The Serial Dilution (PL-02-081525-L) met criteria for all compounds except for Manganese due to sample matrix interference.			
4.	Laboratory Control Sample Summary (if applicable) Submitted.			✓
5.	Blank Contamination - If yes, list compounds and concentrations in each blank:		✓	
6.	Matrix Spike/Matrix Spike Duplicate Recoveries Met Criteria		✓	
	If not met, list those compounds and their recoveries which fall outside the acceptable range.			
	The Matrix Spike (PL-02-081525MS) analysis met criteria for all compounds except for Antimony, Beryllium, Cobalt, Potassium and Zinc due to Chemical Interference during Digestion process. The Matrix Spike Duplicate (PL-02-081525MSD) analysis met criteria for all compounds except for Antimony, Beryllium, Cobalt, Potassium, Vanadium and Zinc due to Chemical Interference during Digestion process.			
7.	Sample Duplicate Analysis Met QC Criteria		✓	
	If not met, list those compounds and their recoveries which fall outside the acceptable range.			
	The Duplicate (PL-02-081525-DUP) analysis met criteria for all compounds except for Aluminum, Barium, Beryllium, Cadmium, Cobalt, Copper, Iron and Potassium due to Sample matrix interference.			
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.			

METALS CONFORMANCE/NON-CONFORMANCE SUMMARY (CONTINUED)

NA NO YES

ADDITIONAL COMMENTS: The Post Digest Spike (PL-02-081525-A) analysis met criteria for all compounds except for Beryllium and Vanadium due to unknown chemical interference of matrix with the addition of spike amount after digestion and before analysis; matrix has suppression effect during addition of spike.

_____ _____

QA REVIEW Date

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

APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: Q2879

	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:** 08/25/2025

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

LAB CHRONICLE

OrderID:	Q2879	**OrderDate:**	8/15/2025 9:15:00 AM
Client:	Nobis Group	**Project:**	Raymark Superfund Site
Contact:	Adam Roy	**Location:**	J23,VOA Lab

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q2879-01	**OU4-TS-GRILLO-TSCP 03-081425**	**SOIL**			**08/14/25**			**08/15/25**
			Mercury	7471B		08/18/25	08/18/25	
			Metals ICP-TAL	6010D		08/18/25	08/19/25	
Q2879-02	**OU4-TS-GRILLO-TSCP 03-081425**	**Water**			**08/14/25**			**08/15/25**
			SPLP Mercury	7470A		08/19/25	08/19/25	
			SPLP MetalGroup3	6020B		08/18/25	08/20/25	
Q2879-03	**OU4-TS-GRILLO-TSCP 04-081425**	**SOIL**			**08/14/25**			**08/15/25**
			Mercury	7471B		08/18/25	08/18/25	
			Metals ICP-TAL	6010D		08/18/25	08/19/25	
Q2879-04	**OU4-TS-GRILLO-TSCP 04-081425**	**Water**			**08/14/25**			**08/15/25**
			SPLP Mercury	7470A		08/19/25	08/19/25	
			SPLP MetalGroup3	6020B		08/18/25	08/20/25	
Q2879-05	**OU4-TS-GRILLO-TSCP 05-081425**	**SOIL**			**08/14/25**			**08/15/25**
			Mercury	7471B		08/18/25	08/18/25	
			Metals ICP-TAL	6010D		08/18/25	08/19/25	
Q2879-06	**OU4-TS-GRILLO-TSCP 05-081425**	**Water**			**08/14/25**			**08/15/25**
			SPLP Mercury	7470A		08/19/25	08/19/25	
			SPLP MetalGroup3	6020B		08/18/25	08/20/25	
Q2879-07	**OU4-TS-GRILLO-TSCP 06-081425**	**SOIL**			**08/14/25**			**08/15/25**
			Mercury	7471B		08/18/25	08/18/25	
			Metals ICP-TAL	6010D		08/18/25	08/19/25	

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

LAB CHRONICLE

Q2879-08	**OU4-TS-GRILLO-TSCP 06-081425**	**Water**			**08/14/25**			**08/15/25**
			SPLP Mercury	7470A		08/19/25	08/19/25	
			SPLP MetalGroup3	6020B		08/18/25	08/20/25	
Q2879-09	**OU4-TS-GRILLO-TSCP 07-081425**	**SOIL**			**08/14/25**			**08/15/25**
			Mercury	7471B		08/18/25	08/18/25	
			Metals ICP-TAL	6010D		08/18/25	08/19/25	
Q2879-10	**OU4-TS-GRILLO-TSCP 07-081425**	**Water**			**08/14/25**			**08/15/25**
			SPLP Mercury	7470A		08/19/25	08/19/25	
			SPLP MetalGroup3	6020B		08/18/25	08/20/25	
Q2879-11	**OU4-TS-GRILLO-TSCP 08-081425**	**SOIL**			**08/14/25**			**08/15/25**
			Mercury	7471B		08/18/25	08/18/25	
			Metals ICP-TAL	6010D		08/18/25	08/19/25	
Q2879-12	**OU4-TS-GRILLO-TSCP 08-081425**	**Water**			**08/14/25**			**08/15/25**
			SPLP Mercury	7470A		08/19/25	08/19/25	
			SPLP MetalGroup3	6020B		08/18/25	08/20/25	
Q2879-13	**OU4-TS-GRILLO-TSCP 09-081425**	**SOIL**			**08/14/25**			**08/15/25**
			Mercury	7471B		08/18/25	08/18/25	
			Metals ICP-TAL	6010D		08/18/25	08/19/25	
Q2879-14	**OU4-TS-GRILLO-TSCP 09-081425**	**Water**			**08/14/25**			**08/15/25**
			SPLP Mercury	7470A		08/19/25	08/19/25	
			SPLP MetalGroup3	6020B		08/18/25	08/20/25	
Q2879-15	**OU4-TS-GRILLO-TSCP 10-081425**	**SOIL**			**08/14/25**			**08/15/25**
			Mercury	7471B		08/18/25	08/18/25	
			Metals ICP-TAL	6010D		08/18/25	08/19/25	
Q2879-16	**OU4-TS-GRILLO-TSCP 10-081425**	**Water**			**08/14/25**			**08/15/25**

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

LAB CHRONICLE

			SPLP Mercury	7470A		08/19/25	08/19/25
			SPLP MetalGroup3	6020B		08/18/25	08/20/25
Q2879-17	**OU4-TS-GRILLO-TSCP 11-081425**	**SOIL**			**08/14/25**		**08/15/25**
			Mercury	7471B		08/18/25	08/18/25
			Metals ICP-TAL	6010D		08/18/25	08/19/25
Q2879-18	**OU4-TS-GRILLO-TSCP 11-081425**	**Water**			**08/14/25**		**08/15/25**
			SPLP Mercury	7470A		08/19/25	08/19/25
			SPLP MetalGroup3	6020B		08/18/25	08/20/25

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

Hit Summary Sheet
SW-846

SDG No.: Q2879 **Order ID:** Q2879

Client: Nobis Group **Project ID:** Raymark Superfund Site

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	LOD	RDL	Units
Client ID : OU4-TS-GRILLO-TSCP03-081425									
Q2879-01	OU4-TS-GRILLO-TSCP03-0814	SOIL	Aluminum	10400		0.77	3.68	4.60	mg/Kg
Q2879-01	OU4-TS-GRILLO-TSCP03-0814	SOIL	Arsenic	10.1		0.18	0.74	0.92	mg/Kg
Q2879-01	OU4-TS-GRILLO-TSCP03-0814	SOIL	Barium	54.1		0.67	1.15	4.60	mg/Kg
Q2879-01	OU4-TS-GRILLO-TSCP03-0814	SOIL	Beryllium	0.99		0.023	0.069	0.28	mg/Kg
Q2879-01	OU4-TS-GRILLO-TSCP03-0814	SOIL	Cadmium	1.01		0.022	0.069	0.28	mg/Kg
Q2879-01	OU4-TS-GRILLO-TSCP03-0814	SOIL	Calcium	3680		10.2	23.0	92.0	mg/Kg
Q2879-01	OU4-TS-GRILLO-TSCP03-0814	SOIL	Chromium	16.0		0.043	0.12	0.46	mg/Kg
Q2879-01	OU4-TS-GRILLO-TSCP03-0814	SOIL	Cobalt	7.44		0.092	0.35	1.38	mg/Kg
Q2879-01	OU4-TS-GRILLO-TSCP03-0814	SOIL	Copper	19.0		0.20	0.74	0.92	mg/Kg
Q2879-01	OU4-TS-GRILLO-TSCP03-0814	SOIL	Iron	19900		3.67	3.68	4.60	mg/Kg
Q2879-01	OU4-TS-GRILLO-TSCP03-0814	SOIL	Lead	47.6		0.12	0.44	0.55	mg/Kg
Q2879-01	OU4-TS-GRILLO-TSCP03-0814	SOIL	Magnesium	3340		11.0	23.0	92.0	mg/Kg
Q2879-01	OU4-TS-GRILLO-TSCP03-0814	SOIL	Manganese	320		0.13	0.23	0.92	mg/Kg
Q2879-01	OU4-TS-GRILLO-TSCP03-0814	SOIL	Mercury	0.066		0.0080	0.012	0.015	mg/Kg
Q2879-01	OU4-TS-GRILLO-TSCP03-0814	SOIL	Nickel	14.2		0.12	0.46	1.84	mg/Kg
Q2879-01	OU4-TS-GRILLO-TSCP03-0814	SOIL	Potassium	1610		25.5	73.6	92.0	mg/Kg
Q2879-01	OU4-TS-GRILLO-TSCP03-0814	SOIL	Selenium	0.31	J	0.24	0.74	0.92	mg/Kg
Q2879-01	OU4-TS-GRILLO-TSCP03-0814	SOIL	Silver	0.59		0.11	0.23	0.46	mg/Kg
Q2879-01	OU4-TS-GRILLO-TSCP03-0814	SOIL	Sodium	203		16.4	73.6	92.0	mg/Kg
Q2879-01	OU4-TS-GRILLO-TSCP03-0814	SOIL	Vanadium	25.3		0.23	0.92	1.84	mg/Kg
Q2879-01	OU4-TS-GRILLO-TSCP03-0814	SOIL	Zinc	67.4		0.21	0.46	1.84	mg/Kg
Client ID : OU4-TS-GRILLO-TSCP04-081425									
Q2879-03	OU4-TS-GRILLO-TSCP04-0814	SOIL	Aluminum	11000		0.78	3.69	4.61	mg/Kg
Q2879-03	OU4-TS-GRILLO-TSCP04-0814	SOIL	Arsenic	9.21		0.18	0.74	0.92	mg/Kg
Q2879-03	OU4-TS-GRILLO-TSCP04-0814	SOIL	Barium	59.4		0.67	1.15	4.61	mg/Kg
Q2879-03	OU4-TS-GRILLO-TSCP04-0814	SOIL	Beryllium	0.89		0.023	0.069	0.28	mg/Kg
Q2879-03	OU4-TS-GRILLO-TSCP04-0814	SOIL	Cadmium	0.86		0.022	0.069	0.28	mg/Kg
Q2879-03	OU4-TS-GRILLO-TSCP04-0814	SOIL	Calcium	3940		10.2	23.1	92.2	mg/Kg
Q2879-03	OU4-TS-GRILLO-TSCP04-0814	SOIL	Chromium	16.3		0.043	0.12	0.46	mg/Kg
Q2879-03	OU4-TS-GRILLO-TSCP04-0814	SOIL	Cobalt	7.67		0.092	0.35	1.38	mg/Kg
Q2879-03	OU4-TS-GRILLO-TSCP04-0814	SOIL	Copper	22.2		0.20	0.74	0.92	mg/Kg
Q2879-03	OU4-TS-GRILLO-TSCP04-0814	SOIL	Iron	15700		3.68	3.69	4.61	mg/Kg
Q2879-03	OU4-TS-GRILLO-TSCP04-0814	SOIL	Lead	48.3		0.12	0.44	0.55	mg/Kg
Q2879-03	OU4-TS-GRILLO-TSCP04-0814	SOIL	Magnesium	3340		11.1	23.1	92.2	mg/Kg
Q2879-03	OU4-TS-GRILLO-TSCP04-0814	SOIL	Manganese	327		0.13	0.23	0.92	mg/Kg
Q2879-03	OU4-TS-GRILLO-TSCP04-0814	SOIL	Mercury	0.080		0.0080	0.011	0.014	mg/Kg
Q2879-03	OU4-TS-GRILLO-TSCP04-0814	SOIL	Nickel	14.6		0.12	0.46	1.84	mg/Kg

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

Hit Summary Sheet
SW-846

SDG No.: Q2879 **Order ID:** Q2879

Client: Nobis Group **Project ID:** Raymark Superfund Site

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	LOD	RDL	Units
Q2879-03	OU4-TS-GRILLO-TSCP04-0814	SOIL	Potassium	1800		25.5	73.8	92.2	mg/Kg
Q2879-03	OU4-TS-GRILLO-TSCP04-0814	SOIL	Selenium	0.38	J	0.24	0.74	0.92	mg/Kg
Q2879-03	OU4-TS-GRILLO-TSCP04-0814	SOIL	Silver	0.64		0.11	0.23	0.46	mg/Kg
Q2879-03	OU4-TS-GRILLO-TSCP04-0814	SOIL	Sodium	227		16.4	73.8	92.2	mg/Kg
Q2879-03	OU4-TS-GRILLO-TSCP04-0814	SOIL	Vanadium	26.0		0.23	0.92	1.84	mg/Kg
Q2879-03	OU4-TS-GRILLO-TSCP04-0814	SOIL	Zinc	72.0		0.21	0.46	1.84	mg/Kg
Client ID :	**OU4-TS-GRILLO-TSCP05-081425**								
Q2879-05	OU4-TS-GRILLO-TSCP05-0814	SOIL	Aluminum	9810		0.73	3.49	4.37	mg/Kg
Q2879-05	OU4-TS-GRILLO-TSCP05-0814	SOIL	Arsenic	7.56		0.17	0.70	0.87	mg/Kg
Q2879-05	OU4-TS-GRILLO-TSCP05-0814	SOIL	Barium	53.3		0.64	1.09	4.37	mg/Kg
Q2879-05	OU4-TS-GRILLO-TSCP05-0814	SOIL	Beryllium	0.80		0.022	0.065	0.26	mg/Kg
Q2879-05	OU4-TS-GRILLO-TSCP05-0814	SOIL	Cadmium	0.73		0.021	0.065	0.26	mg/Kg
Q2879-05	OU4-TS-GRILLO-TSCP05-0814	SOIL	Calcium	3670		9.69	21.8	87.3	mg/Kg
Q2879-05	OU4-TS-GRILLO-TSCP05-0814	SOIL	Chromium	14.5		0.041	0.11	0.44	mg/Kg
Q2879-05	OU4-TS-GRILLO-TSCP05-0814	SOIL	Cobalt	6.91		0.087	0.33	1.31	mg/Kg
Q2879-05	OU4-TS-GRILLO-TSCP05-0814	SOIL	Copper	18.7		0.19	0.70	0.87	mg/Kg
Q2879-05	OU4-TS-GRILLO-TSCP05-0814	SOIL	Iron	14600		3.48	3.49	4.37	mg/Kg
Q2879-05	OU4-TS-GRILLO-TSCP05-0814	SOIL	Lead	39.5		0.11	0.42	0.52	mg/Kg
Q2879-05	OU4-TS-GRILLO-TSCP05-0814	SOIL	Magnesium	3070		10.5	21.8	87.3	mg/Kg
Q2879-05	OU4-TS-GRILLO-TSCP05-0814	SOIL	Manganese	296		0.12	0.22	0.87	mg/Kg
Q2879-05	OU4-TS-GRILLO-TSCP05-0814	SOIL	Mercury	0.049		0.0070	0.011	0.013	mg/Kg
Q2879-05	OU4-TS-GRILLO-TSCP05-0814	SOIL	Nickel	13.0		0.11	0.44	1.75	mg/Kg
Q2879-05	OU4-TS-GRILLO-TSCP05-0814	SOIL	Potassium	1810		24.2	69.9	87.3	mg/Kg
Q2879-05	OU4-TS-GRILLO-TSCP05-0814	SOIL	Selenium	0.35	J	0.23	0.70	0.87	mg/Kg
Q2879-05	OU4-TS-GRILLO-TSCP05-0814	SOIL	Silver	0.66		0.11	0.22	0.44	mg/Kg
Q2879-05	OU4-TS-GRILLO-TSCP05-0814	SOIL	Sodium	230		15.5	69.9	87.3	mg/Kg
Q2879-05	OU4-TS-GRILLO-TSCP05-0814	SOIL	Vanadium	24.8		0.22	0.87	1.75	mg/Kg
Q2879-05	OU4-TS-GRILLO-TSCP05-0814	SOIL	Zinc	59.7		0.20	0.44	1.75	mg/Kg
Client ID :	**OU4-TS-GRILLO-TSCP06-081425**								
Q2879-07	OU4-TS-GRILLO-TSCP06-0814	SOIL	Aluminum	9480		0.76	3.61	4.51	mg/Kg
Q2879-07	OU4-TS-GRILLO-TSCP06-0814	SOIL	Arsenic	7.19		0.17	0.72	0.90	mg/Kg
Q2879-07	OU4-TS-GRILLO-TSCP06-0814	SOIL	Barium	50.8		0.66	1.13	4.51	mg/Kg
Q2879-07	OU4-TS-GRILLO-TSCP06-0814	SOIL	Beryllium	0.79		0.023	0.068	0.27	mg/Kg
Q2879-07	OU4-TS-GRILLO-TSCP06-0814	SOIL	Cadmium	0.67		0.022	0.068	0.27	mg/Kg
Q2879-07	OU4-TS-GRILLO-TSCP06-0814	SOIL	Calcium	3250		10.0	22.6	90.3	mg/Kg
Q2879-07	OU4-TS-GRILLO-TSCP06-0814	SOIL	Chromium	13.9		0.042	0.11	0.45	mg/Kg
Q2879-07	OU4-TS-GRILLO-TSCP06-0814	SOIL	Cobalt	6.51		0.090	0.34	1.35	mg/Kg
Q2879-07	OU4-TS-GRILLO-TSCP06-0814	SOIL	Copper	19.9		0.20	0.72	0.90	mg/Kg
Q2879-07	OU4-TS-GRILLO-TSCP06-0814	SOIL	Iron	13700		3.60	3.61	4.51	mg/Kg

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

Hit Summary Sheet
SW-846

SDG No.: Q2879 **Order ID:** Q2879

Client: Nobis Group **Project ID:** Raymark Superfund Site

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	LOD	RDL	Units
Q2879-07	OU4-TS-GRILLO-TSCP06-0814	SOIL	Lead	34.7		0.12	0.43	0.54	mg/Kg
Q2879-07	OU4-TS-GRILLO-TSCP06-0814	SOIL	Magnesium	2890		10.8	22.6	90.3	mg/Kg
Q2879-07	OU4-TS-GRILLO-TSCP06-0814	SOIL	Manganese	284		0.13	0.23	0.90	mg/Kg
Q2879-07	OU4-TS-GRILLO-TSCP06-0814	SOIL	Mercury	0.034		0.0080	0.011	0.014	mg/Kg
Q2879-07	OU4-TS-GRILLO-TSCP06-0814	SOIL	Nickel	12.3		0.12	0.45	1.81	mg/Kg
Q2879-07	OU4-TS-GRILLO-TSCP06-0814	SOIL	Potassium	1490		25.0	72.2	90.3	mg/Kg
Q2879-07	OU4-TS-GRILLO-TSCP06-0814	SOIL	Selenium	0.31	J	0.24	0.72	0.90	mg/Kg
Q2879-07	OU4-TS-GRILLO-TSCP06-0814	SOIL	Silver	0.58		0.11	0.23	0.45	mg/Kg
Q2879-07	OU4-TS-GRILLO-TSCP06-0814	SOIL	Sodium	241		16.1	72.2	90.3	mg/Kg
Q2879-07	OU4-TS-GRILLO-TSCP06-0814	SOIL	Vanadium	23.1		0.23	0.90	1.81	mg/Kg
Q2879-07	OU4-TS-GRILLO-TSCP06-0814	SOIL	Zinc	61.5		0.21	0.45	1.81	mg/Kg
Client ID :	**OU4-TS-GRILLO-TSCP07-081425**								
Q2879-09	OU4-TS-GRILLO-TSCP07-0814	SOIL	Aluminum	10700		0.74	3.52	4.40	mg/Kg
Q2879-09	OU4-TS-GRILLO-TSCP07-0814	SOIL	Arsenic	8.88		0.17	0.70	0.88	mg/Kg
Q2879-09	OU4-TS-GRILLO-TSCP07-0814	SOIL	Barium	58.5		0.64	1.10	4.40	mg/Kg
Q2879-09	OU4-TS-GRILLO-TSCP07-0814	SOIL	Beryllium	0.94		0.022	0.066	0.26	mg/Kg
Q2879-09	OU4-TS-GRILLO-TSCP07-0814	SOIL	Cadmium	0.87		0.021	0.066	0.26	mg/Kg
Q2879-09	OU4-TS-GRILLO-TSCP07-0814	SOIL	Calcium	3550		9.77	22.0	88.0	mg/Kg
Q2879-09	OU4-TS-GRILLO-TSCP07-0814	SOIL	Chromium	22.0		0.041	0.11	0.44	mg/Kg
Q2879-09	OU4-TS-GRILLO-TSCP07-0814	SOIL	Cobalt	8.31		0.088	0.33	1.32	mg/Kg
Q2879-09	OU4-TS-GRILLO-TSCP07-0814	SOIL	Copper	20.7		0.19	0.70	0.88	mg/Kg
Q2879-09	OU4-TS-GRILLO-TSCP07-0814	SOIL	Iron	18300		3.51	3.52	4.40	mg/Kg
Q2879-09	OU4-TS-GRILLO-TSCP07-0814	SOIL	Lead	38.3		0.11	0.42	0.53	mg/Kg
Q2879-09	OU4-TS-GRILLO-TSCP07-0814	SOIL	Magnesium	3610		10.6	22.0	88.0	mg/Kg
Q2879-09	OU4-TS-GRILLO-TSCP07-0814	SOIL	Manganese	304		0.12	0.22	0.88	mg/Kg
Q2879-09	OU4-TS-GRILLO-TSCP07-0814	SOIL	Mercury	0.10		0.0080	0.011	0.014	mg/Kg
Q2879-09	OU4-TS-GRILLO-TSCP07-0814	SOIL	Nickel	15.7		0.11	0.44	1.76	mg/Kg
Q2879-09	OU4-TS-GRILLO-TSCP07-0814	SOIL	Potassium	1880		24.4	70.4	88.0	mg/Kg
Q2879-09	OU4-TS-GRILLO-TSCP07-0814	SOIL	Selenium	0.47	J	0.23	0.70	0.88	mg/Kg
Q2879-09	OU4-TS-GRILLO-TSCP07-0814	SOIL	Silver	0.70		0.11	0.22	0.44	mg/Kg
Q2879-09	OU4-TS-GRILLO-TSCP07-0814	SOIL	Sodium	209		15.7	70.4	88.0	mg/Kg
Q2879-09	OU4-TS-GRILLO-TSCP07-0814	SOIL	Vanadium	27.6		0.22	0.88	1.76	mg/Kg
Q2879-09	OU4-TS-GRILLO-TSCP07-0814	SOIL	Zinc	63.8		0.20	0.44	1.76	mg/Kg
Client ID :	**OU4-TS-GRILLO-TSCP08-081425**								
Q2879-11	OU4-TS-GRILLO-TSCP08-0814	SOIL	Aluminum	11200		0.79	3.74	4.68	mg/Kg
Q2879-11	OU4-TS-GRILLO-TSCP08-0814	SOIL	Arsenic	8.52		0.18	0.75	0.94	mg/Kg
Q2879-11	OU4-TS-GRILLO-TSCP08-0814	SOIL	Barium	58.4		0.68	1.17	4.68	mg/Kg
Q2879-11	OU4-TS-GRILLO-TSCP08-0814	SOIL	Beryllium	0.92		0.023	0.070	0.28	mg/Kg
Q2879-11	OU4-TS-GRILLO-TSCP08-0814	SOIL	Cadmium	0.88		0.022	0.070	0.28	mg/Kg

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

Hit Summary Sheet
SW-846

SDG No.: Q2879 **Order ID:** Q2879

Client: Nobis Group **Project ID:** Raymark Superfund Site

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	LOD	RDL	Units
Q2879-11	OU4-TS-GRILLO-TSCP08-0814	SOIL	Calcium	4000		10.4	23.4	93.6	mg/Kg
Q2879-11	OU4-TS-GRILLO-TSCP08-0814	SOIL	Chromium	16.5		0.044	0.12	0.47	mg/Kg
Q2879-11	OU4-TS-GRILLO-TSCP08-0814	SOIL	Cobalt	7.66		0.094	0.35	1.40	mg/Kg
Q2879-11	OU4-TS-GRILLO-TSCP08-0814	SOIL	Copper	22.5		0.21	0.75	0.94	mg/Kg
Q2879-11	OU4-TS-GRILLO-TSCP08-0814	SOIL	Iron	15700		3.74	3.74	4.68	mg/Kg
Q2879-11	OU4-TS-GRILLO-TSCP08-0814	SOIL	Lead	45.8		0.12	0.45	0.56	mg/Kg
Q2879-11	OU4-TS-GRILLO-TSCP08-0814	SOIL	Magnesium	3380		11.2	23.4	93.6	mg/Kg
Q2879-11	OU4-TS-GRILLO-TSCP08-0814	SOIL	Manganese	317		0.13	0.23	0.94	mg/Kg
Q2879-11	OU4-TS-GRILLO-TSCP08-0814	SOIL	Mercury	0.13		0.0070	0.011	0.013	mg/Kg
Q2879-11	OU4-TS-GRILLO-TSCP08-0814	SOIL	Nickel	14.7		0.12	0.47	1.87	mg/Kg
Q2879-11	OU4-TS-GRILLO-TSCP08-0814	SOIL	Potassium	1850		25.9	74.9	93.6	mg/Kg
Q2879-11	OU4-TS-GRILLO-TSCP08-0814	SOIL	Selenium	0.39	J	0.24	0.75	0.94	mg/Kg
Q2879-11	OU4-TS-GRILLO-TSCP08-0814	SOIL	Silver	0.49		0.11	0.23	0.47	mg/Kg
Q2879-11	OU4-TS-GRILLO-TSCP08-0814	SOIL	Sodium	247		16.7	74.9	93.6	mg/Kg
Q2879-11	OU4-TS-GRILLO-TSCP08-0814	SOIL	Vanadium	27.7		0.23	0.94	1.87	mg/Kg
Q2879-11	OU4-TS-GRILLO-TSCP08-0814	SOIL	Zinc	69.4		0.22	0.47	1.87	mg/Kg
Client ID :	**OU4-TS-GRILLO-TSCP09-081425**								
Q2879-13	OU4-TS-GRILLO-TSCP09-0814	SOIL	Aluminum	12900		0.77	3.65	4.57	mg/Kg
Q2879-13	OU4-TS-GRILLO-TSCP09-0814	SOIL	Arsenic	9.78		0.17	0.73	0.91	mg/Kg
Q2879-13	OU4-TS-GRILLO-TSCP09-0814	SOIL	Barium	67.0		0.67	1.14	4.57	mg/Kg
Q2879-13	OU4-TS-GRILLO-TSCP09-0814	SOIL	Beryllium	1.06		0.023	0.068	0.27	mg/Kg
Q2879-13	OU4-TS-GRILLO-TSCP09-0814	SOIL	Cadmium	1.08		0.022	0.068	0.27	mg/Kg
Q2879-13	OU4-TS-GRILLO-TSCP09-0814	SOIL	Calcium	4340		10.1	22.8	91.3	mg/Kg
Q2879-13	OU4-TS-GRILLO-TSCP09-0814	SOIL	Chromium	18.9		0.043	0.11	0.46	mg/Kg
Q2879-13	OU4-TS-GRILLO-TSCP09-0814	SOIL	Cobalt	8.86		0.091	0.34	1.37	mg/Kg
Q2879-13	OU4-TS-GRILLO-TSCP09-0814	SOIL	Copper	24.5		0.20	0.73	0.91	mg/Kg
Q2879-13	OU4-TS-GRILLO-TSCP09-0814	SOIL	Iron	19200		3.64	3.65	4.57	mg/Kg
Q2879-13	OU4-TS-GRILLO-TSCP09-0814	SOIL	Lead	53.8		0.12	0.44	0.55	mg/Kg
Q2879-13	OU4-TS-GRILLO-TSCP09-0814	SOIL	Magnesium	3820		11.0	22.8	91.3	mg/Kg
Q2879-13	OU4-TS-GRILLO-TSCP09-0814	SOIL	Manganese	353		0.13	0.23	0.91	mg/Kg
Q2879-13	OU4-TS-GRILLO-TSCP09-0814	SOIL	Mercury	0.087		0.0070	0.010	0.013	mg/Kg
Q2879-13	OU4-TS-GRILLO-TSCP09-0814	SOIL	Nickel	18.0		0.12	0.46	1.83	mg/Kg
Q2879-13	OU4-TS-GRILLO-TSCP09-0814	SOIL	Potassium	2200		25.3	73.1	91.3	mg/Kg
Q2879-13	OU4-TS-GRILLO-TSCP09-0814	SOIL	Selenium	0.30	J	0.24	0.73	0.91	mg/Kg
Q2879-13	OU4-TS-GRILLO-TSCP09-0814	SOIL	Silver	0.71		0.11	0.23	0.46	mg/Kg
Q2879-13	OU4-TS-GRILLO-TSCP09-0814	SOIL	Sodium	316		16.3	73.1	91.3	mg/Kg
Q2879-13	OU4-TS-GRILLO-TSCP09-0814	SOIL	Vanadium	29.8		0.23	0.91	1.83	mg/Kg
Q2879-13	OU4-TS-GRILLO-TSCP09-0814	SOIL	Zinc	75.1		0.21	0.46	1.83	mg/Kg
Client ID :	**OU4-TS-GRILLO-TSCP10-081425**								

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

Hit Summary Sheet
SW-846

SDG No.: Q2879 **Order ID:** Q2879

Client: Nobis Group **Project ID:** Raymark Superfund Site

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	LOD	RDL	Units
Q2879-15	OU4-TS-GRILLO-TSCP10-0814	SOIL	Aluminum	10200		0.79	3.74	4.68	mg/Kg
Q2879-15	OU4-TS-GRILLO-TSCP10-0814	SOIL	Arsenic	7.54		0.18	0.75	0.94	mg/Kg
Q2879-15	OU4-TS-GRILLO-TSCP10-0814	SOIL	Barium	44.6		0.68	1.17	4.68	mg/Kg
Q2879-15	OU4-TS-GRILLO-TSCP10-0814	SOIL	Beryllium	0.86		0.023	0.070	0.28	mg/Kg
Q2879-15	OU4-TS-GRILLO-TSCP10-0814	SOIL	Cadmium	0.72		0.022	0.070	0.28	mg/Kg
Q2879-15	OU4-TS-GRILLO-TSCP10-0814	SOIL	Calcium	2950		10.4	23.4	93.6	mg/Kg
Q2879-15	OU4-TS-GRILLO-TSCP10-0814	SOIL	Chromium	16.2		0.044	0.12	0.47	mg/Kg
Q2879-15	OU4-TS-GRILLO-TSCP10-0814	SOIL	Cobalt	6.87		0.094	0.35	1.40	mg/Kg
Q2879-15	OU4-TS-GRILLO-TSCP10-0814	SOIL	Copper	17.3		0.21	0.75	0.94	mg/Kg
Q2879-15	OU4-TS-GRILLO-TSCP10-0814	SOIL	Iron	15000		3.74	3.74	4.68	mg/Kg
Q2879-15	OU4-TS-GRILLO-TSCP10-0814	SOIL	Lead	30.4		0.12	0.45	0.56	mg/Kg
Q2879-15	OU4-TS-GRILLO-TSCP10-0814	SOIL	Magnesium	3630		11.2	23.4	93.6	mg/Kg
Q2879-15	OU4-TS-GRILLO-TSCP10-0814	SOIL	Manganese	273		0.13	0.23	0.94	mg/Kg
Q2879-15	OU4-TS-GRILLO-TSCP10-0814	SOIL	Mercury	0.048		0.0080	0.011	0.014	mg/Kg
Q2879-15	OU4-TS-GRILLO-TSCP10-0814	SOIL	Nickel	13.8		0.12	0.47	1.87	mg/Kg
Q2879-15	OU4-TS-GRILLO-TSCP10-0814	SOIL	Potassium	1650		25.9	74.9	93.6	mg/Kg
Q2879-15	OU4-TS-GRILLO-TSCP10-0814	SOIL	Selenium	0.42	J	0.24	0.75	0.94	mg/Kg
Q2879-15	OU4-TS-GRILLO-TSCP10-0814	SOIL	Silver	0.46	J	0.11	0.23	0.47	mg/Kg
Q2879-15	OU4-TS-GRILLO-TSCP10-0814	SOIL	Sodium	153		16.7	74.9	93.6	mg/Kg
Q2879-15	OU4-TS-GRILLO-TSCP10-0814	SOIL	Vanadium	23.6		0.23	0.94	1.87	mg/Kg
Q2879-15	OU4-TS-GRILLO-TSCP10-0814	SOIL	Zinc	60.5		0.22	0.47	1.87	mg/Kg
Client ID :	**OU4-TS-GRILLO-TSCP11-081425**								
Q2879-17	OU4-TS-GRILLO-TSCP11-0814	SOIL	Aluminum	12000		0.95	4.52	5.65	mg/Kg
Q2879-17	OU4-TS-GRILLO-TSCP11-0814	SOIL	Arsenic	9.57		0.22	0.90	1.13	mg/Kg
Q2879-17	OU4-TS-GRILLO-TSCP11-0814	SOIL	Barium	62.1		0.82	1.41	5.65	mg/Kg
Q2879-17	OU4-TS-GRILLO-TSCP11-0814	SOIL	Beryllium	0.98		0.028	0.085	0.34	mg/Kg
Q2879-17	OU4-TS-GRILLO-TSCP11-0814	SOIL	Cadmium	0.84		0.027	0.085	0.34	mg/Kg
Q2879-17	OU4-TS-GRILLO-TSCP11-0814	SOIL	Calcium	4600		12.5	28.2	113	mg/Kg
Q2879-17	OU4-TS-GRILLO-TSCP11-0814	SOIL	Chromium	17.6		0.053	0.14	0.56	mg/Kg
Q2879-17	OU4-TS-GRILLO-TSCP11-0814	SOIL	Cobalt	8.68		0.11	0.42	1.69	mg/Kg
Q2879-17	OU4-TS-GRILLO-TSCP11-0814	SOIL	Copper	22.3		0.25	0.90	1.13	mg/Kg
Q2879-17	OU4-TS-GRILLO-TSCP11-0814	SOIL	Iron	17500		4.51	4.52	5.65	mg/Kg
Q2879-17	OU4-TS-GRILLO-TSCP11-0814	SOIL	Lead	44.5		0.15	0.54	0.68	mg/Kg
Q2879-17	OU4-TS-GRILLO-TSCP11-0814	SOIL	Magnesium	3820		13.6	28.2	113	mg/Kg
Q2879-17	OU4-TS-GRILLO-TSCP11-0814	SOIL	Manganese	350		0.16	0.28	1.13	mg/Kg
Q2879-17	OU4-TS-GRILLO-TSCP11-0814	SOIL	Mercury	0.039		0.0090	0.013	0.017	mg/Kg
Q2879-17	OU4-TS-GRILLO-TSCP11-0814	SOIL	Nickel	16.1		0.15	0.56	2.26	mg/Kg
Q2879-17	OU4-TS-GRILLO-TSCP11-0814	SOIL	Potassium	2030		31.3	90.3	113	mg/Kg
Q2879-17	OU4-TS-GRILLO-TSCP11-0814	SOIL	Selenium	0.41	J	0.29	0.90	1.13	mg/Kg
Q2879-17	OU4-TS-GRILLO-TSCP11-0814	SOIL	Silver	0.70		0.14	0.28	0.56	mg/Kg

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

Hit Summary Sheet
SW-846

SDG No.:	Q2879	**Order ID:**	Q2879
Client:	Nobis Group	**Project ID:**	Raymark Superfund Site

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	LOD	RDL	Units
Q2879-17	OU4-TS-GRILLO-TSCP11-0814	SOIL	Sodium	228		20.1	90.3	113	mg/Kg
Q2879-17	OU4-TS-GRILLO-TSCP11-0814	SOIL	Vanadium	28.8		0.28	1.13	2.26	mg/Kg
Q2879-17	OU4-TS-GRILLO-TSCP11-0814	SOIL	Zinc	74.2		0.26	0.56	2.26	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:	Nobis Group	Date Collected:	08/14/25
Project:	Raymark Superfund Site	Date Received:	08/15/25
Client Sample ID:	OU4-TS-GRILLO-TSCP03-081425	SDG No.:	Q2879
Lab Sample ID:	Q2879-01	Matrix:	SOIL
Level (low/med):	low	% Solid:	89.1

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.	Prep Met.
7429-90-5	Aluminum	10400	*	1	0.77	3.68	4.60	mg/Kg	08/18/25 09:05	08/19/25 15:27	6010D	SW3050
7440-36-0	Antimony	0.57	UN	1	0.20	0.57	2.30	mg/Kg	08/18/25 09:05	08/19/25 15:27	6010D	SW3050
7440-38-2	Arsenic	10.1		1	0.18	0.74	0.92	mg/Kg	08/18/25 09:05	08/19/25 15:27	6010D	SW3050
7440-39-3	Barium	54.1	*	1	0.67	1.15	4.60	mg/Kg	08/18/25 09:05	08/19/25 15:27	6010D	SW3050
7440-41-7	Beryllium	0.99	N*	1	0.023	0.069	0.28	mg/Kg	08/18/25 09:05	08/19/25 15:27	6010D	SW3050
7440-43-9	Cadmium	1.01	*	1	0.022	0.069	0.28	mg/Kg	08/18/25 09:05	08/19/25 15:27	6010D	SW3050
7440-70-2	Calcium	3680		1	10.2	23.0	92.0	mg/Kg	08/18/25 09:05	08/19/25 15:27	6010D	SW3050
7440-47-3	Chromium	16.0		1	0.043	0.12	0.46	mg/Kg	08/18/25 09:05	08/19/25 15:27	6010D	SW3050
7440-48-4	Cobalt	7.44	N*	1	0.092	0.35	1.38	mg/Kg	08/18/25 09:05	08/19/25 15:27	6010D	SW3050
7440-50-8	Copper	19.0	*	1	0.20	0.74	0.92	mg/Kg	08/18/25 09:05	08/19/25 15:27	6010D	SW3050
7439-89-6	Iron	19900	*	1	3.67	3.68	4.60	mg/Kg	08/18/25 09:05	08/19/25 15:27	6010D	SW3050
7439-92-1	Lead	47.6		1	0.12	0.44	0.55	mg/Kg	08/18/25 09:05	08/19/25 15:27	6010D	SW3050
7439-95-4	Magnesium	3340		1	11.0	23.0	92.0	mg/Kg	08/18/25 09:05	08/19/25 15:27	6010D	SW3050
7439-96-5	Manganese	320		1	0.13	0.23	0.92	mg/Kg	08/18/25 09:05	08/19/25 15:27	6010D	SW3050
7439-97-6	Mercury	0.066		1	0.0080	0.012	0.015	mg/Kg	08/18/25 08:40	08/18/25 14:14	7471B	
7440-02-0	Nickel	14.2		1	0.12	0.46	1.84	mg/Kg	08/18/25 09:05	08/19/25 15:27	6010D	SW3050
7440-09-7	Potassium	1610	N*	1	25.5	73.6	92.0	mg/Kg	08/18/25 09:05	08/19/25 15:27	6010D	SW3050
7782-49-2	Selenium	0.31	J	1	0.24	0.74	0.92	mg/Kg	08/18/25 09:05	08/19/25 15:27	6010D	SW3050
7440-22-4	Silver	0.59		1	0.11	0.23	0.46	mg/Kg	08/18/25 09:05	08/19/25 15:27	6010D	SW3050
7440-23-5	Sodium	203		1	16.4	73.6	92.0	mg/Kg	08/18/25 09:05	08/19/25 15:27	6010D	SW3050
7440-28-0	Thallium	0.92	U	1	0.21	0.92	1.84	mg/Kg	08/18/25 09:05	08/19/25 15:27	6010D	SW3050
7440-62-2	Vanadium	25.3	N	1	0.23	0.92	1.84	mg/Kg	08/18/25 09:05	08/19/25 15:27	6010D	SW3050
7440-66-6	Zinc	67.4	N	1	0.21	0.46	1.84	mg/Kg	08/18/25 09:05	08/19/25 15:27	6010D	SW3050

Color Before:	Brown	Clarity Before:		Texture:	Medium
Color After:	Yellow	Clarity After:		Artifacts:	
Comments:	METALS-TAL				

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

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

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

Report of Analysis

Client:	Nobis Group	Date Collected:	08/14/25
Project:	Raymark Superfund Site	Date Received:	08/15/25
Client Sample ID:	OU4-TS-GRILLO-TSCP04-081425	SDG No.:	Q2879
Lab Sample ID:	Q2879-03	Matrix:	SOIL
Level (low/med):	low	% Solid:	87.1

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.	Prep Met.
7429-90-5	Aluminum	11000	*	1	0.78	3.69	4.61	mg/Kg	08/18/25 09:05	08/19/25 15:31	6010D	SW3050
7440-36-0	Antimony	0.58	UN	1	0.20	0.58	2.31	mg/Kg	08/18/25 09:05	08/19/25 15:31	6010D	SW3050
7440-38-2	Arsenic	9.21		1	0.18	0.74	0.92	mg/Kg	08/18/25 09:05	08/19/25 15:31	6010D	SW3050
7440-39-3	Barium	59.4	*	1	0.67	1.15	4.61	mg/Kg	08/18/25 09:05	08/19/25 15:31	6010D	SW3050
7440-41-7	Beryllium	0.89	N*	1	0.023	0.069	0.28	mg/Kg	08/18/25 09:05	08/19/25 15:31	6010D	SW3050
7440-43-9	Cadmium	0.86	*	1	0.022	0.069	0.28	mg/Kg	08/18/25 09:05	08/19/25 15:31	6010D	SW3050
7440-70-2	Calcium	3940		1	10.2	23.1	92.2	mg/Kg	08/18/25 09:05	08/19/25 15:31	6010D	SW3050
7440-47-3	Chromium	16.3		1	0.043	0.12	0.46	mg/Kg	08/18/25 09:05	08/19/25 15:31	6010D	SW3050
7440-48-4	Cobalt	7.67	N*	1	0.092	0.35	1.38	mg/Kg	08/18/25 09:05	08/19/25 15:31	6010D	SW3050
7440-50-8	Copper	22.2	*	1	0.20	0.74	0.92	mg/Kg	08/18/25 09:05	08/19/25 15:31	6010D	SW3050
7439-89-6	Iron	15700	*	1	3.68	3.69	4.61	mg/Kg	08/18/25 09:05	08/19/25 15:31	6010D	SW3050
7439-92-1	Lead	48.3		1	0.12	0.44	0.55	mg/Kg	08/18/25 09:05	08/19/25 15:31	6010D	SW3050
7439-95-4	Magnesium	3340		1	11.1	23.1	92.2	mg/Kg	08/18/25 09:05	08/19/25 15:31	6010D	SW3050
7439-96-5	Manganese	327		1	0.13	0.23	0.92	mg/Kg	08/18/25 09:05	08/19/25 15:31	6010D	SW3050
7439-97-6	Mercury	0.080		1	0.0080	0.011	0.014	mg/Kg	08/18/25 08:40	08/18/25 14:16	7471B	
7440-02-0	Nickel	14.6		1	0.12	0.46	1.84	mg/Kg	08/18/25 09:05	08/19/25 15:31	6010D	SW3050
7440-09-7	Potassium	1800	N*	1	25.5	73.8	92.2	mg/Kg	08/18/25 09:05	08/19/25 15:31	6010D	SW3050
7782-49-2	Selenium	0.38	J	1	0.24	0.74	0.92	mg/Kg	08/18/25 09:05	08/19/25 15:31	6010D	SW3050
7440-22-4	Silver	0.64		1	0.11	0.23	0.46	mg/Kg	08/18/25 09:05	08/19/25 15:31	6010D	SW3050
7440-23-5	Sodium	227		1	16.4	73.8	92.2	mg/Kg	08/18/25 09:05	08/19/25 15:31	6010D	SW3050
7440-28-0	Thallium	0.92	U	1	0.21	0.92	1.84	mg/Kg	08/18/25 09:05	08/19/25 15:31	6010D	SW3050
7440-62-2	Vanadium	26.0	N	1	0.23	0.92	1.84	mg/Kg	08/18/25 09:05	08/19/25 15:31	6010D	SW3050
7440-66-6	Zinc	72.0	N	1	0.21	0.46	1.84	mg/Kg	08/18/25 09:05	08/19/25 15:31	6010D	SW3050

Color Before:	Brown	Clarity Before:		Texture:	Medium
Color After:	Yellow	Clarity After:		Artifacts:	
Comments:	METALS-TAL				

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

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

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

Report of Analysis

Client:	Nobis Group	Date Collected:	08/14/25
Project:	Raymark Superfund Site	Date Received:	08/15/25
Client Sample ID:	OU4-TS-GRILLO-TSCP05-081425	SDG No.:	Q2879
Lab Sample ID:	Q2879-05	Matrix:	SOIL
Level (low/med):	low	% Solid:	93.1

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.	Prep Met.
7429-90-5	Aluminum	9810	*	1	0.73	3.49	4.37	mg/Kg	08/18/25 09:05	08/19/25 13:52	6010D	SW3050
7440-36-0	Antimony	0.55	UN	1	0.19	0.55	2.18	mg/Kg	08/18/25 09:05	08/19/25 13:52	6010D	SW3050
7440-38-2	Arsenic	7.56		1	0.17	0.70	0.87	mg/Kg	08/18/25 09:05	08/19/25 13:52	6010D	SW3050
7440-39-3	Barium	53.3	*	1	0.64	1.09	4.37	mg/Kg	08/18/25 09:05	08/19/25 13:52	6010D	SW3050
7440-41-7	Beryllium	0.80	N*	1	0.022	0.065	0.26	mg/Kg	08/18/25 09:05	08/19/25 13:52	6010D	SW3050
7440-43-9	Cadmium	0.73	*	1	0.021	0.065	0.26	mg/Kg	08/18/25 09:05	08/19/25 13:52	6010D	SW3050
7440-70-2	Calcium	3670		1	9.69	21.8	87.3	mg/Kg	08/18/25 09:05	08/19/25 13:52	6010D	SW3050
7440-47-3	Chromium	14.5		1	0.041	0.11	0.44	mg/Kg	08/18/25 09:05	08/19/25 13:52	6010D	SW3050
7440-48-4	Cobalt	6.91	N*	1	0.087	0.33	1.31	mg/Kg	08/18/25 09:05	08/19/25 13:52	6010D	SW3050
7440-50-8	Copper	18.7	*	1	0.19	0.70	0.87	mg/Kg	08/18/25 09:05	08/19/25 13:52	6010D	SW3050
7439-89-6	Iron	14600	*	1	3.48	3.49	4.37	mg/Kg	08/18/25 09:05	08/19/25 13:52	6010D	SW3050
7439-92-1	Lead	39.5		1	0.11	0.42	0.52	mg/Kg	08/18/25 09:05	08/19/25 13:52	6010D	SW3050
7439-95-4	Magnesium	3070		1	10.5	21.8	87.3	mg/Kg	08/18/25 09:05	08/19/25 13:52	6010D	SW3050
7439-96-5	Manganese	296		1	0.12	0.22	0.87	mg/Kg	08/18/25 09:05	08/19/25 13:52	6010D	SW3050
7439-97-6	Mercury	0.049		1	0.0070	0.011	0.013	mg/Kg	08/18/25 08:40	08/18/25 14:19	7471B	
7440-02-0	Nickel	13.0		1	0.11	0.44	1.75	mg/Kg	08/18/25 09:05	08/19/25 13:52	6010D	SW3050
7440-09-7	Potassium	1810	N*	1	24.2	69.9	87.3	mg/Kg	08/18/25 09:05	08/19/25 13:52	6010D	SW3050
7782-49-2	Selenium	0.35	J	1	0.23	0.70	0.87	mg/Kg	08/18/25 09:05	08/19/25 13:52	6010D	SW3050
7440-22-4	Silver	0.66		1	0.11	0.22	0.44	mg/Kg	08/18/25 09:05	08/19/25 13:52	6010D	SW3050
7440-23-5	Sodium	230		1	15.5	69.9	87.3	mg/Kg	08/18/25 09:05	08/19/25 13:52	6010D	SW3050
7440-28-0	Thallium	0.87	U	1	0.20	0.87	1.75	mg/Kg	08/18/25 09:05	08/19/25 13:52	6010D	SW3050
7440-62-2	Vanadium	24.8	N	1	0.22	0.87	1.75	mg/Kg	08/18/25 09:05	08/19/25 13:52	6010D	SW3050
7440-66-6	Zinc	59.7	N	1	0.20	0.44	1.75	mg/Kg	08/18/25 09:05	08/19/25 13:52	6010D	SW3050

Color Before:	Brown	Clarity Before:		Texture:	Medium
Color After:	Yellow	Clarity After:		Artifacts:	
Comments:	METALS-TAL				

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

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

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

Report of Analysis

Client:	Nobis Group	Date Collected:	08/14/25
Project:	Raymark Superfund Site	Date Received:	08/15/25
Client Sample ID:	OU4-TS-GRILLO-TSCP06-081425	SDG No.:	Q2879
Lab Sample ID:	Q2879-07	Matrix:	SOIL
Level (low/med):	low	% Solid:	90.8

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.	Prep Met.
7429-90-5	Aluminum	9480	*	1	0.76	3.61	4.51	mg/Kg	08/18/25 09:05	08/19/25 14:01	6010D	SW3050
7440-36-0	Antimony	0.56	UN	1	0.20	0.56	2.26	mg/Kg	08/18/25 09:05	08/19/25 14:01	6010D	SW3050
7440-38-2	Arsenic	7.19		1	0.17	0.72	0.90	mg/Kg	08/18/25 09:05	08/19/25 14:01	6010D	SW3050
7440-39-3	Barium	50.8	*	1	0.66	1.13	4.51	mg/Kg	08/18/25 09:05	08/19/25 14:01	6010D	SW3050
7440-41-7	Beryllium	0.79	N*	1	0.023	0.068	0.27	mg/Kg	08/18/25 09:05	08/19/25 14:01	6010D	SW3050
7440-43-9	Cadmium	0.67	*	1	0.022	0.068	0.27	mg/Kg	08/18/25 09:05	08/19/25 14:01	6010D	SW3050
7440-70-2	Calcium	3250		1	10.0	22.6	90.3	mg/Kg	08/18/25 09:05	08/19/25 14:01	6010D	SW3050
7440-47-3	Chromium	13.9		1	0.042	0.11	0.45	mg/Kg	08/18/25 09:05	08/19/25 14:01	6010D	SW3050
7440-48-4	Cobalt	6.51	N*	1	0.090	0.34	1.35	mg/Kg	08/18/25 09:05	08/19/25 14:01	6010D	SW3050
7440-50-8	Copper	19.9	*	1	0.20	0.72	0.90	mg/Kg	08/18/25 09:05	08/19/25 14:01	6010D	SW3050
7439-89-6	Iron	13700	*	1	3.60	3.61	4.51	mg/Kg	08/18/25 09:05	08/19/25 14:01	6010D	SW3050
7439-92-1	Lead	34.7		1	0.12	0.43	0.54	mg/Kg	08/18/25 09:05	08/19/25 14:01	6010D	SW3050
7439-95-4	Magnesium	2890		1	10.8	22.6	90.3	mg/Kg	08/18/25 09:05	08/19/25 14:01	6010D	SW3050
7439-96-5	Manganese	284		1	0.13	0.23	0.90	mg/Kg	08/18/25 09:05	08/19/25 14:01	6010D	SW3050
7439-97-6	Mercury	0.034		1	0.0080	0.011	0.014	mg/Kg	08/18/25 08:40	08/18/25 14:21	7471B	
7440-02-0	Nickel	12.3		1	0.12	0.45	1.81	mg/Kg	08/18/25 09:05	08/19/25 14:01	6010D	SW3050
7440-09-7	Potassium	1490	N*	1	25.0	72.2	90.3	mg/Kg	08/18/25 09:05	08/19/25 14:01	6010D	SW3050
7782-49-2	Selenium	0.31	J	1	0.24	0.72	0.90	mg/Kg	08/18/25 09:05	08/19/25 14:01	6010D	SW3050
7440-22-4	Silver	0.58		1	0.11	0.23	0.45	mg/Kg	08/18/25 09:05	08/19/25 14:01	6010D	SW3050
7440-23-5	Sodium	241		1	16.1	72.2	90.3	mg/Kg	08/18/25 09:05	08/19/25 14:01	6010D	SW3050
7440-28-0	Thallium	0.90	U	1	0.21	0.90	1.81	mg/Kg	08/18/25 09:05	08/19/25 14:01	6010D	SW3050
7440-62-2	Vanadium	23.1	N	1	0.23	0.90	1.81	mg/Kg	08/18/25 09:05	08/19/25 14:01	6010D	SW3050
7440-66-6	Zinc	61.5	N	1	0.21	0.45	1.81	mg/Kg	08/18/25 09:05	08/19/25 14:01	6010D	SW3050

Color Before:	Brown	Clarity Before:		Texture:	Medium
Color After:	Yellow	Clarity After:		Artifacts:	
Comments:	METALS-TAL				

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

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

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

Report of Analysis

Client:	Nobis Group	Date Collected:	08/14/25
Project:	Raymark Superfund Site	Date Received:	08/15/25
Client Sample ID:	OU4-TS-GRILLO-TSCP07-081425	SDG No.:	Q2879
Lab Sample ID:	Q2879-09	Matrix:	SOIL
Level (low/med):	low	% Solid:	93.5

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.	Prep Met.
7429-90-5	Aluminum	10700	*	1	0.74	3.52	4.40	mg/Kg	08/18/25 09:05	08/19/25 14:13	6010D	SW3050
7440-36-0	Antimony	0.55	UN	1	0.19	0.55	2.20	mg/Kg	08/18/25 09:05	08/19/25 14:13	6010D	SW3050
7440-38-2	Arsenic	8.88		1	0.17	0.70	0.88	mg/Kg	08/18/25 09:05	08/19/25 14:13	6010D	SW3050
7440-39-3	Barium	58.5	*	1	0.64	1.10	4.40	mg/Kg	08/18/25 09:05	08/19/25 14:13	6010D	SW3050
7440-41-7	Beryllium	0.94	N*	1	0.022	0.066	0.26	mg/Kg	08/18/25 09:05	08/19/25 14:13	6010D	SW3050
7440-43-9	Cadmium	0.87	*	1	0.021	0.066	0.26	mg/Kg	08/18/25 09:05	08/19/25 14:13	6010D	SW3050
7440-70-2	Calcium	3550		1	9.77	22.0	88.0	mg/Kg	08/18/25 09:05	08/19/25 14:13	6010D	SW3050
7440-47-3	Chromium	22.0		1	0.041	0.11	0.44	mg/Kg	08/18/25 09:05	08/19/25 14:13	6010D	SW3050
7440-48-4	Cobalt	8.31	N*	1	0.088	0.33	1.32	mg/Kg	08/18/25 09:05	08/19/25 14:13	6010D	SW3050
7440-50-8	Copper	20.7	*	1	0.19	0.70	0.88	mg/Kg	08/18/25 09:05	08/19/25 14:13	6010D	SW3050
7439-89-6	Iron	18300	*	1	3.51	3.52	4.40	mg/Kg	08/18/25 09:05	08/19/25 14:13	6010D	SW3050
7439-92-1	Lead	38.3		1	0.11	0.42	0.53	mg/Kg	08/18/25 09:05	08/19/25 14:13	6010D	SW3050
7439-95-4	Magnesium	3610		1	10.6	22.0	88.0	mg/Kg	08/18/25 09:05	08/19/25 14:13	6010D	SW3050
7439-96-5	Manganese	304		1	0.12	0.22	0.88	mg/Kg	08/18/25 09:05	08/19/25 14:13	6010D	SW3050
7439-97-6	Mercury	0.10		1	0.0080	0.011	0.014	mg/Kg	08/18/25 08:40	08/18/25 14:23	7471B	
7440-02-0	Nickel	15.7		1	0.11	0.44	1.76	mg/Kg	08/18/25 09:05	08/19/25 14:13	6010D	SW3050
7440-09-7	Potassium	1880	N*	1	24.4	70.4	88.0	mg/Kg	08/18/25 09:05	08/19/25 14:13	6010D	SW3050
7782-49-2	Selenium	0.47	J	1	0.23	0.70	0.88	mg/Kg	08/18/25 09:05	08/19/25 14:13	6010D	SW3050
7440-22-4	Silver	0.70		1	0.11	0.22	0.44	mg/Kg	08/18/25 09:05	08/19/25 14:13	6010D	SW3050
7440-23-5	Sodium	209		1	15.7	70.4	88.0	mg/Kg	08/18/25 09:05	08/19/25 14:13	6010D	SW3050
7440-28-0	Thallium	0.88	U	1	0.20	0.88	1.76	mg/Kg	08/18/25 09:05	08/19/25 14:13	6010D	SW3050
7440-62-2	Vanadium	27.6	N	1	0.22	0.88	1.76	mg/Kg	08/18/25 09:05	08/19/25 14:13	6010D	SW3050
7440-66-6	Zinc	63.8	N	1	0.20	0.44	1.76	mg/Kg	08/18/25 09:05	08/19/25 14:13	6010D	SW3050

Color Before:	Brown	Clarity Before:		Texture:	Medium
Color After:	Yellow	Clarity After:		Artifacts:	
Comments:	METALS-TAL				

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

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

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

Report of Analysis

Client:	Nobis Group	Date Collected:	08/14/25
Project:	Raymark Superfund Site	Date Received:	08/15/25
Client Sample ID:	OU4-TS-GRILLO-TSCP08-081425	SDG No.:	Q2879
Lab Sample ID:	Q2879-11	Matrix:	SOIL
Level (low/med):	low	% Solid:	91.3

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.	Prep Met.
7429-90-5	Aluminum	11200	*	1	0.79	3.74	4.68	mg/Kg	08/18/25 09:05	08/19/25 14:17	6010D	SW3050
7440-36-0	Antimony	0.59	UN	1	0.21	0.59	2.34	mg/Kg	08/18/25 09:05	08/19/25 14:17	6010D	SW3050
7440-38-2	Arsenic	8.52		1	0.18	0.75	0.94	mg/Kg	08/18/25 09:05	08/19/25 14:17	6010D	SW3050
7440-39-3	Barium	58.4	*	1	0.68	1.17	4.68	mg/Kg	08/18/25 09:05	08/19/25 14:17	6010D	SW3050
7440-41-7	Beryllium	0.92	N*	1	0.023	0.070	0.28	mg/Kg	08/18/25 09:05	08/19/25 14:17	6010D	SW3050
7440-43-9	Cadmium	0.88	*	1	0.022	0.070	0.28	mg/Kg	08/18/25 09:05	08/19/25 14:17	6010D	SW3050
7440-70-2	Calcium	4000		1	10.4	23.4	93.6	mg/Kg	08/18/25 09:05	08/19/25 14:17	6010D	SW3050
7440-47-3	Chromium	16.5		1	0.044	0.12	0.47	mg/Kg	08/18/25 09:05	08/19/25 14:17	6010D	SW3050
7440-48-4	Cobalt	7.66	N*	1	0.094	0.35	1.40	mg/Kg	08/18/25 09:05	08/19/25 14:17	6010D	SW3050
7440-50-8	Copper	22.5	*	1	0.21	0.75	0.94	mg/Kg	08/18/25 09:05	08/19/25 14:17	6010D	SW3050
7439-89-6	Iron	15700	*	1	3.74	3.74	4.68	mg/Kg	08/18/25 09:05	08/19/25 14:17	6010D	SW3050
7439-92-1	Lead	45.8		1	0.12	0.45	0.56	mg/Kg	08/18/25 09:05	08/19/25 14:17	6010D	SW3050
7439-95-4	Magnesium	3380		1	11.2	23.4	93.6	mg/Kg	08/18/25 09:05	08/19/25 14:17	6010D	SW3050
7439-96-5	Manganese	317		1	0.13	0.23	0.94	mg/Kg	08/18/25 09:05	08/19/25 14:17	6010D	SW3050
7439-97-6	Mercury	0.13		1	0.0070	0.011	0.013	mg/Kg	08/18/25 08:40	08/18/25 14:30	7471B	
7440-02-0	Nickel	14.7		1	0.12	0.47	1.87	mg/Kg	08/18/25 09:05	08/19/25 14:17	6010D	SW3050
7440-09-7	Potassium	1850	N*	1	25.9	74.9	93.6	mg/Kg	08/18/25 09:05	08/19/25 14:17	6010D	SW3050
7782-49-2	Selenium	0.39	J	1	0.24	0.75	0.94	mg/Kg	08/18/25 09:05	08/19/25 14:17	6010D	SW3050
7440-22-4	Silver	0.49		1	0.11	0.23	0.47	mg/Kg	08/18/25 09:05	08/19/25 14:17	6010D	SW3050
7440-23-5	Sodium	247		1	16.7	74.9	93.6	mg/Kg	08/18/25 09:05	08/19/25 14:17	6010D	SW3050
7440-28-0	Thallium	0.94	U	1	0.22	0.94	1.87	mg/Kg	08/18/25 09:05	08/19/25 14:17	6010D	SW3050
7440-62-2	Vanadium	27.7	N	1	0.23	0.94	1.87	mg/Kg	08/18/25 09:05	08/19/25 14:17	6010D	SW3050
7440-66-6	Zinc	69.4	N	1	0.22	0.47	1.87	mg/Kg	08/18/25 09:05	08/19/25 14:17	6010D	SW3050

Color Before:	Brown	Clarity Before:		Texture:	Medium
Color After:	Yellow	Clarity After:		Artifacts:	
Comments:	METALS-TAL				

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

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

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

Report of Analysis

Client:	Nobis Group	Date Collected:	08/14/25
Project:	Raymark Superfund Site	Date Received:	08/15/25
Client Sample ID:	OU4-TS-GRILLO-TSCP09-081425	SDG No.:	Q2879
Lab Sample ID:	Q2879-13	Matrix:	SOIL
Level (low/med):	low	% Solid:	92.8

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.	Prep Met.
7429-90-5	Aluminum	12900	*	1	0.77	3.65	4.57	mg/Kg	08/18/25 09:05	08/19/25 14:21	6010D	SW3050
7440-36-0	Antimony	0.57	UN	1	0.20	0.57	2.28	mg/Kg	08/18/25 09:05	08/19/25 14:21	6010D	SW3050
7440-38-2	Arsenic	9.78		1	0.17	0.73	0.91	mg/Kg	08/18/25 09:05	08/19/25 14:21	6010D	SW3050
7440-39-3	Barium	67.0	*	1	0.67	1.14	4.57	mg/Kg	08/18/25 09:05	08/19/25 14:21	6010D	SW3050
7440-41-7	Beryllium	1.06	N*	1	0.023	0.068	0.27	mg/Kg	08/18/25 09:05	08/19/25 14:21	6010D	SW3050
7440-43-9	Cadmium	1.08	*	1	0.022	0.068	0.27	mg/Kg	08/18/25 09:05	08/19/25 14:21	6010D	SW3050
7440-70-2	Calcium	4340		1	10.1	22.8	91.3	mg/Kg	08/18/25 09:05	08/19/25 14:21	6010D	SW3050
7440-47-3	Chromium	18.9		1	0.043	0.11	0.46	mg/Kg	08/18/25 09:05	08/19/25 14:21	6010D	SW3050
7440-48-4	Cobalt	8.86	N*	1	0.091	0.34	1.37	mg/Kg	08/18/25 09:05	08/19/25 14:21	6010D	SW3050
7440-50-8	Copper	24.5	*	1	0.20	0.73	0.91	mg/Kg	08/18/25 09:05	08/19/25 14:21	6010D	SW3050
7439-89-6	Iron	19200	*	1	3.64	3.65	4.57	mg/Kg	08/18/25 09:05	08/19/25 14:21	6010D	SW3050
7439-92-1	Lead	53.8		1	0.12	0.44	0.55	mg/Kg	08/18/25 09:05	08/19/25 14:21	6010D	SW3050
7439-95-4	Magnesium	3820		1	11.0	22.8	91.3	mg/Kg	08/18/25 09:05	08/19/25 14:21	6010D	SW3050
7439-96-5	Manganese	353		1	0.13	0.23	0.91	mg/Kg	08/18/25 09:05	08/19/25 14:21	6010D	SW3050
7439-97-6	Mercury	0.087		1	0.0070	0.010	0.013	mg/Kg	08/18/25 08:40	08/18/25 14:32	7471B	
7440-02-0	Nickel	18.0		1	0.12	0.46	1.83	mg/Kg	08/18/25 09:05	08/19/25 14:21	6010D	SW3050
7440-09-7	Potassium	2200	N*	1	25.3	73.1	91.3	mg/Kg	08/18/25 09:05	08/19/25 14:21	6010D	SW3050
7782-49-2	Selenium	0.30	J	1	0.24	0.73	0.91	mg/Kg	08/18/25 09:05	08/19/25 14:21	6010D	SW3050
7440-22-4	Silver	0.71		1	0.11	0.23	0.46	mg/Kg	08/18/25 09:05	08/19/25 14:21	6010D	SW3050
7440-23-5	Sodium	316		1	16.3	73.1	91.3	mg/Kg	08/18/25 09:05	08/19/25 14:21	6010D	SW3050
7440-28-0	Thallium	0.91	U	1	0.21	0.91	1.83	mg/Kg	08/18/25 09:05	08/19/25 14:21	6010D	SW3050
7440-62-2	Vanadium	29.8	N	1	0.23	0.91	1.83	mg/Kg	08/18/25 09:05	08/19/25 14:21	6010D	SW3050
7440-66-6	Zinc	75.1	N	1	0.21	0.46	1.83	mg/Kg	08/18/25 09:05	08/19/25 14:21	6010D	SW3050

Color Before:	Brown	Clarity Before:		Texture:	Medium
Color After:	Yellow	Clarity After:		Artifacts:	
Comments:	METALS-TAL				

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

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

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

Report of Analysis

Client:	Nobis Group	Date Collected:	08/14/25
Project:	Raymark Superfund Site	Date Received:	08/15/25
Client Sample ID:	OU4-TS-GRILLO-TSCP10-081425	SDG No.:	Q2879
Lab Sample ID:	Q2879-15	Matrix:	SOIL
Level (low/med):	low	% Solid:	91.3

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.	Prep Met.
7429-90-5	Aluminum	10200	*	1	0.79	3.74	4.68	mg/Kg	08/18/25 09:05	08/19/25 14:26	6010D	SW3050
7440-36-0	Antimony	0.59	UN	1	0.21	0.59	2.34	mg/Kg	08/18/25 09:05	08/19/25 14:26	6010D	SW3050
7440-38-2	Arsenic	7.54		1	0.18	0.75	0.94	mg/Kg	08/18/25 09:05	08/19/25 14:26	6010D	SW3050
7440-39-3	Barium	44.6	*	1	0.68	1.17	4.68	mg/Kg	08/18/25 09:05	08/19/25 14:26	6010D	SW3050
7440-41-7	Beryllium	0.86	N*	1	0.023	0.070	0.28	mg/Kg	08/18/25 09:05	08/19/25 14:26	6010D	SW3050
7440-43-9	Cadmium	0.72	*	1	0.022	0.070	0.28	mg/Kg	08/18/25 09:05	08/19/25 14:26	6010D	SW3050
7440-70-2	Calcium	2950		1	10.4	23.4	93.6	mg/Kg	08/18/25 09:05	08/19/25 14:26	6010D	SW3050
7440-47-3	Chromium	16.2		1	0.044	0.12	0.47	mg/Kg	08/18/25 09:05	08/19/25 14:26	6010D	SW3050
7440-48-4	Cobalt	6.87	N*	1	0.094	0.35	1.40	mg/Kg	08/18/25 09:05	08/19/25 14:26	6010D	SW3050
7440-50-8	Copper	17.3	*	1	0.21	0.75	0.94	mg/Kg	08/18/25 09:05	08/19/25 14:26	6010D	SW3050
7439-89-6	Iron	15000	*	1	3.74	3.74	4.68	mg/Kg	08/18/25 09:05	08/19/25 14:26	6010D	SW3050
7439-92-1	Lead	30.4		1	0.12	0.45	0.56	mg/Kg	08/18/25 09:05	08/19/25 14:26	6010D	SW3050
7439-95-4	Magnesium	3630		1	11.2	23.4	93.6	mg/Kg	08/18/25 09:05	08/19/25 14:26	6010D	SW3050
7439-96-5	Manganese	273		1	0.13	0.23	0.94	mg/Kg	08/18/25 09:05	08/19/25 14:26	6010D	SW3050
7439-97-6	Mercury	0.048		1	0.0080	0.011	0.014	mg/Kg	08/18/25 08:40	08/18/25 14:35	7471B	
7440-02-0	Nickel	13.8		1	0.12	0.47	1.87	mg/Kg	08/18/25 09:05	08/19/25 14:26	6010D	SW3050
7440-09-7	Potassium	1650	N*	1	25.9	74.9	93.6	mg/Kg	08/18/25 09:05	08/19/25 14:26	6010D	SW3050
7782-49-2	Selenium	0.42	J	1	0.24	0.75	0.94	mg/Kg	08/18/25 09:05	08/19/25 14:26	6010D	SW3050
7440-22-4	Silver	0.46	J	1	0.11	0.23	0.47	mg/Kg	08/18/25 09:05	08/19/25 14:26	6010D	SW3050
7440-23-5	Sodium	153		1	16.7	74.9	93.6	mg/Kg	08/18/25 09:05	08/19/25 14:26	6010D	SW3050
7440-28-0	Thallium	0.94	U	1	0.22	0.94	1.87	mg/Kg	08/18/25 09:05	08/19/25 14:26	6010D	SW3050
7440-62-2	Vanadium	23.6	N	1	0.23	0.94	1.87	mg/Kg	08/18/25 09:05	08/19/25 14:26	6010D	SW3050
7440-66-6	Zinc	60.5	N	1	0.22	0.47	1.87	mg/Kg	08/18/25 09:05	08/19/25 14:26	6010D	SW3050

Color Before:	Brown	Clarity Before:		Texture:	Medium
Color After:	Yellow	Clarity After:		Artifacts:	
Comments:	METALS-TAL				

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

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

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

Report of Analysis

Client:	Nobis Group	Date Collected:	08/14/25
Project:	Raymark Superfund Site	Date Received:	08/15/25
Client Sample ID:	OU4-TS-GRILLO-TSCP11-081425	SDG No.:	Q2879
Lab Sample ID:	Q2879-17	Matrix:	SOIL
Level (low/med):	low	% Solid:	77

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.	Prep Met.
7429-90-5	Aluminum	12000	*	1	0.95	4.52	5.65	mg/Kg	08/18/25 09:05	08/19/25 14:30	6010D	SW3050
7440-36-0	Antimony	0.71	UN	1	0.25	0.71	2.82	mg/Kg	08/18/25 09:05	08/19/25 14:30	6010D	SW3050
7440-38-2	Arsenic	9.57		1	0.22	0.90	1.13	mg/Kg	08/18/25 09:05	08/19/25 14:30	6010D	SW3050
7440-39-3	Barium	62.1	*	1	0.82	1.41	5.65	mg/Kg	08/18/25 09:05	08/19/25 14:30	6010D	SW3050
7440-41-7	Beryllium	0.98	N*	1	0.028	0.085	0.34	mg/Kg	08/18/25 09:05	08/19/25 14:30	6010D	SW3050
7440-43-9	Cadmium	0.84	*	1	0.027	0.085	0.34	mg/Kg	08/18/25 09:05	08/19/25 14:30	6010D	SW3050
7440-70-2	Calcium	4600		1	12.5	28.2	113	mg/Kg	08/18/25 09:05	08/19/25 14:30	6010D	SW3050
7440-47-3	Chromium	17.6		1	0.053	0.14	0.56	mg/Kg	08/18/25 09:05	08/19/25 14:30	6010D	SW3050
7440-48-4	Cobalt	8.68	N*	1	0.11	0.42	1.69	mg/Kg	08/18/25 09:05	08/19/25 14:30	6010D	SW3050
7440-50-8	Copper	22.3	*	1	0.25	0.90	1.13	mg/Kg	08/18/25 09:05	08/19/25 14:30	6010D	SW3050
7439-89-6	Iron	17500	*	1	4.51	4.52	5.65	mg/Kg	08/18/25 09:05	08/19/25 14:30	6010D	SW3050
7439-92-1	Lead	44.5		1	0.15	0.54	0.68	mg/Kg	08/18/25 09:05	08/19/25 14:30	6010D	SW3050
7439-95-4	Magnesium	3820		1	13.6	28.2	113	mg/Kg	08/18/25 09:05	08/19/25 14:30	6010D	SW3050
7439-96-5	Manganese	350		1	0.16	0.28	1.13	mg/Kg	08/18/25 09:05	08/19/25 14:30	6010D	SW3050
7439-97-6	Mercury	0.039		1	0.0090	0.013	0.017	mg/Kg	08/18/25 08:40	08/18/25 14:37	7471B	
7440-02-0	Nickel	16.1		1	0.15	0.56	2.26	mg/Kg	08/18/25 09:05	08/19/25 14:30	6010D	SW3050
7440-09-7	Potassium	2030	N*	1	31.3	90.3	113	mg/Kg	08/18/25 09:05	08/19/25 14:30	6010D	SW3050
7782-49-2	Selenium	0.41	J	1	0.29	0.90	1.13	mg/Kg	08/18/25 09:05	08/19/25 14:30	6010D	SW3050
7440-22-4	Silver	0.70		1	0.14	0.28	0.56	mg/Kg	08/18/25 09:05	08/19/25 14:30	6010D	SW3050
7440-23-5	Sodium	228		1	20.1	90.3	113	mg/Kg	08/18/25 09:05	08/19/25 14:30	6010D	SW3050
7440-28-0	Thallium	1.13	U	1	0.26	1.13	2.26	mg/Kg	08/18/25 09:05	08/19/25 14:30	6010D	SW3050
7440-62-2	Vanadium	28.8	N	1	0.28	1.13	2.26	mg/Kg	08/18/25 09:05	08/19/25 14:30	6010D	SW3050
7440-66-6	Zinc	74.2	N	1	0.26	0.56	2.26	mg/Kg	08/18/25 09:05	08/19/25 14:30	6010D	SW3050

Color Before:	Brown	Clarity Before:		Texture:	Medium
Color After:	Yellow	Clarity After:		Artifacts:	
Comments:	METALS-TAL				

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

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

METAL CALIBRATION DATA

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

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Nobis Group **SDG No.:** Q2879

Contract: NOBI03 **Lab Code:** ACE

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
ICV20	Mercury	4.16	4.0	104	90 - 110	CV	08/18/2025	13:54	LB136858

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

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Nobis Group **SDG No.:** Q2879

Contract: NOBI03 **Lab Code:** ACE

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
CCV60	Mercury	4.55	5.0	91	90 - 110	CV	08/18/2025	13:58	LB136858
CCV61	Mercury	5.07	5.0	101	90 - 110	CV	08/18/2025	14:26	LB136858
CCV62	Mercury	4.83	5.0	97	90 - 110	CV	08/18/2025	14:53	LB136858
CCV63	Mercury	4.62	5.0	92	90 - 110	CV	08/18/2025	15:26	LB136858

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

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Nobis Group **SDG No.:** Q2879

Contract: NOBI03 **Lab Code:** ACE

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	7850	8000	98	90 - 110	P	08/19/2025	12:17	LB136886
	Antimony	4070	4000	102	90 - 110	P	08/19/2025	12:17	LB136886
	Arsenic	3990	4000	100	90 - 110	P	08/19/2025	12:17	LB136886
	Barium	7940	8000	99	90 - 110	P	08/19/2025	12:17	LB136886
	Beryllium	209	200	104	90 - 110	P	08/19/2025	12:17	LB136886
	Cadmium	1970	2000	98	90 - 110	P	08/19/2025	12:17	LB136886
	Calcium	19600	20000	98	90 - 110	P	08/19/2025	12:17	LB136886
	Chromium	803	800	100	90 - 110	P	08/19/2025	12:17	LB136886
	Cobalt	1980	2000	99	90 - 110	P	08/19/2025	12:17	LB136886
	Copper	1020	1000	102	90 - 110	P	08/19/2025	12:17	LB136886
	Iron	4010	4000	100	90 - 110	P	08/19/2025	12:17	LB136886
	Lead	3990	4000	100	90 - 110	P	08/19/2025	12:17	LB136886
	Magnesium	19600	20000	98	90 - 110	P	08/19/2025	12:17	LB136886
	Manganese	1980	2000	99	90 - 110	P	08/19/2025	12:17	LB136886
	Nickel	1980	2000	99	90 - 110	P	08/19/2025	12:17	LB136886
	Potassium	19600	20000	98	90 - 110	P	08/19/2025	12:17	LB136886
	Selenium	4030	4000	101	90 - 110	P	08/19/2025	12:17	LB136886
	Silver	1010	1000	101	90 - 110	P	08/19/2025	12:17	LB136886
	Sodium	19600	20000	98	90 - 110	P	08/19/2025	12:17	LB136886
	Thallium	3920	4000	98	90 - 110	P	08/19/2025	12:17	LB136886
	Vanadium	1970	2000	98	90 - 110	P	08/19/2025	12:17	LB136886
	Zinc	2000	2000	100	90 - 110	P	08/19/2025	12:17	LB136886

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

Metals

- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Nobis Group **SDG No.:** Q2879

Contract: NOBI03 **Lab Code:** ACE

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	117	100	117	80 - 120	P	08/19/2025	12:23	LB136886
	Antimony	55.2	50.0	110	80 - 120	P	08/19/2025	12:23	LB136886
	Arsenic	20.1	20.0	100	80 - 120	P	08/19/2025	12:23	LB136886
	Barium	100	100	100	80 - 120	P	08/19/2025	12:23	LB136886
	Beryllium	6.28	6.0	105	80 - 120	P	08/19/2025	12:23	LB136886
	Cadmium	6.00	6.0	100	80 - 120	P	08/19/2025	12:23	LB136886
	Calcium	2120	2000	106	80 - 120	P	08/19/2025	12:23	LB136886
	Chromium	10.0	10.0	100	80 - 120	P	08/19/2025	12:23	LB136886
	Cobalt	30.3	30.0	101	80 - 120	P	08/19/2025	12:23	LB136886
	Copper	22.1	20.0	111	80 - 120	P	08/19/2025	12:23	LB136886
	Iron	112	100	112	80 - 120	P	08/19/2025	12:23	LB136886
	Lead	12.5	12.0	104	80 - 120	P	08/19/2025	12:23	LB136886
	Magnesium	2190	2000	109	80 - 120	P	08/19/2025	12:23	LB136886
	Manganese	22.1	20.0	111	80 - 120	P	08/19/2025	12:23	LB136886
	Nickel	40.8	40.0	102	80 - 120	P	08/19/2025	12:23	LB136886
	Potassium	1900	2000	95	80 - 120	P	08/19/2025	12:23	LB136886
	Selenium	18.3	20.0	91	80 - 120	P	08/19/2025	12:23	LB136886
	Silver	10.6	10.0	106	80 - 120	P	08/19/2025	12:23	LB136886
	Sodium	1960	2000	98	80 - 120	P	08/19/2025	12:23	LB136886
	Thallium	43.9	40.0	110	80 - 120	P	08/19/2025	12:23	LB136886
	Vanadium	43.0	40.0	108	80 - 120	P	08/19/2025	12:23	LB136886
	Zinc	44.7	40.0	112	80 - 120	P	08/19/2025	12:23	LB136886

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

Metals

- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Nobis Group **SDG No.:** Q2879

Contract: NOBI03 **Lab Code:** ACE

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	9980	10000	100	90 - 110	P	08/19/2025	12:59	LB136886
	Antimony	5080	5000	102	90 - 110	P	08/19/2025	12:59	LB136886
	Arsenic	5050	5000	101	90 - 110	P	08/19/2025	12:59	LB136886
	Barium	10100	10000	100	90 - 110	P	08/19/2025	12:59	LB136886
	Beryllium	244	250	98	90 - 110	P	08/19/2025	12:59	LB136886
	Cadmium	2480	2500	99	90 - 110	P	08/19/2025	12:59	LB136886
	Calcium	25100	25000	100	90 - 110	P	08/19/2025	12:59	LB136886
	Chromium	1000	1000	100	90 - 110	P	08/19/2025	12:59	LB136886
	Cobalt	2480	2500	99	90 - 110	P	08/19/2025	12:59	LB136886
	Copper	1260	1250	101	90 - 110	P	08/19/2025	12:59	LB136886
	Iron	5140	5000	103	90 - 110	P	08/19/2025	12:59	LB136886
	Lead	4950	5000	99	90 - 110	P	08/19/2025	12:59	LB136886
	Magnesium	24700	25000	99	90 - 110	P	08/19/2025	12:59	LB136886
	Manganese	2500	2500	100	90 - 110	P	08/19/2025	12:59	LB136886
	Nickel	2480	2500	99	90 - 110	P	08/19/2025	12:59	LB136886
	Potassium	25400	25000	102	90 - 110	P	08/19/2025	12:59	LB136886
	Selenium	5090	5000	102	90 - 110	P	08/19/2025	12:59	LB136886
	Silver	1260	1250	100	90 - 110	P	08/19/2025	12:59	LB136886
	Sodium	26000	25000	104	90 - 110	P	08/19/2025	12:59	LB136886
	Thallium	5150	5000	103	90 - 110	P	08/19/2025	12:59	LB136886
	Vanadium	2500	2500	100	90 - 110	P	08/19/2025	12:59	LB136886
	Zinc	2540	2500	102	90 - 110	P	08/19/2025	12:59	LB136886
CCV02	Aluminum	9760	10000	98	90 - 110	P	08/19/2025	14:05	LB136886
	Antimony	5010	5000	100	90 - 110	P	08/19/2025	14:05	LB136886
	Arsenic	4980	5000	100	90 - 110	P	08/19/2025	14:05	LB136886
	Barium	9800	10000	98	90 - 110	P	08/19/2025	14:05	LB136886
	Beryllium	239	250	96	90 - 110	P	08/19/2025	14:05	LB136886
	Cadmium	2430	2500	97	90 - 110	P	08/19/2025	14:05	LB136886
	Calcium	24400	25000	98	90 - 110	P	08/19/2025	14:05	LB136886
	Chromium	982	1000	98	90 - 110	P	08/19/2025	14:05	LB136886
	Cobalt	2440	2500	97	90 - 110	P	08/19/2025	14:05	LB136886
	Copper	1240	1250	99	90 - 110	P	08/19/2025	14:05	LB136886
	Iron	5080	5000	102	90 - 110	P	08/19/2025	14:05	LB136886
	Lead	4850	5000	97	90 - 110	P	08/19/2025	14:05	LB136886

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

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Nobis Group **SDG No.:** Q2879

Contract: NOBI03 **Lab Code:** ACE

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV02	Magnesium	24200	25000	97	90 - 110	P	08/19/2025	14:05	LB136886
	Manganese	2440	2500	98	90 - 110	P	08/19/2025	14:05	LB136886
	Nickel	2440	2500	98	90 - 110	P	08/19/2025	14:05	LB136886
	Potassium	24800	25000	99	90 - 110	P	08/19/2025	14:05	LB136886
	Selenium	5020	5000	100	90 - 110	P	08/19/2025	14:05	LB136886
	Silver	1240	1250	99	90 - 110	P	08/19/2025	14:05	LB136886
	Sodium	25000	25000	100	90 - 110	P	08/19/2025	14:05	LB136886
	Thallium	5060	5000	101	90 - 110	P	08/19/2025	14:05	LB136886
	Vanadium	2480	2500	99	90 - 110	P	08/19/2025	14:05	LB136886
	Zinc	2500	2500	100	90 - 110	P	08/19/2025	14:05	LB136886
CCV03	Aluminum	9870	10000	99	90 - 110	P	08/19/2025	14:54	LB136886
	Antimony	5060	5000	101	90 - 110	P	08/19/2025	14:54	LB136886
	Arsenic	5040	5000	101	90 - 110	P	08/19/2025	14:54	LB136886
	Barium	10000	10000	100	90 - 110	P	08/19/2025	14:54	LB136886
	Beryllium	243	250	97	90 - 110	P	08/19/2025	14:54	LB136886
	Cadmium	2470	2500	99	90 - 110	P	08/19/2025	14:54	LB136886
	Calcium	24600	25000	98	90 - 110	P	08/19/2025	14:54	LB136886
	Chromium	1000	1000	100	90 - 110	P	08/19/2025	14:54	LB136886
	Cobalt	2470	2500	99	90 - 110	P	08/19/2025	14:54	LB136886
	Copper	1250	1250	100	90 - 110	P	08/19/2025	14:54	LB136886
	Iron	5160	5000	103	90 - 110	P	08/19/2025	14:54	LB136886
	Lead	4910	5000	98	90 - 110	P	08/19/2025	14:54	LB136886
	Magnesium	24600	25000	98	90 - 110	P	08/19/2025	14:54	LB136886
	Manganese	2470	2500	99	90 - 110	P	08/19/2025	14:54	LB136886
	Nickel	2470	2500	99	90 - 110	P	08/19/2025	14:54	LB136886
	Potassium	25100	25000	100	90 - 110	P	08/19/2025	14:54	LB136886
	Selenium	5080	5000	102	90 - 110	P	08/19/2025	14:54	LB136886
	Silver	1260	1250	101	90 - 110	P	08/19/2025	14:54	LB136886
	Sodium	24900	25000	100	90 - 110	P	08/19/2025	14:54	LB136886
	Thallium	5060	5000	101	90 - 110	P	08/19/2025	14:54	LB136886
	Vanadium	2500	2500	100	90 - 110	P	08/19/2025	14:54	LB136886
	Zinc	2540	2500	102	90 - 110	P	08/19/2025	14:54	LB136886
CCV04	Aluminum	9740	10000	97	90 - 110	P	08/19/2025	15:47	LB136886
	Antimony	5020	5000	100	90 - 110	P	08/19/2025	15:47	LB136886

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

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Nobis Group **SDG No.:** Q2879

Contract: NOBI03 **Lab Code:** ACE

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV04	Arsenic	5000	5000	100	90 - 110	P	08/19/2025	15:47	LB136886
	Barium	9800	10000	98	90 - 110	P	08/19/2025	15:47	LB136886
	Beryllium	239	250	96	90 - 110	P	08/19/2025	15:47	LB136886
	Cadmium	2440	2500	98	90 - 110	P	08/19/2025	15:47	LB136886
	Calcium	24300	25000	97	90 - 110	P	08/19/2025	15:47	LB136886
	Chromium	990	1000	99	90 - 110	P	08/19/2025	15:47	LB136886
	Cobalt	2440	2500	98	90 - 110	P	08/19/2025	15:47	LB136886
	Copper	1240	1250	99	90 - 110	P	08/19/2025	15:47	LB136886
	Iron	5100	5000	102	90 - 110	P	08/19/2025	15:47	LB136886
	Lead	4860	5000	97	90 - 110	P	08/19/2025	15:47	LB136886
	Magnesium	24200	25000	97	90 - 110	P	08/19/2025	15:47	LB136886
	Manganese	2430	2500	97	90 - 110	P	08/19/2025	15:47	LB136886
	Nickel	2440	2500	98	90 - 110	P	08/19/2025	15:47	LB136886
	Potassium	24700	25000	99	90 - 110	P	08/19/2025	15:47	LB136886
	Selenium	5030	5000	101	90 - 110	P	08/19/2025	15:47	LB136886
	Silver	1250	1250	100	90 - 110	P	08/19/2025	15:47	LB136886
	Sodium	24400	25000	98	90 - 110	P	08/19/2025	15:47	LB136886
	Thallium	4860	5000	97	90 - 110	P	08/19/2025	15:47	LB136886
	Vanadium	2480	2500	99	90 - 110	P	08/19/2025	15:47	LB136886
	Zinc	2520	2500	101	90 - 110	P	08/19/2025	15:47	LB136886
CCV05	Aluminum	9760	10000	98	90 - 110	P	08/19/2025	16:38	LB136886
	Antimony	5070	5000	101	90 - 110	P	08/19/2025	16:38	LB136886
	Arsenic	5090	5000	102	90 - 110	P	08/19/2025	16:38	LB136886
	Barium	9760	10000	98	90 - 110	P	08/19/2025	16:38	LB136886
	Beryllium	239	250	96	90 - 110	P	08/19/2025	16:38	LB136886
	Cadmium	2470	2500	99	90 - 110	P	08/19/2025	16:38	LB136886
	Calcium	24400	25000	98	90 - 110	P	08/19/2025	16:38	LB136886
	Chromium	995	1000	100	90 - 110	P	08/19/2025	16:38	LB136886
	Cobalt	2470	2500	99	90 - 110	P	08/19/2025	16:38	LB136886
	Copper	1250	1250	100	90 - 110	P	08/19/2025	16:38	LB136886
	Iron	5100	5000	102	90 - 110	P	08/19/2025	16:38	LB136886
	Lead	4910	5000	98	90 - 110	P	08/19/2025	16:38	LB136886
	Magnesium	24400	25000	98	90 - 110	P	08/19/2025	16:38	LB136886
	Manganese	2430	2500	97	90 - 110	P	08/19/2025	16:38	LB136886

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

Metals

- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Nobis Group **SDG No.:** Q2879

Contract: NOBI03 **Lab Code:** ACE

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV05	Nickel	2470	2500	99	90 - 110	P	08/19/2025	16:38	LB136886
	Potassium	25000	25000	100	90 - 110	P	08/19/2025	16:38	LB136886
	Selenium	5140	5000	103	90 - 110	P	08/19/2025	16:38	LB136886
	Silver	1260	1250	100	90 - 110	P	08/19/2025	16:38	LB136886
	Sodium	24900	25000	100	90 - 110	P	08/19/2025	16:38	LB136886
	Thallium	5290	5000	106	90 - 110	P	08/19/2025	16:38	LB136886
	Vanadium	2470	2500	99	90 - 110	P	08/19/2025	16:38	LB136886
	Zinc	2540	2500	102	90 - 110	P	08/19/2025	16:38	LB136886
CCV06	Aluminum	9810	10000	98	90 - 110	P	08/19/2025	17:29	LB136886
	Antimony	5120	5000	102	90 - 110	P	08/19/2025	17:29	LB136886
	Arsenic	5070	5000	102	90 - 110	P	08/19/2025	17:29	LB136886
	Barium	9990	10000	100	90 - 110	P	08/19/2025	17:29	LB136886
	Beryllium	235	250	94	90 - 110	P	08/19/2025	17:29	LB136886
	Cadmium	2460	2500	98	90 - 110	P	08/19/2025	17:29	LB136886
	Calcium	24400	25000	98	90 - 110	P	08/19/2025	17:29	LB136886
	Chromium	994	1000	99	90 - 110	P	08/19/2025	17:29	LB136886
	Cobalt	2470	2500	99	90 - 110	P	08/19/2025	17:29	LB136886
	Copper	1250	1250	100	90 - 110	P	08/19/2025	17:29	LB136886
	Iron	5290	5000	106	90 - 110	P	08/19/2025	17:29	LB136886
	Lead	4880	5000	98	90 - 110	P	08/19/2025	17:29	LB136886
	Magnesium	24300	25000	97	90 - 110	P	08/19/2025	17:29	LB136886
	Manganese	2460	2500	98	90 - 110	P	08/19/2025	17:29	LB136886
	Nickel	2460	2500	98	90 - 110	P	08/19/2025	17:29	LB136886
	Potassium	25400	25000	102	90 - 110	P	08/19/2025	17:29	LB136886
	Selenium	5150	5000	103	90 - 110	P	08/19/2025	17:29	LB136886
	Silver	1260	1250	101	90 - 110	P	08/19/2025	17:29	LB136886
	Sodium	25300	25000	101	90 - 110	P	08/19/2025	17:29	LB136886
	Thallium	5200	5000	104	90 - 110	P	08/19/2025	17:29	LB136886
	Vanadium	2490	2500	100	90 - 110	P	08/19/2025	17:29	LB136886
	Zinc	2540	2500	102	90 - 110	P	08/19/2025	17:29	LB136886
CCV07	Aluminum	9740	10000	97	90 - 110	P	08/19/2025	18:02	LB136886
	Antimony	5130	5000	103	90 - 110	P	08/19/2025	18:02	LB136886
	Arsenic	5090	5000	102	90 - 110	P	08/19/2025	18:02	LB136886
	Barium	9730	10000	97	90 - 110	P	08/19/2025	18:02	LB136886

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

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Nobis Group **SDG No.:** Q2879

Contract: NOBI03 **Lab Code:** ACE

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV07	Beryllium	233	250	93	90 - 110	P	08/19/2025	18:02	LB136886
	Cadmium	2450	2500	98	90 - 110	P	08/19/2025	18:02	LB136886
	Calcium	24200	25000	97	90 - 110	P	08/19/2025	18:02	LB136886
	Chromium	990	1000	99	90 - 110	P	08/19/2025	18:02	LB136886
	Cobalt	2460	2500	98	90 - 110	P	08/19/2025	18:02	LB136886
	Copper	1250	1250	100	90 - 110	P	08/19/2025	18:02	LB136886
	Iron	5200	5000	104	90 - 110	P	08/19/2025	18:02	LB136886
	Lead	4850	5000	97	90 - 110	P	08/19/2025	18:02	LB136886
	Magnesium	23900	25000	96	90 - 110	P	08/19/2025	18:02	LB136886
	Manganese	2430	2500	97	90 - 110	P	08/19/2025	18:02	LB136886
	Nickel	2450	2500	98	90 - 110	P	08/19/2025	18:02	LB136886
	Potassium	25200	25000	101	90 - 110	P	08/19/2025	18:02	LB136886
	Selenium	5150	5000	103	90 - 110	P	08/19/2025	18:02	LB136886
	Silver	1250	1250	100	90 - 110	P	08/19/2025	18:02	LB136886
	Sodium	24900	25000	100	90 - 110	P	08/19/2025	18:02	LB136886
	Thallium	5290	5000	106	90 - 110	P	08/19/2025	18:02	LB136886
	Vanadium	2470	2500	99	90 - 110	P	08/19/2025	18:02	LB136886
	Zinc	2530	2500	101	90 - 110	P	08/19/2025	18:02	LB136886

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

Metals

- 2b -
CRDL STANDARD FOR AA & ICP

Client: Nobis Group **SDG No.:** Q2879

Contract: NOBI03 **Lab Code:** ACE

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	0.23	0.2	117	70 - 130	CV	08/18/2025	14:03	LB136858
CRI01	Aluminum	110	100	110	65 - 135	P	08/19/2025	12:38	LB136886
	Antimony	53.1	50.0	106	65 - 135	P	08/19/2025	12:38	LB136886
	Arsenic	20.5	20.0	103	65 - 135	P	08/19/2025	12:38	LB136886
	Barium	98.1	100	98	65 - 135	P	08/19/2025	12:38	LB136886
	Beryllium	6.06	6.0	101	65 - 135	P	08/19/2025	12:38	LB136886
	Cadmium	5.77	6.0	96	65 - 135	P	08/19/2025	12:38	LB136886
	Calcium	2050	2000	102	65 - 135	P	08/19/2025	12:38	LB136886
	Chromium	10.1	10.0	101	65 - 135	P	08/19/2025	12:38	LB136886
	Cobalt	29.4	30.0	98	65 - 135	P	08/19/2025	12:38	LB136886
	Copper	21.2	20.0	106	65 - 135	P	08/19/2025	12:38	LB136886
	Iron	103	100	103	65 - 135	P	08/19/2025	12:38	LB136886
	Lead	12.1	12.0	101	65 - 135	P	08/19/2025	12:38	LB136886
	Magnesium	2120	2000	106	65 - 135	P	08/19/2025	12:38	LB136886
	Manganese	21.6	20.0	108	65 - 135	P	08/19/2025	12:38	LB136886
	Nickel	39.2	40.0	98	65 - 135	P	08/19/2025	12:38	LB136886
	Potassium	1800	2000	90	65 - 135	P	08/19/2025	12:38	LB136886
	Selenium	19.6	20.0	98	65 - 135	P	08/19/2025	12:38	LB136886
	Silver	9.92	10.0	99	65 - 135	P	08/19/2025	12:38	LB136886
	Sodium	1980	2000	99	65 - 135	P	08/19/2025	12:38	LB136886
	Thallium	43.6	40.0	109	65 - 135	P	08/19/2025	12:38	LB136886
	Vanadium	39.6	40.0	99	65 - 135	P	08/19/2025	12:38	LB136886
	Zinc	42.1	40.0	105	65 - 135	P	08/19/2025	12:38	LB136886

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

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Nobis Group **SDG No.:** Q2879

Contract: NOBI03 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB20	Mercury	0.076	+/-0.2	U	0.16	0.20	CV	08/18/2025	13:56	LB136858

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

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Nobis Group **SDG No.:** Q2879

Contract: NOBI03 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB60	Mercury	0.076	+/-0.2	U	0.16	0.20	CV	08/18/2025	14:00	LB136858
CCB61	Mercury	0.076	+/-0.2	U	0.16	0.20	CV	08/18/2025	14:28	LB136858
CCB62	Mercury	0.095	+/-0.2	J	0.16	0.20	CV	08/18/2025	14:55	LB136858
CCB63	Mercury	0.076	+/-0.2	U	0.16	0.20	CV	08/18/2025	15:31	LB136858

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

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Nobis Group **SDG No.:** Q2879

Contract: NOBI03 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB01	Aluminum	12.2	+/-50	J	80.0	100	P	08/19/2025	12:27	LB136886
	Antimony	6.76	+/-25	U	12.5	50.0	P	08/19/2025	12:27	LB136886
	Arsenic	5.12	+/-10	U	15.0	20.0	P	08/19/2025	12:27	LB136886
	Barium	14.6	+/-50	U	25.0	100	P	08/19/2025	12:27	LB136886
	Beryllium	0.56	+/-3	U	1.50	6.00	P	08/19/2025	12:27	LB136886
	Cadmium	0.50	+/-3	U	1.50	6.00	P	08/19/2025	12:27	LB136886
	Calcium	234	+/-1000	U	500	2000	P	08/19/2025	12:27	LB136886
	Chromium	2.12	+/-5	U	5.00	10.0	P	08/19/2025	12:27	LB136886
	Cobalt	2.26	+/-15	U	7.50	30.0	P	08/19/2025	12:27	LB136886
	Copper	4.60	+/-10	U	16.0	20.0	P	08/19/2025	12:27	LB136886
	Iron	23.4	+/-50	U	80.0	100	P	08/19/2025	12:27	LB136886
	Lead	2.30	+/-6	U	9.60	12.0	P	08/19/2025	12:27	LB136886
	Magnesium	244	+/-1000	U	500	2000	P	08/19/2025	12:27	LB136886
	Manganese	5.94	+/-10	U	15.0	20.0	P	08/19/2025	12:27	LB136886
	Nickel	3.06	+/-20	U	10.0	40.0	P	08/19/2025	12:27	LB136886
	Potassium	918	+/-1000	U	1600	2000	P	08/19/2025	12:27	LB136886
	Selenium	9.64	+/-10	U	16.0	20.0	P	08/19/2025	12:27	LB136886
	Silver	1.62	+/-5	U	5.00	10.0	P	08/19/2025	12:27	LB136886
	Sodium	868	+/-1000	U	1000	2000	P	08/19/2025	12:27	LB136886
	Thallium	4.38	+/-20	U	20.0	40.0	P	08/19/2025	12:27	LB136886
	Vanadium	6.26	+/-20	U	20.0	40.0	P	08/19/2025	12:27	LB136886
	Zinc	16.7	+/-20	U	15.0	40.0	P	08/19/2025	12:27	LB136886

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

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Nobis Group **SDG No.:** Q2879

Contract: NOBI03 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB01	Aluminum	11.3	+/-50	U	80.0	100	P	08/19/2025	13:03	LB136886
	Antimony	6.76	+/-25	U	12.5	50.0	P	08/19/2025	13:03	LB136886
	Arsenic	5.12	+/-10	U	15.0	20.0	P	08/19/2025	13:03	LB136886
	Barium	14.6	+/-50	U	25.0	100	P	08/19/2025	13:03	LB136886
	Beryllium	0.56	+/-3	U	1.50	6.00	P	08/19/2025	13:03	LB136886
	Cadmium	0.50	+/-3	U	1.50	6.00	P	08/19/2025	13:03	LB136886
	Calcium	234	+/-1000	U	500	2000	P	08/19/2025	13:03	LB136886
	Chromium	2.12	+/-5	U	5.00	10.0	P	08/19/2025	13:03	LB136886
	Cobalt	2.26	+/-15	U	7.50	30.0	P	08/19/2025	13:03	LB136886
	Copper	4.60	+/-10	U	16.0	20.0	P	08/19/2025	13:03	LB136886
	Iron	23.4	+/-50	U	80.0	100	P	08/19/2025	13:03	LB136886
	Lead	2.30	+/-6	U	9.60	12.0	P	08/19/2025	13:03	LB136886
	Magnesium	244	+/-1000	U	500	2000	P	08/19/2025	13:03	LB136886
	Manganese	5.94	+/-10	U	15.0	20.0	P	08/19/2025	13:03	LB136886
	Nickel	3.06	+/-20	U	10.0	40.0	P	08/19/2025	13:03	LB136886
	Potassium	918	+/-1000	U	1600	2000	P	08/19/2025	13:03	LB136886
	Selenium	9.64	+/-10	U	16.0	20.0	P	08/19/2025	13:03	LB136886
	Silver	1.62	+/-5	U	5.00	10.0	P	08/19/2025	13:03	LB136886
	Sodium	868	+/-1000	U	1000	2000	P	08/19/2025	13:03	LB136886
	Thallium	4.38	+/-20	U	20.0	40.0	P	08/19/2025	13:03	LB136886
	Vanadium	6.26	+/-20	U	20.0	40.0	P	08/19/2025	13:03	LB136886
	Zinc	16.7	+/-20	U	15.0	40.0	P	08/19/2025	13:03	LB136886
CCB02	Aluminum	11.3	+/-50	U	80.0	100	P	08/19/2025	14:09	LB136886
	Antimony	6.76	+/-25	U	12.5	50.0	P	08/19/2025	14:09	LB136886
	Arsenic	5.12	+/-10	U	15.0	20.0	P	08/19/2025	14:09	LB136886
	Barium	14.6	+/-50	U	25.0	100	P	08/19/2025	14:09	LB136886
	Beryllium	0.56	+/-3	U	1.50	6.00	P	08/19/2025	14:09	LB136886
	Cadmium	0.50	+/-3	U	1.50	6.00	P	08/19/2025	14:09	LB136886
	Calcium	234	+/-1000	U	500	2000	P	08/19/2025	14:09	LB136886
	Chromium	2.12	+/-5	U	5.00	10.0	P	08/19/2025	14:09	LB136886
	Cobalt	2.26	+/-15	U	7.50	30.0	P	08/19/2025	14:09	LB136886
	Copper	4.60	+/-10	U	16.0	20.0	P	08/19/2025	14:09	LB136886
	Iron	23.4	+/-50	U	80.0	100	P	08/19/2025	14:09	LB136886
	Lead	2.30	+/-6	U	9.60	12.0	P	08/19/2025	14:09	LB136886
	Magnesium	244	+/-1000	U	500	2000	P	08/19/2025	14:09	LB136886
	Manganese	5.94	+/-10	U	15.0	20.0	P	08/19/2025	14:09	LB136886
	Nickel	3.06	+/-20	U	10.0	40.0	P	08/19/2025	14:09	LB136886
	Potassium	918	+/-1000	U	1600	2000	P	08/19/2025	14:09	LB136886
	Selenium	9.64	+/-10	U	16.0	20.0	P	08/19/2025	14:09	LB136886

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

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Nobis Group **SDG No.:** Q2879

Contract: NOBI03 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB02	Silver	1.62	+/-5	U	5.00	10.0	P	08/19/2025	14:09	LB136886
	Sodium	868	+/-1000	U	1000	2000	P	08/19/2025	14:09	LB136886
	Thallium	4.38	+/-20	U	20.0	40.0	P	08/19/2025	14:09	LB136886
	Vanadium	6.26	+/-20	U	20.0	40.0	P	08/19/2025	14:09	LB136886
	Zinc	16.7	+/-20	U	15.0	40.0	P	08/19/2025	14:09	LB136886
CCB03	Aluminum	11.6	+/-50	J	80.0	100	P	08/19/2025	14:58	LB136886
	Antimony	6.76	+/-25	U	12.5	50.0	P	08/19/2025	14:58	LB136886
	Arsenic	5.12	+/-10	U	15.0	20.0	P	08/19/2025	14:58	LB136886
	Barium	14.6	+/-50	U	25.0	100	P	08/19/2025	14:58	LB136886
	Beryllium	0.56	+/-3	U	1.50	6.00	P	08/19/2025	14:58	LB136886
	Cadmium	0.50	+/-3	U	1.50	6.00	P	08/19/2025	14:58	LB136886
	Calcium	234	+/-1000	U	500	2000	P	08/19/2025	14:58	LB136886
	Chromium	2.12	+/-5	U	5.00	10.0	P	08/19/2025	14:58	LB136886
	Cobalt	2.26	+/-15	U	7.50	30.0	P	08/19/2025	14:58	LB136886
	Copper	4.60	+/-10	U	16.0	20.0	P	08/19/2025	14:58	LB136886
	Iron	23.4	+/-50	U	80.0	100	P	08/19/2025	14:58	LB136886
	Lead	2.30	+/-6	U	9.60	12.0	P	08/19/2025	14:58	LB136886
	Magnesium	244	+/-1000	U	500	2000	P	08/19/2025	14:58	LB136886
	Manganese	5.94	+/-10	U	15.0	20.0	P	08/19/2025	14:58	LB136886
	Nickel	3.06	+/-20	U	10.0	40.0	P	08/19/2025	14:58	LB136886
	Potassium	918	+/-1000	U	1600	2000	P	08/19/2025	14:58	LB136886
	Selenium	9.64	+/-10	U	16.0	20.0	P	08/19/2025	14:58	LB136886
	Silver	1.62	+/-5	U	5.00	10.0	P	08/19/2025	14:58	LB136886
	Sodium	868	+/-1000	U	1000	2000	P	08/19/2025	14:58	LB136886
	Thallium	4.38	+/-20	U	20.0	40.0	P	08/19/2025	14:58	LB136886
	Vanadium	6.26	+/-20	U	20.0	40.0	P	08/19/2025	14:58	LB136886
	Zinc	16.7	+/-20	U	15.0	40.0	P	08/19/2025	14:58	LB136886
CCB04	Aluminum	15.0	+/-50	J	80.0	100	P	08/19/2025	15:52	LB136886
	Antimony	6.76	+/-25	U	12.5	50.0	P	08/19/2025	15:52	LB136886
	Arsenic	5.12	+/-10	U	15.0	20.0	P	08/19/2025	15:52	LB136886
	Barium	14.6	+/-50	U	25.0	100	P	08/19/2025	15:52	LB136886
	Beryllium	0.56	+/-3	U	1.50	6.00	P	08/19/2025	15:52	LB136886
	Cadmium	0.50	+/-3	U	1.50	6.00	P	08/19/2025	15:52	LB136886
	Calcium	234	+/-1000	U	500	2000	P	08/19/2025	15:52	LB136886
	Chromium	2.12	+/-5	U	5.00	10.0	P	08/19/2025	15:52	LB136886
	Cobalt	2.26	+/-15	U	7.50	30.0	P	08/19/2025	15:52	LB136886
	Copper	4.60	+/-10	U	16.0	20.0	P	08/19/2025	15:52	LB136886
	Iron	23.4	+/-50	U	80.0	100	P	08/19/2025	15:52	LB136886
	Lead	2.30	+/-6	U	9.60	12.0	P	08/19/2025	15:52	LB136886

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

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Nobis Group **SDG No.:** Q2879

Contract: NOBI03 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB04	Magnesium	244	+/-1000	U	500	2000	P	08/19/2025	15:52	LB136886
	Manganese	5.94	+/-10	U	15.0	20.0	P	08/19/2025	15:52	LB136886
	Nickel	3.06	+/-20	U	10.0	40.0	P	08/19/2025	15:52	LB136886
	Potassium	918	+/-1000	U	1600	2000	P	08/19/2025	15:52	LB136886
	Selenium	9.64	+/-10	U	16.0	20.0	P	08/19/2025	15:52	LB136886
	Silver	1.62	+/-5	U	5.00	10.0	P	08/19/2025	15:52	LB136886
	Sodium	868	+/-1000	U	1000	2000	P	08/19/2025	15:52	LB136886
	Thallium	4.38	+/-20	U	20.0	40.0	P	08/19/2025	15:52	LB136886
	Vanadium	6.26	+/-20	U	20.0	40.0	P	08/19/2025	15:52	LB136886
	Zinc	16.7	+/-20	U	15.0	40.0	P	08/19/2025	15:52	LB136886
CCB05	Aluminum	11.3	+/-50	U	80.0	100	P	08/19/2025	16:43	LB136886
	Antimony	6.76	+/-25	U	12.5	50.0	P	08/19/2025	16:43	LB136886
	Arsenic	5.12	+/-10	U	15.0	20.0	P	08/19/2025	16:43	LB136886
	Barium	14.6	+/-50	U	25.0	100	P	08/19/2025	16:43	LB136886
	Beryllium	0.56	+/-3	U	1.50	6.00	P	08/19/2025	16:43	LB136886
	Cadmium	0.50	+/-3	U	1.50	6.00	P	08/19/2025	16:43	LB136886
	Calcium	234	+/-1000	U	500	2000	P	08/19/2025	16:43	LB136886
	Chromium	2.12	+/-5	U	5.00	10.0	P	08/19/2025	16:43	LB136886
	Cobalt	2.26	+/-15	U	7.50	30.0	P	08/19/2025	16:43	LB136886
	Copper	4.60	+/-10	U	16.0	20.0	P	08/19/2025	16:43	LB136886
	Iron	23.4	+/-50	U	80.0	100	P	08/19/2025	16:43	LB136886
	Lead	2.30	+/-6	U	9.60	12.0	P	08/19/2025	16:43	LB136886
	Magnesium	244	+/-1000	U	500	2000	P	08/19/2025	16:43	LB136886
	Manganese	5.94	+/-10	U	15.0	20.0	P	08/19/2025	16:43	LB136886
	Nickel	3.06	+/-20	U	10.0	40.0	P	08/19/2025	16:43	LB136886
	Potassium	918	+/-1000	U	1600	2000	P	08/19/2025	16:43	LB136886
	Selenium	9.64	+/-10	U	16.0	20.0	P	08/19/2025	16:43	LB136886
	Silver	1.62	+/-5	U	5.00	10.0	P	08/19/2025	16:43	LB136886
	Sodium	868	+/-1000	U	1000	2000	P	08/19/2025	16:43	LB136886
	Thallium	4.38	+/-20	U	20.0	40.0	P	08/19/2025	16:43	LB136886
	Vanadium	6.26	+/-20	U	20.0	40.0	P	08/19/2025	16:43	LB136886
	Zinc	16.7	+/-20	U	15.0	40.0	P	08/19/2025	16:43	LB136886
CCB06	Aluminum	16.7	+/-50	J	80.0	100	P	08/19/2025	17:33	LB136886
	Antimony	6.76	+/-25	U	12.5	50.0	P	08/19/2025	17:33	LB136886
	Arsenic	5.12	+/-10	U	15.0	20.0	P	08/19/2025	17:33	LB136886
	Barium	14.6	+/-50	U	25.0	100	P	08/19/2025	17:33	LB136886
	Beryllium	0.56	+/-3	U	1.50	6.00	P	08/19/2025	17:33	LB136886
	Cadmium	0.50	+/-3	U	1.50	6.00	P	08/19/2025	17:33	LB136886
	Calcium	234	+/-1000	U	500	2000	P	08/19/2025	17:33	LB136886

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

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Nobis Group **SDG No.:** Q2879

Contract: NOBI03 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB06	Chromium	2.12	+/-5	U	5.00	10.0	P	08/19/2025	17:33	LB136886
	Cobalt	2.26	+/-15	U	7.50	30.0	P	08/19/2025	17:33	LB136886
	Copper	4.60	+/-10	U	16.0	20.0	P	08/19/2025	17:33	LB136886
	Iron	23.4	+/-50	U	80.0	100	P	08/19/2025	17:33	LB136886
	Lead	2.30	+/-6	U	9.60	12.0	P	08/19/2025	17:33	LB136886
	Magnesium	244	+/-1000	U	500	2000	P	08/19/2025	17:33	LB136886
	Manganese	5.94	+/-10	U	15.0	20.0	P	08/19/2025	17:33	LB136886
	Nickel	3.06	+/-20	U	10.0	40.0	P	08/19/2025	17:33	LB136886
	Potassium	918	+/-1000	U	1600	2000	P	08/19/2025	17:33	LB136886
	Selenium	9.64	+/-10	U	16.0	20.0	P	08/19/2025	17:33	LB136886
	Silver	1.62	+/-5	U	5.00	10.0	P	08/19/2025	17:33	LB136886
	Sodium	868	+/-1000	U	1000	2000	P	08/19/2025	17:33	LB136886
	Thallium	4.38	+/-20	U	20.0	40.0	P	08/19/2025	17:33	LB136886
	Vanadium	6.26	+/-20	U	20.0	40.0	P	08/19/2025	17:33	LB136886
	Zinc	16.7	+/-20	U	15.0	40.0	P	08/19/2025	17:33	LB136886
CCB07	Aluminum	11.3	+/-50	U	80.0	100	P	08/19/2025	18:07	LB136886
	Antimony	6.76	+/-25	U	12.5	50.0	P	08/19/2025	18:07	LB136886
	Arsenic	5.12	+/-10	U	15.0	20.0	P	08/19/2025	18:07	LB136886
	Barium	14.6	+/-50	U	25.0	100	P	08/19/2025	18:07	LB136886
	Beryllium	0.56	+/-3	U	1.50	6.00	P	08/19/2025	18:07	LB136886
	Cadmium	0.50	+/-3	U	1.50	6.00	P	08/19/2025	18:07	LB136886
	Calcium	234	+/-1000	U	500	2000	P	08/19/2025	18:07	LB136886
	Chromium	2.12	+/-5	U	5.00	10.0	P	08/19/2025	18:07	LB136886
	Cobalt	2.26	+/-15	U	7.50	30.0	P	08/19/2025	18:07	LB136886
	Copper	4.60	+/-10	U	16.0	20.0	P	08/19/2025	18:07	LB136886
	Iron	23.4	+/-50	U	80.0	100	P	08/19/2025	18:07	LB136886
	Lead	2.30	+/-6	U	9.60	12.0	P	08/19/2025	18:07	LB136886
	Magnesium	244	+/-1000	U	500	2000	P	08/19/2025	18:07	LB136886
	Manganese	5.94	+/-10	U	15.0	20.0	P	08/19/2025	18:07	LB136886
	Nickel	3.06	+/-20	U	10.0	40.0	P	08/19/2025	18:07	LB136886
	Potassium	918	+/-1000	U	1600	2000	P	08/19/2025	18:07	LB136886
	Selenium	9.64	+/-10	U	16.0	20.0	P	08/19/2025	18:07	LB136886
	Silver	1.62	+/-5	U	5.00	10.0	P	08/19/2025	18:07	LB136886
	Sodium	868	+/-1000	U	1000	2000	P	08/19/2025	18:07	LB136886
	Thallium	4.38	+/-20	U	20.0	40.0	P	08/19/2025	18:07	LB136886
	Vanadium	6.26	+/-20	U	20.0	40.0	P	08/19/2025	18:07	LB136886
	Zinc	16.7	+/-20	U	15.0	40.0	P	08/19/2025	18:07	LB136886

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

Metals
- 3b -
PREPARATION BLANK SUMMARY

Client: Nobis Group **SDG No.:** Q2879

Instrument: CV1

Sample ID	Analyte	Result (mg/Kg)	Acceptance Limit	Conc Qual	LOD mg/Kg	CRQL mg/Kg	M	Analysis Date	Analysis Time	Run
PB169281BL		**SOLID**		**Batch Number:**		**PB169281**		**Prep Date:**	**08/18/2025**	
	Mercury	0.0080	<0.014	U	0.011	0.014	CV	08/18/2025	14:10	LB136858

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

Metals
- 3b -
PREPARATION BLANK SUMMARY

Client: Nobis Group **SDG No.:** Q2879

Instrument: P4

Sample ID	Analyte	Result (mg/Kg)	Acceptance Limit	Conc Qual	LOD mg/Kg	CRQL mg/Kg	M	Analysis Date	Analysis Time	Run
PB169280BL		**SOLID**		**Batch Number:**		**PB169280**		**Prep Date:**	**08/18/2025**	
	Aluminum	1.72	<2.5	J	4.00	5.00	P	08/19/2025	15:18	LB136886
	Antimony	0.22	<1.25	U	0.63	2.50	P	08/19/2025	15:18	LB136886
	Arsenic	0.19	<0.5	U	0.80	1.00	P	08/19/2025	15:18	LB136886
	Barium	0.73	<2.5	U	1.25	5.00	P	08/19/2025	15:18	LB136886
	Beryllium	0.025	<0.15	U	0.075	0.30	P	08/19/2025	15:18	LB136886
	Cadmium	0.024	<0.15	U	0.075	0.30	P	08/19/2025	15:18	LB136886
	Calcium	11.1	<50	U	25.0	100	P	08/19/2025	15:18	LB136886
	Chromium	0.047	<0.25	U	0.13	0.50	P	08/19/2025	15:18	LB136886
	Cobalt	0.10	<0.75	U	0.38	1.50	P	08/19/2025	15:18	LB136886
	Copper	0.22	<0.5	U	0.80	1.00	P	08/19/2025	15:18	LB136886
	Iron	3.99	<2.5	U	4.00	5.00	P	08/19/2025	15:18	LB136886
	Lead	0.13	<0.3	U	0.48	0.60	P	08/19/2025	15:18	LB136886
	Magnesium	12.0	<50	U	25.0	100	P	08/19/2025	15:18	LB136886
	Manganese	0.14	<0.5	U	0.25	1.00	P	08/19/2025	15:18	LB136886
	Nickel	0.13	<1	U	0.50	2.00	P	08/19/2025	15:18	LB136886
	Potassium	27.7	<50	U	80.0	100	P	08/19/2025	15:18	LB136886
	Selenium	0.26	<0.5	U	0.80	1.00	P	08/19/2025	15:18	LB136886
	Silver	0.12	<0.25	U	0.25	0.50	P	08/19/2025	15:18	LB136886
	Sodium	17.8	<50	U	80.0	100	P	08/19/2025	15:18	LB136886
	Thallium	0.23	<1	U	1.00	2.00	P	08/19/2025	15:18	LB136886
	Vanadium	0.25	<1	U	1.00	2.00	P	08/19/2025	15:18	LB136886
	Zinc	0.23	<1	U	0.50	2.00	P	08/19/2025	15:18	LB136886

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

Metals
- 4 -
INTERFERENCE CHECK SAMPLE

Client: Nobis Group **SDG No.:** Q2879

Contract: NOBI03 **Lab Code:** ACE

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	246000	255000	96	216000	294000	08/19/2025	12:42	LB136886
	Antimony	-0.20			-50	50	08/19/2025	12:42	LB136886
	Arsenic	12.1			-20	20	08/19/2025	12:42	LB136886
	Barium	-1.21	6.0	20	-94	106	08/19/2025	12:42	LB136886
	Beryllium	2.93			-6	6	08/19/2025	12:42	LB136886
	Cadmium	2.13	1.0	213	-5	7	08/19/2025	12:42	LB136886
	Calcium	234000	245000	96	208000	282000	08/19/2025	12:42	LB136886
	Chromium	59.6	52.0	115	42	62	08/19/2025	12:42	LB136886
	Cobalt	1.71			-30	30	08/19/2025	12:42	LB136886
	Copper	-2.88	2.0	144	-18	22	08/19/2025	12:42	LB136886
	Iron	103000	101000	102	85600	116500	08/19/2025	12:42	LB136886
	Lead	-6.18			-12	12	08/19/2025	12:42	LB136886
	Magnesium	246000	255000	96	216000	294000	08/19/2025	12:42	LB136886
	Manganese	-1.33	7.0	19	-13	27	08/19/2025	12:42	LB136886
	Nickel	5.95	2.0	298	-38	42	08/19/2025	12:42	LB136886
	Potassium	1.64			0	0	08/19/2025	12:42	LB136886
	Selenium	3.05			-20	20	08/19/2025	12:42	LB136886
	Silver	2.72			-10	10	08/19/2025	12:42	LB136886
	Sodium	29.5			0	0	08/19/2025	12:42	LB136886
	Thallium	2.08			-40	40	08/19/2025	12:42	LB136886
	Vanadium	3.51			-40	40	08/19/2025	12:42	LB136886
	Zinc	1.80			-40	40	08/19/2025	12:42	LB136886
ICSAB01	Aluminum	241000	247000	98	209000	285000	08/19/2025	12:46	LB136886
	Antimony	590	618	96	525	711	08/19/2025	12:46	LB136886
	Arsenic	110	104	106	88.4	120	08/19/2025	12:46	LB136886
	Barium	478	537	89	437	637	08/19/2025	12:46	LB136886
	Beryllium	462	495	93	420	570	08/19/2025	12:46	LB136886
	Cadmium	951	972	98	826	1120	08/19/2025	12:46	LB136886
	Calcium	228000	235000	97	199000	271000	08/19/2025	12:46	LB136886
	Chromium	541	542	100	460	624	08/19/2025	12:46	LB136886
	Cobalt	479	476	101	404	548	08/19/2025	12:46	LB136886
	Copper	463	511	91	434	588	08/19/2025	12:46	LB136886
	Iron	101000	99300	102	84400	114500	08/19/2025	12:46	LB136886
	Lead	41.0	49.0	84	37	61	08/19/2025	12:46	LB136886
	Magnesium	240000	248000	97	210000	286000	08/19/2025	12:46	LB136886
	Manganese	465	507	92	430	584	08/19/2025	12:46	LB136886
	Nickel	954	954	100	810	1100	08/19/2025	12:46	LB136886
	Potassium	-314			0	0	08/19/2025	12:46	LB136886
	Selenium	49.3	46.0	107	26	66	08/19/2025	12:46	LB136886
	Silver	212	201	106	170	232	08/19/2025	12:46	LB136886
	Sodium	-49.4			0	0	08/19/2025	12:46	LB136886
	Thallium	96.0	108	89	68	148	08/19/2025	12:46	LB136886

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

Metals
- 4 -
INTERFERENCE CHECK SAMPLE

Client: Nobis Group **SDG No.:** Q2879

Contract: NOBI03 **Lab Code:** ACE

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

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Low Limit (ug/L)	High Limit (ug/L)	Analysis Date	Analysis Time	Run Number
ICSAB01	Vanadium	462	491	94	417	565	08/19/2025	12:46	LB136886
	Zinc	1020	952	107	809	1095	08/19/2025	12:46	LB136886

METAL QC DATA

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

metals
- 5a -
MATRIX SPIKE SUMMARY

client: Nobis Group **level:** low **sdg no.:** Q2879

contract: NOBI03 **lab code:** ACE

matrix: Solid **sample id:** Q2889-01 **client id:** PL-02-081525MS

Percent Solids for Sample: 93.2 **Spiked ID:** Q2889-01MS **Percent Solids for Spike Sample:** 93.2

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	mg/Kg	74 - 119	7450		8840		89.0	-1559		P
Antimony	mg/Kg	79 - 114	15.2		2.34	U	35.6	43	N	P
Arsenic	mg/Kg	82 - 111	33.7		3.41		35.6	85		P
Barium	mg/Kg	83 - 113	34.6		36.3		8.9	-19		P
Beryllium	mg/Kg	83 - 113	8.05		0.77		8.9	82	N	P
Cadmium	mg/Kg	82 - 113	8.83		0.44		8.9	94		P
Calcium	mg/Kg	81 - 116	1470		1140		44.5	726		P
Chromium	mg/Kg	85 - 113	27.7		11.7		17.8	90		P
Cobalt	mg/Kg	85 - 112	13.9		7.08		8.9	76	N	P
Copper	mg/Kg	81 - 117	24.3		12.1		13.4	91		P
Iron	mg/Kg	81 - 118	12400		14700		130	-1780		P
Lead	mg/Kg	81 - 112	49.2		10.9		44.5	86		P
Magnesium	mg/Kg	78 - 115	2180		2400		89.0	-247		P
Manganese	mg/Kg	84 - 114	206		250		8.9	-497		P
Mercury	mg/Kg	80 - 124	0.30		0.034		0.29	91		CV
Nickel	mg/Kg	83 - 113	31.7		12.1		22.3	88		P
Potassium	mg/Kg	81 - 116	882		632		450	56	N	P
Selenium	mg/Kg	78 - 111	74.9		0.94	U	89.0	84		P
Silver	mg/Kg	82 - 112	3.46		0.46	J	3.3	91		P
Sodium	mg/Kg	83 - 118	290		171		130	91		P
Thallium	mg/Kg	83 - 111	80.2		1.87	U	89.0	90		P
Vanadium	mg/Kg	82 - 114	32.9		21.5		13.4	85		P
Zinc	mg/Kg	82 - 113	33.1		30.1		8.9	34	N	P

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

metals
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: Nobis Group **level:** low **sdg no.:** Q2879

contract: NOBI03 **lab code:** ACE

matrix: Solid **sample id:** Q2889-01 **client id:** PL-02-081525MSD

Percent Solids for Sample: 93.2 **Spiked ID:** Q2889-01MSD **Percent Solids for Spike Sample:** 93.2

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	mg/Kg	74 - 119	7230		8840		87.6	-1829		P
Antimony	mg/Kg	79 - 114	14.9		2.34	U	35.0	43	N	P
Arsenic	mg/Kg	82 - 111	33.0		3.41		35.0	84		P
Barium	mg/Kg	83 - 113	33.7		36.3		8.8	-30		P
Beryllium	mg/Kg	83 - 113	7.71		0.77		8.8	79	N	P
Cadmium	mg/Kg	82 - 113	8.56		0.44		8.8	92		P
Calcium	mg/Kg	81 - 116	1420		1140		43.8	635		P
Chromium	mg/Kg	85 - 113	26.9		11.7		17.5	87		P
Cobalt	mg/Kg	85 - 112	13.5		7.08		8.8	73	N	P
Copper	mg/Kg	81 - 117	23.5		12.1		13.1	87		P
Iron	mg/Kg	81 - 118	12200		14700		130	-1962		P
Lead	mg/Kg	81 - 112	47.7		10.9		43.8	84		P
Magnesium	mg/Kg	78 - 115	2110		2400		87.6	-335		P
Manganese	mg/Kg	84 - 114	199		250		8.8	-577		P
Mercury	mg/Kg	80 - 124	0.28		0.034		0.27	90		CV
Nickel	mg/Kg	83 - 113	30.8		12.1		21.9	85		P
Potassium	mg/Kg	81 - 116	864		632		440	53	N	P
Selenium	mg/Kg	78 - 111	73.0		0.94	U	87.6	83		P
Silver	mg/Kg	82 - 112	3.41		0.46	J	3.3	89		P
Sodium	mg/Kg	83 - 118	285		171		130	88		P
Thallium	mg/Kg	83 - 111	76.9		1.87	U	87.6	88		P
Vanadium	mg/Kg	82 - 114	31.9		21.5		13.1	79	N	P
Zinc	mg/Kg	82 - 113	32.2		30.1		8.8	24	N	P

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

Metals
- 5b -
POST DIGEST SPIKE SUMMARY

Client: Nobis Group **SDG No.:** Q2879

Contract: NOBI03 **Lab Code:** ACE

Matrix: Solid **Level:** LOW **Client ID:** PL-02-081525-A

Sample ID: Q2889-01 **Spiked ID:** Q2889-01A

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Antimony	mg/Kg	79 - 114	31.3		2.34	U	37.5	84		P
Beryllium	mg/Kg	83 - 113	8.17		0.77		9.40	79	N	P
Cobalt	mg/Kg	85 - 112	15.7		7.08		9.40	91		P
Potassium	mg/Kg	81 - 116	1020		632		470	83		P
Vanadium	mg/Kg	82 - 114	32.6		21.5		14.1	78	N	P
Zinc	mg/Kg	82 - 113	37.8		30.1		9.40	82		P

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

Metals

- 6 -
DUPLICATE SAMPLE SUMMARY

Client: Nobis Group **Level:** LOW **SDG No.:** Q2879

Contract: NOBI03 **Lab Code:** ACE

Matrix: Solid **Sample ID:** Q2889-01 **Client ID:** PL-02-081525-DUP

Percent Solids for Sample: 93.2 **Duplicate ID** Q2889-01DUP **Percent Solids for Spike Sample:** 93.2

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	mg/Kg	20	8840		6830		26	*	P
Antimony	mg/Kg	20	2.34	U	2.33	U			P
Arsenic	mg/Kg	20	3.41		2.83		19		P
Barium	mg/Kg	20	36.3		29.4		21	*	P
Beryllium	mg/Kg	20	0.77		0.60		24	*	P
Cadmium	mg/Kg	20	0.44		0.35		23	*	P
Calcium	mg/Kg	20	1140		1170		3		P
Chromium	mg/Kg	20	11.7		9.94		16		P
Cobalt	mg/Kg	20	7.08		5.49		25	*	P
Copper	mg/Kg	20	12.1		16.3		30	*	P
Iron	mg/Kg	20	14700		11700		23	*	P
Lead	mg/Kg	20	10.9		10.4		5		P
Magnesium	mg/Kg	20	2400		2120		12		P
Manganese	mg/Kg	20	250		217		14		P
Mercury	mg/Kg	20	0.034		0.043		23		CV
Nickel	mg/Kg	20	12.1		10.2		17		P
Potassium	mg/Kg	20	632		432		38	*	P
Selenium	mg/Kg	20	0.94	U	0.93	U			P
Silver	mg/Kg	20	0.46	J	0.34	J	28		P
Sodium	mg/Kg	20	171		155		10		P
Thallium	mg/Kg	20	1.87	U	1.87	U			P
Vanadium	mg/Kg	20	21.5		18.9		13		P
Zinc	mg/Kg	20	30.1		26.3		13		P

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

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

Metals

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: Nobis Group **Level:** LOW **SDG No.:** Q2879

Contract: NOBI03 **Lab Code:** ACE

Matrix: Solid **Sample ID:** Q2889-01MS **Client ID:** PL-02-081525MSD

Percent Solids for Sample: 93.2 **Duplicate ID** Q2889-01MSD **Percent Solids for Spike Sample:** 93.2

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	mg/Kg	20	7450		7230		3		P
Antimony	mg/Kg	20	15.2		14.9		2		P
Arsenic	mg/Kg	20	33.7		33.0		2		P
Barium	mg/Kg	20	34.6		33.7		3		P
Beryllium	mg/Kg	20	8.05		7.71		4		P
Cadmium	mg/Kg	20	8.83		8.56		3		P
Calcium	mg/Kg	20	1470		1420		3		P
Chromium	mg/Kg	20	27.7		26.9		3		P
Cobalt	mg/Kg	20	13.9		13.5		3		P
Copper	mg/Kg	20	24.3		23.5		3		P
Iron	mg/Kg	20	12400		12200		2		P
Lead	mg/Kg	20	49.2		47.7		3		P
Magnesium	mg/Kg	20	2180		2110		3		P
Manganese	mg/Kg	20	206		199		3		P
Mercury	mg/Kg	20	0.30		0.28		7		CV
Nickel	mg/Kg	20	31.7		30.8		3		P
Potassium	mg/Kg	20	882		864		2		P
Selenium	mg/Kg	20	74.9		73.0		3		P
Silver	mg/Kg	20	3.46		3.41		1		P
Sodium	mg/Kg	20	290		285		2		P
Thallium	mg/Kg	20	80.2		76.9		4		P
Vanadium	mg/Kg	20	32.9		31.9		3		P
Zinc	mg/Kg	20	33.1		32.2		3		P

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

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

LABORATORY CONTROL SAMPLE SUMMARY

Client: Nobis Group **SDG No.:** Q2879

Contract: NOBI03 **Lab Code:** ACE

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB169280BS							
Aluminum	mg/Kg	100	95.6		96	74 - 119	P
Antimony	mg/Kg	40.0	38.9		97	79 - 114	P
Arsenic	mg/Kg	40.0	38.2		96	82 - 111	P
Barium	mg/Kg	10.0	9.13		91	83 - 113	P
Beryllium	mg/Kg	10.0	9.57		96	83 - 113	P
Cadmium	mg/Kg	10.0	9.13		91	82 - 113	P
Calcium	mg/Kg	50.0	48.7	J	97	81 - 116	P
Chromium	mg/Kg	20.0	19.4		97	85 - 113	P
Cobalt	mg/Kg	10.0	9.36		94	85 - 112	P
Copper	mg/Kg	15.0	15.0		100	81 - 117	P
Iron	mg/Kg	150	145		97	81 - 118	P
Lead	mg/Kg	50.0	45.9		92	81 - 112	P
Magnesium	mg/Kg	100	95.5	J	96	78 - 115	P
Manganese	mg/Kg	10.0	9.67		97	84 - 114	P
Nickel	mg/Kg	25.0	23.6		94	83 - 113	P
Potassium	mg/Kg	500	459		92	81 - 116	P
Selenium	mg/Kg	100	97.0		97	78 - 111	P
Silver	mg/Kg	3.8	3.62		95	82 - 112	P
Sodium	mg/Kg	150	140		93	83 - 118	P
Thallium	mg/Kg	100	93.7		94	83 - 111	P
Vanadium	mg/Kg	15.0	14.4		96	82 - 114	P
Zinc	mg/Kg	10.0	10.1		101	82 - 113	P

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

LABORATORY CONTROL SAMPLE SUMMARY

Client: Nobis Group **SDG No.:** Q2879

Contract: NOBI03 **Lab Code:** ACE

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB169281BS							
Mercury	mg/Kg	0.28	0.25		89	80 - 124	CV

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

Metals

-9 -

ICP SERIAL DILUTIONS

SAMPLE NO.

PL-02-081525-L

Lab Name: Alliance **Contract:** NOBI03

Lab Code: ACE **Lb No.:** lb136886 **Lab Sample ID :** Q2889-01L **SDG No.:** Q2879

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
Aluminum	8840		10400		17		P
Antimony	2.34	U	11.7	U			P
Arsenic	3.41		4.24	J	24		P
Barium	36.3		41.6		14		P
Beryllium	0.77		0.96	J	26		P
Cadmium	0.44		0.24	J	45		P
Calcium	1140		1370		20		P
Chromium	11.7		13.8		18		P
Cobalt	7.08		7.35		4		P
Copper	12.1		14.7		21		P
Iron	14700		17000		16		P
Lead	10.9		11.7		7		P
Magnesium	2400		2880		20		P
Manganese	250		302		21		P
Mercury	0.034		0.070	U	100.0		CV
Nickel	12.1		12.6		3		P
Potassium	632		702		11		P
Selenium	0.94	U	4.69	U			P
Silver	0.46	J	2.34	U	100.0		P
Sodium	171		221	J	29		P
Thallium	1.87	U	9.37	U			P
Vanadium	21.5		25.7		19		P
Zinc	30.1		35.0		16		P

METAL PREPARATION & INSTRUMENT DATA

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

Metals
- 11 -
ICP INTERELEMENT CORRECTION FACTORS

Client: Nobis Group **SDG No.:** Q2879

Contract: NOBI03 **Lab Code:** ACE

Instrument ID: **Date:**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

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

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

Metals
- 11 -
ICP INTERELEMENT CORRECTION FACTORS

Client: Nobis Group **SDG No.:** Q2879

Contract: NOBI03 **Lab Code:** ACE

Instrument ID: **Date:**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

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

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

Metals
- 11 -
ICP INTERELEMENT CORRECTION FACTORS

Client: Nobis Group **SDG No.:** Q2879

Contract: NOBI03 **Lab Code:** ACE

Instrument ID: **Date:**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

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

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

Metals
- 11 -
ICP INTERELEMENT CORRECTION FACTORS

Client: Nobis Group **SDG No.:** Q2879

Contract: NOBI03 **Lab Code:** ACE

Instrument ID: **Date:**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

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

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

Metals
- 11 -
ICP INTERELEMENT CORRECTION FACTORS

Client: Nobis Group **SDG No.:** Q2879

Contract: NOBI03 **Lab Code:** ACE

Instrument ID: **Date:**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

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

METAL PREPARATION & ANALYICAL SUMMARY

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

Metals
- 13 -
SAMPLE PREPARATION SUMMARY

Client: Nobis Group **SDG No.:** Q2879

Contract: NOBI03 **Lab Code:** ACE **Method:**

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(g)	Final Sample Volume (mL)	Percent Solids
Batch Number:	**PB169280**						
PB169280BL	PB169280BL	MB	SOLID	08/18/2025	2.00	100.0	100.00
PB169280BS	PB169280BS	LCS	SOLID	08/18/2025	2.00	100.0	100.00
Q2879-01	OU4-TS-GRILLO-TSCP03-081425	SAM	SOLID	08/18/2025	2.44	100.0	89.10
Q2879-03	OU4-TS-GRILLO-TSCP04-081425	SAM	SOLID	08/18/2025	2.49	100.0	87.10
Q2879-05	OU4-TS-GRILLO-TSCP05-081425	SAM	SOLID	08/18/2025	2.46	100.0	93.10
Q2879-07	OU4-TS-GRILLO-TSCP06-081425	SAM	SOLID	08/18/2025	2.44	100.0	90.80
Q2879-09	OU4-TS-GRILLO-TSCP07-081425	SAM	SOLID	08/18/2025	2.43	100.0	93.50
Q2879-11	OU4-TS-GRILLO-TSCP08-081425	SAM	SOLID	08/18/2025	2.34	100.0	91.30
Q2879-13	OU4-TS-GRILLO-TSCP09-081425	SAM	SOLID	08/18/2025	2.36	100.0	92.80
Q2879-15	OU4-TS-GRILLO-TSCP10-081425	SAM	SOLID	08/18/2025	2.34	100.0	91.30
Q2879-17	OU4-TS-GRILLO-TSCP11-081425	SAM	SOLID	08/18/2025	2.30	100.0	77.00
Q2889-01DUP	PL-02-081525-DUP	DUP	SOLID	08/18/2025	2.30	100.0	93.20
Q2889-01MS	PL-02-081525MS	MS	SOLID	08/18/2025	2.41	100.0	93.20
Q2889-01MSD	PL-02-081525MSD	MSD	SOLID	08/18/2025	2.45	100.0	93.20

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

Metals
- 13 -
SAMPLE PREPARATION SUMMARY

Client: Nobis Group **SDG No.:** Q2879

Contract: NOBI03 **Lab Code:** ACE **Method:**

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(g)	Final Sample Volume (mL)	Percent Solids
Batch Number:	**PB169281**						
PB169281BL	PB169281BL	MB	SOLID	08/18/2025	0.50	35.0	100.00
PB169281BS	PB169281BS	LCS	SOLID	08/18/2025	0.50	35.0	100.00
Q2879-01	OU4-TS-GRILLO-TSCP03-081425	SAM	SOLID	08/18/2025	0.54	35.0	89.10
Q2879-03	OU4-TS-GRILLO-TSCP04-081425	SAM	SOLID	08/18/2025	0.56	35.0	87.10
Q2879-05	OU4-TS-GRILLO-TSCP05-081425	SAM	SOLID	08/18/2025	0.57	35.0	93.10
Q2879-07	OU4-TS-GRILLO-TSCP06-081425	SAM	SOLID	08/18/2025	0.54	35.0	90.80
Q2879-09	OU4-TS-GRILLO-TSCP07-081425	SAM	SOLID	08/18/2025	0.55	35.0	93.50
Q2879-11	OU4-TS-GRILLO-TSCP08-081425	SAM	SOLID	08/18/2025	0.57	35.0	91.30
Q2879-13	OU4-TS-GRILLO-TSCP09-081425	SAM	SOLID	08/18/2025	0.59	35.0	92.80
Q2879-15	OU4-TS-GRILLO-TSCP10-081425	SAM	SOLID	08/18/2025	0.56	35.0	91.30
Q2879-17	OU4-TS-GRILLO-TSCP11-081425	SAM	SOLID	08/18/2025	0.55	35.0	77.00
Q2889-01DUP	PL-02-081525-DUP	DUP	SOLID	08/18/2025	0.56	35.0	93.20
Q2889-01MS	PL-02-081525MS	MS	SOLID	08/18/2025	0.52	35.0	93.20
Q2889-01MSD	PL-02-081525MSD	MSD	SOLID	08/18/2025	0.56	35.0	93.20

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

metals
- 14 -
ANALYSIS RUN LOG

Client: Nobis Group **Contract:** NOBI03

Lab code: ACE **Sdg no.:** Q2879

Instrument id number: **Method:** **Run number:** LB136858

Start date: 08/18/2025 **End date:** 08/18/2025

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1314	HG
S0.2	S0.2	1	1317	HG
S2.5	S2.5	1	1322	HG
S5	S5	1	1324	HG
S7.5	S7.5	1	1328	HG
S10	S10	1	1330	HG
ICV20	ICV20	1	1354	HG
ICB20	ICB20	1	1356	HG
CCV60	CCV60	1	1358	HG
CCB60	CCB60	1	1400	HG
CRA	CRA	1	1403	HG
PB169281BL	PB169281BL	1	1410	HG
PB169281BS	PB169281BS	1	1412	HG
Q2879-01	OU4-TS-GRILLO-TSCP03-0814	1	1414	HG
Q2879-03	OU4-TS-GRILLO-TSCP04-0814	1	1416	HG
Q2879-05	OU4-TS-GRILLO-TSCP05-0814	1	1419	HG
Q2879-07	OU4-TS-GRILLO-TSCP06-0814	1	1421	HG
Q2879-09	OU4-TS-GRILLO-TSCP07-0814	1	1423	HG
CCV61	CCV61	1	1426	HG
CCB61	CCB61	1	1428	HG
Q2879-11	OU4-TS-GRILLO-TSCP08-0814	1	1430	HG
Q2879-13	OU4-TS-GRILLO-TSCP09-0814	1	1432	HG
Q2879-15	OU4-TS-GRILLO-TSCP10-0814	1	1435	HG
Q2879-17	OU4-TS-GRILLO-TSCP11-0814	1	1437	HG
Q2889-01DUP	PL-02-081525-DUP	1	1451	HG
CCV62	CCV62	1	1453	HG
CCB62	CCB62	1	1455	HG
Q2889-01MS	PL-02-081525MS	1	1458	HG
Q2889-01MSD	PL-02-081525MSD	1	1500	HG
Q2889-01L	PL-02-081525-L	5	1502	HG
CCV63	CCV63	1	1526	HG
CCB63	CCB63	1	1531	HG

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

metals
- 14 -
ANALYSIS RUN LOG

Client: Nobis Group **Contract:** NOBI03

Lab code: ACE **Sdg no.:** Q2879

Instrument id number: **Method:** **Run number:** LB136886

Start date: 08/19/2025 **End date:** 08/19/2025

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1115	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
S1	S1	1	1119	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
S2	S2	1	1124	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
S3	S3	1	1128	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
S4	S4	1	1132	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
S5	S5	1	1136	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
ICV01	ICV01	1	1217	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
LLICV01	LLICV01	1	1223	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
ICB01	ICB01	1	1227	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CRI01	CRI01	1	1238	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
ICSA01	ICSA01	1	1242	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
ICSAB01	ICSAB01	1	1246	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCV01	CCV01	1	1259	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCB01	CCB01	1	1303	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q2879-05	OU4-TS-GRILLO-TSCP05-081	1	1352	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q2879-07	OU4-TS-GRILLO-TSCP06-081	1	1401	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCV02	CCV02	1	1405	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCB02	CCB02	1	1409	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q2879-09	OU4-TS-GRILLO-TSCP07-081	1	1413	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q2879-11	OU4-TS-GRILLO-TSCP08-081	1	1417	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q2879-13	OU4-TS-GRILLO-TSCP09-081	1	1421	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q2879-15	OU4-TS-GRILLO-TSCP10-081	1	1426	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q2879-17	OU4-TS-GRILLO-TSCP11-081	1	1430	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q2889-01DUP	PL-02-081525-DUP	1	1450	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCV03	CCV03	1	1454	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCB03	CCB03	1	1458	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q2889-01L	PL-02-081525-L	5	1502	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q2889-01MS	PL-02-081525MS	1	1507	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q2889-01A	PL-02-081525-A	1	1514	Be,Co,K,Sb,V,Zn
PB169280BL	PB169280BL	1	1518	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
PB169280BS	PB169280BS	1	1523	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q2879-01	OU4-TS-GRILLO-TSCP03-081	1	1527	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q2879-03	OU4-TS-GRILLO-TSCP04-081	1	1531	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q2889-01MSD	PL-02-081525MSD	1	1535	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCV04	CCV04	1	1547	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCB04	CCB04	1	1552	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCV05	CCV05	1	1638	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCB05	CCB05	1	1643	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCV06	CCV06	1	1729	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCB06	CCB06	1	1733	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCV07	CCV07	1	1802	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn

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

metals
- 14 -
ANALYSIS RUN LOG

Client: Nobis Group **Contract:** NOBI03

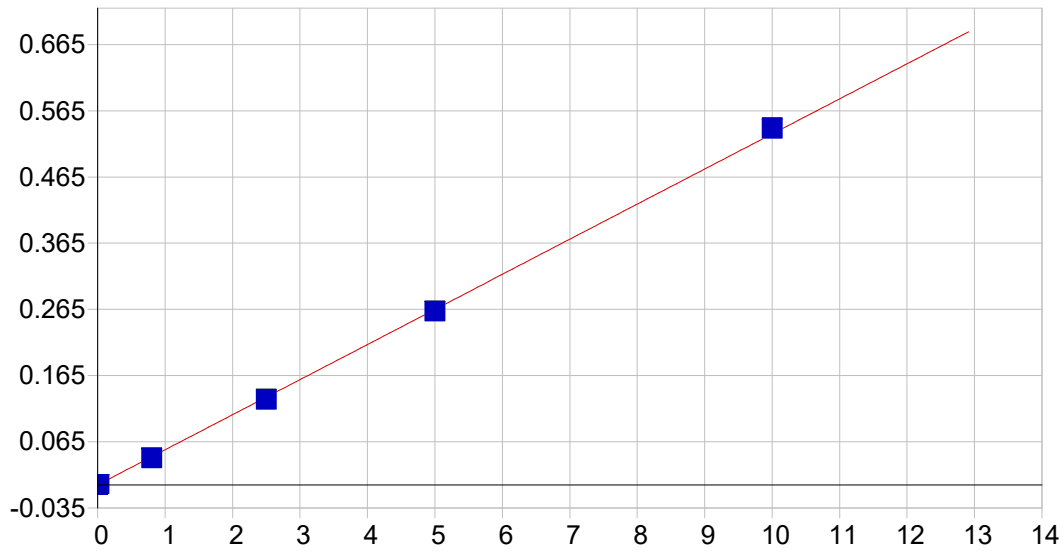
Lab code: ACE **Sdg no.:** Q2879

Instrument id number: **Method:** **Run number:** LB136886

Start date: 08/19/2025 **End date:** 08/19/2025

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
CCB07	CCB07	1	1807	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn

METAL
RAW DATA

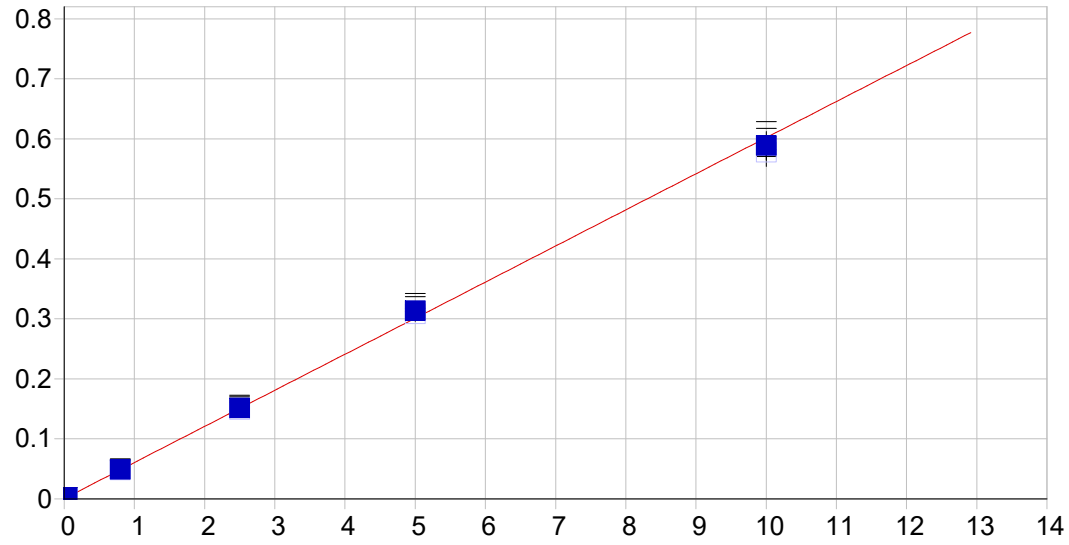


As 189.042 {479}

Date of Fit:	8/19/2025 12:21:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000017	Re-Slope:	1.000000
A1 (Gain):	0.052994	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999826	Status:	OK.
Std Error of Est:	0.000023		
Predicted MDL:	0.002011		
Predicted MQL:	0.006703		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00002	.000	1
S1	.02000	.02061	.001	3.04	.00107	.000	1
S3	2.5000	2.4342	-.066	-2.63	.12884	.000	1
S4	5.0000	4.9470	-.053	-1.06	.26185	.000	1
S5	10.000	10.155	.155	1.55	.53754	.001	1
S2	.80000	.76352	-.036	-4.56	.04040	.000	1

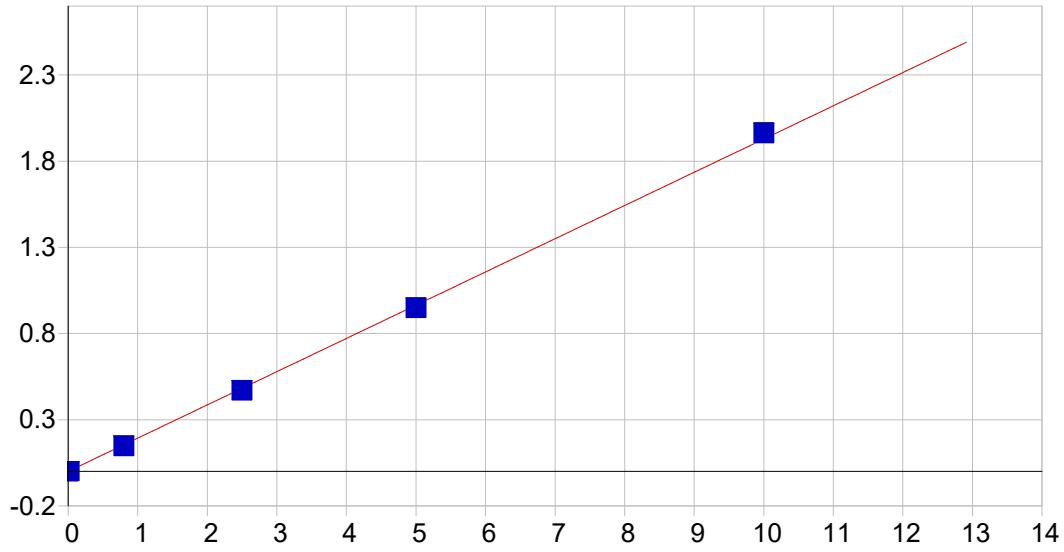


Tl 190.856 {477}

Date of Fit:	8/19/2025 12:21:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000468	Re-Slope:	1.000000
A1 (Gain):	0.060134	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999614	Status:	OK.
Std Error of Est:	0.000054		
Predicted MDL:	0.002070		
Predicted MQL:	0.006901		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00047	.000	1
S1	.04000	.04331	.003	8.28	.00292	.000	1
S3	2.5000	2.5109	.011	.436	.14872	.005	1
S4	5.0000	5.2046	.205	4.09	.30796	.012	1
S5	10.000	9.7779	-.222	-2.22	.57749	.024	1
S2	.80000	.80350	.003	.437	.04791	.001	1

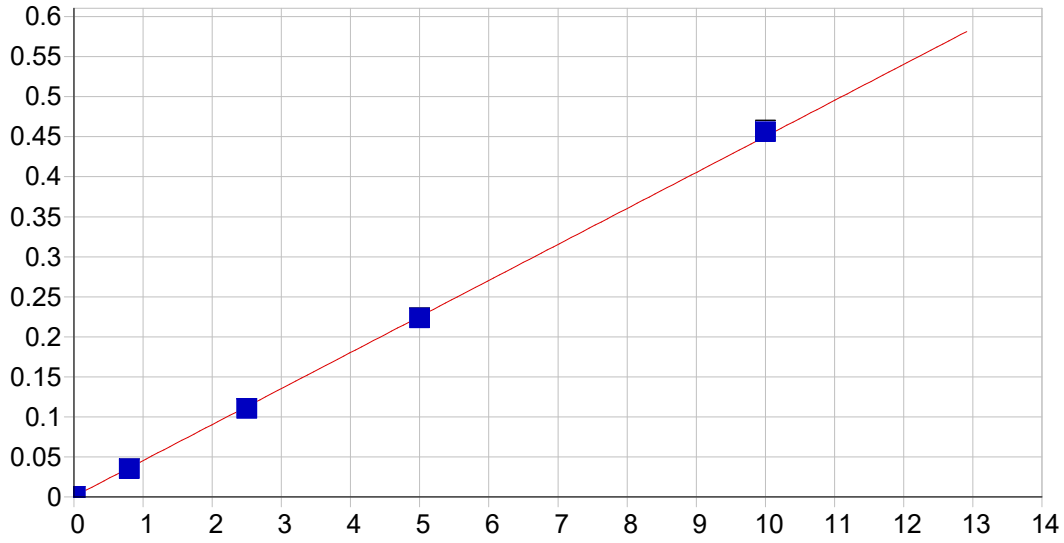


Pb 220.353 {453}

Date of Fit:	8/19/2025 12:21:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000049	Re-Slope:	1.000000
A1 (Gain):	0.192868	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999796	Status:	OK.
Std Error of Est:	0.000071		
Predicted MDL:	0.001270		
Predicted MQL:	0.004233		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00005	.000	1
S1	.01200	.01248	.000	4.00	.00241	.000	1
S3	2.5000	2.4371	-.063	-2.52	.46959	.001	1
S4	5.0000	4.9167	-.083	-1.67	.94732	.001	1
S5	10.000	10.178	.178	1.78	1.9611	.002	1
S2	.80000	.76764	-.032	-4.04	.14794	.000	1

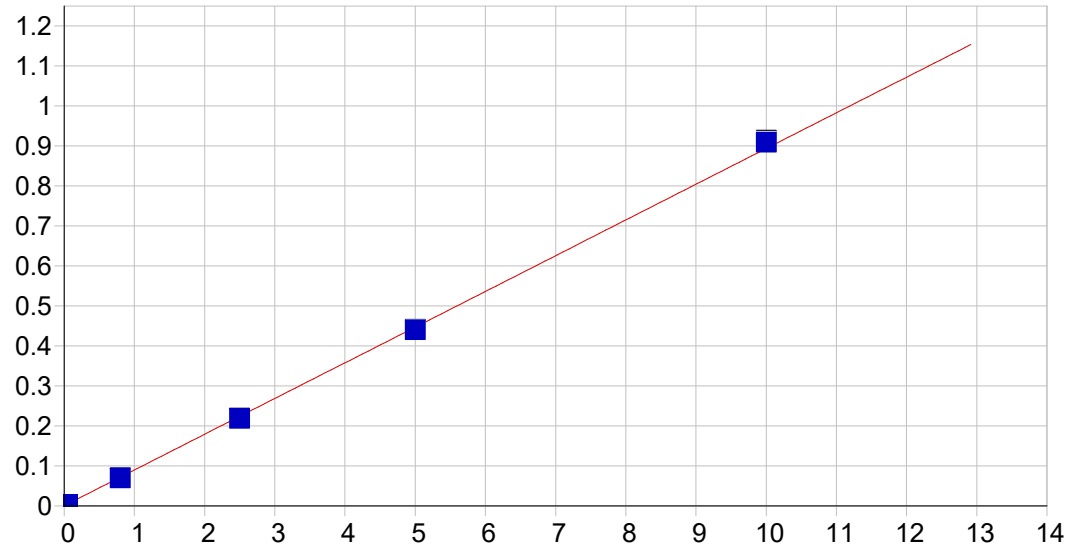


Se 196.090 {472}

Date of Fit:	8/19/2025 12:21:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000419	Re-Slope:	1.000000
A1 (Gain):	0.044992	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999873	Status:	OK.
Std Error of Est:	0.000017		
Predicted MDL:	0.002942		
Predicted MQL:	0.009806		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00042	.000	1
S1	.02000	.01993	-.000	-.366	.00132	.000	1
S3	2.5000	2.4404	-.060	-2.38	.11019	.000	1
S4	5.0000	4.9588	-.041	-.824	.22346	.001	1
S5	10.000	10.131	.131	1.31	.45612	.002	1
S2	.80000	.76952	-.030	-3.81	.03503	.000	1

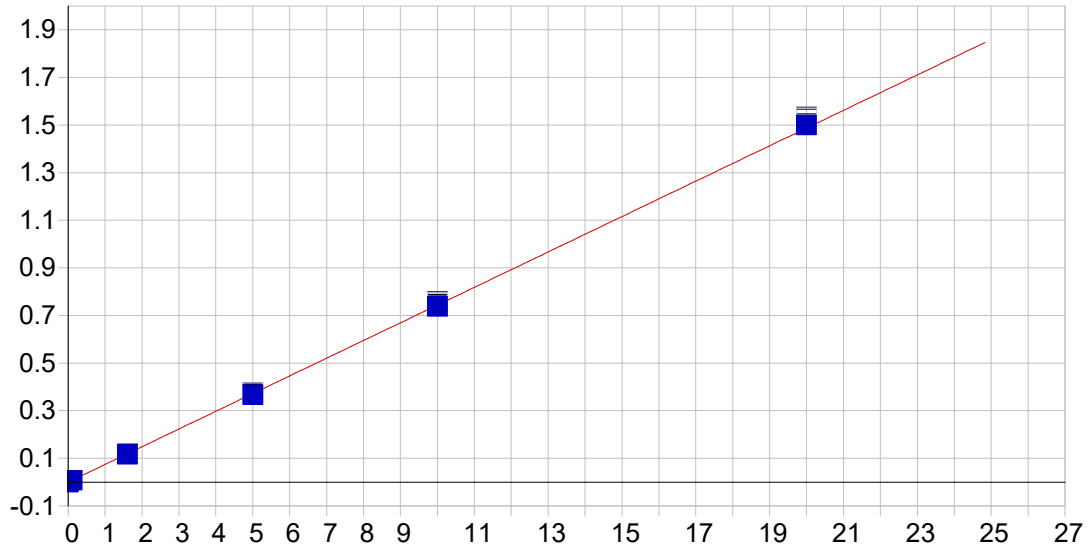


Sb 206.833 {463}

Date of Fit:	8/19/2025 12:21:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000570	Re-Slope:	1.000000
A1 (Gain):	0.089309	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999813	Status:	OK.
Std Error of Est:	0.000064		
Predicted MDL:	0.001875		
Predicted MQL:	0.006249		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00057	.000	1
S1	.05000	.05025	.000	.506	.00507	.000	1
S3	2.5000	2.4385	-.061	-2.46	.21896	.001	1
S4	5.0000	4.9197	-.080	-1.61	.44116	.001	1
S5	10.000	10.172	.172	1.72	.91144	.003	1
S2	.80000	.76968	-.030	-3.79	.06950	.000	1

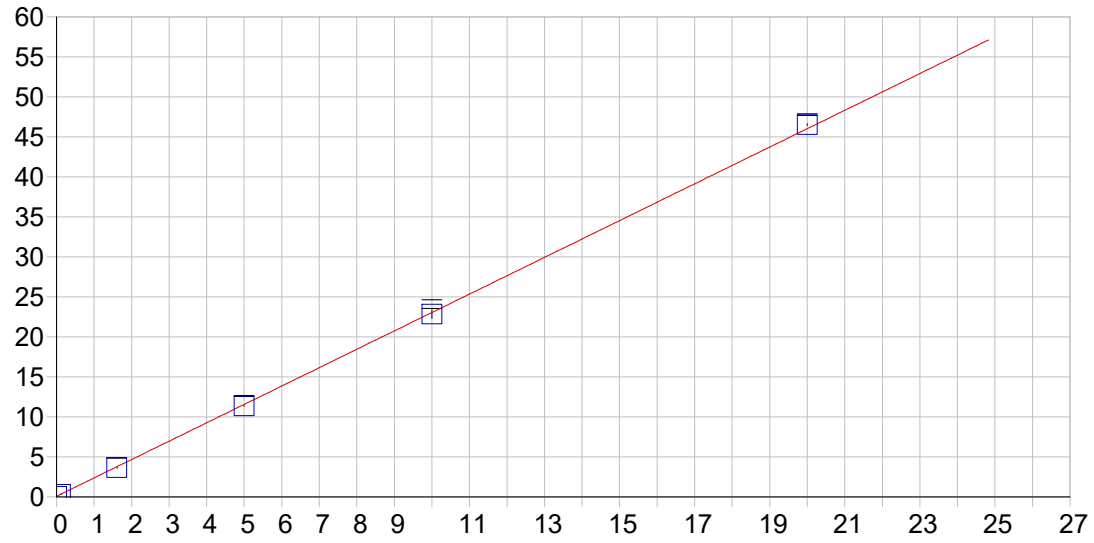


Al 396.152 { 85}

Date of Fit:	8/19/2025 12:21:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000000	Re-Slope:	1.000000
A1 (Gain):	0.074374	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999950	Status:	OK.
Std Error of Est:	0.000056		
Predicted MDL:	0.010942		
Predicted MQL:	0.036473		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00000	.001	1
S1	.10000	.10453	.005	4.53	.00835	.001	1
S3	5.0000	4.9322	-.068	-1.36	.37404	.001	1
S4	10.000	9.9228	-.077	-.772	.75242	.006	1
S5	20.000	20.172	.172	.860	1.5291	.004	1
S2	1.6000	1.5681	-.032	-1.99	.11894	.001	1

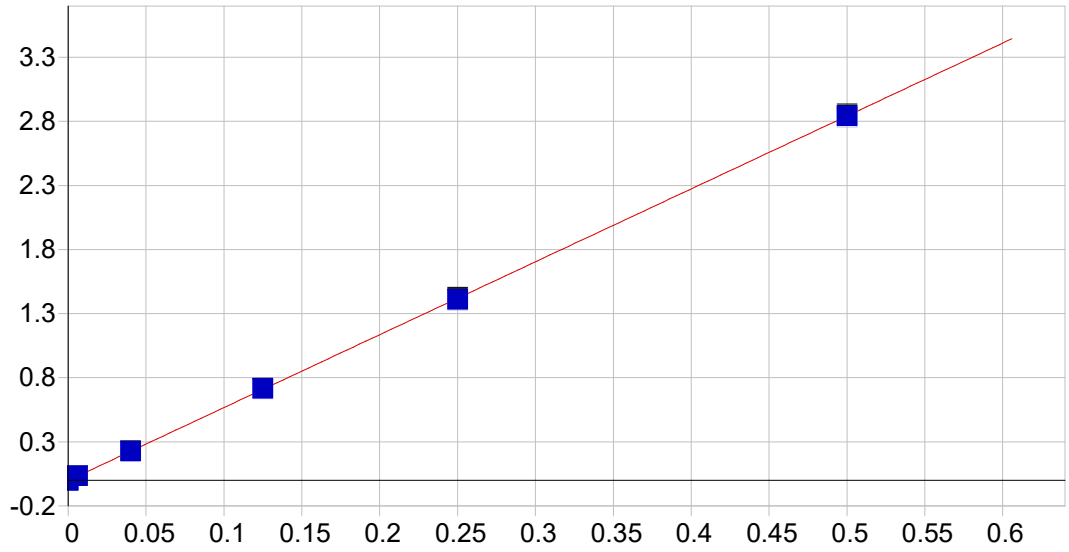


Ba 493.409 { 68}

Date of Fit:	8/19/2025 12:21:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.081817	Re-Slope:	1.000000
A1 (Gain):	2.297211	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999915	Status:	OK.
Std Error of Est:	0.002222		
Predicted MDL:	0.001004		
Predicted MQL:	0.003346		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.08183	.001	1
S1	.10000	.09699	-.003	-3.01	.30463	.000	1
S3	5.0000	4.9166	-.083	-1.67	11.376	.056	1
S4	10.000	9.9151	-.085	-.849	22.859	.524	1
S5	20.000	20.222	.222	1.11	46.535	.091	1
S2	1.6000	1.5497	-.050	-3.15	3.6417	.018	1

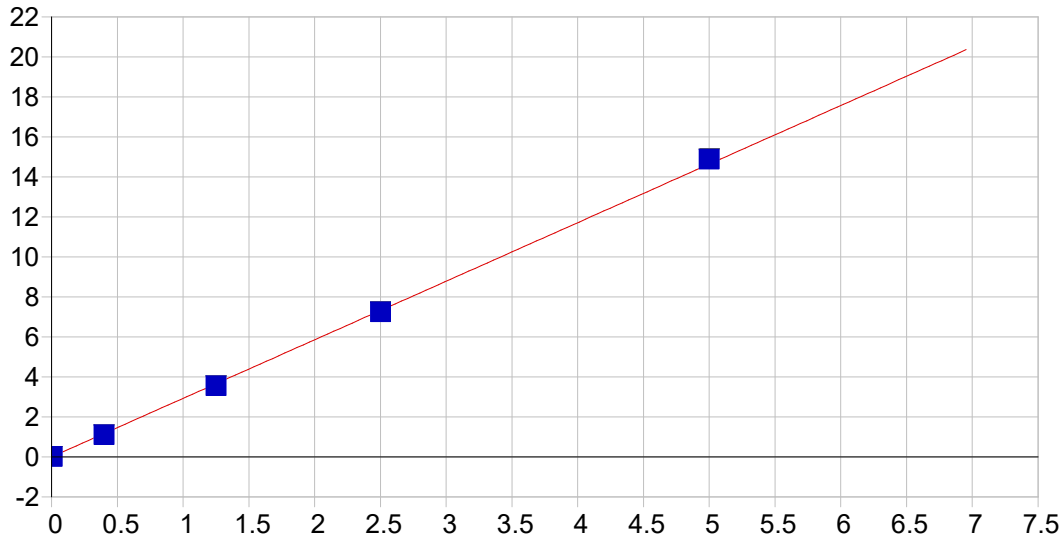


Be 234.861 {144}

Date of Fit:	8/19/2025 12:21:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001738	Re-Slope:	1.000000
A1 (Gain):	5.688102	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999974	Status:	OK.
Std Error of Est:	0.000117		
Predicted MDL:	0.000084		
Predicted MQL:	0.000281		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00174	.000	1
S1	.00600	.00636	.000	5.94	.03416	.001	1
S3	.12500	.12608	.001	.862	.71222	.004	1
S4	.25000	.24806	-.002	-.774	1.4029	.018	1
S5	.50000	.50029	.000	.057	2.8312	.014	1
S2	.04000	.04022	.000	.544	.22600	.001	1

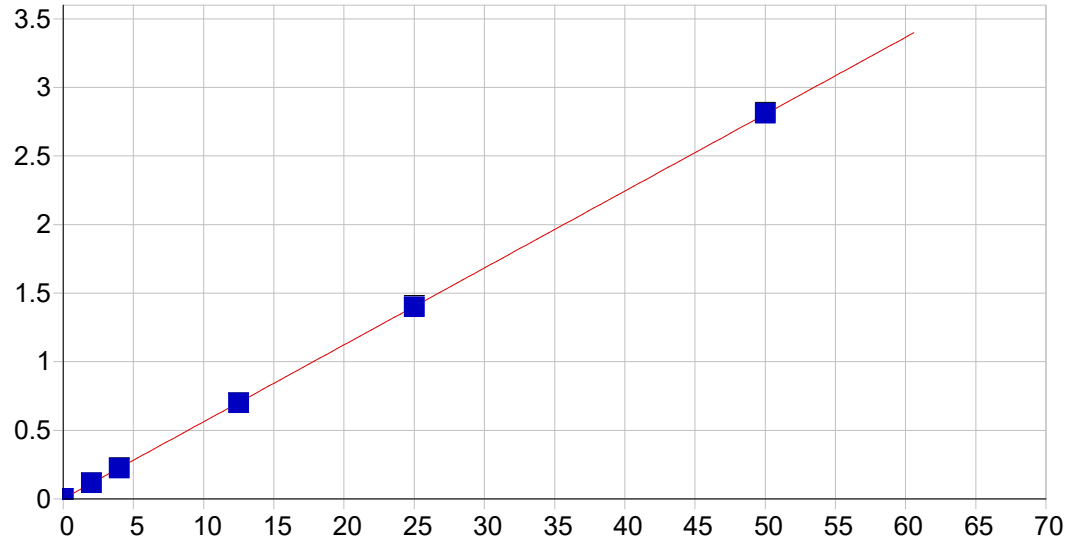


Cd 226.502 {449}

Date of Fit:	8/19/2025 12:21:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000541	Re-Slope:	1.000000
A1 (Gain):	2.928210	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999775	Status:	OK.
Std Error of Est:	0.000564		
Predicted MDL:	0.000071		
Predicted MQL:	0.000238		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00054	.000	1
S1	.00600	.00581	-.000	-3.21	.01652	.000	1
S3	1.2500	1.2136	-.036	-2.92	3.5554	.005	1
S4	2.5000	2.4762	-.024	-.951	7.2552	.003	1
S5	5.0000	5.0842	.084	1.68	14.897	.017	1
S2	.40000	.37617	-.024	-5.96	1.1017	.001	1

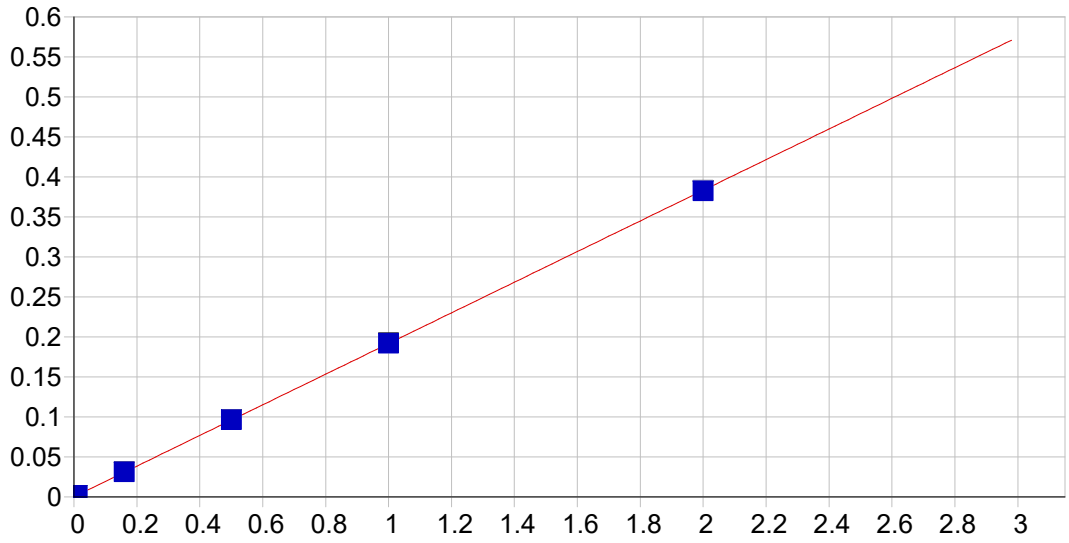


Ca 373.690 { 90}

Date of Fit:	8/19/2025 12:21:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001933	Re-Slope:	1.000000
A1 (Gain):	0.056058	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999991	Status:	OK.
Std Error of Est:	0.000129		
Predicted MDL:	0.011369		
Predicted MQL:	0.037897		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00193	.000	1
S2	4.0000	3.9608	-.039	-.979	.22397	.001	1
S3	12.500	12.452	-.048	-.380	.69999	.002	1
S4	25.000	24.925	-.075	-.301	1.3992	.010	1
S5	50.000	50.125	.125	.251	2.8119	.006	1
S1	2.0000	2.0364	.036	1.82	.11609	.000	1

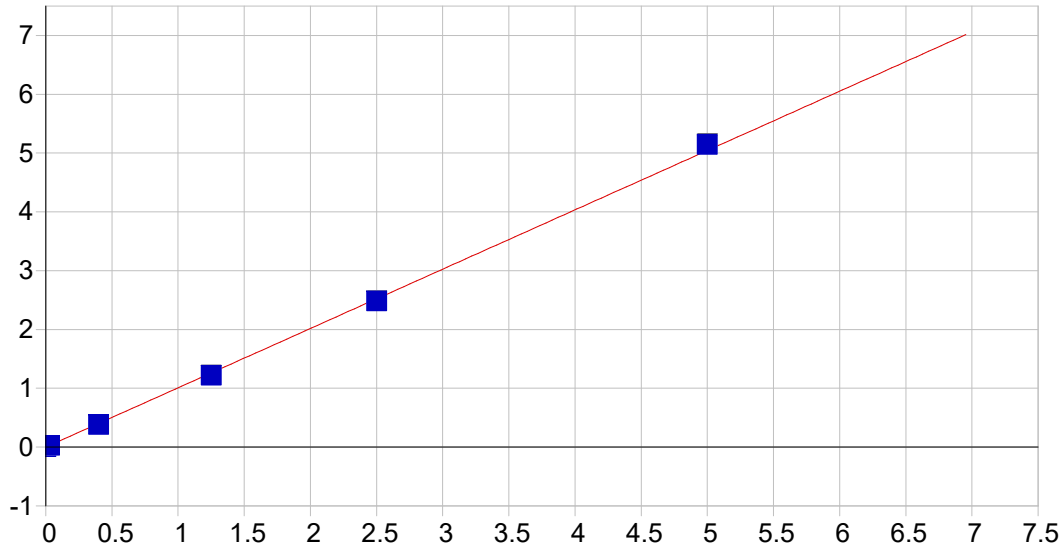


Cr 267.716 {126}

Date of Fit:	8/19/2025 12:21:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000219	Re-Slope:	1.000000
A1 (Gain):	0.191534	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999995	Status:	OK.
Std Error of Est:	0.000004		
Predicted MDL:	0.000334		
Predicted MQL:	0.001115		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00022	.000	1
S1	.01000	.01024	.000	2.36	.00218	.000	1
S3	.50000	.50228	.002	.456	.09646	.000	1
S4	1.0000	1.0004	.000	.044	.19191	.000	1
S5	2.0000	1.9958	-.004	-.211	.38263	.001	1
S2	.16000	.16126	.001	.790	.03112	.000	1

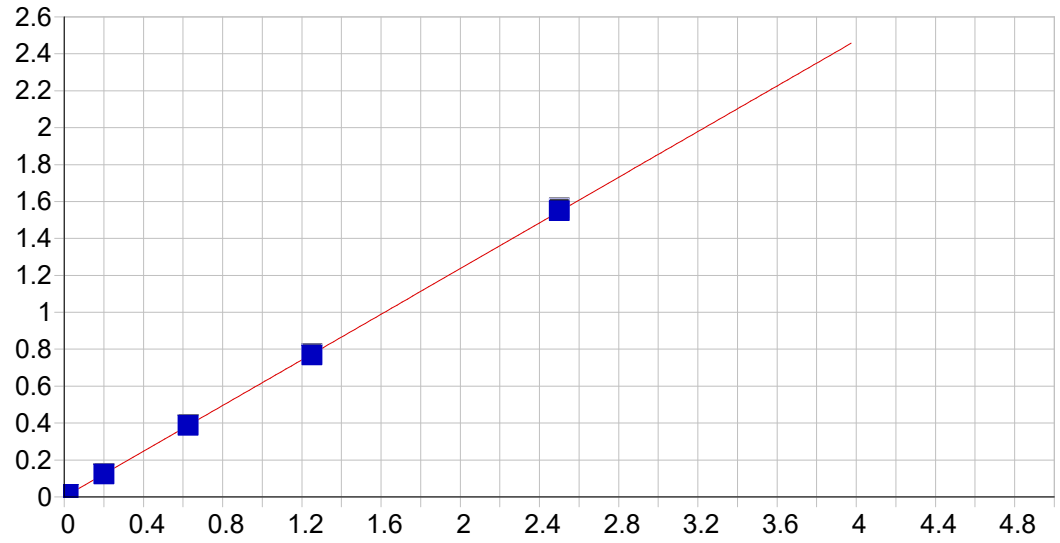


Co 228.616 {448}

Date of Fit:	8/19/2025 12:21:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000197	Re-Slope:	1.000000
A1 (Gain):	1.008673	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999726	Status:	OK.
Std Error of Est:	0.000481		
Predicted MDL:	0.000184		
Predicted MQL:	0.000613		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00019	.000	1
S1	.03000	.02976	-.000	-.800	.02969	.000	1
S3	1.2500	1.2098	-.040	-3.21	1.2223	.001	1
S4	2.5000	2.4629	-.037	-1.49	2.4883	.002	1
S5	5.0000	5.0996	.100	1.99	5.1522	.008	1
S2	.40000	.37791	-.022	-5.52	.38167	.000	1

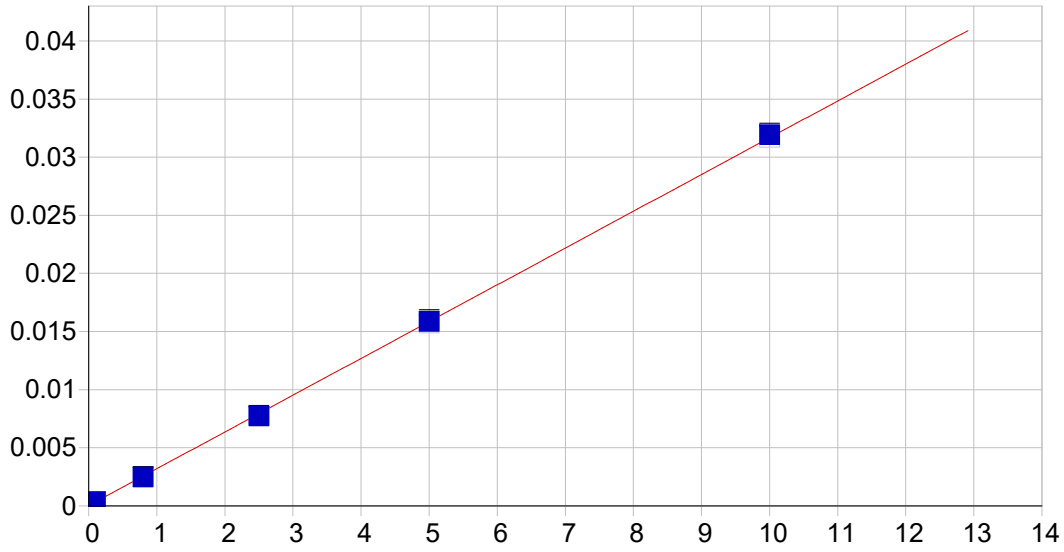


Cu 224.700 {450}

Date of Fit:	8/19/2025 12:21:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000358	Re-Slope:	1.000000
A1 (Gain):	0.618292	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999986	Status:	OK.
Std Error of Est:	0.000039		
Predicted MDL:	0.000411		
Predicted MQL:	0.001369		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00036	.000	1
S1	.02000	.02106	.001	5.32	.01352	.000	1
S3	.62500	.62561	.001	.097	.39038	.001	1
S4	1.2500	1.2418	-.008	-.659	.77457	.002	1
S5	2.5000	2.5069	.007	.275	1.5632	.003	1
S2	.20000	.19970	-.000	-.151	.12486	.000	1

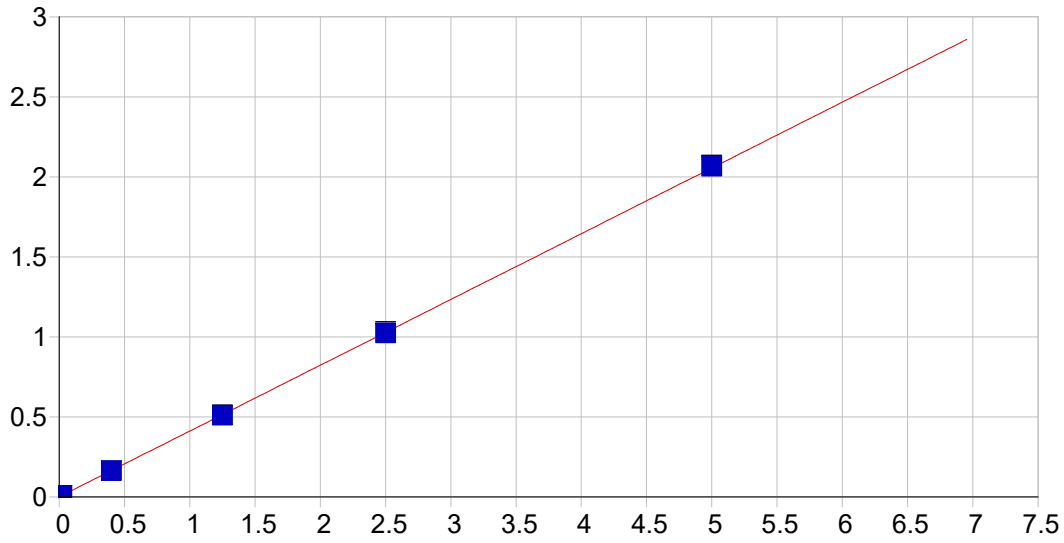


Fe 240.488 {140}

Date of Fit:	8/19/2025 12:21:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000032	Re-Slope:	1.000000
A1 (Gain):	0.003164	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999913	Status:	OK.
Std Error of Est:	0.000002		
Predicted MDL:	0.006482		
Predicted MQL:	0.021605		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00003	.000	1
S1	.10000	.10238	.002	2.38	.00035	.000	1
S3	2.5000	2.4375	-.062	-2.50	.00768	.000	1
S4	5.0000	5.0005	.001	.010	.01572	.000	1
S5	10.000	10.085	.085	.852	.03167	.000	1
S2	.80000	.77439	-.026	-3.20	.00246	.000	1

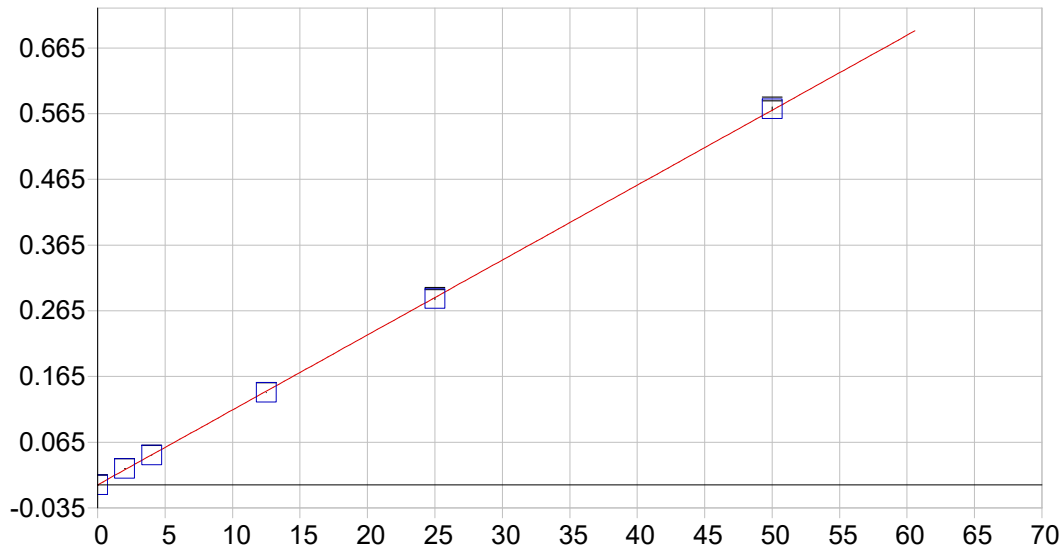


Mn 257.610 {131}

Date of Fit:	8/19/2025 12:21:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000492	Re-Slope:	1.000000
A1 (Gain):	0.411051	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999985	Status:	OK.
Std Error of Est:	0.000038		
Predicted MDL:	0.000568		
Predicted MQL:	0.001894		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00049	.000	1
S1	.02000	.02082	.001	4.09	.00905	.000	1
S3	1.2500	1.2399	-.010	-.809	.51025	.002	1
S4	2.5000	2.4897	-.010	-.412	1.0241	.008	1
S5	5.0000	5.0226	.023	.452	2.0654	.008	1
S2	.40000	.39700	-.003	-.750	.16371	.001	1

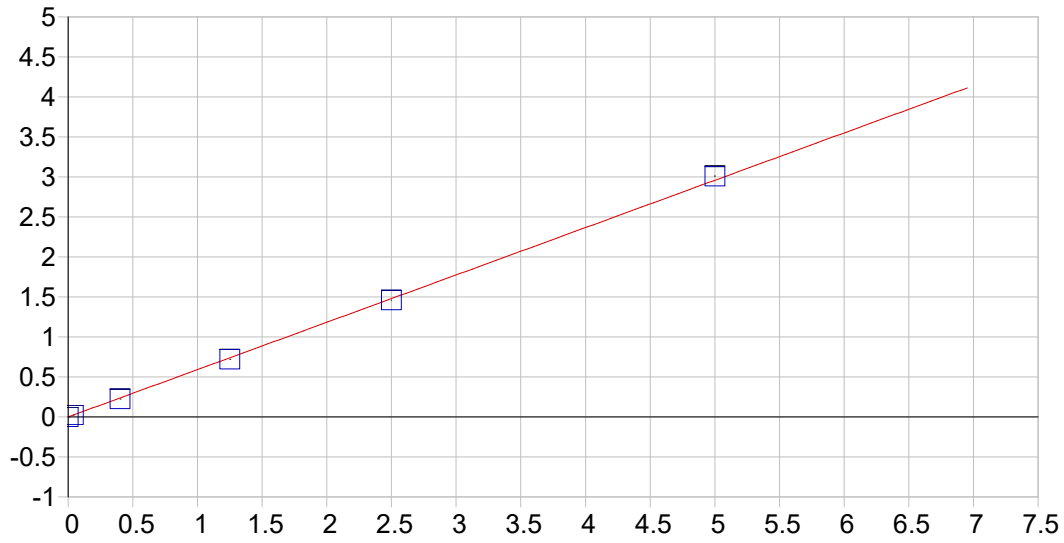


Mg 279.079 {121}

Date of Fit:	8/19/2025 12:21:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000049	Re-Slope:	1.000000
A1 (Gain):	0.011406	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999889	Status:	OK.
Std Error of Est:	0.000090		
Predicted MDL:	0.026469		
Predicted MQL:	0.088231		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00012	-.000	.000	.00005	.000	1
S2	4.0000	3.9522	-.048	-1.19	.04513	.000	1
S3	12.500	12.322	-.178	-1.43	.14059	.000	1
S4	25.000	24.866	-.134	-.536	.28367	.002	1
S5	50.000	50.180	.180	.359	.57240	.003	1
S1	2.0000	2.1804	.180	9.02	.02492	.000	1

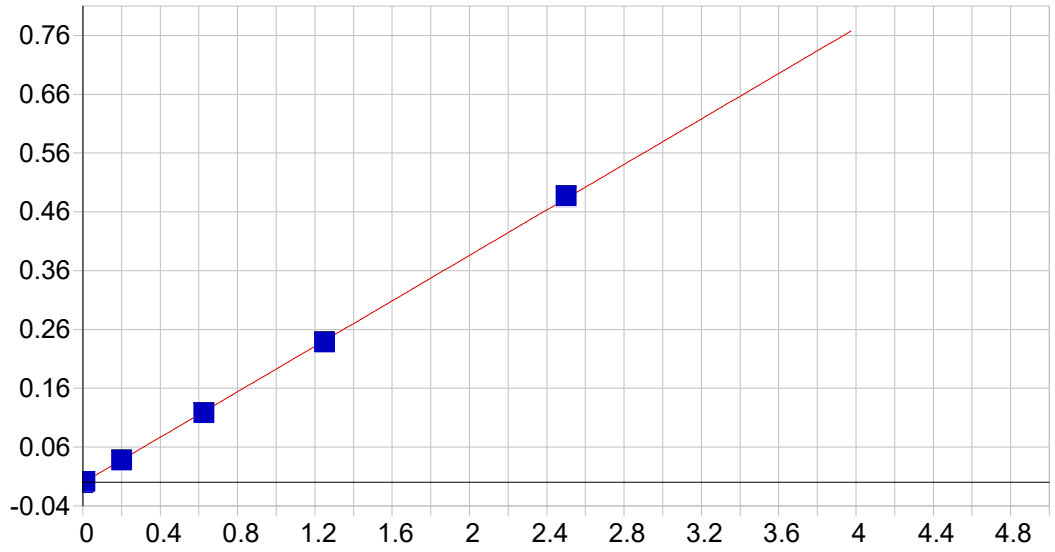


Ni 231.604 {446}

Date of Fit:	8/19/2025 12:21:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000424	Re-Slope:	1.000000
A1 (Gain):	0.591638	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999796	Status:	OK.
Std Error of Est:	0.000281		
Predicted MDL:	0.000334		
Predicted MQL:	0.001113		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00042	.000	1
S1	.04000	.03953	-.000	-1.16	.02297	.000	1
S3	1.2500	1.2172	-.033	-2.62	.71973	.001	1
S4	2.5000	2.4653	-.035	-1.39	1.4582	.001	1
S5	5.0000	5.0869	.087	1.74	3.0092	.005	1
S2	.40000	.38102	-.019	-4.74	.22500	.000	1

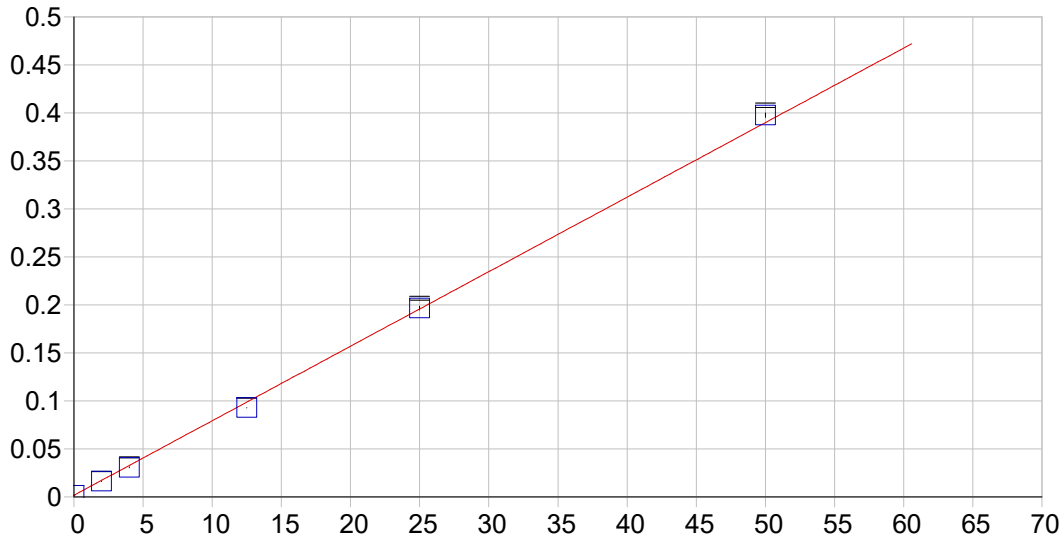


Ag 328.068 {103}

Date of Fit:	8/19/2025 12:21:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000590	Re-Slope:	1.000000
A1 (Gain):	0.193311	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999948	Status:	OK.
Std Error of Est:	0.000016		
Predicted MDL:	0.000520		
Predicted MQL:	0.001734		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00059	.000	1
S1	.01000	.00978	-.000	-2.21	.00128	.000	1
S3	.62500	.61643	-.009	-1.37	.11799	.000	1
S4	1.2500	1.2380	-.012	-.956	.23757	.001	1
S5	2.5000	2.5229	.023	.914	.48476	.000	1
S2	.20000	.19789	-.002	-1.05	.03748	.000	1

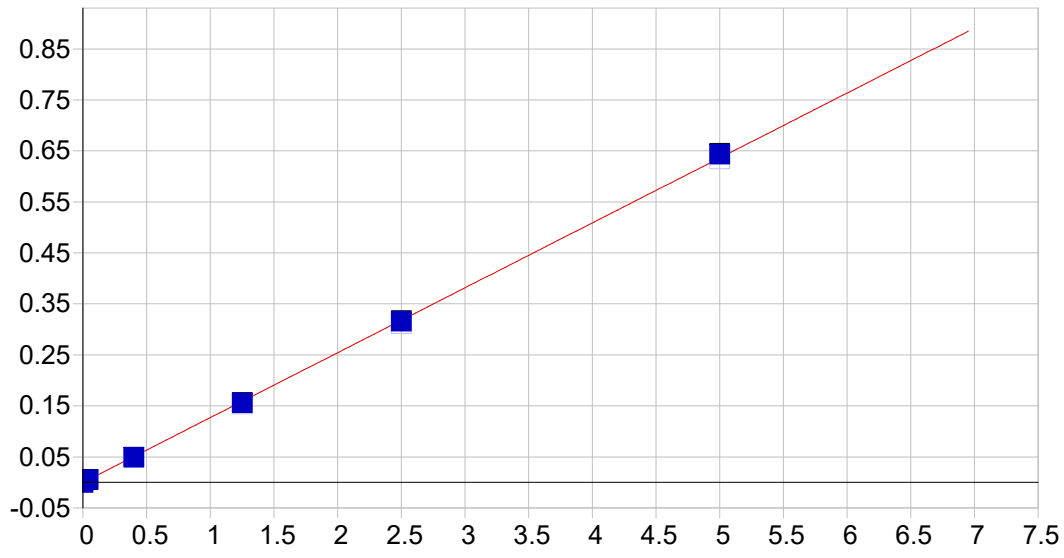


Na 589.592 { 57}

Date of Fit:	8/19/2025 12:21:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001722	Re-Slope:	1.000000
A1 (Gain):	0.007763	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999513	Status:	OK.
Std Error of Est:	0.000128		
Predicted MDL:	0.018393		
Predicted MQL:	0.061310		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00032	.000	.000	.00172	.000	1
S2	4.0000	3.7447	-.255	-6.38	.03079	.000	1
S3	12.500	11.743	-.757	-6.05	.09289	.000	1
S4	25.000	25.119	.119	.477	.19672	.002	1
S5	50.000	51.017	1.02	2.03	.39777	.002	1
S1	2.0000	1.8763	-.124	-6.18	.01629	.000	1

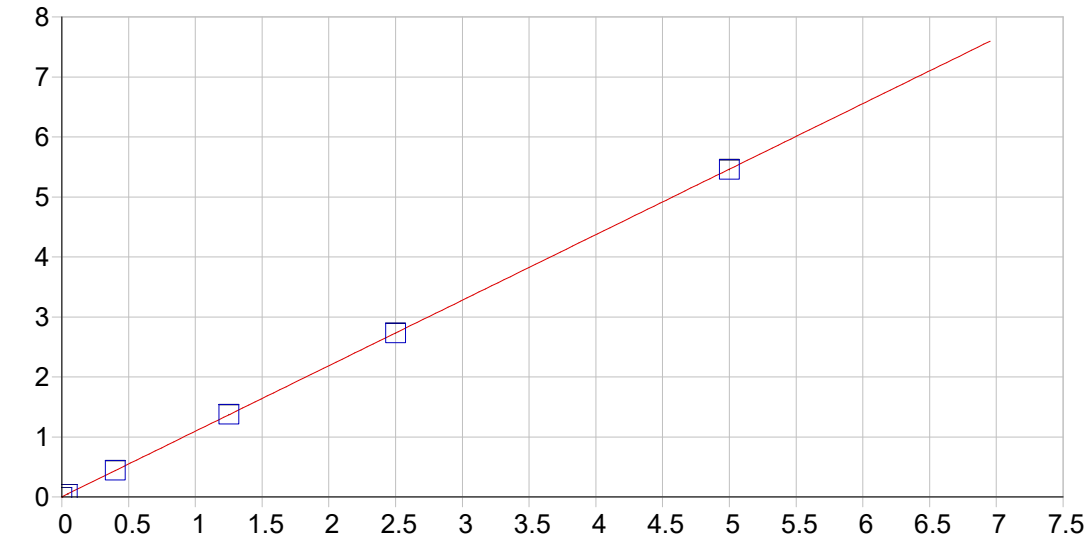


V 292.402 {115}

Date of Fit:	8/19/2025 12:21:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000289	Re-Slope:	1.000000
A1 (Gain):	0.127279	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999902	Status:	OK.
Std Error of Est:	0.000041		
Predicted MDL:	0.002797		
Predicted MQL:	0.009322		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00029	.000	1
S1	.04000	.04194	.002	4.86	.00486	.000	1
S3	1.2500	1.2240	-.026	-2.08	.15318	.001	1
S4	2.5000	2.4819	-.018	-.723	.31097	.002	1
S5	5.0000	5.0546	.055	1.09	.63378	.002	1
S2	.40000	.38751	-.012	-3.12	.04829	.000	1

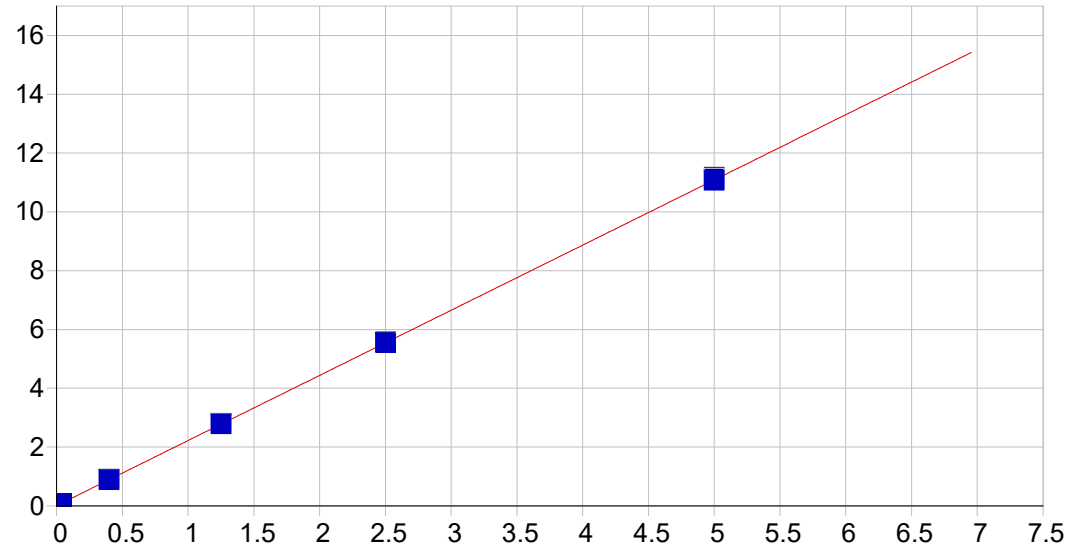


Zn 206.200 {464}

Date of Fit:	8/19/2025 12:21:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002549	Re-Slope:	1.000000
A1 (Gain):	1.092006	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999996	Status:	OK.
Std Error of Est:	0.000076		
Predicted MDL:	0.000139		
Predicted MQL:	0.000464		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00255	.000	1
S1	.04000	.04117	.001	2.93	.04751	.000	1
S3	1.2500	1.2563	.006	.507	1.3745	.001	1
S4	2.5000	2.4965	-.004	-.141	2.7287	.002	1
S5	5.0000	4.9948	-.005	-.103	5.4569	.007	1
S2	.40000	.40118	.001	.295	.44064	.001	1

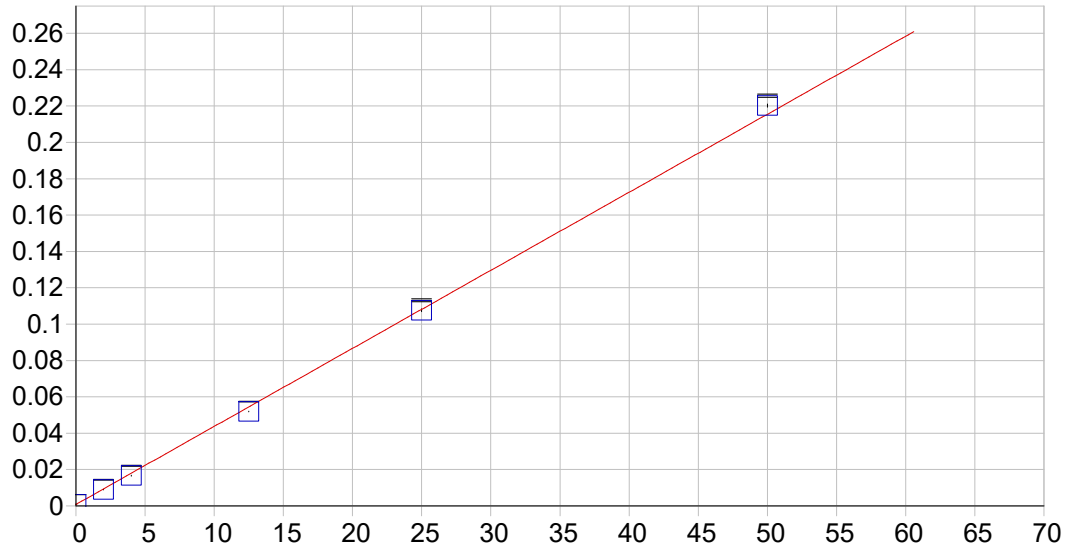


Zn 213.856 {158}

Date of Fit:	8/19/2025 12:21:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.006373	Re-Slope:	1.000000
A1 (Gain):	2.216373	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999996	Status:	OK.
Std Error of Est:	0.000150		
Predicted MDL:	0.000243		
Predicted MQL:	0.000809		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00637	.000	1
S1	.04000	.04141	.001	3.54	.09878	.001	1
S3	1.2500	1.2528	.003	.222	2.8023	.010	1
S4	2.5000	2.5010	.001	.039	5.5880	.002	1
S5	5.0000	4.9928	-.007	-.143	11.149	.024	1
S2	.40000	.40200	.002	.499	.90352	.003	1

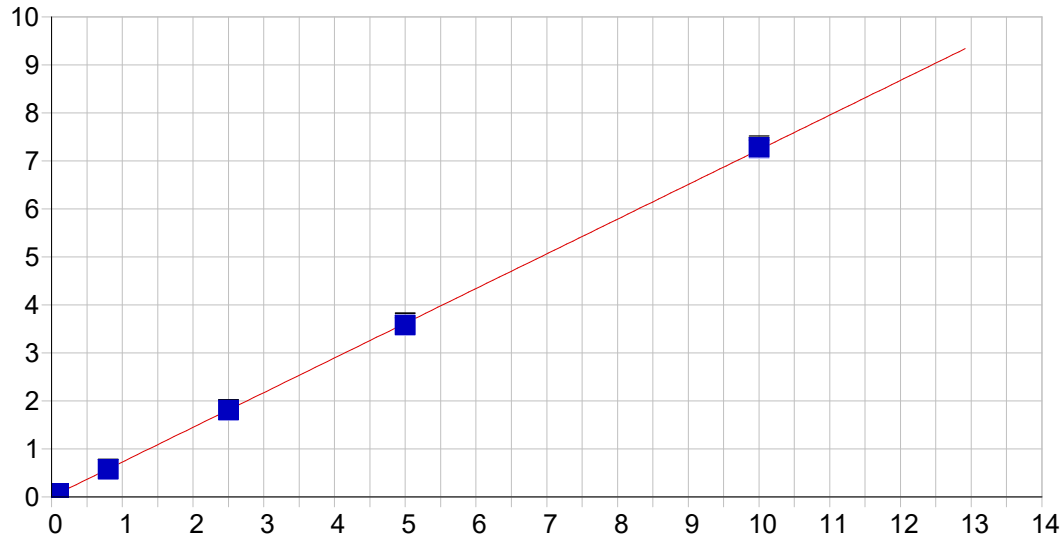


K 766.490 { 44}

Date of Fit:	8/19/2025 12:21:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000816	Re-Slope:	1.000000
A1 (Gain):	0.004293	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999556	Status:	OK.
Std Error of Est:	0.000068		
Predicted MDL:	0.039773		
Predicted MQL:	0.132577		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00032	.000	.000	.00082	.000	1
S2	4.0000	3.6923	-.308	-7.69	.01667	.000	1
S3	12.500	11.906	-.594	-4.75	.05193	.000	1
S4	25.000	24.884	-.116	-.462	.10765	.001	1
S5	50.000	51.121	1.12	2.24	.22030	.001	1
S1	2.0000	1.8959	-.104	-5.20	.00896	.000	1

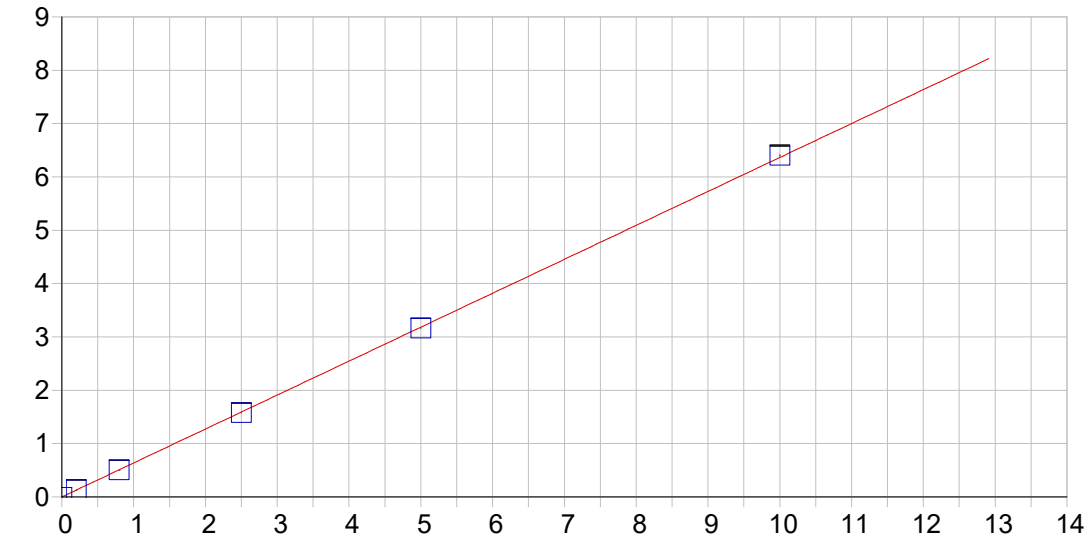


B 249.678 {135}

Date of Fit:	8/19/2025 12:21:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.004366	Re-Slope:	1.000000
A1 (Gain):	0.722719	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999968	Status:	OK.
Std Error of Est:	0.000303		
Predicted MDL:	0.000726		
Predicted MQL:	0.002419		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00437	.001	1
S1	.10000	.10118	.001	1.18	.07706	.000	1
S3	2.5000	2.4941	-.006	-.238	1.8004	.010	1
S4	5.0000	4.9477	-.052	-1.05	3.5671	.046	1
S5	10.000	10.068	.068	.677	7.2544	.035	1
S2	.80000	.78938	-.011	-1.33	.57278	.003	1

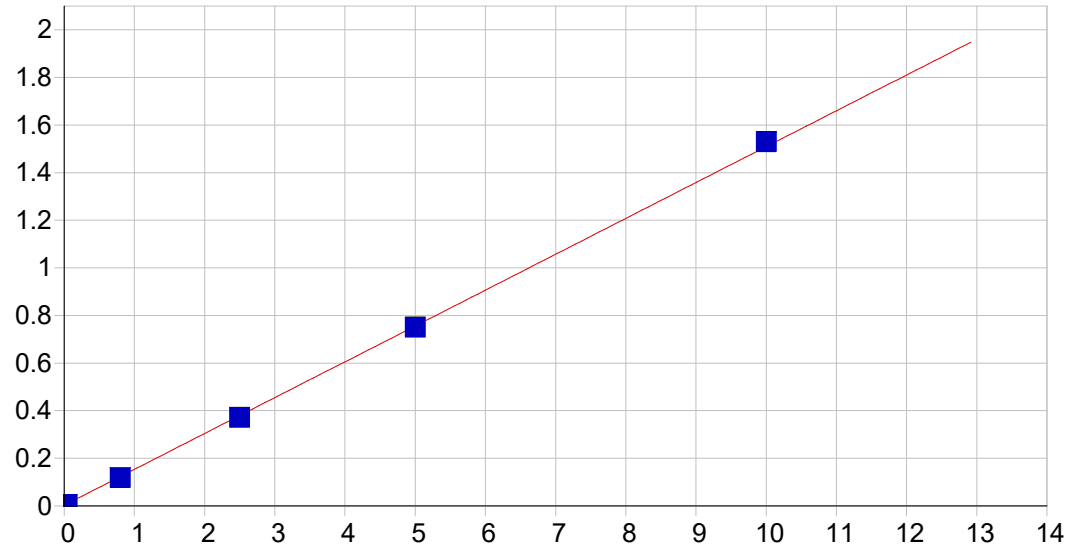


Mo 202.030 {467}

Date of Fit:	8/19/2025 12:21:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000443	Re-Slope:	1.000000
A1 (Gain):	0.636379	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999973	Status:	OK.
Std Error of Est:	0.000351		
Predicted MDL:	0.000252		
Predicted MQL:	0.000841		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00044	.000	1
S1	.20000	.20468	.005	2.34	.13070	.000	1
S3	2.5000	2.4743	-.026	-1.03	1.5751	.003	1
S4	5.0000	4.9710	-.029	-.579	3.1639	.003	1
S5	10.000	10.060	.060	.596	6.4022	.009	1
S2	.80000	.79031	-.010	-1.21	.50338	.001	1

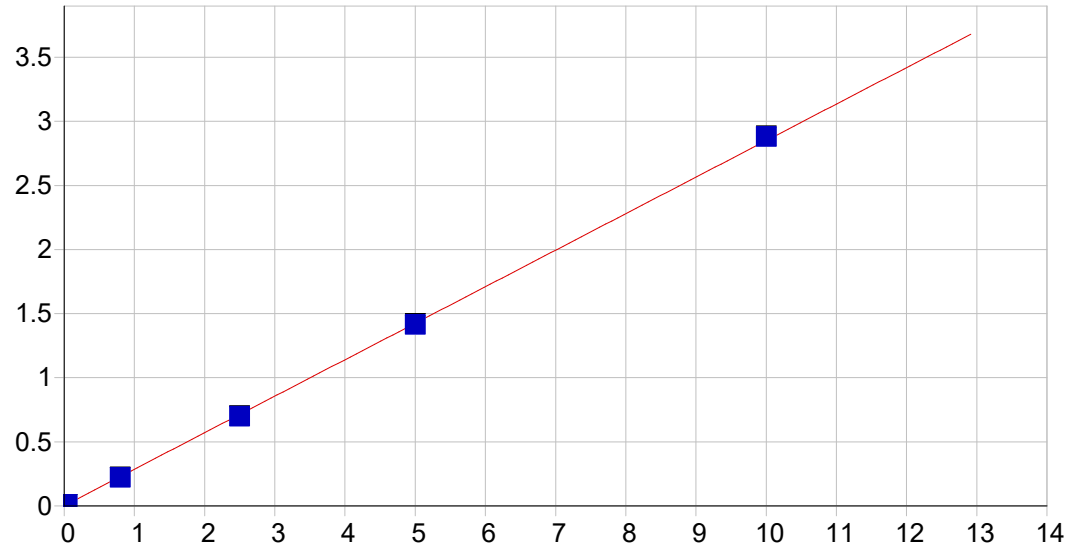


Sn 189.989 {478}

Date of Fit:	8/19/2025 12:21:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002826	Re-Slope:	1.000000
A1 (Gain):	0.150633	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999858	Status:	OK.
Std Error of Est:	0.000084		
Predicted MDL:	0.000588		
Predicted MQL:	0.001960		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00283	.000	1
S1	.04000	.03655	-.003	-8.62	.00833	.000	1
S3	2.5000	2.4470	-.053	-2.12	.37105	.000	1
S4	5.0000	4.9575	-.043	-.851	.74881	.002	1
S5	10.000	10.135	.135	1.35	1.5279	.001	1
S2	.80000	.76411	-.036	-4.49	.11780	.000	1

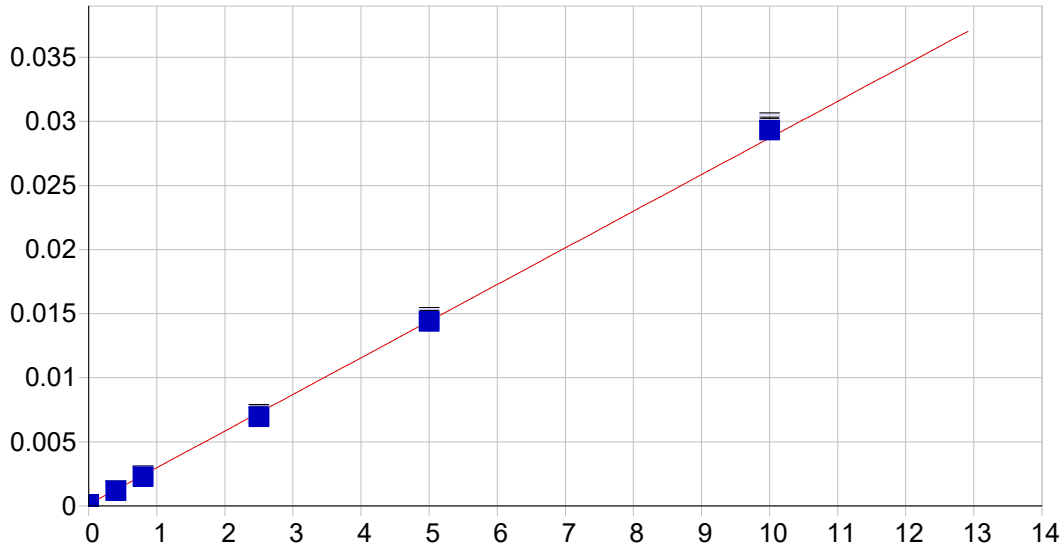


Ti 336.121 {100}

Date of Fit:	8/19/2025 12:21:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001235	Re-Slope:	1.000000
A1 (Gain):	0.284881	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999917	Status:	OK.
Std Error of Est:	0.000121		
Predicted MDL:	0.001619		
Predicted MQL:	0.005396		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00124	.000	1
S1	.04000	.03873	-.001	-3.19	.01226	.000	1
S3	2.5000	2.4501	-.050	-2.00	.69896	.004	1
S4	5.0000	4.9618	-.038	-.764	1.4142	.008	1
S5	10.000	10.109	.109	1.09	2.8802	.005	1
S2	.80000	.77990	-.020	-2.51	.22333	.001	1

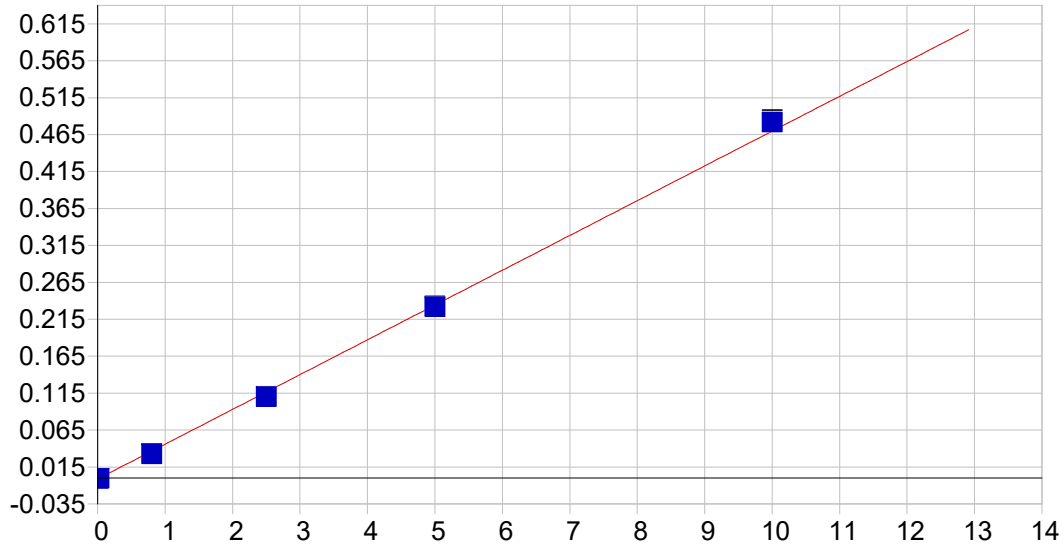


Si 288.158 {117}

Date of Fit:	8/19/2025 12:21:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000122	Re-Slope:	1.000000
A1 (Gain):	0.002859	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999611	Status:	OK.
Std Error of Est:	0.000009		
Predicted MDL:	0.012809		
Predicted MQL:	0.042697		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00007	.000	.000	.00012	.000	1
S1	.40000	.36558	-.034	-8.60	.00117	.000	1
S3	2.5000	2.3855	-.115	-4.58	.00705	.000	1
S4	5.0000	4.9858	-.014	-.284	.01459	.000	1
S5	10.000	10.207	.207	2.07	.02973	.000	1
S2	.80000	.75582	-.044	-5.52	.00232	.000	1

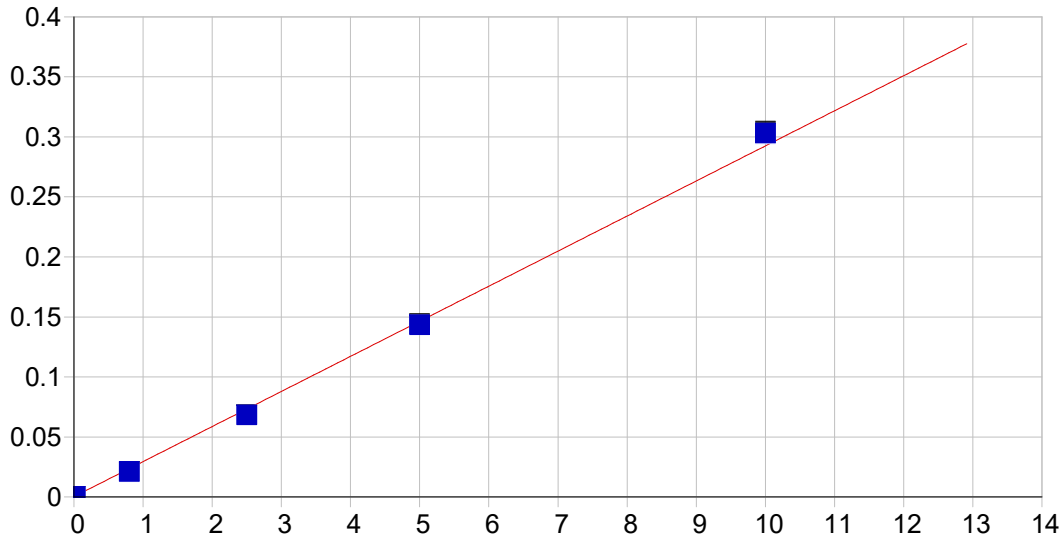


P 177.495 {490}

Date of Fit:	8/19/2025 12:21:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001266	Re-Slope:	1.000000
A1 (Gain):	0.047098	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999401	Status:	OK.
Std Error of Est:	0.000038		
Predicted MDL:	0.001584		
Predicted MQL:	0.005279		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00127	.000	1
S1	.02000	.01857	-.001	-7.16	-.00039	.000	1
S3	2.5000	2.3675	-.133	-5.30	.11022	.000	1
S4	5.0000	4.9497	-.050	-1.01	.23182	.001	1
S5	10.000	10.262	.262	2.62	.48196	.003	1
S2	.80000	.72272	-.077	-9.66	.03277	.000	1

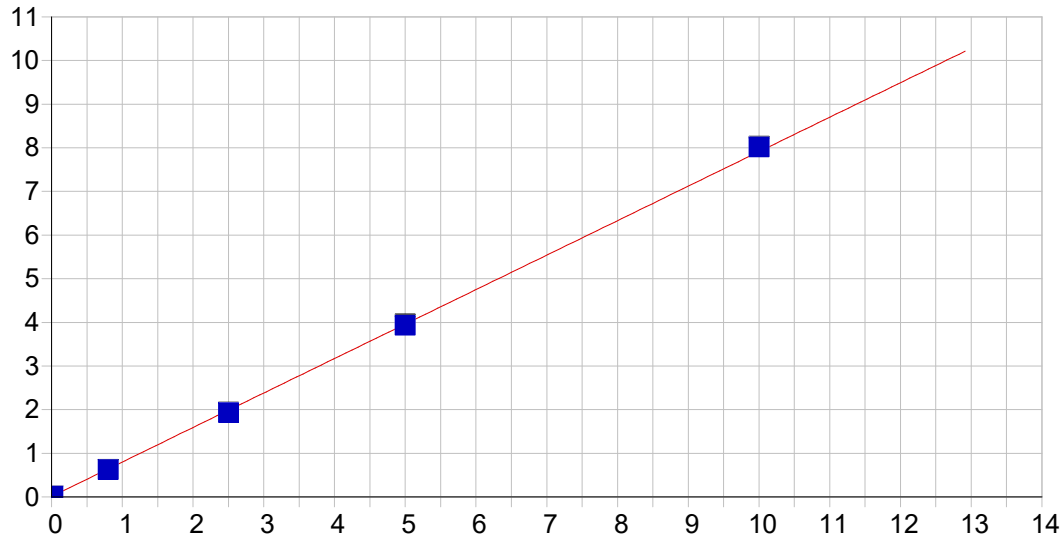


S 182.034 {485}

Date of Fit:	8/19/2025 12:21:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000263	Re-Slope:	1.000000
A1 (Gain):	0.029228	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998988	Status:	OK.
Std Error of Est:	0.000031		
Predicted MDL:	0.002727		
Predicted MQL:	0.009089		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00026	.000	1
S1	.02000	.01891	-.001	-5.44	.00079	.000	1
S3	2.5000	2.3308	-.169	-6.77	.06820	.000	1
S4	5.0000	4.8995	-.100	-2.01	.14309	.001	1
S5	10.000	10.362	.362	3.62	.30235	.002	1
S2	.80000	.70911	-.091	-11.4	.02093	.000	1

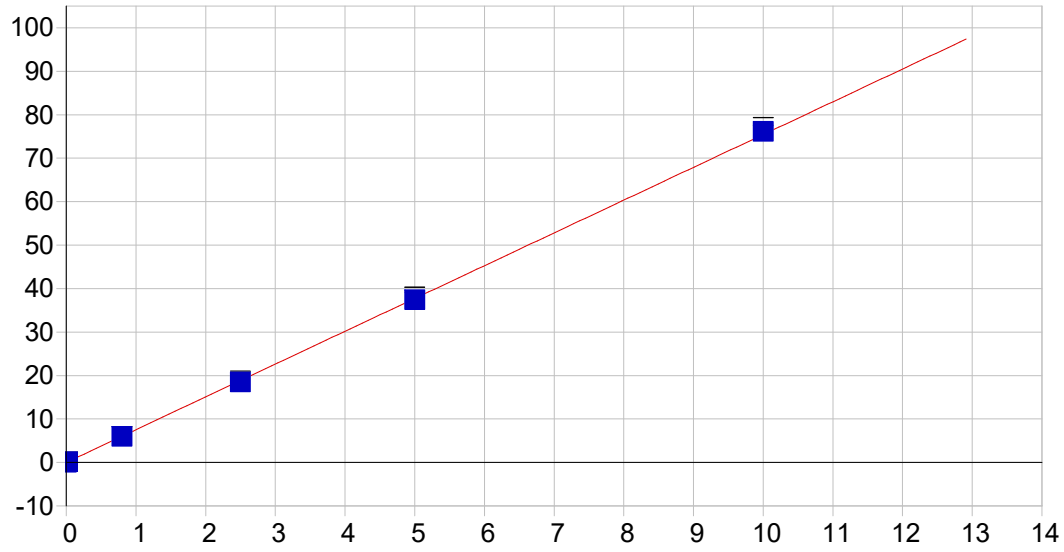


Li 670.784 { 50}

Date of Fit:	8/19/2025 12:21:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.010399	Re-Slope:	1.000000
A1 (Gain):	0.790100	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999879	Status:	OK.
Std Error of Est:	0.000288		
Predicted MDL:	0.001907		
Predicted MQL:	0.006356		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.01040	.001	1
S5	10.000	10.128	.128	1.28	8.0192	.017	1
S4	5.0000	4.9629	-.037	-.741	3.9348	.027	1
S3	2.5000	2.4317	-.068	-2.73	1.9332	.007	1
S1	.02000	.01919	-.001	-4.04	.02584	.001	1
S2	.80000	.77780	-.022	-2.77	.62545	.003	1

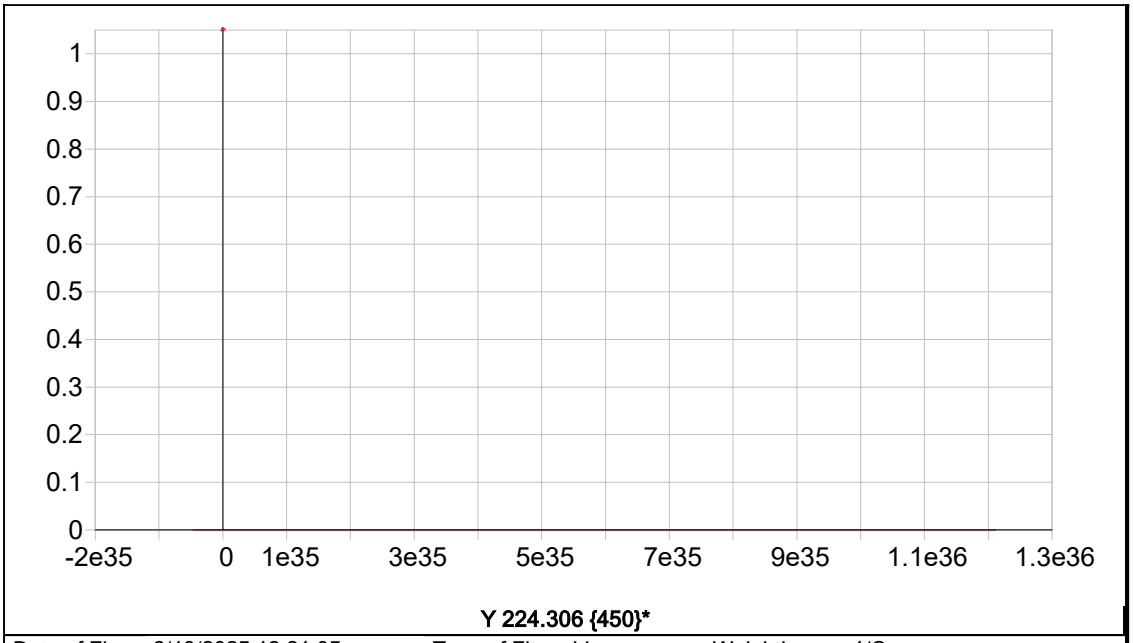


Sr 407.771 { 83}

Date of Fit:	8/19/2025 12:21:05	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000110	Re-Slope:	1.000000
A1 (Gain):	7.542963	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999937	Status:	OK.
Std Error of Est:	0.001979		
Predicted MDL:	0.000104		
Predicted MQL:	0.000348		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00010	.000	1
S1	.02000	.01976	-.000	-1.18	.14969	.002	1
S3	2.5000	2.4510	-.049	-1.96	18.506	.224	1
S4	5.0000	4.9645	-.035	-.709	37.483	.579	1
S5	10.000	10.096	.096	.960	76.226	.889	1
S2	.80000	.78862	-.011	-1.42	5.9542	.021	1

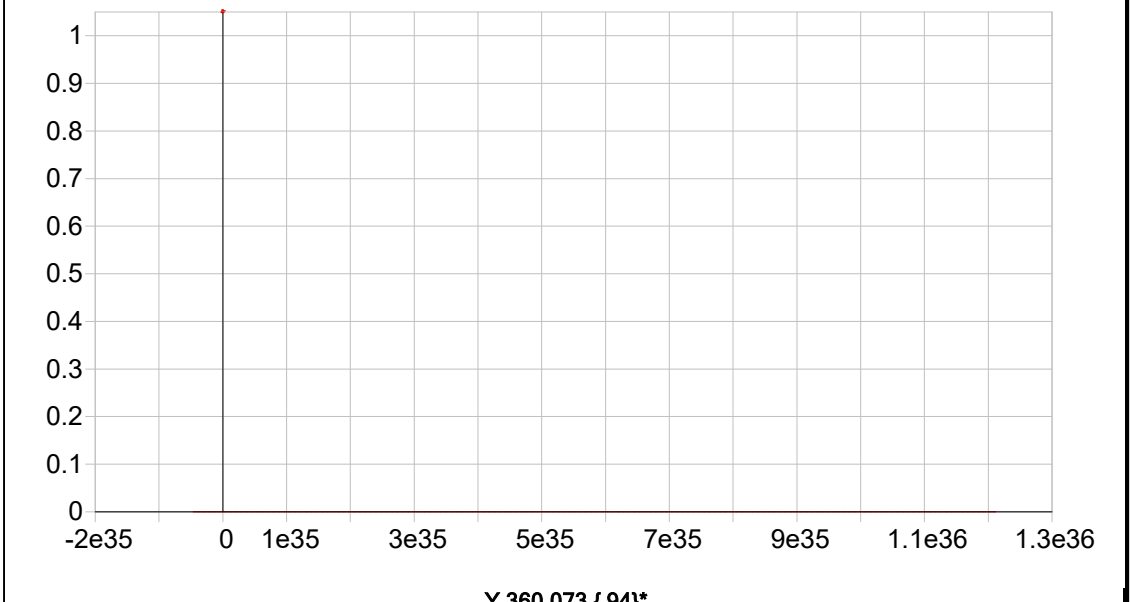


Y 224.306 {450}*

Date of Fit:	8/19/2025 12:21:05	Type of Fit:	Linear	Weighting:	1/Conc

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

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



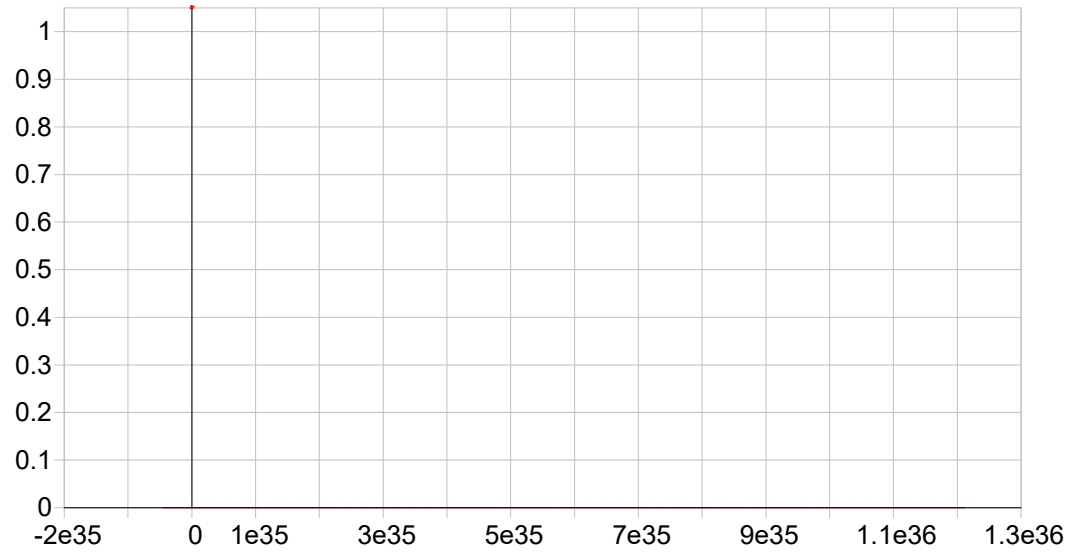
Y 360.073 { 94}*

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

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

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

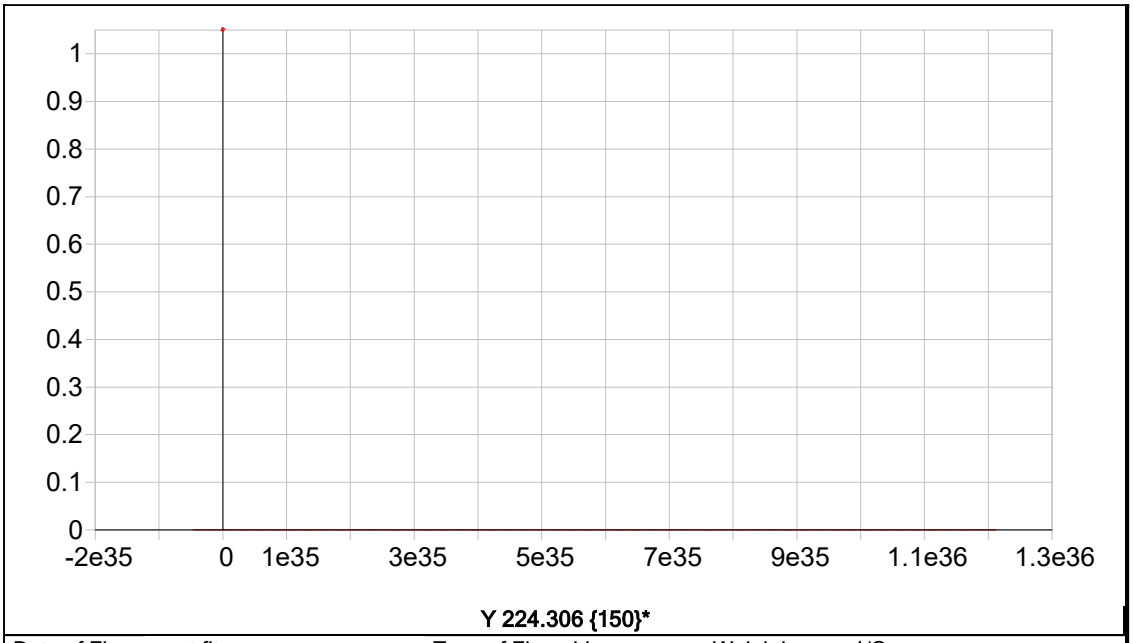
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis



Y 371.030 { 91}*

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

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

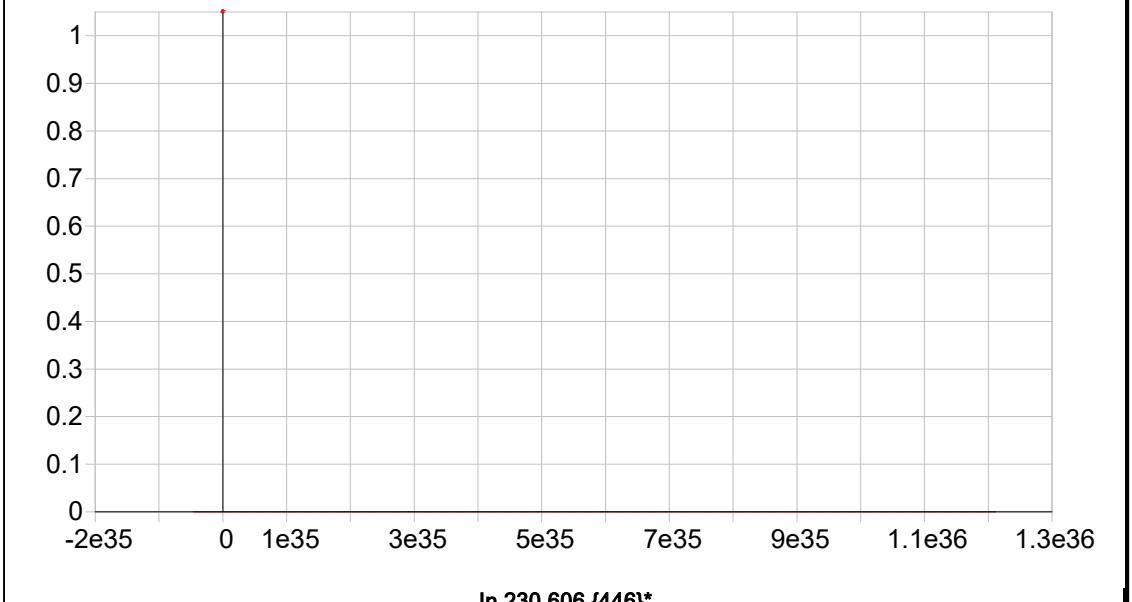


Y 224.306 {150}*

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

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

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



In 230.606 {446}*

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

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

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

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: S0 Acquired: 8/19/2025 11:15:23 Type: Cal
Method: 6010-200.7 NEW(v115) 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	**-.00002**	**.00047**	**.00005**	**.00042**	**.00057**	**-.00000**	**.08183**	**-.00174**
Stddev	.00011	.00004	.00019	.00007	.00006	.00056	.00054	.00038
%RSD	631.46	9.4608	397.15	16.392	9.8375	102450.	.65481	21.852
#1	-.00013	.00050	-.00007	.00034	.00054	.00058	.08221	-.00218
#2	.00008	.00042	.00027	.00045	.00054	-.00004	.08208	-.00154
#3	.00001	.00048	-.00005	.00047	.00064	-.00054	.08122	-.00150

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	**-.00054**	**.00193**	**.00022**	**-.00019**	**.00036**	**.00003**	**.00049**	**.00005**
Stddev	.00028	.00005	.00003	.00012	.00011	.00001	.00023	.00021
%RSD	51.871	2.5058	12.580	63.720	30.519	36.904	46.656	442.29
#1	-.00077	.00196	.00020	-.00006	.00027	.00003	.00045	-.00016
#2	-.00061	.00196	.00021	-.00022	.00033	.00005	.00029	.00026
#3	-.00023	.00188	.00025	-.00030	.00048	.00002	.00074	.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**	**-.00059**	**.00172**	**-.00029**	**.00637**	**.00082**	**.00437**	**.00044**
Stddev	.00010	.00005	.00018	.00025	.00034	.00017	.00076	.00008
%RSD	24.612	8.4188	10.222	85.242	5.3403	20.676	17.391	18.423
#1	-.00042	-.00056	.00156	-.00044	.00652	.00063	.00453	.00046
#2	-.00053	-.00065	.00191	-.00000	.00661	.00095	.00503	.00035
#3	-.00032	-.00056	.00170	-.00042	.00598	.00087	.00354	.00052

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	**.00283**	**.00124**	**.00012**	**-.00127**	**.00026**	**.01040**	**-.00010**
Stddev	.00004	.00006	.00004	.00001	.00002	.00102	.00015
%RSD	1.2464	4.5827	30.596	1.0839	6.3057	9.7713	140.68
#1	.00280	.00118	.00008	-.00127	.00028	.01125	.00006
#2	.00287	.00124	.00012	-.00127	.00024	.01067	-.00022
#3	.00282	.00129	.00016	-.00125	.00027	.00928	-.00014

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: S0 Acquired: 8/19/2025 11:15:23 Type: Cal
Method: 6010-200.7 NEW(v115) 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	**6488.7**	**109460.**	**10459.**	**5083.5**	**8146.7**
Stddev	10.2	181.	77.	15.9	5.8
%RSD	.15715	.16529	.73910	.31344	.07072
#1	6497.0	109610.	10535.	5083.4	8152.7
#2	6477.3	109260.	10381.	5067.6	8146.3
#3	6491.6	109520.	10463.	5099.5	8141.2

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: S1 Acquired: 8/19/2025 11:19:47 Type: Cal
Method: 6010-200.7 NEW(v115) 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	**.00107**	**.00292**	**.00241**	**.00132**	**.00507**	**.00835**	**.30463**	**.03416**
Stddev	.00006	.00023	.00022	.00002	.00010	.00064	.00034	.00050
%RSD	5.7933	7.9459	9.1888	1.1688	2.0561	7.7191	.11014	1.4761
#1	.00100	.00265	.00262	.00131	.00506	.00875	.30440	.03436
#2	.00112	.00305	.00243	.00133	.00497	.00761	.30449	.03359
#3	.00108	.00305	.00218	.00131	.00518	.00869	.30502	.03454

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	**.01652**	**.11609**	**.00218**	**.02969**	**.01352**	**.00035**	**.00905**	**.02492**
Stddev	.00010	.00017	.00003	.00017	.00034	.00001	.00027	.00008
%RSD	.59437	.14892	1.5895	.56676	2.5227	2.8346	2.9346	.33405
#1	.01656	.11603	.00215	.02978	.01334	.00036	.00881	.02485
#2	.01660	.11596	.00217	.02950	.01391	.00036	.00901	.02490
#3	.01641	.11629	.00222	.02980	.01331	.00034	.00934	.02501

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	**.02297**	**.00128**	**.01629**	**.00486**	**.09878**	**.00896**	**.07706**	**.13070**
Stddev	.00007	.00006	.00012	.00020	.00063	.00018	.00020	.00003
%RSD	.32012	4.4079	.76586	4.0618	.63688	2.0559	.25505	.02049
#1	.02304	.00123	.01643	.00492	.09907	.00875	.07714	.13071
#2	.02297	.00135	.01618	.00464	.09922	.00903	.07721	.13071
#3	.02289	.00127	.01626	.00502	.09806	.00909	.07684	.13067

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	**.00833**	**.01226**	**.00117**	**-.00039**	**.00079**	**.02584**	**.14969**
Stddev	.00010	.00049	.00002	.00001	.00010	.00143	.00158
%RSD	1.1638	4.0143	1.8736	3.8035	12.631	5.5491	1.0540
#1	.00823	.01169	.00117	-.00039	.00090	.02431	.14790
#2	.00832	.01252	.00115	-.00041	.00071	.02716	.15088
#3	.00843	.01257	.00119	-.00038	.00076	.02604	.15030

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: S1 Acquired: 8/19/2025 11:19:47 Type: Cal
Method: 6010-200.7 NEW(v115) 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	6532.6	107110.	10543.	4988.6	8067.2
Stddev	4.9	86.	32.	18.1	16.1
%RSD	.07479	.07996	.30457	.36203	.19912
#1	6528.1	107140.	10557.	4968.1	8064.1
#2	6537.8	107170.	10506.	5002.3	8084.6
#3	6532.0	107010.	10566.	4995.4	8053.0

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: S2 Acquired: 8/19/2025 11:24:04 Type: Cal
Method: 6010-200.7 NEW(v115) 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	**.04040**	**.04791**	**.14794**	**.03503**	**.06950**	**.11894**	**3.6417**	**.22600**
Stddev	.00010	.00109	.00036	.00006	.00016	.00077	.0177	.00141
%RSD	.25115	2.2787	.24563	.18121	.23339	.65008	.48695	.62195
#1	.04031	.04672	.14761	.03497	.06969	.11966	3.6365	.22760
#2	.04038	.04886	.14788	.03510	.06938	.11812	3.6614	.22543
#3	.04051	.04815	.14833	.03503	.06945	.11903	3.6271	.22497

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	**1.1017**	**.22397**	**.03112**	**.38167**	**.12486**	**.00246**	**.16371**	**.04513**
Stddev	.0009	.00119	.00026	.00029	.00030	.00003	.00066	.00033
%RSD	.08233	.53176	.82702	.07531	.24418	1.2309	.40455	.73346
#1	1.1027	.22450	.03108	.38136	.12459	.00243	.16402	.04549
#2	1.1017	.22481	.03139	.38174	.12519	.00248	.16416	.04484
#3	1.1009	.22261	.03088	.38192	.12480	.00248	.16295	.04505

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	**.22500**	**.03748**	**.03079**	**.04829**	**.90352**	**.01667**	**.57278**	**.50338**
Stddev	.00019	.00010	.00043	.00015	.00266	.00025	.00333	.00073
%RSD	.08571	.26614	1.3834	.31218	.29392	1.4989	.58171	.14488
#1	.22486	.03737	.03044	.04813	.90618	.01638	.57659	.50365
#2	.22493	.03749	.03126	.04843	.90087	.01683	.57039	.50394
#3	.22522	.03757	.03068	.04831	.90349	.01679	.57136	.50255

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	**.11780**	**.22333**	**.00232**	**.03277**	**.02093**	**.62545**	**5.9542**
Stddev	.00007	.00078	.00003	.00029	.00007	.00251	.0210
%RSD	.05654	.34710	1.1768	.89007	.33386	.40123	.35268
#1	.11785	.22337	.00230	.03251	.02100	.62372	5.9494
#2	.11773	.22254	.00231	.03308	.02091	.62833	5.9773
#3	.11783	.22409	.00235	.03270	.02087	.62430	5.9361

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: S2 Acquired: 8/19/2025 11:24:04 Type: Cal
Method: 6010-200.7 NEW(v115) 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	6619.9	108890.	10774.	5126.4	8022.3
Stddev	9.1	269.	77.	15.9	11.0
%RSD	.13770	.24723	.71008	.30998	.13653
#1	6615.2	109010.	10685.	5114.9	8015.2
#2	6614.1	108580.	10814.	5119.8	8016.8
#3	6630.4	109070.	10822.	5144.5	8034.9

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: S3 Acquired: 8/19/2025 11:28:07 Type: Cal
Method: 6010-200.7 NEW(v115) 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	**.12884**	**.14872**	**.46959**	**.11019**	**.21896**	**.37404**	**11.376**	**.71222**
Stddev	.00039	.00478	.00103	.00013	.00064	.00054	.056	.00366
%RSD	.30105	3.2145	.21870	.11504	.29344	.14378	.49293	.51339
#1	.12854	.15407	.47032	.11024	.21824	.37448	11.426	.71451
#2	.12870	.14486	.47003	.11004	.21917	.37421	11.315	.70800
#3	.12928	.14722	.46841	.11028	.21947	.37344	11.388	.71415

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	**3.5554**	**.69999**	**.09646**	**1.2223**	**.39038**	**.00768**	**.51025**	**.14059**
Stddev	.0052	.00232	.00023	.0007	.00083	.00004	.00200	.00026
%RSD	.14502	.33102	.23501	.05394	.21336	.55594	.39250	.18785
#1	3.5614	.70101	.09627	1.2230	.38992	.00764	.51209	.14080
#2	3.5524	.69734	.09671	1.2218	.38989	.00772	.50812	.14067
#3	3.5525	.70162	.09640	1.2220	.39135	.00767	.51054	.14029

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	**.71973**	**.11799**	**.09289**	**.15318**	**2.8023**	**.05193**	**1.8004**	**1.5751**
Stddev	.00105	.00029	.00009	.00061	.0101	.00021	.0100	.0031
%RSD	.14575	.24499	.09414	.39727	.36095	.40555	.55518	.19639
#1	.72068	.11784	.09279	.15368	2.7907	.05169	1.8072	1.5726
#2	.71991	.11780	.09292	.15336	2.8091	.05209	1.7889	1.5740
#3	.71861	.11832	.09295	.15250	2.8070	.05202	1.8049	1.5785

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	**.37105**	**.69896**	**.00705**	**.11022**	**.06820**	**1.9332**	**18.506**
Stddev	.00035	.00388	.00009	.00029	.00020	.0075	.224
%RSD	.09527	.55542	1.3472	.26356	.29864	.38629	1.2117
#1	.37138	.70243	.00696	.11031	.06809	1.9404	18.713
#2	.37068	.69477	.00715	.10989	.06807	1.9255	18.537
#3	.37107	.69969	.00704	.11045	.06843	1.9337	18.268

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: S3 Acquired: 8/19/2025 11:28:07 Type: Cal
Method: 6010-200.7 NEW(v115) 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	6397.1	107230.	10595.	5000.0	7543.4
Stddev	4.2	358.	54.	7.6	14.5
%RSD	.06572	.33424	.50856	.15223	.19286
#1	6399.7	107400.	10535.	4996.5	7527.8
#2	6399.4	106810.	10638.	4994.8	7545.9
#3	6392.3	107460.	10611.	5008.8	7556.6

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: S4 Acquired: 8/19/2025 11:32:12 Type: Cal
Method: 6010-200.7 NEW(v115) 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	**.26185**	**.30796**	**.94732**	**.22346**	**.44116**	**.75242**	**22.859**	**1.4029**
Stddev	.00004	.01232	.00053	.00054	.00094	.00589	.524	.0177
%RSD	.01670	4.0010	.05615	.24005	.21241	.78217	2.2913	1.2603
#1	.26188	.29417	.94786	.22284	.44008	.75046	22.900	1.4113
#2	.26188	.31789	.94680	.22380	.44159	.74777	22.316	1.3826
#3	.26180	.31181	.94730	.22375	.44180	.75904	23.361	1.4149

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	**7.2552**	**1.3992**	**.19191**	**2.4883**	**.77457**	**.01572**	**1.0241**	**.28367**
Stddev	.0034	.0098	.00047	.0024	.00161	.00016	.0078	.00167
%RSD	.04636	.70314	.24428	.09718	.20733	1.0312	.75750	.58994
#1	7.2578	1.3993	.19143	2.4894	.77372	.01553	1.0243	.28402
#2	7.2514	1.3892	.19236	2.4855	.77357	.01582	1.0162	.28185
#3	7.2563	1.4089	.19195	2.4899	.77642	.01580	1.0317	.28514

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	**1.4582**	**.23757**	**.19672**	**.31097**	**5.5880**	**.10765**	**3.5671**	**3.1639**
Stddev	.0008	.00057	.00202	.00167	.0021	.00086	.0465	.0026
%RSD	.05346	.24081	1.0290	.53802	.03765	.79926	1.3035	.08088
#1	1.4573	.23691	.19448	.30991	5.5892	.10671	3.5858	3.1610
#2	1.4588	.23780	.19841	.31009	5.5856	.10839	3.5142	3.1650
#3	1.4584	.23799	.19729	.31290	5.5892	.10786	3.6014	3.1657

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	**.74881**	**1.4142**	**.01459**	**.23182**	**.14309**	**3.9348**	**37.483**
Stddev	.00159	.0078	.00012	.00097	.00079	.0270	.579
%RSD	.21184	.54916	.81361	.42025	.55045	.68657	1.5444
#1	.74886	1.4126	.01446	.23096	.14220	3.9335	37.708
#2	.75037	1.4074	.01469	.23288	.14371	3.9084	36.826
#3	.74720	1.4227	.01462	.23163	.14334	3.9624	37.917

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: S4 Acquired: 8/19/2025 11:32:12 Type: Cal
Method: 6010-200.7 NEW(v115) 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	6342.8	105900.	10681.	4927.7	7323.1
Stddev	4.3	154.	134.	11.3	10.5
%RSD	.06748	.14537	1.2535	.22881	.14347
#1	6338.2	105980.	10586.	4917.6	7313.4
#2	6343.5	105720.	10834.	4925.7	7321.6
#3	6346.7	106000.	10623.	4939.9	7334.3

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: S5 Acquired: 8/19/2025 11:36:23 Type: Cal
Method: 6010-200.7 NEW(v115) 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	**.53754**	**.57749**	**1.9611**	**.45612**	**.91144**	**1.5291**	**46.535**	**2.8312**
Stddev	.00116	.02353	.0019	.00189	.00298	.0043	.091	.0144
%RSD	.21525	4.0742	.09611	.41436	.32695	.28456	.19550	.50789
#1	.53626	.55132	1.9601	.45400	.90835	1.5336	46.486	2.8445
#2	.53850	.58426	1.9599	.45674	.91165	1.5289	46.640	2.8159
#3	.53787	.59689	1.9633	.45762	.91430	1.5249	46.480	2.8332

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	**14.897**	**2.8119**	**.38263**	**5.1522**	**1.5632**	**.03167**	**2.0654**	**.57240**
Stddev	.017	.0059	.00052	.0079	.0027	.00012	.0077	.00281
%RSD	.11453	.21032	.13636	.15317	.17612	.37285	.37074	.49071
#1	14.887	2.8184	.38203	5.1461	1.5608	.03164	2.0696	.57560
#2	14.887	2.8070	.38290	5.1495	1.5626	.03180	2.0701	.57036
#3	14.916	2.8101	.38296	5.1611	1.5662	.03158	2.0566	.57123

Elem	Ni2316	Ag3280	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3.0092**	**.48476**	**.39777**	**.63378**	**11.149**	**.22030**	**7.2544**	**6.4022**
Stddev	.0053	.00013	.00238	.00182	.024	.00089	.0347	.0093
%RSD	.17735	.02772	.59928	.28751	.21883	.40385	.47771	.14592
#1	3.0045	.48473	.39641	.63481	11.167	.21958	7.2829	6.3925
#2	3.0080	.48491	.40052	.63484	11.159	.22129	7.2159	6.4028
#3	3.0150	.48465	.39637	.63167	11.122	.22001	7.2646	6.4112

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	**1.5279**	**2.8802**	**.02973**	**.48196**	**.30235**	**8.0192**	**76.226**
Stddev	.0014	.0055	.00016	.00301	.00171	.0167	.889
%RSD	.09104	.18995	.54552	.62403	.56552	.20833	1.1667
#1	1.5277	2.8844	.02955	.47877	.30038	8.0291	76.338
#2	1.5294	2.8822	.02987	.48474	.30348	8.0286	75.286
#3	1.5266	2.8740	.02977	.48236	.30318	7.9999	77.054

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: S5 Acquired: 8/19/2025 11:36:23 Type: Cal
Method: 6010-200.7 NEW(v115) 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	**6104.5**	**104900.**	**10516.**	**4770.5**	**6877.0**
Stddev	6.5	262.	81.	15.0	6.9
%RSD	.10645	.25016	.76887	.31471	.09993
#1	6099.0	104660.	10433.	4764.2	6871.8
#2	6111.7	105180.	10595.	4759.7	6884.8
#3	6102.9	104860.	10518.	4787.7	6874.4

Sample Name: ICV01 Acquired: 8/19/2025 12:17:57 Type: Unk
Method: 6010-200.7 NEW(v115) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICV01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.985809**	**3.915657**	**3.990705**	**4.026083**	**4.070347**	**7.853820**
Stddev	.010872	.070469	.006102	.012077	.003409	.025536
%RSD	.2727672	1.799672	.1528986	.2999587	.0837478	.3251404
#1	3.985668	3.943200	3.996368	4.026082	4.068967	7.873549
#2	3.975008	3.835576	3.991503	4.014007	4.067844	7.824978
#3	3.996751	3.968195	3.984243	4.038160	4.074229	7.862932

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.941565**	**.2090285**	**1.969141**	**19.62415**	**.8028668**	**1.978066**
Stddev	.005580	.0007317	.001253	.02453	.0041668	.001778
%RSD	.0702582	.3500502	.0636568	.1249927	.5189954	.0899068
#1	7.942469	.2083600	1.969333	19.64209	.8073795	1.979618
#2	7.946637	.2089152	1.967802	19.59620	.8020557	1.976126
#3	7.935589	.2098102	1.970287	19.63415	.7991651	1.978456

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.015675**	**4.007973**	**1.980245**	**19.57425**	**1.982624**	**1.011257**
Stddev	.001057	.012765	.002332	.04302	.000257	.001339
%RSD	.1040574	.3184992	.1177640	.2197546	.0129861	.1324099
#1	1.016706	4.010979	1.982378	19.62333	1.982905	1.011041
#2	1.015724	4.018966	1.980603	19.55628	1.982400	1.012691
#3	1.014594	3.993972	1.977755	19.54313	1.982566	1.010039

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**19.57782**	**1.966589**	**2.003830**	**19.59727**	**4.061603**	**4.026907**
Stddev	.11382	.001912	.010317	.06033	.023356	.006489
%RSD	.5813974	.0972284	.5148865	.3078346	.5750369	.1611491
#1	19.67291	1.968796	2.002642	19.64019	4.035810	4.028939
#2	19.60886	1.965432	1.994158	19.62331	4.067678	4.019645
#3	19.45170	1.965538	2.014690	19.52829	4.081321	4.032137

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: ICV01 Acquired: 8/19/2025 12:17:57 Type: Unk
Method: 6010-200.7 NEW(v115) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICV01 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.965941	3.962261	3.935260	F .0041464	F .0231284	F -.003558
Stddev	.005199	.004219	.032853	.0011772	.0009540	.001081
%RSD	.1310883	.1064834	.8348277	28.39052	4.124845	30.36918
#1	3.967139	3.960170	3.973067	.0031317	.0239992	-.004788
#2	3.960248	3.959495	3.919055	.0038704	.0232774	-.003127
#3	3.970437	3.967117	3.913658	.0054370	.0221087	-.002760

Elem	Sr4077
Units	ppm
Avg	F -.003492
Stddev	.000129
%RSD	3.704557
#1	-.003637
#2	-.003448
#3	-.003389

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6371.174	107820.8	10923.03	5023.136	7457.305
Stddev	2.383	627.0	23.12	35.584	3.422
%RSD	.0373970	.5815217	.2116677	.7084004	.0458854
#1	6368.423	107146.3	10901.81	4984.628	7455.193
#2	6372.540	107930.3	10947.67	5054.802	7455.469
#3	6372.560	108385.9	10919.61	5029.979	7461.253

Sample Name: LLICV01 Acquired: 8/19/2025 12:23:29 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**.0200953**	**.0439446**	**.0125370**	**.0182740**	**.0552001**	**.1170755**	**.1001725**
Stddev	.0008743	.0015394	.0011221	.0008293	.0004016	.0075217	.0009859
%RSD	4.350885	3.502949	8.950114	4.538040	.7276240	6.424660	.9842399
#1	.0204186	.0421822	.0125503	.0173768	.0548787	.1100573	.1012815
#2	.0207619	.0450264	.0114083	.0184325	.0550712	.1250157	.0993950
#3	.0191054	.0446252	.0136524	.0190125	.0556504	.1161537	.0998410

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0062843**	**.0059985**	**2.118640**	**.0100444**	**.0302669**	**.0221384**	**.1116212**
Stddev	.0000416	.0000559	.009267	.0003842	.0001383	.0003787	.0048065
%RSD	.6619672	.9310070	.4374055	3.824676	.4569688	1.710774	4.306060
#1	.0063266	.0059399	2.124231	.0098289	.0301465	.0225695	.1060768
#2	.0062435	.0060045	2.107943	.0104879	.0302362	.0219863	.1146091
#3	.0062829	.0060511	2.123746	.0098164	.0304179	.0218594	.1141778

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0221257**	**2.188888**	**.0407574**	**.0106003**	**1.955984**	**.0430277**	**.0446679**
Stddev	.0002279	.010536	.0004071	.0000609	.015768	.0013931	.0002315
%RSD	1.029889	.4813541	.9989287	.5745707	.8061489	3.237766	.5183721
#1	.0219728	2.200821	.0408596	.0106475	1.943358	.0437968	.0444316
#2	.0223876	2.180868	.0403090	.0105315	1.973658	.0438667	.0448943
#3	.0220165	2.184974	.0411038	.0106218	1.950936	.0414195	.0446778

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.903600**	**.1045677**	**.2120681**	**.0384768**	**.0404080**	**.3786009**	**.0194715**
Stddev	.042816	.0008741	.0006226	.0002481	.0011984	.0127815	.0015566
%RSD	2.249232	.8359085	.2935901	.6447676	2.965713	3.375994	7.994215
#1	1.856752	.1054901	.2116497	.0383498	.0402185	.3735692	.0209357
#2	1.913343	.1044614	.2117710	.0387627	.0416898	.3691010	.0178366
#3	1.940705	.1037517	.2127836	.0383179	.0393156	.3931325	.0196422

Sample Name: LLICV01 Acquired: 8/19/2025 12:23:29 Type: Unk
Method: 6010-200.7 NEW(v115) 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	.0210849	.0197957	.0210070
Stddev	.0012800	.0006140	.0002480
%RSD	6.070553	3.101912	1.180789
#1	.0205777	.0194673	.0212890
#2	.0201363	.0194156	.0209092
#3	.0225408	.0205041	.0208227

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6566.046	113870.2	11363.04	5142.864	8182.192
Stddev	5.104	217.1	102.46	15.755	4.634
%RSD	.0777379	.1906637	.9016719	.3063380	.0566408
#1	6570.407	113857.0	11257.23	5160.577	8187.207
#2	6560.432	114093.6	11461.78	5130.416	8178.067
#3	6567.299	113660.0	11370.11	5137.599	8181.303

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: ICB01 Acquired: 8/19/2025 12:27:44 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**-.001053**	**-.000670**	**.0002235**	**-.003340**	**.0009365**	**.0122451**	**-.004082**
Stddev	.000262	.001580	.0011404	.002887	.0005173	.0071783	.000748
%RSD	24.92486	235.7610	510.1943	86.42833	55.23377	58.62167	18.32844
#1	-.000750	-.000392	-.000066	-.000964	.0005080	.0060502	-.003982
#2	-.001205	-.002370	-.000744	-.006553	.0007904	.0105733	-.004874
#3	-.001203	.000752	.001481	-.002503	.0015112	.0201117	-.003388

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000429**	**.0000846**	**-.009142**	**.0000486**	**.0000278**	**-.000132**	**.0004513**
Stddev	.0000463	.0000662	.010453	.0001984	.0000996	.000090	.0035454
%RSD	107.9982	78.27983	114.3416	407.6973	358.3523	68.52445	785.5999
#1	.0000165	.0001588	-.017156	.0002687	.0001186	-.000035	.0023790
#2	.0000158	.0000632	-.012952	-.000006	.0000436	-.000147	-.003640
#3	.0000964	.0000317	.002682	-.000116	-.000079	-.000213	.002615

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000298**	**-.004831**	**-.000170**	**-.000214**	**-.072843**	**.0012452**	**-.000441**
Stddev	.000128	.000776	.000051	.000145	.004483	.0007032	.000067
%RSD	43.04614	16.06693	30.03898	67.64166	6.153793	56.46889	15.23517
#1	-.000409	-.003935	-.000117	-.000075	-.077623	.0008308	-.000383
#2	-.000329	-.005280	-.000219	-.000202	-.072171	.0020571	-.000426
#3	-.000158	-.005279	-.000174	-.000364	-.068734	.0008478	-.000515

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.209487**	**-.000342**	**.0001992**	**-.002569**	**-.001069**	**.0014800**	**.0004030**
Stddev	.026045	.000294	.0000328	.000675	.001338	.0096737	.0010557
%RSD	12.43265	86.14861	16.48442	26.27781	125.1414	653.6083	261.9604
#1	-.228327	-.000672	.0002341	-.001791	.000241	.0078441	.0009616
#2	-.179766	-.000247	.0001689	-.002999	-.001015	.0062481	-.000815
#3	-.220368	-.000106	.0001947	-.002918	-.002433	-.009652	.001062

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: ICB01 Acquired: 8/19/2025 12:27:44 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**-.002616**	**-.002840**	**-.000066**
Stddev	.000270	.000713	.000057
%RSD	10.30373	25.09265	86.16282
#1	-.002508	-.003662	-.000126
#2	-.002923	-.002412	-.000014
#3	-.002417	-.002445	-.000058

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6649.587**	**112041.7**	**11403.71**	**5140.896**	**8418.892**
Stddev	13.943	341.0	111.51	1.833	19.946
%RSD	.2096850	.3043940	.9778741	.0356515	.2369235
#1	6638.087	112434.2	11532.27	5142.976	8398.433
#2	6665.095	111873.2	11333.08	5140.192	8438.282
#3	6645.579	111817.7	11345.78	5139.519	8419.961

Sample Name: CRI01 Acquired: 8/19/2025 12:38:23 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**.0205493**	**.0436384**	**.0120932**	**.0195580**	**.0530990**	**.1100975**	**.0981253**
Stddev	.0004057	.0020669	.0007435	.0027902	.0007117	.0049911	.0003346
%RSD	1.974243	4.736491	6.148096	14.26611	1.340389	4.533327	.3409838
#1	.0208720	.0457153	.0115230	.0163426	.0522778	.1046659	.0977630
#2	.0206819	.0436184	.0118224	.0213407	.0535389	.1144820	.0981904
#3	.0200938	.0415816	.0129341	.0209908	.0534801	.1111445	.0984226

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0060623**	**.0057694**	**2.050149**	**.0101399**	**.0294265**	**.0212438**	**.1030984**
Stddev	.0000936	.0000652	.012660	.0001305	.0001520	.0001428	.0070203
%RSD	1.544197	1.129753	.6175295	1.287422	.5164033	.6723354	6.809325
#1	.0060762	.0057647	2.064623	.0102075	.0293146	.0210926	.0988415
#2	.0061482	.0057066	2.041134	.0102228	.0293654	.0213764	.0992524
#3	.0059625	.0058368	2.044689	.0099895	.0295995	.0212624	.1112013

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0215680**	**2.115582**	**.0392499**	**.0099186**	**1.975871**	**.0395526**	**.0421386**
Stddev	.0004174	.022164	.0004154	.0003688	.017542	.0009013	.0004363
%RSD	1.935094	1.047675	1.058260	3.718231	.8878250	2.278597	1.035411
#1	.0210903	2.108937	.0393499	.0095237	1.963925	.0390059	.0422161
#2	.0218619	2.140309	.0387937	.0099782	1.967677	.0405929	.0425309
#3	.0217518	2.097501	.0396062	.0102540	1.996011	.0390592	.0416687

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.803522**	**.0971697**	**.2058657**	**.0351882**	**.0394423**	**.3949458**	**.0187129**
Stddev	.017600	.0006868	.0008018	.0003919	.0016067	.0041005	.0011421
%RSD	.9758656	.7067635	.3894636	1.113680	4.073461	1.038245	6.103260
#1	1.809170	.0979624	.2060276	.0348677	.0400096	.3952350	.0176591
#2	1.817605	.0967910	.2049954	.0356251	.0376289	.3988941	.0199265
#3	1.783792	.0967556	.2065742	.0350717	.0406884	.3907083	.0185530

Sample Name: CRI01 Acquired: 8/19/2025 12:38:23 Type: Unk
Method: 6010-200.7 NEW(v115) 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	.0154246	.0181929	.0204099
Stddev	.0013740	.0022512	.0002124
%RSD	8.908137	12.37433	1.040869
#1	.0142614	.0199895	.0206385
#2	.0150718	.0189216	.0203726
#3	.0169406	.0156675	.0202185

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6647.698	110956.4	11384.72	5108.731	8253.774
Stddev	5.621	53.5	61.04	26.081	8.657
%RSD	.0845593	.0482062	.5361426	.5105164	.1048855
#1	6645.299	110933.0	11331.86	5096.799	8263.437
#2	6654.121	111017.6	11370.76	5090.752	8246.727
#3	6643.674	110918.6	11451.52	5138.644	8251.158

Sample Name: ICSA01 Acquired: 8/19/2025 12:42:39 Type: Unk
Method: 6010-200.7 NEW(v115) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICSA01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0121400**	**.0020798**	**-.006177**	**.0030461**	**-.000196**	**246.2414**
Stddev	.0014295	.0015804	.002169	.0026371	.002326	.1159
%RSD	11.77513	75.98853	35.11210	86.57128	1185.265	.0470711
#1	.0136486	.0030834	-.006839	.0058170	.001375	246.2275
#2	.0119660	.0002580	-.007938	.0005671	.000905	246.1330
#3	.0108055	.0028980	-.003754	.0027543	-.002868	246.3636

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001213**	**.0029256**	**.0021277**	**234.3403**	**.0596449**	**.0017100**
Stddev	.000144	.0001155	.0000373	.3092	.0002104	.0000553
%RSD	11.90254	3.946795	1.754283	.1319319	.3528126	3.232277
#1	-.001103	.0028371	.0021016	234.5310	.0595411	.0017489
#2	-.001376	.0030562	.0021111	233.9836	.0595065	.0017344
#3	-.001159	.0028835	.0021704	234.5062	.0598870	.0016467

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.002879**	**102.7735**	**-.001328**	**245.6921**	**.0059490**	**.0027186**
Stddev	.000191	.1258	.000326	.6218	.0002970	.0003865
%RSD	6.629328	.1224111	24.57841	.2530681	4.992309	14.21706
#1	-.002766	102.6363	-.001695	246.2240	.0056681	.0022837
#2	-.002772	102.8008	-.001218	245.0085	.0059191	.0028490
#3	-.003099	102.8834	-.001071	245.8439	.0062598	.0030230

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0295282**	**.0035103**	**.0017978**	**.0016378**	**.0412418**	**.0012658**
Stddev	.0277549	.0008480	.0002282	.0402819	.0020656	.0002478
%RSD	93.99482	24.15592	12.69482	2459.516	5.008392	19.57333
#1	.0037980	.0043641	.0020419	-.025402	.0435994	.0009800
#2	.0258462	.0026683	.0015898	-.017619	.0397501	.0014200
#3	.0589403	.0034986	.0017616	.047934	.0403760	.0013975

Sample Name: ICSA01 Acquired: 8/19/2025 12:42:39 Type: Unk
Method: 6010-200.7 NEW(v115) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICSA01 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.003769	-.004369	.0176449	.0086504	-.008245	F -.029742
Stddev	.000974	.000690	.0140976	.0007162	.002348	.001558
%RSD	25.84257	15.79824	79.89644	8.278799	28.47535	5.236764
#1	-.004866	-.004635	.0245837	.0088829	-.009924	-.031175
#2	-.003434	-.004886	.0014227	.0092213	-.009250	-.028084
#3	-.003006	-.003585	.0269283	.0078469	-.005562	-.029966

Elem	Sr4077
Units	ppm
Avg	.0001863
Stddev	.0003818
%RSD	205.0143
#1	-.000197
#2	.000566
#3	.000190

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5894.286	99924.21	11123.50	4602.758	6595.719
Stddev	16.094	94.78	33.44	25.468	15.341
%RSD	.2730475	.0948517	.3006368	.5533282	.2325853
#1	5899.805	100033.0	11150.72	4596.575	6602.148
#2	5906.895	99880.3	11086.17	4630.748	6606.799
#3	5876.159	99859.3	11133.61	4580.949	6578.210

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: ICSAB01 Acquired: 8/19/2025 12:46:49 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**.1104879**	**.0960412**	**.0410499**	**.0492733**	**.5900150**	**240.8270**
Stddev	.0014405	.0033005	.0027356	.0052279	.0046430	.7941
%RSD	1.303745	3.436530	6.664167	10.60993	.7869304	.3297213
#1	.1102938	.0998519	.0380055	.0500403	.5848044	240.4439
#2	.1120156	.0940911	.0433019	.0437044	.5937135	240.2972
#3	.1091543	.0941806	.0418421	.0540754	.5915270	241.7400

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4776551**	**.4624029**	**.9511457**	**227.9983**	**.5409012**	**.4793599**
Stddev	.0019738	.0027702	.0010389	.4658	.0022317	.0004218
%RSD	.4132251	.5990831	.1092278	.2043025	.4125913	.0879882
#1	.4783308	.4646676	.9505390	228.4978	.5383526	.4788986
#2	.4792024	.4593142	.9505527	227.5757	.5425058	.4794551
#3	.4754322	.4632268	.9523453	227.9214	.5418452	.4797259

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4631787**	**100.7136**	**.4649428**	**239.8658**	**.9541454**	**.2116558**
Stddev	.0011810	.5633	.0005470	.5004	.0008615	.0004518
%RSD	.2549740	.5593214	.1176429	.2086329	.0902937	.2134418
#1	.4639914	100.3002	.4650705	240.4204	.9537523	.2117502
#2	.4618240	101.3552	.4654147	239.4479	.9535506	.2120528
#3	.4637207	100.4854	.4643433	239.7291	.9551334	.2111642

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.049376**	**.4617720**	**1.015544**	**-.314272**	**.9074576**	**.9597749**
Stddev	.010026	.0014624	.002856	.042391	.0023055	.0011958
%RSD	20.30487	.3166860	.2812225	13.48862	.2540582	.1245932
#1	-.041052	.4625093	1.017776	-.288841	.9094583	.9589790
#2	-.060506	.4627190	1.012325	-.290767	.9049364	.9591956
#3	-.046569	.4600878	1.016530	-.363208	.9079782	.9611500

Sample Name: ICSAB01 Acquired: 8/19/2025 12:46:49 Type: Unk
Method: 6010-200.7 NEW(v115) 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	.9405771	.9303419	.9927519	F .0091550	F -.003677	F -.030877
Stddev	.0037412	.0009704	.0244290	.0020686	.000785	.000512
%RSD	.3977526	.1043014	2.460732	22.59517	21.33711	1.656874
#1	.9415176	.9308212	.9663987	.0108640	-.004562	-.031405
#2	.9364555	.9309793	1.014641	.0097456	-.003068	-.030844
#3	.9437583	.9292252	.997216	.0068553	-.003401	-.030383

Elem	Sr4077
Units	ppm
Avg	F -.000911
Stddev	.000423
%RSD	46.38602
#1	-.000557
#2	-.001379
#3	-.000797

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6139.761	103393.9	11664.80	4773.274	6864.956
Stddev	5.805	364.4	85.08	30.960	4.577
%RSD	.0945557	.3524741	.7293489	.6486157	.0666785
#1	6144.548	103747.8	11603.89	4755.282	6868.201
#2	6133.304	103414.1	11762.01	4809.023	6859.720
#3	6141.432	103019.8	11628.51	4755.516	6866.946

Sample Name: ICSADLX20 Acquired: 8/19/2025 12:51:03 Type: Unk
Method: 6010-200.7 NEW(v115) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICSA01DLX20 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000160**	**-.000212**	**.0005303**	**-.002242**	**.0011253**	**12.15168**	**-.004296**
Stddev	.001038	.000150	.0007521	.001008	.0005576	.01305	.000523
%RSD	649.2826	70.60744	141.8198	44.96105	49.55385	.1073950	12.16464
#1	-.000731	-.000231	.0013883	-.001078	.0005042	12.16618	-.004452
#2	.001039	-.000054	.0002171	-.002816	.0012887	12.14088	-.004723
#3	-.000788	-.000351	-.000015	-.002832	.0015829	12.14798	-.003713

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006011**	**.0007603**	**12.06896**	**.0030731**	**.0005000**	**.0001957**	**4.894649**
Stddev	.0000577	.0000352	.03503	.0002943	.0002752	.0002957	.009623
%RSD	9.596325	4.624477	.2902303	9.576460	55.03898	151.0824	.1965954
#1	.0006077	.0008004	12.10608	.0027422	.0002017	.0005211	4.903413
#2	.0005403	.0007347	12.06431	.0033054	.0005543	-.000057	4.884352
#3	.0006551	.0007457	12.03649	.0031717	.0007440	.000123	4.896182

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001651**	**12.37448**	**.0010179**	**-.000339**	**-.126357**	**-.000007**	**.0006511**
Stddev	.0006659	.07901	.0002503	.000220	.012159	.001103	.0000372
%RSD	403.2691	.6384679	24.59248	64.98922	9.623005	15285.66	5.716741
#1	.0002294	12.46432	.0009265	-.000485	-.138741	.000973	.0006093
#2	.0007965	12.34330	.0008261	-.000086	-.114435	.000206	.0006807
#3	-.000531	12.31582	.0013010	-.000446	-.125894	-.001201	.0006633

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.419174**	**-.000472**	**.0004631**	**-.003077**	**.0008375**	**.0051455**	**.0016092**
Stddev	.021763	.000425	.0000951	.000323	.0018357	.0086724	.0010601
%RSD	5.191802	89.94920	20.54573	10.49107	219.1858	168.5413	65.87757
#1	-.405356	-.000194	.0005637	-.002807	.0023221	.0143656	.0006339
#2	-.444260	-.000961	.0003745	-.002990	.0014055	.0039199	.0027374
#3	-.407906	-.000262	.0004512	-.003435	-.001215	-.002849	.0014562

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: ICSADLX20 Acquired: 8/19/2025 12:51:03 Type: Unk
Method: 6010-200.7 NEW(v115) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICSA01DLX20 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**-.000636**	**-.006615**	**.0002652**
Stddev	.001247	.001512	.0000824
%RSD	196.0473	22.85655	31.06195
#1	-.001554	-.007154	.0002874
#2	.000784	-.007783	.0003343
#3	-.001138	-.004907	.0001740

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6585.663**	**112285.3**	**11386.52**	**5144.723**	**8084.077**
Stddev	10.821	220.8	55.89	23.955	12.146
%RSD	.1643162	.1966372	.4908831	.4656154	.1502465
#1	6583.734	112522.7	11322.41	5159.552	8086.319
#2	6597.319	112247.2	11412.16	5157.530	8094.946
#3	6575.935	112086.0	11425.00	5117.087	8070.967

Sample Name: ICSABDLX20 Acquired: 8/19/2025 12:55:18 Type: Unk
Method: 6010-200.7 NEW(v115) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICSAB01DLX20 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0046062	.0060455	.0016570	.0003145	.0304960	12.65782	.0226206
Stddev	.0013982	.0018346	.0006989	.0013587	.0003464	.00975	.0004641
%RSD	30.35474	30.34637	42.17529	431.9599	1.135813	.0770353	2.051617
#1	.0061851	.0047361	.0010445	.0005240	.0308951	12.65682	.0230932
#2	.0035248	.0052582	.0024183	.0015564	.0302738	12.66804	.0221655
#3	.0041087	.0081424	.0015083	-.001137	.0303191	12.64861	.0226033

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0257449	.0487126	12.56602	.0287052	.0247865	.0261791	5.080988
Stddev	.0002487	.0002054	.04397	.0003992	.0001751	.0001266	.021052
%RSD	.9660922	.4216078	.3499101	1.390696	.7062317	.4834588	.4143369
#1	.0258639	.0486490	12.56541	.0282958	.0246107	.0262587	5.071986
#2	.0259118	.0485466	12.61029	.0290933	.0247879	.0260331	5.105044
#3	.0254591	.0489423	12.52236	.0287264	.0249608	.0262454	5.065932

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0251500	12.95450	.0495006	.0102715	-.127863	.0286345	.0526278
Stddev	.0005826	.03965	.0000597	.0004112	.008530	.0003903	.0003193
%RSD	2.316508	.3060972	.1205076	4.003642	6.671021	1.363112	.6066792
#1	.0255246	12.98684	.0495039	.0099642	-.126010	.0287295	.0523913
#2	.0254468	12.96641	.0495586	.0107387	-.137167	.0282054	.0529910
#3	.0244788	12.91026	.0494394	.0101117	-.120412	.0289685	.0525011

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.399250	.0481047	.0516344	.0451409	.0503757	.0467397	.0012430
Stddev	.010952	.0006014	.0003932	.0005147	.0014878	.0092387	.0021781
%RSD	2.743175	1.250183	.7616137	1.140113	2.953473	19.76621	175.2317
#1	-.411893	.0474477	.0520339	.0447178	.0516617	.0558290	.0025199
#2	-.392664	.0482386	.0512477	.0449910	.0487461	.0470314	.0024811
#3	-.393193	.0486279	.0516217	.0457138	.0507193	.0373586	-.001272

Sample Name: ICSABDLX20 Acquired: 8/19/2025 12:55:18 Type: Unk
Method: 6010-200.7 NEW(v115) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICSAB01DLX20 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**-.002049**	**-.007314**	**.0002550**
Stddev	.001353	.000572	.0000134
%RSD	66.04059	7.818787	5.252819
#1	-.000528	-.007952	.0002550
#2	-.003118	-.006847	.0002416
#3	-.002500	-.007143	.0002684

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6480.575**	**110875.1**	**11197.94**	**5095.513**	**7941.963**
Stddev	5.987	286.5	46.68	20.135	8.587
%RSD	.0923861	.2583600	.4168541	.3951509	.1081241
#1	6480.946	111115.0	11176.35	5081.486	7944.547
#2	6474.411	110558.0	11165.96	5086.470	7932.380
#3	6486.368	110952.4	11251.50	5118.584	7948.961

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: CCV01 Acquired: 8/19/2025 12:59:30 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**5.051097**	**5.149283**	**4.945965**	**5.093720**	**5.078265**	**9.983093**	**10.05142**
Stddev	.004723	.071601	.003229	.012752	.001380	.014590	.12507
%RSD	.0935022	1.390496	.0652923	.2503379	.0271768	.1461443	1.244318
#1	5.049792	5.089953	4.942342	5.085501	5.078826	9.996713	10.19575
#2	5.056335	5.228814	4.948542	5.108409	5.079276	9.967696	9.98366
#3	5.047164	5.129082	4.947011	5.087249	5.076693	9.984869	9.97485

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2438033**	**2.479964**	**25.08721**	**1.003310**	**2.483537**	**1.258963**	**5.139571**
Stddev	.0008196	.001367	.07227	.005345	.001682	.000381	.035800
%RSD	.3361644	.0551334	.2880625	.5327549	.0677383	.0302950	.6965574
#1	.2444329	2.478453	25.16143	.997158	2.481791	1.258824	5.116558
#2	.2428766	2.480324	25.01707	1.005952	2.483671	1.258671	5.180818
#3	.2441003	2.481116	25.08312	1.006820	2.485148	1.259395	5.121339

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.498985**	**24.69962**	**2.480200**	**1.256796**	**26.00833**	**2.502273**	**2.538210**
Stddev	.019607	.05241	.001740	.001982	.11770	.007286	.006803
%RSD	.7846149	.2121933	.0701521	.1576806	.4525560	.2911888	.2680124
#1	2.519410	24.75883	2.478192	1.254511	26.13571	2.510461	2.533629
#2	2.480313	24.65917	2.481142	1.257832	25.90360	2.496503	2.534975
#3	2.497231	24.68085	2.481266	1.258044	25.98569	2.499854	2.546027

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.40693**	**4.883084**	**5.046582**	**4.980413**	**5.008938**	**5.092893**	**5.034715**
Stddev	.05073	.021858	.005061	.006499	.021129	.031036	.021945
%RSD	.1996839	.4476193	.1002939	.1304857	.4218339	.6094013	.4358781
#1	25.44822	4.901268	5.042478	4.977475	5.032542	5.062941	5.019884
#2	25.35030	4.858834	5.052238	4.987862	4.991791	5.124910	5.059924
#3	25.42228	4.889150	5.045031	4.975902	5.002479	5.090828	5.024336

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: CCV01 Acquired: 8/19/2025 12:59:30 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**4.983816**	**4.994075**	**5.115548**
Stddev	.012293	.032401	.051855
%RSD	.2466670	.6487959	1.013679
#1	4.971014	5.024044	5.166182
#2	4.995528	4.959693	5.062552
#3	4.984907	4.998488	5.117910

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6318.344**	**107103.0**	**11081.36**	**4919.564**	**7344.251**
Stddev	13.566	195.0	43.94	20.313	14.570
%RSD	.2147139	.1821072	.3965261	.4128955	.1983833
#1	6304.086	107299.5	11033.03	4940.177	7331.890
#2	6331.092	106909.4	11118.91	4918.948	7360.315
#3	6319.856	107100.1	11092.12	4899.566	7340.548

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: CCB01 Acquired: 8/19/2025 13:03:41 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**.0006441**	**.0015590**	**.0004083**	**-.000746**	**.0018405**	**.0086897**	**-.002394**
Stddev	.0013912	.0017952	.0007685	.002419	.0013759	.0014941	.000519
%RSD	215.9971	115.1485	188.2342	324.1177	74.75580	17.19340	21.67800
#1	-.000956	.0016196	.0009097	.001650	.0031858	.0104099	-.002040
#2	.001568	-.000266	.0007917	-.003188	.0004360	.0079430	-.002989
#3	.001320	.003323	-.000476	-.000701	.0018995	.0077162	-.002152

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000204**	**.0001067**	**-.001513**	**-.000118**	**.0001374**	**-.000064**	**-.000142**
Stddev	.0000260	.0000354	.007736	.000249	.0000821	.000283	.004708
%RSD	127.0470	33.21632	511.2899	212.2187	59.79418	442.8316	3322.076
#1	.0000332	.0000718	-.010350	.000163	.0002176	.000261	.000070
#2	.0000376	.0001426	.001778	-.000201	.0001411	-.000257	-.004952
#3	-.000009	.0001056	.004033	-.000314	.0000534	-.000196	.004457

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000441**	**-.018259**	**-.000099**	**-.000394**	**-.140596**	**.0018162**	**-.000508**
Stddev	.000329	.005293	.000199	.000480	.022778	.0011717	.000158
%RSD	74.76765	28.98795	201.7673	121.9143	16.20080	64.51777	31.07458
#1	-.000134	-.023547	.000060	-.000055	-.160598	.0031676	-.000594
#2	-.000789	-.012961	-.000322	-.000184	-.145385	.0010846	-.000605
#3	-.000400	-.018267	-.000034	-.000943	-.115804	.0011962	-.000326

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.402771**	**.0014592**	**.0006949**	**-.002154**	**.0004587**	**.0082270**	**.0006927**
Stddev	.035025	.0001671	.0000565	.000257	.0011706	.0046000	.0017609
%RSD	8.696043	11.45095	8.126958	11.92079	255.1919	55.91340	254.2140
#1	-.434251	.0012824	.0007430	-.001897	-.000027	.0076210	.0021892
#2	-.365042	.0014805	.0006327	-.002410	.001794	.0039600	-.001248
#3	-.409019	.0016145	.0007090	-.002157	-.000391	.0131000	.001137

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: CCB01 Acquired: 8/19/2025 13:03:41 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**-.003848**	**-.004581**	**.0001905**
Stddev	.001350	.001889	.0000835
%RSD	35.09864	41.22596	43.84654
#1	-.002506	-.002652	.0002511
#2	-.003829	-.004665	.0002252
#3	-.005207	-.006427	.0000952

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6586.129**	**112432.6**	**11294.39**	**5124.724**	**8372.637**
Stddev	4.979	177.4	58.57	20.722	7.577
%RSD	.0756004	.1577561	.5185637	.4043617	.0904914
#1	6591.853	112406.5	11255.75	5130.175	8368.042
#2	6583.729	112621.6	11361.78	5101.821	8381.382
#3	6582.804	112269.8	11265.64	5142.176	8368.488

Sample Name: LR-2 Acquired: 8/19/2025 13:12:39 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**.2554783**	**-.322260**	**-.108637**	**-.025420**	**-.119621**	**1891.260**	**.0207094**
Stddev	.0034299	.007208	.006106	.006853	.003065	22.821	.0009205
%RSD	1.342558	2.236801	5.620188	26.95922	2.562020	1.206668	4.444746
#1	.2587439	-.314161	-.115675	-.032547	-.118069	1870.921	.0204599
#2	.2519048	-.324647	-.104765	-.018878	-.117642	1915.940	.0199394
#3	.2557860	-.327972	-.105471	-.024835	-.123151	1886.919	.0217289

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0789501**	**.0569504**	**15.08615**	**-.047627**	**.0673268**	**-.038368**	**2807.104**
Stddev	.0009606	.0013139	.28210	.000385	.0006419	.015357	16.664
%RSD	1.216775	2.307131	1.869949	.8089820	.9534740	40.02501	.5936351
#1	.0779110	.0570478	15.40220	-.047188	.0666205	-.021147	2787.872
#2	.0798058	.0555905	14.99647	-.047912	.0674851	-.043318	2816.164
#3	.0791335	.0582129	14.85980	-.047780	.0678747	-.050640	2817.275

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.484234**	**1.006017**	**.0478135**	**^ *****	**3.561108**	**.0421729**	**.0976029**
Stddev	.001243	.033046	.0002934	-----	.040120	.0027369	.0015632
%RSD	.2566882	3.284811	.6136506	-----	1.126628	6.489709	1.601628
#1	-.483455	1.002641	.0474948	^ -----	3.548194	.0426874	.0989545
#2	-.485668	1.040621	.0480725	^ -----	3.606095	.0392153	.0979632
#3	-.483581	.974789	.0478731	^ -----	3.529035	.0446160	.0958910

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1840.518**	**^ *****	**-.016513**	**.0166440**	**.0041458**	**.5163038**	**.0882775**
Stddev	16.743	-----	.000723	.0027761	.0004937	.0207781	.0059659
%RSD	.9096951	-----	4.378997	16.67894	11.90882	4.024400	6.758157
#1	1849.774	^ -----	-.015687	.0144174	.0047058	.4923323	.0847233
#2	1850.589	^ -----	-.016822	.0197544	.0037735	.5291591	.0849440
#3	1821.190	^ -----	-.017030	.0157602	.0039580	.5274201	.0951652

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: LR-2 Acquired: 8/19/2025 13:12:39 Type: Unk
Method: 6010-200.7 NEW(v115) 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	-.506195	.2854290	-2.69071
Stddev	.008899	.0022494	.01594
%RSD	1.758023	.7880671	.5924869
#1	-.495939	.2828543	-2.67231
#2	-.511867	.2870129	-2.69934
#3	-.510780	.2864198	-2.70048

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5147.630	85136.72	10720.53	3958.517	5445.676
Stddev	5.246	174.25	98.36	7.935	6.530
%RSD	.1019056	.2046742	.9174605	.2004468	.1199112
#1	5145.893	85326.82	10768.38	3966.589	5441.826
#2	5153.524	84984.56	10607.40	3958.236	5453.215
#3	5143.474	85098.77	10785.80	3950.727	5441.986

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: LR-3 Acquired: 8/19/2025 13:17:07 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**.1013319**	**.0355911**	**227.2070**	**.0021428**	**.1440763**	**.1204380**	**-.002534**
Stddev	.0014075	.0032266	1.0420	.0026125	.0026254	.0031984	.000930
%RSD	1.388954	9.065732	.4586099	121.9226	1.822249	2.655654	36.70849
#1	.1015081	.0367568	228.3402	.0000512	.1426320	.1216335	-.001627
#2	.1026430	.0319436	226.9906	.0013059	.1424901	.1228665	-.002488
#3	.0998446	.0380728	226.2901	.0050712	.1471068	.1168141	-.003485

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.005216**	**-.001877**	**.2245361**	**23.73961**	**.0068190**	**52.55998**	**.1237895**
Stddev	.000036	.000052	.0051908	.19011	.0000656	.06009	.0054496
%RSD	.6833522	2.794801	2.311803	.8008112	.9616227	.1143278	4.402277
#1	-.005218	-.001916	.2217612	23.88922	.0067787	52.62544	.1178499
#2	-.005251	-.001817	.2213224	23.80393	.0067836	52.54716	.1285589
#3	-.005179	-.001897	.2305246	23.52568	.0068947	52.50733	.1249597

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**49.06710**	**-.174730**	**23.59847**	**.0041685**	**.2811849**	**-.040004**	**29.14966**
Stddev	.33203	.007524	.03813	.0002697	.0187514	.001891	.11106
%RSD	.6766909	4.305894	.1615575	6.470536	6.668694	4.726615	.3809989
#1	49.25825	-.181302	23.64105	.0040812	.2982138	-.038905	29.26602
#2	49.25936	-.176366	23.58685	.0039533	.2842517	-.042187	29.13817
#3	48.68371	-.166523	23.56750	.0044711	.2610892	-.038919	29.04479

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5061665**	**.0021962**	**-.014259**	**-.011756**	**-.044824**	**-.113205**	**.1054864**
Stddev	.0237797	.0004402	.000258	.000022	.000769	.008769	.0024912
%RSD	4.698002	20.04494	1.807588	.1872012	1.715323	7.746229	2.361668
#1	.5336057	.0024666	-.014114	-.011734	-.044900	-.105391	.1067495
#2	.4933361	.0016882	-.014556	-.011778	-.044019	-.111534	.1070930
#3	.4915576	.0024338	-.014106	-.011757	-.045551	-.122689	.1026166

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: LR-3 Acquired: 8/19/2025 13:17:07 Type: Unk
Method: 6010-200.7 NEW(v115) 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	.0542301	-.000474	.0003778
Stddev	.0015059	.000739	.0000627
%RSD	2.776882	156.0095	16.60452
#1	.0538658	-.000227	.0004378
#2	.0558848	.000111	.0003829
#3	.0529398	-.001304	.0003126

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6191.521	112063.6	11130.77	4937.354	7939.898
Stddev	6.331	469.9	5.78	26.031	7.079
%RSD	.1022555	.4193030	.0519575	.5272193	.0891560
#1	6193.526	111586.9	11136.85	4937.685	7936.693
#2	6184.430	112077.6	11125.34	4911.159	7934.989
#3	6196.606	112526.3	11130.13	4963.217	7948.013

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: Q2552-06 Acquired: 8/19/2025 13:26:37 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**.0008315**	**.0002059**	**.0045882**	**-.002692**	**-.001649**	**.0035408**	**-.003355**
Stddev	.0014475	.0007109	.0013498	.001071	.000619	.0037720	.001103
%RSD	174.0878	345.1960	29.41839	39.80126	37.54943	106.5286	32.86317
#1	-.000670	.0004431	.0058261	-.003177	-.000955	.0016210	-.003463
#2	.000947	-.000593	.0047892	-.003434	-.002144	.0078865	-.004400
#3	.002218	.000768	.0031491	-.001464	-.001847	.0011150	-.002203

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001038**	**.0000640**	**.0691238**	**-.000368**	**-.000049**	**.0005398**	**.0067656**
Stddev	.0000023	.0000625	.0098556	.000367	.000099	.0001755	.0015414
%RSD	2.269182	97.56946	14.25789	99.74670	202.3828	32.51031	22.78315
#1	.0001015	.0000925	.0776021	-.000118	.000060	.0007203	.0085451
#2	.0001035	.0001071	.0714589	-.000790	-.000074	.0003698	.0058446
#3	.0001062	-.000008	.0583104	-.000197	-.000133	.0005294	.0059072

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0007495**	**.0788781**	**-.000555**	**-.000223**	**8.712899**	**.0002610**	**-.000399**
Stddev	.0004101	.0256402	.000184	.000259	.019197	.0021653	.000151
%RSD	54.71952	32.50605	33.17950	116.2789	.2203249	829.7688	37.95053
#1	.0009337	.0961412	-.000355	.000036	8.708409	-.001580	-.000517
#2	.0010353	.0910771	-.000592	-.000482	8.733943	-.000284	-.000228
#3	.0002796	.0494161	-.000718	-.000223	8.696346	.002647	-.000451

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.284340**	**-.003504**	**.0008344**	**-.017752**	**.0006190**	**5.327072**	**.0023293**
Stddev	.010500	.000198	.0001178	.000371	.0003563	.021447	.0011104
%RSD	3.692933	5.658677	14.12104	2.091491	57.56524	.4025977	47.67013
#1	-.289778	-.003444	.0007136	-.018142	.0009721	5.321986	.0025719
#2	-.291007	-.003343	.0009490	-.017403	.0002595	5.350605	.0032984
#3	-.272236	-.003725	.0008406	-.017712	.0006253	5.308626	.0011177

Sample Name: Q2552-06 Acquired: 8/19/2025 13:26:37 Type: Unk
Method: 6010-200.7 NEW(v115) 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	.0025576	-.007172	-.000040
Stddev	.0028530	.001738	.000022
%RSD	111.5500	24.23241	55.03286
#1	.0016768	-.007027	-.000038
#2	.0057472	-.005511	-.000019
#3	.0002489	-.008977	-.000063

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6746.090	115884.5	11722.41	5299.161	8458.062
Stddev	9.663	587.0	45.30	36.635	19.309
%RSD	.1432427	.5065410	.3864288	.6913357	.2282955
#1	6755.699	116434.4	11746.91	5334.976	8479.990
#2	6746.196	115952.7	11750.18	5300.749	8450.593
#3	6736.374	115266.4	11670.14	5261.757	8443.603

Sample Name: PB169295BL Acquired: 8/19/2025 13:30:56 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**.0003065**	**.0001872**	**.0013814**	**.0006147**	**.0001586**	**.0089859**	**-.003629**
Stddev	.0010122	.0008904	.0006710	.0007214	.0010537	.0085367	.000552
%RSD	330.2677	475.7009	48.57700	117.3527	664.5768	95.00093	15.20091
#1	.0014750	-.000134	.0006359	.0014266	.0007910	.0082082	-.004033
#2	-.000300	.001194	.0015712	.0000475	-.001058	.0178849	-.003000
#3	-.000255	-.000498	.0019370	.0003700	.000743	.0008647	-.003854

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000244**	**.0000340**	**.0149270**	**.0000165**	**.0000703**	**.0000436**	**-.003213**
Stddev	.0000420	.0000652	.0094018	.0000921	.0000416	.0002684	.003665
%RSD	172.0999	191.4316	62.98557	558.2139	59.27207	616.0013	114.0546
#1	.0000405	-.000010	.0214580	-.000068	.0000951	-.000250	-.007221
#2	-.000023	.000109	.0191718	.000003	.0000934	.000104	-.000033
#3	.000056	.000003	.0041512	.000114	.0000222	.000277	-.002386

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000440**	**.0209408**	**-.000153**	**.0000058**	**.6256404**	**.0006390**	**-.000326**
Stddev	.000552	.0186600	.000226	.0003439	.0344634	.0019628	.000118
%RSD	125.3908	89.10865	147.9044	5976.765	5.508502	307.1828	36.09040
#1	-.001063	-.000604	.000105	-.000307	.6613186	-.000770	-.000254
#2	-.000011	.031970	-.000245	.000374	.6230665	-.000195	-.000461
#3	-.000247	.031456	-.000319	-.000049	.5925361	.002881	-.000262

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1667093**	**-.003387**	**.0001071**	**-.002939**	**.0014438**	**-.006824**	**.0006667**
Stddev	.0166759	.000091	.0002004	.000334	.0009566	.005584	.0010815
%RSD	10.00297	2.688306	187.1588	11.36129	66.25702	81.81693	162.2035
#1	.1838392	-.003400	.0002767	-.002707	.0003932	-.006682	.0014136
#2	.1657609	-.003471	-.000114	-.002788	.0022645	-.012478	.0011600
#3	.1505279	-.003290	.000159	-.003322	.0016737	-.001314	-.000573

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: PB169295BL Acquired: 8/19/2025 13:30:56 Type: Unk
Method: 6010-200.7 NEW(v115) 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	-.002417	.0066830	-.000019
Stddev	.000213	.0029076	.000038
%RSD	8.830663	43.50840	195.7168
#1	-.002663	.0088558	.000017
#2	-.002279	.0078132	-.000016
#3	-.002309	.0033799	-.000058

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6601.087	112410.8	11152.06	5123.738	8364.744
Stddev	5.039	131.2	74.84	22.185	11.530
%RSD	.0763352	.1167577	.6711100	.4329839	.1378376
#1	6606.827	112451.3	11217.35	5117.356	8377.903
#2	6597.394	112264.1	11070.38	5105.443	8359.918
#3	6599.039	112517.1	11168.46	5148.414	8356.412

Sample Name: PB169295BS Acquired: 8/19/2025 13:35:15 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**.7614040**	**1.934871**	**.9270779**	**1.935253**	**.8041438**	**1.947877**
Stddev	.0024216	.054767	.0002334	.005867	.0003588	.014518
%RSD	.3180417	2.830544	.0251745	.3031803	.0446201	.7453092
#1	.7639497	1.920193	.9271896	1.932783	.8039331	1.939080
#2	.7611330	1.995482	.9268096	1.941951	.8045581	1.939917
#3	.7591294	1.888938	.9272343	1.931024	.8039403	1.964634

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1909475**	**.1940561**	**.1842710**	**1.003267**	**.3929703**	**.1888444**
Stddev	.0010549	.0005502	.0002230	.007905	.0004134	.0004979
%RSD	.5524373	.2835467	.1210188	.7879068	.1052066	.2636407
#1	.1920021	.1940920	.1840922	.998434	.3934258	.1885869
#2	.1898924	.1934888	.1841998	.998979	.3928663	.1885280
#3	.1909480	.1945875	.1845208	1.012390	.3926188	.1894183

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3005036**	**2.973313**	**.1988306**	**1.963641**	**.4747079**	**.0731993**
Stddev	.0005109	.007230	.0006239	.013794	.0010427	.0002757
%RSD	.1700092	.2431639	.3137984	.7024493	.2196450	.3766941
#1	.3002824	2.970594	.1989245	1.955031	.4745029	.0734672
#2	.3001405	2.967837	.1981651	1.979551	.4737830	.0732143
#3	.3010877	2.981509	.1994023	1.956342	.4758379	.0729163

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.177271**	**.2925669**	**.2021068**	**9.460940**	**.2828728**	**.4016826**
Stddev	.018864	.0013072	.0010311	.034147	.0008124	.0001519
%RSD	.5937105	.4467944	.5101744	.3609256	.2871970	.0378208
#1	3.167052	.2934529	.2014278	9.476456	.2830113	.4017337
#2	3.165721	.2931822	.2015993	9.484574	.2820000	.4018023
#3	3.199039	.2910656	.2032933	9.421790	.2836070	.4015117

Sample Name: PB169295BS Acquired: 8/19/2025 13:35:15 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**.6644329**	**.1946709**	**.9105246**	**5.378914**	F **-.002726**	**.1982390**
Stddev	.0007636	.0018954	.0142850	.022310	.001217	.0016079
%RSD	.1149309	.9736456	1.568876	.4147633	44.64971	.8110827
#1	.6643579	.1967121	.9108262	5.378099	-.001652	.2000732
#2	.6652313	.1943342	.9246565	5.401620	-.004048	.1970728
#3	.6637095	.1929664	.8960912	5.357023	-.002478	.1975709

Elem	Sr4077
Units	ppm
Avg	**.1910875**
Stddev	.0003297
%RSD	.1725245
#1	.1909336
#2	.1908629
#3	.1914660

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6549.796**	**110828.3**	**11186.33**	**5090.839**	**8050.821**
Stddev	8.376	166.2	37.28	6.972	14.833
%RSD	.1278799	.1499723	.3332800	.1369579	.1842370
#1	6555.844	110643.9	11184.32	5092.056	8057.804
#2	6553.308	110874.3	11224.57	5097.122	8060.874
#3	6540.236	110966.6	11150.09	5083.338	8033.786

Sample Name: Q2552-03 Acquired: 8/19/2025 13:39:15 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**.0002945**	**.0009859**	**.0013764**	**-.003199**	**-.001233**	**.0042023**	**-.003281**
Stddev	.0015222	.0014160	.0011352	.000635	.002278	.0045751	.000838
%RSD	516.8820	143.6311	82.47523	19.84471	184.6964	108.8734	25.54889
#1	-.001257	.0024187	.0017468	-.002517	-.000599	-.000279	-.002327
#2	.001785	-.000413	.0001023	-.003308	.000660	.008866	-.003901
#3	.000355	.000952	.0022801	-.003773	-.003761	.004020	-.003616

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001815**	**.0000406**	**66.10390**	**-.000751**	**.0002273**	**-.000145**	**-.007227**
Stddev	.0000761	.0000117	.18937	.000392	.0000346	.000064	.007459
%RSD	41.94845	28.74874	.2864771	52.12055	15.20123	44.38036	103.2016
#1	.0001265	.0000321	66.28923	-.000355	.0002007	-.000178	.000357
#2	.0002684	.0000358	66.11174	-.000761	.0002150	-.000186	-.007485
#3	.0001497	.0000538	65.91073	-.001138	.0002664	-.000071	-.014554

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000291**	**18.45810**	**-.000267**	**-.000269**	**44.57274**	**.0023946**	**-.000946**
Stddev	.000203	.07599	.000224	.000167	.25430	.0016429	.000125
%RSD	69.71797	.4116962	83.96281	62.13843	.5705361	68.60790	13.20725
#1	-.000068	18.52158	-.000041	-.000078	44.27958	.0007617	-.001062
#2	-.000339	18.47881	-.000271	-.000340	44.73398	.0023749	-.000814
#3	-.000465	18.37390	-.000489	-.000389	44.70464	.0040473	-.000963

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**28.38476**	**-.002781**	**.0003866**	**-.018912**	**-.001019**	**-.014908**	**.0015184**
Stddev	.07303	.000098	.0001446	.000752	.000471	.017217	.0014852
%RSD	.2572721	3.521337	37.39917	3.976159	46.23669	115.4865	97.81704
#1	28.30070	-.002894	.0002777	-.018498	-.001545	-.002905	.0027608
#2	28.42098	-.002716	.0003315	-.019780	-.000876	-.034635	.0019209
#3	28.43259	-.002734	.0005506	-.018459	-.000636	-.007185	-.000127

Sample Name: Q2552-03 Acquired: 8/19/2025 13:39:15 Type: Unk
Method: 6010-200.7 NEW(v115) 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	.0078787	-.019489	.0066196
Stddev	.0027167	.001363	.0000471
%RSD	34.48179	6.993933	.7112715
#1	.0080304	-.021062	.0065987
#2	.0105165	-.018656	.0065866
#3	.0050894	-.018749	.0066735

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6384.174	109966.9	11347.07	5073.736	7541.978
Stddev	18.938	196.3	71.51	8.714	30.201
%RSD	.2966338	.1784711	.6301997	.1717516	.4004386
#1	6405.471	109832.0	11264.53	5079.890	7576.632
#2	6369.227	109876.6	11386.17	5063.765	7521.270
#3	6377.824	110192.0	11390.50	5077.553	7528.032

Sample Name: Q2552-04 Acquired: 8/19/2025 13:43:32 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**.0226239**	**.0084733**	**.0464418**	**.0778859**	**.0187310**	**.6257792**	**.6640561**
Stddev	.0009124	.0006487	.0003673	.0024654	.0005454	.0027453	.0025273
%RSD	4.032940	7.656179	.7908191	3.165392	2.911914	.4386974	.3805864
#1	.0218489	.0092201	.0460419	.0761332	.0192163	.6229177	.6611763
#2	.0223934	.0081502	.0467640	.0807050	.0181407	.6283912	.6659047
#3	.0236295	.0080495	.0465195	.0768195	.0188360	.6260285	.6650875

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0092491**	**.0163543**	**-.002419**	**.0234478**	**.0001840**	**1.040161**	**.6197078**
Stddev	.0000553	.0000214	.006088	.0002606	.0001433	.000318	.0060185
%RSD	.5982975	.1306018	251.6276	1.111576	77.90718	.0305461	.9711825
#1	.0093121	.0163784	-.008430	.0231839	.0002578	1.039796	.6127826
#2	.0092082	.0163465	.003743	.0234545	.0002753	1.040378	.6236740
#3	.0092270	.0163379	-.002571	.0237050	.0000188	1.040309	.6226668

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1110362**	**-.021607**	**.4429101**	**.0839141**	**.2025816**	**.3175629**	**1.012476**
Stddev	.0003292	.005766	.0009322	.0001696	.0075964	.0007899	.006587
%RSD	.2965198	26.68716	.2104764	.2021270	3.749806	.2487425	.6505790
#1	.1114162	-.024076	.4424866	.0839605	.2087214	.3183324	1.017649
#2	.1108563	-.015017	.4422649	.0840556	.2049370	.3167540	1.005061
#3	.1108360	-.025727	.4439789	.0837261	.1940865	.3176024	1.014718

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.147520**	**.8689415**	**.0928780**	**-.003713**	**.0000476**	**.2078477**	**.0032089**
Stddev	.008932	.0018070	.0002339	.000153	.0007451	.0143427	.0005306
%RSD	6.055036	.2079565	.2517999	4.116714	1564.784	6.900578	16.53462
#1	-.155922	.8707115	.0929127	-.003543	.0008953	.2243933	.0031284
#2	-.148499	.8690133	.0926287	-.003755	-.000504	.2002040	.0027232
#3	-.138138	.8670996	.0930926	-.003840	-.000249	.1989458	.0037751

Sample Name: Q2552-04 Acquired: 8/19/2025 13:43:32 Type: Unk
Method: 6010-200.7 NEW(v115) 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	-.002911	-.000329	-.000564
Stddev	.001471	.001101	.000112
%RSD	50.54480	334.3034	19.82582
#1	-.001377	.000875	-.000467
#2	-.004310	-.001283	-.000686
#3	-.003046	-.000580	-.000539

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6863.887	118619.1	11844.55	5340.324	8652.019
Stddev	5.648	193.6	13.98	22.424	2.614
%RSD	.0822929	.1631895	.1180158	.4199035	.0302167
#1	6864.379	118824.8	11832.80	5337.395	8653.659
#2	6858.009	118440.5	11840.84	5364.068	8649.004
#3	6869.273	118592.0	11860.00	5319.507	8653.394

Sample Name: Q2879-05 Acquired: 8/19/2025 13:52:21 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**.1731525**	**-.036779**	**.9052695**	**.0080731**	**-.006267**	**224.7387**
Stddev	.0005515	.001698	.0011708	.0025821	.000879	.7234
%RSD	.3184919	4.615966	.1293283	31.98347	14.01780	.3219034
#1	.1732028	-.034860	.9064941	.0067117	-.006169	224.5709
#2	.1736772	-.037394	.9041613	.0064566	-.005442	225.5314
#3	.1725777	-.038084	.9051531	.0110510	-.007191	224.1140

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.219952**	**.0183302**	**.0167002**	**84.07499**	**.3313852**	**.1581553**
Stddev	.002606	.0001380	.0001960	.04094	.0010187	.0003123
%RSD	.2136220	.7529688	1.173874	.0486925	.3074174	.1974978
#1	1.218971	.0184712	.0166099	84.08454	.3319358	.1579689
#2	1.222906	.0181954	.0165657	84.03012	.3320101	.1585159
#3	1.217979	.0183239	.0169252	84.11031	.3302096	.1579811

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4281276**	**334.9722**	**6.787924**	**70.26387**	**.2967956**	**.0151234**
Stddev	.0019045	1.2811	.007573	.24390	.0004988	.0008175
%RSD	.4448356	.3824397	.1115682	.3471137	.1680543	5.405464
#1	.4301586	333.5196	6.793786	70.42623	.2968965	.0144148
#2	.4278423	335.9406	6.790611	69.98341	.2972361	.0149375
#3	.4263818	335.4564	6.779373	70.38197	.2962540	.0160178

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.260583**	**.5688286**	**1.367900**	**41.42614**	**.2384495**	**.0139113**
Stddev	.022233	.0032142	.004190	.17174	.0024007	.0001120
%RSD	.4226380	.5650497	.3063319	.4145701	1.006790	.8050498
#1	5.241787	.5725385	1.370765	41.28919	.2382127	.0140340
#2	5.285125	.5668801	1.369843	41.61882	.2409598	.0138145
#3	5.254838	.5670673	1.363090	41.37040	.2361759	.0138854

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: Q2879-05 Acquired: 8/19/2025 13:52:21 Type: Unk
Method: 6010-200.7 NEW(v115) 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	.0222386	9.918299	5.278217	F 16.77601	9.502773	.3339458
Stddev	.0009061	.011463	.034368	.07867	.079496	.0015457
%RSD	4.074240	.1155729	.6511316	.4689158	.8365523	.4628660
#1	.0229896	9.916986	5.260253	16.68519	9.411109	.3348273
#2	.0212323	9.930361	5.317845	16.81986	9.544382	.3321611
#3	.0224940	9.907548	5.256554	16.82298	9.552827	.3348492

Elem	Sr4077
Units	ppm
Avg	.0629120
Stddev	.0016664
%RSD	2.648846
#1	.0643256
#2	.0633360
#3	.0610746

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7118.646	124361.4	14300.36	5540.937	6887.119
Stddev	8.638	310.1	31.83	15.252	10.549
%RSD	.1213469	.2493362	.2226088	.2752576	.1531755
#1	7123.538	124638.1	14263.78	5536.906	6894.967
#2	7123.727	124026.2	14315.55	5528.105	6891.263
#3	7108.672	124419.8	14321.75	5557.799	6875.127

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: LR-1 Acquired: 8/19/2025 13:56:31 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**-.000452**	**.0182584**	**.0112573**	**-.017133**	**.0166455**	**.1315536**	**-.018496**
Stddev	.001314	.0077551	.0007964	.002989	.0034095	.0322698	.001608
%RSD	290.3866	42.47426	7.074854	17.44869	20.48303	24.52973	8.691572
#1	-.001750	.0200075	.0112037	-.019823	.0179914	.1484516	-.020327
#2	-.000483	.0249896	.0104890	-.017659	.0127685	.1518654	-.017845
#3	.000876	.0097781	.0120792	-.013915	.0191767	.0943439	-.017315

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001502**	**.0004109**	**2123.810**	**.0115873**	**-.000225**	**.0024227**	**.4475689**
Stddev	.0000564	.0000271	21.800	.0005386	.000065	.0006195	.0073281
%RSD	37.57250	6.607864	1.026438	4.648079	28.76583	25.57174	1.637306
#1	.0002128	.0003853	2105.095	.0122087	-.000296	.0031221	.4435386
#2	.0001342	.0004394	2147.746	.0113002	-.000169	.0019429	.4560275
#3	.0001034	.0004080	2118.590	.0112532	-.000210	.0022031	.4431405

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0133138**	**2125.277**	**.0084150**	**-.002252**	**2362.022**	**.0060914**	**.0463353**
Stddev	.0002826	21.519	.0004539	.000551	55.437	.0024398	.0003706
%RSD	2.122289	1.012519	5.394418	24.46209	2.347008	40.05236	.7997835
#1	.0131801	2120.298	.0088083	-.002644	2419.292	.0036977	.0463253
#2	.0131229	2148.849	.0085184	-.002489	2358.155	.0060018	.0467108
#3	.0136384	2106.685	.0079183	-.001622	2308.620	.0085748	.0459698

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**11.87955**	**.0063839**	**.0027030**	**-.016328**	**-.100727**	**-.026675**	**.0138050**
Stddev	.66277	.0002210	.0002713	.000385	.000188	.027724	.0062186
%RSD	5.579122	3.461069	10.03585	2.358740	.1861926	103.9328	45.04612
#1	11.23563	.0066368	.0027613	-.016049	-.100527	-.019942	.0205488
#2	11.84332	.0062285	.0029405	-.016767	-.100755	-.057144	.0125691
#3	12.55969	.0062863	.0024074	-.016167	-.100899	-.002937	.0082971

Sample Name: LR-1 Acquired: 8/19/2025 13:56:31 Type: Unk
Method: 6010-200.7 NEW(v115) 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	.1977143	-.331057	.0597557
Stddev	.0074463	.004175	.0006312
%RSD	3.766206	1.260977	1.056281
#1	.2060838	-.327290	.0604832
#2	.1952361	-.335545	.0593539
#3	.1918231	-.330336	.0594300

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4067.274	73268.62	9964.543	3163.276	4301.788
Stddev	4.243	54.95	86.952	3.678	5.124
%RSD	.1043221	.0749932	.8726154	.1162596	.1191134
#1	4062.468	73321.65	10050.97	3161.974	4298.534
#2	4068.851	73272.27	9965.58	3167.427	4299.136
#3	4070.503	73211.94	9877.08	3160.425	4307.695

Sample Name: Q2879-07 Acquired: 8/19/2025 14:01:09 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**.1592335**	**-.028480**	**.7693754**	**.0067913**	**-.002735**	**209.9858**
Stddev	.0011773	.002284	.0005478	.0014488	.002629	2.4763
%RSD	.7393287	8.020382	.0711965	21.33250	96.13066	1.179251
#1	.1591103	-.026005	.7699879	.0055189	.000008	212.8103
#2	.1604675	-.030506	.7692061	.0083681	-.002980	208.9583
#3	.1581227	-.028930	.7689323	.0064871	-.005233	208.1886

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.126072**	**.0175772**	**.0149063**	**71.89815**	**.3082337**	**.1443312**
Stddev	.005864	.0000283	.0001578	.16920	.0007572	.0005613
%RSD	.5207401	.1607880	1.058942	.2353326	.2456490	.3889279
#1	1.119400	.0175863	.0150687	71.75227	.3073727	.1449660
#2	1.128407	.0175455	.0147535	71.85853	.3085328	.1439001
#3	1.130409	.0175998	.0148966	72.08364	.3087956	.1441276

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4404087**	**303.7380**	**6.286050**	**64.11781**	**.2725598**	**.0127893**
Stddev	.0019274	1.6051	.034374	.17166	.0006250	.0013206
%RSD	.4376343	.5284638	.5468330	.2677333	.2292992	10.32586
#1	.4403307	302.3177	6.256170	63.95413	.2732804	.0115685
#2	.4385215	305.4794	6.278362	64.10282	.2722338	.0141910
#3	.4423739	303.4168	6.323617	64.29648	.2721652	.0126084

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.344013**	**.5127216**	**1.362083**	**33.06669**	**.1780083**	**.0172268**
Stddev	.032714	.0012607	.004162	.13923	.0066401	.0000282
%RSD	.6121622	.2458941	.3055469	.4210645	3.730234	.1637294
#1	5.308864	.5138664	1.365612	32.91421	.1750048	.0171951
#2	5.373572	.5113704	1.357494	33.18706	.1856194	.0172361
#3	5.349603	.5129280	1.363145	33.09881	.1734005	.0172492

Sample Name: Q2879-07 Acquired: 8/19/2025 14:01:09 Type: Unk
Method: 6010-200.7 NEW(v115) 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	.0258443	9.660515	5.592956	F 15.53938	7.066284	.2918516
Stddev	.0004331	.027822	.029840	.01411	.017563	.0017521
%RSD	1.675719	.2880019	.5335365	.0908331	.2485508	.6003395
#1	.0253458	9.631170	5.601589	15.52334	7.046765	.2909492
#2	.0261275	9.663861	5.617528	15.54989	7.071278	.2907347
#3	.0260596	9.686513	5.559751	15.54493	7.080809	.2938710

Elem	Sr4077
Units	ppm
Avg	.0166446
Stddev	.0018163
%RSD	10.91252
#1	.0165454
#2	.0148798
#3	.0185084

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7102.996	122040.5	13627.58	5482.490	6920.652
Stddev	12.133	297.1	58.20	20.285	8.954
%RSD	.1708153	.2434067	.4270544	.3700003	.1293742
#1	7116.601	122249.9	13664.54	5484.515	6927.497
#2	7093.297	121700.5	13657.69	5501.686	6910.520
#3	7099.089	122171.1	13560.49	5461.268	6923.940

Sample Name: CCV02 Acquired: 8/19/2025 14:05:18 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**4.979431**	**5.059766**	**4.846867**	**5.021075**	**5.006333**	**9.756002**	**9.801158**
Stddev	.004466	.101309	.004950	.010390	.010371	.023581	.061967
%RSD	.0896841	2.002255	.1021317	.2069373	.2071525	.2417075	.6322398
#1	4.975734	4.942852	4.850064	5.009523	4.999755	9.775660	9.872034
#2	4.978165	5.114770	4.841165	5.024044	5.000956	9.762489	9.774226
#3	4.984393	5.121676	4.849372	5.029657	5.018288	9.729856	9.757215

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2388201**	**2.433991**	**24.36986**	**.9823375**	**2.435647**	**1.237042**	**5.081652**
Stddev	.0005835	.001092	.06370	.0018311	.001728	.000330	.030771
%RSD	.2443233	.0448584	.2614070	.1863998	.0709607	.0267114	.6055305
#1	.2390513	2.434912	24.41481	.9844249	2.436619	1.236961	5.117166
#2	.2392526	2.434275	24.39782	.9810025	2.433652	1.236760	5.062918
#3	.2381565	2.432785	24.29696	.9815850	2.436671	1.237405	5.064874

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.441575**	**24.19129**	**2.437594**	**1.240496**	**24.96137**	**2.476060**	**2.498449**
Stddev	.007558	.02616	.001004	.000383	.08788	.003906	.000575
%RSD	.3095393	.1081217	.0411864	.0309106	.3520574	.1577441	.0230302
#1	2.450013	24.21273	2.438664	1.240362	25.06065	2.475533	2.497833
#2	2.439283	24.19899	2.436672	1.240929	24.89358	2.480202	2.498972
#3	2.435428	24.16214	2.437445	1.240198	24.92986	2.472444	2.498541

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.75398**	**4.798413**	**4.993136**	**4.888937**	**4.911785**	**5.034442**	**4.936825**
Stddev	.03678	.011124	.003156	.006407	.014189	.014973	.022375
%RSD	.1485864	.2318328	.0632160	.1310430	.2888760	.2974139	.4532275
#1	24.78053	4.793288	4.989821	4.882267	4.923027	5.050584	4.912174
#2	24.71200	4.811176	4.993482	4.895044	4.916486	5.021006	4.955849
#3	24.76942	4.790775	4.996105	4.889499	4.895842	5.031735	4.942453

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: CCV02 Acquired: 8/19/2025 14:05:18 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**4.873906**	**4.662297**	**4.964873**
Stddev	.017016	.009605	.035090
%RSD	.3491181	.2060207	.7067723
#1	4.854259	4.670174	4.924456
#2	4.883548	4.665120	4.987573
#3	4.883912	4.651597	4.982590

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6388.120**	**109021.1**	**11341.89**	**4938.349**	**7445.359**
Stddev	6.301	57.7	12.21	12.723	4.049
%RSD	.0986381	.0529089	.1076663	.2576455	.0543780
#1	6394.275	108979.8	11334.65	4923.718	7449.669
#2	6381.682	109087.0	11335.02	4946.826	7441.636
#3	6388.403	108996.5	11355.98	4944.502	7444.773

Sample Name: CCB02 Acquired: 8/19/2025 14:09:29 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**.0007170**	**.0018027**	**.0003195**	**.0018469**	**-.000643**	**.0078584**	**-.005195**
Stddev	.0011036	.0007427	.0010649	.0006239	.001033	.0068133	.000830
%RSD	153.9101	41.19929	333.3366	33.78408	160.5891	86.70170	15.96899
#1	.0016359	.0009481	-.000263	.0014800	.000322	.0016705	-.006081
#2	.0010222	.0021679	-.000327	.0025673	-.000518	.0067446	-.004437
#3	-.000507	.0022920	.001549	.0014933	-.001733	.0151599	-.005067

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000022**	**.0001300**	**.0006379**	**-.000191**	**.0002326**	**.0000121**	**.0024591**
Stddev	.000050	.0000238	.0032829	.000096	.0001355	.0003969	.0027415
%RSD	225.5513	18.31470	514.6822	50.25944	58.25440	3280.684	111.4823
#1	.000015	.0001034	.0013092	-.000081	.0000796	.0002939	-.000278
#2	-.000002	.0001493	-.002929	-.000260	.0002810	-.000442	.005205
#3	-.000079	.0001373	.003533	-.000232	.0003373	.000184	.002451

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000204**	**.0028409**	**-.000070**	**.0000579**	**.3379259**	**.0008720**	**-.000630**
Stddev	.000311	.0063404	.000174	.0003608	.0139385	.0010520	.000128
%RSD	152.1908	223.1857	249.5468	623.4074	4.124715	120.6301	20.36493
#1	-.000139	.0019080	-.000264	-.000027	.3342635	.0019921	-.000482
#2	.000069	.0095960	.000071	-.000253	.3533299	.0007191	-.000692
#3	-.000542	-.002981	-.000016	.000453	.3261842	-.000095	-.000715

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0927879**	**.0004955**	**.0007257**	**-.002265**	**.0007490**	**.0085746**	**.0000795**
Stddev	.0171973	.0001916	.0002248	.000061	.0006869	.0093278	.0005964
%RSD	18.53394	38.67775	30.97414	2.681590	91.71539	108.7843	749.9079
#1	.0847782	.0005503	.0006487	-.002204	.0015367	-.002195	-.000188
#2	.1125289	.0002824	.0009788	-.002264	.0002742	.014101	-.000336
#3	.0810564	.0006537	.0005495	-.002326	.0004361	.013818	.000763

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: CCB02 Acquired: 8/19/2025 14:09:29 Type: Unk
Method: 6010-200.7 NEW(v115) 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	-.001856	-.000699	.0002656
Stddev	.001518	.001984	.0000909
%RSD	81.78636	283.9162	34.20934
#1	-.002047	-.002990	.0002704
#2	-.003270	.000467	.0001724
#3	-.000252	.000427	.0003540

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6630.056	114669.3	11511.13	5119.662	8441.774
Stddev	.857	97.9	73.61	15.153	11.796
%RSD	.0129278	.0853431	.6394472	.2959776	.1397342
#1	6629.129	114729.8	11595.34	5121.623	8454.949
#2	6630.820	114556.4	11479.01	5103.624	8438.181
#3	6630.218	114721.8	11459.04	5133.739	8432.192

Sample Name: Q2879-09 Acquired: 8/19/2025 14:13:27 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**.2017557**	**-.046897**	**.8699612**	**.0107306**	**-.006913**	**242.7784**
Stddev	.0022686	.006753	.0024047	.0040318	.001357	2.2616
%RSD	1.124438	14.40016	.2764192	37.57281	19.62567	.9315305
#1	.2032536	-.053935	.8678279	.0110093	-.005597	245.1240
#2	.1991456	-.040470	.8694885	.0065667	-.008307	240.6115
#3	.2028678	-.046285	.8725672	.0146158	-.006836	242.5998

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.329827**	**.0213055**	**.0198688**	**80.67212**	**.4990480**	**.1888979**
Stddev	.004535	.0001177	.0003220	.19230	.0014625	.0006134
%RSD	.3410291	.5525521	1.620531	.2383700	.2930645	.3247071
#1	1.334789	.0212865	.0201001	80.88996	.4975387	.1888556
#2	1.328797	.0211984	.0195011	80.60047	.4991465	.1883068
#3	1.325896	.0214315	.0200053	80.52593	.5004587	.1895314

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4704609**	**414.7848**	**6.896015**	**81.90982**	**.3558636**	**.0157868**
Stddev	.0029355	2.0587	.023176	.08211	.0001682	.0009583
%RSD	.6239559	.4963380	.3360824	.1002445	.0472735	6.070502
#1	.4717224	413.9142	6.918637	81.97022	.3557784	.0156346
#2	.4671055	417.1359	6.897086	81.94292	.3557549	.0168122
#3	.4725547	413.3045	6.872322	81.81633	.3560574	.0149137

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.748632**	**.6280975**	**1.449470**	**42.63200**	**.2750348**	**.0168645**
Stddev	.007722	.0011911	.002716	.10884	.0052427	.0000064
%RSD	.1626118	.1896391	.1873464	.2553002	1.906198	.0380308
#1	4.756510	.6294727	1.448761	42.62099	.2708924	.0168719
#2	4.748310	.6274302	1.447180	42.74593	.2809291	.0168606
#3	4.741076	.6273896	1.452470	42.52909	.2732829	.0168609

Sample Name: Q2879-09 Acquired: 8/19/2025 14:13:27 Type: Unk
Method: 6010-200.7 NEW(v115) 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	.0333636	F 10.55735	4.398472	F 16.87600	7.757918	.3675788
Stddev	.0010701	.01845	.034207	.06432	.030894	.0006926
%RSD	3.207459	.1747714	.7776979	.3811449	.3982213	.1884074
#1	.0321577	10.57626	4.433967	16.94499	7.786328	.3667861
#2	.0337330	10.55641	4.395732	16.81767	7.725029	.3678835
#3	.0342001	10.53939	4.365718	16.86534	7.762396	.3680667

Elem	Sr4077
Units	ppm
Avg	-.055738
Stddev	.002160
%RSD	3.874686
#1	-.053836
#2	-.058086
#3	-.055292

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7170.770	123338.8	14307.98	5534.295	6834.342
Stddev	6.633	191.2	54.79	9.162	9.455
%RSD	.0925070	.1550184	.3829059	.1655449	.1383408
#1	7165.679	123432.8	14248.06	5543.030	6836.933
#2	7178.272	123118.8	14355.51	5524.759	6842.231
#3	7168.361	123464.8	14320.37	5535.095	6823.862

Sample Name: Q2879-11 Acquired: 8/19/2025 14:17:35 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**.1820822**	**-.035097**	**.9790978**	**.0084237**	**-.002653**	**238.7479**
Stddev	.0031230	.002758	.0027055	.0021548	.002121	2.7281
%RSD	1.715181	7.857547	.2763282	25.58066	79.93476	1.142649
#1	.1785681	-.038200	.9809967	.0062835	-.000513	241.5563
#2	.1845404	-.034168	.9760000	.0105928	-.004755	236.1080
#3	.1831381	-.032924	.9802967	.0083947	-.002692	238.5796

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.247139**	**.0195619**	**.0187616**	**85.47890**	**.3522006**	**.1635648**
Stddev	.003871	.0001316	.0000928	.04043	.0011195	.0002638
%RSD	.3104133	.6725657	.4946310	.0472956	.3178481	.1612657
#1	1.250453	.0196573	.0188030	85.47936	.3527707	.1637962
#2	1.248079	.0194118	.0186553	85.43825	.3509109	.1632776
#3	1.242884	.0196167	.0188265	85.51910	.3529203	.1636205

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4811213**	**335.9762**	**6.778494**	**72.30640**	**.3130409**	**.0104043**
Stddev	.0008669	.7329	.011858	.31102	.0006122	.0004375
%RSD	.1801859	.2181365	.1749422	.4301425	.1955785	4.205412
#1	.4820691	336.6576	6.791898	72.04519	.3137438	.0099157
#2	.4803684	336.0702	6.774217	72.22355	.3126242	.0107599
#3	.4809264	335.2008	6.769368	72.65045	.3127547	.0105373

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.271200**	**.5912121**	**1.483725**	**39.51985**	**.2104765**	**.0132125**
Stddev	.010236	.0015417	.005786	.17625	.0021590	.0001649
%RSD	.1941841	.2607738	.3899436	.4459833	1.025784	1.248206
#1	5.281142	.5906098	1.487797	39.67502	.2083411	.0130225
#2	5.260694	.5929641	1.486275	39.55630	.2104301	.0133194
#3	5.271765	.5900625	1.477102	39.32822	.2126584	.0132954

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: Q2879-11 Acquired: 8/19/2025 14:17:35 Type: Unk
Method: 6010-200.7 NEW(v115) 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	.0303187	F 10.68222	4.861572	F 16.72136	8.565628	.3154777
Stddev	.0010134	.01756	.036610	.09929	.034677	.0002886
%RSD	3.342394	.1644202	.7530581	.5937853	.4048388	.0914697
#1	.0302279	10.69654	4.848893	16.81264	8.575005	.3152348
#2	.0313744	10.68750	4.902837	16.73582	8.594653	.3154017
#3	.0293538	10.66263	4.832987	16.61564	8.527227	.3157967

Elem	Sr4077
Units	ppm
Avg	.0324474
Stddev	.0006341
%RSD	1.954401
#1	.0328326
#2	.0327940
#3	.0317154

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7220.516	123437.1	14042.29	5570.090	6852.404
Stddev	6.751	106.5	21.89	29.892	4.151
%RSD	.0934907	.0862469	.1559190	.5366519	.0605724
#1	7215.728	123528.1	14066.29	5542.532	6847.636
#2	7217.582	123320.0	14037.18	5565.871	6854.373
#3	7228.237	123463.1	14023.41	5601.867	6855.204

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: Q2879-13 Acquired: 8/19/2025 14:21:44 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**.2141158**	**-.044385**	**1.178642**	**.0064542**	**-.005085**	**283.0721**
Stddev	.0026367	.002225	.002762	.0042668	.001649	2.3364
%RSD	1.231427	5.013551	.2343588	66.10877	32.42667	.8253790
#1	.2141088	-.046105	1.178106	.0022801	-.003476	285.7694
#2	.2114826	-.041872	1.181633	.0062745	-.005007	281.6742
#3	.2167559	-.045177	1.176187	.0108080	-.006771	281.7728

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.466926**	**.0231124**	**.0236995**	**94.95795**	**.4144403**	**.1939332**
Stddev	.007029	.0000878	.0004622	.08950	.0020976	.0007755
%RSD	.4791485	.3798791	1.950464	.0942531	.5061185	.3999006
#1	1.461862	.0230344	.0241094	94.85630	.4129177	.1944471
#2	1.463964	.0232075	.0237907	94.99260	.4135703	.1943114
#3	1.474950	.0230954	.0231984	95.02495	.4168328	.1930411

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5368759**	**421.4777**	**7.741477**	**83.65961**	**.3948999**	**.0156224**
Stddev	.0047315	4.7958	.023217	.08401	.0015027	.0013343
%RSD	.8813096	1.137844	.2998995	.1004135	.3805172	8.540884
#1	.5390075	418.2382	7.721820	83.57536	.3957274	.0150426
#2	.5401667	419.2080	7.735520	83.74337	.3958069	.0146761
#3	.5314536	426.9870	7.767092	83.66010	.3931654	.0171485

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.924799**	**.6533309**	**1.645200**	**48.19315**	**^ *****	**.0187874**
Stddev	.042983	.0029911	.005775	.27528	-----	.0002798
%RSD	.6207044	.4578251	.3510110	.5712117	-----	1.489287
#1	6.884453	.6514556	1.639810	47.89935	.2641107	.0185629
#2	6.919941	.6567803	1.644495	48.23496	^ -----	.0191009
#3	6.970005	.6517566	1.651295	48.44513	^ -----	.0186985

Sample Name: Q2879-13 Acquired: 8/19/2025 14:21:44 Type: Unk
Method: 6010-200.7 NEW(v115) 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	.0433902	F 11.94302	4.817060	F 19.62509	9.780901	.3819810
Stddev	.0005620	.03261	.027508	.05505	.029129	.0008596
%RSD	1.295128	.2730276	.5710543	.2804866	.2978140	.2250381
#1	.0431596	11.90886	4.847588	19.66910	9.789867	.3810860
#2	.0429802	11.94639	4.809394	19.64280	9.804493	.3820570
#3	.0440307	11.97381	4.794198	19.56336	9.748343	.3828001

Elem	Sr4077
Units	ppm
Avg	.0088220
Stddev	.0028667
%RSD	32.49491
#1	.0107062
#2	.0102369
#3	.0055229

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7408.240	126940.0	14551.16	5717.167	6735.041
Stddev	16.165	439.0	55.59	32.551	19.621
%RSD	.2181994	.3458185	.3820387	.5693539	.2913341
#1	7408.378	127199.1	14551.50	5718.813	6727.323
#2	7392.007	127187.7	14606.59	5748.864	6720.452
#3	7424.335	126433.1	14495.41	5683.824	6757.348

Sample Name: Q2879-15 Acquired: 8/19/2025 14:26:00 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**.1610589**	**-.039222**	**.6488350**	**.0090304**	**-.003722**	**217.9022**
Stddev	.0013984	.001959	.0007587	.0036803	.003596	.1505
%RSD	.8682758	4.994833	.1169288	40.75428	96.59433	.0690479
#1	.1626498	-.041209	.6492681	.0082733	-.001374	217.9996
#2	.1600239	-.037292	.6479589	.0057875	-.001931	217.9781
#3	.1605031	-.039167	.6492778	.0130303	-.007862	217.7289

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9533117**	**.0182906**	**.0153764**	**63.07028**	**.3450805**	**.1467828**
Stddev	.0058873	.0000789	.0002787	.13488	.0004000	.0002431
%RSD	.6175643	.4312455	1.812376	.2138584	.1159135	.1656037
#1	.9596681	.0183536	.0151989	63.22114	.3454437	.1466933
#2	.9480460	.0182021	.0156976	63.02836	.3451460	.1465972
#3	.9522209	.0183159	.0152328	62.96133	.3446518	.1470579

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3698447**	**320.4526**	**5.831014**	**77.45208**	**.2953272**	**.0099079**
Stddev	.0019774	2.2373	.034444	.22936	.0006870	.0008053
%RSD	.5346586	.6981811	.5906996	.2961358	.2326375	8.128241
#1	.3676063	321.8158	5.867436	77.68432	.2957733	.0103298
#2	.3713544	317.8705	5.798966	77.44620	.2945360	.0089793
#3	.3705733	321.6715	5.826639	77.22571	.2956723	.0104147

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.268299**	**.5034254**	**1.292762**	**35.19003**	**.1758892**	**.0116962**
Stddev	.013734	.0043735	.004919	.19915	.0098831	.0001435
%RSD	.4202214	.8687543	.3804891	.5659229	5.618918	1.227365
#1	3.274653	.5027427	1.297320	35.27223	.1837080	.0115814
#2	3.252538	.5081001	1.293420	34.96293	.1647809	.0116499
#3	3.277705	.4994333	1.287548	35.33491	.1791788	.0118571

Sample Name: Q2879-15 Acquired: 8/19/2025 14:26:00 Type: Unk
Method: 6010-200.7 NEW(v115) 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	.0164358	F 10.73304	4.872757	F 12.39917	5.824212	.3345785
Stddev	.0007472	.02861	.049855	.03371	.017610	.0017614
%RSD	4.545890	.2665690	1.023133	.2718904	.3023562	.5264576
#1	.0172515	10.76608	4.817064	12.42710	5.839132	.3362816
#2	.0157846	10.71696	4.887985	12.40870	5.828717	.3327641
#3	.0162713	10.71609	4.913222	12.36172	5.804788	.3346899

Elem	Sr4077
Units	ppm
Avg	-.031937
Stddev	.000981
%RSD	3.072598
#1	-.031853
#2	-.031000
#3	-.032957

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7113.931	122043.8	13676.87	5471.610	6946.425
Stddev	8.019	236.9	64.53	39.123	7.318
%RSD	.1127184	.1940728	.4717843	.7150156	.1053507
#1	7115.179	121777.8	13626.89	5427.055	6947.937
#2	7121.253	122232.0	13654.00	5487.427	6952.870
#3	7105.362	122121.4	13749.72	5500.347	6938.470

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: Q2879-17 Acquired: 8/19/2025 14:30:08 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**.1695534**	**-.029566**	**.7875285**	**.0071829**	**-.004400**	**212.8064**
Stddev	.0018755	.003510	.0006147	.0048154	.001374	2.6602
%RSD	1.106157	11.87045	.0780585	67.04034	31.22131	1.250071
#1	.1690935	-.031893	.7869908	.0023810	-.005957	213.3779
#2	.1679506	-.031277	.7873960	.0071559	-.003360	209.9069
#3	.1716161	-.025529	.7881987	.0120118	-.003883	215.1344

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.099261**	**.0173059**	**.0147898**	**81.38770**	**.3115173**	**.1537531**
Stddev	.002731	.0001025	.0001382	.08115	.0004668	.0005848
%RSD	.2484809	.5922608	.9345228	.0997120	.1498597	.3803270
#1	1.100109	.0173935	.0147813	81.29716	.3118622	.1530959
#2	1.101468	.0173312	.0146559	81.45390	.3117036	.1542158
#3	1.096206	.0171932	.0149320	81.41204	.3109861	.1539477

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3945524**	**309.9567**	**6.198302**	**67.56421**	**.2845798**	**.0123146**
Stddev	.0012372	1.1813	.015691	.16674	.0007876	.0004017
%RSD	.3135668	.3811035	.2531481	.2467832	.2767521	3.261838
#1	.3940770	309.6807	6.202394	67.37210	.2837269	.0127140
#2	.3936235	311.2515	6.211541	67.67139	.2847332	.0123192
#3	.3959568	308.9379	6.180970	67.64912	.2852795	.0119107

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.037741**	**.5107813**	**1.314404**	**35.88759**	**.1988028**	**.0136183**
Stddev	.003499	.0012760	.001298	.06589	.0043933	.0001727
%RSD	.0866523	.2498134	.0987213	.1835985	2.209868	1.268123
#1	4.039763	.5114676	1.315523	35.86026	.2026257	.0135580
#2	4.033701	.5093090	1.312981	35.96275	.1997792	.0138131
#3	4.039760	.5115673	1.314707	35.83976	.1940034	.0134839

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: Q2879-17 Acquired: 8/19/2025 14:30:08 Type: Unk
Method: 6010-200.7 NEW(v115) 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	.0204280	9.403226	5.218052	F 14.80225	7.722938	.2993264
Stddev	.0012572	.012377	.008431	.08586	.027101	.0012358
%RSD	6.154064	.1316234	.1615698	.5800328	.3509209	.4128779
#1	.0216901	9.404685	5.216194	14.71695	7.708882	.2979094
#2	.0191759	9.414809	5.210706	14.88866	7.754180	.2998883
#3	.0204181	9.390185	5.227257	14.80115	7.705753	.3001814

Elem	Sr4077
Units	ppm
Avg	.0461755
Stddev	.0007684
%RSD	1.664057
#1	.0464934
#2	.0452992
#3	.0467339

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7092.267	122630.2	13800.69	5505.131	6955.988
Stddev	11.850	170.8	22.71	5.930	8.002
%RSD	.1670895	.1392478	.1645918	.1077149	.1150310
#1	7087.171	122552.6	13776.53	5501.172	6955.847
#2	7105.813	122512.0	13821.61	5511.949	6964.060
#3	7083.817	122826.0	13803.93	5502.272	6948.058

Sample Name: Q2884-01 Acquired: 8/19/2025 14:34:19 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**.0848100**	**-.032248**	**1.044092**	**-.001578**	**-.009642**	**137.1015**	**.7152750**
Stddev	.0010842	.002103	.002952	.002891	.001399	.8552	.0025454
%RSD	1.278387	6.521772	.2827731	183.2453	14.50938	.6237665	.3558623
#1	.0856886	-.031753	1.047458	-.002876	-.008439	136.1488	.7150840
#2	.0851430	-.034554	1.041941	.001735	-.009312	137.8028	.7179105
#3	.0835983	-.030436	1.042877	-.003593	-.011177	137.3530	.7128305

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0139207**	**.0125424**	**31.92071**	**.2544263**	**.1370144**	**.3647121**	**279.1851**
Stddev	.0001084	.0002809	.19974	.0045281	.0000890	.0043223	4.6890
%RSD	.7784087	2.239810	.6257361	1.779716	.0649441	1.185133	1.679539
#1	.0138015	.0124880	31.69900	.2551718	.1370974	.3634370	281.4951
#2	.0139471	.0122926	32.08659	.2585352	.1369205	.3611708	282.2709
#3	.0140133	.0128465	31.97654	.2495717	.1370254	.3695286	273.7892

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.872038**	**47.02539**	**.2725044**	**.0086930**	**4.352218**	**.3233758**	**1.414231**
Stddev	.021138	.45309	.0006753	.0004026	.103059	.0024424	.028415
%RSD	.4338716	.9635110	.2478241	4.631594	2.367963	.7552822	2.009228
#1	4.849497	46.51310	.2729193	.0088520	4.406721	.3206283	1.419647
#2	4.891418	47.37354	.2717251	.0082352	4.416581	.3253006	1.439548
#3	4.875199	47.18954	.2728687	.0089919	4.233352	.3241986	1.383497

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**11.41118**	**.1384698**	**.0052584**	**.0162759**	**3.364055**	**4.606899**	**8.849602**
Stddev	.21313	.0204687	.0001312	.0002708	.021034	.081204	.002499
%RSD	1.867726	14.78207	2.495384	1.664052	.6252701	1.762663	.0282342
#1	11.53618	.1582689	.0052171	.0159942	3.341949	4.623387	8.851942
#2	11.53227	.1397491	.0054053	.0165344	3.383822	4.678593	8.846971
#3	11.16509	.1173915	.0051528	.0162990	3.366394	4.518716	8.849894

Sample Name: Q2884-01 Acquired: 8/19/2025 14:34:19 Type: Unk
Method: 6010-200.7 NEW(v115) 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	2.878455	.2034224	-.080064
Stddev	.023536	.0014664	.004045
%RSD	.8176531	.7208665	5.052627
#1	2.891200	.2025951	-.082682
#2	2.892868	.2051155	-.082105
#3	2.851295	.2025566	-.075405

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7546.260	125970.0	14228.04	5742.067	7236.919
Stddev	20.917	1879.6	176.98	105.032	16.579
%RSD	.2771900	1.492112	1.243908	1.829162	.2290848
#1	7525.614	125723.6	14432.37	5698.577	7220.565
#2	7567.439	124225.8	14122.53	5665.765	7253.714
#3	7545.728	127960.7	14129.23	5861.859	7236.480

Sample Name: Q2884-03 Acquired: 8/19/2025 14:38:21 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**.2417594**	**-.007544**	**.0582046**	**-.000629**	**.0023499**	**95.85079**	**.3717990**
Stddev	.0016927	.001544	.0017319	.002552	.0011887	.12629	.0023375
%RSD	.7001464	20.46121	2.975507	405.6150	50.58606	.1317539	.6287009
#1	.2404266	-.007348	.0601960	-.003057	.0017083	95.72092	.3744911
#2	.2411878	-.009177	.0573679	-.000863	.0037216	95.97317	.3706209
#3	.2436639	-.006108	.0570500	.002032	.0016198	95.85829	.3702849

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0083182**	**.0041159**	**40.65467**	**.0630721**	**.0206273**	**.1881981**	**91.07471**
Stddev	.0000646	.0000730	.04967	.0003934	.0000803	.0001601	.41135
%RSD	.7770576	1.774054	.1221738	.6236870	.3891497	.0850733	.4516660
#1	.0083889	.0041745	40.69239	.0632508	.0205638	.1881830	91.20122
#2	.0083035	.0041390	40.67324	.0626211	.0207175	.1883652	90.61496
#3	.0082622	.0040341	40.59840	.0633444	.0206005	.1880460	91.40795

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2429980**	**19.65471**	**.0889539**	**.0028537**	**16.42001**	**.1958588**	**2.367080**
Stddev	.0017237	.05451	.0001686	.0005694	.10914	.0013720	.002614
%RSD	.7093554	.2773169	.1895440	19.95355	.6646709	.7004824	.1104260
#1	.2449478	19.59242	.0887593	.0025744	16.47787	.1966805	2.364125
#2	.2416766	19.69366	.0890566	.0035089	16.29413	.1942750	2.368024
#3	.2423697	19.67803	.0890458	.0024779	16.48804	.1966209	2.369091

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**19.30824**	**.0640181**	**.0128665**	**.0121263**	**.7103025**	**4.387760**	**4.250489**
Stddev	.04789	.0021363	.0000553	.0004928	.0006151	.026131	.008785
%RSD	.2480069	3.337032	.4301746	4.063901	.0866017	.5955346	.2066911
#1	19.28189	.0642660	.0128026	.0123394	.7095953	4.390331	4.240372
#2	19.27931	.0617686	.0128977	.0115628	.7105983	4.360439	4.256194
#3	19.36351	.0660195	.0128992	.0124766	.7107137	4.412510	4.254902

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: Q2884-03 Acquired: 8/19/2025 14:38:21 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**6.904054**	**.0181978**	**.4427138**
Stddev	.035251	.0004448	.0026627
%RSD	.5105802	2.443958	.6014459
#1	6.865913	.0177325	.4457859
#2	6.910815	.0182423	.4412847
#3	6.935435	.0186186	.4410708

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**7523.563**	**129384.0**	**14105.57**	**5795.943**	**7417.756**
Stddev	12.562	82.2	92.60	26.135	9.605
%RSD	.1669686	.0635158	.6564530	.4509256	.1294927
#1	7521.074	129291.6	14035.38	5794.958	7420.769
#2	7537.184	129411.3	14070.82	5822.557	7425.494
#3	7512.432	129449.0	14210.52	5770.314	7407.006

Sample Name: Q2888-01 Acquired: 8/19/2025 14:42:23 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**.1159856**	**-.043311**	**1.134276**	**.0015099**	**-.010215**	**184.4555**	**1.355458**
Stddev	.0026509	.003102	.002360	.0033584	.002350	.0215	.003947
%RSD	2.285564	7.162873	.2080345	222.4258	23.00578	.0116787	.2912016
#1	.1189858	-.046780	1.136989	.0039981	-.012885	184.4400	1.350914
#2	.1150114	-.042351	1.132705	.0028417	-.009295	184.4463	1.357425
#3	.1139596	-.040803	1.133133	-.002310	-.008463	184.4801	1.358036

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0205989**	**.0181295**	**36.93271**	**.3173172**	**.1878094**	**.4443375**	**377.9893**
Stddev	.0001931	.0002984	.06362	.0011402	.0003714	.0018025	1.8295
%RSD	.9374567	1.646041	.1722586	.3593190	.1977733	.4056516	.4839965
#1	.0208060	.0184600	36.89189	.3167310	.1881587	.4459070	376.0610
#2	.0205669	.0178798	37.00601	.3165894	.1878503	.4447365	378.2064
#3	.0204238	.0180487	36.90022	.3186313	.1874192	.4423689	379.7006

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.881669**	**59.61764**	**.4449724**	**.0120488**	**3.029747**	**.4232585**	**1.562556**
Stddev	.016224	.03282	.0008111	.0008619	.029230	.0034083	.004365
%RSD	.2058433	.0550588	.1822689	7.153696	.9647695	.8052558	.2793658
#1	7.863341	59.58134	.4454149	.0112423	2.997176	.4196338	1.562292
#2	7.894191	59.64523	.4454660	.0119470	3.038368	.4237434	1.567047
#3	7.887476	59.62636	.4440363	.0129571	3.053697	.4263985	1.558328

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**20.00363**	**.1940558**	**.0064339**	**.0404173**	**4.054680**	**3.937075**	**6.444862**
Stddev	.10386	.0020144	.0002333	.0003815	.010747	.013064	.038374
%RSD	.5192220	1.038045	3.625828	.9440107	.2650442	.3318095	.5954260
#1	19.90993	.1918717	.0061697	.0408259	4.044937	3.926670	6.480605
#2	19.98565	.1958407	.0066115	.0400703	4.066207	3.932819	6.404310
#3	20.11531	.1944550	.0065204	.0403556	4.052897	3.951736	6.449671

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: Q2888-01 Acquired: 8/19/2025 14:42:23 Type: Unk
Method: 6010-200.7 NEW(v115) 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	1.606058	.4168762	-.089873
Stddev	.011869	.0011392	.001164
%RSD	.7389845	.2732799	1.295053
#1	1.612725	.4155876	-.088856
#2	1.592355	.4177496	-.089621
#3	1.613094	.4172913	-.091143

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7509.213	128761.8	14297.36	5819.374	7044.351
Stddev	2.478	449.8	21.46	2.595	8.531
%RSD	.0330025	.3493542	.1501122	.0445934	.1211093
#1	7507.069	129004.3	14286.86	5817.179	7036.507
#2	7511.926	129038.4	14322.05	5818.706	7053.434
#3	7508.643	128242.8	14283.18	5822.238	7043.113

Sample Name: Q2889-01 Acquired: 8/19/2025 14:46:25 Type: Unk
Method: 6010-200.7 NEW(v115) 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	.0727135	-.031735	.2334097	.0018175	-.010524	188.5962	.7754554
Stddev	.0017138	.002968	.0006188	.0022287	.000508	1.8486	.0096931
%RSD	2.356922	9.351840	.2651113	122.6248	4.831233	.9801925	1.249994
#1	.0729542	-.035099	.2335067	.0014629	-.010573	190.7297	.7865848
#2	.0708920	-.029486	.2327481	-.000213	-.011006	187.4704	.7688617
#3	.0742942	-.030619	.2339742	.004202	-.009992	187.5885	.7709196

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0163224	.0093656	24.40078	.2502100	.1510921	.2581850	313.9566
Stddev	.0000376	.0002068	.25468	.0010529	.0004143	.0024037	1.9230
%RSD	.2305922	2.208126	1.043746	.4208237	.2742057	.9310053	.6125047
#1	.0163485	.0091326	24.69482	.2512642	.1506595	.2556792	316.1752
#2	.0163395	.0095276	24.25808	.2491583	.1511314	.2584041	312.9273
#3	.0162792	.0094364	24.24944	.2502075	.1514853	.2604717	312.7674

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.336321	51.26564	.2591709	.0097217	3.652022	.4588011	.6430867
Stddev	.070006	.58724	.0003094	.0003495	.024600	.0047206	.0026964
%RSD	1.311874	1.145490	.1193740	3.595447	.6735918	1.028906	.4192843
#1	5.417069	51.94219	.2590137	.0100805	3.674372	.4641808	.6400159
#2	5.299209	50.96692	.2589716	.0097024	3.625664	.4568719	.6450672
#3	5.292685	50.88781	.2595273	.0093822	3.656028	.4553506	.6441769

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	13.49010	.1538596	.0062298	.0014174	4.104974	4.968189	5.384731
Stddev	.04609	.0011738	.0003166	.0011208	.042130	.034835	.028732
%RSD	.3416771	.7628918	5.081875	79.07130	1.026314	.7011696	.5335859
#1	13.51028	.1528777	.0060634	.0025896	4.153217	4.985448	5.384854
#2	13.52266	.1535414	.0065949	.0003563	4.075431	4.928094	5.413402
#3	13.43736	.1551597	.0060312	.0013064	4.086273	4.991026	5.355938

Sample Name: Q2889-01 Acquired: 8/19/2025 14:46:25 Type: Unk
Method: 6010-200.7 NEW(v115) 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	3.100039	.2551643	-.169804
Stddev	.018984	.0033083	.000334
%RSD	.6123655	1.296544	.1968363
#1	3.099222	.2587937	-.170131
#2	3.119418	.2523173	-.169819
#3	3.081477	.2543820	-.169463

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7012.666	120041.2	13168.78	5394.086	7182.297
Stddev	2.783	418.1	131.48	14.105	8.440
%RSD	.0396796	.3483287	.9983914	.2614958	.1175091
#1	7014.527	119695.5	13022.30	5391.303	7186.156
#2	7009.468	120505.9	13276.58	5409.376	7172.618
#3	7014.005	119922.2	13207.45	5381.580	7188.118

Sample Name: Q2889-01DUP Acquired: 8/19/2025 14:50:26 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**.0607700**	**-.026992**	**.2219714**	**.0025745**	**-.006370**	**146.3989**	**.6292119**
Stddev	.0011928	.003377	.0008241	.0033851	.001477	.1100	.0013152
%RSD	1.962783	12.51206	.3712667	131.4865	23.18697	.0751672	.2090213
#1	.0618637	-.023181	.2214335	.0004832	-.005542	146.2930	.6290771
#2	.0609480	-.028183	.2215605	.0007603	-.008075	146.3908	.6279693
#3	.0594982	-.029613	.2229202	.0064800	-.005493	146.5127	.6305893

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0128892**	**.0074283**	**25.07139**	**.2131125**	**.1176441**	**.3502069**	**249.7475**
Stddev	.0001319	.0000762	.02524	.0005933	.0000617	.0018498	.4644
%RSD	1.023611	1.025676	.1006711	.2783993	.0524916	.5282080	.1859466
#1	.0130415	.0074324	25.09597	.2126934	.1175788	.3480757	249.2838
#2	.0128131	.0075024	25.04554	.2137913	.1176518	.3513971	249.7461
#3	.0128130	.0073502	25.07267	.2128527	.1177016	.3511477	250.2125

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.651881**	**45.45435**	**.2193625**	**.0073548**	**3.318318**	**.4055862**	**.5632153**
Stddev	.016440	.08811	.0002905	.0008216	.017917	.0032139	.0014978
%RSD	.3533983	.1938499	.1324293	11.17114	.5399443	.7924134	.2659373
#1	4.667830	45.54534	.2190615	.0065343	3.298273	.4018808	.5634310
#2	4.634991	45.44829	.2193849	.0073528	3.323907	.4076160	.5616214
#3	4.652822	45.36942	.2196412	.0081775	3.332775	.4072620	.5645936

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.268468**	**.1504475**	**.0053413**	**.0011604**	**3.853305**	**5.116540**	**4.306057**
Stddev	.032568	.0024238	.0003173	.0001988	.011931	.037613	.017217
%RSD	.3513869	1.611024	5.941329	17.13344	.3096415	.7351195	.3998350
#1	9.232095	.1478642	.0050555	.0012147	3.858340	5.074447	4.294322
#2	9.294928	.1508067	.0056828	.0009400	3.839681	5.128324	4.325822
#3	9.278381	.1526716	.0052857	.0013263	3.861893	5.146850	4.298026

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: Q2889-01DUP Acquired: 8/19/2025 14:50:26 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**2.510955**	**.1898264**	**-.105357**
Stddev	.009609	.0013827	.000310
%RSD	.3826805	.7283866	.2946309
#1	2.500543	.1893422	-.105014
#2	2.519482	.1913860	-.105618
#3	2.512841	.1887509	-.105439

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6988.616**	**119133.9**	**12997.14**	**5402.501**	**7351.350**
Stddev	1.549	222.7	47.58	7.470	6.458
%RSD	.0221693	.1869130	.3661040	.1382705	.0878495
#1	6986.909	119287.0	12943.44	5410.158	7344.405
#2	6989.932	118878.5	13013.93	5395.233	7357.175
#3	6989.008	119236.3	13034.05	5402.113	7352.469

Sample Name: CCV03 Acquired: 8/19/2025 14:54:27 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**5.038658**	**5.064911**	**4.913540**	**5.076149**	**5.059809**	**9.868534**	**10.00074**
Stddev	.000499	.112365	.003351	.001840	.004589	.021336	.09270
%RSD	.0098936	2.218494	.0681967	.0362564	.0907002	.2162026	.9269742
#1	5.038297	5.054256	4.916542	5.078267	5.058920	9.854038	9.95847
#2	5.038450	4.958253	4.909925	5.074939	5.055728	9.858531	9.93670
#3	5.039227	5.182224	4.914153	5.075241	5.064777	9.893034	10.10705

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2425752**	**2.468821**	**24.62574**	**1.002984**	**2.467090**	**1.253300**	**5.163160**
Stddev	.0011035	.002251	.03628	.002935	.000689	.001636	.012391
%RSD	.4548896	.0911891	.1473348	.2926152	.0279356	.1305323	.2399957
#1	.2418054	2.471349	24.60264	1.005562	2.467859	1.254882	5.177364
#2	.2420809	2.467035	24.60701	1.003598	2.466528	1.251615	5.157553
#3	.2438394	2.468078	24.66756	.999790	2.466883	1.253404	5.154563

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.469408**	**24.58167**	**2.470165**	**1.258514**	**24.93478**	**2.503671**	**2.538399**
Stddev	.014348	.10690	.001664	.002113	.02566	.002319	.005592
%RSD	.5810483	.4348623	.0673803	.1679250	.1029042	.0926149	.2202959
#1	2.456858	24.50292	2.471135	1.256094	24.91706	2.505425	2.533363
#2	2.466315	24.70336	2.471116	1.259994	24.92306	2.501042	2.544417
#3	2.485050	24.53873	2.468243	1.259456	24.96420	2.504546	2.537417

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.13717**	**4.840710**	**5.050125**	**4.952614**	**4.969306**	**5.146469**	**4.947084**
Stddev	.05964	.023735	.004430	.008621	.012997	.026995	.008707
%RSD	.2372686	.4903106	.0877106	.1740733	.2615485	.5245247	.1760097
#1	25.20570	4.818959	5.055117	4.962537	4.965188	5.159733	4.949674
#2	25.10880	4.837146	5.046665	4.946968	4.958867	5.164266	4.937376
#3	25.09700	4.866025	5.048592	4.948336	4.983863	5.115409	4.954203

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: CCV03 Acquired: 8/19/2025 14:54:27 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**4.915521**	**4.704127**	**5.050093**
Stddev	.013326	.016528	.016084
%RSD	.2710958	.3513489	.3184883
#1	4.927655	4.698242	5.068665
#2	4.917649	4.691347	5.040730
#3	4.901260	4.722792	5.040885

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6344.900**	**107157.1**	**11229.29**	**4876.793**	**7398.077**
Stddev	7.248	161.2	58.82	15.612	7.135
%RSD	.1142325	.1503978	.5238415	.3201225	.0964491
#1	6336.628	107226.9	11287.33	4867.626	7389.911
#2	6350.136	106972.8	11230.84	4867.933	7401.217
#3	6347.937	107271.6	11169.71	4894.819	7403.104

Sample Name: CCB03 Acquired: 8/19/2025 14:58:38 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**-.000438**	**.0003919**	**.0003439**	**-.002360**	**.0002072**	**.0115710**	**-.003727**
Stddev	.001179	.0007820	.0006001	.000749	.0009413	.0050055	.000490
%RSD	269.2944	199.5674	174.5055	31.72400	454.4084	43.25898	13.14982
#1	.000863	.0001347	.0006200	-.002037	-.000630	.0113672	-.003374
#2	-.000740	-.000229	-.000345	-.003216	.000026	.0066705	-.003521
#3	-.001437	.001270	.000756	-.001827	.001226	.0166752	-.004287

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000363**	**.0001061**	**-.014212**	**.0000432**	**.0000788**	**-.000239**	**.0014827**
Stddev	.0000624	.0000510	.007393	.0001617	.0002275	.000146	.0050569
%RSD	171.8751	48.07668	52.01746	374.6443	288.9098	60.94754	341.0550
#1	.0000417	.0001557	-.008890	-.000137	.0002131	-.000077	.0062220
#2	-.000029	.0001086	-.011092	.000177	.0002071	-.000359	-.003841
#3	.000096	.0000539	-.022652	.000089	-.000184	-.000281	.002067

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000358**	**-.015035**	**.0000631**	**-.000038**	**.1590480**	**.0012570**	**-.000557**
Stddev	.000861	.008173	.0001279	.000779	.0058930	.0034067	.000209
%RSD	240.6355	54.36117	202.8364	2073.044	3.705186	271.0077	37.55302
#1	-.001276	-.011030	-.000078	.000622	.1528572	.0040468	-.000785
#2	.000433	-.009637	.000095	.000161	.1596972	-.002540	-.000374
#3	-.000231	-.024438	.000172	-.000896	.1645895	.002264	-.000513

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0549467**	**.0013554**	**.0004924**	**-.002846**	**.0000503**	**.0031839**	**.0009350**
Stddev	.0316355	.0008157	.0000796	.000029	.0005462	.0082331	.0003806
%RSD	57.57486	60.18425	16.16473	1.017246	1084.986	258.5828	40.69898
#1	.0280145	.0022717	.0005825	-.002875	-.000266	-.005726	.0010104
#2	.0470399	.0007085	.0004318	-.002817	-.000264	.004769	.0012723
#3	.0897856	.0010859	.0004629	-.002846	.000681	.010509	.0005225

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: CCB03 Acquired: 8/19/2025 14:58:38 Type: Unk
Method: 6010-200.7 NEW(v115) 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	-.000313	-.002870	.0003068
Stddev	.000747	.001503	.0000980
%RSD	238.5382	52.38696	31.94974
#1	-.000124	-.001153	.0004184
#2	-.001136	-.003950	.0002348
#3	.000321	-.003506	.0002671

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6578.065	113549.2	11440.00	5105.796	8377.599
Stddev	7.745	160.5	40.01	18.683	14.453
%RSD	.1177362	.1413361	.3497717	.3659117	.1725239
#1	6579.922	113707.8	11420.06	5085.581	8372.395
#2	6584.712	113552.8	11486.07	5122.427	8393.934
#3	6569.560	113386.9	11413.88	5109.379	8366.468

Sample Name: Q2889-01LX5 Acquired: 8/19/2025 15:02:57 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**.0180960**	**-.004188**	**.0499148**	**.0011688**	**-.002983**	**44.29547**	**.1774310**
Stddev	.0012731	.000552	.0003940	.0036019	.001598	.06506	.0016787
%RSD	7.035234	13.19160	.7893016	308.1808	53.57057	.1468703	.9461216
#1	.0169894	-.004796	.0498408	-.001656	-.003169	44.36640	.1783498
#2	.0194874	-.004050	.0503405	-.000062	-.004480	44.23857	.1784497
#3	.0178113	-.003717	.0495631	.005225	-.001300	44.28144	.1754934

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0041004**	**.0010279**	**5.861089**	**.0589141**	**.0313568**	**.0625908**	**72.70792**
Stddev	.0000848	.0000957	.008882	.0003160	.0002923	.0004072	.35093
%RSD	2.069035	9.307491	.1515394	.5362845	.9323128	.6505342	.4826617
#1	.0040775	.0011382	5.859171	.0588008	.0314884	.0630360	72.91346
#2	.0041944	.0009767	5.870773	.0586704	.0315602	.0622372	72.90758
#3	.0040294	.0009687	5.853323	.0592710	.0310218	.0624993	72.30271

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.287193**	**12.28145**	**.0536084**	**.0017349**	**.9433612**	**.1096446**	**.1493463**
Stddev	.010443	.04758	.0006233	.0002392	.0162737	.0021685	.0004368
%RSD	.8112981	.3874486	1.162650	13.78514	1.725075	1.977713	.2924641
#1	1.290521	12.26005	.0541092	.0014641	.9247519	.1120960	.1497950
#2	1.295565	12.33597	.0538057	.0019171	.9549245	.1088605	.1493215
#3	1.275491	12.24832	.0529104	.0018235	.9504073	.1079772	.1489225

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.994913**	**.0316802**	**.0015936**	**-.002321**	**.9743640**	**1.103161**	**1.091977**
Stddev	.025233	.0014060	.0002125	.000225	.0036287	.004896	.012124
%RSD	.8425359	4.438238	13.33176	9.694027	.3724188	.4438389	1.110284
#1	2.971636	.0332900	.0014576	-.002087	.9755796	1.097507	1.105844
#2	2.991374	.0310576	.0018385	-.002339	.9772288	1.106013	1.086710
#3	3.021729	.0306929	.0014848	-.002536	.9702835	1.105962	1.083378

Sample Name: Q2889-01LX5 Acquired: 8/19/2025 15:02:57 Type: Unk
Method: 6010-200.7 NEW(v115) 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	.6174812	.0565257	-.038539
Stddev	.0049381	.0022821	.000166
%RSD	.7997223	4.037350	.4304276
#1	.6211468	.0560232	-.038724
#2	.6194309	.0590172	-.038489
#3	.6118658	.0545367	-.038404

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6675.646	113150.1	11911.98	5132.673	7868.288
Stddev	2.724	203.5	46.59	25.742	4.791
%RSD	.0408043	.1798453	.3910800	.5015401	.0608893
#1	6672.529	113383.8	11956.77	5107.527	7868.306
#2	6676.841	113012.2	11863.78	5158.973	7863.488
#3	6677.569	113054.2	11915.38	5131.518	7873.070

Sample Name: Q2889-01MS Acquired: 8/19/2025 15:07:03 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**.7579129**	**1.802103**	**1.105006**	**1.682940**	**.3403051**	**167.3105**
Stddev	.0022007	.024059	.000365	.002862	.0027567	.1726
%RSD	.2903630	1.335028	.0329861	.1700514	.8100700	.1031777
#1	.7556772	1.786412	1.105421	1.680936	.3432743	167.4993
#2	.7579846	1.790095	1.104741	1.686217	.3398142	167.1608
#3	.7600769	1.829802	1.104854	1.681666	.3378269	167.2715

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7775633**	**.1807043**	**.1982959**	**32.93778**	**.6225628**	**.3112691**
Stddev	.0014027	.0003844	.0001018	.05549	.0010225	.0000966
%RSD	.1803911	.2127377	.0513437	.1684595	.1642323	.0310403
#1	.7788677	.1803326	.1981906	32.98423	.6216256	.3113351
#2	.7760796	.1811003	.1983032	32.87634	.6224097	.3111582
#3	.7777427	.1806800	.1983938	32.95277	.6236532	.3113141

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5462349**	**278.4288**	**4.623291**	**49.01760**	**.7124331**	**.0778154**
Stddev	.0007008	1.1917	.010829	.01685	.0005309	.0003201
%RSD	.1282966	.4280207	.2342283	.0343740	.0745203	.4113981
#1	.5454263	279.3462	4.633278	49.02057	.7118212	.0781149
#2	.5466668	277.0818	4.611781	49.03277	.7127715	.0774780
#3	.5466115	278.8583	4.624813	48.99946	.7127066	.0778533

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.504150**	**.7397423**	**.7437600**	**19.80836**	**.3870652**	**.3605986**
Stddev	.047021	.0020053	.0011401	.08268	.0061886	.0003047
%RSD	.7229346	.2710794	.1532904	.4173854	1.598861	.0845021
#1	6.541756	.7396757	.7428904	19.85725	.3938515	.3605606
#2	6.451431	.7377712	.7433389	19.71290	.3817334	.3603147
#3	6.519262	.7417801	.7450508	19.85492	.3856106	.3609206

Sample Name: Q2889-01MS Acquired: 8/19/2025 15:07:03 Type: Unk
Method: 6010-200.7 NEW(v115) 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	.6270260	4.624107	5.456510	F 10.25145	2.863064	.3875717
Stddev	.0009276	.008263	.036924	.05832	.015268	.0020548
%RSD	.1479413	.1786971	.6766954	.5688907	.5332914	.5301594
#1	.6263869	4.630678	5.493096	10.19289	2.850310	.3890470
#2	.6280899	4.614830	5.419257	10.30953	2.858900	.3852249
#3	.6266010	4.626812	5.457177	10.25192	2.879983	.3884433

Elem	Sr4077
Units	ppm
Avg	.0624312
Stddev	.0005866
%RSD	.9395262
#1	.0628325
#2	.0627030
#3	.0617581

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6883.242	117080.1	12879.46	5309.323	7165.655
Stddev	11.507	14.2	27.73	16.801	4.223
%RSD	.1671743	.0121537	.2153381	.3164496	.0589399
#1	6872.633	117070.5	12900.72	5326.442	7160.822
#2	6895.475	117073.4	12848.09	5308.668	7168.634
#3	6881.618	117096.5	12889.56	5292.859	7167.509

Sample Name: Q2889-01A Acquired: 8/19/2025 15:14:57 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**.7455959**	**1.825853**	**1.106398**	**1.665321**	**.6680707**	**185.5637**
Stddev	.0010882	.016640	.004193	.006476	.0025020	.1560
%RSD	.1459479	.9113618	.3789902	.3888621	.3745161	.0840627
#1	.7467883	1.842430	1.102032	1.672796	.6651816	185.5391
#2	.7446566	1.825977	1.106768	1.661729	.6695029	185.4214
#3	.7453427	1.809151	1.110393	1.661437	.6695275	185.7304

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9174166**	**.1743904**	**.1917023**	**24.68660**	**.5802811**	**.3342686**
Stddev	.0039298	.0009713	.0004295	.02663	.0018937	.0006235
%RSD	.4283504	.5569470	.2240612	.1078873	.3263394	.1865342
#1	.9208334	.1741164	.1912329	24.71495	.5818821	.3335724
#2	.9131223	.1735855	.1917985	24.66209	.5807705	.3347756
#3	.9182942	.1754692	.1920756	24.68276	.5781908	.3344578

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4933293**	**307.5807**	**5.361955**	**51.68758**	**.7170093**	**.0731267**
Stddev	.0033781	1.7966	.026245	.10664	.0009465	.0009702
%RSD	.6847607	.5841080	.4894642	.2063117	.1320021	1.326672
#1	.4902312	309.0216	5.386648	51.65930	.7161738	.0741194
#2	.4928258	308.1527	5.334394	51.59793	.7168170	.0730799
#3	.4969309	305.5677	5.364824	51.80550	.7180372	.0721808

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.999160**	**.6948218**	**.8073353**	**21.82224**	**.3541414**	**.3483557**
Stddev	.022125	.0042326	.0004211	.12931	.0104722	.0007188
%RSD	.3688082	.6091611	.0521531	.5925490	2.957056	.2063344
#1	6.024296	.6994877	.8075245	21.89899	.3590370	.3491559
#2	5.982635	.6912293	.8076286	21.89479	.3612690	.3477649
#3	5.990549	.6937484	.8068529	21.67295	.3421180	.3481463

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: Q2889-01A Acquired: 8/19/2025 15:14:57 Type: Unk
Method: 6010-200.7 NEW(v115) 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	.6372385	4.185039	6.136843	F 10.68290	3.071308	.4133498
Stddev	.0013338	.010049	.015798	.04369	.005257	.0013490
%RSD	.2093097	.2401210	.2574316	.4089637	.1711634	.3263493
#1	.6387649	4.193891	6.119001	10.72881	3.069733	.4142972
#2	.6362977	4.174116	6.142477	10.64184	3.067018	.4118053
#3	.6366527	4.187111	6.149053	10.67805	3.077172	.4139468

Elem	Sr4077
Units	ppm
Avg	-.002731
Stddev	.001740
%RSD	63.72345
#1	-.003101
#2	-.004256
#3	-.000835

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7024.221	119225.7	13025.39	5378.379	7189.874
Stddev	2.098	192.2	98.45	8.122	3.767
%RSD	.0298710	.1611738	.7558392	.1510168	.0523934
#1	7024.421	119021.2	13006.31	5369.499	7191.629
#2	7022.031	119402.6	13131.98	5380.208	7185.550
#3	7026.213	119253.2	12937.87	5385.432	7192.443

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: PB169280BL Acquired: 8/19/2025 15:18:52 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**.0000871**	**.0006775**	**-.000403**	**-.002156**	**.0004573**	**.0344134**	**-.006269**
Stddev	.0015143	.0010042	.000780	.001072	.0008193	.0111882	.000612
%RSD	1739.410	148.2335	193.6204	49.72810	179.1474	32.51126	9.763650
#1	-.001438	-.000482	.000456	-.001360	.0005065	.0471487	-.006791
#2	.000110	.001268	-.000597	-.003376	.0012509	.0299261	-.005595
#3	.001590	.001246	-.001067	-.001734	-.000385	.0261654	-.006420

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000345**	**.0000383**	**-.002727**	**-.000047**	**.0000481**	**-.000609**	**.0329373**
Stddev	.0000664	.0000483	.006313	.000114	.0001175	.000107	.0049007
%RSD	192.5780	126.1395	231.5004	240.8746	244.4371	17.56024	14.87893
#1	.0000650	.0000570	.001075	-.000175	.0001813	-.000587	.0385803
#2	-.000042	-.000017	.000758	.000044	-.000040	-.000725	.0297496
#3	.000080	.000074	-.010014	-.000011	.000003	-.000514	.0304819

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001968**	**.0089652**	**.0000146**	**-.000001**	**.1182912**	**.0000462**	**-.000896**
Stddev	.0004221	.0176367	.0002920	.000465	.0184034	.0023731	.000204
%RSD	214.4716	196.7232	1996.808	55994.98	15.55771	5135.044	22.73315
#1	.0006017	-.010763	.0002950	.000487	.1180284	.0000253	-.001033
#2	.0002296	.023205	-.000288	-.000050	.1000206	.0024297	-.000993
#3	-.000241	.014455	.000037	-.000439	.1368246	-.002316	-.000662

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.006195**	**-.002391**	**.0001555**	**-.003039**	**.0003603**	**-.001722**	**.0003698**
Stddev	.013035	.000270	.0001109	.000476	.0010441	.000824	.0007066
%RSD	210.4115	11.30059	71.33328	15.66924	289.7775	47.84920	191.1001
#1	-.018806	-.002703	.0002123	-.002662	-.000822	-.002620	.0000037
#2	-.007005	-.002228	.0000277	-.003574	.000749	-.001002	.0011844
#3	.007226	-.002242	.0002265	-.002881	.001155	-.001543	-.000079

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: PB169280BL Acquired: 8/19/2025 15:18:52 Type: Unk
Method: 6010-200.7 NEW(v115) 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	-.001459	-.003061	.0000050
Stddev	.001530	.000865	.0000123
%RSD	104.8811	28.26758	243.7868
#1	-.003132	-.002398	-.000003
#2	-.000129	-.004040	.000019
#3	-.001117	-.002745	-.000001

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6628.622	111295.9	11515.53	4989.421	8439.047
Stddev	5.374	5064.5	13.21	229.927	10.856
%RSD	.0810743	4.550497	.1146761	4.608293	.1286381
#1	6627.776	114249.1	11529.10	5127.604	8432.110
#2	6634.368	114190.5	11502.72	5116.660	8433.474
#3	6623.720	105448.0	11514.76	4724.000	8451.558

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: PB169280BS Acquired: 8/19/2025 15:23:11 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**.7636765**	**1.874180**	**.9186386**	**1.939475**	**.7782724**	**1.911962**
Stddev	.0029134	.090079	.0017758	.004896	.0008757	.007280
%RSD	.3814942	4.806315	.1933095	.2524652	.1125201	.3807627
#1	.7628325	1.922028	.9203148	1.939136	.7773366	1.910588
#2	.7612783	1.770274	.9188234	1.934756	.7784085	1.905467
#3	.7669187	1.930239	.9167776	1.944532	.7790721	1.919831

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1825361**	**.1913764**	**.1826784**	**.9731641**	**.3886112**	**.1872436**
Stddev	.0010444	.0014997	.0001642	.0023089	.0007609	.0003741
%RSD	.5721609	.7836356	.0898964	.2372578	.1958079	.1998163
#1	.1822928	.1899808	.1827883	.9709691	.3889101	.1870622
#2	.1816347	.1911864	.1827573	.9755722	.3877462	.1876738
#3	.1836806	.1929621	.1824896	.9729511	.3891773	.1869947

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2995585**	**2.906800**	**.1934237**	**1.910020**	**.4715867**	**.0724031**
Stddev	.0004163	.017277	.0016244	.008474	.0003276	.0001333
%RSD	.1389837	.5943498	.8398256	.4436399	.0694688	.1840331
#1	.2993072	2.925680	.1934348	1.919761	.4714915	.0722872
#2	.3000391	2.891780	.1917938	1.904354	.4719513	.0725487
#3	.2993292	2.902939	.1950426	1.905945	.4713172	.0723735

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.808495**	**.2883184**	**.2017779**	**9.175841**	**.2787567**	**.3892290**
Stddev	.007096	.0010374	.0009673	.032840	.0017230	.0002453
%RSD	.2526450	.3598034	.4794009	.3578949	.6181039	.0630161
#1	2.815878	.2892322	.2012911	9.211969	.2775782	.3893080
#2	2.801727	.2871908	.2011507	9.167756	.2779577	.3889539
#3	2.807880	.2885321	.2028919	9.147799	.2807341	.3894249

Sample Name: PB169280BS Acquired: 8/19/2025 15:23:11 Type: Unk
Method: 6010-200.7 NEW(v115) 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	.6365357	.1845679	.8687988	5.309858	F -.002184	.1869733
Stddev	.0024511	.0001818	.0063016	.037826	.003321	.0009313
%RSD	.3850751	.0984726	.7253294	.7123694	152.0619	.4981121
#1	.6360611	.1843917	.8706860	5.311190	.001494	.1873779
#2	.6343566	.1847548	.8739412	5.271384	-.004965	.1859080
#3	.6391895	.1845571	.8617692	5.347000	-.003081	.1876338

Elem	Sr4077
Units	ppm
Avg	.1878889
Stddev	.0006286
%RSD	.3345694
#1	.1874430
#2	.1876158
#3	.1886078

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6601.817	113681.6	11509.07	5142.045	8154.929
Stddev	7.925	280.6	91.11	17.212	7.527
%RSD	.1200434	.2468368	.7916095	.3347296	.0923035
#1	6605.244	113398.1	11554.51	5153.941	8154.907
#2	6592.756	113959.3	11568.52	5149.885	8147.413
#3	6607.452	113687.5	11404.18	5122.308	8162.467

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: Q2879-01 Acquired: 8/19/2025 15:27:10 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**.2205260**	**-.047721**	**1.033878**	**.0066816**	**-.009007**	**226.6650**
Stddev	.0006295	.000676	.003283	.0008970	.000878	2.0802
%RSD	.2854445	1.416676	.3175188	13.42470	9.745379	.9177611
#1	.2204646	-.046966	1.030104	.0076914	-.008000	226.5151
#2	.2211839	-.047926	1.035457	.0059771	-.009610	228.8162
#3	.2199295	-.048271	1.036073	.0063762	-.009412	224.6638

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.176216**	**.0215302**	**.0219004**	**80.08417**	**.3468662**	**.1617604**
Stddev	.001626	.0001745	.0002356	.17558	.0013708	.0000768
%RSD	.1382161	.8104530	1.075935	.2192482	.3951890	.0474666
#1	1.174387	.0213294	.0216607	79.93440	.3483023	.1616793
#2	1.177495	.0216160	.0219088	80.27740	.3467246	.1618320
#3	1.176767	.0216452	.0221317	80.04069	.3455718	.1617697

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4133673**	**431.9681**	**6.953521**	**72.67568**	**.3084763**	**.0127156**
Stddev	.0019304	2.4392	.026244	.17766	.0011240	.0003849
%RSD	.4670032	.5646653	.3774211	.2444558	.3643571	3.026625
#1	.4124040	433.4825	6.923707	72.72087	.3073469	.0130380
#2	.4155898	429.1543	6.973128	72.82639	.3095947	.0122895
#3	.4121080	433.2675	6.963729	72.47979	.3084873	.0128192

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.408411**	**.5497202**	**1.465480**	**35.08755**	**^ *****	**.0124750**
Stddev	.024674	.0024430	.001901	.15789	-----	.0004176
%RSD	.5597108	.4444085	.1296887	.4499782	-----	3.347831
#1	4.384858	.5508689	1.465362	35.20543	^ -----	.0129328
#2	4.434071	.5513771	1.463641	35.14905	^ -----	.0121148
#3	4.406304	.5469146	1.467436	34.90817	^ -----	.0123773

Sample Name: Q2879-01 Acquired: 8/19/2025 15:27:10 Type: Unk
Method: 6010-200.7 NEW(v115) 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	.0749058	9.933249	5.400252	F 15.76048	6.977140	.3193542
Stddev	.0005136	.019020	.013260	.03190	.027773	.0001722
%RSD	.6856176	.1914782	.2455514	.2024181	.3980629	.0539204
#1	.0743138	9.913261	5.386213	15.72531	6.946136	.3194587
#2	.0752319	9.951124	5.401980	15.76860	6.999744	.3194486
#3	.0751717	9.935362	5.412564	15.78754	6.985539	.3191555

Elem	Sr4077
Units	ppm
Avg	-.094278
Stddev	.002817
%RSD	2.987659
#1	-.096477
#2	-.091103
#3	-.095255

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7153.075	122245.1	14090.01	5433.240	6895.911
Stddev	7.018	400.3	25.57	40.192	2.116
%RSD	.0981159	.3274191	.1814427	.7397483	.0306837
#1	7151.204	121924.1	14096.67	5395.860	6897.685
#2	7160.840	122117.5	14061.78	5475.752	6896.479
#3	7147.182	122693.6	14111.59	5428.108	6893.569

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: Q2879-03 Acquired: 8/19/2025 15:31:28 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**.1997376**	**-.036371**	**1.047968**	**.0082772**	**-.001020**	**238.8209**
Stddev	.0022304	.002353	.005089	.0074773	.000952	1.5047
%RSD	1.116654	6.468504	.4855965	90.33653	93.29757	.6300657
#1	.1988962	-.039051	1.051555	.0030180	-.001769	237.1199
#2	.1980502	-.035415	1.042144	.0049767	-.001343	239.3646
#3	.2022662	-.034646	1.050206	.0168369	.000051	239.9782

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.289039**	**.0193221**	**.0185766**	**85.51305**	**.3544113**	**.1662683**
Stddev	.005347	.0001869	.0001637	.11914	.0004948	.0008562
%RSD	.4148352	.9672883	.8810316	.1393278	.1396129	.5149347
#1	1.283503	.0192447	.0187556	85.37739	.3548133	.1672485
#2	1.294175	.0195353	.0184346	85.56105	.3538587	.1658896
#3	1.289438	.0191863	.0185396	85.60070	.3545620	.1656668

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4811661**	**340.7382**	**7.086763**	**72.44524**	**.3172043**	**.0138090**
Stddev	.0008215	.6064	.030084	.11283	.0003899	.0006603
%RSD	.1707217	.1779619	.4245032	.1557445	.1229183	4.781512
#1	.4814012	340.0743	7.055381	72.34667	.3176041	.0132107
#2	.4802527	341.2629	7.115353	72.42075	.3171835	.0136989
#3	.4818443	340.8773	7.089554	72.56830	.3168252	.0145174

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.922456**	**.5641910**	**1.561043**	**39.11573**	**.2211531**	**.0164958**
Stddev	.022056	.0054240	.002535	.10832	.0039535	.0004506
%RSD	.4480639	.9613801	.1623875	.2769238	1.787689	2.731415
#1	4.898715	.5667493	1.558485	39.00455	.2234232	.0163801
#2	4.926342	.5579610	1.561090	39.12170	.2234482	.0169930
#3	4.942310	.5678628	1.563554	39.22094	.2165880	.0161144

Sample Name: Q2879-03 Acquired: 8/19/2025 15:31:28 Type: Unk
Method: 6010-200.7 NEW(v115) 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	.0303398	F 10.42296	6.109144	F 17.02238	8.598004	.3158531
Stddev	.0009603	.02624	.025806	.07505	.034014	.0011060
%RSD	3.165111	.2517741	.4224233	.4408965	.3956091	.3501570
#1	.0294668	10.39570	6.111682	17.10432	8.635711	.3145760
#2	.0313684	10.44806	6.133588	16.95697	8.569631	.3164964
#3	.0301843	10.42511	6.082162	17.00586	8.588669	.3164868

Elem	Sr4077
Units	ppm
Avg	.0331186
Stddev	.0008835
%RSD	2.667766
#1	.0321241
#2	.0338129
#3	.0334190

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7242.320	124515.1	14327.64	5568.759	6869.298
Stddev	5.930	141.6	42.30	12.658	7.670
%RSD	.0818793	.1136857	.2952587	.2273066	.1116555
#1	7244.118	124655.4	14358.45	5578.151	6865.217
#2	7247.142	124372.4	14279.41	5573.764	6878.146
#3	7235.699	124517.6	14345.07	5554.364	6864.532

Sample Name: Q2889-01MSD Acquired: 8/19/2025 15:35:36 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**.7526147**	**1.756350**	**1.088936**	**1.666665**	**.3395041**	**165.1880**
Stddev	.0024486	.043733	.005017	.011402	.0023715	.1914
%RSD	.3253468	2.489968	.4607622	.6841168	.6985066	.1158933
#1	.7550451	1.803587	1.089384	1.674032	.3414131	164.9818
#2	.7501483	1.717271	1.083710	1.653532	.3402499	165.3602
#3	.7526508	1.748191	1.093715	1.672432	.3368494	165.2218

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7694070**	**.1760656**	**.1955591**	**32.45229**	**.6144703**	**.3074353**
Stddev	.0023963	.0001579	.0002218	.04066	.0004636	.0004017
%RSD	.3114534	.0897044	.1134291	.1253058	.0754438	.1306660
#1	.7686294	.1758836	.1954644	32.41258	.6145227	.3074122
#2	.7674961	.1761671	.1954003	32.49385	.6149054	.3070456
#3	.7720956	.1761460	.1958125	32.45045	.6139827	.3078480

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5368489**	**277.6447**	**4.550353**	**48.15449**	**.7033466**	**.0778042**
Stddev	.0014897	.7701	.008717	.05990	.0012513	.0003290
%RSD	.2774967	.2773783	.1915738	.1243812	.1779072	.4228502
#1	.5364338	277.8187	4.546617	48.21286	.7026108	.0779856
#2	.5385022	276.8024	4.544126	48.15743	.7026376	.0774244
#3	.5356108	278.3129	4.560315	48.09318	.7047914	.0780025

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.518705**	**.7283876**	**.7359893**	**19.73450**	**.3961993**	**.3562771**
Stddev	.034781	.0008262	.0017166	.07387	.0048257	.0004021
%RSD	.5335583	.1134298	.2332313	.3743029	1.217990	.1128623
#1	6.532471	.7277481	.7357320	19.70005	.3988269	.3560854
#2	6.479148	.7293205	.7378201	19.68416	.3906301	.3560068
#3	6.544497	.7280942	.7344160	19.81930	.3991410	.3567392

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: Q2889-01MSD Acquired: 8/19/2025 15:35:36 Type: Unk
Method: 6010-200.7 NEW(v115) 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	.6189283	4.572568	5.395972	F 10.07301	2.826700	.3826459
Stddev	.0018935	.005465	.029467	.09580	.022433	.0004555
%RSD	.3059238	.1195140	.5460878	.9510532	.7936250	.1190456
#1	.6203062	4.567845	5.419827	10.13728	2.837988	.3824048
#2	.6167692	4.571306	5.363033	9.96291	2.800864	.3823615
#3	.6197094	4.578554	5.405057	10.11886	2.841247	.3831713

Elem	Sr4077
Units	ppm
Avg	.0599548
Stddev	.0007611
%RSD	1.269461
#1	.0592247
#2	.0598960
#3	.0607435

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6971.343	118452.7	13224.10	5325.925	7274.004
Stddev	7.433	172.3	16.43	26.938	2.945
%RSD	.1066248	.1454623	.1242647	.5057964	.0404855
#1	6976.720	118334.2	13234.73	5310.458	7273.416
#2	6962.861	118650.4	13205.18	5310.287	7277.199
#3	6974.449	118373.6	13232.41	5357.031	7271.398

Sample Name: PB169302BL Acquired: 8/19/2025 15:39:31 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**-.000150**	**.0018489**	**.0003910**	**-.000187**	**-.000417**	**.0236919**	**-.005304**
Stddev	.000347	.0015381	.0002749	.002365	.001634	.0120183	.000438
%RSD	231.9196	83.19219	70.31621	1265.293	392.3194	50.72738	8.260534
#1	-.000395	.0030931	.0002953	.002089	-.000966	.0374345	-.005553
#2	-.000301	.0001292	.0007010	-.000017	.001422	.0184925	-.004798
#3	.000247	.0023244	.0001767	-.002633	-.001705	.0151488	-.005561

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000880**	**.0000554**	**-.008314**	**.0000274**	**.0000242**	**-.000007**	**.0155142**
Stddev	.0000962	.0000205	.001746	.0001731	.0000432	.000246	.0014250
%RSD	109.2890	37.06696	21.00556	631.2682	178.3428	3717.438	9.185220
#1	.0000140	.0000483	-.009744	.0002128	.0000541	-.000289	.0171597
#2	.0001968	.0000393	-.008832	-.000001	-.000025	.000162	.0146923
#3	.0000533	.0000785	-.006368	-.000130	.000044	.000107	.0146907

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000472**	**.0185680**	**-.000143**	**.0000473**	**.0807087**	**-.000710**	**-.000617**
Stddev	.000357	.0070216	.000221	.0001050	.0119191	.001410	.000155
%RSD	75.57414	37.81579	154.6599	221.8568	14.76803	198.5074	25.16582
#1	-.000074	.0136679	-.000337	-.000065	.0689908	.000662	-.000439
#2	-.000581	.0154239	.000098	.000063	.0803160	-.000638	-.000685
#3	-.000762	.0266123	-.000190	.000143	.0928192	-.002155	-.000726

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.113389**	**-.003083**	**.0001390**	**-.002617**	**.0000953**	**-.002605**	**.0013788**
Stddev	.012869	.000441	.0002019	.000693	.0009595	.003096	.0012255
%RSD	11.34904	14.29266	145.1976	26.49238	1006.745	118.8231	88.88206
#1	-.125798	-.003253	.0002960	-.002057	.0005680	-.006180	.0009392
#2	-.100106	-.003413	.0002098	-.003393	-.001009	-.000857	.0027635
#3	-.114264	-.002583	-.000089	-.002402	.000727	-.000780	.0004338

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: PB169302BL Acquired: 8/19/2025 15:39:31 Type: Unk
Method: 6010-200.7 NEW(v115) 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	-.000545	-.003383	-.000002
Stddev	.001678	.000828	.000123
%RSD	307.6100	24.47759	7036.525
#1	-.001699	-.003081	-.000118
#2	-.001316	-.004319	-.000014
#3	.001379	-.002748	.000127

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6703.754	115320.5	11622.82	5133.104	8533.436
Stddev	4.256	281.9	84.49	18.148	4.262
%RSD	.0634872	.2444168	.7269640	.3535518	.0499434
#1	6703.084	115536.6	11672.89	5122.008	8535.367
#2	6708.305	115001.7	11525.26	5123.256	8536.390
#3	6699.872	115423.3	11670.31	5154.047	8528.550

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: PB169302BS Acquired: 8/19/2025 15:43:50 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**.7664279**	**1.890406**	**.9174973**	**1.942224**	**.8064461**	**1.922134**
Stddev	.0019383	.046828	.0024228	.005416	.0028017	.010019
%RSD	.2529020	2.477134	.2640656	.2788333	.3474150	.5212460
#1	.7652873	1.850025	.9194164	1.936100	.8048608	1.911249
#2	.7653305	1.941740	.9183007	1.944187	.8047965	1.930969
#3	.7686659	1.879455	.9147749	1.946384	.8096810	1.924185

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1814703**	**.1918794**	**.1823483**	**.9712266**	**.3901108**	**.1871192**
Stddev	.0002479	.0008928	.0002024	.0048147	.0008402	.0002721
%RSD	.1365817	.4653115	.1109850	.4957378	.2153814	.1454354
#1	.1812319	.1909489	.1824802	.9659375	.3900610	.1871237
#2	.1814523	.1919602	.1821153	.9723879	.3909747	.1868448
#3	.1817266	.1927291	.1824494	.9753545	.3892965	.1873890

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2982324**	**2.911496**	**.1915300**	**1.916723**	**.4707889**	**.0721500**
Stddev	.0003480	.009081	.0006037	.024444	.0005166	.0004732
%RSD	.1166796	.3118918	.3151942	1.275302	.1097352	.6558310
#1	.2980100	2.905376	.1922185	1.891440	.4711733	.0719229
#2	.2980538	2.921930	.1910911	1.918498	.4702017	.0718332
#3	.2986334	2.907183	.1912805	1.940232	.4709918	.0726939

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.748940**	**.2893115**	**.2031865**	**9.075757**	**.2785676**	**.4024255**
Stddev	.015904	.0007160	.0008076	.037995	.0023529	.0005290
%RSD	.5785472	.2474735	.3974643	.4186378	.8446356	.1314592
#1	2.730607	.2896538	.2023437	9.079162	.2758930	.4021873
#2	2.759031	.2884887	.2039536	9.111934	.2794911	.4020575
#3	2.757183	.2897921	.2032623	9.036174	.2803186	.4030317

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: PB169302BS Acquired: 8/19/2025 15:43:50 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**.6580478**	**.1908611**	**.8892060**	**5.305225**	F **.0002336**	**.1839569**
Stddev	.0006473	.0010850	.0074516	.032153	.0051535	.0012090
%RSD	.0983614	.5684822	.8380067	.6060703	2206.129	.6572355
#1	.6574169	.1896262	.8977685	5.273338	.0014654	.1844524
#2	.6580161	.1916618	.8856592	5.337639	-.005424	.1848394
#3	.6587103	.1912953	.8841903	5.304697	.004660	.1825788

Elem	Sr4077
Units	ppm
Avg	**.1861841**
Stddev	.0004182
%RSD	.2246183
#1	.1857498
#2	.1862185
#3	.1865841

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6625.843**	**113336.6**	**11521.38**	**5093.175**	**8190.625**
Stddev	10.043	410.0	31.75	28.668	11.845
%RSD	.1515754	.3617447	.2755728	.5628675	.1446181
#1	6616.469	113295.6	11553.72	5087.667	8176.968
#2	6636.443	112948.6	11490.26	5067.661	8196.810
#3	6624.617	113765.5	11520.15	5124.198	8198.097

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: CCV04 Acquired: 8/19/2025 15:47:50 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**4.998784**	**4.863467**	**4.856634**	**5.032549**	**5.016987**	**9.740111**	**9.795343**
Stddev	.006494	.052379	.009879	.004612	.003440	.037151	.048029
%RSD	.1299106	1.076986	.2034065	.0916371	.0685635	.3814197	.4903203
#1	4.992472	4.923934	4.846797	5.037681	5.013255	9.782993	9.849804
#2	5.005446	4.832072	4.856549	5.031213	5.017675	9.717671	9.777180
#3	4.998433	4.834395	4.866554	5.028752	5.020031	9.719668	9.759044

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2390902**	**2.440433**	**24.32176**	**.9898865**	**2.437894**	**1.239396**	**5.095901**
Stddev	.0011613	.002947	.08002	.0015451	.003187	.001688	.025110
%RSD	.4857053	.1207706	.3289996	.1560880	.1307225	.1361572	.4927425
#1	.2402002	2.438940	24.41402	.9881120	2.436993	1.239041	5.074217
#2	.2378837	2.438530	24.27996	.9906134	2.435254	1.237915	5.123412
#3	.2391867	2.443828	24.27129	.9909341	2.441434	1.241233	5.090075

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.432030**	**24.22397**	**2.441983**	**1.245596**	**24.44557**	**2.476458**	**2.515445**
Stddev	.004855	.03377	.002956	.001129	.18648	.008565	.005824
%RSD	.1996105	.1394022	.1210295	.0906219	.7628539	.3458507	.2315287
#1	2.437333	24.24097	2.439521	1.244351	24.24327	2.483945	2.509833
#2	2.427806	24.18508	2.441167	1.246552	24.61060	2.467119	2.515041
#3	2.430949	24.24586	2.445261	1.245885	24.48285	2.478309	2.521460

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.65558**	**4.776809**	**4.997347**	**4.887441**	**4.918529**	**5.087514**	**4.885655**
Stddev	.14528	.011458	.001179	.001014	.007485	.012196	.012613
%RSD	.5892441	.2398600	.0235828	.0207372	.1521740	.2397317	.2581692
#1	24.50138	4.788057	4.998107	4.888574	4.927138	5.075713	4.890920
#2	24.78990	4.765153	4.995989	4.886622	4.914877	5.100071	4.894784
#3	24.67545	4.777216	4.997945	4.887126	4.913571	5.086758	4.871263

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: CCV04 Acquired: 8/19/2025 15:47:50 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**4.844767**	**4.625586**	**5.005926**
Stddev	.014858	.002361	.051965
%RSD	.3066738	.0510373	1.038078
#1	4.857486	4.625285	5.060893
#2	4.848378	4.623390	4.999285
#3	4.828437	4.628082	4.957601

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6412.379**	**109124.4**	**11456.68**	**4941.027**	**7481.037**
Stddev	10.188	109.1	61.36	10.143	9.266
%RSD	.1588727	.0999364	.5355551	.2052845	.1238636
#1	6419.261	109143.1	11385.84	4942.023	7485.925
#2	6417.202	109007.3	11493.07	4930.422	7486.837
#3	6400.676	109223.0	11491.13	4950.635	7470.351

Sample Name: CCB04 Acquired: 8/19/2025 15:52:02 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**-.000135**	**.0007629**	**-.000204**	**-.000904**	**-.000597**	**.0149562**	**-.005443**
Stddev	.000978	.0006882	.001176	.002285	.001529	.0028153	.000894
%RSD	725.5315	90.21918	576.5002	252.7061	256.2402	18.82382	16.42169
#1	.000994	.0011979	.000596	-.003248	.000331	.0149373	-.005586
#2	-.000700	-.000031	-.001555	-.000782	.000240	.0177809	-.004487
#3	-.000699	.001121	.000346	.001317	-.002362	.0121503	-.006258

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000703**	**.0000816**	**-.008229**	**-.000175**	**.0000655**	**-.000042**	**.0000418**
Stddev	.0000169	.0000097	.003478	.000153	.0000914	.000373	.0028524
%RSD	24.06262	11.89590	42.26263	87.36579	139.4730	881.9034	6826.646
#1	.0000527	.0000720	-.004603	-.000003	.0000727	-.000291	-.003110
#2	.0000865	.0000815	-.011537	-.000224	-.000029	.000387	.000789
#3	.0000718	.0000914	-.008547	-.000297	.000153	-.000223	.002446

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000220**	**-.005207**	**-.000193**	**.0001076**	**.0684635**	**.0015377**	**-.000666**
Stddev	.000122	.007170	.000087	.0001359	.0088518	.0013571	.000187
%RSD	55.67224	137.6952	45.20099	126.3360	12.92923	88.26003	28.15326
#1	-.000196	-.013483	-.000187	.0001341	.0599356	.0003013	-.000819
#2	-.000111	-.001248	-.000283	-.000040	.0678477	.0029897	-.000721
#3	-.000352	-.000889	-.000109	.000228	.0776071	.0013220	-.000457

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.036052**	**.0011903**	**.0004974**	**-.002230**	**.0003155**	**.0013227**	**.0010149**
Stddev	.039686	.0001924	.0002634	.000485	.0009041	.0060541	.0016775
%RSD	110.0789	16.16024	52.95794	21.73538	286.6198	457.6988	165.2780
#1	-.079599	.0009712	.0008000	-.002686	.0010230	.0051070	.0027907
#2	-.001920	.0013315	.0003192	-.002282	-.000703	.0045210	.0007971
#3	-.026637	.0012683	.0003730	-.001721	.000627	-.005660	-.000543

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: CCB04 Acquired: 8/19/2025 15:52:02 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**-.002463**	**-.002976**	**.0002946**
Stddev	.001223	.002375	.0000523
%RSD	49.66272	79.79082	17.75776
#1	-.001430	-.001397	.0002921
#2	-.002145	-.005707	.0003482
#3	-.003813	-.001825	.0002436

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6605.981**	**114053.2**	**11451.47**	**5077.679**	**8412.381**
Stddev	4.027	135.1	55.12	12.845	7.093
%RSD	.0609592	.1184525	.4813310	.2529784	.0843197
#1	6602.062	114107.0	11470.64	5063.184	8404.393
#2	6605.774	113899.4	11389.33	5087.651	8414.809
#3	6610.108	114153.0	11494.45	5082.202	8417.942

Sample Name: PB169291TB Acquired: 8/19/2025 15:56:20 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**-.003061**	**-.001367**	**-.001348**	**.0038357**	**.0011069**	**.0081667**	**-.006716**
Stddev	.001482	.002291	.000875	.0025338	.0013900	.0056711	.000880
%RSD	48.43433	167.5752	64.88386	66.05973	125.5831	69.44170	13.10901
#1	-.001941	-.002582	-.001573	.0034546	.0025899	.0105546	-.007311
#2	-.004742	.001275	-.000383	.0065385	-.000166	.0016921	-.007133
#3	-.002499	-.002795	-.002089	.0015140	.000897	.0122532	-.005705

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000082**	**-.000034**	**.0569510**	**.0016442**	**-.000223**	**-.000029**	**.0176403**
Stddev	.000031	.000051	.0062497	.0000962	.000095	.000039	.0018244
%RSD	37.78323	150.3113	10.97386	5.848959	42.32807	135.8382	10.34216
#1	-.000057	-.000081	.0511310	.0015397	-.000153	-.000046	.0165761
#2	-.000117	.000021	.0561658	.0016641	-.000331	-.000056	.0197469
#3	-.000072	-.000043	.0635562	.0017289	-.000186	.000016	.0165979

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0074333**	**-.008055**	**.0009277**	**-.000191**	**357.8033**	**.0015971**	**.0012912**
Stddev	.0003158	.018836	.0001808	.000406	4.4697	.0008747	.0004338
%RSD	4.248046	233.8338	19.49107	212.6614	1.249213	54.76996	33.59721
#1	.0070696	-.023525	.0010421	-.000510	354.0297	.0009820	.0009472
#2	.0076374	-.013560	.0010217	.000266	362.7395	.0012108	.0011478
#3	.0075929	.012920	.0007192	-.000329	356.6407	.0025985	.0017785

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.185223**	**-.002030**	**.0008019**	**-.015172**	**.0005314**	**.0133400**	**.0088185**
Stddev	.020278	.000465	.0002032	.000307	.0001779	.0025139	.0006627
%RSD	10.94809	22.92640	25.33336	2.026227	33.47622	18.84480	7.514383
#1	-.196957	-.002566	.0008988	-.015167	.0003418	.0158763	.0082240
#2	-.196904	-.001794	.0005685	-.014867	.0006947	.0132948	.0095330
#3	-.161807	-.001730	.0009385	-.015482	.0005575	.0108491	.0086987

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: PB169291TB Acquired: 8/19/2025 15:56:20 Type: Unk
Method: 6010-200.7 NEW(v115) 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	.0785441	-.007330	.0002665
Stddev	.0022039	.000810	.0000053
%RSD	2.805939	11.04424	1.980090
#1	.0804127	-.007818	.0002722
#2	.0791061	-.006395	.0002619
#3	.0761137	-.007776	.0002653

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6149.865	105422.6	11592.11	4770.731	7147.647
Stddev	11.859	161.4	22.10	7.649	16.833
%RSD	.1928293	.1530608	.1906867	.1603214	.2355017
#1	6146.480	105380.0	11614.73	4775.613	7134.063
#2	6163.048	105600.9	11591.02	4774.664	7166.479
#3	6140.066	105286.8	11570.56	4761.916	7142.400

Sample Name: Q2884-04 Acquired: 8/19/2025 16:00:48 Type: Unk
Method: 6010-200.7 NEW(v115) 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	.0042941	-.001179	.0022825	.0022256	.0029748	.0323220	.0942952
Stddev	.0011668	.000422	.0007548	.0009018	.0005191	.0063622	.0003821
%RSD	27.17297	35.79145	33.07006	40.52084	17.44952	19.68377	.4051875
#1	.0030354	-.000706	.0018838	.0019799	.0024884	.0373158	.0940061
#2	.0053397	-.001516	.0018106	.0032248	.0029147	.0344915	.0947284
#3	.0045071	-.001316	.0031531	.0014721	.0035214	.0251589	.0941511

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000383	.0003128	9.207637	.0002308	.0004045	.0983985	.1173140
Stddev	.0000683	.0000304	.022741	.0001073	.0001426	.0003134	.0033137
%RSD	178.1829	9.726326	.2469815	46.48070	35.24309	.3185375	2.824666
#1	.0001119	.0003239	9.232489	.0001079	.0004152	.0987373	.1155655
#2	-.000023	.0002784	9.187867	.0002791	.0002569	.0981188	.1211357
#3	.000026	.0003361	9.202556	.0003055	.0005415	.0983395	.1152406

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0336163	2.212501	.0020264	.0002595	166.0475	.0020641	.3872804
Stddev	.0002563	.009654	.0001388	.0002603	2.5613	.0018317	.0007738
%RSD	.7625319	.4363468	6.850530	100.2780	1.542503	88.74093	.1998036
#1	.0338547	2.204597	.0020643	.0002031	167.6483	.0003120	.3875964
#2	.0336491	2.209646	.0018725	.0000322	167.4007	.0019141	.3863986
#3	.0333452	2.223261	.0021422	.0005434	163.0934	.0039661	.3878463

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.145637	.0260253	.0007859	-.016521	-.001017	2.136065	.2721589
Stddev	.031318	.0001895	.0000791	.000337	.001168	.009712	.0014812
%RSD	.9956145	.7281179	10.06948	2.039451	114.8246	.4546778	.5442460
#1	3.174182	.0259134	.0008773	-.016844	-.000301	2.127849	.2704905
#2	3.112136	.0262441	.0007389	-.016171	-.000385	2.133562	.2726666
#3	3.150592	.0259183	.0007416	-.016547	-.002366	2.146783	.2733195

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: Q2884-04 Acquired: 8/19/2025 16:00:48 Type: Unk
Method: 6010-200.7 NEW(v115) 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	1.710295	-.007935	.0872647
Stddev	.020930	.001575	.0002741
%RSD	1.223774	19.84457	.3140571
#1	1.717615	-.009753	.0875090
#2	1.686688	-.007037	.0869683
#3	1.726582	-.007015	.0873167

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6369.715	110034.4	12103.91	4930.362	7522.488
Stddev	2.839	138.2	22.26	32.380	4.782
%RSD	.0445658	.1255774	.1838703	.6567488	.0635689
#1	6368.424	110105.0	12078.24	4893.195	7527.948
#2	6367.751	109875.2	12117.77	4952.472	7520.469
#3	6372.970	110123.1	12115.73	4945.418	7519.047

Sample Name: Q2888-02 Acquired: 8/19/2025 16:05:06 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**-.003581**	**-.001833**	**.0100040**	**.0054588**	**.0017061**	**.1006636**	**.2447425**
Stddev	.000932	.001212	.0009470	.0004454	.0010437	.0070667	.0015397
%RSD	26.03065	66.11801	9.466189	8.158848	61.17621	7.020102	.6291173
#1	-.002504	-.002027	.0090781	.0056888	.0005085	.0928101	.2431437
#2	-.004126	-.002938	.0099631	.0057421	.0024216	.1026716	.2462155
#3	-.004111	-.000536	.0109708	.0049454	.0021883	.1065089	.2448682

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000029**	**.0009238**	**20.01590**	**.0003378**	**.0001106**	**.0127437**	**.0436779**
Stddev	.000058	.0000539	.04191	.0002406	.0001622	.0005480	.0027939
%RSD	199.7227	5.838347	.2094039	71.22083	146.6186	4.300089	6.396629
#1	.000037	.0008681	19.98357	.0003337	.0001376	.0128316	.0423367
#2	-.000068	.0009275	20.00086	.0000993	.0002576	.0132424	.0468895
#3	-.000055	.0009757	20.06325	.0005804	-.000063	.0121571	.0418075

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1626851**	**3.447717**	**.0019841**	**.0000094**	**319.0670**	**.0016920**	**.1161368**
Stddev	.0010609	.017010	.0002173	.0002006	4.3378	.0014226	.0003270
%RSD	.6521228	.4933590	10.95027	2129.730	1.359521	84.07952	.2815838
#1	.1614753	3.432879	.0020906	-.000117	323.8778	.0003074	.1163060
#2	.1631233	3.466281	.0017341	-.000095	317.8692	.0031497	.1163445
#3	.1634567	3.443992	.0021275	.000241	315.4540	.0016188	.1157598

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6391989**	**.0259805**	**.0006450**	**-.017102**	**.0020211**	**1.344001**	**.0367897**
Stddev	.0206403	.0001340	.0002211	.000588	.0005803	.024614	.0006493
%RSD	3.229088	.5157951	34.27765	3.438360	28.71436	1.831415	1.764818
#1	.6154599	.0260904	.0008932	-.016599	.0019389	1.350464	.0362637
#2	.6529033	.0260198	.0005722	-.017748	.0026382	1.364739	.0365900
#3	.6492335	.0258312	.0004694	-.016959	.0014863	1.316800	.0375153

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: Q2888-02 Acquired: 8/19/2025 16:05:06 Type: Unk
Method: 6010-200.7 NEW(v115) 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	.4170369	-.010514	.1236665
Stddev	.0053858	.001184	.0001477
%RSD	1.291445	11.26410	.1194537
#1	.4139628	-.011539	.1234964
#2	.4138921	-.010785	.1237628
#3	.4232557	-.009218	.1237402

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6230.337	104828.0	11790.26	4783.525	7187.150
Stddev	11.771	270.8	140.92	11.549	19.786
%RSD	.1889292	.2583397	1.195211	.2414342	.2753036
#1	6217.267	104897.3	11900.75	4795.374	7164.461
#2	6233.644	104529.2	11838.46	4772.302	7196.168
#3	6240.101	105057.3	11631.56	4782.900	7200.821

Sample Name: Q2888-02DUP Acquired: 8/19/2025 16:09:29 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**-.002938**	**-.002310**	**.0116962**	**.0036178**	**.0027065**	**.1211316**	**.2793393**
Stddev	.000823	.001906	.0009467	.0036083	.0002030	.0017709	.0010816
%RSD	28.01983	82.51043	8.093800	99.73813	7.501064	1.461939	.3871884
#1	-.003887	-.001954	.0119623	.0077272	.0025153	.1192478	.2784648
#2	-.002416	-.000607	.0106449	.0021583	.0029196	.1213844	.2790043
#3	-.002512	-.004369	.0124813	.0009678	.0026847	.1227624	.2805487

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000198**	**.0010348**	**22.50359**	**.0004174**	**.0000994**	**.0140642**	**.0500167**
Stddev	.0000563	.0000150	.02561	.0002135	.0001202	.0001759	.0041084
%RSD	284.2991	1.449625	.1138196	51.14638	120.9433	1.251014	8.214046
#1	.0000842	.0010388	22.51545	.0003322	.0002067	.0142355	.0528637
#2	-.000005	.0010183	22.52112	.0006604	.0001221	.0138839	.0518795
#3	-.000020	.0010475	22.47419	.0002597	-.000031	.0140732	.0453069

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1705567**	**3.929339**	**.0023010**	**-.000514**	**360.2471**	**.0011151**	**.1280438**
Stddev	.0004640	.019923	.0000521	.000137	1.7684	.0033982	.0005548
%RSD	.2720319	.5070356	2.263622	26.76196	.4908835	304.7541	.4332646
#1	.1708284	3.949160	.0022619	-.000355	359.7878	.0032539	.1286542
#2	.1708208	3.929540	.0023601	-.000587	362.1998	.0028947	.1275703
#3	.1700210	3.909316	.0022811	-.000599	358.7536	-.002803	.1279069

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6599702**	**.0296918**	**.0008362**	**-.017082**	**.0026682**	**1.508151**	**.0400649**
Stddev	.0580840	.0007269	.0002076	.000045	.0010549	.028573	.0016756
%RSD	8.801005	2.448022	24.82420	.2636573	39.53556	1.894589	4.182183
#1	.6277285	.0292638	.0010397	-.017087	.0014804	1.477614	.0413606
#2	.6251586	.0305311	.0006248	-.017035	.0034958	1.512602	.0406614
#3	.7270234	.0292806	.0008439	-.017125	.0030284	1.534238	.0381727

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: Q2888-02DUP Acquired: 8/19/2025 16:09:29 Type: Unk
Method: 6010-200.7 NEW(v115) 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	.4665025	-.011322	.1381496
Stddev	.0055741	.001428	.0001683
%RSD	1.194876	12.61156	.1217952
#1	.4712871	-.012401	.1380182
#2	.4603817	-.011863	.1383393
#3	.4678387	-.009703	.1380915

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6180.431	104180.8	11484.87	4773.245	7096.333
Stddev	9.215	147.4	57.51	17.972	11.281
%RSD	.1490965	.1414789	.5007438	.3765156	.1589717
#1	6175.877	104245.9	11434.71	4754.796	7087.855
#2	6174.380	104284.4	11472.27	4774.241	7092.007
#3	6191.036	104012.1	11547.64	4790.699	7109.137

Sample Name: Q2888-02LX5 Acquired: 8/19/2025 16:13:53 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**-.002481**	**.0023123**	**.0033787**	**.0010819**	**.0005489**	**.0324040**	**.0540395**
Stddev	.001035	.0014660	.0005875	.0016127	.0007384	.0047876	.0004106
%RSD	41.73041	63.39835	17.38905	149.0679	134.5242	14.77481	.7598286
#1	-.002128	.0036465	.0036609	-.000543	-.000120	.0375643	.0537916
#2	-.001669	.0007430	.0027034	.002682	.000426	.0315414	.0545135
#3	-.003647	.0025474	.0037720	.001107	.001341	.0281063	.0538135

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000872**	**.0002048**	**4.755909**	**-.000116**	**-.000007**	**.0029228**	**.0092155**
Stddev	.0000545	.0000201	.020520	.000250	.000148	.0003391	.0059796
%RSD	62.47594	9.810638	.4314603	215.3479	2171.350	11.60356	64.88609
#1	.0001198	.0002183	4.736322	-.000398	-.000064	.0026248	.0054480
#2	.0000243	.0002143	4.754155	.000080	.000161	.0032918	.0161103
#3	.0001175	.0001817	4.777249	-.000030	-.000118	.0028517	.0060884

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0378921**	**.8163955**	**.0004152**	**-.000125**	**69.30674**	**.0004138**	**.0252801**
Stddev	.0002660	.0206502	.0002646	.000090	.84415	.0015637	.0005094
%RSD	.7018990	2.529442	63.72569	72.01286	1.217996	377.8584	2.014912
#1	.0376126	.7939443	.0006955	-.000174	69.31167	.0006935	.0251311
#2	.0379217	.8206647	.0001698	-.000021	70.14843	-.001271	.0248619
#3	.0381421	.8345775	.0003802	-.000179	68.46014	.001819	.0258474

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6445096**	**.0038716**	**.0002483**	**-.005137**	**.0000609**	**.2787905**	**.0077964**
Stddev	.0347792	.0002216	.0000198	.000425	.0006186	.0068443	.0008500
%RSD	5.396225	5.723692	7.967023	8.265799	1015.599	2.455001	10.90261
#1	.6047955	.0038571	.0002409	-.004834	-.000317	.2797578	.0083788
#2	.6592004	.0036576	.0002707	-.005622	-.000275	.2850997	.0068210
#3	.6695328	.0041001	.0002332	-.004955	.000775	.2715140	.0081894

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: Q2888-02LX5 Acquired: 8/19/2025 16:13:53 Type: Unk
Method: 6010-200.7 NEW(v115) 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	.0903192	.0125243	.0292259
Stddev	.0030205	.0010397	.0001960
%RSD	3.344213	8.301120	.6706429
#1	.0926027	.0137211	.0290007
#2	.0914606	.0120073	.0293583
#3	.0868944	.0118445	.0293186

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6440.952	109973.3	11412.41	4959.540	7669.670
Stddev	16.048	424.9	114.33	28.515	14.359
%RSD	.2491623	.3863964	1.001791	.5749457	.1872233
#1	6426.180	109558.0	11479.91	4935.870	7654.350
#2	6458.027	109954.7	11476.91	4991.196	7682.822
#3	6438.648	110407.3	11280.40	4951.553	7671.838

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: Q2888-02MS Acquired: 8/19/2025 16:18:11 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**.8118014**	**2.035748**	**.9298659**	**2.048661**	**.7926928**	**2.046095**	**.4843381**
Stddev	.0029375	.008825	.0010581	.007089	.0024232	.009904	.0021285
%RSD	.3618540	.4334979	.1137946	.3460379	.3056974	.4840589	.4394634
#1	.8147069	2.042600	.9309441	2.041421	.7899128	2.036405	.4865212
#2	.8088329	2.038854	.9288291	2.048972	.7943582	2.045679	.4842242
#3	.8118644	2.025790	.9298245	2.055589	.7938074	2.056201	.4822688

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1878541**	**.1964371**	**25.13702**	**.4026308**	**.1964267**	**.3033906**	**3.149679**
Stddev	.0007861	.0002696	.02783	.0012221	.0003007	.0005909	.021721
%RSD	.4184708	.1372576	.1107201	.3035366	.1530756	.1947572	.6896356
#1	.1887521	.1965506	25.16772	.4034098	.1967186	.3029160	3.148892
#2	.1875200	.1961293	25.12989	.4032603	.1964434	.3032034	3.171784
#3	.1872902	.1966315	25.11345	.4012222	.1961180	.3040524	3.128362

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3748394**	**6.130865**	**.4920643**	**.0746393**	**372.2175**	**.2977767**	**.3484160**
Stddev	.0020098	.013789	.0007551	.0001993	4.0240	.0046684	.0025595
%RSD	.5361844	.2249080	.1534508	.2670842	1.081086	1.567740	.7345963
#1	.3764701	6.115578	.4927894	.0747845	372.4741	.3022528	.3490237
#2	.3754540	6.134652	.4921211	.0744120	376.1071	.2981400	.3506170
#3	.3725940	6.142364	.4912824	.0747213	368.0714	.2929373	.3456074

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.95378**	**.2891769**	**.4176200**	**.6725372**	**.1932893**	**2.500497**	**6.003707**
Stddev	.04517	.0024608	.0007682	.0023071	.0006089	.021871	.014641
%RSD	.4123969	.8509578	.1839342	.3430483	.3150015	.8746837	.2438578
#1	10.91478	.2919971	.4168014	.6749347	.1931273	2.475438	6.019716
#2	11.00328	.2874670	.4183250	.6703326	.1939627	2.515747	6.000407
#3	10.94327	.2880664	.4177337	.6723443	.1927777	2.510305	5.990999

Sample Name: Q2888-02MS Acquired: 8/19/2025 16:18:11 Type: Unk
Method: 6010-200.7 NEW(v115) 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	.4972053	.1798721	.3340574		
Stddev	.0007970	.0018914	.0012788		
%RSD	.1602906	1.051535	.3828164		
#1	.4963189	.1809927	.3352801		
#2	.4978626	.1776883	.3341630		
#3	.4974346	.1809353	.3327290		

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6246.841	104220.3	11253.18	4772.207	7115.410
Stddev	3.318	299.8	38.86	14.948	10.138
%RSD	.0531189	.2876870	.3452857	.3132280	.1424744
#1	6250.392	104261.0	11210.21	4769.471	7103.711
#2	6246.312	103902.3	11285.84	4758.815	7121.615
#3	6243.819	104497.8	11263.49	4788.333	7120.904

Sample Name: Q2888-02MSD Acquired: 8/19/2025 16:22:19 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**.8266122**	**1.993741**	**.9411169**	**2.090400**	**.8158120**	**2.044398**	**.4645320**
Stddev	.0019614	.045891	.0008119	.007697	.0018928	.006604	.0011338
%RSD	.2372846	2.301771	.0862640	.3681881	.2320189	.3230496	.2440770
#1	.8245808	2.042891	.9417532	2.096533	.8138837	2.037691	.4639332
#2	.8284952	1.986318	.9402026	2.092903	.8158851	2.044606	.4638231
#3	.8267606	1.952013	.9413950	2.081763	.8176672	2.050895	.4658396

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1865557**	**.1983347**	**23.52542**	**.4064302**	**.1985517**	**.3069430**	**3.181216**
Stddev	.0000931	.0002692	.02666	.0004574	.0002903	.0004348	.006207
%RSD	.0499218	.1357157	.1133158	.1125513	.1462291	.1416629	.1951237
#1	.1864654	.1986347	23.53407	.4064662	.1988790	.3069794	3.185618
#2	.1866514	.1981142	23.49552	.4068687	.1984509	.3064912	3.183914
#3	.1865504	.1982551	23.54669	.4059559	.1983252	.3073585	3.174116

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4011923**	**5.854105**	**.4969826**	**.0750432**	**343.9540**	**.2992359**	**.3397268**
Stddev	.0004920	.017184	.0004698	.0000922	3.0447	.0033410	.0012718
%RSD	.1226325	.2935351	.0945278	.1228295	.8852079	1.116519	.3743638
#1	.4017450	5.869857	.4975240	.0749695	347.1452	.3023707	.3402311
#2	.4008023	5.856679	.4966829	.0751466	341.0808	.2957211	.3382802
#3	.4010295	5.835780	.4967409	.0750136	343.6361	.2996159	.3406691

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**11.04258**	**.2848137**	**.4281579**	**.6855113**	**.1969645**	**2.414390**	**6.017792**
Stddev	.02914	.0018569	.0010538	.0017720	.0005163	.012989	.005402
%RSD	.2638661	.6519596	.2461259	.2584934	.2621171	.5379660	.0897753
#1	11.02222	.2845371	.4292299	.6875568	.1963697	2.405398	6.022117
#2	11.07596	.2831107	.4281205	.6845345	.1972971	2.429281	6.019524
#3	11.02956	.2867934	.4271233	.6844427	.1972266	2.408490	6.011737

Sample Name: Q2888-02MSD Acquired: 8/19/2025 16:22:19 Type: Unk
Method: 6010-200.7 NEW(v115) 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	.4726070	.1789132	.3265633
Stddev	.0018855	.0017877	.0007371
%RSD	.3989641	.9991713	.2257247
#1	.4745406	.1791029	.3267267
#2	.4707735	.1770382	.3257581
#3	.4725069	.1805984	.3272049

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6247.220	106260.3	11511.30	4823.350	7146.468
Stddev	4.896	115.2	26.43	11.261	8.240
%RSD	.0783662	.1083983	.2295696	.2334671	.1153002
#1	6247.895	106202.6	11481.60	4825.864	7148.288
#2	6251.743	106392.9	11532.22	4833.142	7153.645
#3	6242.022	106185.4	11520.08	4811.045	7137.470

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: Q2888-02A Acquired: 8/19/2025 16:26:27 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**.7987862**	**1.975686**	**.9111288**	**2.020400**	**.7823267**	**1.982175**	**.4343354**
Stddev	.0055819	.034060	.0040921	.007589	.0015041	.001484	.0009605
%RSD	.6988014	1.723951	.4491282	.3756113	.1922533	.0748714	.2211519
#1	.8011553	1.968508	.9077249	2.024669	.7830816	1.982582	.4351833
#2	.7924105	1.945787	.9099926	2.011638	.7833038	1.983413	.4332922
#3	.8027929	2.012762	.9156690	2.024892	.7805947	1.980530	.4345307

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1799056**	**.1920375**	**21.56561**	**.3945162**	**.1923775**	**.2967358**	**3.116246**
Stddev	.0008802	.0002211	.05042	.0003538	.0004494	.0003372	.015760
%RSD	.4892361	.1151220	.2337835	.0896896	.2335867	.1136521	.5057234
#1	.1790256	.1917929	21.59310	.3949173	.1919747	.2963464	3.134131
#2	.1807859	.1920963	21.50743	.3942482	.1922957	.2969231	3.104394
#3	.1799052	.1922232	21.59632	.3943831	.1928622	.2969377	3.110214

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3487076**	**5.552430**	**.4828709**	**.0703751**	**319.6746**	**.2909115**	**.3260680**
Stddev	.0001071	.004989	.0004426	.0011885	3.6330	.0020611	.0004708
%RSD	.0307057	.0898532	.0916504	1.688819	1.136458	.7084980	.1444010
#1	.3485841	5.557276	.4824985	.0712389	319.9468	.2920784	.3261648
#2	.3487740	5.552706	.4827539	.0708668	315.9132	.2921244	.3264830
#3	.3487647	5.547309	.4833601	.0690197	323.1638	.2885317	.3255563

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.75211**	**.2724255**	**.4077861**	**.6541461**	**.1846097**	**2.312662**	**5.850949**
Stddev	.08298	.0015943	.0002397	.0023067	.0015966	.007504	.039613
%RSD	.7717469	.5852077	.0587747	.3526284	.8648247	.3244704	.6770274
#1	10.80392	.2725182	.4076397	.6532928	.1843194	2.308859	5.824736
#2	10.65641	.2739714	.4076559	.6523876	.1831782	2.321306	5.831593
#3	10.79602	.2707869	.4080627	.6567578	.1863315	2.307822	5.896518

Sample Name: Q2888-02A Acquired: 8/19/2025 16:26:27 Type: Unk
Method: 6010-200.7 NEW(v115) 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	.4260573	.1742035	.3099768
Stddev	.0052134	.0003666	.0007669
%RSD	1.223650	.2104543	.2474001
#1	.4201937	.1740982	.3101878
#2	.4278088	.1739010	.3091265
#3	.4301695	.1746112	.3106161

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6244.577	105677.2	11614.97	4808.385	7160.872
Stddev	7.242	57.1	44.73	9.534	9.202
%RSD	.1159740	.0540159	.3850924	.1982822	.1285102
#1	6251.891	105621.8	11646.50	4797.417	7171.497
#2	6244.431	105735.9	11563.78	4813.046	7155.662
#3	6237.409	105673.8	11634.64	4814.692	7155.455

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: PB169304BL Acquired: 8/19/2025 16:30:35 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**-.000259**	**.0005755**	**.0003092**	**-.000166**	**-.000700**	**.0111134**
Stddev	.000500	.0009034	.0000808	.001346	.002167	.0097839
%RSD	192.8990	156.9718	26.13766	809.6795	309.6950	88.03665
#1	-.000821	.0012392	.0002843	.001087	-.002340	.0091440
#2	-.000095	.0009408	.0003996	.000002	.001757	.0217322
#3	.000138	-.000453	.0002438	-.001588	-.001516	.0024640

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.005168**	**.0000956**	**.0000148**	**-.010091**	**.0000856**	**.0000887**
Stddev	.000754	.0000292	.0000162	.008502	.0001135	.0001365
%RSD	14.59797	30.53605	109.3229	84.25145	132.5699	153.9182
#1	-.004331	.0001260	.0000068	-.013848	-.000036	-.000065
#2	-.005379	.0000678	.0000335	-.000358	.000189	.000134
#3	-.005794	.0000930	.0000042	-.016068	.000103	.000197

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000026**	**-.000861**	**-.000632**	**-.005006**	**.0001624**	**-.000243**
Stddev	.000118	.002402	.000415	.015594	.0003338	.000295
%RSD	457.1029	278.8984	65.54503	311.5381	205.4948	121.4110
#1	.000105	-.003546	-.001076	.009377	-.000168	-.000419
#2	-.000057	-.000121	-.000256	-.021580	.000499	-.000407
#3	-.000125	.001084	-.000565	-.002813	.000156	.000097

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8863364**	**-.000052**	**-.001010**	**.8389334**	**-.003009**	**.0000103**
Stddev	.0436467	.001386	.000150	.0214563	.000386	.0002493
%RSD	4.924395	2656.812	14.85463	2.557563	12.83659	2414.412
#1	.9366028	.001441	-.001181	.8632613	-.003409	.0002742
#2	.8643665	-.001298	-.000953	.8227093	-.002981	-.000022
#3	.8580400	-.000299	-.000898	.8308296	-.002638	-.000221

Sample Name: PB169304BL Acquired: 8/19/2025 16:30:35 Type: Unk
Method: 6010-200.7 NEW(v115) 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	-.003727	.0005227	-.004022	.0022049	-.001889	F .0174632
Stddev	.000457	.0012848	.000275	.0006718	.003441	.0032897
%RSD	12.25672	245.7953	6.828618	30.46687	182.1641	18.83774
#1	-.004140	.0018950	-.003954	.0015742	-.005774	.0207576
#2	-.003805	-.000651	-.003788	.0029113	-.000669	.0174534
#3	-.003236	.000324	-.004324	.0021291	.000776	.0141783

Elem	Sr4077
Units	ppm
Avg	.0000369
Stddev	.0000990
%RSD	267.9501
#1	-.000062
#2	.000136
#3	.000036

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6827.793	114441.1	11606.23	5169.563	8668.268
Stddev	11.123	239.6	67.78	29.005	14.005
%RSD	.1629126	.2093584	.5839769	.5610696	.1615652
#1	6822.571	114171.6	11658.26	5151.700	8656.077
#2	6820.242	114521.4	11529.58	5153.960	8665.161
#3	6840.567	114630.2	11630.84	5203.030	8683.565

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: PB169304BS Acquired: 8/19/2025 16:34:54 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**.7547713**	**1.978833**	**.9051489**	**1.923618**	**.7671714**	**1.880099**
Stddev	.0098960	.036843	.0063809	.025797	.0079586	.013054
%RSD	1.311120	1.861863	.7049518	1.341058	1.037393	.6943262
#1	.7507470	1.994076	.9001406	1.906008	.7608380	1.890020
#2	.7475215	1.936815	.9029730	1.911617	.7645713	1.865310
#3	.7660454	2.005609	.9123331	1.953229	.7761048	1.884966

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1773975**	**.1855654**	**.1801242**	**.9628335**	**.3820087**	**.1846599**
Stddev	.0015616	.0015468	.0016473	.0060149	.0019829	.0017961
%RSD	.8803028	.8335418	.9145292	.6247116	.5190803	.9726611
#1	.1779755	.1861912	.1791612	.9683156	.3842398	.1835189
#2	.1756293	.1838038	.1791852	.9563993	.3813388	.1837305
#3	.1785878	.1867013	.1820263	.9637857	.3804474	.1867302

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2951606**	**2.884518**	**.1884162**	**1.881167**	**.4633715**	**.0712777**
Stddev	.0030683	.013056	.0015366	.023712	.0039441	.0003629
%RSD	1.039530	.4526335	.8155421	1.260489	.8511685	.5091514
#1	.2932991	2.892979	.1891853	1.865002	.4601808	.0716419
#2	.2934807	2.891094	.1866469	1.870110	.4621526	.0709161
#3	.2987020	2.869481	.1894164	1.908387	.4677811	.0712751

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.059909**	**.2838039**	**.1990547**	**9.370916**	**.2687493**	**.3841348**
Stddev	.008366	.0046709	.0005434	.048375	.0015819	.0041338
%RSD	.2733994	1.645831	.2729704	.5162253	.5886026	1.076124
#1	3.064015	.2890794	.1992299	9.424249	.2687539	.3815327
#2	3.065428	.2801943	.1984454	9.358628	.2671651	.3819703
#3	3.050283	.2821379	.1994889	9.329869	.2703288	.3889014

Sample Name: PB169304BS Acquired: 8/19/2025 16:34:54 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**.6302857**	**.1810440**	**.8556648**	**5.224939**	F **-.001905**	**.1889281**
Stddev	.0072079	.0024536	.0028681	.071847	.002493	.0018729
%RSD	1.143594	1.355233	.3351899	1.375083	130.8544	.9913402
#1	.6253774	.1793764	.8563455	5.170911	-.001325	.1903653
#2	.6269187	.1798943	.8581314	5.197430	.000246	.1868100
#3	.6385610	.1838613	.8525176	5.306476	-.004638	.1896091

Elem	Sr4077
Units	ppm
Avg	**.1831504**
Stddev	.0006694
%RSD	.3654763
#1	.1833042
#2	.1824175
#3	.1837294

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6708.632**	**115325.2**	**11870.56**	**5172.057**	**8286.052**
Stddev	51.754	549.1	72.47	12.879	61.949
%RSD	.7714484	.4761175	.6105049	.2490086	.7476257
#1	6745.717	114795.8	11818.91	5157.250	8335.826
#2	6730.673	115287.7	11953.40	5178.273	8305.657
#3	6649.507	115892.0	11839.35	5180.650	8216.673

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: CCV05 Acquired: 8/19/2025 16:38:54 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**5.090016**	**5.291319**	**4.913088**	**5.138411**	**5.071662**	**9.764797**	**9.764960**
Stddev	.009280	.056398	.002856	.009596	.011965	.050551	.198879
%RSD	.1823181	1.065854	.0581283	.1867465	.2359227	.5176876	2.036660
#1	5.088005	5.286603	4.916104	5.140075	5.071226	9.820858	9.921786
#2	5.081906	5.237427	4.910425	5.128092	5.059921	9.722684	9.831830
#3	5.100136	5.349926	4.912735	5.147066	5.083839	9.750849	9.541264

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2388990**	**2.473331**	**24.36941**	**.9947061**	**2.467810**	**1.252915**	**5.101838**
Stddev	.0004823	.004546	.05779	.0129842	.003214	.001869	.051185
%RSD	.2018690	.1838109	.2371569	1.305334	.1302571	.1491727	1.003256
#1	.2394074	2.476040	24.42995	.9937871	2.469320	1.254180	5.105109
#2	.2388416	2.468083	24.36348	.9822059	2.464119	1.250768	5.049097
#3	.2384480	2.475871	24.31481	1.008126	2.469992	1.253795	5.151309

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.432803**	**24.38284**	**2.465669**	**1.255391**	**24.87657**	**2.470331**	**2.542815**
Stddev	.009716	.06411	.003107	.013516	.24646	.005460	.033252
%RSD	.3993547	.2629437	.1260160	1.076676	.9907144	.2210102	1.307698
#1	2.441021	24.31849	2.468252	1.251950	24.93624	2.473302	2.540068
#2	2.435309	24.38331	2.462221	1.243926	24.60575	2.464030	2.511021
#3	2.422080	24.44671	2.466533	1.270295	25.08770	2.473660	2.577355

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.01154**	**4.794435**	**5.052709**	**4.979545**	**4.937007**	**5.129385**	**4.965625**
Stddev	.25317	.015899	.007395	.007991	.018949	.069564	.004145
%RSD	1.012193	.3316116	.1463631	.1604684	.3838191	1.356195	.0834717
#1	24.98632	4.806027	5.054703	4.985756	4.956415	5.117042	4.965228
#2	24.77192	4.800968	5.044521	4.970530	4.936054	5.066818	4.961693
#3	25.27637	4.776310	5.058903	4.982348	4.918553	5.204295	4.969954

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: CCV05 Acquired: 8/19/2025 16:38:54 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**5.042003**	**4.693322**	**4.966061**
Stddev	.011794	.018568	.080840
%RSD	.2339153	.3956306	1.627844
#1	5.033492	4.713731	4.956385
#2	5.037051	4.688807	5.051303
#3	5.055465	4.677427	4.890494

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6307.037**	**108450.1**	**11425.85**	**4878.429**	**7345.107**
Stddev	6.017	1119.0	28.49	68.643	6.988
%RSD	.0954083	1.031781	.2493062	1.407081	.0951448
#1	6300.312	108668.3	11409.66	4903.056	7339.109
#2	6308.884	109443.9	11409.15	4931.362	7343.432
#3	6311.914	107238.2	11458.74	4800.870	7352.781

Sample Name: CCB05 Acquired: 8/19/2025 16:43:04 Type: Unk
Method: 6010-200.7 NEW(v115) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB05 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005386**	**-.005052**	**.0005377**	**-.006911**	**-.003717**	**.0016826**
Stddev	.0001504	.000768	.0003095	.000394	.000377	.0026849
%RSD	27.91931	15.20197	57.57010	5.706361	10.15139	159.5627
#1	.0006682	-.005549	.0001909	-.007213	-.004115	.0046697
#2	.0005738	-.005439	.0006362	-.006465	-.003365	.0009078
#3	.0003737	-.004167	.0007860	-.007056	-.003671	-.000530

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.027225**	**.0002322**	**.0002314**	**-.022028**	**-.000845**	**.0002716**
Stddev	.000102	.0000205	.0000131	.002232	.000023	.0000386
%RSD	.3755854	8.836051	5.676369	10.13280	2.702781	14.22838
#1	-.027314	.0002085	.0002446	-.024530	-.000825	.0003135
#2	-.027247	.0002428	.0002184	-.020241	-.000869	.0002374
#3	-.027113	.0002452	.0002312	-.021312	-.000840	.0002638

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000421**	**-.008023**	**-.000550**	**-.004258**	**.0005193**	**-.000058**
Stddev	.000057	.001260	.000169	.005182	.0000697	.000122
%RSD	13.41977	15.70806	30.73445	121.6852	13.41495	210.9846
#1	-.000376	-.008694	-.000402	.001580	.0005475	-.000025
#2	-.000404	-.006569	-.000734	-.006044	.0004400	.000044
#3	-.000485	-.008805	-.000514	-.008311	.0005705	-.000193

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.219617**	**.0012809**	**-.001729**	**-.303622**	**-.002073**	**-.000035**
Stddev	.000749	.0004561	.000049	.013353	.000289	.000035
%RSD	.3411292	35.60844	2.844113	4.397888	13.94406	100.2468
#1	-.219601	.0008561	-.001678	-.311287	-.001792	.000005
#2	-.218877	.0017629	-.001776	-.288203	-.002057	-.000053
#3	-.220375	.0012237	-.001735	-.311375	-.002369	-.000059

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: CCB05 Acquired: 8/19/2025 16:43:04 Type: Unk
Method: 6010-200.7 NEW(v115) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB05 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.018078	-.000320	-.037900	-.004300	-.007393	F -.010364
Stddev	.000060	.000183	.002530	.000329	.000330	.000252
%RSD	.3329662	57.22605	6.674878	7.653340	4.467929	2.429571
#1	-.018043	-.000510	-.035413	-.003980	-.007025	-.010433
#2	-.018147	-.000306	-.040470	-.004281	-.007663	-.010574
#3	-.018043	-.000144	-.037816	-.004638	-.007492	-.010085

Elem	Sr4077
Units	ppm
Avg	.0003623
Stddev	.0000909
%RSD	25.09983
#1	.0004673
#2	.0003072
#3	.0003124

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	28691.78	461995.7	33528.31	22337.57	36343.82
Stddev	63.30	914.7	597.55	191.26	61.94
%RSD	.2206231	.1979995	1.782238	.8562102	.1704274
#1	28739.97	462213.2	33794.35	22503.23	36382.92
#2	28715.27	462782.1	32843.94	22128.26	36376.14
#3	28620.09	460991.8	33946.64	22381.21	36272.41

Sample Name: Q2891-01 Acquired: 8/19/2025 16:47:31 Type: Unk
Method: 6010-200.7 NEW(v115) 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	.1012242	-.009789	.1205316	-.009387	.0104139	128.3356
Stddev	.0029383	.002777	.0017424	.003334	.0028140	.2275
%RSD	2.902799	28.37065	1.445596	35.52371	27.02197	.1772860
#1	.1040398	-.011789	.1190564	-.009159	.0086788	128.5739
#2	.1014561	-.010960	.1200843	-.006172	.0089023	128.1207
#3	.0981768	-.006618	.1224540	-.012829	.0136607	128.3122

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6926470	.0109471	.0078111	F 2574.638	.7159533	.0699201
Stddev	.0035076	.0000700	.0001061	12.670	.0013072	.0004128
%RSD	.5064007	.6395842	1.358038	.4921057	.1825875	.5903909
#1	.6932146	.0109641	.0078565	2582.945	.7174471	.0703961
#2	.6958362	.0110071	.0078870	2580.914	.7153941	.0697042
#3	.6888903	.0108702	.0076899	2560.055	.7150187	.0696601

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2703129	204.0113	2.775586	497.9962	.5486971	.0024251
Stddev	.0003186	.6031	.007828	.4864	.0014582	.0003040
%RSD	.1178447	.2956314	.2820254	.0976771	.2657593	12.53578
#1	.2700461	203.6828	2.780889	498.2149	.5503421	.0020779
#2	.2706656	203.6438	2.779273	497.4389	.5481859	.0026433
#3	.2702271	204.7074	2.766595	498.3350	.5475634	.0025542

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.187138	.1893544	2.468441	6.280411	.3782765	.1563979
Stddev	.037758	.0016209	.007696	.215192	.0058709	.0006827
%RSD	1.184711	.8559882	.3117927	3.426392	1.552024	.4365265
#1	3.144725	.1898350	2.461074	6.033946	.3747508	.1563103
#2	3.217093	.1906806	2.476429	6.376278	.3750249	.1571202
#3	3.199597	.1875476	2.467819	6.431008	.3850538	.1557632

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: Q2891-01 Acquired: 8/19/2025 16:47:31 Type: Unk
Method: 6010-200.7 NEW(v115) 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	.0074878	5.264469	2.430884	4.988025	F 100.4389	-.236753
Stddev	.0004437	.007490	.029134	.032483	.2874	.001643
%RSD	5.925146	.1422724	1.198502	.6512135	.2861648	.6941066
#1	.0078113	5.260433	2.441042	5.016742	100.4193	-.238501
#2	.0076700	5.273112	2.398030	4.994562	100.7356	-.236520
#3	.0069821	5.259863	2.453578	4.952771	100.1617	-.235239

Elem	Sr4077
Units	ppm
Avg	7.327798
Stddev	.023672
%RSD	.3230423
#1	7.300910
#2	7.336986
#3	7.345499

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5405.242	93809.88	11740.90	4187.636	5205.203
Stddev	4.726	161.05	63.56	12.128	1.179
%RSD	.0874327	.1716731	.5413773	.2896144	.0226592
#1	5410.029	93700.74	11692.77	4200.487	5204.361
#2	5405.117	93994.85	11716.98	4176.391	5206.551
#3	5400.579	93734.06	11812.96	4186.028	5204.697

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: Q2891-02 Acquired: 8/19/2025 16:51:49 Type: Unk
Method: 6010-200.7 NEW(v115) 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	.0383412	.0145744	.0650250	-.005469	.0101379	203.6224
Stddev	.0010842	.0038132	.0026153	.003397	.0034686	1.1960
%RSD	2.827760	26.16345	4.021962	62.11408	34.21441	.5873854
#1	.0387464	.0102975	.0652040	-.008543	.0109597	204.5443
#2	.0371127	.0176191	.0675461	-.006041	.0131219	204.0520
#3	.0391644	.0158066	.0623248	-.001822	.0063322	202.2709

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.868603	.0165648	.0040977	1522.711	.3099332	.0271667
Stddev	.005796	.0000573	.0000837	18.138	.0017078	.0000747
%RSD	.3102024	.3457523	2.042680	1.191145	.5510047	.2751120
#1	1.866331	.0166094	.0041707	1525.648	.3118438	.0270829
#2	1.864286	.0165847	.0040064	1539.202	.3094003	.0272265
#3	1.875191	.0165002	.0041160	1503.285	.3085554	.0271906

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0623042	77.64937	5.744906	125.3550	.0954216	.0046988
Stddev	.0007024	.25562	.011084	.4394	.0003380	.0006138
%RSD	1.127423	.3291922	.1929323	.3505234	.3542427	13.06317
#1	.0618146	77.60689	5.733674	125.5084	.0957138	.0052499
#2	.0631090	77.41766	5.755835	125.6970	.0950514	.0040373
#3	.0619890	77.92357	5.745210	124.8594	.0954997	.0048092

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.211363	.1420856	.4356646	55.83202	.1186867	.0077094
Stddev	.039997	.0010409	.0017838	.29876	.0019446	.0002530
%RSD	.6439331	.7325762	.4094421	.5350983	1.638389	3.281159
#1	6.181271	.1426805	.4374820	55.93123	.1183018	.0076730
#2	6.196067	.1408838	.4355955	55.49629	.1169633	.0079785
#3	6.256751	.1426927	.4339164	56.06856	.1207949	.0074766

Sample Name: Q2891-02 Acquired: 8/19/2025 16:51:49 Type: Unk
Method: 6010-200.7 NEW(v115) 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	.0031955	7.500507	7.086374	4.194066	F 25.05650	-.118488
Stddev	.0007099	.010768	.067903	.025105	.14798	.004149
%RSD	22.21657	.1435642	.9582204	.5985842	.5905926	3.501485
#1	.0037835	7.489796	7.164029	4.199575	25.16207	-.120805
#2	.0033962	7.500393	7.056928	4.166664	24.88735	-.120961
#3	.0024068	7.511331	7.038164	4.215959	25.12007	-.113698

Elem	Sr4077
Units	ppm
Avg	5.768435
Stddev	.071182
%RSD	1.233984
#1	5.812197
#2	5.806808
#3	5.686301

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6484.737	109915.0	13659.32	5009.717	5683.811
Stddev	9.248	560.5	103.03	38.150	4.985
%RSD	.1426192	.5099466	.7543133	.7615176	.0877001
#1	6485.267	109310.4	13597.15	4968.301	5682.110
#2	6493.710	110017.1	13602.54	5017.427	5689.423
#3	6475.235	110417.4	13778.25	5043.422	5679.899

Sample Name: Q2891-03 Acquired: 8/19/2025 16:56:11 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**.0224812**	**.0076764**	**.0480023**	**-.012158**	**.0098998**	**130.6158**
Stddev	.0017357	.0014316	.0030343	.003852	.0018448	.1995
%RSD	7.720808	18.64929	6.321173	31.68215	18.63452	.1527076
#1	.0214659	.0062714	.0489290	-.007739	.0091411	130.7129
#2	.0244854	.0091332	.0504652	-.014804	.0120030	130.3864
#3	.0214924	.0076247	.0446127	-.013932	.0085554	130.7480

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.187102**	**.0109261**	**.0031613**	**2083.952**	**.1558365**	**.0217948**
Stddev	.009835	.0001176	.0000776	28.577	.0001904	.0001886
%RSD	.8284683	1.075997	2.456080	1.371278	.1221904	.8652905
#1	1.178035	.0107989	.0031253	2057.180	.1559569	.0219878
#2	1.185714	.0109489	.0031082	2080.631	.1559357	.0217857
#3	1.197557	.0110307	.0032504	2114.044	.1556170	.0216110

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0446013**	**66.62784**	**4.866482**	**768.7032**	**.0981724**	**.0015289**
Stddev	.0006097	.27854	.040097	1.4541	.0001903	.0005571
%RSD	1.366927	.4180588	.8239358	.1891617	.1938330	36.43648
#1	.0438986	66.60190	4.830779	768.1596	.0982101	.0020189
#2	.0449901	66.36317	4.858806	767.5993	.0979661	.0009230
#3	.0449150	66.91845	4.909862	770.3508	.0983410	.0016447

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.562051**	**.2331470**	**.9914726**	**11.98900**	**.1983155**	**.0083949**
Stddev	.041539	.0009760	.0039444	.05656	.0008198	.0002029
%RSD	.9105340	.4186185	.3978362	.4717347	.4133787	2.416918
#1	4.541011	.2334620	.9887414	12.04527	.1988187	.0086230
#2	4.535242	.2339267	.9959948	11.93217	.1973696	.0082346
#3	4.609900	.2320524	.9896816	11.98955	.1987584	.0083271

Sample Name: Q2891-03 Acquired: 8/19/2025 16:56:11 Type: Unk
Method: 6010-200.7 NEW(v115) 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	.0026473	4.796777	2.908017	2.414974	F 50.71746	-.231088
Stddev	.0013654	.018885	.014203	.013703	.20884	.004811
%RSD	51.57923	.3936923	.4884134	.5674116	.4117670	2.081743
#1	.0014158	4.781591	2.919507	2.406421	50.58794	-.226932
#2	.0041157	4.790817	2.892138	2.407722	50.60605	-.229973
#3	.0024103	4.817922	2.912407	2.430779	50.95838	-.236358

Elem	Sr4077
Units	ppm
Avg	5.086805
Stddev	.015966
%RSD	.3138699
#1	5.083782
#2	5.104066
#3	5.072567

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5659.276	99476.84	12449.17	4383.358	5263.981
Stddev	5.625	226.34	40.94	8.406	6.606
%RSD	.0993916	.2275336	.3288822	.1917721	.1254945
#1	5665.363	99238.73	12493.91	4380.221	5271.129
#2	5658.197	99689.21	12440.01	4376.972	5262.714
#3	5654.269	99502.57	12413.57	4392.882	5258.101

Sample Name: Q2891-04 Acquired: 8/19/2025 17:00:31 Type: Unk
Method: 6010-200.7 NEW(v115) 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	.0286194	.0117331	.0498749	-.001164	.0138120	210.5929
Stddev	.0050113	.0022407	.0012720	.003204	.0011063	1.5712
%RSD	17.51019	19.09701	2.550460	275.2624	8.009829	.7460679
#1	.0247080	.0139574	.0495897	-.004216	.0150751	208.8110
#2	.0268820	.0117653	.0512654	-.001449	.0133463	211.7791
#3	.0342682	.0094764	.0487697	.002173	.0130147	211.1887

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.844754	.0177693	.0041321	1920.941	.2238904	.0389451
Stddev	.009456	.0000757	.0000818	6.496	.0003891	.0001891
%RSD	.5126142	.4257962	1.980184	.3381830	.1737798	.4855281
#1	1.842050	.0177645	.0041703	1918.631	.2243083	.0387632
#2	1.836945	.0178472	.0041877	1928.276	.2235387	.0389316
#3	1.855268	.0176961	.0040381	1915.915	.2238242	.0391406

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0795946	73.66790	4.397066	341.3578	.1251062	.0034013
Stddev	.0003189	.57097	.021975	.5106	.0002202	.0005018
%RSD	.4006619	.7750538	.4997555	.1495804	.1760081	14.75442
#1	.0798982	73.51218	4.378779	340.8323	.1252215	.0034460
#2	.0796232	73.19094	4.390976	341.8521	.1252448	.0028787
#3	.0792624	74.30057	4.421443	341.3889	.1248523	.0038794

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.40384	.2824603	1.623738	51.76128	.2490193	.0092118
Stddev	.11856	.0016261	.000955	.35055	.0021428	.0006289
%RSD	.9558072	.5756956	.0588020	.6772413	.8604988	6.827227
#1	12.41071	.2814978	1.623520	51.81037	.2488390	.0089608
#2	12.28200	.2843378	1.624783	51.38877	.2469723	.0099275
#3	12.51882	.2815453	1.622911	52.08469	.2512465	.0087472

Sample Name: Q2891-04 Acquired: 8/19/2025 17:00:31 Type: Unk
Method: 6010-200.7 NEW(v115) 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	-.000761	7.371043	8.829261	3.643826	F 64.30700	-.104078
Stddev	.000924	.022046	.058056	.025605	.31457	.001296
%RSD	121.3137	.2990862	.6575358	.7027046	.4891626	1.245189
#1	.000166	7.361521	8.892082	3.622596	64.03235	-.103555
#2	-.000770	7.355360	8.818111	3.636621	64.23848	-.105553
#3	-.001681	7.396250	8.777588	3.672262	64.65019	-.103124

Elem	Sr4077
Units	ppm
Avg	6.913437
Stddev	.072830
%RSD	1.053453
#1	6.839556
#2	6.985168
#3	6.915587

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6238.784	107407.1	13504.81	4801.031	5382.148
Stddev	7.633	59.0	49.10	6.837	7.531
%RSD	.1223398	.0549587	.3635524	.1424101	.1399302
#1	6241.949	107339.0	13517.62	4808.825	5385.319
#2	6244.326	107440.4	13450.57	4798.223	5387.575
#3	6230.079	107441.9	13546.22	4796.045	5373.550

Sample Name: Q2892-02 Acquired: 8/19/2025 17:04:54 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**.2112385**	**-.041151**	**1.337397**	**.0014523**	**-.008899**	**192.5292**
Stddev	.0022837	.000761	.000670	.0032622	.002791	.9669
%RSD	1.081112	1.848376	.0501037	224.6305	31.36034	.5021857
#1	.2095954	-.041331	1.337066	-.001139	-.006574	192.8905
#2	.2102739	-.041805	1.336958	.000380	-.011994	193.2633
#3	.2138463	-.040316	1.338169	.005116	-.008129	191.4337

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9767582**	**.0210423**	**.0211844**	**35.51529**	**.3808184**	**.1880739**
Stddev	.0101249	.0002234	.0002178	.29853	.0011443	.0004254
%RSD	1.036585	1.061665	1.028254	.8405799	.3004913	.2262105
#1	.9689993	.0209507	.0212863	35.30881	.3795715	.1876323
#2	.9730638	.0208792	.0213326	35.37947	.3810631	.1884811
#3	.9882115	.0212969	.0209343	35.85759	.3818206	.1881084

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.083302**	**347.9308**	**8.111035**	**92.19329**	**.3222231**	**.0137959**
Stddev	.002728	2.4691	.082855	.72474	.0010755	.0008279
%RSD	.1309650	.7096516	1.021506	.7861044	.3337802	6.001293
#1	2.082024	345.1242	8.053391	91.84344	.3210351	.0128685
#2	2.081446	348.8994	8.073730	91.70986	.3225036	.0140587
#3	2.086434	349.7687	8.205984	93.02659	.3231305	.0144606

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.800563**	**.6941425**	**2.368315**	**36.16389**	**.2248612**	**.0177152**
Stddev	.038571	.0062070	.005452	.22718	.0047259	.0001715
%RSD	.4944704	.8942004	.2302102	.6281913	2.101718	.9681031
#1	7.756391	.6915478	2.367349	35.90531	.2199129	.0178269
#2	7.827585	.6896538	2.374186	36.25493	.2293279	.0178010
#3	7.817715	.7012258	2.363411	36.33142	.2253429	.0175177

Sample Name: Q2892-02 Acquired: 8/19/2025 17:04:54 Type: Unk
Method: 6010-200.7 NEW(v115) 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	.0272303	8.848140	F 15.04881	8.526586	2.188519	.3638358
Stddev	.0003247	.086948	.32962	.026326	.011601	.0045077
%RSD	1.192531	.9826671	2.190363	.3087461	.5300979	1.238940
#1	.0268555	8.795371	14.82218	8.511486	2.189379	.3604509
#2	.0274255	8.800555	15.42695	8.556984	2.199667	.3621038
#3	.0274101	8.948494	14.89730	8.511288	2.176512	.3689526

Elem	Sr4077
Units	ppm
Avg	-.093685
Stddev	.001655
%RSD	1.766358
#1	-.092852
#2	-.095590
#3	-.092611

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7863.310	135469.1	15766.64	6015.099	6956.994
Stddev	22.244	88.2	105.39	3.297	21.390
%RSD	.2828813	.0651145	.6684054	.0548044	.3074645
#1	7886.712	135568.3	15765.28	6017.468	6980.833
#2	7860.777	135439.2	15872.70	6016.495	6950.671
#3	7842.442	135399.7	15661.94	6011.334	6939.478

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: Q2891-02DUP Acquired: 8/19/2025 17:09:04 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**.2155604**	**-.036560**	**1.320792**	**.0052096**	**-.005230**	**193.9640**
Stddev	.0025896	.002049	.008104	.0010523	.000904	.7517
%RSD	1.201334	5.605749	.6135529	20.19966	17.28189	.3875646
#1	.2127174	-.038707	1.311461	.0060188	-.004422	193.7086
#2	.2161793	-.034625	1.326068	.0055900	-.006206	193.3732
#3	.2177844	-.036348	1.324847	.0040200	-.005062	194.8101

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9867592**	**.0214075**	**.0210699**	**34.61399**	**.3789475**	**.1745368**
Stddev	.0055808	.0001141	.0002228	.10061	.0016203	.0008517
%RSD	.5655677	.5330902	1.057312	.2906564	.4275901	.4879499
#1	.9833420	.0215355	.0209645	34.54984	.3796662	.1736019
#2	.9931994	.0213706	.0209194	34.72994	.3800841	.1747401
#3	.9837364	.0213164	.0213258	34.56218	.3770921	.1752684

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**29.08316**	**340.1999**	**6.785333**	**89.51964**	**.3258791**	**.0141866**
Stddev	.10552	1.2938	.032312	.18500	.0018651	.0005287
%RSD	.3628202	.3803082	.4762080	.2066537	.5723384	3.727034
#1	28.96140	340.2790	6.762841	89.38383	.3237256	.0140036
#2	29.14800	341.4524	6.822360	89.73034	.3269266	.0147825
#3	29.14009	338.8684	6.770799	89.44476	.3269849	.0137736

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.493892**	**.6976686**	**2.752129**	**38.38327**	**.2064215**	**.0167387**
Stddev	.050266	.0039306	.011937	.14648	.0040177	.0001231
%RSD	.6707582	.5633972	.4337262	.3816268	1.946346	.7352773
#1	7.453741	.6939097	2.762722	38.35611	.2110454	.0166367
#2	7.550266	.7017510	2.754470	38.54143	.2044360	.0168754
#3	7.477669	.6973451	2.739195	38.25227	.2037832	.0167039

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: Q2891-02DUP Acquired: 8/19/2025 17:09:04 Type: Unk
Method: 6010-200.7 NEW(v115) 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	.0362758	9.387012	F 13.91281	8.924728	2.171646	.3683595
Stddev	.0004026	.027985	.29058	.058750	.008711	.0028329
%RSD	1.109751	.2981295	2.088580	.6582885	.4011295	.7690620
#1	.0358231	9.384068	13.57835	8.860373	2.162153	.3671181
#2	.0365934	9.416353	14.05687	8.938320	2.173512	.3716012
#3	.0364109	9.360615	14.10322	8.975492	2.179273	.3663592

Elem	Sr4077
Units	ppm
Avg	-.094995
Stddev	.000570
%RSD	.6004810
#1	-.095582
#2	-.094960
#3	-.094443

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7877.482	137288.0	15810.56	6084.306	6922.828
Stddev	26.320	374.7	55.68	30.087	34.032
%RSD	.3341145	.2729557	.3521938	.4944938	.4915980
#1	7907.396	137293.7	15852.55	6055.777	6961.479
#2	7867.169	136910.4	15747.40	6081.403	6909.649
#3	7857.880	137659.8	15831.74	6115.739	6897.356

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: Q2891-02LX5 Acquired: 8/19/2025 17:13:13 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**.0537605**	**-.009024**	**.3066906**	**-.000706**	**-.003050**	**54.02770**	**.2664275**
Stddev	.0006750	.002288	.0044378	.002957	.002058	.12348	.0009148
%RSD	1.255601	25.35614	1.447010	419.0411	67.49867	.2285585	.3433458
#1	.0533138	-.011511	.3115016	.000182	-.003484	54.15151	.2670622
#2	.0534306	-.008555	.3058130	.001706	-.004856	54.02704	.2653789
#3	.0545370	-.007007	.3027571	-.004005	-.000809	53.90454	.2668414

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0061384**	**.0026901**	**10.14967**	**.1069628**	**.0410949**	**.1021617**	**94.65735**
Stddev	.0000973	.0001013	.01756	.0002622	.0006281	.0020438	.27251
%RSD	1.585485	3.765066	.1730007	.2451347	1.528421	2.000517	.2878932
#1	.0062482	.0027822	10.16487	.1067456	.0417628	.1040574	94.43303
#2	.0061047	.0027064	10.13045	.1068887	.0410057	.1024310	94.96062
#3	.0060625	.0025816	10.15369	.1072541	.0405161	.0999966	94.57839

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.336517**	**26.28531**	**.0715580**	**.0034063**	**2.215939**	**.1967343**	**.6538020**
Stddev	.008811	.05857	.0007737	.0003364	.008794	.0024078	.0039084
%RSD	.3771068	.2228344	1.081223	9.877119	.3968334	1.223873	.5977988
#1	2.341232	26.30524	.0721229	.0032752	2.209901	.1955377	.6568593
#2	2.326352	26.21938	.0718749	.0031551	2.226028	.1951593	.6551482
#3	2.341968	26.33132	.0706761	.0037885	2.211889	.1995060	.6493984

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.264521**	**.0429307**	**.0049951**	**.0038031**	**2.496227**	**4.845384**	**1.863747**
Stddev	.047884	.0023097	.0002467	.0004200	.008111	.175526	.022049
%RSD	.5168524	5.380158	4.939103	11.04399	.3249231	3.622533	1.183053
#1	9.297310	.0414968	.0050222	.0034458	2.505581	4.954502	1.885676
#2	9.286682	.0455952	.0052272	.0036977	2.491145	4.938740	1.863985
#3	9.209571	.0417001	.0047360	.0042658	2.491956	4.642908	1.841580

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: Q2891-02LX5 Acquired: 8/19/2025 17:13:13 Type: Unk
Method: 6010-200.7 NEW(v115) 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	.4623002	.0990448	-.023572
Stddev	.0123971	.0019324	.000687
%RSD	2.681601	1.951065	2.915858
#1	.4763880	.0999714	-.022846
#2	.4574555	.0968235	-.024213
#3	.4530571	.1003394	-.023658

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6847.010	118034.9	12846.97	5249.416	7707.203
Stddev	18.258	397.6	25.61	10.682	3.427
%RSD	.2666512	.3368441	.1993250	.2034863	.0444651
#1	6867.435	118426.9	12842.95	5260.971	7710.691
#2	6841.319	117632.0	12874.34	5239.902	7703.840
#3	6832.275	118045.9	12823.60	5247.374	7707.078

Sample Name: Q2891-02MS Acquired: 8/19/2025 17:17:18 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**.8569896**	**1.969919**	**2.414557**	**1.599188**	**.2350683**	**221.3138**
Stddev	.0028705	.061440	.001554	.003564	.0027130	2.6743
%RSD	.3349534	3.118929	.0643604	.2228682	1.154141	1.208374
#1	.8601983	1.919743	2.414915	1.595998	.2322772	219.9605
#2	.8546655	2.038443	2.412855	1.603035	.2352320	219.5866
#3	.8561051	1.951571	2.415901	1.598530	.2376958	224.3942

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.270984**	**.1666172**	**.2233918**	**39.94420**	**.7212616**	**.3971549**
Stddev	.007108	.0010221	.0001076	.10546	.0026187	.0005879
%RSD	.5592389	.6134132	.0481728	.2640121	.3630770	.1480203
#1	1.278078	.1658362	.2234021	39.94200	.7185179	.3977962
#2	1.263862	.1662414	.2232794	39.83987	.7237343	.3970270
#3	1.271012	.1677739	.2234939	40.05075	.7215325	.3966415

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6127887**	**349.7140**	**8.259316**	**106.7773**	**.8505157**	**.0761960**
Stddev	.0012402	.8747	.032475	.3555	.0002721	.0009327
%RSD	.2023858	.2501326	.3931982	.3329093	.0319886	1.224095
#1	.6114744	350.6684	8.283017	106.4891	.8503196	.0772432
#2	.6129533	349.5233	8.222299	106.6683	.8508263	.0758901
#3	.6139383	348.9504	8.272632	107.1745	.8504012	.0754546

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**11.26776**	**.9706888**	**2.612455**	**56.15201**	**.3911546**	**.3367528**
Stddev	.04316	.0027520	.009618	.19665	.0020248	.0003558
%RSD	.3830438	.2835059	.3681425	.3502034	.5176424	.1056470
#1	11.31720	.9738488	2.613566	56.29317	.3930641	.3363831
#2	11.23761	.9693985	2.621470	56.23546	.3913681	.3367825
#3	11.24848	.9688190	2.602331	55.92740	.3890315	.3370928

Sample Name: Q2891-02MS Acquired: 8/19/2025 17:17:18 Type: Unk
Method: 6010-200.7 NEW(v115) 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	.7002175	F 11.01832	F 16.89528	F 15.43912	2.200216	.6034516
Stddev	.0015235	.03902	.16824	.06254	.008344	.0013986
%RSD	.2175799	.3541712	.9957651	.4050901	.3792284	.2317615
#1	.6991462	11.04447	17.03717	15.46006	2.193856	.6043872
#2	.7019616	10.97346	16.93925	15.48851	2.209663	.6018438
#3	.6995446	11.03703	16.70943	15.36880	2.197128	.6041237

Elem	Sr4077
Units	ppm
Avg	.0838724
Stddev	.0017526
%RSD	2.089583
#1	.0854840
#2	.0820066
#3	.0841266

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7898.498	137560.9	15700.89	6065.779	6853.827
Stddev	14.528	489.2	54.59	36.806	9.805
%RSD	.1839371	.3556351	.3476774	.6067763	.1430599
#1	7902.622	137935.7	15757.39	6061.832	6851.116
#2	7910.519	137007.4	15696.85	6031.105	6864.702
#3	7882.354	137739.4	15648.44	6104.399	6845.662

Sample Name: Q2891-02MSD Acquired: 8/19/2025 17:21:20 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**.8583546**	**2.038796**	**2.434136**	**1.573515**	**.2233865**	**220.8806**
Stddev	.0003752	.066696	.008069	.003635	.0014545	.9571
%RSD	.0437110	3.271317	.3315004	.2309801	.6511036	.4333020
#1	.8587769	2.021388	2.439819	1.570611	.2247716	221.1584
#2	.8582275	1.982532	2.424900	1.572344	.2235165	221.6680
#3	.8580595	2.112470	2.437688	1.577591	.2218714	219.8153

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.267039**	**.1631238**	**.2237805**	**39.79435**	**.7177896**	**.4032919**
Stddev	.005360	.0003773	.0004540	.07585	.0013437	.0009327
%RSD	.4230730	.2312871	.2028694	.1905924	.1871964	.2312765
#1	1.268442	.1629758	.2239480	39.77346	.7170883	.4042186
#2	1.271558	.1635527	.2232666	39.87845	.7169418	.4023533
#3	1.261116	.1628430	.2241269	39.73114	.7193389	.4033038

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6049349**	**357.4764**	**8.255028**	**100.0853**	**.8744608**	**.0759450**
Stddev	.0012513	.0766	.015090	.1885	.0024700	.0003687
%RSD	.2068490	.0214172	.1827920	.1883368	.2824571	.4855537
#1	.6052055	357.4316	8.243308	99.8677	.8765660	.0758074
#2	.6035704	357.4327	8.272054	100.1979	.8717418	.0763627
#3	.6060287	357.5648	8.249724	100.1902	.8750747	.0756648

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**11.03974**	**.9552790**	**2.661826**	**51.22818**	**.4037407**	**.3359081**
Stddev	.06067	.0018802	.007231	.14549	.0013046	.0005395
%RSD	.5495816	.1968242	.2716531	.2840046	.3231155	.1605988
#1	11.10970	.9558587	2.663149	51.38319	.4050029	.3362878
#2	11.00791	.9568012	2.668304	51.20677	.4023976	.3352906
#3	11.00160	.9531772	2.654025	51.09459	.4038216	.3361458

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: Q2891-02MSD Acquired: 8/19/2025 17:21:20 Type: Unk
Method: 6010-200.7 NEW(v115) 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	.6950586	F 10.26203	F 16.44574	F 15.65573	2.340294	.5752964
Stddev	.0019550	.01965	.35476	.07419	.011921	.0012189
%RSD	.2812753	.1914570	2.157163	.4738982	.5093740	.2118682
#1	.6942030	10.25799	16.85506	15.67924	2.338847	.5763066
#2	.6936772	10.28339	16.22707	15.57263	2.329163	.5756400
#3	.6972956	10.24472	16.25507	15.71532	2.352873	.5739426

Elem	Sr4077
Units	ppm
Avg	.0736198
Stddev	.0016460
%RSD	2.235863
#1	.0746680
#2	.0744688
#3	.0717226

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	8021.097	137418.9	15941.80	6121.762	6879.016
Stddev	4.495	117.9	50.47	31.150	13.736
%RSD	.0560413	.0857864	.3166025	.5088448	.1996863
#1	8016.283	137289.6	15955.30	6100.202	6863.171
#2	8021.823	137446.8	15885.95	6107.608	6887.577
#3	8025.185	137520.3	15984.15	6157.476	6886.299

Sample Name: Q2891-02A Acquired: 8/19/2025 17:25:22 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**.8091466**	**1.863853**	**2.169047**	**1.489208**	**.5997279**	**193.0065**
Stddev	.0012577	.063441	.004657	.003031	.0041615	1.6763
%RSD	.1554306	3.403738	.2146953	.2035624	.6938935	.8685431
#1	.8101881	1.911568	2.163704	1.490938	.5950532	194.4453
#2	.8095022	1.888132	2.171194	1.490978	.6011017	191.1657
#3	.8077494	1.791859	2.172243	1.485708	.6030288	193.4083

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.133563**	**.1536995**	**.2035853**	**35.10048**	**.6627201**	**.3615382**
Stddev	.005882	.0004841	.0002768	.03882	.0027068	.0011369
%RSD	.5189258	.3149710	.1359850	.1105840	.4084318	.3144500
#1	1.139855	.1540359	.2032657	35.14506	.6627715	.3604350
#2	1.128202	.1539180	.2037517	35.08222	.6654008	.3614738
#3	1.132632	.1531447	.2037384	35.07417	.6599880	.3627060

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**21.80529**	**342.7854**	**7.227561**	**90.74309**	**.7822394**	**.0725103**
Stddev	.01767	.7677	.027618	.12421	.0025159	.0001953
%RSD	.0810537	.2239684	.3821199	.1368778	.3216311	.2692701
#1	21.78684	342.9174	7.258826	90.78916	.7813082	.0722865
#2	21.80697	343.4785	7.206484	90.83769	.7803218	.0726454
#3	21.82207	341.9602	7.217375	90.60243	.7850881	.0725991

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.11579**	**.9049765**	**2.764132**	**45.85658**	**.4035074**	**.3200504**
Stddev	.04538	.0042457	.007261	.13117	.0020783	.0001849
%RSD	.4485619	.4691518	.2626835	.2860475	.5150670	.0577762
#1	10.16640	.9078777	2.759209	45.98854	.4057051	.3202471
#2	10.10222	.9069485	2.772471	45.85498	.4015737	.3200239
#3	10.07875	.9001034	2.760717	45.72621	.4032435	.3198801

Sample Name: Q2891-02A Acquired: 8/19/2025 17:25:22 Type: Unk
Method: 6010-200.7 NEW(v115) 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	.6757361	9.378983	F 17.81408	F 14.00970	2.089656	.5132959
Stddev	.0000565	.030569	.48763	.07305	.012072	.0008351
%RSD	.0083533	.3259313	2.737333	.5214335	.5776814	.1627006
#1	.6757979	9.403095	18.09281	14.06504	2.098860	.5129750
#2	.6757229	9.344602	18.09841	14.03715	2.094119	.5126689
#3	.6756873	9.389253	17.25103	13.92690	2.075988	.5142439

Elem	Sr4077
Units	ppm
Avg	.0502857
Stddev	.0024683
%RSD	4.908658
#1	.0521960
#2	.0474987
#3	.0511624

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7922.005	135584.9	15657.10	6074.535	6981.297
Stddev	11.065	464.0	32.03	7.068	14.222
%RSD	.1396706	.3422418	.2045422	.1163587	.2037217
#1	7924.366	135618.3	15622.38	6068.155	6983.756
#2	7931.699	135105.0	15663.43	6073.318	6994.129
#3	7909.951	136031.3	15685.49	6082.133	6966.005

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: CCV06 Acquired: 8/19/2025 17:29:25 Type: Unk
Method: 6010-200.7 NEW(v115) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV06 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.072781**	**5.204098**	**4.879706**	**5.145327**	**5.116012**	**9.806902**	**9.993319**
Stddev	.012155	.030464	.004149	.016269	.011682	.010570	.090172
%RSD	.2396208	.5853911	.0850177	.3161935	.2283355	.1077772	.9023209
#1	5.060390	5.179635	4.878465	5.126617	5.109399	9.800050	10.05164
#2	5.073268	5.194438	4.876320	5.153227	5.109138	9.801582	10.03886
#3	5.084686	5.238221	4.884334	5.156138	5.129500	9.819075	9.88946

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2350740**	**2.460857**	**24.37490**	**.9939547**	**2.467022**	**1.254807**	**5.291094**
Stddev	.0012734	.002176	.06622	.0028618	.002906	.001286	.020288
%RSD	.5416910	.0884084	.2716580	.2879210	.1177917	.1024529	.3834350
#1	.2336264	2.459153	24.31698	.9952222	2.465679	1.254342	5.304132
#2	.2355747	2.460112	24.36064	.9906780	2.465032	1.253818	5.301431
#3	.2360209	2.463308	24.44709	.9959639	2.470357	1.256260	5.267720

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.456472**	**24.26026**	**2.463727**	**1.257186**	**25.31468**	**2.493093**	**2.537832**
Stddev	.005861	.05354	.003321	.002321	.03826	.007771	.004741
%RSD	.2386095	.2206924	.1348101	.1846579	.1511419	.3117004	.1868225
#1	2.449743	24.24818	2.462101	1.259822	25.35748	2.486264	2.536961
#2	2.460467	24.21379	2.461531	1.255445	25.28378	2.491467	2.533586
#3	2.459205	24.31881	2.467548	1.256291	25.30278	2.501548	2.542948

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.43144**	**4.718949**	**5.076015**	**4.922705**	**4.995955**	**5.227205**	**4.898471**
Stddev	.01870	.024014	.005673	.009024	.008824	.020293	.026216
%RSD	.0735189	.5088783	.1117607	.1833206	.1766290	.3882253	.5351955
#1	25.43085	4.691616	5.069671	4.913808	4.985774	5.217540	4.868388
#2	25.41305	4.736660	5.077772	4.922455	5.001406	5.213551	4.910584
#3	25.45043	4.728570	5.080602	4.931852	5.000685	5.250525	4.916440

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: CCV06 Acquired: 8/19/2025 17:29:25 Type: Unk
Method: 6010-200.7 NEW(v115) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV06 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**5.000090**	**4.679515**	**5.062737**
Stddev	.025533	.016331	.044272
%RSD	.5106447	.3489836	.8744672
#1	4.974178	4.660782	5.013650
#2	5.000868	4.690752	5.099645
#3	5.025226	4.687010	5.074916

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6427.762**	**109503.0**	**11753.39**	**4943.119**	**7504.980**
Stddev	10.591	269.7	41.81	31.082	17.838
%RSD	.1647752	.2463169	.3557267	.6287929	.2376839
#1	6429.215	109313.5	11798.66	4926.892	7511.446
#2	6437.551	109811.8	11745.26	4978.956	7518.684
#3	6416.519	109383.8	11716.24	4923.508	7484.811

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: CCB06 Acquired: 8/19/2025 17:33:36 Type: Unk
Method: 6010-200.7 NEW(v115) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB06 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001362**	**-.000469**	**.0003272**	**-.000426**	**.0009819**	**.0167458**	**-.005198**
Stddev	.0004858	.001006	.0014521	.001337	.0003831	.0057332	.000527
%RSD	356.6268	214.3212	443.8157	313.5716	39.01282	34.23654	10.14004
#1	.0006345	.000392	-.001344	.001058	.0009140	.0124221	-.005742
#2	.0001101	-.000225	.001041	-.000800	.0013943	.0145662	-.005161
#3	-.000336	-.001575	.001284	-.001537	.0006373	.0232492	-.004690

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000884**	**.0001323**	**.0021745**	**-.000087**	**.0002329**	**.0001919**	**.0063177**
Stddev	.0000283	.0000537	.0069626	.000262	.0000781	.0002156	.0004911
%RSD	32.03636	40.60479	320.2030	302.4162	33.51503	112.3723	7.773532
#1	.0000724	.0001909	-.005449	-.000356	.0002548	.0000148	.0057541
#2	.0000717	.0001210	.003775	.000168	.0002976	.0004320	.0066536
#3	.0001211	.0000852	.008198	-.000072	.0001462	.0001288	.0065454

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000816**	**.0099117**	**.0000804**	**-.000340**	**.1751816**	**.0022335**	**-.000453**
Stddev	.0000931	.0128389	.0001884	.000245	.0230571	.0008963	.000228
%RSD	114.0346	129.5331	234.2411	71.99004	13.16186	40.12805	50.33078
#1	.0001888	.0246384	-.000133	-.000380	.1485589	.0026057	-.000317
#2	.0000221	.0010719	.000153	-.000078	.1882593	.0012111	-.000326
#3	.0000339	.0040247	.000222	-.000563	.1887266	.0028836	-.000717

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1300601**	**.0002434**	**.0005871**	**-.002275**	**.0003725**	**.0030916**	**.0028819**
Stddev	.0483491	.0003719	.0001373	.000300	.0013122	.0071304	.0008029
%RSD	37.17444	152.7747	23.38937	13.20498	352.2210	230.6386	27.85979
#1	.0763293	.0005903	.0007343	-.002053	.0010891	-.000222	.0029868
#2	.1700551	-.000149	.0005646	-.002155	-.001142	.011276	.0036271
#3	.1437958	.000289	.0004624	-.002617	.001170	-.001779	.0020317

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: CCB06 Acquired: 8/19/2025 17:33:36 Type: Unk
Method: 6010-200.7 NEW(v115) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB06 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0027130	-.000775	.0004304
Stddev	.0002965	.001546	.0000510
%RSD	10.92936	199.3882	11.84006
#1	.0027348	-.002494	.0004890
#2	.0024062	.000501	.0004052
#3	.0029980	-.000332	.0003969

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6681.464	111163.1	11786.87	5070.920	8514.726
Stddev	3.917	79.4	15.64	5.216	7.035
%RSD	.0586178	.0714543	.1327008	.1028521	.0826263
#1	6685.437	111119.4	11804.81	5065.240	8512.318
#2	6681.348	111254.7	11776.09	5072.025	8522.649
#3	6677.606	111115.1	11779.71	5075.494	8509.210

Sample Name: Q2892-04 Acquired: 8/19/2025 17:37:54 Type: Unk
Method: 6010-200.7 NEW(v115) 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	.2089829	-.044231	1.295864	.0071103	-.009901	263.2043
Stddev	.0026302	.002866	.001754	.0043945	.004020	3.0381
%RSD	1.258587	6.479472	.1353458	61.80475	40.60220	1.154263
#1	.2063685	-.045752	1.296804	.0110698	-.013455	265.0015
#2	.2089516	-.046016	1.293840	.0078790	-.010711	259.6966
#3	.2116287	-.040925	1.296947	.0023822	-.005538	264.9147

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.036508	.0244379	.0182902	30.21808	.4409916	.2099633
Stddev	.002890	.0000750	.0002268	.05767	.0013620	.0004981
%RSD	.2788358	.3069950	1.239873	.1908503	.3088577	.2372302
#1	1.038259	.0243700	.0180935	30.26773	.4396420	.2098768
#2	1.038093	.0244252	.0185382	30.15482	.4409669	.2095142
#3	1.033172	.0245184	.0182389	30.23168	.4423658	.2104990

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3597702	397.5947	8.593592	124.1989	.3577294	.0168529
Stddev	.0028346	1.9069	.010052	.2898	.0010189	.0009858
%RSD	.7878939	.4796047	.1169718	.2333312	.2848107	5.849487
#1	.3566620	398.7417	8.588893	124.2095	.3588514	.0177697
#2	.3622128	395.3935	8.586750	123.9039	.3568619	.0169788
#3	.3604359	398.6491	8.605133	124.4832	.3574750	.0158102

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.678053	.8804365	2.313858	42.68355	.2523072	.0162156
Stddev	.018900	.0029043	.003321	.05819	.0059859	.0001597
%RSD	.2177865	.3298706	.1435105	.1363394	2.372452	.9847799
#1	8.689918	.8789626	2.312439	42.66393	.2575144	.0160493
#2	8.656258	.8785646	2.317652	42.74903	.2457673	.0163677
#3	8.687984	.8837822	2.311482	42.63771	.2536400	.0162299

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: Q2892-04 Acquired: 8/19/2025 17:37:54 Type: Unk
Method: 6010-200.7 NEW(v115) 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	.0346651	F 10.82230	F 19.49206	F 10.30581	2.011973	.4823416
Stddev	.0011884	.00816	.34823	.02576	.016056	.0004126
%RSD	3.428274	.0754426	1.786527	.2499859	.7980430	.0855418
#1	.0360023	10.82506	19.88125	10.28904	2.025519	.4828130
#2	.0337295	10.81312	19.20992	10.33547	2.016162	.4820462
#3	.0342635	10.82873	19.38501	10.29291	1.994237	.4821656

Elem	Sr4077
Units	ppm
Avg	-.167663
Stddev	.001764
%RSD	1.052003
#1	-.168395
#2	-.165651
#3	-.168943

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7377.340	127556.3	14874.76	5709.070	6856.465
Stddev	14.642	356.1	55.32	26.700	12.355
%RSD	.1984789	.2792024	.3719285	.4676848	.1801900
#1	7393.044	127599.2	14890.55	5691.251	6859.205
#2	7374.915	127889.1	14920.47	5739.768	6867.220
#3	7364.062	127180.7	14813.25	5696.189	6842.971

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: Q2892-06 Acquired: 8/19/2025 17:42:05 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**.2196099**	**-.040085**	**.8871921**	**.0010486**	**-.010643**	**224.8089**
Stddev	.0008671	.004861	.0015316	.0027320	.003672	.6178
%RSD	.3948417	12.12686	.1726338	260.5329	34.50413	.2747909
#1	.2206082	-.038448	.8855052	-.001159	-.011747	225.1716
#2	.2191776	-.036254	.8884956	.000201	-.013637	225.1596
#3	.2190439	-.045554	.8875755	.004104	-.006545	224.0957

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8507229**	**.0218362**	**.0203845**	**28.08375**	**.3745315**	**.2037655**
Stddev	.0063296	.0000588	.0001181	.06116	.0001529	.0001923
%RSD	.7440302	.2693538	.5793416	.2177826	.0408265	.0943769
#1	.8474758	.0219041	.0204631	28.08159	.3743824	.2038078
#2	.8466759	.0218028	.0204418	28.02370	.3746880	.2039332
#3	.8580172	.0218017	.0202487	28.14596	.3745241	.2035556

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3648295**	**351.1671**	**7.760680**	**102.0993**	**.3318564**	**.0131256**
Stddev	.0003471	2.3210	.050827	.1395	.0008332	.0009572
%RSD	.0951475	.6609466	.6549285	.1366014	.2510802	7.292640
#1	.3647918	350.2166	7.728949	102.1721	.3314916	.0127109
#2	.3651939	349.4721	7.733787	101.9385	.3328099	.0124456
#3	.3645027	353.8125	7.819304	102.1873	.3312679	.0142202

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.83836**	**.7239350**	**2.246399**	**39.55611**	**.2007143**	**.0166973**
Stddev	.11786	.0040120	.008042	.31216	.0086191	.0001654
%RSD	1.087437	.5541867	.3579958	.7891619	4.294219	.9908136
#1	10.79097	.7223968	2.237125	39.43632	.2027730	.0167083
#2	10.75157	.7209197	2.251438	39.32157	.1912523	.0165267
#3	10.97254	.7284884	2.250635	39.91042	.2081177	.0168570

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: Q2892-06 Acquired: 8/19/2025 17:42:05 Type: Unk
Method: 6010-200.7 NEW(v115) 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	.0163407	9.786721	F 14.57139	8.484730	1.087432	.4079277
Stddev	.0003248	.059419	.08603	.007407	.003690	.0023952
%RSD	1.987668	.6071372	.5904032	.0872941	.3392930	.5871633
#1	.0159812	9.777793	14.56304	8.492066	1.085072	.4061048
#2	.0164280	9.732271	14.48984	8.484869	1.091684	.4070378
#3	.0166130	9.850098	14.66129	8.477254	1.085540	.4106404

Elem	Sr4077
Units	ppm
Avg	-.155088
Stddev	.000846
%RSD	.5452292
#1	-.155127
#2	-.154224
#3	-.155914

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7961.658	137670.4	15803.93	6107.453	6840.947
Stddev	9.764	49.6	26.10	48.407	10.976
%RSD	.1226371	.0360005	.1651375	.7925902	.1604462
#1	7950.526	137670.9	15806.10	6155.729	6828.465
#2	7965.679	137719.7	15776.81	6107.715	6845.284
#3	7968.770	137620.6	15828.88	6058.915	6849.091

Sample Name: Q2892-08 Acquired: 8/19/2025 17:46:14 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**.2100653**	**-.037177**	**.8442424**	**.0007916**	**-.008056**	**231.6374**
Stddev	.0024386	.004176	.0028153	.0026087	.001461	2.3122
%RSD	1.160877	11.23336	.3334768	329.5625	18.14144	.9981831
#1	.2106976	-.041056	.8421685	.0023499	-.007107	233.7678
#2	.2073728	-.032757	.8431112	-.002220	-.009739	231.9658
#3	.2121255	-.037718	.8474474	.002245	-.007322	229.1786

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8897973**	**.0218234**	**.0156321**	**26.65923**	**.4041286**	**.1988773**
Stddev	.0028593	.0001612	.0001629	.15075	.0028948	.0003257
%RSD	.3213434	.7386726	1.041872	.5654840	.7163164	.1637644
#1	.8897453	.0219915	.0154610	26.60178	.4074687	.1987957
#2	.8869644	.0216701	.0157852	26.54565	.4023461	.1992360
#3	.8926823	.0218087	.0156501	26.83026	.4025710	.1986001

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3007292**	**327.3235**	**6.784681**	**115.7335**	**.3071295**	**.0127410**
Stddev	.0010634	1.3478	.024084	.6190	.0004696	.0009780
%RSD	.3536101	.4117664	.3549813	.5348396	.1529032	7.675937
#1	.2996109	328.6688	6.775206	115.4424	.3076698	.0116509
#2	.3017275	325.9732	6.766774	115.3138	.3068194	.0130305
#3	.3008491	327.3284	6.812061	116.4444	.3068992	.0135415

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.765538**	**.7234866**	**2.084514**	**50.80606**	**.2022262**	**.0115230**
Stddev	.052394	.0069281	.012668	.24876	.0016984	.0000414
%RSD	.6747015	.9575945	.6077095	.4896323	.8398364	.3597537
#1	7.807929	.7268305	2.098922	51.08846	.2041499	.0114772
#2	7.781725	.7155209	2.075124	50.61937	.2009342	.0115338
#3	7.706961	.7281085	2.079497	50.71035	.2015946	.0115579

Sample Name: Q2892-08 Acquired: 8/19/2025 17:46:14 Type: Unk
Method: 6010-200.7 NEW(v115) 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	.0237330	F 11.80561	F 20.73159	9.906646	.6864885	.4372453
Stddev	.0002678	.05228	.32484	.037218	.0053714	.0006316
%RSD	1.128331	.4428796	1.566890	.3756905	.7824505	.1444406
#1	.0237521	11.80556	21.06904	9.892653	.6876938	.4374141
#2	.0239907	11.75336	20.42103	9.878452	.6806169	.4365465
#3	.0234562	11.85793	20.70469	9.948833	.6911549	.4377753

Elem	Sr4077
Units	ppm
Avg	-.134515
Stddev	.001321
%RSD	.9819460
#1	-.135938
#2	-.133327
#3	-.134281

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7689.796	132595.3	15320.45	5929.369	6874.223
Stddev	6.148	765.1	43.81	25.782	1.789
%RSD	.0799545	.5770305	.2859685	.4348148	.0260310
#1	7685.307	131712.6	15305.30	5903.847	6873.502
#2	7687.276	133067.9	15369.82	5955.403	6872.906
#3	7696.803	133005.5	15286.22	5928.858	6876.260

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: Q2892-10 Acquired: 8/19/2025 17:50:25 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**.2224471**	**-.043091**	**1.030748**	**-.001582**	**-.012246**	**257.2511**
Stddev	.0019155	.003538	.003998	.002610	.000119	1.1119
%RSD	.8611081	8.209785	.3879083	164.9587	.9719942	.4322423
#1	.2236324	-.046746	1.035016	-.003290	-.012176	257.6235
#2	.2234718	-.039684	1.027088	.001422	-.012179	256.0007
#3	.2202372	-.042843	1.030141	-.002878	-.012384	258.1290

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8326826**	**.0240875**	**.0234303**	**36.87530**	**.4353565**	**.2564803**
Stddev	.0029135	.0000756	.0003020	.04637	.0006295	.0002334
%RSD	.3498974	.3140579	1.289089	.1257559	.1445819	.0910179
#1	.8343766	.0241728	.0237713	36.82193	.4353422	.2563949
#2	.8293184	.0240613	.0231963	36.89818	.4347342	.2563015
#3	.8343528	.0240285	.0233233	36.90579	.4359929	.2567444

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3789486**	**374.1862**	**9.210670**	**133.2954**	**.3813115**	**.0123043**
Stddev	.0007302	1.1878	.020013	.4157	.0006362	.0001128
%RSD	.1926771	.3174243	.2172829	.3118675	.1668526	.9163669
#1	.3797209	372.8306	9.206936	132.8687	.3819645	.0124257
#2	.3782696	375.0444	9.192786	133.3184	.3812763	.0122029
#3	.3788552	374.6835	9.232287	133.6991	.3806935	.0122843

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**22.14086**	**.8515274**	**2.289833**	**56.69835**	**.2190814**	**.0154524**
Stddev	.09238	.0043439	.003722	.14309	.0045940	.0003248
%RSD	.4172540	.5101289	.1625643	.2523790	2.096946	2.101920
#1	22.20044	.8548373	2.286778	56.79477	.2141324	.0158194
#2	22.03443	.8531363	2.288741	56.53393	.2199018	.0152020
#3	22.18769	.8466086	2.293979	56.76633	.2232099	.0153358

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: Q2892-10 Acquired: 8/19/2025 17:50:25 Type: Unk
Method: 6010-200.7 NEW(v115) 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	.0192834	F 12.17585	F 23.39325	F 13.39258	.8873296	.4727223
Stddev	.0007119	.00712	.48106	.02131	.0096942	.0015674
%RSD	3.691690	.0585001	2.056389	.1591117	1.092514	.3315666
#1	.0200797	12.18104	23.91666	13.37145	.8922295	.4738431
#2	.0187087	12.16773	23.29263	13.39222	.8761635	.4709312
#3	.0190619	12.17878	22.97046	13.41406	.8935957	.4733926

Elem	Sr4077
Units	ppm
Avg	-.085032
Stddev	.001926
%RSD	2.265137
#1	-.082915
#2	-.086680
#3	-.085501

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	8167.433	141185.9	16341.96	6295.107	6758.737
Stddev	8.341	162.9	11.44	27.467	9.310
%RSD	.1021228	.1153826	.0700088	.4363220	.1377476
#1	8158.070	141066.9	16349.07	6315.704	6748.139
#2	8174.068	141371.6	16348.06	6305.696	6765.597
#3	8170.161	141119.3	16328.77	6263.922	6762.475

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: Q2892-12 Acquired: 8/19/2025 17:54:42 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**.1929912**	**-.040703**	**.8498719**	**.0021834**	**-.008343**	**204.2746**
Stddev	.0032614	.002006	.0015805	.0051131	.001230	1.0496
%RSD	1.689937	4.927422	.1859672	234.1784	14.73993	.5138005
#1	.1925163	-.039496	.8510920	-.002578	-.008873	205.0348
#2	.1964641	-.039594	.8480865	.001541	-.006937	203.0770
#3	.1899933	-.043018	.8504372	.007587	-.009220	204.7119

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8757505**	**.0220706**	**.0180275**	**36.58114**	**.3650688**	**.1877632**
Stddev	.0031634	.0001049	.0001012	.03436	.0005541	.0001601
%RSD	.3612266	.4754854	.5616443	.0939168	.1517843	.0852434
#1	.8745258	.0219964	.0179179	36.56034	.3652914	.1877426
#2	.8793432	.0221907	.0180471	36.56229	.3654770	.1876145
#3	.8733825	.0220248	.0181175	36.62080	.3644380	.1879326

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3413039**	**334.3356**	**7.060116**	**104.3272**	**.3344767**	**.0143635**
Stddev	.0009354	.4439	.010105	.1949	.0003689	.0001468
%RSD	.2740728	.1327653	.1431313	.1867763	.1102924	1.022071
#1	.3408391	333.9338	7.052798	104.3392	.3344899	.0143979
#2	.3406919	334.2611	7.071645	104.1266	.3341014	.0142026
#3	.3423807	334.8121	7.055903	104.5157	.3348389	.0144901

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.885961**	**.6750032**	**2.310159**	**47.95455**	**.2496116**	**.0130016**
Stddev	.026656	.0041886	.006906	.03750	.0036032	.0004003
%RSD	.2696299	.6205298	.2989425	.0781964	1.443512	3.078857
#1	9.893690	.6745238	2.302281	47.93323	.2464017	.0134205
#2	9.907898	.6710749	2.313026	47.99784	.2489241	.0129613
#3	9.856295	.6794108	2.315170	47.93257	.2535090	.0126229

Sample Name: Q2892-12 Acquired: 8/19/2025 17:54:42 Type: Unk
Method: 6010-200.7 NEW(v115) 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	.0234366	F 10.97581	F 11.96371	9.850284	.9478975	.4042914
Stddev	.0013801	.01337	.20952	.014774	.0023095	.0007650
%RSD	5.888596	.1217808	1.751293	.1499849	.2436414	.1892215
#1	.0244240	10.96856	12.04284	9.865961	.9460765	.4035373
#2	.0218597	10.99124	11.72615	9.836619	.9504952	.4050668
#3	.0240262	10.96764	12.12215	9.848273	.9471209	.4042701

Elem	Sr4077
Units	ppm
Avg	-.117644
Stddev	.000809
%RSD	.6874786
#1	-.117206
#2	-.117148
#3	-.118577

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	8039.689	135487.1	15842.66	6097.983	6931.040
Stddev	6.523	98.9	14.93	34.370	5.624
%RSD	.0811367	.0729856	.0942511	.5636316	.0811390
#1	8034.861	135527.7	15853.94	6135.214	6927.314
#2	8047.110	135559.3	15825.73	6091.271	6937.509
#3	8037.097	135374.4	15848.30	6067.463	6928.298

Sample Name: Q2897-01 Acquired: 8/19/2025 17:58:52 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**.0451486**	**-.024932**	**.0640574**	**.0020353**	**-.008219**	**70.60935**
Stddev	.0014494	.001415	.0009997	.0000175	.002188	.37581
%RSD	3.210386	5.673688	1.560599	.8583961	26.61619	.5322413
#1	.0464690	-.023304	.0632061	.0020240	-.010275	70.42682
#2	.0453792	-.025862	.0651582	.0020265	-.005920	71.04157
#3	.0435977	-.025630	.0638077	.0020554	-.008463	70.35967

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3197307**	**.0112729**	**.0067657**	**7.040416**	**.1494584**	**.0752971**
Stddev	.0023438	.0000875	.0000472	.043470	.0012456	.0002316
%RSD	.7330630	.7759048	.6982624	.6174282	.8334262	.3075247
#1	.3170882	.0113214	.0067113	6.999915	.1508898	.0753062
#2	.3205458	.0111719	.0067906	7.086344	.1486205	.0750612
#3	.3215581	.0113253	.0067954	7.034990	.1488649	.0755240

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0928342**	**182.9358**	**2.591754**	**9.594424**	**.0792777**	**.0068900**
Stddev	.0002125	.1560	.012490	.048097	.0004271	.0005980
%RSD	.2289288	.0852969	.4819319	.5013045	.5387434	8.679827
#1	.0927810	182.9327	2.580268	9.569685	.0790263	.0062439
#2	.0926533	182.7814	2.605051	9.649856	.0790359	.0070019
#3	.0930683	183.0934	2.589944	9.563732	.0797708	.0074242

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7922302**	**.2517309**	**.2385875**	**6.199457**	**.0962537**	**.0066892**
Stddev	.0140277	.0010079	.0006659	.037895	.0053426	.0001071
%RSD	1.770662	.4003684	.2790981	.6112601	5.550563	1.600328
#1	.7768098	.2528779	.2380555	6.156857	.1017114	.0068087
#2	.8042341	.2513278	.2393343	6.212101	.0910341	.0066568
#3	.7956466	.2509870	.2383726	6.229413	.0960157	.0066021

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: Q2897-01 Acquired: 8/19/2025 17:58:52 Type: Unk
Method: 6010-200.7 NEW(v115) 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	**-.002119**	**2.703237**	F **10.26166**	**2.396292**	**.9964787**	**.0627636**
Stddev	.000438	.020857	.15716	.012897	.0111617	.0014857
%RSD	20.68117	.7715414	1.531500	.5382046	1.120109	2.367106
#1	-.001788	2.705518	10.41363	2.382339	.9842391	.0614959
#2	-.002616	2.722859	10.27157	2.407776	1.006095	.0623963
#3	-.001954	2.681333	10.09978	2.398760	.999102	.0643984

Elem	Sr4077
Units	ppm
Avg	**-.142870**
Stddev	.000342
%RSD	.2392578
#1	-.143234
#2	-.142819
#3	-.142557

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**8009.415**	**139619.9**	**15246.76**	**6221.766**	**7730.233**
Stddev	8.177	237.1	50.61	28.740	10.271
%RSD	.1020862	.1697867	.3319291	.4619241	.1328632
#1	8005.738	139389.9	15280.22	6189.250	7730.112
#2	8018.784	139863.4	15188.54	6243.770	7740.563
#3	8003.722	139606.3	15271.52	6232.278	7720.023

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: CCV07 Acquired: 8/19/2025 18:02:55 Type: Unk
Method: 6010-200.7 NEW(v115) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV07 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.093352**	**5.285378**	**4.849077**	**5.154947**	**5.130937**	**9.739275**	**9.734032**
Stddev	.008767	.011256	.003758	.015555	.015368	.018860	.062192
%RSD	.1721300	.2129658	.0775068	.3017570	.2995079	.1936462	.6389082
#1	5.085398	5.289183	4.850539	5.137327	5.117071	9.759578	9.755163
#2	5.091906	5.294239	4.844808	5.160736	5.128281	9.722302	9.782905
#3	5.102753	5.272713	4.851886	5.166777	5.147460	9.735946	9.664028

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2325641**	**2.445087**	**24.16445**	**.9899422**	**2.456529**	**1.252809**	**5.204571**
Stddev	.0020714	.001474	.07277	.0031684	.001130	.000972	.038603
%RSD	.8906836	.0602977	.3011282	.3200566	.0459934	.0775840	.7417149
#1	.2348322	2.446718	24.23347	.9862844	2.456133	1.251824	5.162319
#2	.2320878	2.443848	24.17142	.9918362	2.455650	1.252835	5.237997
#3	.2307723	2.444695	24.08844	.9917059	2.457803	1.253768	5.213397

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.425644**	**23.92740**	**2.447709**	**1.254957**	**24.93296**	**2.474190**	**2.528629**
Stddev	.012496	.07412	.000525	.001264	.24969	.005460	.009258
%RSD	.5151558	.3097555	.0214635	.1006945	1.001449	.2206587	.3661121
#1	2.433269	24.01255	2.448084	1.253752	24.70914	2.478926	2.524670
#2	2.432440	23.87735	2.447934	1.256272	25.20227	2.468219	2.539208
#3	2.411223	23.89231	2.447108	1.254847	24.88746	2.475425	2.522009

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.21398**	**4.682735**	**5.080295**	**4.908572**	**4.941997**	**5.217996**	**4.889324**
Stddev	.22167	.046981	.008331	.002604	.018101	.054090	.016266
%RSD	.8791615	1.003283	.1639896	.0530517	.3662671	1.036599	.3326739
#1	24.96529	4.733071	5.071751	4.908666	4.957887	5.155780	4.907911
#2	25.39081	4.675088	5.080737	4.911128	4.945812	5.253850	4.882371
#3	25.28582	4.640047	5.088396	4.905922	4.922293	5.244359	4.877691

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: CCV07 Acquired: 8/19/2025 18:02:55 Type: Unk
Method: 6010-200.7 NEW(v115) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV07 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**5.002412**	**4.617504**	**4.959918**
Stddev	.011553	.026842	.020607
%RSD	.2309401	.5813071	.4154667
#1	4.991172	4.624728	4.964858
#2	5.001810	4.639995	4.937290
#3	5.014254	4.587790	4.977606

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6428.052**	**110742.6**	**11928.23**	**4958.204**	**7534.060**
Stddev	4.201	339.9	107.28	10.981	6.446
%RSD	.0653608	.3069546	.8993716	.2214624	.0855571
#1	6432.884	111120.5	11813.87	4970.880	7527.622
#2	6426.011	110461.7	11944.19	4951.617	7534.043
#3	6425.261	110645.6	12026.64	4952.114	7540.514

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: CCB07 Acquired: 8/19/2025 18:07:06 Type: Unk
Method: 6010-200.7 NEW(v115) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB07 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000234**	**-.000302**	**.0002493**	**-.000551**	**.0003266**	**.0087290**	**-.006408**
Stddev	.000254	.000952	.0001028	.002667	.0016182	.0091352	.000560
%RSD	108.1871	315.6489	41.23272	484.1977	495.4626	104.6538	8.745046
#1	-.000066	.000740	.0003637	-.003102	.0017210	.0191615	-.007025
#2	-.000526	-.000518	.0001647	.002218	.0007064	.0021620	-.005930
#3	-.000111	-.001126	.0002194	-.000768	-.001448	.0048635	-.006268

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001014**	**.0001399**	**-.004283**	**-.000151**	**.0002341**	**-.000279**	**-.003175**
Stddev	.0000639	.0000068	.008733	.000045	.0001084	.000267	.003068
%RSD	63.00642	4.874560	203.8952	30.05817	46.33796	95.84055	96.62311
#1	.0000750	.0001477	-.007615	-.000190	.0003095	-.000421	-.000891
#2	.0001743	.0001356	.005625	-.000101	.0001098	-.000446	-.001972
#3	.0000550	.0001363	-.010860	-.000163	.0002829	.000029	-.006662

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000181**	**.0008991**	**.0001200**	**-.000302**	**.1326717**	**.0005761**	**-.000633**
Stddev	.000349	.0126824	.0001370	.000243	.0165491	.0005353	.000138
%RSD	193.1529	1410.554	114.1792	80.34635	12.47375	92.90970	21.86918
#1	.000079	.0155431	.0001173	-.000507	.1143633	.0006258	-.000743
#2	-.000578	-.006334	-.000016	-.000365	.1370848	.0000177	-.000679
#3	-.000044	-.006512	.000258	-.000034	.1465669	.0010848	-.000477

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1312188**	**.0003630**	**.0006305**	**-.003012**	**.0001689**	**.0123017**	**.0033139**
Stddev	.0615908	.0001929	.0001116	.000240	.0005988	.0048512	.0002028
%RSD	46.93751	53.14264	17.69680	7.973847	354.5430	39.43493	6.120779
#1	.0680448	.0002493	.0006793	-.003273	.0003111	.0087896	.0035477
#2	.1345176	.0005858	.0007093	-.002961	-.000488	.0178370	.0032098
#3	.1910938	.0002540	.0005028	-.002801	.000684	.0102785	.0031843

Reviewed By:jaswal
On:8/21/2025 1:53:50 PM
Inst Id :P4
LB :LB136886

Sample Name: CCB07 Acquired: 8/19/2025 18:07:06 Type: Unk
Method: 6010-200.7 NEW(v115) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB07 Custom ID2: Custom ID3:
Comment:

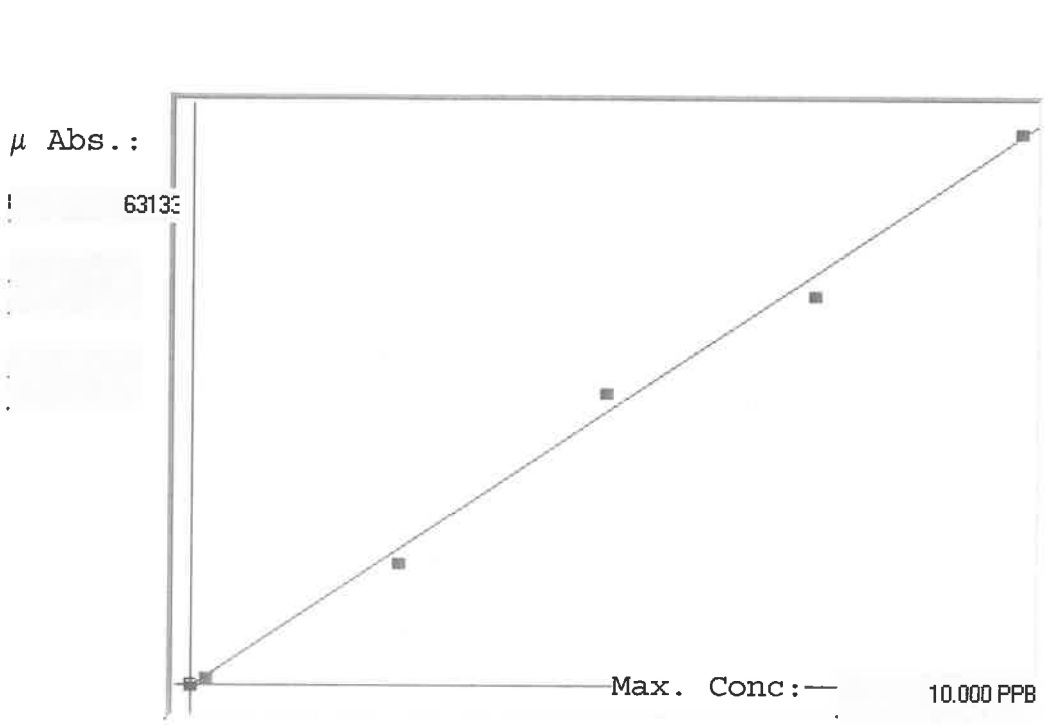
Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**-.001153**	**-.001554**	**.0003995**
Stddev	.002635	.001400	.0000593
%RSD	228.5310	90.10103	14.83837
#1	-.002694	-.003149	.0004531
#2	.001890	-.000987	.0004095
#3	-.002655	-.000526	.0003358

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6811.273**	**114957.9**	**11911.64**	**5191.527**	**8650.986**
Stddev	11.219	185.0	17.30	17.263	5.776
%RSD	.1647070	.1609488	.1452501	.3325131	.0667690
#1	6817.231	114965.8	11891.93	5206.734	8651.622
#2	6818.256	114769.1	11918.67	5195.084	8656.418
#3	6798.332	115138.9	11924.32	5172.763	8644.919

LB136858
INSTRUMENT ID: CV1

Reviewed By:jaswal
On:8/18/2025 10:42:14 PM
Inst Id :CV1
LB :LB136858

7471B



Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0.0	0.000	0.072	0.072	173	0.000	173				
0.2	0.200	0.206	0.006	1020	0.0 %	1020				
2.5	2.500	2.297	-0.203	14162	0.0 %	14162				
5.0	5.000	5.389	0.389	33604	0.0 %	33604				
7.5	7.500	7.150	-0.350	44678	0.0 %	44678				
10.0	10.000	10.086	0.086	63133	0.0 %	63133				

%D
-
3
-8
8
-5
1

Reviewed By:jaswal
On:8/18/2025 10:42:14 PM
Inst Id :CV1
LB :LB136858

LB136858 INSTRUMENT ID:CV1

Method: 7471B Operator: Admin Date of Analysis: 18 Aug 2025 10:43:59

Type	Sample ID	Extended ID	Conc	µ Abs	Units	Type	Stnd Conc	Method	Date
S	0.0 - 1	S0.0	-	173	PPB	Std	0.0000	7471B	18 Aug 2025 13:14:55
S	0.2 - 1	S0.2	-	2748	PPB	Std	0.2000	7471B	18 Aug 2025 13:17:12
S	2.5 - 1	S2.5	-	14162	PPB	Std	2.5000	7471B	18 Aug 2025 13:22:05
S	5.0 - 1	S5.0	-	33604	PPB	Std	5.0000	7471B	18 Aug 2025 13:24:22
S	7.5 - 1	S7.5	-	44678	PPB	Std	7.5000	7471B	18 Aug 2025 13:28:08
S	10.0 - 1	S10.0	-	63133	PPB	Std	10.0000	7471B	18 Aug 2025 13:30:24
U	ICV20 - 1	ICV20	4.1630	25896	PPB	SMPL		7471B	18 Aug 2025 13:54:09
U	ICB20 - 1	ICB20	0.0069	-235	PPB	SMPL		7471B	18 Aug 2025 13:56:24
U	CCV60 - 1	CCV60	4.5478	28315	PPB	SMPL		7471B	18 Aug 2025 13:58:41
U	CCB60 - 1	CCB60	-0.0027	-295	PPB	SMPL		7471B	18 Aug 2025 14:00:57
U	CRA - 1	CRA	0.2341	1194	PPB	SMPL		7471B	18 Aug 2025 14:03:14
U	HighStd - 1	HighStd	10.1246	63378	PPB	SMPL		7471B	18 Aug 2025 14:05:29
U	ChkStd - 1	ChkStd	7.0732	44193	PPB	SMPL		7471B	18 Aug 2025 14:07:44
U	PB169281BL - 1	PB169281BL	-0.0132	-361	PPB	SMPL		7471B	18 Aug 2025 14:10:04
U	PB169281BS - 1	PB169281BS	3.5709	22173	PPB	SMPL		7471B	18 Aug 2025 14:12:23
U	Q2879-01 - 1	OU4-TS-GRILLO-TSCP03-081425	0.9052	5413	PPB	SMPL		7471B	18 Aug 2025 14:14:39
U	Q2879-03 - 1	OU4-TS-GRILLO-TSCP04-081425	1.1164	6741	PPB	SMPL		7471B	18 Aug 2025 14:16:57
U	Q2879-05 - 1	OU4-TS-GRILLO-TSCP05-081425	0.7498	4436	PPB	SMPL		7471B	18 Aug 2025 14:19:17
U	Q2879-07 - 1	OU4-TS-GRILLO-TSCP06-081425	0.4705	2680	PPB	SMPL		7471B	18 Aug 2025 14:21:36
U	Q2879-09 - 1	OU4-TS-GRILLO-TSCP07-081425	1.4929	9108	PPB	SMPL		7471B	18 Aug 2025 14:23:51
U	CCV61 - 1	CCV61	5.0714	31607	PPB	SMPL		7471B	18 Aug 2025 14:26:07
U	CCB61 - 1	CCB61	-0.0060	-316	PPB	SMPL		7471B	18 Aug 2025 14:28:24
U	Q2879-11 - 1	OU4-TS-GRILLO-TSCP08-081425	1.9691	12102	PPB	SMPL		7471B	18 Aug 2025 14:30:41
U	Q2879-13 - 1	OU4-TS-GRILLO-TSCP09-081425	1.3663	8312	PPB	SMPL		7471B	18 Aug 2025 14:32:57
U	Q2879-15 - 1	OU4-TS-GRILLO-TSCP10-081425	0.7046	4152	PPB	SMPL		7471B	18 Aug 2025 14:35:15
U	Q2879-17 - 1	OU4-TS-GRILLO-TSCP11-081425	0.4764	2717	PPB	SMPL		7471B	18 Aug 2025 14:37:32
U	Q2883-01 - 1	RBR2520553	5.9169	36923	PPB	SMPL		7471B	18 Aug 2025 14:39:48
U	Q2884-01 - 1	VNJ-232	1.3501	8210	PPB	SMPL		7471B	18 Aug 2025 14:42:05
U	Q2884-03 - 1	302	0.4513	2559	PPB	SMPL		7471B	18 Aug 2025 14:44:25
U	Q2888-01 - 1	VNJ-210	0.9974	5993	PPB	SMPL		7471B	18 Aug 2025 14:46:43
U	Q2889-01 - 1	PL-02-081525-	0.4902	2804	PPB	SMPL		7471B	18 Aug 2025 14:49:00
U	Q2889-01DUP - 1	PL-02-081525-DUP	0.6431	3765	PPB	SMPL		7471B	18 Aug 2025 14:51:17
U	CCV62 - 1	CCV62	4.8304	30092	PPB	SMPL		7471B	18 Aug 2025 14:53:32
U	CCB62 - 1	CCB62	0.0951	320	PPB	SMPL		7471B	18 Aug 2025 14:55:48
U	Q2889-01MS - 1	PL-02-081525-MS	4.1160	25600	PPB	SMPL		7471B	18 Aug 2025 14:58:06
U	Q2889-01MSD - 1	PL-02-081525-MSD	4.1403	25753	PPB	SMPL		7471B	18 Aug 2025 15:00:22
U	Q2889-01LX5 - 1		0.0512	44	PPB	SMPL		7471B	18 Aug 2025 15:02:39
U	Q2889-01A - 1		4.2124	26206	PPB	SMPL		7471B	18 Aug 2025 15:04:58
U	Q2857-03 - 1		12.1389	76042	PPB	SMPL		7471B	18 Aug 2025 15:07:14
U	Q2857-03DLX5 - 1		2.2395	13802	PPB	SMPL		7471B	18 Aug 2025 15:18:29
U	CCV63 - 1	CCV63	4.6237	28792	PPB	SMPL		7471B	18 Aug 2025 15:26:09
U	CCB63 - 1	CCB63	0.0345	-61	PPB	SMPL		7471B	18 Aug 2025 15:31:20

Alliance TECHNICAL GROUP

Soil/Sludge Metals Preparation Sheet

PB169280

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 #5 2. N/A

Start Digest Date: 08/18/2025 **Time :** 09:05 **Temp :** 97 °C

End Digest Date: 08/18/2025 **Time :** 11:10 **Temp :** 98 °C

Digestion tube ID: M6054

Block thermometer ID: MET-DIG. #5

Dig Technician Signature: SKG.

Supervisor Signature:

Temp : 1. 96°C 2. N/A

Standared Name	MLS USED	STD REF. # FROM LOG
LFS-1	1.00	M6180
LFS-2	1.00	M6181
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	MP86404
30% H2O2	3.00	M6170
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#5 CELL#35 97C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
08/18/25 12:10	SKmetdig	SG (metals lab)
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

Soil/Sludge Metals Preparation Sheet

PB169280

Lab Sample ID	Client Sample ID	pH	Initial Weight (g)	Final Vol (ml)	Color Before	Color After	Texture	Artifact	Comment	Prep Pos
PB169280BL	PBS280	N/A	2.00	100	Colorless	Colorless	Fine	N/A	N/A	1
PB169280BS	LCS280	N/A	2.00	100	Colorless	Colorless	Fine	N/A	MP6180,MP6181	2
Q2879-01	OU4-TS-GRILLO-TSCP03-08 1425	N/A	2.44	100	Brown	Yellow	Medium	N/A	N/A	3
Q2879-03	OU4-TS-GRILLO-TSCP04-08 1425	N/A	2.49	100	Brown	Yellow	Medium	N/A	N/A	4
Q2879-05	OU4-TS-GRILLO-TSCP05-08 1425	N/A	2.46	100	Brown	Yellow	Medium	N/A	N/A	5
Q2879-07	OU4-TS-GRILLO-TSCP06-08 1425	N/A	2.44	100	Brown	Yellow	Medium	N/A	N/A	6
Q2879-09	OU4-TS-GRILLO-TSCP07-08 1425	N/A	2.43	100	Brown	Yellow	Medium	N/A	N/A	7
Q2879-11	OU4-TS-GRILLO-TSCP08-08 1425	N/A	2.34	100	Brown	Yellow	Medium	N/A	N/A	8
Q2879-13	OU4-TS-GRILLO-TSCP09-08 1425	N/A	2.36	100	Brown	Yellow	Medium	N/A	N/A	9
Q2879-15	OU4-TS-GRILLO-TSCP10-08 1425	N/A	2.34	100	Brown	Yellow	Medium	N/A	N/A	10
Q2879-17	OU4-TS-GRILLO-TSCP11-08 1425	N/A	2.30	100	Brown	Yellow	Medium	N/A	N/A	11
Q2883-01	RBR2520553	N/A	2.43	100	Brown	Yellow	Medium	N/A	N/A	12
Q2884-01	VNJ-232	N/A	2.39	100	Brown	Yellow	Medium	N/A	N/A	13
Q2884-03	302	N/A	2.36	100	Brown	Yellow	Medium	N/A	N/A	14
Q2888-01	VNJ-210	N/A	2.42	100	Brown	Yellow	Medium	N/A	N/A	15
Q2889-01	PL-02-081525-	N/A	2.29	100	Brown	Yellow	Medium	N/A	N/A	16
Q2889-01MS	PL-02-081525-MS	N/A	2.41	100	Brown	Yellow	Medium	N/A	MP6180,MP6181	18
Q2889-01MSD	PL-02-081525-MSD	N/A	2.45	100	Brown	Yellow	Medium	N/A	MP6180,MP6181	19
Q2889-01DUP	PL-02-081525-DUP	N/A	2.30	100	Brown	Yellow	Medium	N/A	N/A	17

WORKLIST(Hardcopy Internal Chain)

WorkList Name : PB169280 **WorkList ID :** 191323 **Department :** Digestion **Date :** 08-18-2025 08:23:09

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2879-01	OU4-TS-GRILLO-TSCP03-0814	Solid	Metals ICP-TAL	Cool 4 deg C	NOBI03	J23	08/14/2025	6010D
Q2879-03	OU4-TS-GRILLO-TSCP04-0814	Solid	Metals ICP-TAL	Cool 4 deg C	NOBI03	J23	08/14/2025	6010D
Q2879-05	OU4-TS-GRILLO-TSCP05-0814	Solid	Metals ICP-TAL	Cool 4 deg C	NOBI03	J23	08/14/2025	6010D
Q2879-07	OU4-TS-GRILLO-TSCP06-0814	Solid	Metals ICP-TAL	Cool 4 deg C	NOBI03	J23	08/14/2025	6010D
Q2879-09	OU4-TS-GRILLO-TSCP07-0814	Solid	Metals ICP-TAL	Cool 4 deg C	NOBI03	J23	08/14/2025	6010D
Q2879-11	OU4-TS-GRILLO-TSCP08-0814	Solid	Metals ICP-TAL	Cool 4 deg C	NOBI03	J23	08/14/2025	6010D
Q2879-13	OU4-TS-GRILLO-TSCP09-0814	Solid	Metals ICP-TAL	Cool 4 deg C	NOBI03	J23	08/14/2025	6010D
Q2879-15	OU4-TS-GRILLO-TSCP10-0814	Solid	Metals ICP-TAL	Cool 4 deg C	NOBI03	J23	08/14/2025	6010D
Q2879-17	OU4-TS-GRILLO-TSCP11-0814	Solid	Metals ICP-TAL	Cool 4 deg C	NOBI03	J23	08/14/2025	6010D
Q2883-01	RBR2520553	Solid	Metals ICP-TAL	Cool 4 deg C	PSEG03	D21	08/15/2025	6010D
Q2884-01	VNJ-232	Solid	Metals ICP-TAL	Cool 4 deg C	PSEG03	D31	08/15/2025	6010D
Q2884-03	302	Solid	Metals ICP-TAL	Cool 4 deg C	PSEG03	D31	08/15/2025	6010D
Q2888-01	VNJ-210	Solid	Metals ICP-TAL	Cool 4 deg C	PSEG03	D21	08/15/2025	6010D
Q2889-01	PL-02-081525-	Solid	Metals ICP-TAL	Cool 4 deg C	PSEG05	D21	08/15/2025	6010D

Date/Time 08/18/25 08:40
Raw Sample Received by: SLS metdiv
Raw Sample Relinquished by: CPC SM

Date/Time 08/18/25 9:20
Raw Sample Received by: CPC SM
Raw Sample Relinquished by: SLS metdiv

Alliance TECHNICAL GROUP

Soil/Sludge Mercury Preparation Sheet

PB169281

SOP ID : M7471B-Mercury-19

SDG No : N/A

Matrix : SOIL

Pippete ID: HG A

Balance ID : M SC-3

Filter paper ID : N/A

pH Strip ID : N/A

Hood ID : #1

Block ID: 1. HG HOT BLOCK#3 2. N/A

Start Digest Date: 08/18/2025 **Time :** 08:40 **Temp :** 95 °C

End Digest Date: 08/18/2025 **Time :** 09:05 **Temp :** 95 °C

Digestion tube ID: M5595

Block thermometer ID: HG-DIG#3

Dig Technician Signature: SLS

Supervisor Signature:

Temp : 1. 95°C 2. N/A

Standared Name	MLS USED	STD REF. # FROM LOG
ICV	30mL	MP86821
CCV	30mL	MP86823
CRA	30mL	MP86825
Blank Spike	0.48mL	MP86814
Matrix Spike	0.48mL	MP86814

Chemical Used	ML/SAMPLE USED	Lot Number
AQUA REGIA	1.5mL	MP86827
KMnO4 (5%)	4.5mL	MP85893
Hydroxylamine HCL (12%)	2.0mL	MP86830
PTFE Boiling Stones	----------	M5582
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	MP86815
0.05 ppb	S0.05	N/A	N/A
0.2 ppb	S0.2	30mL	MP86816
2.5 ppb	S2.5	30mL	MP86817
5.0 ppb	S5.0	30mL	MP86818
7.5 ppb	S7.5	30mL	MP86819
10.0 ppb	S10.0	30mL	MP86820
ICV	ICV	30mL	MP86821
ICB	ICB	30mL	MP86822
CCV	CCV	30mL	MP86823
CCB	CCB	30mL	MP86824
CRI	CRI	30mL	MP86825
CHK STD	CHK STD	30mL	MP86826

Extraction Conformance/Non-Conformance Comments:

N/A

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
08/18/25 9:50	SLS metals	Metals Lab
	Preparation Group	**Analysis Group**

Alliance TECHNICAL GROUP

Soil/Sludge Mercury Preparation Sheet

PB169281

Lab Sample ID	Client Sample ID	Initial Weight (g)	Final Vol (ml)	pH	Comment	Prep Pos
PB169281BL	PBS281	0.50	35	N/A	N/A	1-1
PB169281BS	LCS281	0.50	35	N/A	MP86814	2
Q2857-03	72-12002	0.52	35	N/A	N/A	3
Q2879-01	OU4-TS-GRILLO-TSCP03-081425	0.54	35	N/A	N/A	4
Q2879-03	OU4-TS-GRILLO-TSCP04-081425	0.56	35	N/A	N/A	5
Q2879-05	OU4-TS-GRILLO-TSCP05-081425	0.57	35	N/A	N/A	6
Q2879-07	OU4-TS-GRILLO-TSCP06-081425	0.54	35	N/A	N/A	7
Q2879-09	OU4-TS-GRILLO-TSCP07-081425	0.55	35	N/A	N/A	8
Q2879-11	OU4-TS-GRILLO-TSCP08-081425	0.57	35	N/A	N/A	9
Q2879-13	OU4-TS-GRILLO-TSCP09-081425	0.59	35	N/A	N/A	10
Q2879-15	OU4-TS-GRILLO-TSCP10-081425	0.56	35	N/A	N/A	11
Q2879-17	OU4-TS-GRILLO-TSCP11-081425	0.55	35	N/A	N/A	12
Q2883-01	RBR2520553	0.56	35	N/A	N/A	13
Q2884-01	VNJ-232	0.53	35	N/A	N/A	14
Q2884-03	302	0.56	35	N/A	N/A	15
Q2888-01	VNJ-210	0.56	35	N/A	N/A	16
Q2889-01	PL-02-081525-	0.54	35	N/A	N/A	17
Q2889-01MS	PL-02-081525-MS	0.52	35	N/A	MP86814	19
Q2889-01MSD	PL-02-081525-MSD	0.56	35	N/A	MP86814	20
Q2889-01DUP	PL-02-081525-DUP	0.56	35	N/A	N/A	18

WORKLIST(Hardcopy Internal Chain)

WorkList Name : PB169281 **WorkList ID :** 191324 **Department :** Digestion **Date :** 08-18-2025 08:24:34

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2857-03	72-12002	Solid	Mercury	Cool 4 deg C	PSEG03	J12	08/13/2025	7471B
Q2879-01	OU4-TS-GRILLO-TSCP03-0814	Solid	Mercury	Cool 4 deg C	NOBI03	J23	08/14/2025	7471B
Q2879-03	OU4-TS-GRILLO-TSCP04-0814	Solid	Mercury	Cool 4 deg C	NOBI03	J23	08/14/2025	7471B
Q2879-05	OU4-TS-GRILLO-TSCP05-0814	Solid	Mercury	Cool 4 deg C	NOBI03	J23	08/14/2025	7471B
Q2879-07	OU4-TS-GRILLO-TSCP06-0814	Solid	Mercury	Cool 4 deg C	NOBI03	J23	08/14/2025	7471B
Q2879-09	OU4-TS-GRILLO-TSCP07-0814	Solid	Mercury	Cool 4 deg C	NOBI03	J23	08/14/2025	7471B
Q2879-11	OU4-TS-GRILLO-TSCP08-0814	Solid	Mercury	Cool 4 deg C	NOBI03	J23	08/14/2025	7471B
Q2879-13	OU4-TS-GRILLO-TSCP09-0814	Solid	Mercury	Cool 4 deg C	NOBI03	J23	08/14/2025	7471B
Q2879-15	OU4-TS-GRILLO-TSCP10-0814	Solid	Mercury	Cool 4 deg C	NOBI03	J23	08/14/2025	7471B
Q2879-17	OU4-TS-GRILLO-TSCP11-0814	Solid	Mercury	Cool 4 deg C	NOBI03	J23	08/14/2025	7471B
Q2883-01	RBR2520553	Solid	Mercury	Cool 4 deg C	PSEG03	D21	08/15/2025	7471B
Q2884-01	VNJ-232	Solid	Mercury	Cool 4 deg C	PSEG03	D31	08/15/2025	7471B
Q2884-03	302	Solid	Mercury	Cool 4 deg C	PSEG03	D31	08/15/2025	7471B
Q2888-01	VNJ-210	Solid	Mercury	Cool 4 deg C	PSEG03	D21	08/15/2025	7471B
Q2889-01	PL-02-081525-	Solid	Mercury	Cool 4 deg C	PSEG05	D21	08/15/2025	7471B

Date/Time 08/18/25 8:40
Raw Sample Received by: [illegible]
Raw Sample Relinquished by: [illegible]

Date/Time 08/18/25
Raw Sample Received by: [illegible]
Raw Sample Relinquished by: [illegible]

PERCENT SOLID

Supervisor: rubina
Analyst: jignesh
Date: 8/18/2025

OVENTEMP IN Celsius(°C): 107
Time IN: 17:25
In Date: 08/15/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 104
Time OUT: 08:25
Out Date: 08/16/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLID-OVEN

QC: LB136842

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
Q2879-01	OU4-TS-GRILLO-TSCP03-081425	1	1.18	10.28	11.46	10.34	89.1	
Q2879-03	OU4-TS-GRILLO-TSCP04-081425	2	1.18	10.24	11.42	10.1	87.1	
Q2879-05	OU4-TS-GRILLO-TSCP05-081425	3	1.16	10.04	11.2	10.51	93.1	
Q2879-07	OU4-TS-GRILLO-TSCP06-081425	4	1.17	10.46	11.63	10.67	90.8	
Q2879-09	OU4-TS-GRILLO-TSCP07-081425	5	1.18	10.09	11.27	10.61	93.5	
Q2879-11	OU4-TS-GRILLO-TSCP08-081425	6	1.16	10.83	11.99	11.05	91.3	
Q2879-13	OU4-TS-GRILLO-TSCP09-081425	7	1.18	10.47	11.65	10.9	92.8	
Q2879-15	OU4-TS-GRILLO-TSCP10-081425	8	1.19	10.58	11.77	10.85	91.3	
Q2879-17	OU4-TS-GRILLO-TSCP11-081425	9	1.12	10.76	11.88	9.4	77.0	
Q2880-05	SVOC-GPC-BLANK	10	1.00	1.00	2.00	2.00	100.0	
Q2880-06	PEST-GPC-BLANK	11	1.00	1.00	2.00	2.00	100.0	
Q2880-07	PEST-GPC-BLANK-SPIKE	12	1.00	1.00	2.00	2.00	100.0	
Q2880-08	SVOC-GPC2-BLANK	13	1.00	1.00	2.00	2.00	100.0	
Q2880-09	PEST-GPC2-BLANK	14	1.00	1.00	2.00	2.00	100.0	
Q2880-10	PEST -GPC2-BLANK-SPIKE	15	1.00	1.00	2.00	2.00	100.0	
Q2883-01	RBR2520553	16	1.15	10.43	11.58	10.48	89.5	
Q2883-02	RBR2520553-E2	17	1.14	10.75	11.89	10.77	89.6	
Q2884-01	VNJ-232	18	1.12	10.11	11.23	10.8	95.7	
Q2884-02	VNJ-232	19	1.19	10.39	11.58	11.15	95.9	
Q2884-03	302	20	1.19	10.34	11.53	10.6	91.0	
Q2888-01	VNJ-210	21	1.18	10.04	11.22	10.71	94.9	
Q2889-01	PL-02-081525-	22	1.14	10.22	11.36	10.67	93.2	
Q2889-02	EO-02-081525-E2	23	1.19	10.42	11.61	10.68	91.1	

$$\% \text{ Solid} = \frac{(C-A) * 100}{(B-A)}$$

WORKLIST(Hardcopy Internal Chain)

VB 136842

WorkList Name : %1-081525 **WorkList ID :** 191293 **Department :** Wet-Chemistry **Date :** 08-15-2025 08:56:56

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2879-01	OU4-TS-GRILLO-TSCP03-0814	Solid	Percent Solids	Cool 4 deg C	NOBI03	J23	08/14/2025	Chemtech -SO
Q2879-03	OU4-TS-GRILLO-TSCP04-0814	Solid	Percent Solids	Cool 4 deg C	NOBI03	J23	08/14/2025	Chemtech -SO
Q2879-05	OU4-TS-GRILLO-TSCP05-0814	Solid	Percent Solids	Cool 4 deg C	NOBI03	J23	08/14/2025	Chemtech -SO
Q2879-07	OU4-TS-GRILLO-TSCP06-0814	Solid	Percent Solids	Cool 4 deg C	NOBI03	J23	08/14/2025	Chemtech -SO
Q2879-09	OU4-TS-GRILLO-TSCP07-0814	Solid	Percent Solids	Cool 4 deg C	NOBI03	J23	08/14/2025	Chemtech -SO
Q2879-11	OU4-TS-GRILLO-TSCP08-0814	Solid	Percent Solids	Cool 4 deg C	NOBI03	J23	08/14/2025	Chemtech -SO
Q2879-13	OU4-TS-GRILLO-TSCP09-0814	Solid	Percent Solids	Cool 4 deg C	NOBI03	J23	08/14/2025	Chemtech -SO
Q2879-15	OU4-TS-GRILLO-TSCP10-0814	Solid	Percent Solids	Cool 4 deg C	NOBI03	J23	08/14/2025	Chemtech -SO
Q2879-17	OU4-TS-GRILLO-TSCP11-0814	Solid	Percent Solids	Cool 4 deg C	NOBI03	J23	08/14/2025	Chemtech -SO
Q2880-05	SVOC-GPC-BLANK	Solid	Percent Solids	Cool 4 deg C	CHEM02	QA Of	08/08/2025	Chemtech -SO
Q2880-06	PEST-GPC-BLANK	Solid	Percent Solids	Cool 4 deg C	CHEM02	QA Of	08/08/2025	Chemtech -SO
Q2880-07	PEST-GPC-BLANK-SPIKE	Solid	Percent Solids	Cool 4 deg C	CHEM02	QA Of	08/08/2025	Chemtech -SO
Q2880-08	SVOC-GPC2-BLANK	Solid	Percent Solids	Cool 4 deg C	CHEM02	QA Of	08/08/2025	Chemtech -SO
Q2880-09	PEST-GPC2-BLANK	Solid	Percent Solids	Cool 4 deg C	CHEM02	QA Of	08/08/2025	Chemtech -SO
Q2880-10	PEST -GPC2-BLANK-SPIKE	Solid	Percent Solids	Cool 4 deg C	CHEM02	QA Of	08/08/2025	Chemtech -SO
Q2883-01	RBR2520553	Solid	Percent Solids	Cool 4 deg C	PSEG03	D21	08/15/2025	Chemtech -SO
Q2883-02	RBR2520553-E2	Solid	Percent Solids	Cool 4 deg C	PSEG03	D21	08/15/2025	Chemtech -SO
Q2884-01	VNJ-232	Solid	Percent Solids	Cool 4 deg C	PSEG03	D31	08/15/2025	Chemtech -SO
Q2884-02	VNJ-232	Solid	Percent Solids	Cool 4 deg C	PSEG03	D31	08/15/2025	Chemtech -SO
Q2884-03	302	Solid	Percent Solids	Cool 4 deg C	PSEG03	D31	08/15/2025	Chemtech -SO
Q2888-01	VNJ-210	Solid	Percent Solids	Cool 4 deg C	PSEG03	D21	08/15/2025	Chemtech -SO

Date/Time 08/15/25 13:00

Raw Sample Received by:

Raw Sample Relinquished by:

Date/Time 08/15/25 17:35

Raw Sample Received by:

Raw Sample Relinquished by:

WORKLIST(Hardcopy Internal Chain)

VB176842

WorkList Name : %1-081525 **WorkList ID :** 191293 **Department :** Wet-Chemistry **Date :** 08-15-2025 08:56:56

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2889-01	PL-02-081525-	Solid	Percent Solids	Cool 4 deg C	PSEG05	D21	08/15/2025	Chemtech -SO
Q2889-02	EO-02-081525-E2	Solid	Percent Solids	Cool 4 deg C	PSEG05	D21	08/15/2025	Chemtech -SO

Date/Time 08/15/25 15:00

Raw Sample Received by: [signature]

Raw Sample Relinquished by: [signature]

Date/Time 08/15/25 17:35

Raw Sample Received by: [signature]

Raw Sample Relinquished by: [signature]

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 # LB136858

Review By	sagar	Review On	8/18/2025 4:07:50 PM
Supervise By	jaswal	Supervise On	8/18/2025 10:42:14 PM

STD. NAME	STD REF.#
ICAL Standard	MP86815,MP86816,MP86817,MP86818,MP86819,MP86820
ICV Standard	MP86821
CCV Standard	MP86823
ICSA Standard	
CRI Standard	MP86825
LCS Standard	
Chk Standard	MP86822,MP86824,MP86826,MP86829

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	08/18/25 13:14		sagar	OK
2	S0.2	S0.2	CAL2	08/18/25 13:17		sagar	OK
3	S2.5	S2.5	CAL3	08/18/25 13:22		sagar	OK
4	S5	S5	CAL4	08/18/25 13:24		sagar	OK
5	S7.5	S7.5	CAL5	08/18/25 13:28		sagar	OK
6	S10	S10	CAL6	08/18/25 13:30		sagar	OK
7	ICV20	ICV20	ICV	08/18/25 13:54		sagar	OK
8	ICB20	ICB20	ICB	08/18/25 13:56		sagar	OK
9	CCV60	CCV60	CCV	08/18/25 13:58		sagar	OK
10	CCB60	CCB60	CCB	08/18/25 14:00		sagar	OK
11	CRA	CRA	CRDL	08/18/25 14:03		sagar	OK
12	HighStd	HighStd	HIGH STD	08/18/25 14:05		sagar	OK
13	ChkStd	ChkStd	SAM	08/18/25 14:07		sagar	OK
14	PB169281BL	PB169281BL	MB	08/18/25 14:10		sagar	OK
15	PB169281BS	PB169281BS	LCS	08/18/25 14:12		sagar	OK
16	Q2879-01	OU4-TS-GRILLO-TSC	SAM	08/18/25 14:14		sagar	OK
17	Q2879-03	OU4-TS-GRILLO-TSC	SAM	08/18/25 14:16		sagar	OK
18	Q2879-05	OU4-TS-GRILLO-TSC	SAM	08/18/25 14:19		sagar	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 # LB136858

Review By	sagar	Review On	8/18/2025 4:07:50 PM
Supervise By	jaswal	Supervise On	8/18/2025 10:42:14 PM

STD. NAME	STD REF.#
ICAL Standard	MP86815,MP86816,MP86817,MP86818,MP86819,MP86820
ICV Standard	MP86821
CCV Standard	MP86823
ICSA Standard	
CRI Standard	MP86825
LCS Standard	
Chk Standard	MP86822,MP86824,MP86826,MP86829

19	Q2879-07	OU4-TS-GRILLO-TSC	SAM	08/18/25 14:21		sagar	OK
20	Q2879-09	OU4-TS-GRILLO-TSC	SAM	08/18/25 14:23		sagar	OK
21	CCV61	CCV61	CCV	08/18/25 14:26		sagar	OK
22	CCB61	CCB61	CCB	08/18/25 14:28		sagar	OK
23	Q2879-11	OU4-TS-GRILLO-TSC	SAM	08/18/25 14:30		sagar	OK
24	Q2879-13	OU4-TS-GRILLO-TSC	SAM	08/18/25 14:32		sagar	OK
25	Q2879-15	OU4-TS-GRILLO-TSC	SAM	08/18/25 14:35		sagar	OK
26	Q2879-17	OU4-TS-GRILLO-TSC	SAM	08/18/25 14:37		sagar	OK
27	Q2883-01	RBR2520553	SAM	08/18/25 14:39		sagar	OK
28	Q2884-01	VNJ-232	SAM	08/18/25 14:42		sagar	OK
29	Q2884-03	302	SAM	08/18/25 14:44		sagar	OK
30	Q2888-01	VNJ-210	SAM	08/18/25 14:46		sagar	OK
31	Q2889-01	PL-02-081525	SAM	08/18/25 14:49		sagar	OK
32	Q2889-01DUP	PL-02-081525	DUP	08/18/25 14:51		sagar	OK
33	CCV62	CCV62	CCV	08/18/25 14:53		sagar	OK
34	CCB62	CCB62	CCB	08/18/25 14:55		sagar	OK
35	Q2889-01MS	PL-02-081525MS	MS	08/18/25 14:58		sagar	OK
36	Q2889-01MSD	PL-02-081525MSD	MSD	08/18/25 15:00		sagar	OK
37	Q2889-01L	PL-02-081525	SD	08/18/25 15:02		sagar	OK
38	Q2889-01A	PL-02-081525	PS	08/18/25 15:04		sagar	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 # LB136858

Review By	sagar	Review On	8/18/2025 4:07:50 PM
Supervise By	jaswal	Supervise On	8/18/2025 10:42:14 PM

STD. NAME	STD REF.#
ICAL Standard	MP86815,MP86816,MP86817,MP86818,MP86819,MP86820
ICV Standard	MP86821
CCV Standard	MP86823
ICSA Standard	
CRI Standard	MP86825
LCS Standard	
Chk Standard	MP86822,MP86824,MP86826,MP86829

39	Q2857-03	72-12002	SAM	08/18/25 15:07	Hg high	sagar	Dilution
40	Q2857-03DL	72-12002DL	SAM	08/18/25 15:18	5X For Hg	sagar	Confirms
41	CCV63	CCV63	CCV	08/18/25 15:26		sagar	OK
42	CCB63	CCB63	CCB	08/18/25 15:31		sagar	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 # LB136886

Review By	Janvi	Review On	8/20/2025 4:20:31 PM
Supervise By	jaswal	Supervise On	8/21/2025 1:53:50 PM

STD. NAME	STD REF.#
ICAL Standard	MP86640,MP86656,MP86653,MP86643,MP86642,MP86641
ICV Standard	MP86752,MP86656
CCV Standard	MP86646
ICSA Standard	MP86651,MP86753
CRI Standard	MP86656
LCS Standard	
Chk Standard	MP86647,MP86648

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	08/19/25 11:15		Jaswal	OK
2	S1	S1	CAL2	08/19/25 11:19		Jaswal	OK
3	S2	S2	CAL3	08/19/25 11:24		Jaswal	OK
4	S3	S3	CAL4	08/19/25 11:28		Jaswal	OK
5	S4	S4	CAL5	08/19/25 11:32		Jaswal	OK
6	S5	S5	CAL6	08/19/25 11:36		Jaswal	OK
7	ICV01	ICV01	ICV	08/19/25 12:17		Jaswal	OK
8	LLICV01	LLICV01	LLICV	08/19/25 12:23		Jaswal	OK
9	ICB01	ICB01	ICB	08/19/25 12:27		Jaswal	OK
10	CRI01	CRI01	CRDL	08/19/25 12:38		Jaswal	OK
11	ICSA01	ICSA01	ICSA	08/19/25 12:42		Jaswal	OK
12	ICSAB01	ICSAB01	ICSAB	08/19/25 12:46		Jaswal	OK
13	ICSADL	ICSADL	ICSA	08/19/25 12:51		Jaswal	OK
14	ICSABDL	ICSABDL	ICSAB	08/19/25 12:55		Jaswal	OK
15	CCV01	CCV01	CCV	08/19/25 12:59		Jaswal	OK
16	CCB01	CCB01	CCB	08/19/25 13:03		Jaswal	OK
17	LR-2	LR-2	HIGH STD	08/19/25 13:12		Jaswal	OK
18	LR-3	LR-3	HIGH STD	08/19/25 13:17		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 # LB136886

Review By	Janvi	Review On	8/20/2025 4:20:31 PM
Supervise By	jaswal	Supervise On	8/21/2025 1:53:50 PM

STD. NAME	STD REF.#
ICAL Standard	MP86640,MP86656,MP86653,MP86643,MP86642,MP86641
ICV Standard	MP86752,MP86656
CCV Standard	MP86646
ICSA Standard	MP86651,MP86753
CRI Standard	MP86656
LCS Standard	
Chk Standard	MP86647,MP86648

19	Q2552-06	WS0725-PT-SIO2-WS	SAM	08/19/25 13:26		Jaswal	OK
20	PB169295BL	PB169295BL	MB	08/19/25 13:30		Jaswal	OK
21	PB169295BS	PB169295BS	LCS	08/19/25 13:35		Jaswal	OK
22	Q2552-03	WS0725-PT-MIN-WS	SAM	08/19/25 13:39		Jaswal	OK
23	Q2552-04	WS0725-PT-TM-WS	SAM	08/19/25 13:43		Jaswal	OK
24	Q2879-05	OU4-TS-GRILLO-TSC	SAM	08/19/25 13:52		Jaswal	OK
25	LR-1	LR-1	HIGH STD	08/19/25 13:56		Jaswal	OK
26	Q2879-07	OU4-TS-GRILLO-TSC	SAM	08/19/25 14:01		Jaswal	OK
27	CCV02	CCV02	CCV	08/19/25 14:05		Jaswal	OK
28	CCB02	CCB02	CCB	08/19/25 14:09		Jaswal	OK
29	Q2879-09	OU4-TS-GRILLO-TSC	SAM	08/19/25 14:13		Jaswal	OK
30	Q2879-11	OU4-TS-GRILLO-TSC	SAM	08/19/25 14:17		Jaswal	OK
31	Q2879-13	OU4-TS-GRILLO-TSC	SAM	08/19/25 14:21		Jaswal	OK
32	Q2879-15	OU4-TS-GRILLO-TSC	SAM	08/19/25 14:26		Jaswal	OK
33	Q2879-17	OU4-TS-GRILLO-TSC	SAM	08/19/25 14:30		Jaswal	OK
34	Q2884-01	VNJ-232	SAM	08/19/25 14:34		Jaswal	OK
35	Q2884-03	302	SAM	08/19/25 14:38		Jaswal	OK
36	Q2888-01	VNJ-210	SAM	08/19/25 14:42		Jaswal	OK
37	Q2889-01	PL-02-081525	SAM	08/19/25 14:46		Jaswal	OK
38	Q2889-01DUP	PL-02-081525	DUP	08/19/25 14:50		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 # LB136886

Review By	Janvi	Review On	8/20/2025 4:20:31 PM
Supervise By	jaswal	Supervise On	8/21/2025 1:53:50 PM

STD. NAME	STD REF.#
ICAL Standard	MP86640,MP86656,MP86653,MP86643,MP86642,MP86641
ICV Standard	MP86752,MP86656
CCV Standard	MP86646
ICSA Standard	MP86651,MP86753
CRI Standard	MP86656
LCS Standard	
Chk Standard	MP86647,MP86648

39	CCV03	CCV03	CCV	08/19/25 14:54		Jaswal	OK
40	CCB03	CCB03	CCB	08/19/25 14:58		Jaswal	OK
41	Q2889-01L	PL-02-081525	SD	08/19/25 15:02		Jaswal	OK
42	Q2889-01MS	PL-02-081525MS	MS	08/19/25 15:07		Jaswal	OK
43	Q2889-01A	PL-02-081525	PS	08/19/25 15:14	0.1ML OF EACH M6004 AND M6017 IN 10ML SAMPLE.	Jaswal	OK
44	PB169280BL	PB169280BL	MB	08/19/25 15:18		Jaswal	OK
45	PB169280BS	PB169280BS	LCS	08/19/25 15:23		Jaswal	OK
46	Q2879-01	OU4-TS-GRILLO-TSC	SAM	08/19/25 15:27		Jaswal	OK
47	Q2879-03	OU4-TS-GRILLO-TSC	SAM	08/19/25 15:31		Jaswal	OK
48	Q2889-01MSD	PL-02-081525MSD	MSD	08/19/25 15:35		Jaswal	OK
49	PB169302BL	PB169302BL	MB	08/19/25 15:39		Jaswal	OK
50	PB169302BS	PB169302BS	LCS	08/19/25 15:43		Jaswal	OK
51	CCV04	CCV04	CCV	08/19/25 15:47		Jaswal	OK
52	CCB04	CCB04	CCB	08/19/25 15:52		Jaswal	OK
53	PB169291TB	PB169291TB	MB	08/19/25 15:56		Jaswal	OK
54	Q2884-04	302	SAM	08/19/25 16:00		Jaswal	OK
55	Q2888-02	VNJ-210	SAM	08/19/25 16:05		Jaswal	OK
56	Q2888-02DUP	VNJ-210DUP	DUP	08/19/25 16:09		Jaswal	OK
57	Q2888-02L	VNJ-210L	SD	08/19/25 16:13		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 # LB136886

Review By	Janvi	Review On	8/20/2025 4:20:31 PM
Supervise By	jaswal	Supervise On	8/21/2025 1:53:50 PM

STD. NAME	STD REF.#
ICAL Standard	MP86640,MP86656,MP86653,MP86643,MP86642,MP86641
ICV Standard	MP86752,MP86656
CCV Standard	MP86646
ICSA Standard	MP86651,MP86753
CRI Standard	MP86656
LCS Standard	
Chk Standard	MP86647,MP86648

58	Q2888-02MS	VNJ-210MS	MS	08/19/25 16:18		Jaswal	OK
59	Q2888-02MSD	VNJ-210MSD	MSD	08/19/25 16:22		Jaswal	OK
60	Q2888-02A	VNJ-210A	PS	08/19/25 16:26	0.1ML OF EACH M6004 AND M6017 IN 10ML SAMPLE.	Jaswal	OK
61	PB169304BL	PB169304BL	MB	08/19/25 16:30		Jaswal	OK
62	PB169304BS	PB169304BS	LCS	08/19/25 16:34		Jaswal	OK
63	CCV05	CCV05	CCV	08/19/25 16:38		Jaswal	OK
64	CCB05	CCB05	CCB	08/19/25 16:43		Jaswal	OK
65	Q2891-01	BARRICADE	SAM	08/19/25 16:47		Jaswal	OK
66	Q2891-02	WALL-1	SAM	08/19/25 16:51		Jaswal	OK
67	Q2891-03	WALL-2	SAM	08/19/25 16:56		Jaswal	OK
68	Q2891-04	WALL-3	SAM	08/19/25 17:00		Jaswal	OK
69	Q2892-02	1-FLOOR-NORTH-EA	SAM	08/19/25 17:04	Wrong Sample	Jaswal	Not Ok
70	Q2891-02DUP	WALL-1DUP	DUP	08/19/25 17:09	Wrong Sample	Jaswal	Not Ok
71	Q2891-02L	WALL-1L	SD	08/19/25 17:13	Wrong Sample	Jaswal	Not Ok
72	Q2891-02MS	WALL-1MS	MS	08/19/25 17:17	Wrong Sample	Jaswal	Not Ok
73	Q2891-02MSD	WALL-1MSD	MSD	08/19/25 17:21	Wrong Sample	Jaswal	Not Ok
74	Q2891-02A	WALL-1A	PS	08/19/25 17:25	Wrong Sample	Jaswal	Not Ok
75	CCV06	CCV06	CCV	08/19/25 17:29		Jaswal	OK
76	CCB06	CCB06	CCB	08/19/25 17:33		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 # LB136886

Review By	Janvi	Review On	8/20/2025 4:20:31 PM
Supervise By	jaswal	Supervise On	8/21/2025 1:53:50 PM

STD. NAME	STD REF.#
ICAL Standard	MP86640,MP86656,MP86653,MP86643,MP86642,MP86641
ICV Standard	MP86752,MP86656
CCV Standard	MP86646
ICSA Standard	MP86651,MP86753
CRI Standard	MP86656
LCS Standard	
Chk Standard	MP86647,MP86648

77	Q2892-04	1-FLOOR-DRILL-B-BA	SAM	08/19/25 17:37		Jaswal	OK
78	Q2892-06	BACK-1-FLOOR-CEN	SAM	08/19/25 17:42		Jaswal	OK
79	Q2892-08	3-FLOOR-NORTH-D	SAM	08/19/25 17:46		Jaswal	OK
80	Q2892-10	3-FLOOR-SOUTH-E	SAM	08/19/25 17:50		Jaswal	OK
81	Q2892-12	FRONT-1-FLOOR-F	SAM	08/19/25 17:54		Jaswal	OK
82	Q2897-01	HD-02-08182025	SAM	08/19/25 17:58		Jaswal	OK
83	CCV07	CCV07	CCV	08/19/25 18:02		Jaswal	OK
84	CCB07	CCB07	CCB	08/19/25 18:07		Jaswal	OK

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

Prep Standard - Chemical Standard Summary

Order ID : Q2879

Test : Mercury,Metals ICP-TAL

Prepbatch ID : PB169280,PB169281,

Sequence ID/Qc Batch ID: LB136858,LB136886,

Standard ID :
MP85893,MP86404,MP86640,MP86641,MP86642,MP86643,MP86646,MP86647,MP86648,MP86651,MP86653,MP86655,MP86656,MP86752,MP86753,MP86814,MP86815,MP86816,MP86817,MP86818,MP86819,MP86820,MP86821,MP86822,MP86823,MP86824,MP86825,MP86826,MP86827,MP86829,MP86830,

Chemical ID :
M4916,M5062,M5467,M5501,M5581,M5582,M5658,M5697,M5748,M5798,M5799,M5800,M5801,M5805,M5814,M5816,M5820,M5962,M5969,M5970,M5979,M5985,M5998,M6021,M6023,M6027,M6028,M6030,M6032,M6058,M6076,M6077,M6086,M6128,M6137,M6140,M6142,M6144,M6145,M6146,M6151,M6158,M6159,M6162,M6163,M6164,M6165,M6170,M6171,M6174,M6176,M6177,M6178,M6179,M6180,M6181,M6182,M6184,W3112,

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
65	POTASSIUM PERMANGANATE SOLUTION 5 %	MP85893	06/05/2025	12/05/2025	Mohan Bera	METALS_SCALE_3 (M SC-3)	None	Sarabjit Jaswal 06/14/2025

FROM 100.00000gram of M4916 + 2000.00000ml of W3112 = Final Quantity: 2000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
169	1:1HNO3	MP86404	07/17/2025	11/16/2025	Sagar Kanani	METALS_SCALE_2 (M SC-2)	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 07/17/2025

FROM 1250.00000ml of M6162 + 1250.00000ml of W3112 = Final Quantity: 2500.000 ml

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
902	ICP AES CAL BLK (SO/ICB/CCB)	MP86640	08/06/2025	08/27/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 08/07/2025

FROM 125.00000ml of M6151 + 2350.00000ml of W3112 + 25.00000ml of M6162 = Final Quantity: 500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
907	ICP AES STD S (S5)	MP86641	08/06/2025	08/27/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 08/07/2025

FROM 5.00000ml of M5467 + 5.00000ml of M5820 + 5.00000ml of M5969 + 5.00000ml of M5970 + 5.00000ml of M5998 + 5.00000ml of M6077 + 5.00000ml of M6146 + 5.00000ml of M6174 + 5.00000ml of M6176 + 455.00000ml of MP86640 = Final Quantity: 500.000 ml

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
910	ICP AES STD S4	MP86642	08/06/2025	08/27/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 08/07/2025

FROM 50.00000ml of MP86640 + 50.00000ml of MP86641 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
909	ICP AES STD S3	MP86643	08/06/2025	08/27/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 08/07/2025

FROM 25.00000ml of MP86641 + 75.00000ml of MP86640 = Final Quantity: 100.000 ml

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
911	ICP AES CCV SOLN	MP86646	08/06/2025	08/27/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 08/07/2025

FROM 50.00000ml of MP86640 + 50.00000ml of MP86641 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
919	ICP AES INTERNAL STD	MP86647	08/06/2025	08/27/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 08/07/2025

FROM 1.00000ml of M6179 + 10.00000ml of M5985 + 1969.00000ml of W3112 + 20.00000ml of M6162 = Final Quantity: 2000.000 ml

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
903	ICP AES RINSE SOLN	MP86648	08/06/2025	08/27/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 08/07/2025

FROM 200.00000ml of M6162 + 9800.00000ml of W3112 = Final Quantity: 10000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
904	ICP AES ICSA SOLN	MP86651	08/06/2025	08/27/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 08/07/2025

FROM 5.00000ml of M6182 + 45.00000ml of MP86640 = Final Quantity: 50.000 ml

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3913	ICP AES STD S2	MP86653	08/06/2025	08/27/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 08/07/2025

FROM 4.00000ml of MP86641 + 46.00000ml of MP86640 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2950	ICP AES S1/CRI STOCK STD	MP86655	08/06/2025	08/27/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 08/07/2025

FROM 0.00000ml of M5748 + 0.00000ml of M5805 + 0.03000ml of M5798 + 0.03000ml of M6028 + 0.05000ml of M5658 + 0.05000ml of M6030 + 0.05000ml of M6140 + 0.05000ml of M6159 + 0.06000ml of M6177 + 0.10000ml of M5697 + 0.10000ml of M5801 + 0.10000ml of M5816 + 0.10000ml of M5820 + 0.10000ml of M5962 + 0.10000ml of M5970 + 0.10000ml of M6128 + 0.10000ml of M6176 + 0.15000ml of M5800 + 0.20000ml of M5799 + 0.20000ml of M5979 + 0.20000ml of M6021 + 0.20000ml of M6023 + 0.20000ml of M6027 + 0.20000ml of M6145 + 0.25000ml of M5467 + 0.25000ml of M6146 + 0.50000ml of M5814 + 0.50000ml of M6032 + 1.00000ml of M6086 + 1.00000ml of M6142 + 1.00000ml of M6144 + 1.00000ml of M6171 + 1.00000ml of M6178 + 2.00000ml of M6137 + 89.03000ml of MP86640 = Final Quantity: 100.000 ml

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2951	ICP AES S1/CRI WORK STD	MP86656	08/06/2025	08/27/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 08/07/2025

FROM 1.00000ml of MP86655 + 49.00000ml of MP86640 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
4163	NEW ICV-060925	MP86752	08/06/2025	08/27/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 08/14/2025

FROM 0.20000ml of M6058 + 0.40000ml of M6163 + 0.40000ml of M6164 + 0.40000ml of M6165 + 48.60000ml of MP86640 = Final Quantity: 50.000 ml

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3494	ICP AES ICSAB SOLN-1	MP86753	08/06/2025	08/27/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 08/14/2025

FROM 0.05000ml of M6076 + 5.00000ml of M6182 + 5.00000ml of M6184 + 39.95000ml of MP86640 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
871	MERCURY INTERMEDIATE B 250PPB WORKING STD.	MP86814	08/18/2025	08/19/2025	Sagar Kanani	None	METALS_PIPETTE_5 (HG A)	Sarabjit Jaswal 08/18/2025

FROM 1.00000ml of M6162 + 2.50000ml of M5062 + 96.50000ml of W3112 = Final Quantity: 100.000 ml

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1340	Hg 0.00 PPB STD	MP86815	08/18/2025	08/19/2025	Sagar Kanani	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 08/18/2025

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
1341	Hg 0.2 PPB STD	MP86816	08/18/2025	08/19/2025	Sagar Kanani	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 08/18/2025

FROM 2.50000ml of M6162 + 247.30000ml of W3112 + 0.20000ml of MP86814 = Final Quantity: 250.000 ml

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1342	Hg 2.5 PPB STD	MP86817	08/18/2025	08/19/2025	Sagar Kanani	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 08/18/2025

FROM 2.50000ml of M6162 + 245.00000ml of W3112 + 2.50000ml of MP86814 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1343	Hg 5.0 PPB STD	MP86818	08/18/2025	08/19/2025	Sagar Kanani	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 08/18/2025

FROM 2.50000ml of M6162 + 242.50000ml of W3112 + 5.00000ml of MP86814 = Final Quantity: 250.000 ml

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1344	Hg 7.5 PPB STD	MP86819	08/18/2025	08/19/2025	Sagar Kanani	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 08/18/2025

FROM 2.50000ml of M6162 + 240.00000ml of W3112 + 7.50000ml of MP86814 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1345	Hg 10.0 PPB STD	MP86820	08/18/2025	08/19/2025	Sagar Kanani	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 08/18/2025

FROM 2.50000ml of M6162 + 237.50000ml of W3112 + 10.00000ml of MP86814 = Final Quantity: 250.000 ml

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1346	Hg ICV SOLUTION	MP86821	08/18/2025	08/19/2025	Sagar Kanani	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 08/18/2025

FROM 2.50000ml of M6162 + 245.00000ml of W3112 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1351	ICB (Hg 0.00 PPB SOLUTION)	MP86822	08/18/2025	08/19/2025	Sagar Kanani	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 08/18/2025

FROM 2.50000ml of M6162 + 247.50000ml of W3112 = Final Quantity: 250.000 ml

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1358	CCV (Hg 5.0 PPB SOLUTION)	MP86823	08/18/2025	08/19/2025	Sagar Kanani	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 08/18/2025

FROM 485.00000ml of W3112 + 5.00000ml of M6162 + 10.00000ml of MP86814 = Final Quantity: 500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1352	CCB (Hg 0.00 PPB SOLUTION)	MP86824	08/18/2025	08/19/2025	Sagar Kanani	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 08/18/2025

FROM 495.00000ml of W3112 + 5.00000ml of M6162 = Final Quantity: 500.000 ml

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1349	CRA/CRI (Hg 0.2 PPB SOLUTION)	MP86825	08/18/2025	08/19/2025	Sagar Kanani	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 08/18/2025

FROM 2.50000ml of M6162 + 247.30000ml of W3112 + 0.20000ml of MP86814 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1350	CHK STD (Hg 7.0 PPB SOLUTION)	MP86826	08/18/2025	08/19/2025	Sagar Kanani	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 08/18/2025

FROM 2.50000ml of M6162 + 240.50000ml of W3112 + 7.00000ml of MP86814 = Final Quantity: 250.000 ml

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
887	AQUA REGIA FOR HG ON 7471A	MP86827	08/18/2025	08/19/2025	Sagar Kanani	None	None	Sarabjit Jaswal 08/18/2025

FROM 150.00000ml of M6151 + 50.00000ml of M6162 = Final Quantity: 200.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
104	5% RINSING HCL	MP86829	08/18/2025	02/17/2026	Sagar Kanani	None	None	Sarabjit Jaswal 08/18/2025

FROM 100.00000ml of M6151 + 1900.00000ml of W3112 = Final Quantity: 2000.000 ml

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
67	SODIUM CHLORIDE - HYDROXYL- CHLORIDE SOLUTION	MP86830	08/18/2025	02/18/2026	Sagar Kanani	None	None	Sarabjit Jaswal 08/18/2025

FROM 2000.00000ml of W3112 + 240.00000gram of M5501 = Final Quantity: 2000.000 ml

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

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
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.	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 #
Seidler Chemical	BA-3624-05 / Sodium Chloride, Crystal (cs/4x2.5kg)	0000281938	07/06/2026	07/24/2023 / mohan	04/14/2023 / mohan	M5501

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 #
PCI Scientific Supply, Inc.	26397-103 / PTFE BOILING STONES	W126678	12/31/2025	06/17/2023 / Al-Terek	06/12/2023 / jaswal	M5582

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

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58024 / Chromium, Cr, 500 ml, 1000 PPM	060523	06/05/2026	08/28/2023 / jaswal	08/25/2023 / jaswal	M5658

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58029 / Cu, 1000 PPM, 500 ml	102523	10/25/2026	04/03/2024 / jaswal	10/27/2023 / jaswal	M5697

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	/ 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.	57004 / Be, 1000 PPM, 125 ml	102523	10/25/2026	02/09/2024 / bin	02/09/2024 / bin	M5798

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57050 / Sn, 1000 PPM, 125 ml	071123	07/11/2026	02/09/2024 / bin	02/09/2024 / bin	M5799

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57027 / CO, 1000 PPM, 125 ml	091923	09/19/2026	05/31/2024 / bin	02/09/2024 / bin	M5800

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

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57033 / As, 1000 PPM, 125 ml	111323	11/13/2026	02/09/2024 / bin	02/09/2024 / bin	M5801

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58120 / Ca, 10000 PPM, 500 ml	122223	12/22/2026	04/17/2025 / Janvi	01/03/2024 / jaswal	M5805

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.	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.	57015 / P, 1000 PPM, 125 ml	091123	09/11/2026	05/01/2024 / jaswal	02/09/2024 / jaswal	M5820

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57034 / Se, 1000 PPM, 125 ml	060624	06/06/2027	07/02/2024 / Jaswal	06/14/2024 / Jaswal	M5962

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

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57016 / S, 1000 PPM, 125 ml	122923	03/31/2026	03/31/2025 / kareem	06/11/2024 / Jaswal	M5969

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57003 / Li, 1000 PPM, 125 ml	061224	06/21/2027	07/01/2024 / Jaswal	07/01/2024 / Jaswal	M5970

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGTI1-1 / TITANIUM 125mL 1000ug/mL	T2-TI719972	08/05/2026	08/06/2025 / Janvi	02/22/2024 / Jaswal	M5979

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	07/30/2026	07/30/2025 / Janvi	02/22/2024 / kareem	M5998

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

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

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	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.	57028 / Ni, 1000 PPM, 125 ml	062024	06/20/2027	06/04/2025 / Janvi	08/05/2024 / Jaswal	M6027

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

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

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	Z9651Q / CHEM-CLP-4/.25L	V2-MEB746762	01/01/2026	01/01/2025 / kareem	09/19/2024 / kareem	M6076

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 #
Absolute Standards, Inc.	58120 / Calcium, 500 ml, 10000 PPM	082324	08/23/2027	03/06/2025 / JANVI	10/14/2024 / jaswal	M6086

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.	58126 / Fe, 10000 PPM, 500 ml	011025	01/10/2028	06/25/2025 / Janvi	01/13/2025 / Jaswal	M6140

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

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	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 #
Seidler Chemical	BA-9530-33 / Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L)	22G2862015	02/17/2026	02/18/2025 / Sagar	01/15/2025 / Sagar	M6151

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	09/09/2025	03/10/2025 / Eman	02/02/2025 / Sagar	M6158

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

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	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 #
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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	QCP-CICV-1-125ML / EPA CLP ICP Verification Standard1	V2-MEB744107	06/08/2026	06/09/2025 / jaswal	06/06/2025 / jaswal	M6163

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	QCP-CICV-2-125ML / EPA CLP ICP Verification Standard2	U2-MEB733713	06/08/2026	06/09/2025 / jaswal	06/09/2025 / jaswal	M6164

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	QCP-CICV-3-125ML / EPA CLP ICP Verification Standard3	V2-MEB749572	06/08/2026	06/09/2025 / jaswal	06/09/2025 / jaswal	M6165

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-2186-03 / Hydrogen Peroxide (cs/4x4L)	24D1961001	10/16/2025	06/25/2025 / jaswal	05/20/2025 / Sagar	M6170

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

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58112 / Mg, 10000 PPM, 500 ml	011525	01/15/2028	07/15/2025 / jaswal	02/13/2025 / Janvi	M6171

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	V2-MEB742428	07/31/2026	07/31/2025 / Janvi	05/05/2025 / Janvi	M6174

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	092724	09/27/2027	08/06/2025 / Janvi	08/06/2025 / Janvi	M6176

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	/ Lead (Pb) 1000PPM	031525	03/15/2028	08/06/2025 / Janvi	08/06/2025 / Janvi	M6177

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57042 / Mo, 1000 PPM, 125 ml	080528	08/05/2028	08/06/2025 / Janvi	08/06/2025 / Janvi	M6178

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	08/05/2026	08/06/2025 / Janvi	06/02/2024 / Janvi	M6179

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

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	WW-LFS-1 / Laboratory Fortified Stock Solution 1, 125 ml	W2-MEB752149	02/05/2026	08/06/2025 / Janvi	07/22/2025 / Janvi	M6180

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	V2-MEB7433480	02/05/2026	08/06/2025 / Janvi	07/22/2025 / Janvi	M6181

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	02/05/2026	08/06/2025 / Janvi	03/06/2024 / Janvi	M6182

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	02/05/2026	08/06/2025 / Janvi	03/06/2024 / Janvi	M6184

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

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M6032

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

R 8/5/24

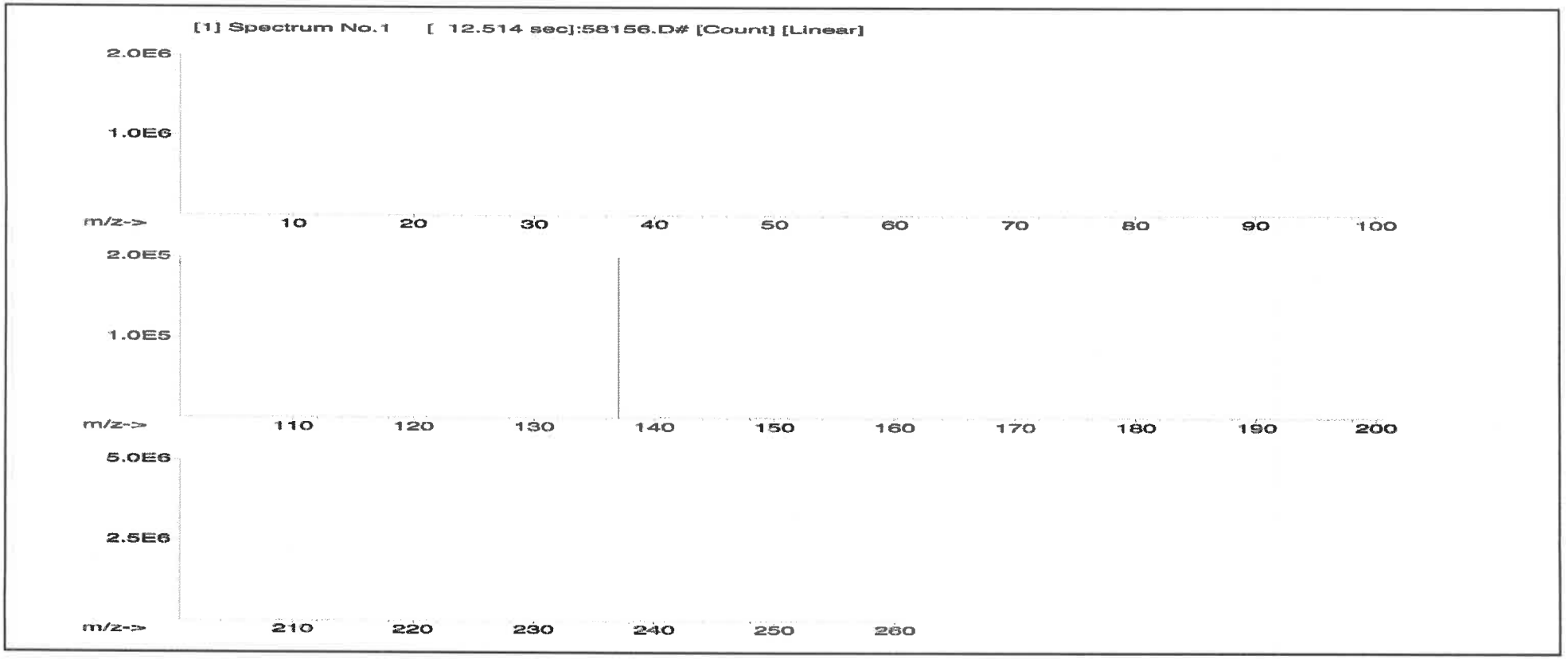
CERTIFIED WEIGHT REPORT:

Part Number:	**57056**		**Solvent:**	**Lot #** 24002546	Nitric Acid
Lot Number:	**010924**				
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
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



324 of 477
Q2879-METALS

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	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).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

R: 01/03/24 M5804, M5805

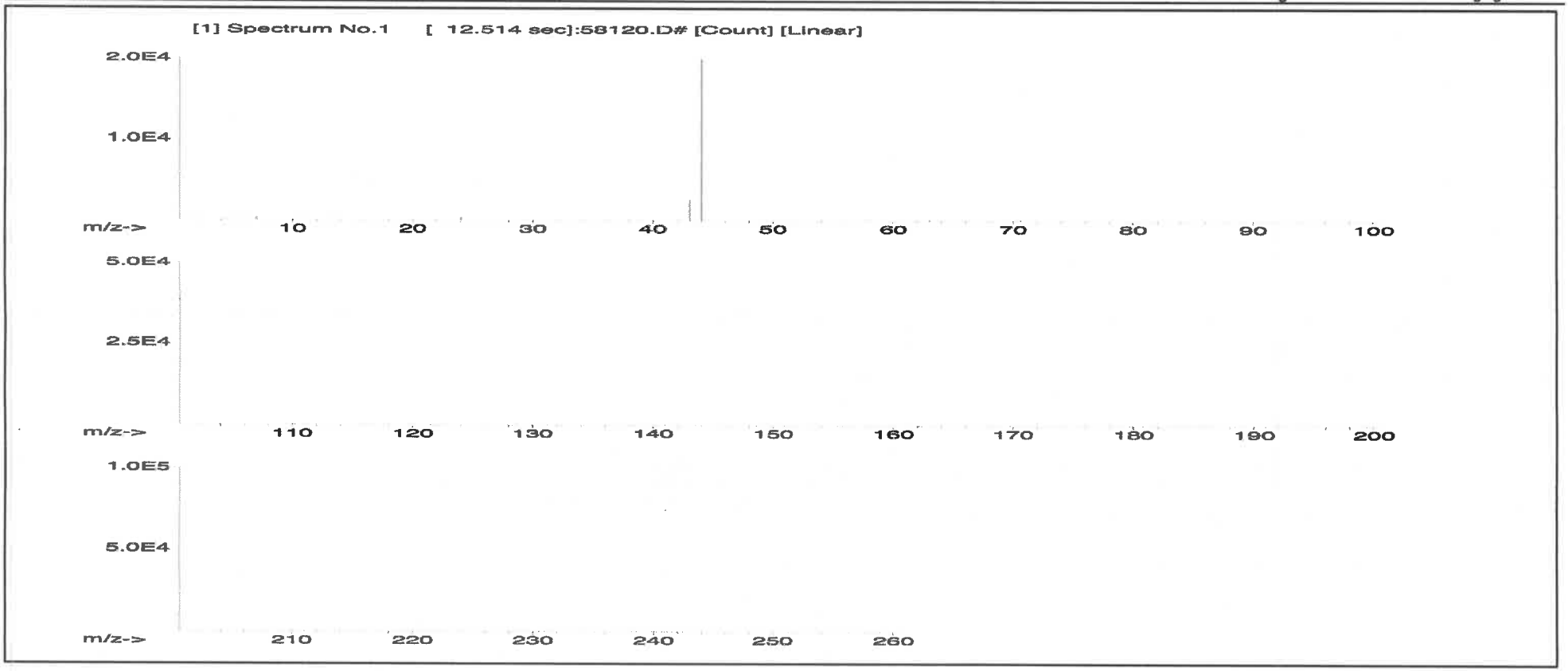
CERTIFIED WEIGHT REPORT:

Part Number:	**58120**		**Lot #**		
Lot Number:	**122223**	**Solvent:**	24002546	Nitric Acid	
Description:	**Calcium (Ca)**	2%	80.0 (mL)	Nitric Acid	
Expiration Date:	122226				
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):	4000.0	0.06	Flask Uncertainty		

Giovanni Esposito

Formulated By:	Giovanni Esposito	122223
Reviewed By:	Pedro L. Rentas	122223

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Calcium carbonate (Ca)	IN014	CAD03202383	10000	99.999	0.10	39.9	100.2525	100.2670	**10001.4**	**20.0**	471-34-1	5 mg/m3	orl-rat >2000mg/kg	3109a



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	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.
* 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

Revd 10/14/2024 M6085/M6086/M6087

CERTIFIED WEIGHT REPORT:

Part Number:	**58120**		**Lot #**		
Lot Number:	**082324**		**Solvent:**	24002546	Nitric Acid
Description:	**Calcium (Ca)**				
			2%	80.0 (mL)	Nitric Acid
Expiration Date:	082327				
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		

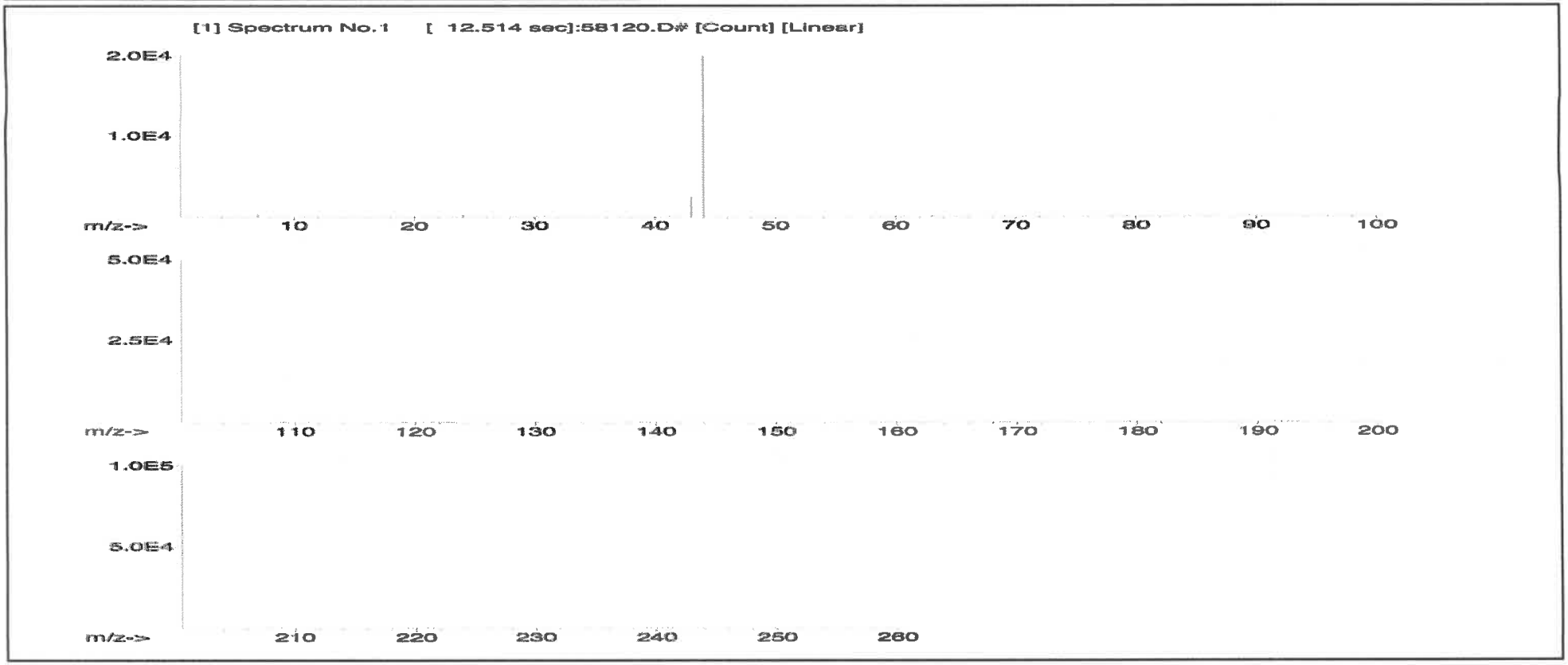
Giovanni Esposito

Formulated By:	Giovanni Esposito	082324

Pedro Rentas

Reviewed By:	Pedro L. Rentas	082324

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	100.2656	**10001.2**	**20.0**	471-34-1	5 mg/m3	ori-rat >2000mg/kg	3109a



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	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.
* 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

M6028

R 8/15/24

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number:	**57048**			**Lot #**	
Lot Number:	**070124**		**Solvent:**	24002546	Nitric Acid
Description:	**Cadmium (Cd)**				
			2%	40.0 (mL)	Nitric Acid
Expiration Date:	070127				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.07	0.100	Flask Uncertainty		

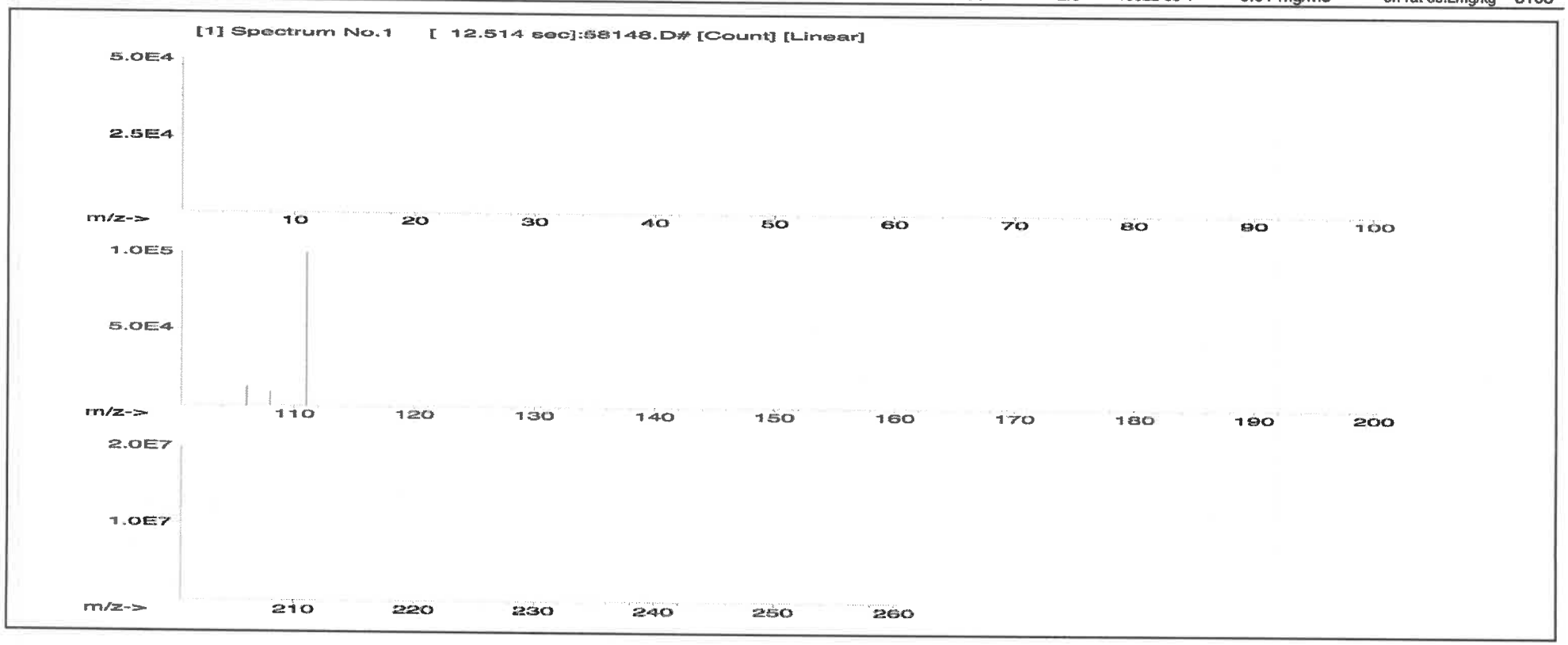
Aleah O'Brady

Formulated By:	Aleah O'Brady	070124

Pedro Rentas

Reviewed By:	Pedro L. Rentas	070124

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Cadmium nitrate tetrahydrate (Cd)	IN024	CDM092021A1	1000	99.999	0.10	36.5	5.4797	5.4804	**1000.1**	**2.0**	10022-68-1	0.01 mg/m3	orl-rat 60.2mg/kg	3108



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	T	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

ThermoFisher SCIENTIFIC

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

M5467 R: 03/01/23 (LA)

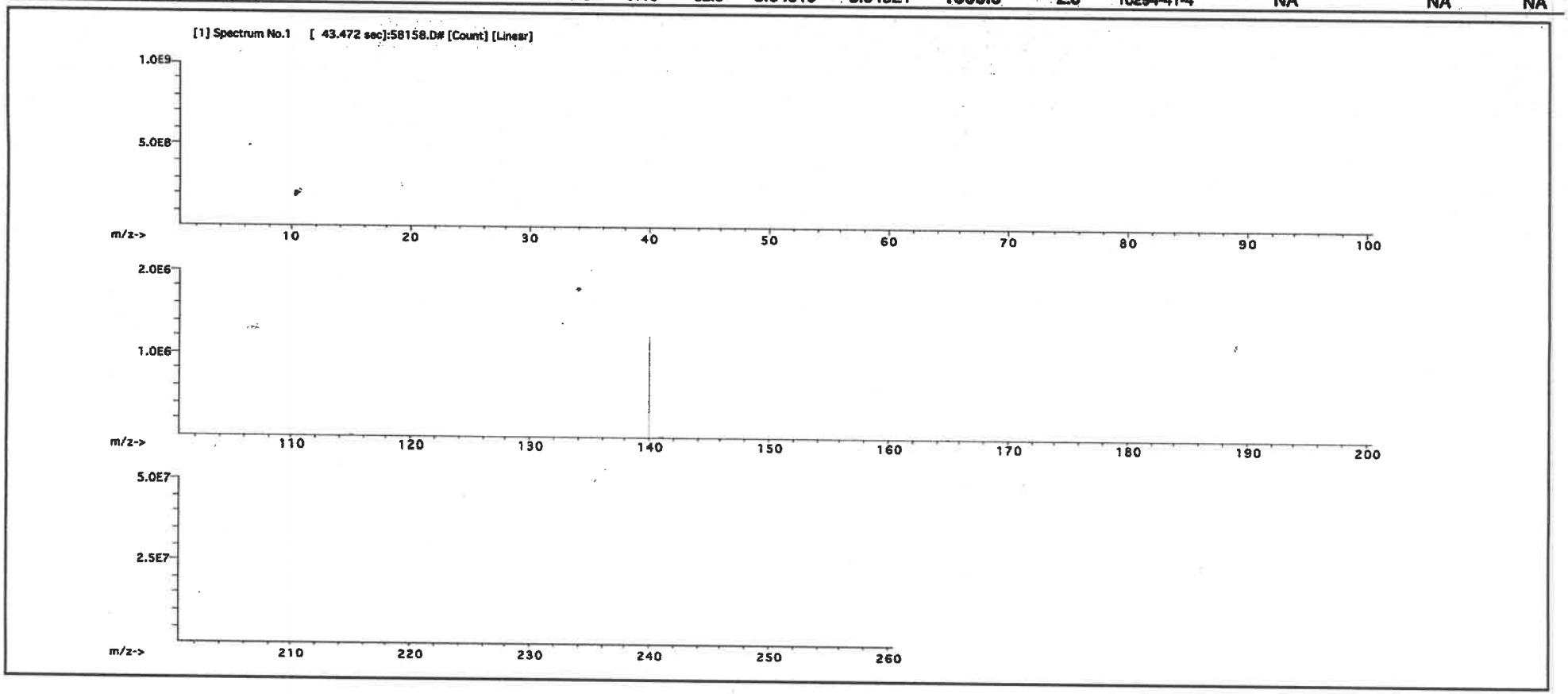
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number:	57058		**Lot #**	
Lot Number:	020623	**Solvent:**	21110221	Nitric Acid
Description:	Cerium (Ce)	2%	20.0 (mL)	Nitric Acid
Expiration Date:	020626			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	1000			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	1000.12	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	020623
Reviewed By:	Pedro L. Rentas	020623

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Cerium nitrate hexahydrate (Ce)	IN146	Z512CEB1	1000	99.999	0.10	32.8	3.04919	3.04921	1000.0	2.0	10294-41-4	NA	NA	NA



2023-METALS

Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	T	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Sodium Chloride, Crystal
BAKER ANALYZED® A.C.S. Reagent

M5493 - M5308
Rad on 4/14/23
JMG

avantor™ | J.T.Baker®

Material No.: 3624-01
Batch No.: 0000281938
Manufactured Date: 2021-06-07
Retest Date: 2026-06-07
Revision No.: 2

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 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone 610.386.1700

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-58118-BOI5021-061223

3773 NW 126th Avenue • Coral Springs, Florida 33065 • Fax (954) 344-2008 • 1-800 446-3781
Email: jensen@jenseninert.com Visit our Web Site at www.jenseninert.com

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-58118-BOI5021-061223

3773 NW 126th Avenue • Coral Springs, Florida 33065 • Fax (954) 344-2008 • 1-800 446-3781
Email: jensen@jenseninert.com Visit our Web Site at www.jenseninert.com

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5658 R ! 8/25/23

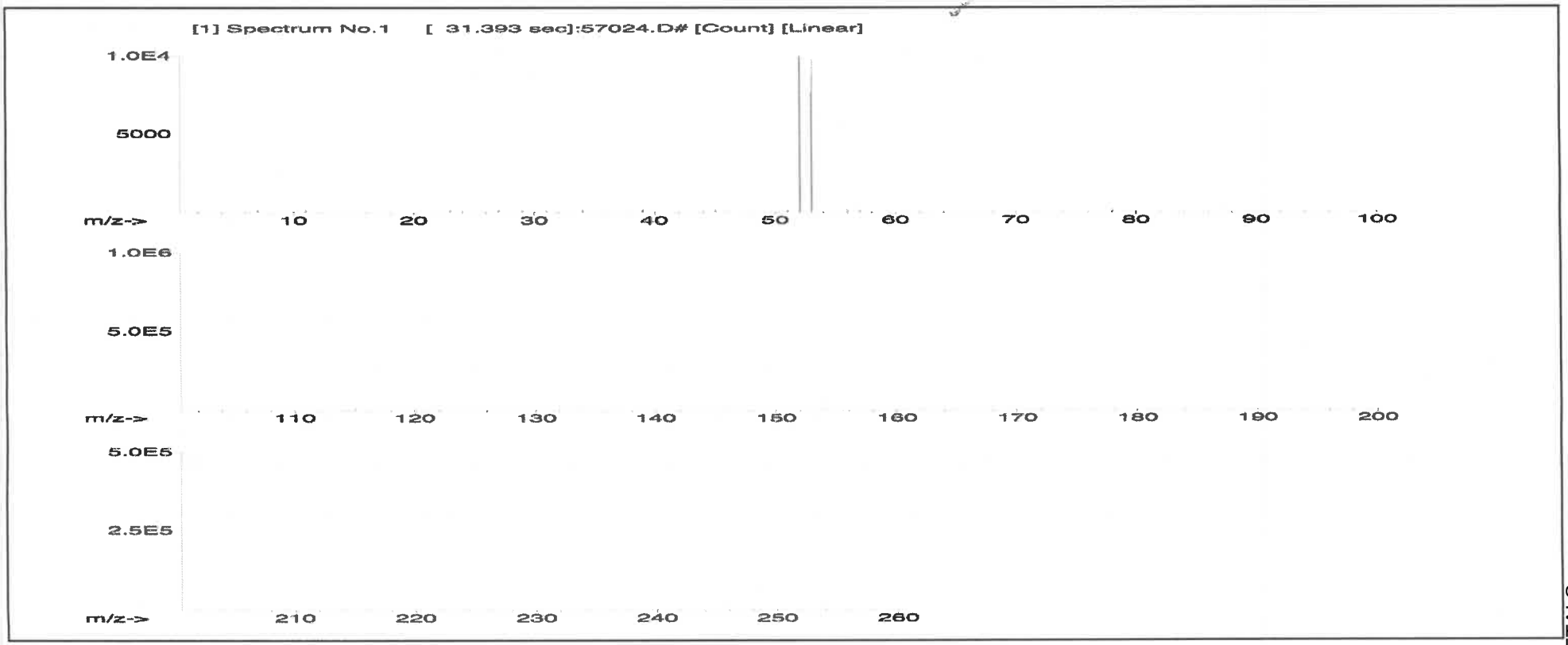
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**58024**	21110221	Nitric Acid	
Lot Number:	**060523**			
Description:	**Chromium (Cr)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	060526			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	060523
Reviewed By:	Pedro L. Rentas	060523

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Chromium(III) nitrate nonahydrate (Cr)	58124	071122	0.1000	200.0	0.084	1000	10000.1	**1000.0**	**2.2**	7789-02-8	0.5 mg(Cr)/m3	orl-rat 3250 mg/kg	3112a



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	T	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5697 R: 10/27/23

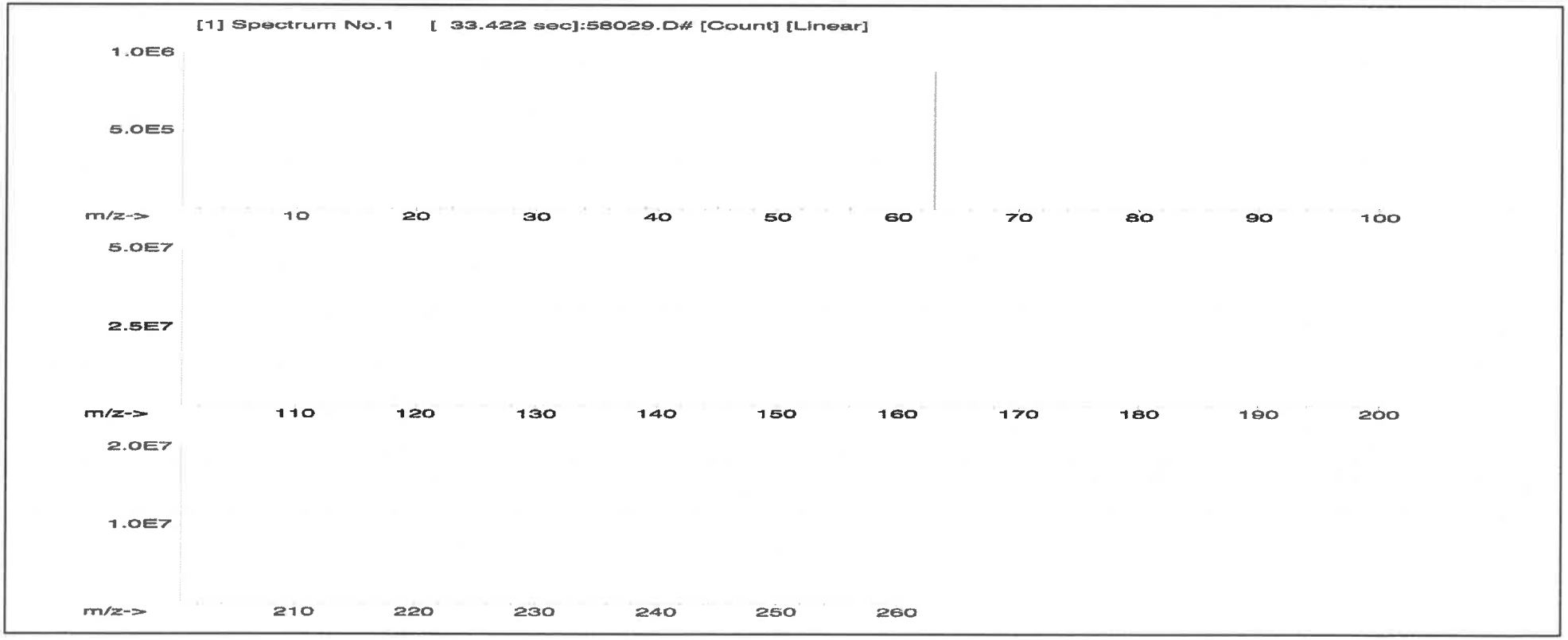
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:		
Part Number:	**58029**	24002546	Nitric Acid		
Lot Number:	**102523**				
Description:	**Copper (Cu)**				
		2.0%	40.0 (mL)	Nitric Acid	
Expiration Date:	102526				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Formulated By:	Benson Chan	102523
Reviewed By:	Pedro L. Rentas	102523

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Copper(II) nitrate trihydrate (Cu)	58129	100223	0.1000	200.0	0.084	1000	10000.1	**1000.0**	**2.2**	10031-43-3	1 mg/m3	orl-rat 794 mg/kg	3114



Absolute Standards, Inc.
300-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	T	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 12/20/23 M5748

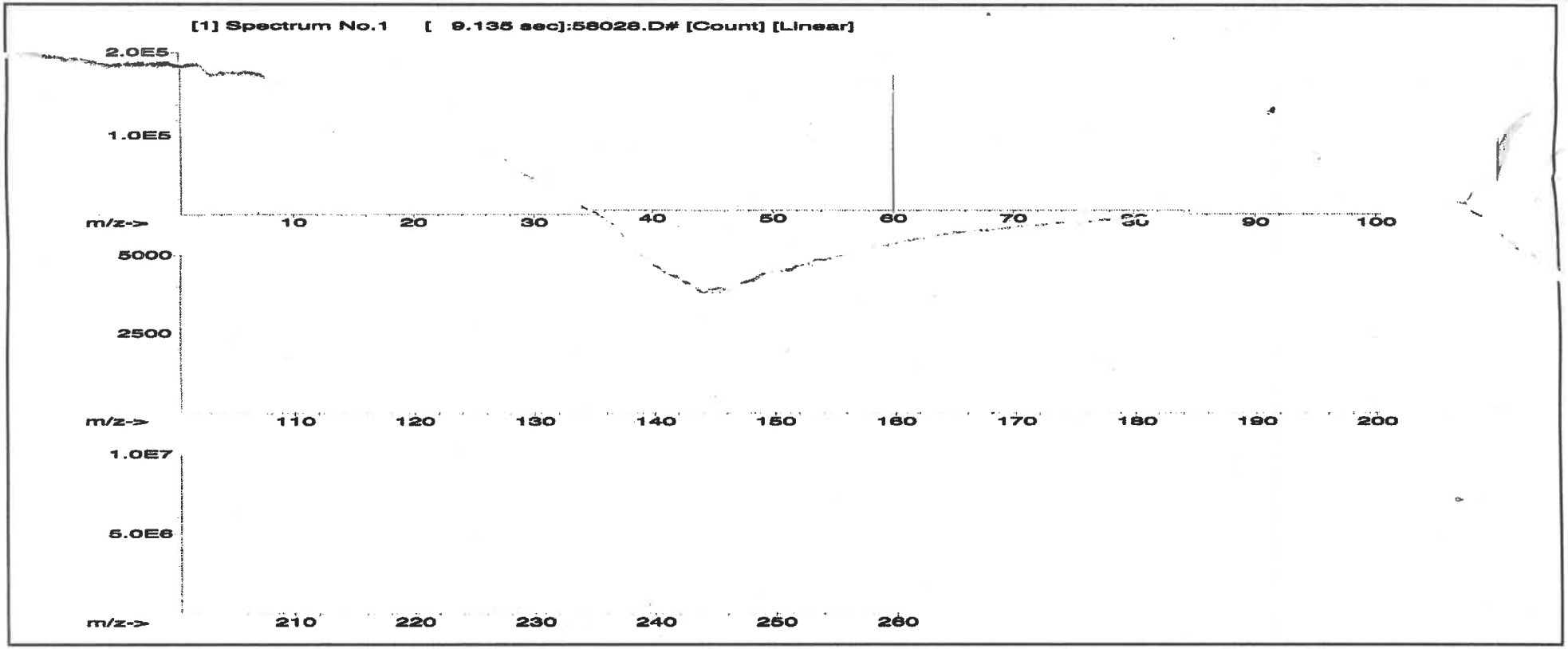
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57028**	24002546	Nitric Acid	
Lot Number:	**091223**			
Description:	**Nickel (Ni)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	091226			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	091223
Reviewed By:	Pedro L. Rentas	091223

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Nickel(II) nitrate hexahydrate (Ni)	58128	062023	0.1000	200.0	0.084	1000	10000.4	**1000.0**	2.2	13478-00-7	1 mg/m3	orl-rat 1620 mg/kg	3136



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	T	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 02/09/24 M5798

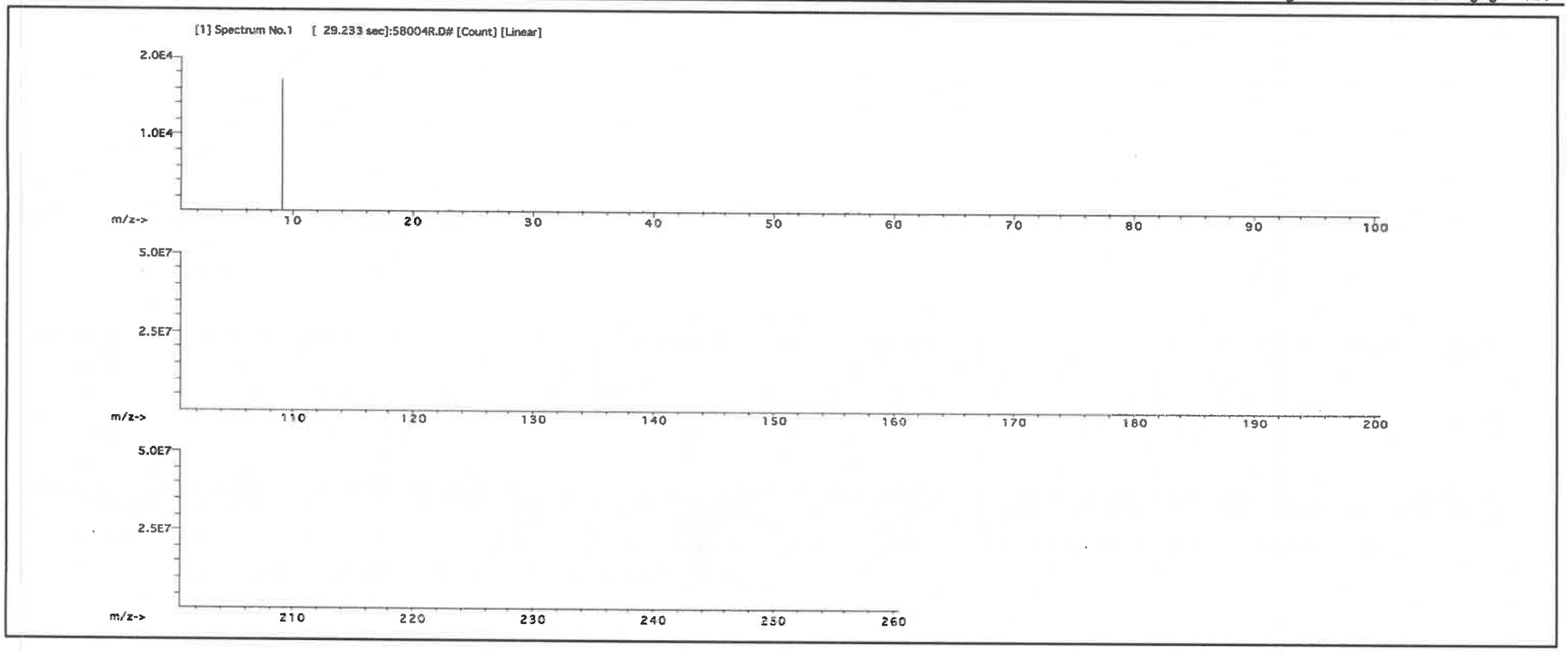
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57004**			
Lot Number:	**102523**	24002546	Nitric Acid	
Description:	**Beryllium (Be)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	102526			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Benson Chan	102523
Reviewed By:	Pedro L. Rentas	102523

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Beryllium nitrate (Be)	58104	091423	0.1000	200.0	0.084	1000	10001.5	**1000.0**	**2.2**	13597-99-4	0.2ug/m3	intrvns-rat 3.16mg/kg	NA



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																		
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	T	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R? 02/09/24 IV15799

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 57050
Lot Number: 071123
Description: Tin (Sn)

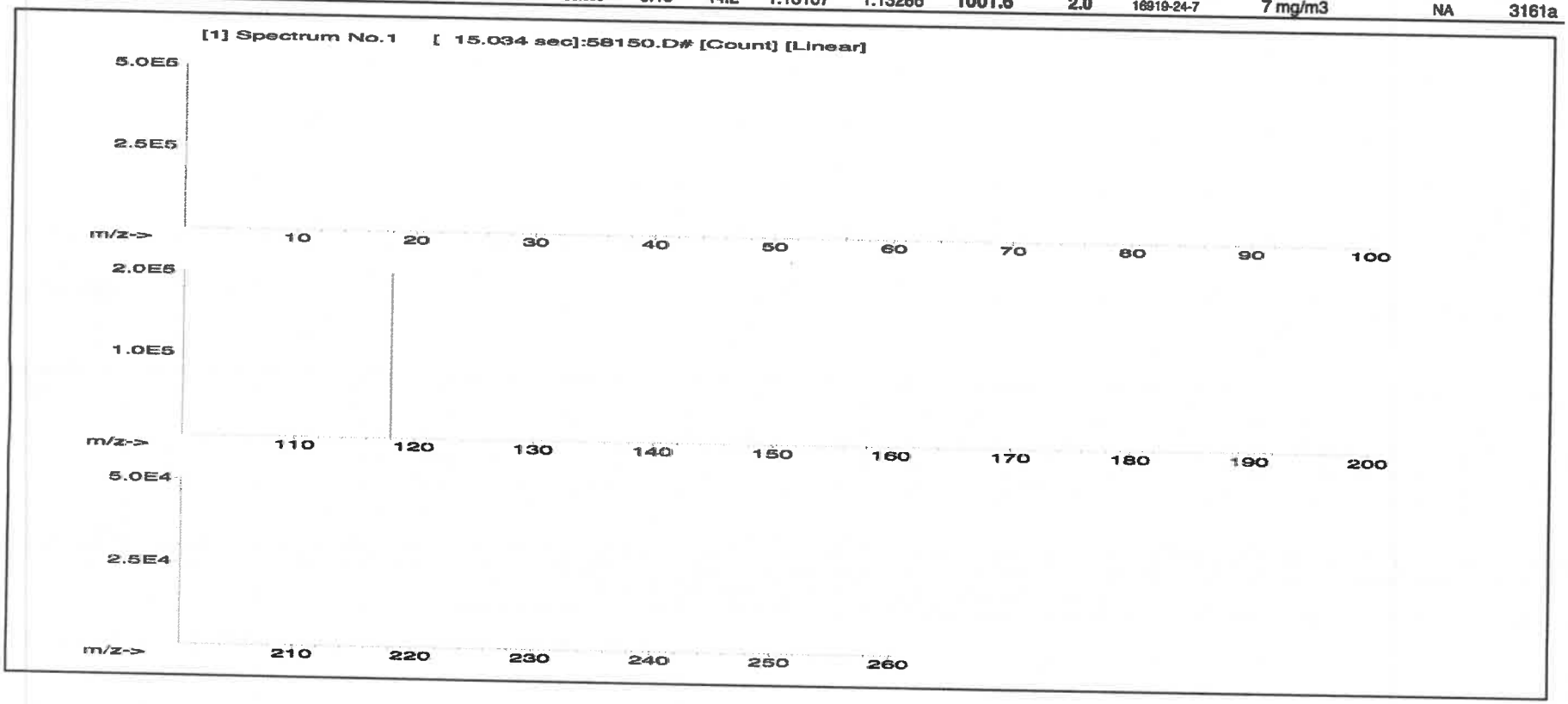
Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 499.93

	Lot #		
Solvents:	21110221	Nitric Acid	
	22D0562008	Hydrochloric acid	
2%	10.0	Nitric Acid	
6%	30.0	Hydrochloric acid	
	(mL)		

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By:	Benson Chan	071123
Reviewed By:	Pedro L. Rentas	071123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium hexafluorostannate(IV) (Sn)	IN010	SND042023A1	1000	99.999	0.10	44.2	1.13107	1.13286	**1001.6**	**2.0**	16919-24-7	7 mg/m3	NA	3161a



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<500	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	T	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 02/09/24 IM5800 BH

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

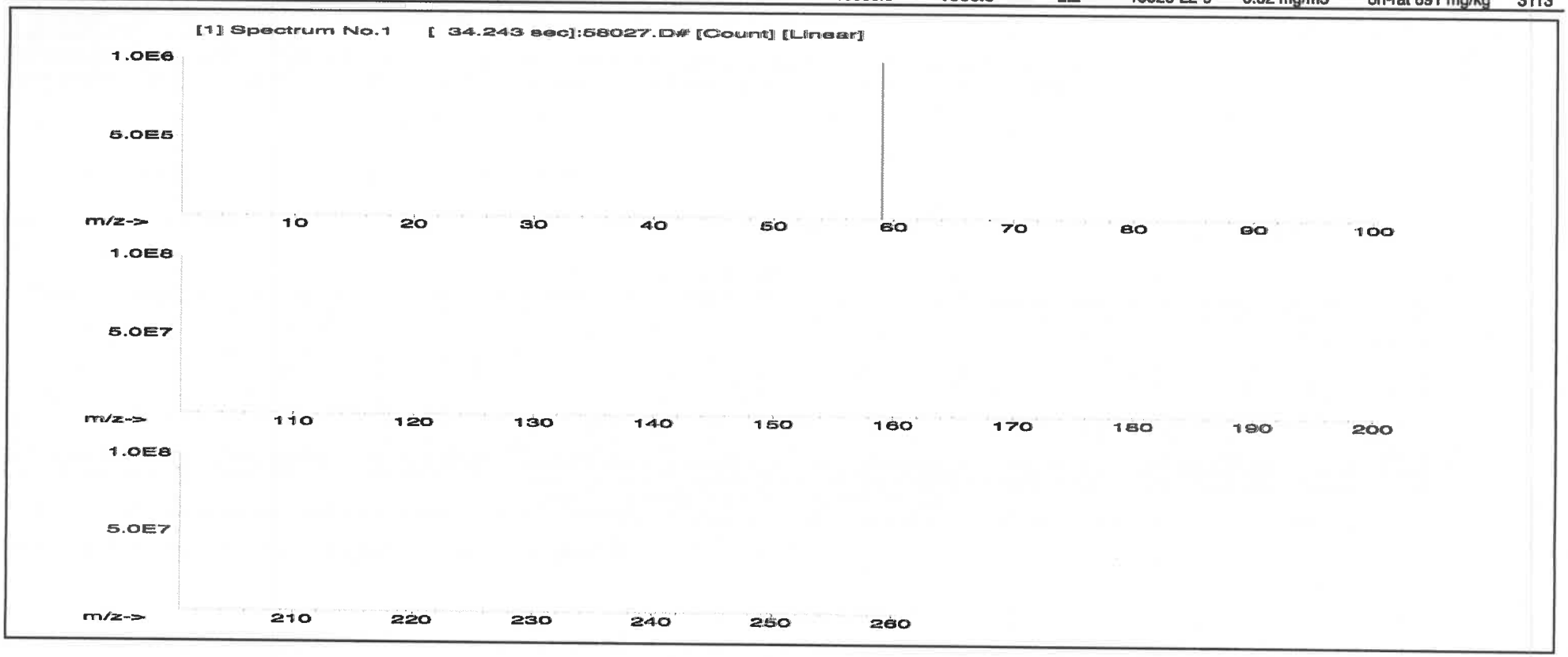
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:		
Part Number:	**57027**	24002546	Nitric Acid		
Lot Number:	**091923**				
Description:	**Cobalt (Co)**	2.0%	40.0 (mL)	Nitric Acid	
Expiration Date:	091926				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Formulated By: Lawrence Barry 091923

Reviewed By: Pedro L. Rentas 091923

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Cobalt(II) nitrate hexahydrate (Co)	58127	050923	0.1000	200.0	0.084	1000	10000.0	**1000.0**	**2.2**	10026-22-9	0.02 mg/m3	orl-rat 691 mg/kg	3113



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	T	Gé	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 02/09/24 M5801 BH

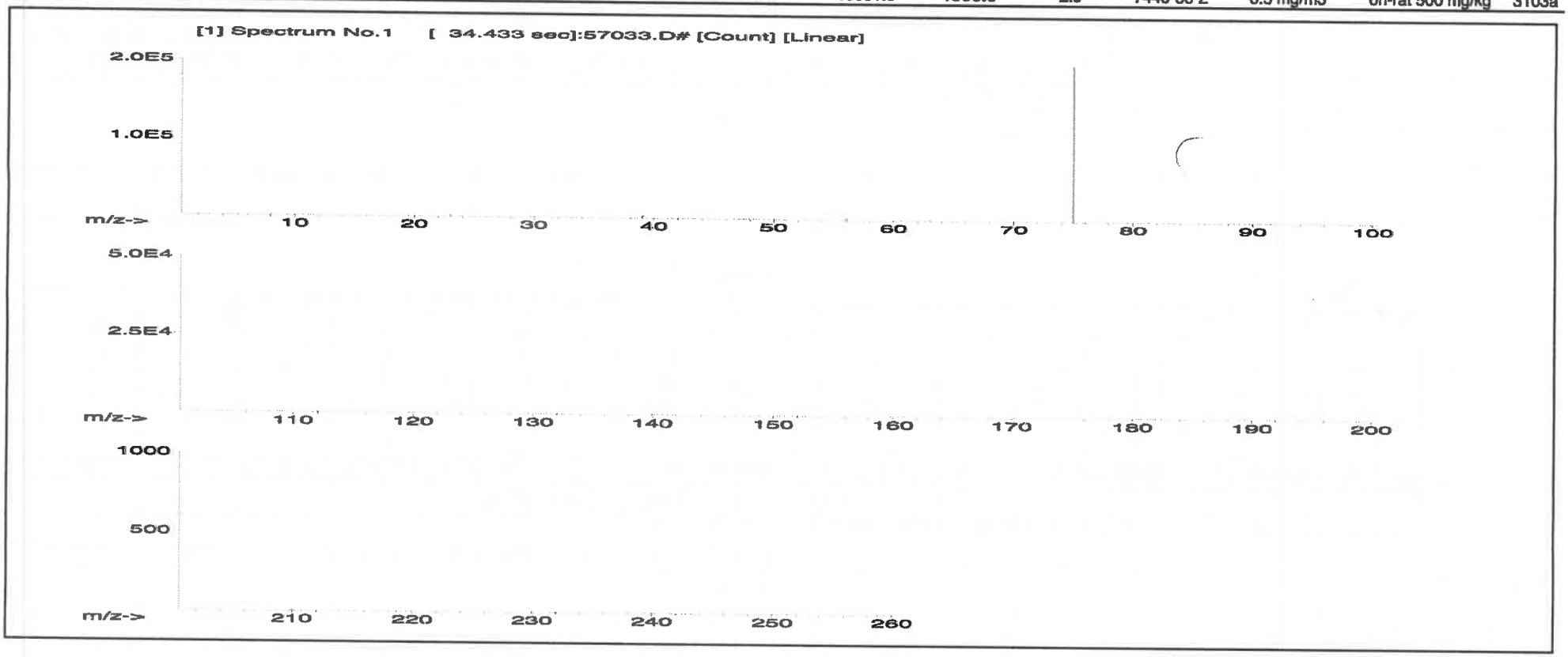
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED **WEIGHT** REPORT:

		Lot #	Solvent:		
Part Number:	**57033**	24002546	Nitric Acid		
Lot Number:	**111323**				
Description:	**Arsenic (As)**	2.0%	80.0 (mL)	Nitric Acid	
Expiration Date:	111326				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	4000.0	0.06	Flask Uncertainty		

Formulated By:	Lawrence Barry	111323
Reviewed By:	Pedro L. Rentas	111323

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Arsenic (As)	58133	020522	0.1000	400.0	0.084	1000	10001.0	**1000.0**	**2.0**	7440-38-2	0.5 mg/m3	orl-rat 500 mg/kg	3103a



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	T	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge*	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

A: 02/09/24 M.5814

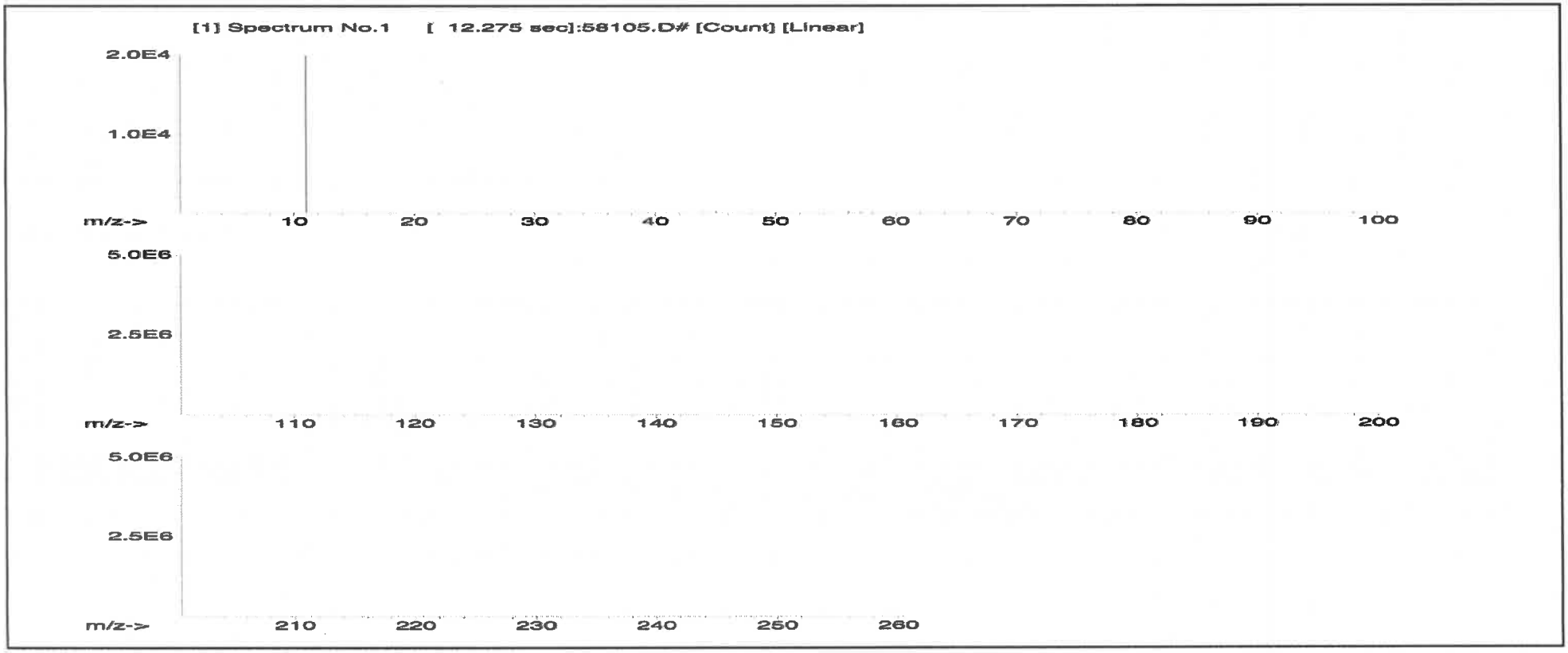
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number:	**57005**		**Lot #**		
Lot Number:	**071123**	**Solvent:**	MKBQ8597V	Ammonium hydroxide	
Description:	**Boron (B)**		2.0%	40.0 (mL)	Ammonium hydroxide
Expiration Date:	071126				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	1999.48	0.058	Flask Uncertainty		

Formulated By:	Benson Chan 071123
Reviewed By:	Pedro L. Rentas 071123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Boric acid (B)	IN018	BV092016A1	1000	99.9999	0.10	17.3	11.55772	11.56201	**1000.4**	**2.0**	10043-35-3	2 mg/m3	orl-rat 2660 mg/kg	3107



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	T	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 02/09/24 M5816

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 57016
Lot Number: 122923
Description: Sulfur (S)

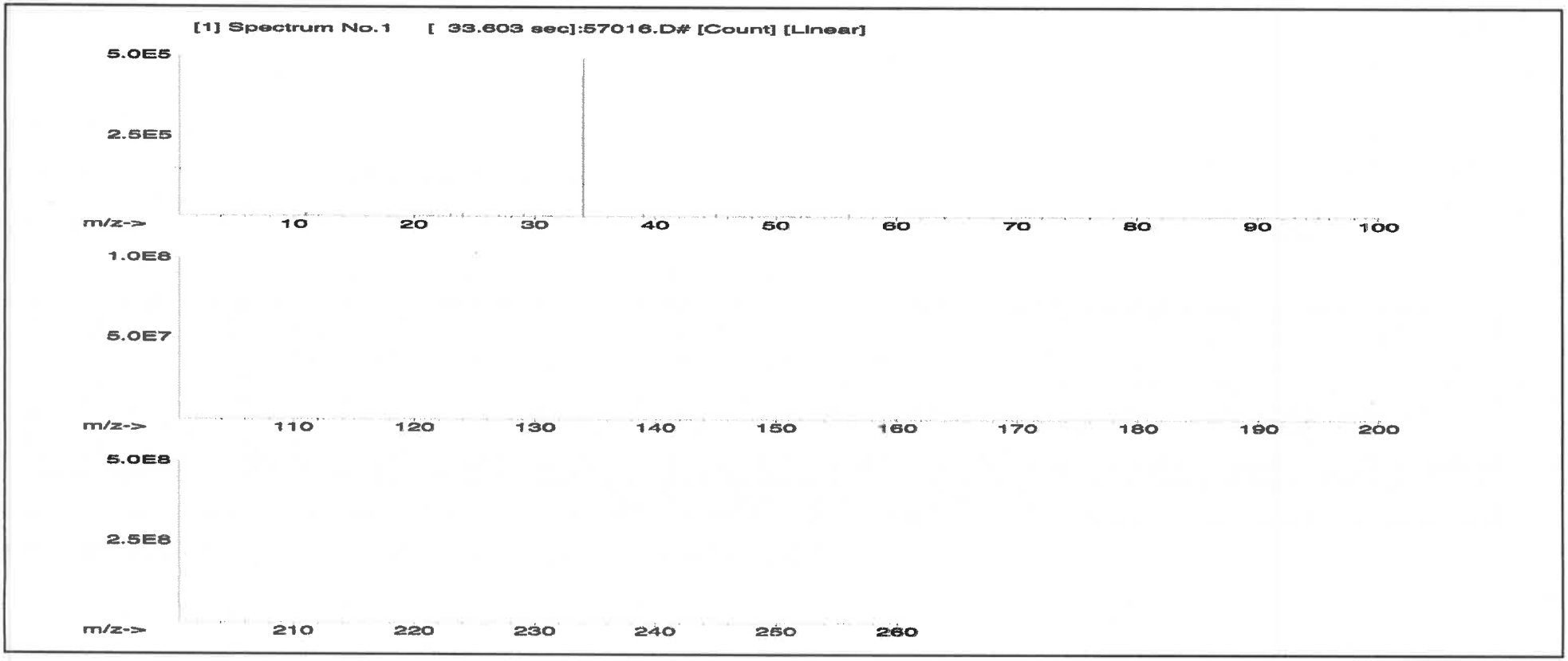
Expiration Date: 122926
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

Weight shown below was diluted to (mL): 4000.0

Lot #		
Solvent:	122923	ASTM Type 1 Water
	5E-05	Balance Uncertainty
	0.06	Flask Uncertainty

Formulated By:	Benson Chan	122923
Reviewed By:	Pedro L. Rentas	122923

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium sulfate (S)	IN117	SLBR7225V	1000	99.9	0.10	24.3	16.4979	16.4980	**1000.0**	**2.0**	7783-20-2	NA	orl-rat 4250mg/kg	3181



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	T	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 02/09/24 M5820

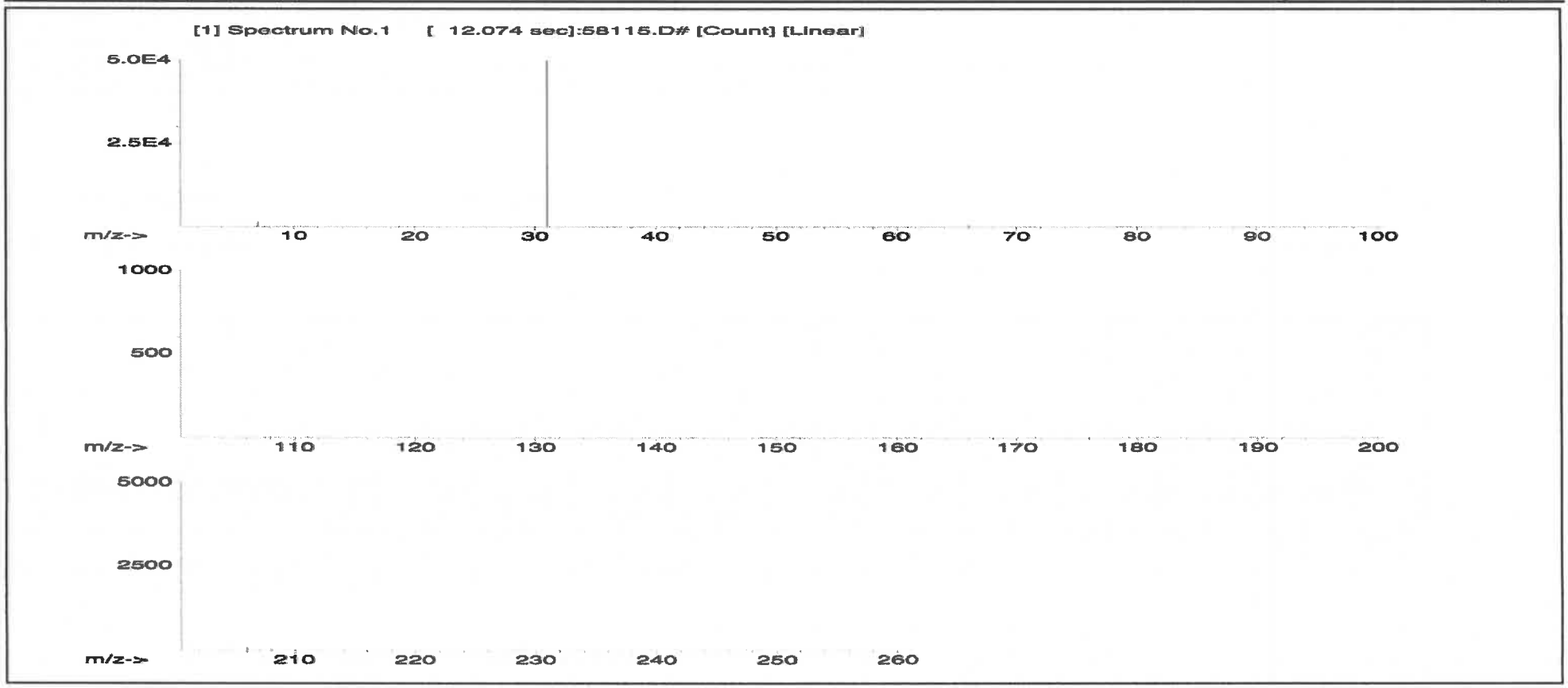
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number:	**57015**		**Lot #**		
Lot Number:	**091123**	**Solvent:**	24002546	Nitric Acid	
Description:	**Phosphorous (P)**				
		2%	40.0 (mL)	Nitric Acid	
Expiration Date:	091126				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Formulated By:	Lawrence Barry	091123
Reviewed By:	Pedro L. Rentas	091123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium dihydrogen phosphate (P)	IN008	PV082019A1	1000	99.999	0.10	27.5	7.2729	7.2730	**1000.0**	**2.0**	7722-76-1	5 mg/m3	orl-rat >2000mg/k	3186



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	T	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5962 R! 06/14/24.

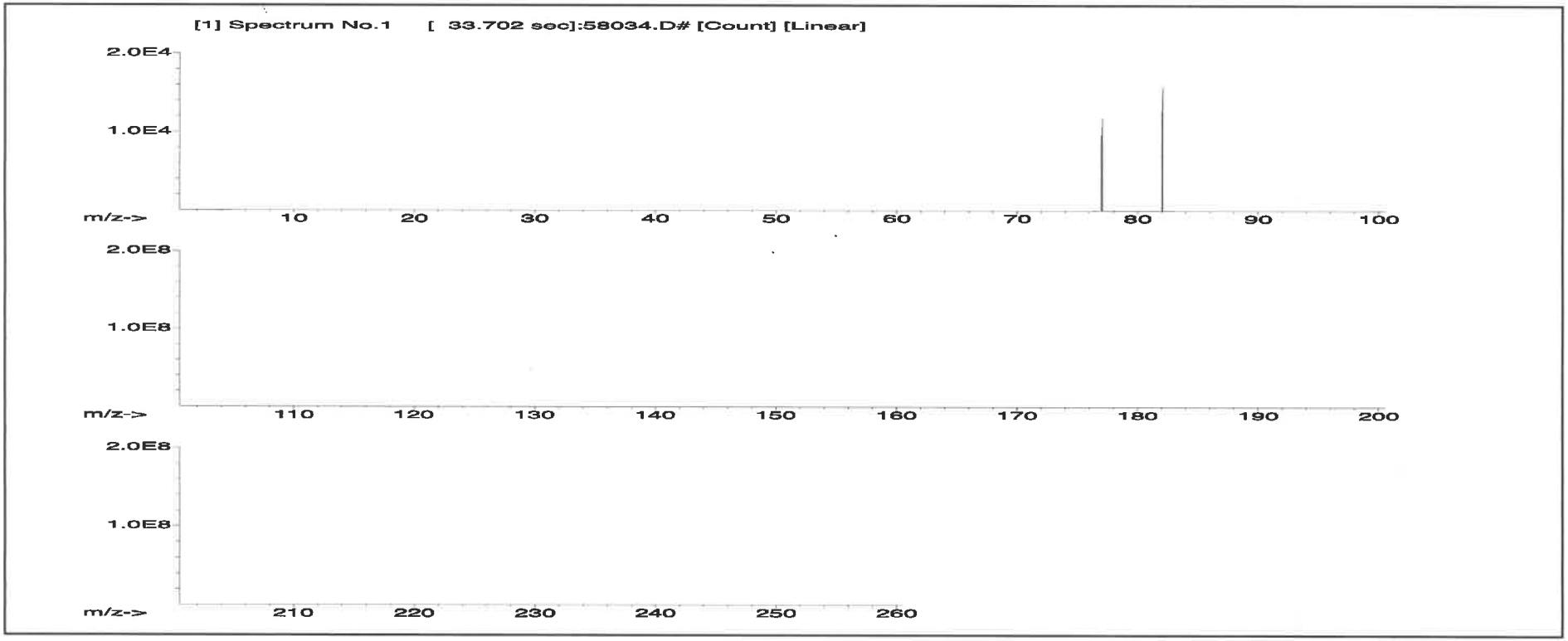
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57034**	24002546	Nitric Acid	
Lot Number:	**060624**			
Description:	**Selenium (Se)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	060627			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.07	0.100	Flask Uncertainty	

Formulated By:	Benson Chan	060624
Reviewed By:	Pedro L. Rentas	060624

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Selenium (Se)	58134	071223	0.1000	200.0	0.084	1000	10002.5	**1000.0**	**2.2**	7782-49-2	0.2 mg/m3	orl-rat 6700 mg/kg	3149



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																		
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	T	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5969 R: 06/11/24

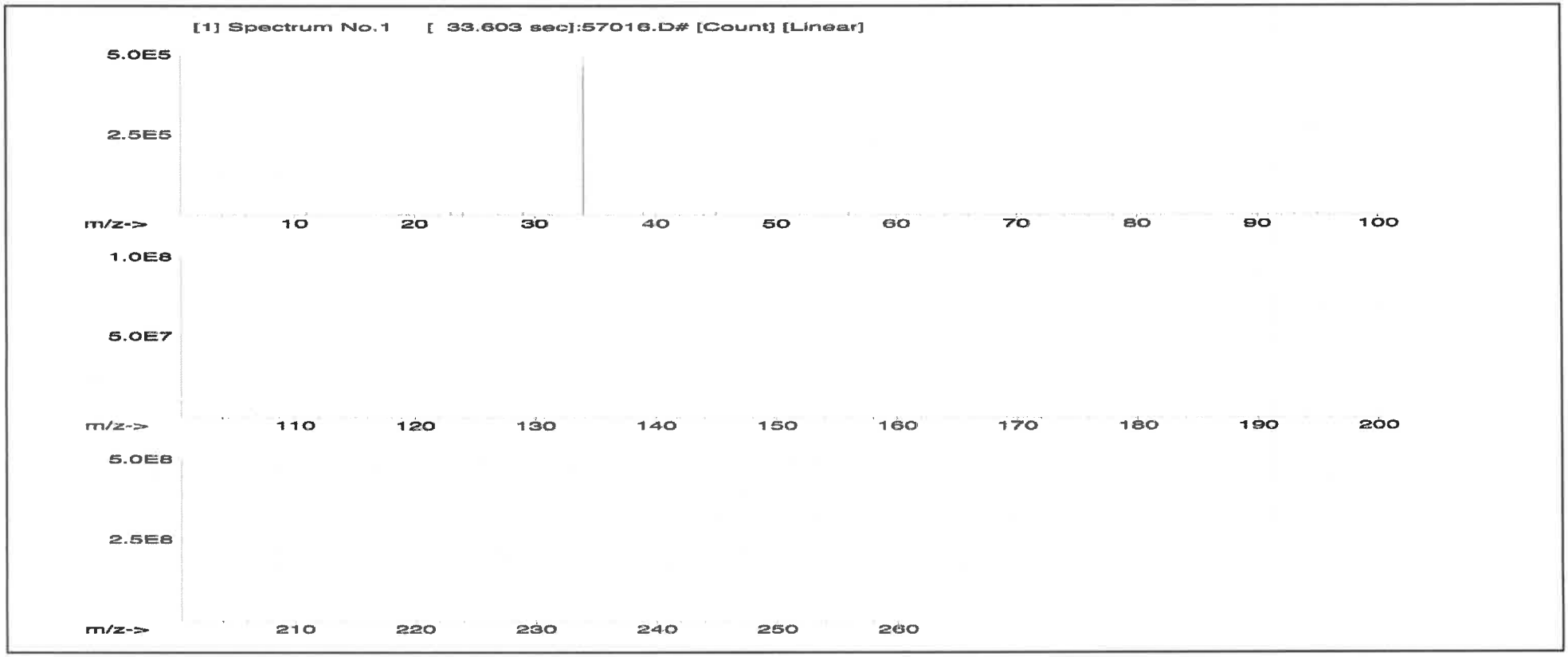
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number:	**57016**	**Solvent:**	**Lot #** 122923	ASTM Type 1 Water
Lot Number:	**122923**			
Description:	**Sulfur (S)**			
Expiration Date:	122926			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	4000.0	0.06	Flask Uncertainty	

Formulated By:	Benson Chan	122923
Reviewed By:	Pedro L. Rentas	122923

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium sulfate (S)	IN117	SLBR7225V	1000	99.9	0.10	24.3	16.4979	16.4980	**1000.0**	**2.0**	7783-20-2	NA	orl-rat 4250mg/kg	3181



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5970, M5971 R: 7/01/24

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

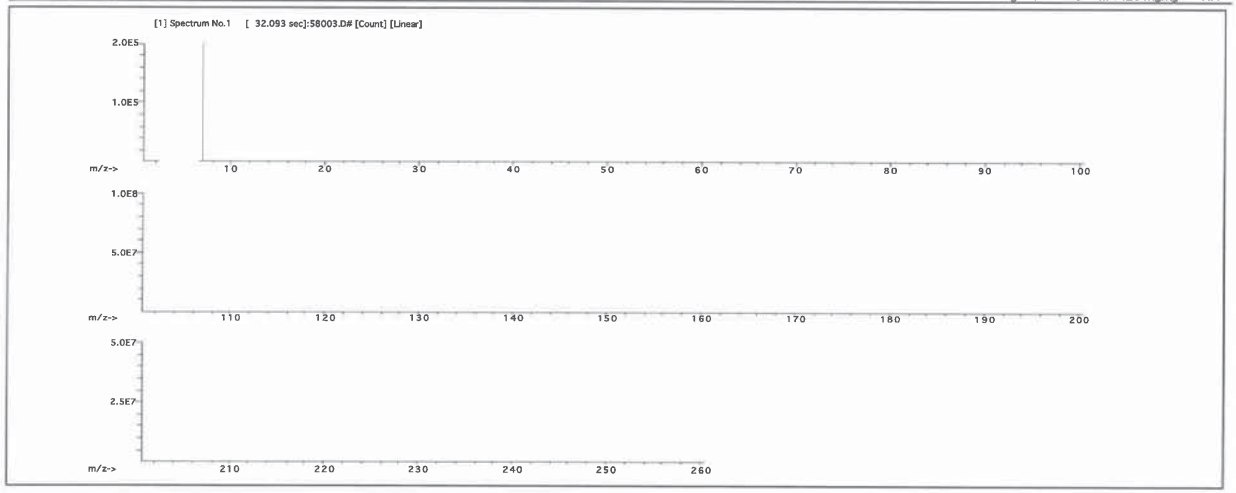
Part Number: 57003
Lot Number: 062124
Description: Lithium (Li)
Expiration Date: 062127
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Volume shown below was diluted to (mL): 250.11

Lot #	Solvent:		
24002546	Nitric Acid		
2.0%	5.0 (mL)	Nitric Acid	
		5E-05	Balance Uncertainty
		0.016	Flask Uncertainty

Giovanni Esposito
Formulated By: Giovanni Esposito 062124

Pedro Rentas
Reviewed By: Pedro L. Rentas 062124

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lithium nitrate (Li)	58103	070622	0.1000	25.0	0.004	1000	10000.4	**1000.0**	**2.0**	7790-69-4	5 mg/m3	orl-rat 1426 mg/kg	NA



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	T	Ni	<0.02	Pr	<0.02	Sc	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

MS978, MS979

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

R: 2/22/24

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 865.01

ACCREDITED Reference Material Producer Certificate 865.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	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:

$$X_{CRM/RM} = \sum(w_i)\,(x_i)$$

x_i = mean of Assay Method i with standard uncertainty $u_{Char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance

$$w_i = (1/u_{Char\ i})^2 \,/\, (\Sigma(1/u_{Char\ i})^2)$$

CRM/RM Expanded Uncertainty ($\pm$) = $u_{CRM/RM} = k\,(u^2_{Char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{Char} = [\Sigma((w_i)^2\,(u_{Char\ i})^2)]^{½}$ where $u_{Char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a)\,(u_{Char\ a})$$

X_a = mean of Assay Method A with

$u_{Char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty ($\pm$) = $u_{CRM/RM} = k\,(u^2_{Char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{Char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000536	M	Eu	<	0.000268	O	Na	<	0.032670	M	Se		0.001204	O	Zn	<	0.003267
O	Al		0.000872	O	Fe		0.003225	O	Nb	<	0.043560	O	Si		0.004735	O	Zr	<	0.043560
M	As	<	0.008586	M	Ga	<	0.000268	M	Nd	<	0.000268	M	Sm	<	0.000268				
M	Au	<	0.004577	M	Gd	<	0.000268	O	Ni	<	0.010890	M	Sn		0.000096				
O	B	<	0.008929	M	Ge	<	0.002146	M	Os	<	0.000269	O	Sr		0.000096				
M	Ba	<	0.002683	M	Hf		0.002161	O	P	<	0.054450	M	Ta		0.010560				
M	Be	<	0.005366	M	Hg	<	0.003231	M	Pb	<	0.001073	M	Tb	<	0.000268				
M	Bi	<	0.001609	M	Ho	<	0.000268	M	Pd	<	0.000268	M	Te	<	0.001341				
O	Ca		0.000676	M	In	<	0.002683	M	Pr	<	0.000268	M	Th	<	0.053663				
M	Cd	<	0.000268	M	Ir	<	0.000269	M	Pt	<	0.000536	s	Ti	<					
M	Ce	<	0.000268	M	K		0.001172	M	Rb	<	0.000268	M	Tl	<	0.000268				
M	Co	<	0.004293	M	La	<	0.000268	M	Re	<	0.000268	M	Tm	<	0.000268				
M	Cr		0.000752	O	Li	<	0.027225	M	Rh	<	0.000268	M	U	<	0.000268				
M	Cs	<	0.000268	M	Lu	<	0.000268	M	Ru	<	0.000269	M	V	<	0.019855				
O	Cu	<	0.010890	O	Mg	<	0.005445	i	S	<		M	W		0.000473				
M	Dy	<	0.000268	O	Mn	<	0.003267	M	Sb	<	0.006976	M	Y	<	0.002146				
M	Er	<	0.000268	M	Mo		0.000774	O	Sc	<	0.004900	M	Yb	<	0.000536				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 47.87 +4 6 Ti(F)6-2

Chemical Compatibility - Soluble in concentrated HCl, HF, H3PO4 H2SO4 and HNO3. Avoid neutral to basic media. Unstable at ppm levels with metals that would pull F- away (i.e. Do not mix with Alkaline or Rare Earths or high levels of transition elements unless they are fluorinated). Stable with most inorganic anions with a tendency to hydrolyze forming the hydrated oxide in all dilute acids except HF.

Stability - 2-100 ppb levels stable (Alone or mixed with all other metals) as the Ti(F)6-2 for months in 1% HNO3 / LDPE container. 1-10,000 ppm single element solutions as the Ti(F)6-2 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

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

MS985
R: 6/14/24

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 863.01
ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGIN10
Lot Number:	U2-IN729349
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Indium
Starting Material:	Indium Metal
Starting Material Lot#:	2511
Starting Material Purity:	99.9995%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10022 ± 30 µg/mL

Density: 1.044 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	**10021 ± 56 µg/mL** ICP Assay NIST SRM 3124a Lot Number: 110516
Assay Method #2	**10035 ± 25 µg/mL** EDTA NIST SRM 928 Lot Number: 928
Assay Method #3	**10001 ± 33 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000760	M	Eu	<	0.000760	O	Na		0.012771	M	Se	<	0.023000	M	Zn	<	0.006100
M	Al		0.003385	O	Fe		0.004462	M	Nb	<	0.000760	O	Si		0.024619	M	Zr	<	0.000760
M	As	<	0.004600	M	Ga	<	0.000760	M	Nd	<	0.000760	M	Sm	<	0.000760				
M	Au	<	0.002300	M	Gd	<	0.000760	O	Ni	<	0.005100	M	Sn	<	0.000760				
O	B		0.003692	M	Ge	<	0.001600	M	Os	<	0.000760	O	Sr	<	0.000610				
M	Ba	<	0.001600	M	Hf	<	0.000760	n	P	<		M	Ta	<	0.000760				
O	Be	<	0.000130	M	Hg	<	0.003100	M	Pb		0.001400	M	Tb	<	0.000760				
M	Bi	<	0.000760	M	Ho	<	0.000760	M	Pd	<	0.001600	M	Te	<	0.000760				
O	Ca		0.004616	s	In	<		M	Pr	<	0.000760	M	Th	<	0.000760				
M	Cd	<	0.000760	M	Ir	<	0.000760	M	Pt	<	0.000760	O	Ti	<	0.001100				
M	Ce	<	0.000760	O	K		0.007078	M	Rb	<	0.000760	M	Tl	<	0.000760				
M	Co	<	0.000760	M	La	<	0.000760	M	Re	<	0.000760	M	Tm	<	0.000760				
O	Cr	<	0.001300	O	Li	<	0.000130	M	Rh	<	0.000760	M	U	<	0.000760				
M	Cs	<	0.000760	M	Lu	<	0.000760	M	Ru	<	0.000760	M	V	<	0.001600				
M	Cu	<	0.003800	O	Mg		0.000707	n	S	<		M	W	<	0.001600				
M	Dy	<	0.000760	O	Mn		0.000149	M	Sb	<	0.000760	M	Y	<	0.000760				
M	Er	<	0.000760	M	Mo	<	0.002300	M	Sc	<	0.000760	M	Yb	<	0.000760				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 114.82 +3 6 In(H2O)6+3

Chemical Compatibility -Soluble in HCl, HNO3, and H2SO4. Avoid neutral and basic media. Stable with most metals and inorganic anions. The oxalate, sulfide, carbonate, hydroxide and phosphate are insoluble in water.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.

In Containing Samples (Preparation and Solution) -Metal (Best dissolved in HCl / HNO3); Oxide (Soluble in mineral acids); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Sulfuric/peroxide digestion or dry ash and dissolution in dilute HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 115 amu	1 ppt	n/a	115Sn, 99Ru16O
ICP-OES 158.583 nm	0.05 / 0.002 µg/mL	1	
ICP-OES 230.606 nm	0.1 / 0.03 µg/mL	1	Ni, Os
ICP-OES 325.609 nm	0.2 / 0.05 µg/mL	1	Mn, Mo, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 21, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- February 21, 2028

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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

R: 2/22/24
MS-997

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CLPP-CAL-3
Lot Number:	T2-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 (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

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**

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

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

INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

R! 08/22/24 M6058, M6059

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CHEM-CLP-4
Lot Number:	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

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**

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

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

M6074
M6075
M6076
M6077

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
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

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

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.

- 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

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

M6074
M6075
M6076
M6077

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
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

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

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.

- 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

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:

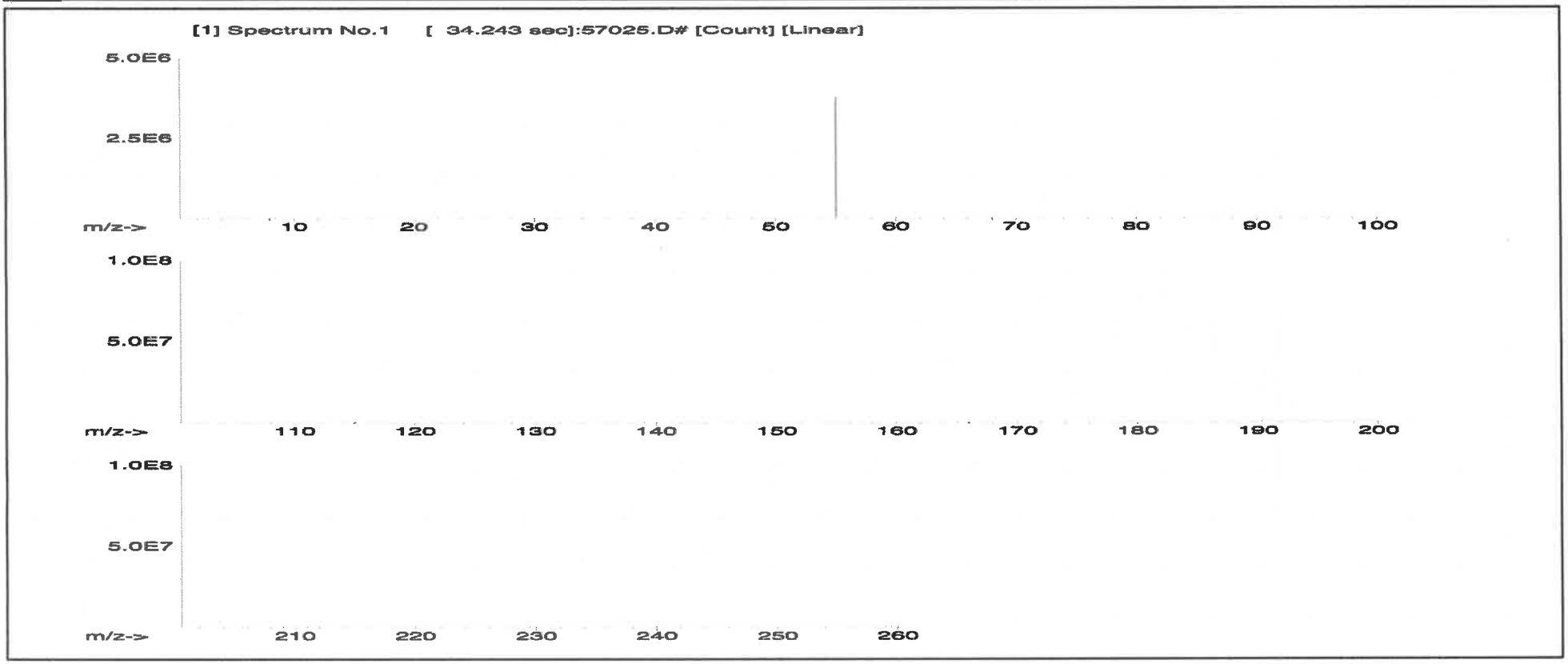
R->1/13/25
M6128

Part Number:	**58025**		**Lot #**		
Lot Number:	**101124**	**Solvent:**	24002546	Nitric Acid	
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
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



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	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).

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

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

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

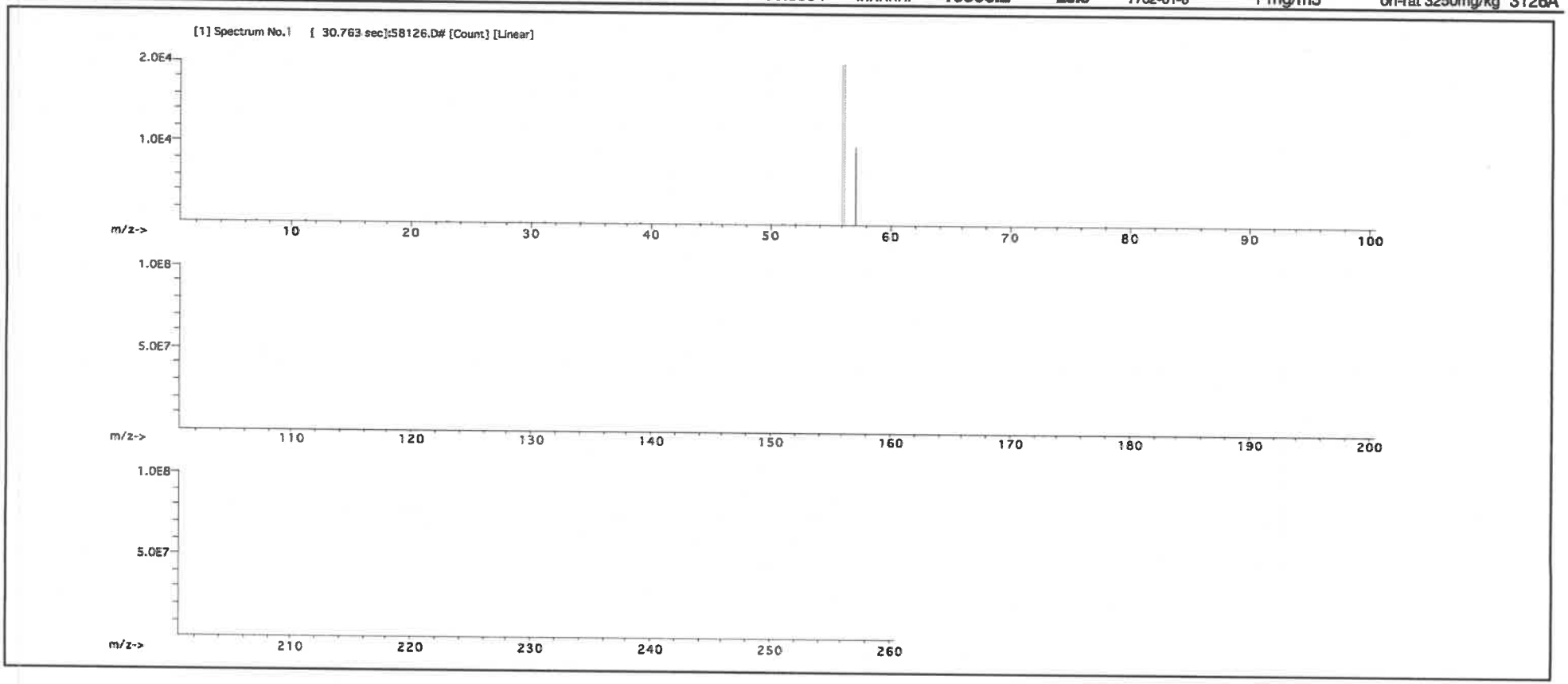
Part Number: 58126 R->1|B|2S
Lot Number: 011025
Description: Iron (Fe) M6140
Expiration Date: 011028
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.07

	Lot #		
Solvent:	24012496	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty
0.100 Flask Uncertainty

Formulated By:	Benson Chan	011025
Reviewed By:	Pedro L. Rentas	011025

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(III) nitrate nonahydrate (Fe)	IN028	FED082023A1	10000	99.999	0.10	13.0	153.8534	######	**10000.2**	**20.0**	7782-61-8	1 mg/m3	orl-rat 3250mg/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	<0.02	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	T	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

R-> 1/13/25

Part Number:	**57119**		**Lot #**		
Lot Number:	**103024**		**Solvent:**	24002546	Nitric Acid
Description:	**Potassium (K)**	M6141 M6142 M6143	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			

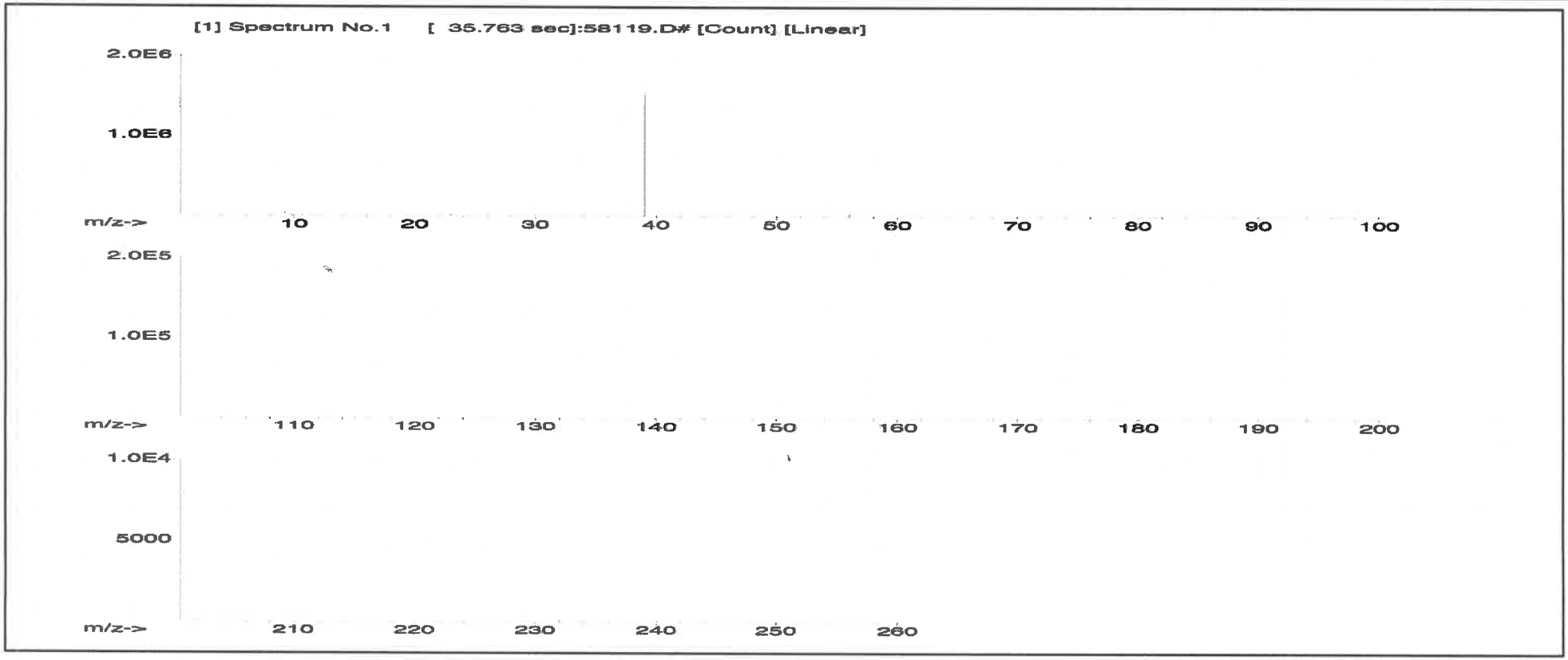
Giovanni Esposito

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



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	T	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

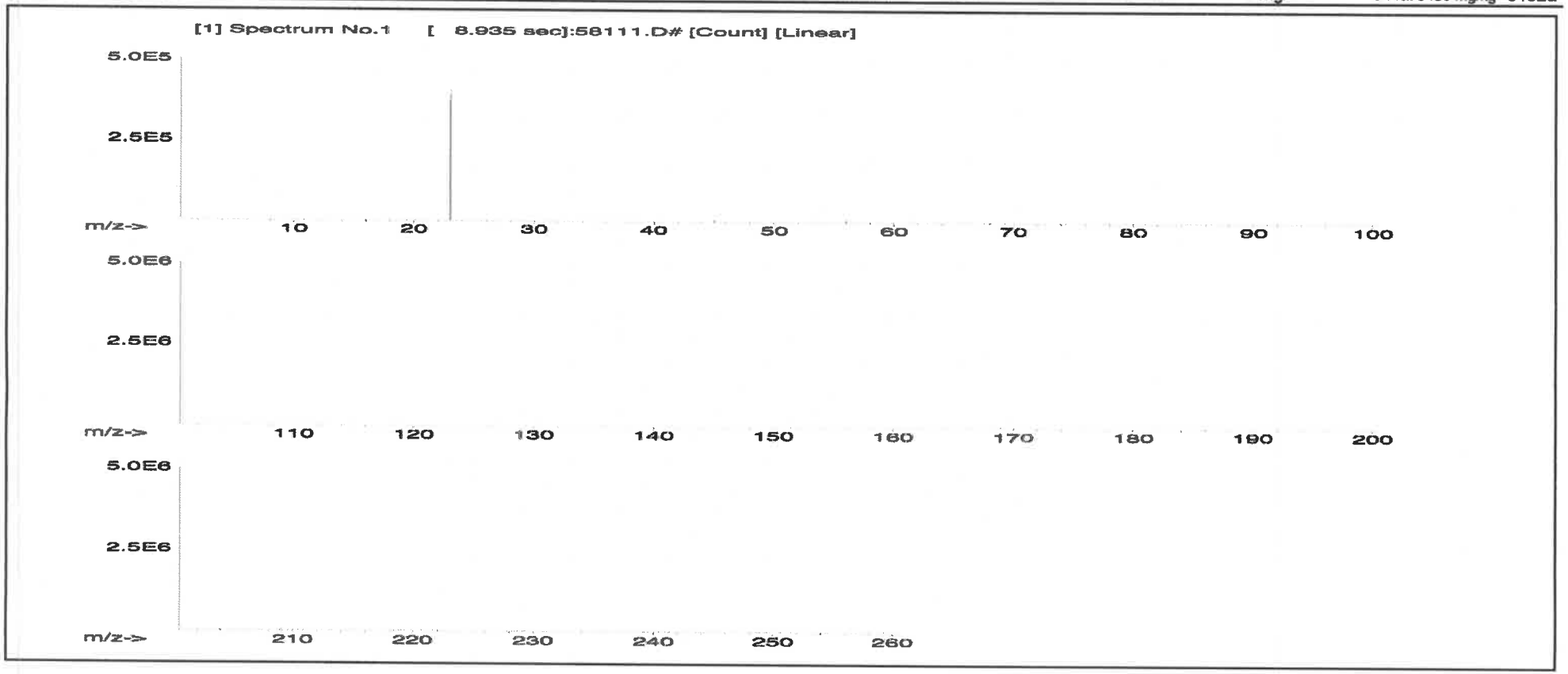
CERTIFIED WEIGHT REPORT:

R->1/13/25

Part Number:	**58111**			**Lot #**	
Lot Number:	**072424**	**Solvent:**	24002546	Nitric Acid	
Description:	**Sodium (Na)**				
		MG144 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



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	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.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 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 | 0.10 Flask Uncertainty

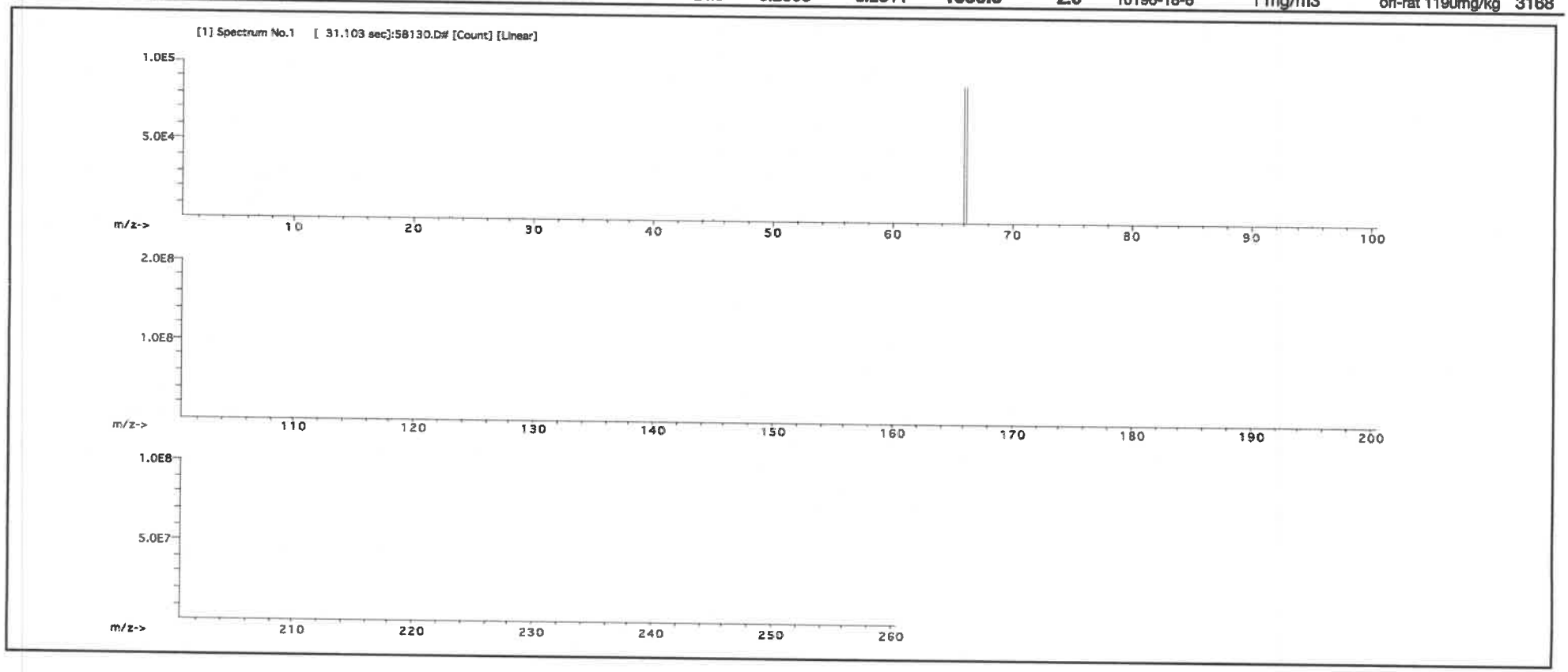
		Lot #	
Solvent:	24012496	Nitric Acid	
	2%	40.0 (mL)	Nitric Acid

5E-05 Balance 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



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	T
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

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).

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

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, Bioscience 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

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	QCP-CICV-1
Lot Number:	V2-MEB744107
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	2 500 µg/mL ea: Calcium, Potassium, Magnesium, Sodium, 1 000 µg/mL ea: Aluminum, Barium, 500 µg/mL ea: Iron, 250 µg/mL ea: Nickel, Vanadium, Zinc, Cobalt, Manganese, 125 µg/mL ea: Silver, Copper, 100 µg/mL ea: Chromium, 25 µg/mL ea: Beryllium

Second Source: Whenever possible, this solution was manufactured from a second set of concentrates in our manufacturing facility.

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	1 000 ± 4 µg/mL	Barium, Ba	1 000 ± 6 µg/mL
Beryllium, Be	24.98 ± 0.12 µg/mL	Calcium, Ca	2 500 ± 8 µg/mL
Chromium, Cr	99.9 ± 0.6 µg/mL	Cobalt, Co	250.2 ± 1.2 µg/mL
Copper, Cu	125.0 ± 0.5 µg/mL	Iron, Fe	500.0 ± 2.2 µg/mL
Magnesium, Mg	2 500 ± 11 µg/mL	Manganese, Mn	249.9 ± 1.1 µg/mL
Nickel, Ni	250.0 ± 1.2 µg/mL	Potassium, K	2 500 ± 11 µg/mL
Silver, Ag	125.0 ± 0.6 µg/mL	Sodium, Na	2 500 ± 11 µg/mL
Vanadium, V	250.0 ± 1.1 µg/mL	Zinc, Zn	249.9 ± 1.1 µg/mL

Density: 1.081 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
Cu	ICP Assay	3114	120618
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	200413
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
V	ICP 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

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**

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

May 22, 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

- **May 22, 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.

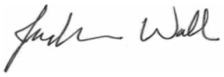
12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Justin Dirico
Stock Processing Supervisor

Certificate Approved By:

Jodie Wall
Stock VSM Coordinator



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	QCP-CICV-2
Lot Number:	U2-MEB733713
Matrix:	3% (w/v) Tartaric acid 1% (v/v) HNO3
Value / Analyte(s):	500 µg/mL ea: Antimony

Second Source: Whenever possible, this solution was manufactured from a second set of concentrates in our manufacturing facility.

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	**500.0 ± 2.8 µg/mL**		

Density: 1.017 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Sb	ICP Assay	3102a	140911

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**

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 01, 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

- **June 01, 2028**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

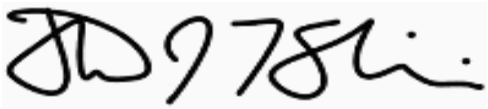
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

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:	QCP-CICV-3
Lot Number:	V2-MEB749572
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	500 µg/mL ea: Arsenic, Lead, Selenium, Thallium, 250 µg/mL ea: Cadmium

Second Source: Whenever possible, this solution was manufactured from a second set of concentrates in our manufacturing facility.

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Arsenic, As	**500.0 ± 3.1 µg/mL**	**Cadmium, Cd**	**250.1 ± 1.1 µg/mL**
Lead, Pb	**500.0 ± 2.3 µg/mL**	**Selenium, Se**	**500.0 ± 3.2 µg/mL**
Thallium, Tl	**500.0 ± 3.0 µg/mL**		

Density: 1.040 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
As	ICP Assay	3103a	100818
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Tl	ICP Assay	3158	151215

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

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

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 02, 2025

- 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 02, 2030**

- 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.

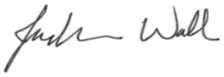
12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Justin Dirico
Stock Processing Supervisor

Certificate Approved By:

Jodie Wall
Stock VSM Coordinator



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Hydrogen Peroxide, 30%
CMOS
(Stabilized)

M-6170

R.Date . 8-05/20/2025

avantor™ | J.T.Baker®

Material No.: 2190-03
Batch No.: 24D1961001

Test	Specification	Result
Trace Impurities – Manganese (Mn)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Molybdenum (Mo)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Nickel (Ni)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Niobium (Nb)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Potassium (K)	≤ 600.0 ppb	176.7 ppb
Trace Impurities – Silicon (Si)	≤ 100.0 ppb	< 10.0 ppb
Trace Impurities – Silver (Ag)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Sodium (Na)	≤ 100.0 ppb	< 5.0 ppb
Trace Impurities – Strontium (Sr)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Tantalum (Ta)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Thallium (Tl)	≤ 50.0 ppb	< 5.0 ppb
Trace Impurities – Tin (Sn)	190.0 – 500.0 ppb	272.3 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)	≤ 50 ppb	< 1 ppb
Trace Impurities – Zirconium (Zr)	≤ 10.0 ppb	< 1.0 ppb
Particle Count – 0.2 µm and greater	≤ 1175 par/ml	202 par/ml
Particle Count – 0.5 µm and greater	≤ 100 par/ml	33 par/ml

>>> Continued on page 3 >>>

Hydrogen Peroxide, 30%
CMOS
(Stabilized)

avantor™ | J.T.Baker®

Material No.: 2190-03
Batch No.: 24D1961001

Test	Specification	Result

For Microelectronic Use

Country of Origin: USA
Packaging Site: Paris Mfg Ctr & DC

Michelle Bales
Sr. Manager, Quality Assurance

Hydrogen Peroxide, 30%
CMOS
(Stabilized)

avantor™ | J.T.Baker®

Material No.: 2190-03
Batch No.: 24D1961001
Manufactured Date: 2024-04-17
Expiration Date: 2025-10-16
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (H_2O_2)	30.0 - 32.0 %	31.6 %
Color (APHA)	≤ 10	< 5
Free Acid (µeq/g)	≤ 0.2	0.1
Residue after Evaporation	≤ 10 ppm	2 ppm
Ammonium (NH_4)	≤ 3 ppm	< 3 ppm
Chloride (Cl)	≤ 0.2 ppm	< 0.2 ppm
Nitrate (NO_3)	≤ 2 ppm	< 2 ppm
Phosphate (PO_4)	≤ 1 ppm	1 ppm
Sulfate (SO_4)	≤ 3 ppm	< 3 ppm
Trace Impurities - Aluminum (Al)	≤ 70.0 ppb	< 5.0 ppb
Arsenic and Antimony (as As)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities - Barium (Ba)	≤ 20.0 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)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Calcium (Ca)	≤ 50.0 ppb	< 1.0 ppb
Trace Impurities - Chromium (Cr)	≤ 20.0 ppb	1.5 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)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities - Germanium (Ge)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities - Gold (Au)	≤ 10.0 ppb	< 5.0 ppb
Heavy Metals (as Pb)	≤ 500.0 ppb	< 250.0 ppb
Trace Impurities - Iron (Fe)	≤ 50.0 ppb	4.6 ppb
Trace Impurities - Lead (Pb)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities - Lithium (Li)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Magnesium (Mg)	≤ 10.0 ppb	< 1.0 ppb

>>> Continued on page 2 >>>

R -> 013125

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:

M 6171

Part Number: 58112
Lot Number: 011525
Description: Magnesium (Mg)

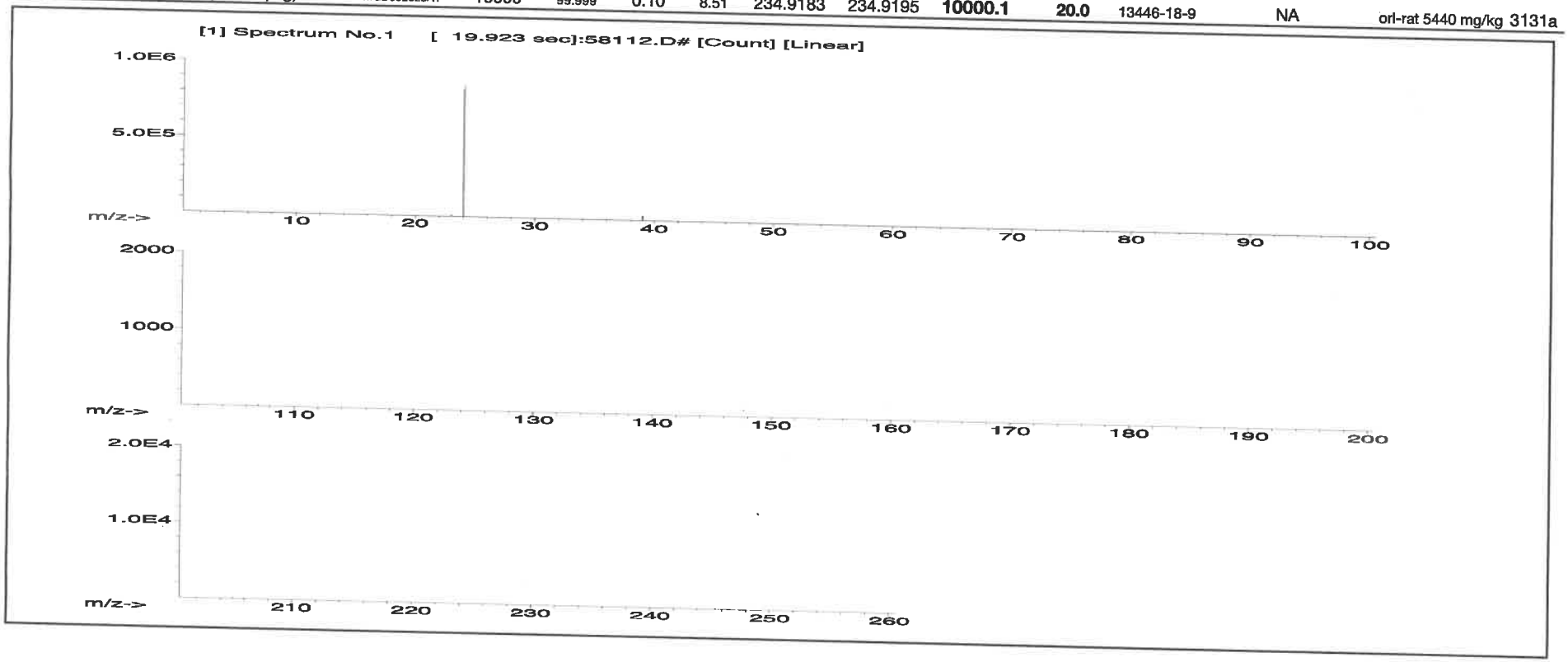
Expiration Date: 011528
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.07

	Lot #		
Solvent:	24012496	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	
	0.100	Flask Uncertainty	

Formulated By: Benson Chan 011525

Reviewed By: Pedro L. Rentas 011525

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	234.9195	**10000.1**	**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:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

M6174
R-> 5/5/24

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:	Multi Analyte Custom Grade Solution
Catalog Number:	CLPP-CAL-1
Lot Number:	V2-MEB742428
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	50.03 ± 0.30 µg/mL	Calcium, Ca	5 000 ± 16 µg/mL
Chromium, Cr	200.0 ± 1.1 µg/mL	Cobalt, Co	500.0 ± 2.3 µg/mL
Copper, Cu	250.0 ± 1.1 µg/mL	Iron, Fe	1 000 ± 4 µg/mL
Magnesium, Mg	5 000 ± 22 µg/mL	Manganese, Mn	499.9 ± 2.2 µg/mL
Nickel, Ni	500.1 ± 2.3 µg/mL	Potassium, K	5 000 ± 22 µg/mL
Silver, Ag	250.0 ± 1.1 µg/mL	Sodium, Na	5 000 ± 22 µg/mL
Vanadium, V	500.0 ± 2.2 µg/mL	Zinc, Zn	500.0 ± 2.2 µg/mL

Density: 1.117 g/mL (measured at 20 ± 4 °C)

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
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	120618
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	200413
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
V	ICP 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

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**

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

March 22, 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

- March 22, 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:

Jodie Wall
Stock VSM Coordinator

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

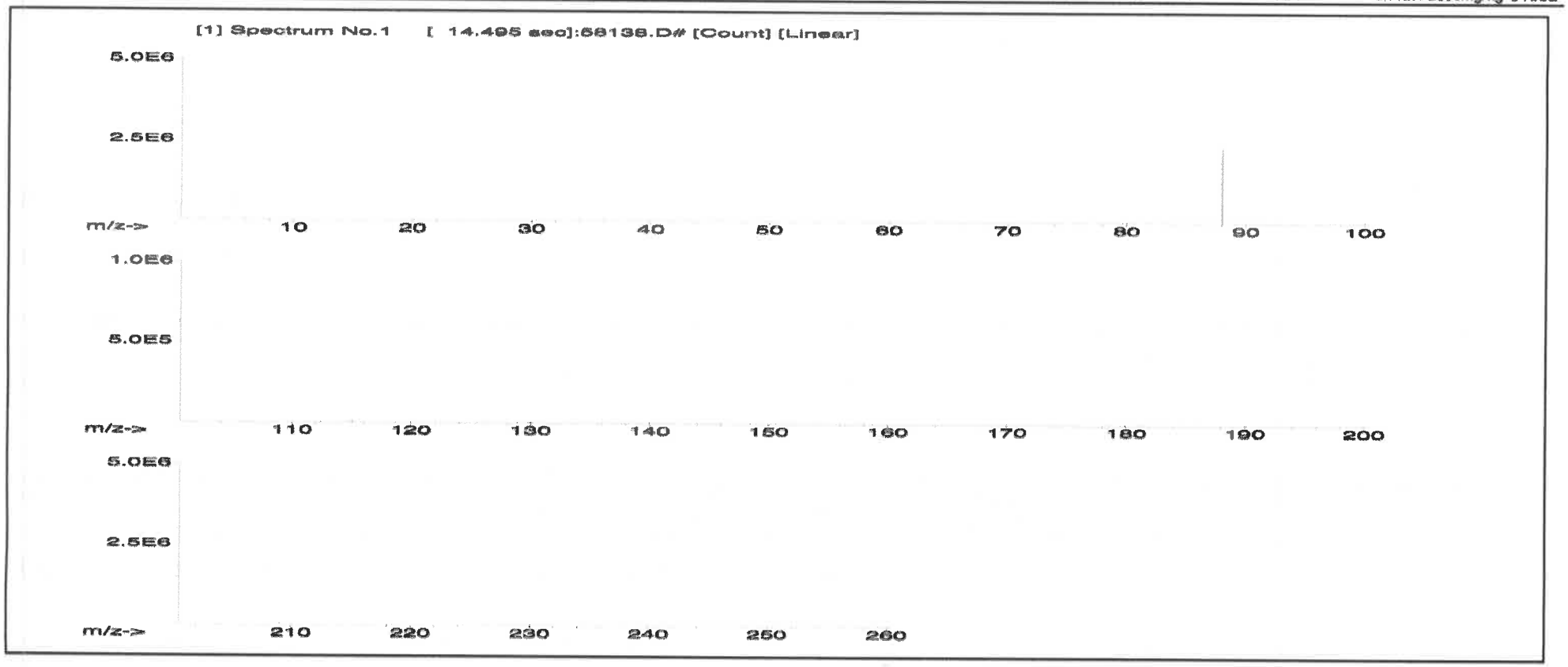
R->8/6/25

M6176

Part Number:	**57038**		**Lot #**		
Lot Number:	**092724**	**Solvent:**	24002546	Nitric Acid	
Description:	**Strontium (Sr)**	2%	40.0 (mL)	Nitric Acid	
Expiration Date:	092727				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.07	0.100	Flask Uncertainty		

Formulated By:	Benson Chan	092724
Reviewed By:	Pedro L. Rentas	092724

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Strontium nitrate (Sr)	IN017	SRZ022018A1	1000	99.997	0.10	41.2	4.85470	4.85481	**1000.0**	**2.0**	10042-76-9	NA	orl-rat >2000mg/kg	3153a



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	T	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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→ 8/6/25
M6177

Part Number: 57042
Lot Number: 080525
Description: Molybdenum (Mo)

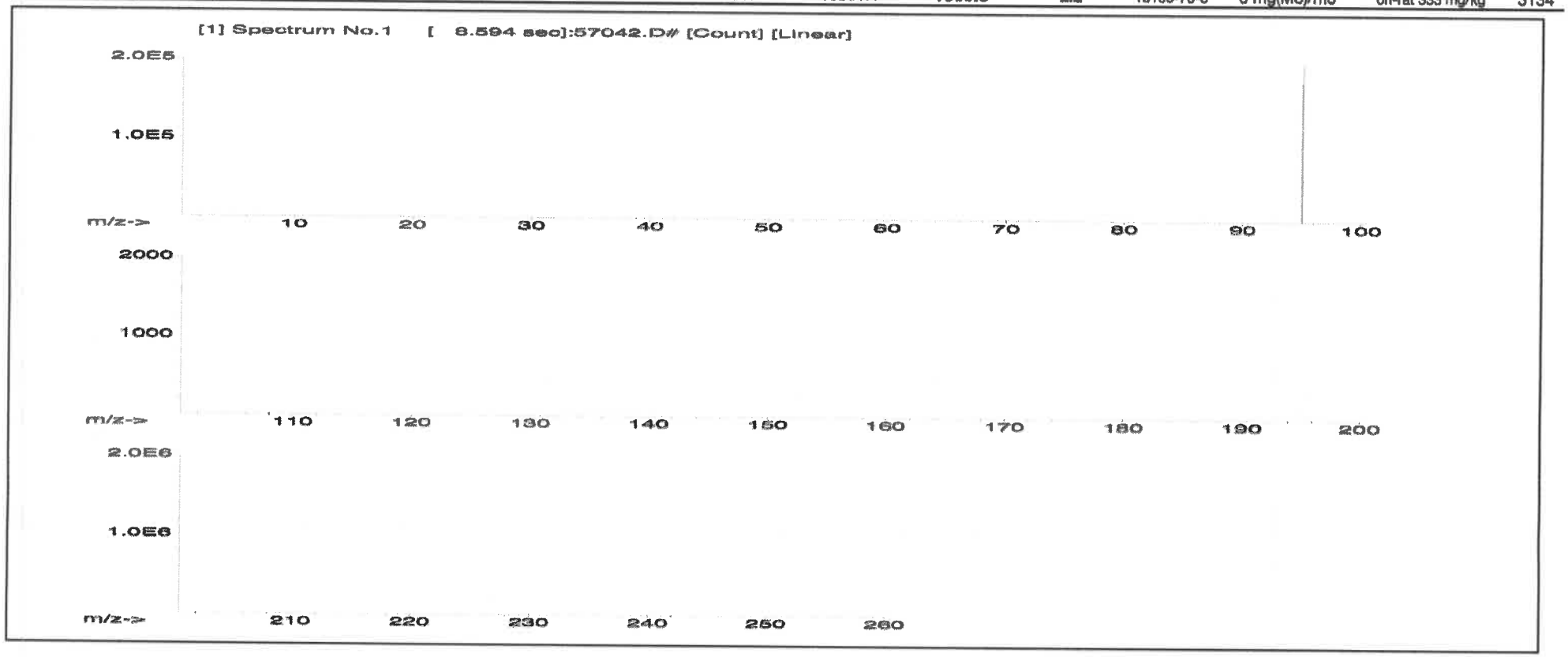
Expiration Date: 080528
Recommended Storage: Ambient (15 - 30 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB 5E-05 Balance Uncertainty
Volume shown below was diluted to (mL): 1999.41 0.058 Flask Uncertainty

Lot #	Solvent:		
MKBQ8597V	Ammonium hydroxide		
080525	ASTM Type 1 Water		
0.5%	10.0 (mL)	Ammonium hydroxide	

Formulated By: Benson Chan 080525

Reviewed By: Pedro L. Rentas 080525

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium molybdate (Mo)	58142	112322	0.1000	200.0	0.084	1000	10001.4	**1000.5**	**2.2**	13106-76-8	5 mg(Mo)/m3	orl-rat 333 mg/kg	3134



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass 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	T	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware, and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated by an ISO17025 certified organization with weights traceable through NIST to the SI kilogram (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).
Rev 1.0, 2/25/2025

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>8/6/28
M6178

Part Number:	**57082**		**Lot #**		
Lot Number:	**031525**	**Solvent:**	24014457	Nitric Acid	
Description:	**Lead (Pb)**		2%	40.0 (mL)	Nitric Acid
Expiration Date:	031528				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.07	0.10	Flask Uncertainty		

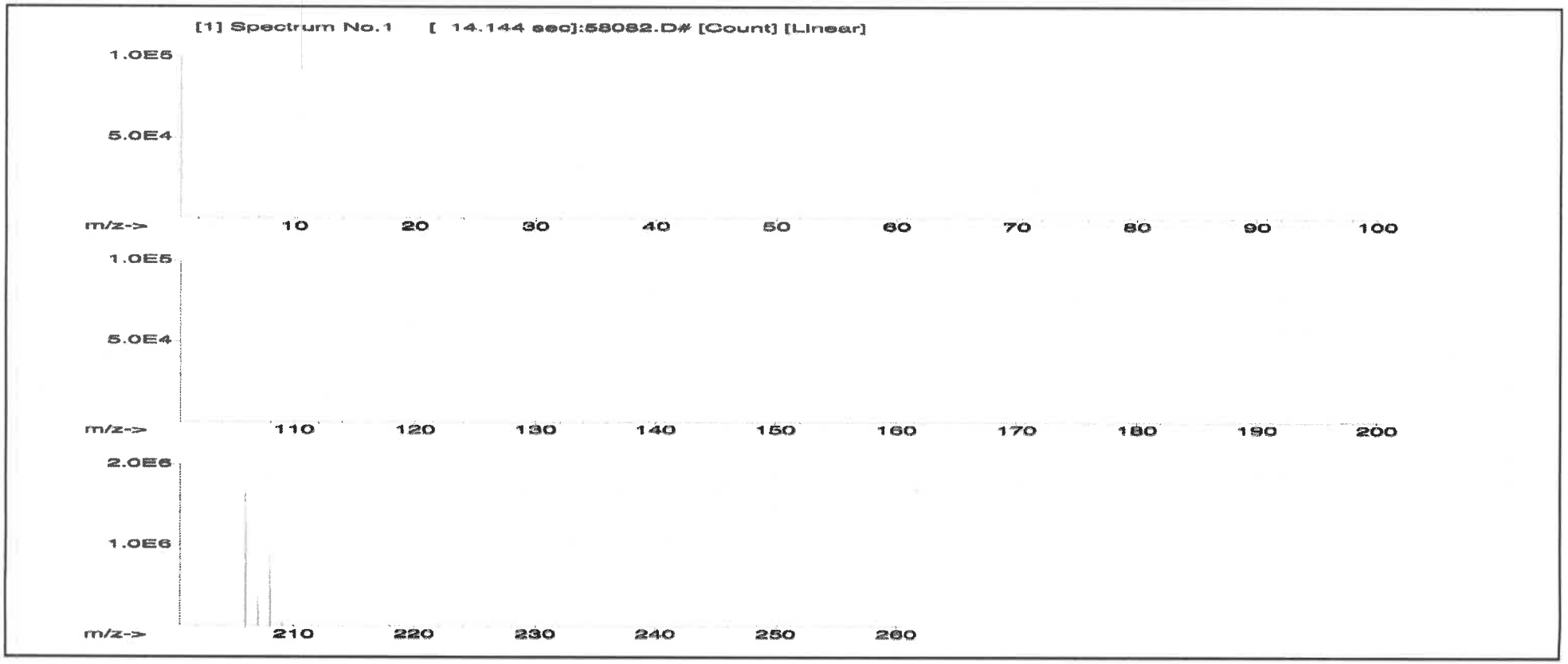
Giovanni Esposito

Formulated By:	Giovanni Esposito	031525

Pedro Rentas

Reviewed By:	Pedro L. Rentas	031525

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	3.20015	3.20067	**1000.2**	**2.0**	10099-74-8	0.05 mg/m3	intrvns-rat 93 mg/kg	3128



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	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	T	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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

M6179
R -> 6/2/24

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:	CGY10
Lot Number:	V2-Y740548
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Yttrium
Starting Material:	Yttrium Oxide
Starting Material Lot#:	2661 and 06230520YL
Starting Material Purity:	99.9984%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10000 ± 30 µg/mL

Density: 1.032 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	**10011 ± 25 µg/mL** EDTA NIST SRM 928 Lot Number: 928
Assay Method #2	**9997 ± 50 µg/mL** ICP Assay NIST SRM 3167a Lot Number: 190730
Assay Method #3	**9984 ± 31 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.004600	M	Eu		0.009037	M	Na		0.086360	M	Se	<	0.005200	M	Zn		0.030125
M	Al		0.014862	O	Fe		0.002410	M	Nb	<	0.000570	O	Si		0.024100	O	Zr	<	0.002600
M	As	<	0.003500	M	Ga	<	0.000570	M	Nd		0.000923	M	Sm		0.000461				
M	Au	<	0.001700	M	Gd	<	0.003500	M	Ni	<	0.005700	M	Sn	<	0.002300				
O	B		0.002209	M	Ge	<	0.005200	M	Os	<	0.001200	M	Sr	<	0.004600				
O	Ba	<	0.002500	M	Hf	<	0.000570	n	P	<		M	Ta	<	0.000570				
O	Be	<	0.001400	M	Hg	<	0.000570	M	Pb		0.005020	M	Tb		0.001044				
M	Bi	<	0.003500	M	Ho		0.009037	M	Pd	<	0.005100	M	Te	<	0.002300				
O	Ca		0.009841	M	In	<	0.002300	M	Pr	<	0.002300	M	Th	<	0.000570				
M	Cd	<	0.000570	M	Ir	<	0.000570	M	Pt	<	0.000570	M	Ti	<	0.003500				
M	Ce	<	0.002300	O	K		0.018677	M	Rb	<	0.000570	M	Tl	<	0.000570				
M	Co	<	0.000570	M	La		0.000461	M	Re	<	0.000570	M	Tm	<	0.003500				
M	Cr	<	0.004000	O	Li	<	0.009300	M	Rh	<	0.008000	M	U	<	0.000570				
M	Cs	<	0.000570	M	Lu		0.000582	M	Ru	<	0.000570	M	V		0.001265				
M	Cu		0.002610	O	Mg		0.001486	n	S	<		M	W	<	0.002300				
M	Dy		0.003815	M	Mn		0.000582	M	Sb		0.005422	s	Y	<					
M	Er		0.003615	M	Mo	<	0.005700	M	Sc	<	0.001200	M	Yb		0.001827				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 88.91 +3 6 Y(OH)(H2O)x+2

Chemical Compatibility -Soluble in HCl, H2SO4 and HNO3. Avoid HF, H3PO4 and neutral to basic media. Stable with most metals and inorganic anions forming an insoluble carbonate, oxide, oxalate, and fluoride. Avoid mixing with elements / solutions containing moderate amounts of fluoride.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.

Y Containing Samples (Preparation and Solution) - Metal (Soluble in acids); Oxide (Dissolve by heating in H2O/ HNO3); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Dry ash and dissolve in 1:1 H2O / HCl or HNO3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 89 amu	0.8 ppt	N/A	73Ge16O, 178Hf+2
ICP-OES 360.073 nm	0.005 / 0.000036 µg/mL	1	Ce, Th
ICP-OES 371.030 nm	0.004 / 0.00007 µg/mL	1	Ce
ICP-OES 377.433 nm	0.005 / 0.0009 µg/mL	1	Ta, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 20, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- February 20, 2029

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Custom Processing Supervisor

Certificate Approved By:

Muzzammil Khan
Stock Laboratory Supervisor

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

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:	W2-MEB752149
Matrix:	5% (v/v) HNO3

M6180
R-7/22/25

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	200.2 ± 0.7 µg/mL	Arsenic, As	80.1 ± 0.5 µg/mL
Barium, Ba	20.02 ± 0.12 µg/mL	Beryllium, Be	20.02 ± 0.11 µg/mL
Boron, B	30.02 ± 0.15 µg/mL	Cadmium, Cd	20.04 ± 0.09 µg/mL
Calcium, Ca	100.1 ± 0.3 µg/mL	Cerium, Ce	200.2 ± 1.0 µg/mL
Chromium, Cr	40.02 ± 0.26 µg/mL	Cobalt, Co	20.03 ± 0.09 µg/mL
Copper, Cu	30.03 ± 0.13 µg/mL	Iron, Fe	300.3 ± 1.3 µg/mL
Lead, Pb	100.1 ± 0.5 µg/mL	Lithium, Li	20.03 ± 0.09 µg/mL
Magnesium, Mg	200.2 ± 0.9 µg/mL	Manganese, Mn	19.99 ± 0.09 µg/mL
Mercury, Hg	70.0 ± 0.3 µg/mL	Nickel, Ni	50.05 ± 0.22 µg/mL
Phosphorus, P	600.5 ± 2.9 µg/mL	Potassium, K	1 001 ± 4 µg/mL
Selenium, Se	200.2 ± 1.1 µg/mL	Silver, Ag	7.52 ± 0.03 µg/mL
Sodium, Na	300.3 ± 1.3 µg/mL	Strontium, Sr	20.02 ± 0.10 µg/mL
Thallium, Tl	200.2 ± 1.0 µg/mL	Vanadium, V	30.02 ± 0.13 µg/mL
Zinc, Zn	20.05 ± 0.09 µg/mL		

Density: 1.037 g/mL (measured at 20 ± 5 °C)

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
As	ICP Assay	3103a	100818
B	ICP Assay	3107	190605
B	Calculated		See Sec. 4.2
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	160830
Ce	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	120618
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	3152a	200413
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	ICP 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

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° - 25° C to minimize the effects of transpiration. Use at 20° ± 5° 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

April 08, 2025

- 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

- **April 08, 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:

Justin Dirico
Stock Processing Supervisor

Certificate Approved By:

Jodie Wall
Stock VSM Coordinator

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

M6181
R->7/22/28

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-2
Lot Number:	V2-MEB743480
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 ± 0.5 µg/mL	Molybdenum, Mo	40.05 ± 0.22 µg/mL
Silica, SiO2	200.3 ± 1.4 µg/mL	Tin, Sn	70.1 ± 0.4 µg/mL
Titanium, Ti	20.03 ± 0.12 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
Sb	ICP Assay	3102a	140911
SiO2	Calculated		See Sec. 4.2
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

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

May 07, 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

- May 07, 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:

Justin Dirico
Stock Processing Supervisor

Certificate Approved By:

Thomas Kozikowski
Stock VS Manager

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

QATS LABORATORY INORGANIC REFERENCE MATERIAL INTERFERENCE CHECK SAMPLE SET FOR ICP-AES (ICSA WITH ICSB)

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocol or your contract, disregard these instructions.

APPLICATION: For use with the CLP SFAM01.0 SOW and revisions.

CAUTION: Read instructions carefully before opening bottle(s) and proceeding with the analyses.

M6182

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.

QATS LABORATORY INORGANIC REFERENCE MATERIAL INTERFERENCE CHECK SAMPLE SET FOR ICP-AES (ICSA WITH ICSB)

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocol or your contract, disregard these instructions.

APPLICATION: For use with the CLP SFAM01.0 SOW and revisions.

CAUTION: Read instructions carefully before opening bottle(s) and proceeding with the analyses.

Contains Heavy Metals
HAZARDOUS MATERIAL

Safety Data Sheets
Available Upon Request

M6184

(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.

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M6027

R1 8/05/24

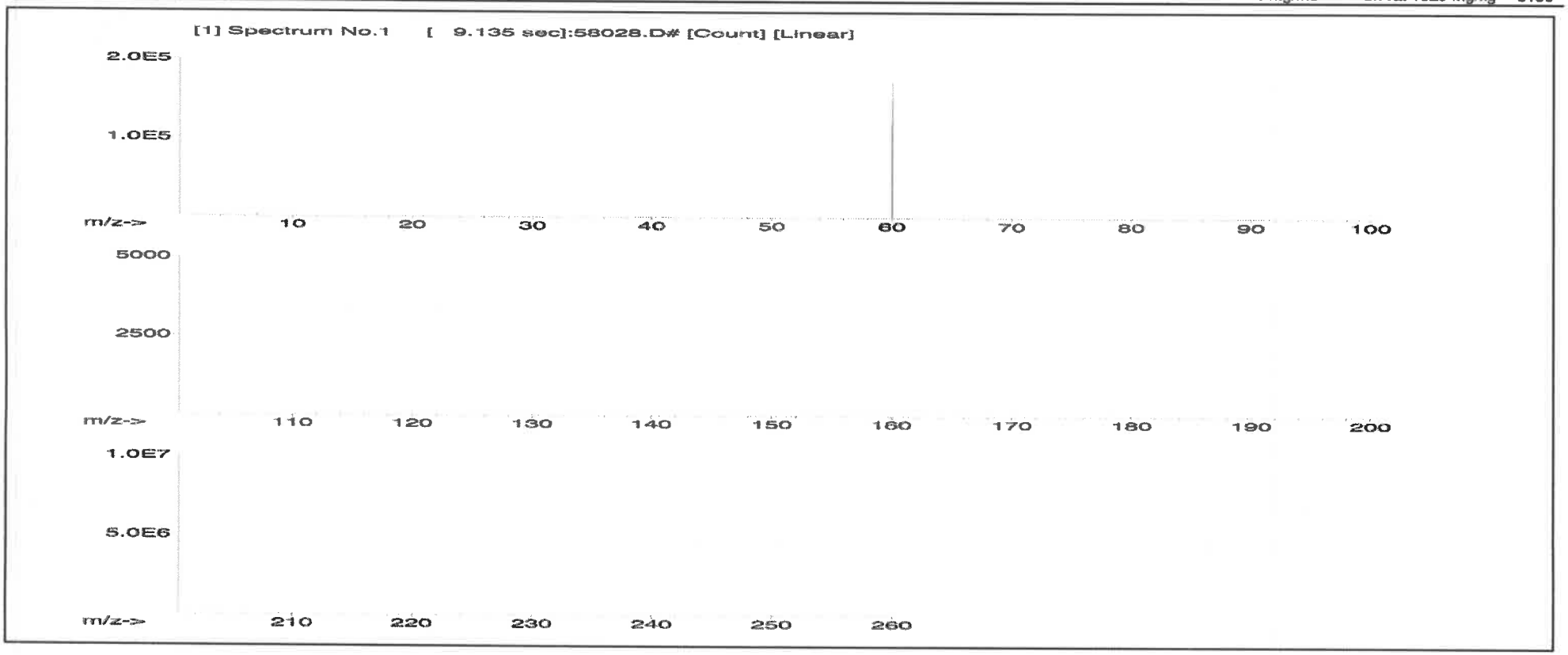
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:		
Part Number:	**57028**	24002546	Nitric Acid		
Lot Number:	**062024**				
Description:	**Nickel (Ni)**	2.0%	40.0 (mL)	Nitric Acid	
Expiration Date:	062027				
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	062024
Reviewed By:	Pedro L. Rentas	062024

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Nickel(II) nitrate hexahydrate (Ni)	58128	062023	0.1000	200.0	0.084	1000	10000.4	**1000.0**	2.2	13478-00-7	1 mg/m3	orl-rat 1620 mg/kg	3136



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass 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	T	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M6030

R: 8/5/24

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 57047
Lot Number: 122823
Description: Silver (Ag)

Expiration Date: 122826
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

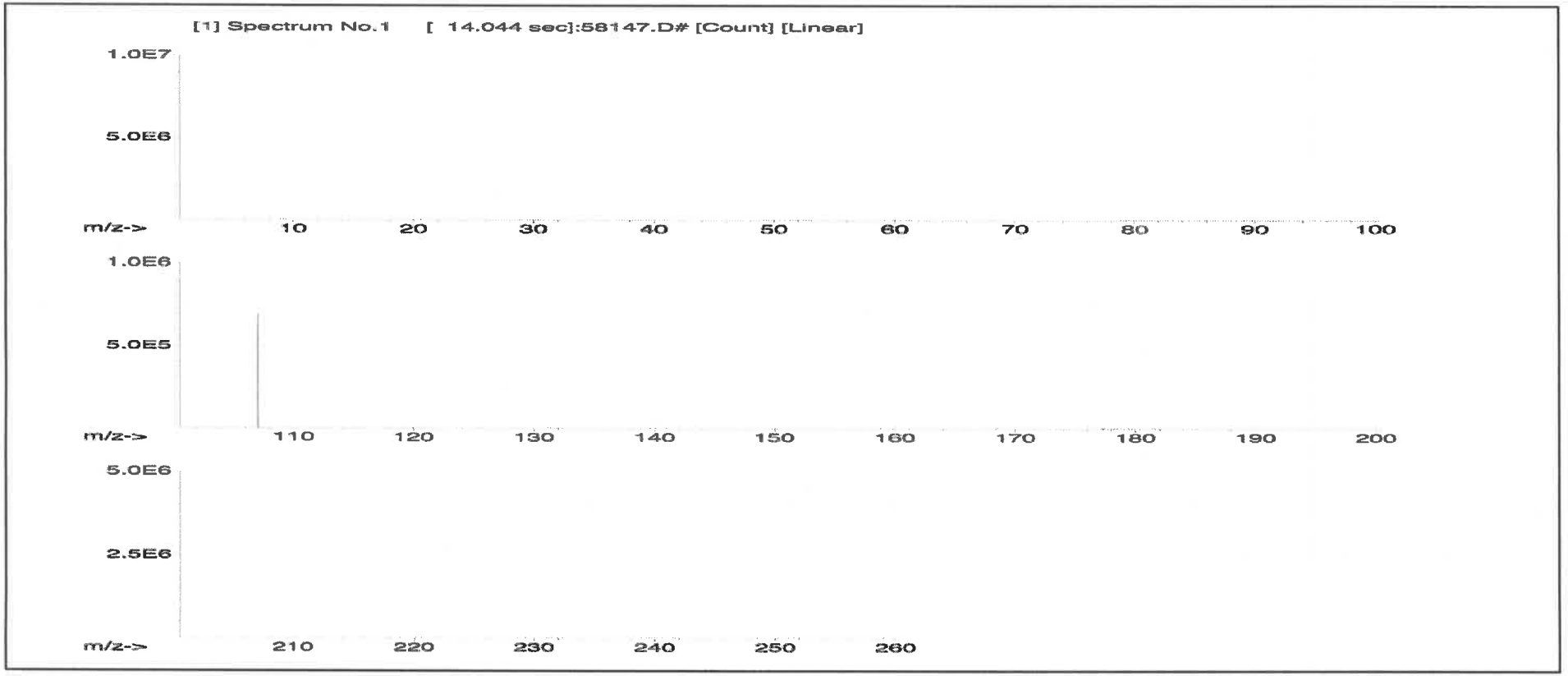
Weight shown below was diluted to (mL): 4000.30 0.058 Flask Uncertainty

		Lot #	
Solvent:	24002546	Nitric Acid	
2%	80.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

Formulated By:	Benson Chan	122823
Reviewed By:	Pedro L. Rentas	122823

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Silver nitrate (Ag)	IN035	J0612AGA1	1000.0	99.9999	0.10	63.7	6.27992	6.27998	**1000.0**	**2.0**	7761-88-8	10 ug/m3	NA	3151



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	T	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 10/18/24

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

MG146

Part Number: 57051
Lot Number: 071724
Description: Antimony (Sb)
Expiration Date: 071727
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Volume shown below was diluted to (mL): 2000.26 ± 0.058 Flask Uncertainty

Lot #	Solvent:		
24002546	Nitric Acid		
2.0%	40.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

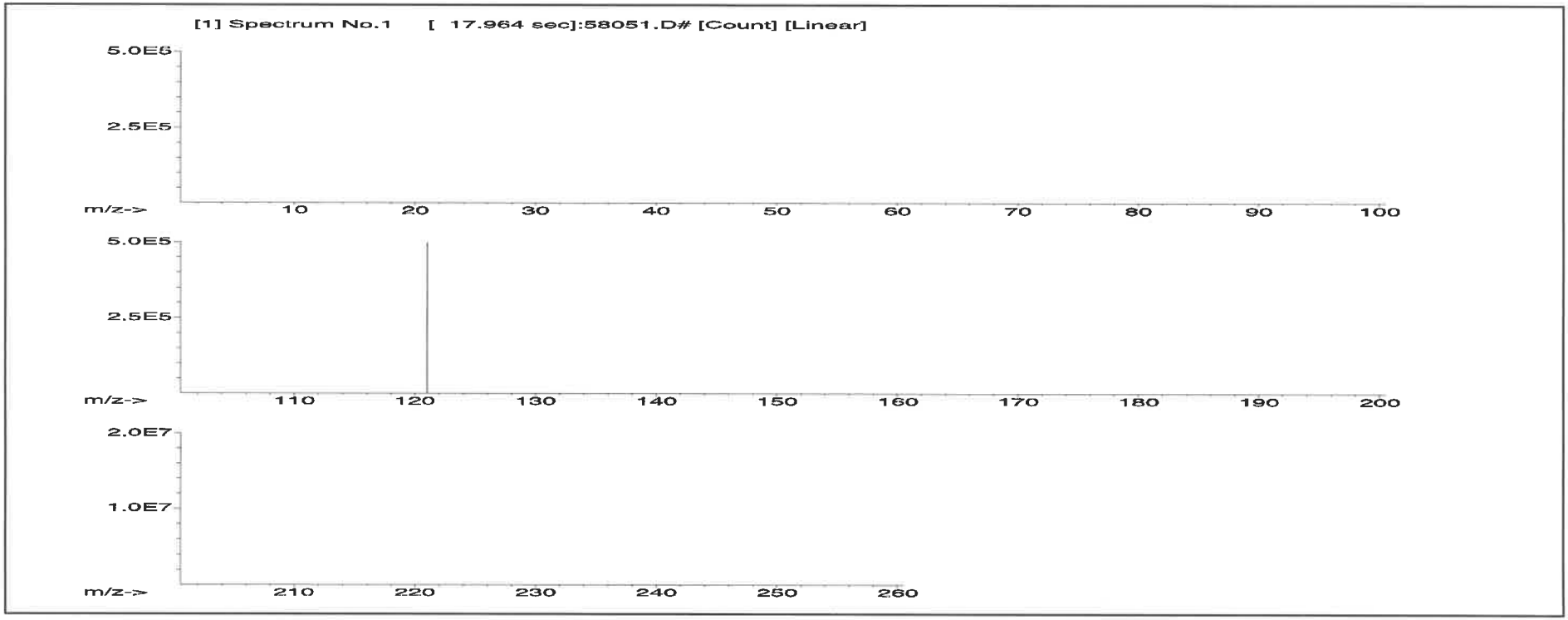
Giovanni Esposito

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
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	T	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

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

M6023

R ! 8/5/24

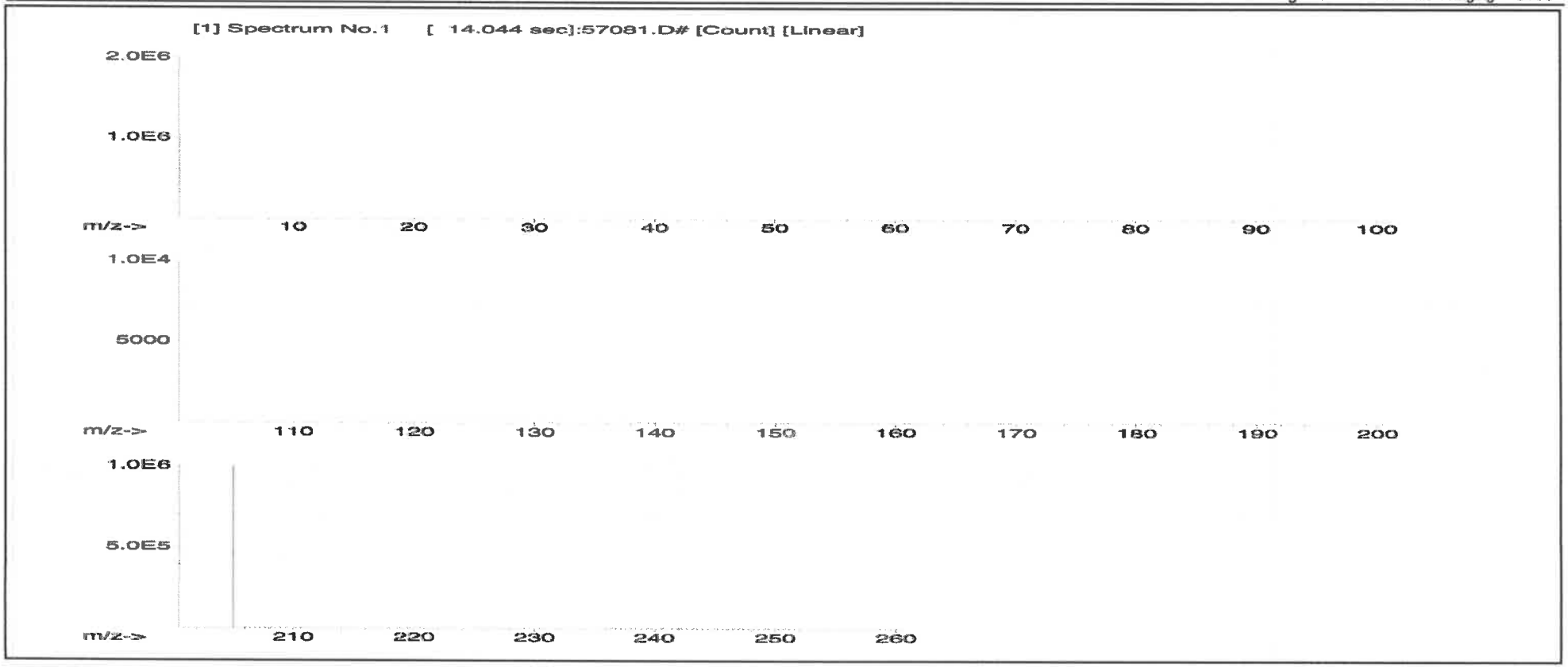
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	T	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M6021

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Rc. 8/5/24

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57023**			
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	

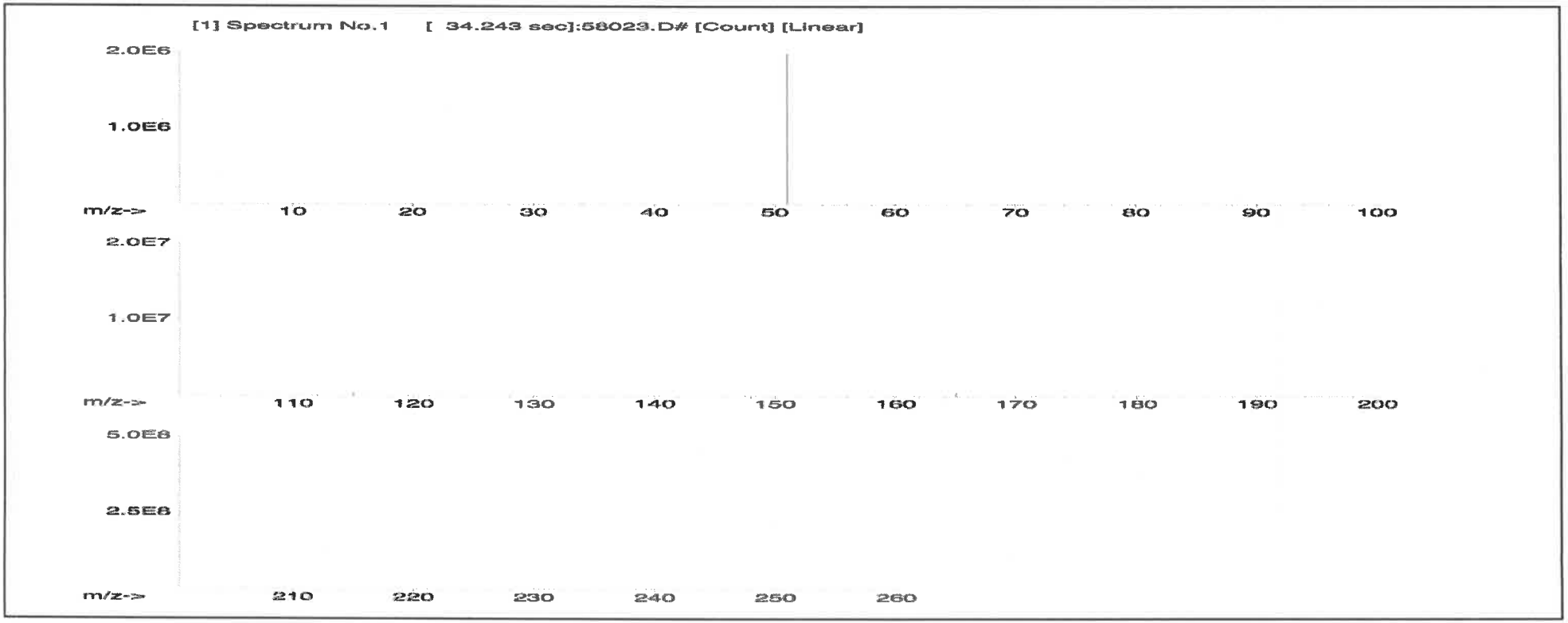
Aleah O'Brady

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

Q 2879

Chemtech

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

http://www.contestlabs.com

CHAIN OF CUSTODY RECORD

39 Spruce Street
East Longmeadow, MA 01028

Doc # 381 Rev 4_01/08/2020

Company Name:	Nobis Group
Address:	55 Technology Dr Suite 101, Lowell, MA 01851
Phone:	978-703-6014
Project Name:	Raymark
Project Location:	Stratford, CT
Project Number:	95700
Project Manager:	Adam Roy
Con-Test Quote Name/Numbe	
Invoice Recipient:	
Sampled By:	A. Brittingham

Requested Turnaround Time
5-Day [X] 10-Day [ ]
PFAS 10-Day (std) [ ] Due Date:

Rush-Approval Required
1-Day [ ] 3-Day [✓]
2-Day [ ] 4-Day [ ]

Data Delivery
Format: PDF [✓] EXCEL [✓]
Other:
CLP Like Data Pkg Required: [ ] No
Email To: aroy@nobis-group.com
Fax To #:

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

PCB ONLY
SOXHLET [✓]
NON SOXHLET [ ]

ANALYSIS REQUESTED

Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	M/O	RCP VOCs	% Solids	PAHs	Herbicides	Pesticides	PCBs	Metals ICP + Hg - 6010	Cyanide	SPLP RCP Metals - 6020
	OU4-TS-Grillo-TSCP03-081425	8/14/25	11:30	G	SO		3	2	1				X	X	X	X	X	X	X	X	X
	OU4-TS-Grillo-TSCP04-081425	8/14/25	11:35	G	SO		3	2	1				X	X	X	X	X	X	X	X	X
	OU4-TS-Grillo-TSCP05-081425	8/14/25	11:40	G	SO		3	2	1				X	X	X	X	X	X	X	X	X
	OU4-TS-Grillo-TSCP06-081425	8/14/25	11:45	G	SO		3	2	1				X	X	X	X	X	X	X	X	X
	OU4-TS-Grillo-TSCP07-081425	8/14/25	11:50	G	SO		3	2	1				X	X	X	X	X	X	X	X	X
	OU4-TS-Grillo-TSCP08-081425	8/14/25	11:55	G	SO		3	2	1				X	X	X	X	X	X	X	X	X
	OU4-TS-Grillo-TSCP09-081425	8/14/25	12:00	G	SO		3	2	1				X	X	X	X	X	X	X	X	X
	OU4-TS-Grillo-TSCP10-081425	8/14/25	12:05	G	SO		3	2	1				X	X	X	X	X	X	X	X	X
	OU4-TS-Grillo-TSCP11-081425	8/14/25	12:10	G	SO		3	2	1				X	X	X	X	X	X	X	X	X

[2] Preservation Code

Total Number Of:
VIALS_____
GLASS_____
PLASTIC_____
BACTERIA_____
ENCORE_____

Glassware in the fridge? Y / N

Glassware in freezer? Y / N

Prepackaged Cooler? Y / N

*Contest is not responsible for missing samples from prepacked coolers

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Relinquished by: (signature)	Date/Time:	8/15 9:09
Received by: (signature)	Date/Time:	8/15 9:09
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Client Comments:
3.2

Detection Limit Requirements
MA
CT
Other:

Special Requirements
[ ] MA MCP Required
MCP Certification Form Required
[✓] CT RCP Required
RCP Certification Form Required
[ ] MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government [ ] Municipality [ ] MWRA [ ] WRTA [ ]
Federal [ ] 21 J [ ] School [ ]
City [ ] Brownfield [ ] MBTA [ ]

Other
[ ] Chromatogram
[ ] AIHA-LAP,LLC

Lab Comments:

Disclaimer: Con-Test Labs is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Con-Test values your partnership on each project and will try to assist with missing information, but will not be held accountable.

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	TX-C25-00189
Virginia	460312

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

LOGIN REPORT/SAMPLE TRANSFER

Order ID : Q2879 NOBI03
Client Name : Nobis Group
Client Contact : Adam Roy
Invoice Name : Nobis Group
Invoice Contact : Adam Roy

Order Date : 8/15/2025 9:15:00 AM
Project Name : Raymark Superfund Site
Receive DateTime : 8/15/2025 9:09:00 AM
Purchase Order :

Project Mgr :
Report Type : Level 4
EDD Type : EQUIS
Hard Copy Date :
Date Signoff :

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
Q2879-01	OU4-TS-GRILLO-TSCP03-081425	Solid	08/14/2025	11:30					
					VOCMS Group3		8260D		5 Bus. Days
Q2879-03	OU4-TS-GRILLO-TSCP04-081425	Solid	08/14/2025	11:35					
					VOCMS Group3		8260D		5 Bus. Days
Q2879-05	OU4-TS-GRILLO-TSCP05-081425	Solid	08/14/2025	11:40					
					VOCMS Group3		8260D		5 Bus. Days
Q2879-07	OU4-TS-GRILLO-TSCP06-081425	Solid	08/14/2025	11:45					
					VOCMS Group3		8260D		5 Bus. Days
Q2879-09	OU4-TS-GRILLO-TSCP07-081425	Solid	08/14/2025	11:50					
					VOCMS Group3		8260D		5 Bus. Days
Q2879-11	OU4-TS-GRILLO-TSCP08-081425	Solid	08/14/2025	11:55					
					VOCMS Group3		8260D		5 Bus. Days
Q2879-13	OU4-TS-GRILLO-TSCP09-081425	Solid	08/14/2025	12:00					
					VOCMS Group3		8260D		5 Bus. Days
Q2879-15	OU4-TS-GRILLO-TSCP10-081425	Solid	08/14/2025	12:05					

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

LOGIN REPORT/SAMPLE TRANSFER

Order ID : Q2879 NOBI03
Client Name : Nobis Group
Client Contact : Adam Roy
Invoice Name : Nobis Group
Invoice Contact : Adam Roy

Order Date : 8/15/2025 9:15:00 AM
Project Name : Raymark Superfund Site
Receive DateTime : 8/15/2025 9:09:00 AM
Purchase Order :

Project Mgr :
Report Type : Level 4
EDD Type : EQUIS
Hard Copy Date :
Date Signoff :

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD		FAX DATE	DUE DATES
					VOCMS Group3		8260D	5 Bus. Days		
Q2879-17	OU4-TS-GRILLO-TSCP11-081425	Solid	08/14/2025	12:10						
					VOCMS Group3		8260D	5 Bus. Days		

Relinguished By :
Date / Time : 8/15/25 1230

Received By : Sam
Date / Time : 8/15/25 1230

Storage Area : VOA Refridgerator Room