284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
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Cover Page

Order ID : Q3172

Project ID : Amsterdam

Client : G Environmental

Lab Sample Number	Client Sample Number
Q3172-01	FW7D
Q3172-02	FW6D
Q3172-03	GB3W

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: 9/29/2025

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

Alliance TECHNICAL GROUP

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

DATA REPORTING QUALIFIERS- INORGANIC

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

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

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APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: **Q3172**

	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:** **09/29/2025**

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LAB CHRONICLE

OrderID:	Q3172	**OrderDate:**	9/24/2025 9:00:00 AM
Client:	G Environmental	**Project:**	Amsterdam
Contact:	Gary Landis	**Location:**	J43,VOA Lab

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q3172-01	**FW7D**	**Water**			**09/22/25**			**09/23/25**
			Mercury	7470A		09/26/25	09/29/25	
			Metals ICP-TAL	6010D		09/24/25	09/25/25	
Q3172-02	**FW6D**	**Water**			**09/22/25**			**09/23/25**
			Mercury	7470A		09/26/25	09/29/25	
			Metals ICP-TAL	6010D		09/24/25	09/25/25	

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Hit Summary Sheet
SW-846

SDG No.: Q3172 **Order ID:** Q3172

Client: G Environmental **Project ID:** Amsterdam

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Client ID : FW7D								
Q3172-01	FW7D	Water	Aluminum	113000		5.67	50.0	ug/L
Q3172-01	FW7D	Water	Arsenic	215		2.56	10.0	ug/L
Q3172-01	FW7D	Water	Barium	2280		7.28	50.0	ug/L
Q3172-01	FW7D	Water	Beryllium	9.65		0.28	3.00	ug/L
Q3172-01	FW7D	Water	Cadmium	12.2		0.25	3.00	ug/L
Q3172-01	FW7D	Water	Calcium	435000		117	1000	ug/L
Q3172-01	FW7D	Water	Chromium	135		1.06	5.00	ug/L
Q3172-01	FW7D	Water	Cobalt	201		1.13	15.0	ug/L
Q3172-01	FW7D	Water	Copper	210		2.30	10.0	ug/L
Q3172-01	FW7D	Water	Iron	191000		11.7	50.0	ug/L
Q3172-01	FW7D	Water	Lead	142		1.15	6.00	ug/L
Q3172-01	FW7D	Water	Magnesium	105000		122	1000	ug/L
Q3172-01	FW7D	Water	Manganese	8680		2.97	10.0	ug/L
Q3172-01	FW7D	Water	Mercury	0.72		0.076	0.20	ug/L
Q3172-01	FW7D	Water	Nickel	392		1.53	20.0	ug/L
Q3172-01	FW7D	Water	Potassium	43000		459	1000	ug/L
Q3172-01	FW7D	Water	Sodium	98300		434	1000	ug/L
Q3172-01	FW7D	Water	Vanadium	190		3.13	20.0	ug/L
Q3172-01	FW7D	Water	Zinc	751		8.33	20.0	ug/L
Client ID : FW6D								
Q3172-02	FW6D	Water	Aluminum	610		5.67	50.0	ug/L
Q3172-02	FW6D	Water	Arsenic	30.0		2.56	10.0	ug/L
Q3172-02	FW6D	Water	Barium	117		7.28	50.0	ug/L
Q3172-02	FW6D	Water	Cadmium	0.36	J	0.25	3.00	ug/L
Q3172-02	FW6D	Water	Calcium	42300		117	1000	ug/L
Q3172-02	FW6D	Water	Chromium	3.33	J	1.06	5.00	ug/L
Q3172-02	FW6D	Water	Cobalt	2.59	J	1.13	15.0	ug/L
Q3172-02	FW6D	Water	Copper	47.6		2.30	10.0	ug/L
Q3172-02	FW6D	Water	Iron	13800		11.7	50.0	ug/L
Q3172-02	FW6D	Water	Lead	6.17		1.15	6.00	ug/L
Q3172-02	FW6D	Water	Magnesium	3980		122	1000	ug/L
Q3172-02	FW6D	Water	Manganese	892		2.97	10.0	ug/L
Q3172-02	FW6D	Water	Mercury	0.087	J	0.076	0.20	ug/L
Q3172-02	FW6D	Water	Nickel	5.26	J	1.53	20.0	ug/L
Q3172-02	FW6D	Water	Potassium	10600		459	1000	ug/L
Q3172-02	FW6D	Water	Sodium	19600		434	1000	ug/L
Q3172-02	FW6D	Water	Zinc	117		8.33	20.0	ug/L

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Hit Summary Sheet
SW-846

SDG No.:	Q3172	**Order ID:**	Q3172
Client:	G Environmental	**Project ID:**	Amsterdam

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units

SAMPLE DATA

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Report of Analysis

Client:	G Environmental	Date Collected:	09/22/25
Project:	Amsterdam	Date Received:	09/23/25
Client Sample ID:	FW7D	SDG No.:	Q3172
Lab Sample ID:	Q3172-01	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7429-90-5	Aluminum	113000		1	5.67	50.0	ug/L	09/24/25 12:35	09/25/25 14:17	6010D	SW3010
7440-36-0	Antimony	3.38	U	1	3.38	25.0	ug/L	09/24/25 12:35	09/25/25 14:17	6010D	SW3010
7440-38-2	Arsenic	215		1	2.56	10.0	ug/L	09/24/25 12:35	09/25/25 14:17	6010D	SW3010
7440-39-3	Barium	2280		1	7.28	50.0	ug/L	09/24/25 12:35	09/25/25 14:17	6010D	SW3010
7440-41-7	Beryllium	9.65		1	0.28	3.00	ug/L	09/24/25 12:35	09/25/25 14:17	6010D	SW3010
7440-43-9	Cadmium	12.2		1	0.25	3.00	ug/L	09/24/25 12:35	09/25/25 14:17	6010D	SW3010
7440-70-2	Calcium	435000		1	117	1000	ug/L	09/24/25 12:35	09/25/25 14:17	6010D	SW3010
7440-47-3	Chromium	135		1	1.06	5.00	ug/L	09/24/25 12:35	09/25/25 14:17	6010D	SW3010
7440-48-4	Cobalt	201		1	1.13	15.0	ug/L	09/24/25 12:35	09/25/25 14:17	6010D	SW3010
7440-50-8	Copper	210		1	2.30	10.0	ug/L	09/24/25 12:35	09/25/25 14:17	6010D	SW3010
7439-89-6	Iron	191000		1	11.7	50.0	ug/L	09/24/25 12:35	09/25/25 14:17	6010D	SW3010
7439-92-1	Lead	142		1	1.15	6.00	ug/L	09/24/25 12:35	09/25/25 14:17	6010D	SW3010
7439-95-4	Magnesium	105000		1	122	1000	ug/L	09/24/25 12:35	09/25/25 14:17	6010D	SW3010
7439-96-5	Manganese	8680		1	2.97	10.0	ug/L	09/24/25 12:35	09/25/25 14:17	6010D	SW3010
7439-97-6	Mercury	0.72		1	0.076	0.20	ug/L	09/26/25 14:40	09/29/25 12:37	7470A	
7440-02-0	Nickel	392		1	1.53	20.0	ug/L	09/24/25 12:35	09/25/25 14:17	6010D	SW3010
7440-09-7	Potassium	43000		1	459	1000	ug/L	09/24/25 12:35	09/25/25 14:17	6010D	SW3010
7782-49-2	Selenium	4.82	U	1	4.82	10.0	ug/L	09/24/25 12:35	09/25/25 14:17	6010D	SW3010
7440-22-4	Silver	0.81	U	1	0.81	5.00	ug/L	09/24/25 12:35	09/25/25 14:17	6010D	SW3010
7440-23-5	Sodium	98300	N	1	434	1000	ug/L	09/24/25 12:35	09/25/25 14:17	6010D	SW3010
7440-28-0	Thallium	2.19	U	1	2.19	20.0	ug/L	09/24/25 12:35	09/25/25 14:17	6010D	SW3010
7440-62-2	Vanadium	190		1	3.13	20.0	ug/L	09/24/25 12:35	09/25/25 14:17	6010D	SW3010
7440-66-6	Zinc	751	N	1	8.33	20.0	ug/L	09/24/25 12:35	09/25/25 14:17	6010D	SW3010

Color Before:	Brown	Clarity Before:	Cloudy	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	METALS-TAL				

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

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

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Report of Analysis

Client:	G Environmental	Date Collected:	09/22/25
Project:	Amsterdam	Date Received:	09/23/25
Client Sample ID:	FW6D	SDG No.:	Q3172
Lab Sample ID:	Q3172-02	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7429-90-5	Aluminum	610		1	5.67	50.0	ug/L	09/24/25 12:35	09/25/25 14:35	6010D	SW3010
7440-36-0	Antimony	3.38	U	1	3.38	25.0	ug/L	09/24/25 12:35	09/25/25 14:35	6010D	SW3010
7440-38-2	Arsenic	30.0		1	2.56	10.0	ug/L	09/24/25 12:35	09/25/25 14:35	6010D	SW3010
7440-39-3	Barium	117		1	7.28	50.0	ug/L	09/24/25 12:35	09/25/25 14:35	6010D	SW3010
7440-41-7	Beryllium	0.28	U	1	0.28	3.00	ug/L	09/24/25 12:35	09/25/25 14:35	6010D	SW3010
7440-43-9	Cadmium	0.36	J	1	0.25	3.00	ug/L	09/24/25 12:35	09/25/25 14:35	6010D	SW3010
7440-70-2	Calcium	42300		1	117	1000	ug/L	09/24/25 12:35	09/25/25 14:35	6010D	SW3010
7440-47-3	Chromium	3.33	J	1	1.06	5.00	ug/L	09/24/25 12:35	09/25/25 14:35	6010D	SW3010
7440-48-4	Cobalt	2.59	J	1	1.13	15.0	ug/L	09/24/25 12:35	09/25/25 14:35	6010D	SW3010
7440-50-8	Copper	47.6		1	2.30	10.0	ug/L	09/24/25 12:35	09/25/25 14:35	6010D	SW3010
7439-89-6	Iron	13800		1	11.7	50.0	ug/L	09/24/25 12:35	09/25/25 14:35	6010D	SW3010
7439-92-1	Lead	6.17		1	1.15	6.00	ug/L	09/24/25 12:35	09/25/25 14:35	6010D	SW3010
7439-95-4	Magnesium	3980		1	122	1000	ug/L	09/24/25 12:35	09/25/25 14:35	6010D	SW3010
7439-96-5	Manganese	892		1	2.97	10.0	ug/L	09/24/25 12:35	09/25/25 14:35	6010D	SW3010
7439-97-6	Mercury	0.087	J	1	0.076	0.20	ug/L	09/26/25 14:40	09/29/25 12:40	7470A	
7440-02-0	Nickel	5.26	J	1	1.53	20.0	ug/L	09/24/25 12:35	09/25/25 14:35	6010D	SW3010
7440-09-7	Potassium	10600		1	459	1000	ug/L	09/24/25 12:35	09/25/25 14:35	6010D	SW3010
7782-49-2	Selenium	4.82	U	1	4.82	10.0	ug/L	09/24/25 12:35	09/25/25 14:35	6010D	SW3010
7440-22-4	Silver	0.81	U	1	0.81	5.00	ug/L	09/24/25 12:35	09/25/25 14:35	6010D	SW3010
7440-23-5	Sodium	19600	N	1	434	1000	ug/L	09/24/25 12:35	09/25/25 14:35	6010D	SW3010
7440-28-0	Thallium	2.19	U	1	2.19	20.0	ug/L	09/24/25 12:35	09/25/25 14:35	6010D	SW3010
7440-62-2	Vanadium	3.13	U	1	3.13	20.0	ug/L	09/24/25 12:35	09/25/25 14:35	6010D	SW3010
7440-66-6	Zinc	117	N	1	8.33	20.0	ug/L	09/24/25 12:35	09/25/25 14:35	6010D	SW3010

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	METALS-TAL				

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

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

METAL CALIBRATION DATA

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: G Environmental **SDG No.:** Q3172

Contract: GENV01 **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
ICV50	Mercury	3.71	4.0	93	90 - 110	CV	09/29/2025	10:44	LB137343

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: G Environmental **SDG No.:** Q3172

Contract: GENV01 **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
CCV51	Mercury	5.02	5.0	100	90 - 110	CV	09/29/2025	10:49	LB137343
CCV52	Mercury	5.09	5.0	102	90 - 110	CV	09/29/2025	11:22	LB137343
CCV53	Mercury	4.84	5.0	97	90 - 110	CV	09/29/2025	11:51	LB137343
CCV54	Mercury	4.65	5.0	93	90 - 110	CV	09/29/2025	12:18	LB137343
CCV55	Mercury	4.75	5.0	95	90 - 110	CV	09/29/2025	12:53	LB137343
CCV56	Mercury	4.85	5.0	97	90 - 110	CV	09/29/2025	13:22	LB137343
CCV57	Mercury	4.81	5.0	96	90 - 110	CV	09/29/2025	13:36	LB137343

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Metals

- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: G Environmental **SDG No.:** Q3172

Contract: GENV01 **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	7830	8000	98	90 - 110	P	09/25/2025	11:20	LB137314
	Antimony	4090	4000	102	90 - 110	P	09/25/2025	11:20	LB137314
	Arsenic	3970	4000	99	90 - 110	P	09/25/2025	11:20	LB137314
	Barium	7810	8000	98	90 - 110	P	09/25/2025	11:20	LB137314
	Beryllium	196	200	98	90 - 110	P	09/25/2025	11:20	LB137314
	Cadmium	1970	2000	98	90 - 110	P	09/25/2025	11:20	LB137314
	Calcium	19500	20000	98	90 - 110	P	09/25/2025	11:20	LB137314
	Chromium	816	800	102	90 - 110	P	09/25/2025	11:20	LB137314
	Cobalt	1970	2000	98	90 - 110	P	09/25/2025	11:20	LB137314
	Copper	1010	1000	101	90 - 110	P	09/25/2025	11:20	LB137314
	Iron	4180	4000	105	90 - 110	P	09/25/2025	11:20	LB137314
	Lead	3850	4000	96	90 - 110	P	09/25/2025	11:20	LB137314
	Magnesium	19400	20000	97	90 - 110	P	09/25/2025	11:20	LB137314
	Manganese	1950	2000	97	90 - 110	P	09/25/2025	11:20	LB137314
	Nickel	1970	2000	99	90 - 110	P	09/25/2025	11:20	LB137314
	Potassium	20700	20000	104	90 - 110	P	09/25/2025	11:20	LB137314
	Selenium	4010	4000	100	90 - 110	P	09/25/2025	11:20	LB137314
	Silver	1020	1000	102	90 - 110	P	09/25/2025	11:20	LB137314
	Sodium	20500	20000	103	90 - 110	P	09/25/2025	11:20	LB137314
	Thallium	3980	4000	100	90 - 110	P	09/25/2025	11:20	LB137314
	Vanadium	1940	2000	97	90 - 110	P	09/25/2025	11:20	LB137314
	Zinc	2030	2000	101	90 - 110	P	09/25/2025	11:20	LB137314

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: G Environmental **SDG No.:** Q3172

Contract: GENV01 **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	101	100	101	80 - 120	P	09/25/2025	11:29	LB137314
	Antimony	47.8	50.0	96	80 - 120	P	09/25/2025	11:29	LB137314
	Arsenic	22.4	20.0	112	80 - 120	P	09/25/2025	11:29	LB137314
	Barium	97.5	100	98	80 - 120	P	09/25/2025	11:29	LB137314
	Beryllium	6.21	6.0	104	80 - 120	P	09/25/2025	11:29	LB137314
	Cadmium	5.96	6.0	99	80 - 120	P	09/25/2025	11:29	LB137314
	Calcium	2040	2000	102	80 - 120	P	09/25/2025	11:29	LB137314
	Chromium	10.4	10.0	104	80 - 120	P	09/25/2025	11:29	LB137314
	Cobalt	29.2	30.0	97	80 - 120	P	09/25/2025	11:29	LB137314
	Copper	20.5	20.0	103	80 - 120	P	09/25/2025	11:29	LB137314
	Iron	108	100	108	80 - 120	P	09/25/2025	11:29	LB137314
	Lead	10.2	12.0	85	80 - 120	P	09/25/2025	11:29	LB137314
	Magnesium	2080	2000	104	80 - 120	P	09/25/2025	11:29	LB137314
	Manganese	20.6	20.0	103	80 - 120	P	09/25/2025	11:29	LB137314
	Nickel	40.1	40.0	100	80 - 120	P	09/25/2025	11:29	LB137314
	Potassium	2120	2000	106	80 - 120	P	09/25/2025	11:29	LB137314
	Selenium	21.6	20.0	108	80 - 120	P	09/25/2025	11:29	LB137314
	Silver	9.87	10.0	99	80 - 120	P	09/25/2025	11:29	LB137314
	Sodium	2010	2000	101	80 - 120	P	09/25/2025	11:29	LB137314
	Thallium	38.9	40.0	97	80 - 120	P	09/25/2025	11:29	LB137314
	Vanadium	35.4	40.0	88	80 - 120	P	09/25/2025	11:29	LB137314
	Zinc	42.4	40.0	106	80 - 120	P	09/25/2025	11:29	LB137314

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Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: G Environmental **SDG No.:** Q3172

Contract: GENV01 **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	9660	10000	97	90 - 110	P	09/25/2025	12:12	LB137314
	Antimony	4930	5000	99	90 - 110	P	09/25/2025	12:12	LB137314
	Arsenic	4910	5000	98	90 - 110	P	09/25/2025	12:12	LB137314
	Barium	9590	10000	96	90 - 110	P	09/25/2025	12:12	LB137314
	Beryllium	235	250	94	90 - 110	P	09/25/2025	12:12	LB137314
	Cadmium	2420	2500	97	90 - 110	P	09/25/2025	12:12	LB137314
	Calcium	24000	25000	96	90 - 110	P	09/25/2025	12:12	LB137314
	Chromium	981	1000	98	90 - 110	P	09/25/2025	12:12	LB137314
	Cobalt	2410	2500	96	90 - 110	P	09/25/2025	12:12	LB137314
	Copper	1230	1250	98	90 - 110	P	09/25/2025	12:12	LB137314
	Iron	5010	5000	100	90 - 110	P	09/25/2025	12:12	LB137314
	Lead	4800	5000	96	90 - 110	P	09/25/2025	12:12	LB137314
	Magnesium	23900	25000	96	90 - 110	P	09/25/2025	12:12	LB137314
	Manganese	2380	2500	95	90 - 110	P	09/25/2025	12:12	LB137314
	Nickel	2410	2500	96	90 - 110	P	09/25/2025	12:12	LB137314
	Potassium	25100	25000	100	90 - 110	P	09/25/2025	12:12	LB137314
	Selenium	4970	5000	100	90 - 110	P	09/25/2025	12:12	LB137314
	Silver	1230	1250	98	90 - 110	P	09/25/2025	12:12	LB137314
	Sodium	24600	25000	98	90 - 110	P	09/25/2025	12:12	LB137314
	Thallium	4900	5000	98	90 - 110	P	09/25/2025	12:12	LB137314
	Vanadium	2420	2500	97	90 - 110	P	09/25/2025	12:12	LB137314
	Zinc	2490	2500	100	90 - 110	P	09/25/2025	12:12	LB137314
CCV02	Aluminum	9810	10000	98	90 - 110	P	09/25/2025	13:23	LB137314
	Antimony	5080	5000	102	90 - 110	P	09/25/2025	13:23	LB137314
	Arsenic	5030	5000	101	90 - 110	P	09/25/2025	13:23	LB137314
	Barium	9690	10000	97	90 - 110	P	09/25/2025	13:23	LB137314
	Beryllium	235	250	94	90 - 110	P	09/25/2025	13:23	LB137314
	Cadmium	2460	2500	99	90 - 110	P	09/25/2025	13:23	LB137314
	Calcium	24300	25000	97	90 - 110	P	09/25/2025	13:23	LB137314
	Chromium	1010	1000	101	90 - 110	P	09/25/2025	13:23	LB137314
	Cobalt	2460	2500	98	90 - 110	P	09/25/2025	13:23	LB137314
	Copper	1250	1250	100	90 - 110	P	09/25/2025	13:23	LB137314
	Iron	5220	5000	104	90 - 110	P	09/25/2025	13:23	LB137314
	Lead	4880	5000	98	90 - 110	P	09/25/2025	13:23	LB137314

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Metals

- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: G Environmental **SDG No.:** Q3172

Contract: GENV01 **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	24000	25000	96	90 - 110	P	09/25/2025	13:23	LB137314
	Manganese	2390	2500	96	90 - 110	P	09/25/2025	13:23	LB137314
	Nickel	2460	2500	99	90 - 110	P	09/25/2025	13:23	LB137314
	Potassium	26400	25000	106	90 - 110	P	09/25/2025	13:23	LB137314
	Selenium	5110	5000	102	90 - 110	P	09/25/2025	13:23	LB137314
	Silver	1260	1250	101	90 - 110	P	09/25/2025	13:23	LB137314
	Sodium	25200	25000	101	90 - 110	P	09/25/2025	13:23	LB137314
	Thallium	5180	5000	104	90 - 110	P	09/25/2025	13:23	LB137314
	Vanadium	2460	2500	98	90 - 110	P	09/25/2025	13:23	LB137314
	Zinc	2630	2500	105	90 - 110	P	09/25/2025	13:23	LB137314
CCV03	Aluminum	9770	10000	98	90 - 110	P	09/25/2025	14:21	LB137314
	Antimony	4990	5000	100	90 - 110	P	09/25/2025	14:21	LB137314
	Arsenic	4990	5000	100	90 - 110	P	09/25/2025	14:21	LB137314
	Barium	9550	10000	96	90 - 110	P	09/25/2025	14:21	LB137314
	Beryllium	238	250	95	90 - 110	P	09/25/2025	14:21	LB137314
	Cadmium	2440	2500	98	90 - 110	P	09/25/2025	14:21	LB137314
	Calcium	24300	25000	97	90 - 110	P	09/25/2025	14:21	LB137314
	Chromium	981	1000	98	90 - 110	P	09/25/2025	14:21	LB137314
	Cobalt	2430	2500	97	90 - 110	P	09/25/2025	14:21	LB137314
	Copper	1240	1250	99	90 - 110	P	09/25/2025	14:21	LB137314
	Iron	4990	5000	100	90 - 110	P	09/25/2025	14:21	LB137314
	Lead	4840	5000	97	90 - 110	P	09/25/2025	14:21	LB137314
	Magnesium	24100	25000	96	90 - 110	P	09/25/2025	14:21	LB137314
	Manganese	2390	2500	96	90 - 110	P	09/25/2025	14:21	LB137314
	Nickel	2440	2500	98	90 - 110	P	09/25/2025	14:21	LB137314
	Potassium	26100	25000	104	90 - 110	P	09/25/2025	14:21	LB137314
	Selenium	5080	5000	102	90 - 110	P	09/25/2025	14:21	LB137314
	Silver	1220	1250	98	90 - 110	P	09/25/2025	14:21	LB137314
	Sodium	24200	25000	97	90 - 110	P	09/25/2025	14:21	LB137314
	Thallium	5040	5000	101	90 - 110	P	09/25/2025	14:21	LB137314
	Vanadium	2460	2500	98	90 - 110	P	09/25/2025	14:21	LB137314
	Zinc	2470	2500	99	90 - 110	P	09/25/2025	14:21	LB137314
CCV04	Aluminum	9860	10000	99	90 - 110	P	09/25/2025	15:16	LB137314
	Antimony	4980	5000	100	90 - 110	P	09/25/2025	15:16	LB137314

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: G Environmental **SDG No.:** Q3172

Contract: GENV01 **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	4950	5000	99	90 - 110	P	09/25/2025	15:16	LB137314
	Barium	9580	10000	96	90 - 110	P	09/25/2025	15:16	LB137314
	Beryllium	240	250	96	90 - 110	P	09/25/2025	15:16	LB137314
	Cadmium	2440	2500	98	90 - 110	P	09/25/2025	15:16	LB137314
	Calcium	24400	25000	98	90 - 110	P	09/25/2025	15:16	LB137314
	Chromium	999	1000	100	90 - 110	P	09/25/2025	15:16	LB137314
	Cobalt	2430	2500	97	90 - 110	P	09/25/2025	15:16	LB137314
	Copper	1240	1250	99	90 - 110	P	09/25/2025	15:16	LB137314
	Iron	4980	5000	100	90 - 110	P	09/25/2025	15:16	LB137314
	Lead	4830	5000	97	90 - 110	P	09/25/2025	15:16	LB137314
	Magnesium	24300	25000	97	90 - 110	P	09/25/2025	15:16	LB137314
	Manganese	2380	2500	95	90 - 110	P	09/25/2025	15:16	LB137314
	Nickel	2440	2500	98	90 - 110	P	09/25/2025	15:16	LB137314
	Potassium	25200	25000	101	90 - 110	P	09/25/2025	15:16	LB137314
	Selenium	5040	5000	101	90 - 110	P	09/25/2025	15:16	LB137314
	Silver	1230	1250	99	90 - 110	P	09/25/2025	15:16	LB137314
	Sodium	23800	25000	95	90 - 110	P	09/25/2025	15:16	LB137314
	Thallium	5190	5000	104	90 - 110	P	09/25/2025	15:16	LB137314
	Vanadium	2480	2500	99	90 - 110	P	09/25/2025	15:16	LB137314
	Zinc	2510	2500	100	90 - 110	P	09/25/2025	15:16	LB137314
CCV05	Aluminum	10100	10000	101	90 - 110	P	09/25/2025	16:16	LB137314
	Antimony	5180	5000	104	90 - 110	P	09/25/2025	16:16	LB137314
	Arsenic	5170	5000	103	90 - 110	P	09/25/2025	16:16	LB137314
	Barium	9750	10000	98	90 - 110	P	09/25/2025	16:16	LB137314
	Beryllium	247	250	99	90 - 110	P	09/25/2025	16:16	LB137314
	Cadmium	2520	2500	101	90 - 110	P	09/25/2025	16:16	LB137314
	Calcium	25200	25000	101	90 - 110	P	09/25/2025	16:16	LB137314
	Chromium	1040	1000	104	90 - 110	P	09/25/2025	16:16	LB137314
	Cobalt	2510	2500	100	90 - 110	P	09/25/2025	16:16	LB137314
	Copper	1290	1250	103	90 - 110	P	09/25/2025	16:16	LB137314
	Iron	5350	5000	107	90 - 110	P	09/25/2025	16:16	LB137314
	Lead	4990	5000	100	90 - 110	P	09/25/2025	16:16	LB137314
	Magnesium	25000	25000	100	90 - 110	P	09/25/2025	16:16	LB137314
	Manganese	2480	2500	99	90 - 110	P	09/25/2025	16:16	LB137314

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Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: G Environmental **SDG No.:** Q3172

Contract: GENV01 **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	2520	2500	101	90 - 110	P	09/25/2025	16:16	LB137314
	Potassium	26600	25000	106	90 - 110	P	09/25/2025	16:16	LB137314
	Selenium	5280	5000	106	90 - 110	P	09/25/2025	16:16	LB137314
	Silver	1290	1250	103	90 - 110	P	09/25/2025	16:16	LB137314
	Sodium	25300	25000	101	90 - 110	P	09/25/2025	16:16	LB137314
	Thallium	5380	5000	108	90 - 110	P	09/25/2025	16:16	LB137314
	Vanadium	2560	2500	102	90 - 110	P	09/25/2025	16:16	LB137314
	Zinc	2640	2500	106	90 - 110	P	09/25/2025	16:16	LB137314
CCV06	Aluminum	10200	10000	102	90 - 110	P	09/25/2025	17:27	LB137314
	Antimony	5060	5000	101	90 - 110	P	09/25/2025	17:27	LB137314
	Arsenic	5030	5000	100	90 - 110	P	09/25/2025	17:27	LB137314
	Barium	9990	10000	100	90 - 110	P	09/25/2025	17:27	LB137314
	Beryllium	245	250	98	90 - 110	P	09/25/2025	17:27	LB137314
	Cadmium	2470	2500	99	90 - 110	P	09/25/2025	17:27	LB137314
	Calcium	25200	25000	101	90 - 110	P	09/25/2025	17:27	LB137314
	Chromium	1000	1000	100	90 - 110	P	09/25/2025	17:27	LB137314
	Cobalt	2460	2500	98	90 - 110	P	09/25/2025	17:27	LB137314
	Copper	1260	1250	101	90 - 110	P	09/25/2025	17:27	LB137314
	Iron	5030	5000	100	90 - 110	P	09/25/2025	17:27	LB137314
	Lead	4880	5000	98	90 - 110	P	09/25/2025	17:27	LB137314
	Magnesium	25300	25000	101	90 - 110	P	09/25/2025	17:27	LB137314
	Manganese	2500	2500	100	90 - 110	P	09/25/2025	17:27	LB137314
	Nickel	2460	2500	99	90 - 110	P	09/25/2025	17:27	LB137314
	Potassium	26300	25000	105	90 - 110	P	09/25/2025	17:27	LB137314
	Selenium	5110	5000	102	90 - 110	P	09/25/2025	17:27	LB137314
	Silver	1240	1250	99	90 - 110	P	09/25/2025	17:27	LB137314
	Sodium	24800	25000	99	90 - 110	P	09/25/2025	17:27	LB137314
	Thallium	5260	5000	105	90 - 110	P	09/25/2025	17:27	LB137314
	Vanadium	2570	2500	103	90 - 110	P	09/25/2025	17:27	LB137314
	Zinc	2520	2500	101	90 - 110	P	09/25/2025	17:27	LB137314
CCV07	Aluminum	10100	10000	101	90 - 110	P	09/25/2025	17:40	LB137314
	Antimony	5170	5000	103	90 - 110	P	09/25/2025	17:40	LB137314
	Arsenic	5120	5000	102	90 - 110	P	09/25/2025	17:40	LB137314
	Barium	9780	10000	98	90 - 110	P	09/25/2025	17:40	LB137314

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Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: G Environmental **SDG No.:** Q3172

Contract: GENV01 **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	244	250	98	90 - 110	P	09/25/2025	17:40	LB137314
	Cadmium	2520	2500	101	90 - 110	P	09/25/2025	17:40	LB137314
	Calcium	24900	25000	100	90 - 110	P	09/25/2025	17:40	LB137314
	Chromium	1040	1000	104	90 - 110	P	09/25/2025	17:40	LB137314
	Cobalt	2510	2500	100	90 - 110	P	09/25/2025	17:40	LB137314
	Copper	1280	1250	103	90 - 110	P	09/25/2025	17:40	LB137314
	Iron	5170	5000	103	90 - 110	P	09/25/2025	17:40	LB137314
	Lead	4980	5000	100	90 - 110	P	09/25/2025	17:40	LB137314
	Magnesium	24900	25000	100	90 - 110	P	09/25/2025	17:40	LB137314
	Manganese	2440	2500	98	90 - 110	P	09/25/2025	17:40	LB137314
	Nickel	2520	2500	101	90 - 110	P	09/25/2025	17:40	LB137314
	Potassium	26100	25000	104	90 - 110	P	09/25/2025	17:40	LB137314
	Selenium	5210	5000	104	90 - 110	P	09/25/2025	17:40	LB137314
	Silver	1280	1250	102	90 - 110	P	09/25/2025	17:40	LB137314
	Sodium	24300	25000	97	90 - 110	P	09/25/2025	17:40	LB137314
	Thallium	5360	5000	107	90 - 110	P	09/25/2025	17:40	LB137314
	Vanadium	2530	2500	101	90 - 110	P	09/25/2025	17:40	LB137314
	Zinc	2590	2500	104	90 - 110	P	09/25/2025	17:40	LB137314

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CRDL STANDARD FOR AA & ICP

Client: G Environmental **SDG No.:** Q3172

Contract: GENV01 **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
CRI01	Aluminum	122	100	122	65 - 135	P	09/25/2025	11:38	LB137314
	Antimony	54.2	50.0	108	65 - 135	P	09/25/2025	11:38	LB137314
	Arsenic	21.8	20.0	109	65 - 135	P	09/25/2025	11:38	LB137314
	Barium	105	100	105	65 - 135	P	09/25/2025	11:38	LB137314
	Beryllium	6.51	6.0	108	65 - 135	P	09/25/2025	11:38	LB137314
	Cadmium	6.34	6.0	106	65 - 135	P	09/25/2025	11:38	LB137314
	Calcium	2180	2000	109	65 - 135	P	09/25/2025	11:38	LB137314
	Chromium	10.7	10.0	107	65 - 135	P	09/25/2025	11:38	LB137314
	Cobalt	31.5	30.0	105	65 - 135	P	09/25/2025	11:38	LB137314
	Copper	22.6	20.0	113	65 - 135	P	09/25/2025	11:38	LB137314
	Iron	114	100	114	65 - 135	P	09/25/2025	11:38	LB137314
	Lead	11.4	12.0	95	65 - 135	P	09/25/2025	11:38	LB137314
	Magnesium	2190	2000	110	65 - 135	P	09/25/2025	11:38	LB137314
	Manganese	22.6	20.0	113	65 - 135	P	09/25/2025	11:38	LB137314
	Nickel	42.9	40.0	107	65 - 135	P	09/25/2025	11:38	LB137314
	Potassium	2140	2000	107	65 - 135	P	09/25/2025	11:38	LB137314
	Selenium	25.2	20.0	126	65 - 135	P	09/25/2025	11:38	LB137314
	Silver	11.0	10.0	110	65 - 135	P	09/25/2025	11:38	LB137314
	Sodium	2140	2000	107	65 - 135	P	09/25/2025	11:38	LB137314
	Thallium	42.8	40.0	107	65 - 135	P	09/25/2025	11:38	LB137314
	Vanadium	36.1	40.0	90	65 - 135	P	09/25/2025	11:38	LB137314
	Zinc	44.8	40.0	112	65 - 135	P	09/25/2025	11:38	LB137314
CRA	Mercury	0.17	0.2	87	70 - 130	CV	09/29/2025	10:56	LB137343

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: G Environmental **SDG No.:** Q3172

Contract: GENV01 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB50	Mercury	0.076	+/-0.2	U	0.20	CV	09/29/2025	10:46	LB137343

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: G Environmental **SDG No.:** Q3172

Contract: GENV01 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB51	Mercury	0.076	+/-0.2	U	0.20	CV	09/29/2025	10:51	LB137343
CCB52	Mercury	0.076	+/-0.2	U	0.20	CV	09/29/2025	11:24	LB137343
CCB53	Mercury	0.076	+/-0.2	U	0.20	CV	09/29/2025	11:53	LB137343
CCB54	Mercury	0.076	+/-0.2	U	0.20	CV	09/29/2025	12:20	LB137343
CCB55	Mercury	0.076	+/-0.2	U	0.20	CV	09/29/2025	12:56	LB137343
CCB56	Mercury	0.076	+/-0.2	U	0.20	CV	09/29/2025	13:24	LB137343
CCB57	Mercury	0.076	+/-0.2	U	0.20	CV	09/29/2025	13:38	LB137343

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: G Environmental **SDG No.:** Q3172

Contract: GENV01 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB01	Aluminum	11.3	+/-50	U	100	P	09/25/2025	11:33	LB137314
	Antimony	6.76	+/-25	U	50.0	P	09/25/2025	11:33	LB137314
	Arsenic	5.12	+/-10	U	20.0	P	09/25/2025	11:33	LB137314
	Barium	14.6	+/-50	U	100	P	09/25/2025	11:33	LB137314
	Beryllium	0.56	+/-3	U	6.00	P	09/25/2025	11:33	LB137314
	Cadmium	0.50	+/-3	U	6.00	P	09/25/2025	11:33	LB137314
	Calcium	234	+/-1000	U	2000	P	09/25/2025	11:33	LB137314
	Chromium	2.12	+/-5	U	10.0	P	09/25/2025	11:33	LB137314
	Cobalt	2.26	+/-15	U	30.0	P	09/25/2025	11:33	LB137314
	Copper	4.60	+/-10	U	20.0	P	09/25/2025	11:33	LB137314
	Iron	23.4	+/-50	U	100	P	09/25/2025	11:33	LB137314
	Lead	2.30	+/-6	U	12.0	P	09/25/2025	11:33	LB137314
	Magnesium	244	+/-1000	U	2000	P	09/25/2025	11:33	LB137314
	Manganese	5.94	+/-10	U	20.0	P	09/25/2025	11:33	LB137314
	Nickel	3.06	+/-20	U	40.0	P	09/25/2025	11:33	LB137314
	Potassium	918	+/-1000	U	2000	P	09/25/2025	11:33	LB137314
	Selenium	9.64	+/-10	U	20.0	P	09/25/2025	11:33	LB137314
	Silver	1.62	+/-5	U	10.0	P	09/25/2025	11:33	LB137314
	Sodium	868	+/-1000	U	2000	P	09/25/2025	11:33	LB137314
	Thallium	4.38	+/-20	U	40.0	P	09/25/2025	11:33	LB137314
	Vanadium	6.26	+/-20	U	40.0	P	09/25/2025	11:33	LB137314
	Zinc	16.7	+/-20	U	40.0	P	09/25/2025	11:33	LB137314

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Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: G Environmental **SDG No.:** Q3172

Contract: GENV01 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB01	Aluminum	11.3	+/-50	U	100	P	09/25/2025	12:17	LB137314
	Antimony	6.76	+/-25	U	50.0	P	09/25/2025	12:17	LB137314
	Arsenic	5.12	+/-10	U	20.0	P	09/25/2025	12:17	LB137314
	Barium	14.6	+/-50	U	100	P	09/25/2025	12:17	LB137314
	Beryllium	0.56	+/-3	U	6.00	P	09/25/2025	12:17	LB137314
	Cadmium	0.50	+/-3	U	6.00	P	09/25/2025	12:17	LB137314
	Calcium	234	+/-1000	U	2000	P	09/25/2025	12:17	LB137314
	Chromium	2.12	+/-5	U	10.0	P	09/25/2025	12:17	LB137314
	Cobalt	2.26	+/-15	U	30.0	P	09/25/2025	12:17	LB137314
	Copper	4.60	+/-10	U	20.0	P	09/25/2025	12:17	LB137314
	Iron	23.4	+/-50	U	100	P	09/25/2025	12:17	LB137314
	Lead	2.30	+/-6	U	12.0	P	09/25/2025	12:17	LB137314
	Magnesium	244	+/-1000	U	2000	P	09/25/2025	12:17	LB137314
	Manganese	5.94	+/-10	U	20.0	P	09/25/2025	12:17	LB137314
	Nickel	3.06	+/-20	U	40.0	P	09/25/2025	12:17	LB137314
	Potassium	918	+/-1000	U	2000	P	09/25/2025	12:17	LB137314
	Selenium	9.64	+/-10	U	20.0	P	09/25/2025	12:17	LB137314
	Silver	1.62	+/-5	U	10.0	P	09/25/2025	12:17	LB137314
	Sodium	868	+/-1000	U	2000	P	09/25/2025	12:17	LB137314
	Thallium	4.38	+/-20	U	40.0	P	09/25/2025	12:17	LB137314
	Vanadium	6.26	+/-20	U	40.0	P	09/25/2025	12:17	LB137314
	Zinc	16.7	+/-20	U	40.0	P	09/25/2025	12:17	LB137314
CCB02	Aluminum	11.3	+/-50	U	100	P	09/25/2025	13:27	LB137314
	Antimony	6.76	+/-25	U	50.0	P	09/25/2025	13:27	LB137314
	Arsenic	5.12	+/-10	U	20.0	P	09/25/2025	13:27	LB137314
	Barium	14.6	+/-50	U	100	P	09/25/2025	13:27	LB137314
	Beryllium	0.56	+/-3	U	6.00	P	09/25/2025	13:27	LB137314
	Cadmium	0.50	+/-3	U	6.00	P	09/25/2025	13:27	LB137314
	Calcium	234	+/-1000	U	2000	P	09/25/2025	13:27	LB137314
	Chromium	2.12	+/-5	U	10.0	P	09/25/2025	13:27	LB137314
	Cobalt	2.26	+/-15	U	30.0	P	09/25/2025	13:27	LB137314
	Copper	4.60	+/-10	U	20.0	P	09/25/2025	13:27	LB137314
	Iron	23.4	+/-50	U	100	P	09/25/2025	13:27	LB137314
	Lead	2.30	+/-6	U	12.0	P	09/25/2025	13:27	LB137314
	Magnesium	244	+/-1000	U	2000	P	09/25/2025	13:27	LB137314
	Manganese	5.94	+/-10	U	20.0	P	09/25/2025	13:27	LB137314
	Nickel	3.06	+/-20	U	40.0	P	09/25/2025	13:27	LB137314
	Potassium	918	+/-1000	U	2000	P	09/25/2025	13:27	LB137314
	Selenium	9.64	+/-10	U	20.0	P	09/25/2025	13:27	LB137314

Alliance TECHNICAL GROUP
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Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: G Environmental **SDG No.:** Q3172

Contract: GENV01 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB02	Silver	1.62	+/-5	U	10.0	P	09/25/2025	13:27	LB137314
	Sodium	868	+/-1000	U	2000	P	09/25/2025	13:27	LB137314
	Thallium	4.38	+/-20	U	40.0	P	09/25/2025	13:27	LB137314
	Vanadium	6.26	+/-20	U	40.0	P	09/25/2025	13:27	LB137314
	Zinc	16.7	+/-20	U	40.0	P	09/25/2025	13:27	LB137314
CCB03	Aluminum	11.3	+/-50	U	100	P	09/25/2025	14:30	LB137314
	Antimony	6.76	+/-25	U	50.0	P	09/25/2025	14:30	LB137314
	Arsenic	5.12	+/-10	U	20.0	P	09/25/2025	14:30	LB137314
	Barium	14.6	+/-50	U	100	P	09/25/2025	14:30	LB137314
	Beryllium	0.56	+/-3	U	6.00	P	09/25/2025	14:30	LB137314
	Cadmium	0.50	+/-3	U	6.00	P	09/25/2025	14:30	LB137314
	Calcium	234	+/-1000	U	2000	P	09/25/2025	14:30	LB137314
	Chromium	2.12	+/-5	U	10.0	P	09/25/2025	14:30	LB137314
	Cobalt	2.26	+/-15	U	30.0	P	09/25/2025	14:30	LB137314
	Copper	4.60	+/-10	U	20.0	P	09/25/2025	14:30	LB137314
	Iron	23.4	+/-50	U	100	P	09/25/2025	14:30	LB137314
	Lead	2.30	+/-6	U	12.0	P	09/25/2025	14:30	LB137314
	Magnesium	244	+/-1000	U	2000	P	09/25/2025	14:30	LB137314
	Manganese	5.94	+/-10	U	20.0	P	09/25/2025	14:30	LB137314
	Nickel	3.06	+/-20	U	40.0	P	09/25/2025	14:30	LB137314
	Potassium	918	+/-1000	U	2000	P	09/25/2025	14:30	LB137314
	Selenium	9.64	+/-10	U	20.0	P	09/25/2025	14:30	LB137314
	Silver	1.62	+/-5	U	10.0	P	09/25/2025	14:30	LB137314
	Sodium	868	+/-1000	U	2000	P	09/25/2025	14:30	LB137314
	Thallium	4.38	+/-20	U	40.0	P	09/25/2025	14:30	LB137314
	Vanadium	6.26	+/-20	U	40.0	P	09/25/2025	14:30	LB137314
	Zinc	16.7	+/-20	U	40.0	P	09/25/2025	14:30	LB137314
CCB04	Aluminum	11.3	+/-50	U	100	P	09/25/2025	15:20	LB137314
	Antimony	6.76	+/-25	U	50.0	P	09/25/2025	15:20	LB137314
	Arsenic	5.12	+/-10	U	20.0	P	09/25/2025	15:20	LB137314
	Barium	14.6	+/-50	U	100	P	09/25/2025	15:20	LB137314
	Beryllium	0.56	+/-3	U	6.00	P	09/25/2025	15:20	LB137314
	Cadmium	0.50	+/-3	U	6.00	P	09/25/2025	15:20	LB137314
	Calcium	234	+/-1000	U	2000	P	09/25/2025	15:20	LB137314
	Chromium	2.12	+/-5	U	10.0	P	09/25/2025	15:20	LB137314
	Cobalt	2.26	+/-15	U	30.0	P	09/25/2025	15:20	LB137314
	Copper	4.60	+/-10	U	20.0	P	09/25/2025	15:20	LB137314
	Iron	23.4	+/-50	U	100	P	09/25/2025	15:20	LB137314
	Lead	2.30	+/-6	U	12.0	P	09/25/2025	15:20	LB137314

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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: G Environmental **SDG No.:** Q3172

Contract: GENV01 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB04	Magnesium	244	+/-1000	U	2000	P	09/25/2025	15:20	LB137314
	Manganese	5.94	+/-10	U	20.0	P	09/25/2025	15:20	LB137314
	Nickel	3.06	+/-20	U	40.0	P	09/25/2025	15:20	LB137314
	Potassium	918	+/-1000	U	2000	P	09/25/2025	15:20	LB137314
	Selenium	9.64	+/-10	U	20.0	P	09/25/2025	15:20	LB137314
	Silver	1.62	+/-5	U	10.0	P	09/25/2025	15:20	LB137314
	Sodium	868	+/-1000	U	2000	P	09/25/2025	15:20	LB137314
	Thallium	4.38	+/-20	U	40.0	P	09/25/2025	15:20	LB137314
	Vanadium	6.26	+/-20	U	40.0	P	09/25/2025	15:20	LB137314
	Zinc	16.7	+/-20	U	40.0	P	09/25/2025	15:20	LB137314
CCB05	Aluminum	11.3	+/-50	U	100	P	09/25/2025	16:20	LB137314
	Antimony	6.76	+/-25	U	50.0	P	09/25/2025	16:20	LB137314
	Arsenic	5.12	+/-10	U	20.0	P	09/25/2025	16:20	LB137314
	Barium	14.6	+/-50	U	100	P	09/25/2025	16:20	LB137314
	Beryllium	0.56	+/-3	U	6.00	P	09/25/2025	16:20	LB137314
	Cadmium	0.50	+/-3	U	6.00	P	09/25/2025	16:20	LB137314
	Calcium	234	+/-1000	U	2000	P	09/25/2025	16:20	LB137314
	Chromium	2.12	+/-5	U	10.0	P	09/25/2025	16:20	LB137314
	Cobalt	2.26	+/-15	U	30.0	P	09/25/2025	16:20	LB137314
	Copper	4.60	+/-10	U	20.0	P	09/25/2025	16:20	LB137314
	Iron	23.4	+/-50	U	100	P	09/25/2025	16:20	LB137314
	Lead	2.30	+/-6	U	12.0	P	09/25/2025	16:20	LB137314
	Magnesium	244	+/-1000	U	2000	P	09/25/2025	16:20	LB137314
	Manganese	5.94	+/-10	U	20.0	P	09/25/2025	16:20	LB137314
	Nickel	3.06	+/-20	U	40.0	P	09/25/2025	16:20	LB137314
	Potassium	918	+/-1000	U	2000	P	09/25/2025	16:20	LB137314
	Selenium	9.64	+/-10	U	20.0	P	09/25/2025	16:20	LB137314
	Silver	1.62	+/-5	U	10.0	P	09/25/2025	16:20	LB137314
	Sodium	868	+/-1000	U	2000	P	09/25/2025	16:20	LB137314
	Thallium	4.38	+/-20	U	40.0	P	09/25/2025	16:20	LB137314
	Vanadium	6.26	+/-20	U	40.0	P	09/25/2025	16:20	LB137314
	Zinc	16.7	+/-20	U	40.0	P	09/25/2025	16:20	LB137314
CCB06	Aluminum	11.3	+/-50	U	100	P	09/25/2025	17:31	LB137314
	Antimony	6.76	+/-25	U	50.0	P	09/25/2025	17:31	LB137314
	Arsenic	5.12	+/-10	U	20.0	P	09/25/2025	17:31	LB137314
	Barium	14.6	+/-50	U	100	P	09/25/2025	17:31	LB137314
	Beryllium	0.56	+/-3	U	6.00	P	09/25/2025	17:31	LB137314
	Cadmium	0.50	+/-3	U	6.00	P	09/25/2025	17:31	LB137314
	Calcium	234	+/-1000	U	2000	P	09/25/2025	17:31	LB137314

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Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: G Environmental **SDG No.:** Q3172

Contract: GENV01 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB06	Chromium	2.12	+/-5	U	10.0	P	09/25/2025	17:31	LB137314
	Cobalt	2.26	+/-15	U	30.0	P	09/25/2025	17:31	LB137314
	Copper	4.60	+/-10	U	20.0	P	09/25/2025	17:31	LB137314
	Iron	23.4	+/-50	U	100	P	09/25/2025	17:31	LB137314
	Lead	2.30	+/-6	U	12.0	P	09/25/2025	17:31	LB137314
	Magnesium	244	+/-1000	U	2000	P	09/25/2025	17:31	LB137314
	Manganese	5.94	+/-10	U	20.0	P	09/25/2025	17:31	LB137314
	Nickel	3.06	+/-20	U	40.0	P	09/25/2025	17:31	LB137314
	Potassium	918	+/-1000	U	2000	P	09/25/2025	17:31	LB137314
	Selenium	9.64	+/-10	U	20.0	P	09/25/2025	17:31	LB137314
	Silver	1.62	+/-5	U	10.0	P	09/25/2025	17:31	LB137314
	Sodium	868	+/-1000	U	2000	P	09/25/2025	17:31	LB137314
	Thallium	4.38	+/-20	U	40.0	P	09/25/2025	17:31	LB137314
	Vanadium	6.26	+/-20	U	40.0	P	09/25/2025	17:31	LB137314
	Zinc	16.7	+/-20	U	40.0	P	09/25/2025	17:31	LB137314
CCB07	Aluminum	11.3	+/-50	U	100	P	09/25/2025	17:44	LB137314
	Antimony	6.76	+/-25	U	50.0	P	09/25/2025	17:44	LB137314
	Arsenic	5.12	+/-10	U	20.0	P	09/25/2025	17:44	LB137314
	Barium	14.6	+/-50	U	100	P	09/25/2025	17:44	LB137314
	Beryllium	0.56	+/-3	U	6.00	P	09/25/2025	17:44	LB137314
	Cadmium	0.50	+/-3	U	6.00	P	09/25/2025	17:44	LB137314
	Calcium	234	+/-1000	U	2000	P	09/25/2025	17:44	LB137314
	Chromium	2.12	+/-5	U	10.0	P	09/25/2025	17:44	LB137314
	Cobalt	2.26	+/-15	U	30.0	P	09/25/2025	17:44	LB137314
	Copper	4.60	+/-10	U	20.0	P	09/25/2025	17:44	LB137314
	Iron	23.4	+/-50	U	100	P	09/25/2025	17:44	LB137314
	Lead	2.30	+/-6	U	12.0	P	09/25/2025	17:44	LB137314
	Magnesium	244	+/-1000	U	2000	P	09/25/2025	17:44	LB137314
	Manganese	5.94	+/-10	U	20.0	P	09/25/2025	17:44	LB137314
	Nickel	3.06	+/-20	U	40.0	P	09/25/2025	17:44	LB137314
	Potassium	918	+/-1000	U	2000	P	09/25/2025	17:44	LB137314
	Selenium	9.64	+/-10	U	20.0	P	09/25/2025	17:44	LB137314
	Silver	1.62	+/-5	U	10.0	P	09/25/2025	17:44	LB137314
	Sodium	868	+/-1000	U	2000	P	09/25/2025	17:44	LB137314
	Thallium	4.38	+/-20	U	40.0	P	09/25/2025	17:44	LB137314
	Vanadium	6.26	+/-20	U	40.0	P	09/25/2025	17:44	LB137314
	Zinc	16.7	+/-20	U	40.0	P	09/25/2025	17:44	LB137314

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Metals
- 3b -
PREPARATION BLANK SUMMARY

Client: G Environmental **SDG No.:** Q3172

Instrument: CV1

Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB169872BL		**WATER**		**Batch Number:**	**PB169872**		**Prep Date:**	**09/26/2025**	
	Mercury	0.088	<0.2	J	0.20	CV	09/29/2025	12:27	LB137343

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Metals
- 3b -
PREPARATION BLANK SUMMARY

Client: G Environmental **SDG No.:** Q3172

Instrument: P4

Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB169812BL		**WATER**		**Batch Number:**	**PB169812**		**Prep Date:**	**09/24/2025**	
	Aluminum	5.67	<25	U	50.0	P	09/25/2025	13:02	LB137314
	Antimony	3.38	<12.5	U	25.0	P	09/25/2025	13:02	LB137314
	Arsenic	2.56	<5	U	10.0	P	09/25/2025	13:02	LB137314
	Barium	7.28	<25	U	50.0	P	09/25/2025	13:02	LB137314
	Beryllium	0.28	<1.5	U	3.00	P	09/25/2025	13:02	LB137314
	Cadmium	0.25	<1.5	U	3.00	P	09/25/2025	13:02	LB137314
	Calcium	117	<500	U	1000	P	09/25/2025	13:02	LB137314
	Chromium	1.06	<2.5	U	5.00	P	09/25/2025	13:02	LB137314
	Cobalt	1.13	<7.5	U	15.0	P	09/25/2025	13:02	LB137314
	Copper	2.30	<5	U	10.0	P	09/25/2025	13:02	LB137314
	Iron	11.7	<25	U	50.0	P	09/25/2025	13:02	LB137314
	Lead	1.15	<3	U	6.00	P	09/25/2025	13:02	LB137314
	Magnesium	122	<500	U	1000	P	09/25/2025	13:02	LB137314
	Manganese	2.97	<5	U	10.0	P	09/25/2025	13:02	LB137314
	Nickel	1.53	<10	U	20.0	P	09/25/2025	13:02	LB137314
	Potassium	459	<500	U	1000	P	09/25/2025	13:02	LB137314
	Selenium	4.82	<5	U	10.0	P	09/25/2025	13:02	LB137314
	Silver	0.81	<2.5	U	5.00	P	09/25/2025	13:02	LB137314
	Sodium	434	<500	U	1000	P	09/25/2025	13:02	LB137314
	Thallium	2.19	<10	U	20.0	P	09/25/2025	13:02	LB137314
	Vanadium	3.13	<10	U	20.0	P	09/25/2025	13:02	LB137314
	Zinc	8.33	<10	U	20.0	P	09/25/2025	13:02	LB137314

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Metals
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INTERFERENCE CHECK SAMPLE

Client: G Environmental **SDG No.:** Q3172

Contract: GENV01 **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	283000	255000	111	216000	294000	09/25/2025	11:42	LB137314
	Antimony	-3.99			-50	50	09/25/2025	11:42	LB137314
	Arsenic	3.12			-20	20	09/25/2025	11:42	LB137314
	Barium	1.85	6.0	31	-94	106	09/25/2025	11:42	LB137314
	Beryllium	2.29			-6	6	09/25/2025	11:42	LB137314
	Cadmium	1.36	1.0	136	-5	7	09/25/2025	11:42	LB137314
	Calcium	268000	245000	109	208000	282000	09/25/2025	11:42	LB137314
	Chromium	51.7	52.0	99	42	62	09/25/2025	11:42	LB137314
	Cobalt	1.04			-30	30	09/25/2025	11:42	LB137314
	Copper	13.1	2.0	655	-18	22	09/25/2025	11:42	LB137314
	Iron	114000	101000	113	85600	116500	09/25/2025	11:42	LB137314
	Lead	-7.23			-12	12	09/25/2025	11:42	LB137314
	Magnesium	284000	255000	111	216000	294000	09/25/2025	11:42	LB137314
	Manganese	6.88	7.0	98	-13	27	09/25/2025	11:42	LB137314
	Nickel	3.09	2.0	154	-38	42	09/25/2025	11:42	LB137314
	Potassium	81.6			0	0	09/25/2025	11:42	LB137314
	Selenium	10.6			-20	20	09/25/2025	11:42	LB137314
	Silver	-2.79			-10	10	09/25/2025	11:42	LB137314
	Sodium	-1.08			0	0	09/25/2025	11:42	LB137314
	Thallium	0.46			-40	40	09/25/2025	11:42	LB137314
	Vanadium	2.04			-40	40	09/25/2025	11:42	LB137314
	Zinc	1.46			-40	40	09/25/2025	11:42	LB137314
ICSAB01	Aluminum	251000	247000	102	209000	285000	09/25/2025	11:46	LB137314
	Antimony	639	618	103	525	711	09/25/2025	11:46	LB137314
	Arsenic	112	104	108	88.4	120	09/25/2025	11:46	LB137314
	Barium	497	537	93	437	637	09/25/2025	11:46	LB137314
	Beryllium	512	495	103	420	570	09/25/2025	11:46	LB137314
	Cadmium	1030	972	106	826	1120	09/25/2025	11:46	LB137314
	Calcium	237000	235000	101	199000	271000	09/25/2025	11:46	LB137314
	Chromium	576	542	106	460	624	09/25/2025	11:46	LB137314
	Cobalt	514	476	108	404	548	09/25/2025	11:46	LB137314
	Copper	511	511	100	434	588	09/25/2025	11:46	LB137314
	Iron	104000	99300	105	84400	114500	09/25/2025	11:46	LB137314
	Lead	41.9	49.0	86	37	61	09/25/2025	11:46	LB137314
	Magnesium	251000	248000	101	210000	286000	09/25/2025	11:46	LB137314
	Manganese	495	507	98	430	584	09/25/2025	11:46	LB137314
	Nickel	1030	954	108	810	1100	09/25/2025	11:46	LB137314
	Potassium	14.4			0	0	09/25/2025	11:46	LB137314
	Selenium	60.7	46.0	132	26	66	09/25/2025	11:46	LB137314
	Silver	220	201	110	170	232	09/25/2025	11:46	LB137314
	Sodium	35.3			0	0	09/25/2025	11:46	LB137314
	Thallium	115	108	106	68	148	09/25/2025	11:46	LB137314

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INTERFERENCE CHECK SAMPLE

Client: G Environmental **SDG No.:** Q3172

Contract: GENV01 **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	489	491	100	417	565	09/25/2025	11:46	LB137314
	Zinc	1090	952	114	809	1095	09/25/2025	11:46	LB137314

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metals
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MATRIX SPIKE SUMMARY

client: G Environmental **level:** low **sdg no.:** Q3172

contract: GENV01 **lab code:** ACE

matrix: Water **sample id:** Q3168-05 **client id:** TOTES COMP#1MS

Percent Solids for Sample: NA **Spiked ID:** Q3168-05MS **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	ug/L	75 - 125	1520		628		1000	89		P
Antimony	ug/L	75 - 125	385		25.0	U	400	96		P
Arsenic	ug/L	75 - 125	387		10.0	U	400	97		P
Barium	ug/L	75 - 125	108		15.5	J	100	92		P
Beryllium	ug/L	75 - 125	91.7		3.00	U	100	92		P
Cadmium	ug/L	75 - 125	91.9		3.00	U	100	92		P
Calcium	ug/L	75 - 125	31900		27600		500	853		P
Chromium	ug/L	75 - 125	203		1.92	J	200	101		P
Cobalt	ug/L	75 - 125	94.3		15.0	U	100	94		P
Copper	ug/L	75 - 125	157		12.4		150	97		P
Iron	ug/L	75 - 125	3190		1670		1500	102		P
Lead	ug/L	75 - 125	466		12.9		500	91		P
Magnesium	ug/L	75 - 125	2020		1000		1000	102		P
Manganese	ug/L	75 - 125	143		46.1		100	97		P
Nickel	ug/L	75 - 125	236		1.67	J	250	94		P
Potassium	ug/L	75 - 125	7220		1940		5000	106		P
Selenium	ug/L	75 - 125	960		10.0	U	1000	96		P
Silver	ug/L	75 - 125	33.6		5.00	U	37.5	90		P
Sodium	ug/L	75 - 125	5960		3870		1500	139	N	P
Thallium	ug/L	75 - 125	988		20.0	U	1000	99		P
Vanadium	ug/L	75 - 125	144		20.0	U	150	96		P
Zinc	ug/L	75 - 125	503		355		100	148	N	P

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metals
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MATRIX SPIKE DUPLICATE SUMMARY

client: G Environmental **level:** low **sdg no.:** Q3172

contract: GENV01 **lab code:** ACE

matrix: Water **sample id:** Q3168-05 **client id:** TOTES COMP#1MSD

Percent Solids for Sample: NA **Spiked ID:** Q3168-05MSD **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	ug/L	75 - 125	1480		628		1000	85		P
Antimony	ug/L	75 - 125	395		25.0	U	400	99		P
Arsenic	ug/L	75 - 125	377		10.0	U	400	94		P
Barium	ug/L	75 - 125	108		15.5	J	100	93		P
Beryllium	ug/L	75 - 125	89.8		3.00	U	100	90		P
Cadmium	ug/L	75 - 125	89.0		3.00	U	100	89		P
Calcium	ug/L	75 - 125	30300		27600		500	536		P
Chromium	ug/L	75 - 125	196		1.92	J	200	97		P
Cobalt	ug/L	75 - 125	91.5		15.0	U	100	92		P
Copper	ug/L	75 - 125	152		12.4		150	93		P
Iron	ug/L	75 - 125	3020		1670		1500	90		P
Lead	ug/L	75 - 125	451		12.9		500	88		P
Magnesium	ug/L	75 - 125	1970		1000		1000	97		P
Manganese	ug/L	75 - 125	141		46.1		100	95		P
Nickel	ug/L	75 - 125	228		1.67	J	250	91		P
Potassium	ug/L	75 - 125	6900		1940		5000	99		P
Selenium	ug/L	75 - 125	935		10.0	U	1000	94		P
Silver	ug/L	75 - 125	31.7		5.00	U	37.5	84		P
Sodium	ug/L	75 - 125	5840		3870		1500	131	N	P
Thallium	ug/L	75 - 125	970		20.0	U	1000	97		P
Vanadium	ug/L	75 - 125	145		20.0	U	150	97		P
Zinc	ug/L	75 - 125	468		355		100	113		P

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metals
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MATRIX SPIKE SUMMARY

client: G Environmental **level:** low **sdg no.:** Q3172

contract: GENV01 **lab code:** ACE

matrix: Water **sample id:** Q3205-01 **client id:** TRE-25-0106MS

Percent Solids for Sample: NA **Spiked ID:** Q3205-01MS **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/L	75 - 125	3.87		0.085	J	4.0	95		CV

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metals
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MATRIX SPIKE DUPLICATE SUMMARY

client: G Environmental **level:** low **sdg no.:** Q3172

contract: GENV01 **lab code:** ACE

matrix: Water **sample id:** Q3205-01 **client id:** TRE-25-0106MSD

Percent Solids for Sample: NA **Spiked ID:** Q3205-01MSD **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/L	75 - 125	4.02		0.085	J	4.0	98		CV

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Metals
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POST DIGEST SPIKE SUMMARY

Client: G Environmental **SDG No.:** Q3172

Contract: GENV01 **Lab Code:** ACE

Matrix: Water **Level:** LOW **Client ID:** TOTES COMP#1A

Sample ID: Q3168-05 **Spiked ID:** Q3168-05A

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Sodium	ug/L	75 - 125	5390		3870		1500	101		P
Zinc	ug/L	75 - 125	448		355		100	93		P

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Metals

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DUPLICATE SAMPLE SUMMARY

Client: G Environmental **Level:** LOW **SDG No.:** Q3172

Contract: GENV01 **Lab Code:** ACE

Matrix: Water **Sample ID:** Q3168-05 **Client ID:** TOTES COMP#1DUP

Percent Solids for Sample: NA **Duplicate ID** Q3168-05DUP **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/L	20	628		576		9		P
Antimony	ug/L	20	25.0	U	25.0	U			P
Arsenic	ug/L	20	10.0	U	10.0	U			P
Barium	ug/L	20	15.5	J	19.1	J	21		P
Beryllium	ug/L	20	3.00	U	3.00	U			P
Cadmium	ug/L	20	3.00	U	3.00	U			P
Calcium	ug/L	20	27600		31500		13		P
Chromium	ug/L	20	1.92	J	1.86	J	3		P
Cobalt	ug/L	20	15.0	U	15.0	U			P
Copper	ug/L	20	12.4		12.1		2		P
Iron	ug/L	20	1670		1740		4		P
Lead	ug/L	20	12.9		13.7		6		P
Magnesium	ug/L	20	1000		1130		12		P
Manganese	ug/L	20	46.1		52.1		12		P
Nickel	ug/L	20	1.67	J	1.63	J	2		P
Potassium	ug/L	20	1940		2190		12		P
Selenium	ug/L	20	10.0	U	10.0	U			P
Silver	ug/L	20	5.00	U	5.00	U			P
Sodium	ug/L	20	3870		4520		15		P
Thallium	ug/L	20	20.0	U	20.0	U			P
Vanadium	ug/L	20	20.0	U	20.0	U			P
Zinc	ug/L	20	355		396		11		P

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

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DUPLICATE SAMPLE SUMMARY

Client: G Environmental **Level:** LOW **SDG No.:** Q3172

Contract: GENV01 **Lab Code:** ACE

Matrix: Water **Sample ID:** Q3168-05MS **Client ID:** TOTES COMP#1MSD

Percent Solids for Sample: NA **Duplicate ID** Q3168-05MSD **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/L	20	1520		1480		3		P
Antimony	ug/L	20	385		395		3		P
Arsenic	ug/L	20	387		377		3		P
Barium	ug/L	20	108		108		0		P
Beryllium	ug/L	20	91.7		89.8		2		P
Cadmium	ug/L	20	91.9		89.0		3		P
Calcium	ug/L	20	31900		30300		5		P
Chromium	ug/L	20	203		196		4		P
Cobalt	ug/L	20	94.3		91.5		3		P
Copper	ug/L	20	157		152		3		P
Iron	ug/L	20	3190		3020		5		P
Lead	ug/L	20	466		451		3		P
Magnesium	ug/L	20	2020		1970		3		P
Manganese	ug/L	20	143		141		1		P
Nickel	ug/L	20	236		228		3		P
Potassium	ug/L	20	7220		6900		5		P
Selenium	ug/L	20	960		935		3		P
Silver	ug/L	20	33.6		31.7		6		P
Sodium	ug/L	20	5960		5840		2		P
Thallium	ug/L	20	988		970		2		P
Vanadium	ug/L	20	144		145		1		P
Zinc	ug/L	20	503		468		7		P

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

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DUPLICATE SAMPLE SUMMARY

Client: G Environmental **Level:** LOW **SDG No.:** Q3172

Contract: GENV01 **Lab Code:** ACE

Matrix: Water **Sample ID:** Q3205-01 **Client ID:** TRE-25-0106DUP

Percent Solids for Sample: NA **Duplicate ID** Q3205-01DUP **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/L	20	0.085	J	0.20	U	200.0		CV

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

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DUPLICATE SAMPLE SUMMARY

Client: G Environmental **Level:** LOW **SDG No.:** Q3172

Contract: GENV01 **Lab Code:** ACE

Matrix: Water **Sample ID:** Q3205-01MS **Client ID:** TRE-25-0106MSD

Percent Solids for Sample: NA **Duplicate ID** Q3205-01MSD **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/L	20	3.87		4.02		4		CV

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

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LABORATORY CONTROL SAMPLE SUMMARY

Client: G Environmental **SDG No.:** Q3172

Contract: GENV01 **Lab Code:** ACE

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB169812BS							
Aluminum	ug/L	1000	933		93	80 - 120	P
Antimony	ug/L	400	391		98	80 - 120	P
Arsenic	ug/L	400	376		94	80 - 120	P
Barium	ug/L	100	87.3		87	80 - 120	P
Beryllium	ug/L	100	94.6		95	80 - 120	P
Cadmium	ug/L	100	91.9		92	80 - 120	P
Calcium	ug/L	500	469	J	94	80 - 120	P
Chromium	ug/L	200	193		96	80 - 120	P
Cobalt	ug/L	100	92.3		92	80 - 120	P
Copper	ug/L	150	146		97	80 - 120	P
Iron	ug/L	1500	1440		96	80 - 120	P
Lead	ug/L	500	453		91	80 - 120	P
Magnesium	ug/L	1000	931	J	93	80 - 120	P
Manganese	ug/L	100	91.9		92	80 - 120	P
Nickel	ug/L	250	232		93	80 - 120	P
Potassium	ug/L	5000	4960		99	80 - 120	P
Selenium	ug/L	1000	967		97	80 - 120	P
Silver	ug/L	37.5	34.4		92	80 - 120	P
Sodium	ug/L	1500	1400		93	80 - 120	P
Thallium	ug/L	1000	954		95	80 - 120	P
Vanadium	ug/L	150	139		93	80 - 120	P
Zinc	ug/L	100	98.6		99	80 - 120	P

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LABORATORY CONTROL SAMPLE SUMMARY

Client: G Environmental **SDG No.:** Q3172

Contract: GENV01 **Lab Code:** ACE

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB169872BS							
Mercury	ug/L	4.0	3.59		90	80 - 120	CV

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ICP SERIAL DILUTIONS

SAMPLE NO.

TOTES COMP#1L

Lab Name: Alliance **Contract:** GENV01

Lab Code: ACE **Lb No.:** lb137314 **Lab Sample ID :** Q3168-05L **SDG No.:** Q3172

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

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Aluminum	628		695		11		P
Antimony	25.0	U	125	U			P
Arsenic	10.0	U	50.0	U			P
Barium	15.5	J	250	U	100.0		P
Beryllium	3.00	U	15.0	U			P
Cadmium	3.00	U	15.0	U			P
Calcium	27600		30100		9		P
Chromium	1.92	J	25.0	U	100.0		P
Cobalt	15.0	U	75.0	U			P
Copper	12.4		11.7	J	6		P
Iron	1670		1840		10		P
Lead	12.9		9.54	J	26		P
Magnesium	1000		1120	J	12		P
Manganese	46.1		48.6	J	5		P
Nickel	1.67	J	100	U	100.0		P
Potassium	1940		2930	J	51		P
Selenium	10.0	U	50.0	U			P
Silver	5.00	U	25.0	U			P
Sodium	3870		5350		38		P
Thallium	20.0	U	100	U			P
Vanadium	20.0	U	100	U			P
Zinc	355		369		4		P

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ICP SERIAL DILUTIONS

SAMPLE NO.

TRE-25-0106L

Lab Name: Alliance **Contract:** GENV01

Lab Code: ACE **Lb No.:** lb137343 **Lab Sample ID :** Q3205-01L **SDG No.:** Q3172

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

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Mercury	0.085	J	1.00	U	100.0		CV

METAL PREPARATION & INSTRUMENT DATA

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ICP INTERELEMENT CORRECTION FACTORS

Client: G Environmental **SDG No.:** Q3172

Contract: GENV01 **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

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ICP INTERELEMENT CORRECTION FACTORS

Client: G Environmental **SDG No.:** Q3172

Contract: GENV01 **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

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Metals
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ICP INTERELEMENT CORRECTION FACTORS

Client: G Environmental **SDG No.:** Q3172

Contract: GENV01 **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

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Metals
- 11 -
ICP INTERELEMENT CORRECTION FACTORS

Client: G Environmental **SDG No.:** Q3172

Contract: GENV01 **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

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Metals
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ICP INTERELEMENT CORRECTION FACTORS

Client: G Environmental **SDG No.:** Q3172

Contract: GENV01 **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

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Metals
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SAMPLE PREPARATION SUMMARY

Client: G Environmental **SDG No.:** Q3172

Contract: GENV01 **Lab Code:** ACE **Method:**

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(mL)	Final Sample Volume (mL)	Percent Solids
Batch Number:	**PB169812**						
PB169812BL	PB169812BL	MB	WATER	09/24/2025	50.0	25.0	
PB169812BS	PB169812BS	LCS	WATER	09/24/2025	50.0	25.0	
Q3168-05DUP	TOTES COMP#1DUP	DUP	WATER	09/24/2025	50.0	25.0	
Q3168-05MS	TOTES COMP#1MS	MS	WATER	09/24/2025	50.0	25.0	
Q3168-05MSD	TOTES COMP#1MSD	MSD	WATER	09/24/2025	50.0	25.0	
Q3172-01	FW7D	SAM	WATER	09/24/2025	50.0	25.0	
Q3172-02	FW6D	SAM	WATER	09/24/2025	50.0	25.0	

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SAMPLE PREPARATION SUMMARY

Client: G Environmental **SDG No.:** Q3172

Contract: GENV01 **Lab Code:** ACE **Method:**

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(mL)	Final Sample Volume (mL)	Percent Solids
Batch Number:	**PB169872**						
PB169872BL	PB169872BL	MB	WATER	09/26/2025	30.0	30.0	
PB169872BS	PB169872BS	LCS	WATER	09/26/2025	30.0	30.0	
Q3172-01	FW7D	SAM	WATER	09/26/2025	30.0	30.0	
Q3172-02	FW6D	SAM	WATER	09/26/2025	30.0	30.0	
Q3205-01DUP	TRE-25-0106DUP	DUP	WATER	09/26/2025	30.0	30.0	
Q3205-01MS	TRE-25-0106MS	MS	WATER	09/26/2025	30.0	30.0	
Q3205-01MSD	TRE-25-0106MSD	MSD	WATER	09/26/2025	30.0	30.0	

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ANALYSIS RUN LOG

Client: G Environmental **Contract:** GENV01

Lab code: ACE **Sdg no.:** Q3172

Instrument id number: **Method:** **Run number:** LB137314

Start date: 09/25/2025 **End date:** 09/25/2025

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1055	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	1100	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	1104	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	1108	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	1112	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	1116	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	1120	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	1129	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	1133	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	1138	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	1142	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	1146	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	1212	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	1217	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
PB169812BL	PB169812BL	1	1302	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
PB169812BS	PB169812BS	1	1307	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	1323	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	1327	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q3172-01	FW7D	1	1417	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	1421	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	1430	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q3172-02	FW6D	1	1435	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q3168-05DUP	TOTES COMP#1DUP	1	1443	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q3168-05L	TOTES COMP#1L	5	1447	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q3168-05MS	TOTES COMP#1MS	1	1452	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q3168-05MSD	TOTES COMP#1MSD	1	1456	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q3168-05A	TOTES COMP#1A	1	1500	Na,Zn
CCV04	CCV04	1	1516	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	1520	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	1616	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	1620	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	1727	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	1731	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	1740	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCB07	CCB07	1	1744	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn

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metals
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ANALYSIS RUN LOG

Client: G Environmental **Contract:** GENV01

Lab code: ACE **Sdg no.:** Q3172

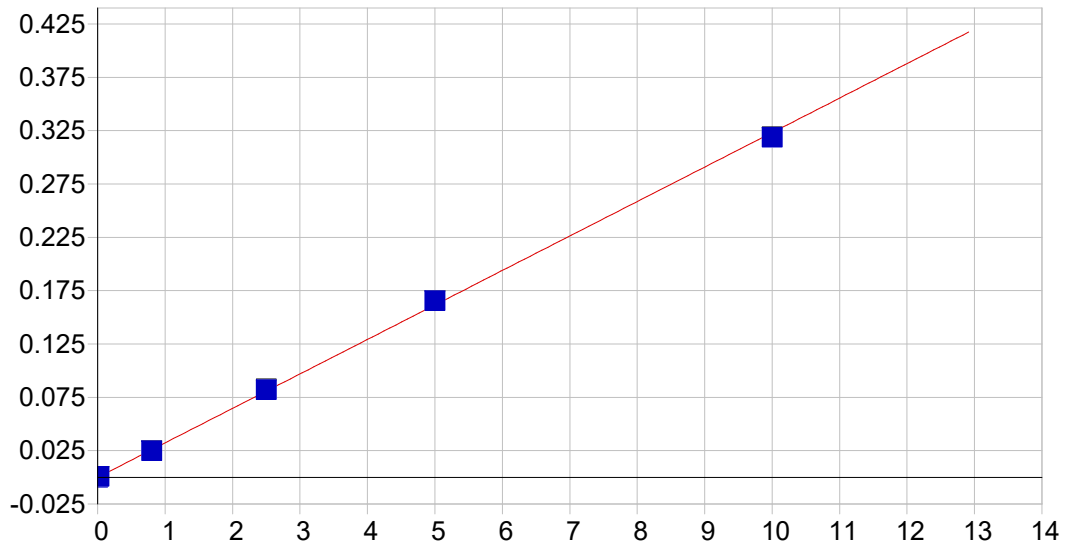
Instrument id number: **Method:** **Run number:** LB137343

Start date: 09/29/2025 **End date:** 09/29/2025

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1029	HG
S0.2	S0.2	1	1031	HG
S2.5	S2.5	1	1034	HG
S5	S5	1	1036	HG
S7.5	S7.5	1	1038	HG
S10	S10	1	1041	HG
ICV50	ICV50	1	1044	HG
ICB50	ICB50	1	1046	HG
CCV51	CCV51	1	1049	HG
CCB51	CCB51	1	1051	HG
CRA	CRA	1	1056	HG
CCV52	CCV52	1	1122	HG
CCB52	CCB52	1	1124	HG
CCV53	CCV53	1	1151	HG
CCB53	CCB53	1	1153	HG
CCV54	CCV54	1	1218	HG
CCB54	CCB54	1	1220	HG
PB169872BL	PB169872BL	1	1227	HG
PB169872BS	PB169872BS	1	1230	HG
Q3172-01	FW7D	1	1237	HG
Q3172-02	FW6D	1	1240	HG
Q3205-01DUP	TRE-25-0106DUP	1	1244	HG
Q3205-01MS	TRE-25-0106MS	1	1251	HG
CCV55	CCV55	1	1253	HG
CCB55	CCB55	1	1256	HG
Q3205-01MSD	TRE-25-0106MSD	1	1258	HG
Q3205-01L	TRE-25-0106L	5	1317	HG
CCV56	CCV56	1	1322	HG
CCB56	CCB56	1	1324	HG
CCV57	CCV57	1	1336	HG
CCB57	CCB57	1	1338	HG

METAL
RAW DATA

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314



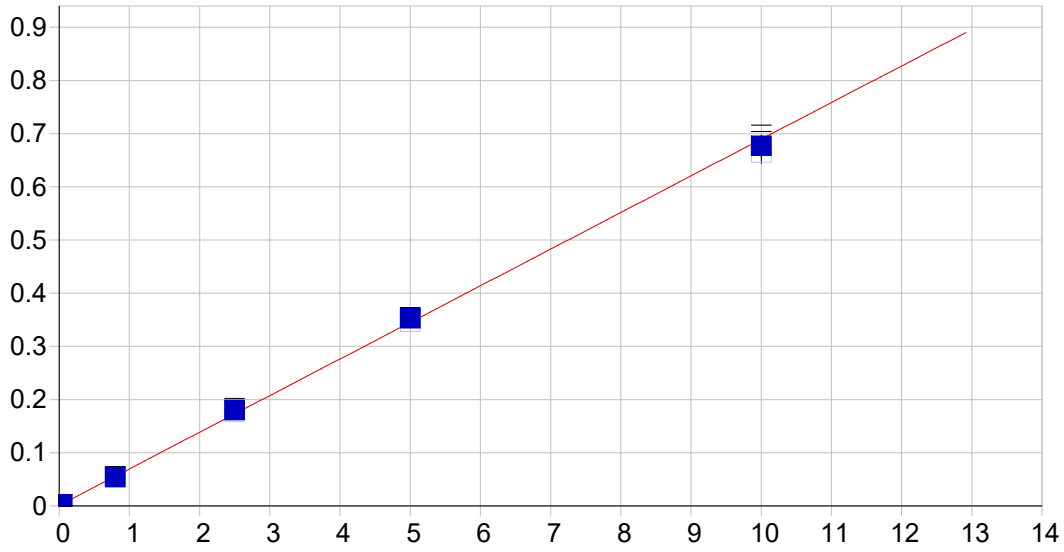
As 189.042 {479}

Date of Fit:	9/25/2025 15:42:31	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000059	Re-Slope:	1.000000
A1 (Gain):	0.032327	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999796	Status:	OK.
Std Error of Est:	0.000015		
Predicted MDL:	0.003207		
Predicted MQL:	0.010689		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00006	.000	1
S1	.02000	.02308	.003	15.4	.00068	.000	1
S3	2.5000	2.5419	.042	1.68	.08203	.001	1
S4	5.0000	5.1232	.123	2.46	.16539	.000	1
S5	10.000	9.8659	-.134	-1.34	.31854	.000	1
S2	.80000	.76590	-.034	-4.26	.02467	.000	1

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314



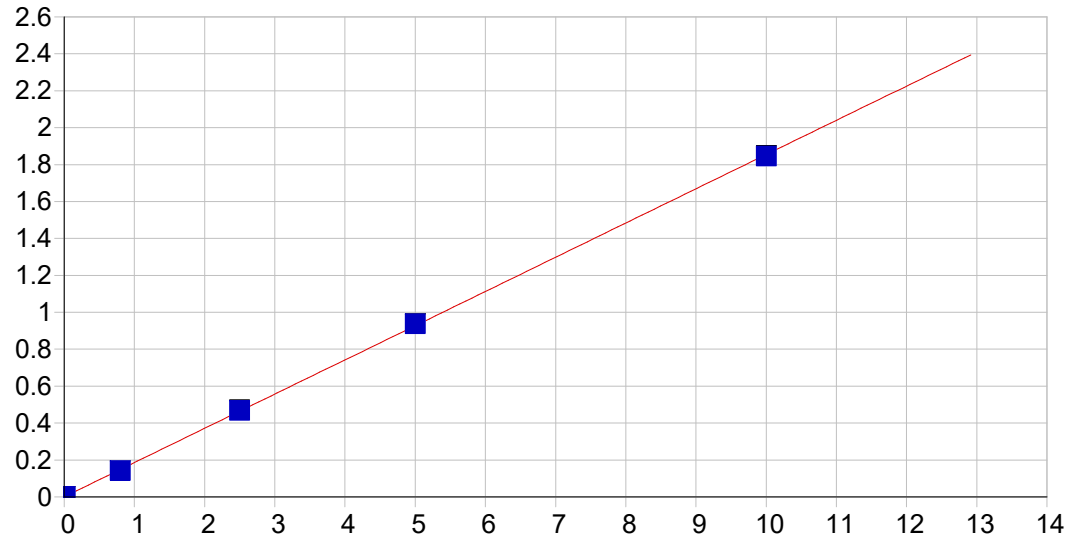
Tl 190.856 {477}

Date of Fit:	9/25/2025 15:42:31	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000740	Re-Slope:	1.000000
A1 (Gain):	0.068878	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999691	Status:	OK.
Std Error of Est:	0.000056		
Predicted MDL:	0.002511		
Predicted MQL:	0.008368		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00074	.000	1
S1	.04000	.03932	-.001	-1.70	.00327	.000	1
S3	2.5000	2.6041	.104	4.17	.17697	.003	1
S4	5.0000	5.1066	.107	2.13	.34619	.002	1
S5	10.000	9.8180	-.182	-1.82	.66442	.021	1
S2	.80000	.77184	-.028	-3.52	.05290	.001	1

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314



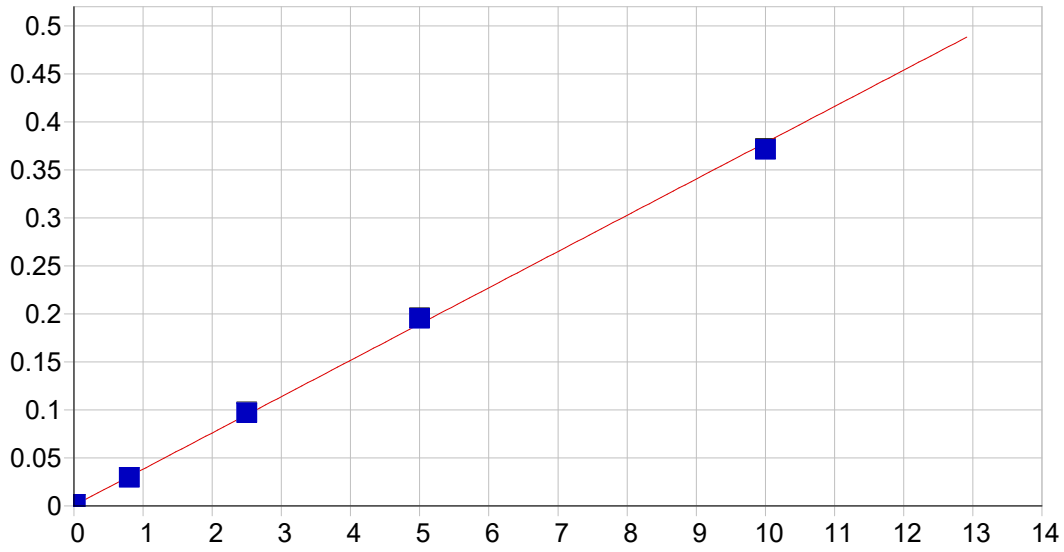
Pb 220.353 {453}

Date of Fit:	9/25/2025 15:42:31	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000562	Re-Slope:	1.000000
A1 (Gain):	0.185378	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999918	Status:	OK.
Std Error of Est:	0.000043		
Predicted MDL:	0.001502		
Predicted MQL:	0.005007		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00056	.000	1
S1	.01200	.01065	-.001	-11.3	.00249	.000	1
S3	2.5000	2.5259	.026	1.04	.46830	.002	1
S4	5.0000	5.0561	.056	1.12	.93682	.002	1
S5	10.000	9.9567	-.043	-.433	1.8443	.003	1
S2	.80000	.76260	-.037	-4.68	.14177	.001	1

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314



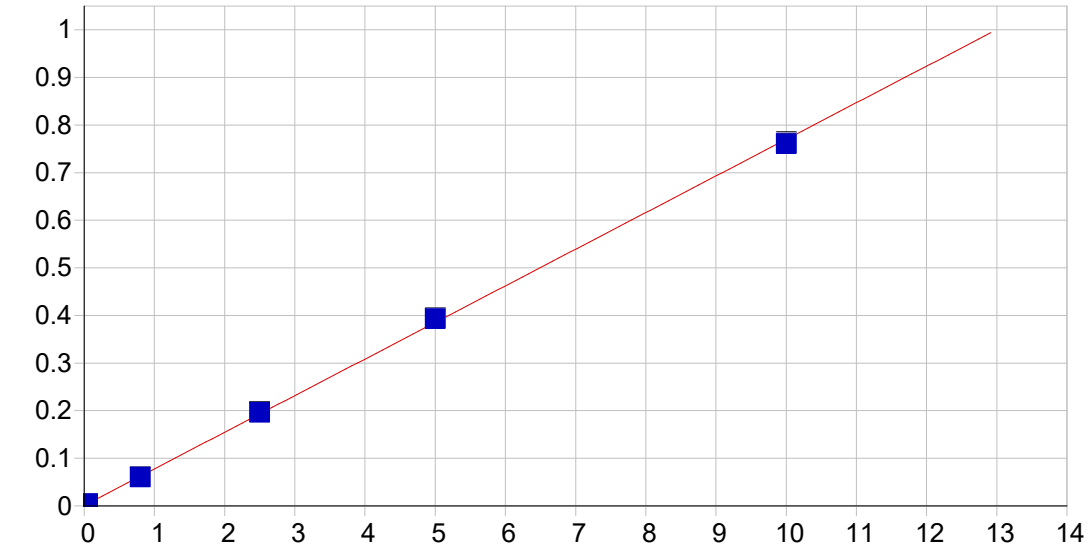
Se 196.090 {472}

Date of Fit:	9/25/2025 15:42:31	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000505	Re-Slope:	1.000000
A1 (Gain):	0.037780	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999704	Status:	OK.
Std Error of Est:	0.000022		
Predicted MDL:	0.003649		
Predicted MQL:	0.012163		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00051	.000	1
S1	.02000	.02283	.003	14.1	.00137	.000	1
S3	2.5000	2.5542	.054	2.17	.09698	.001	1
S4	5.0000	5.1553	.155	3.11	.19522	.001	1
S5	10.000	9.8169	-.183	-1.83	.37128	.001	1
S2	.80000	.77068	-.029	-3.66	.02961	.000	1

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314



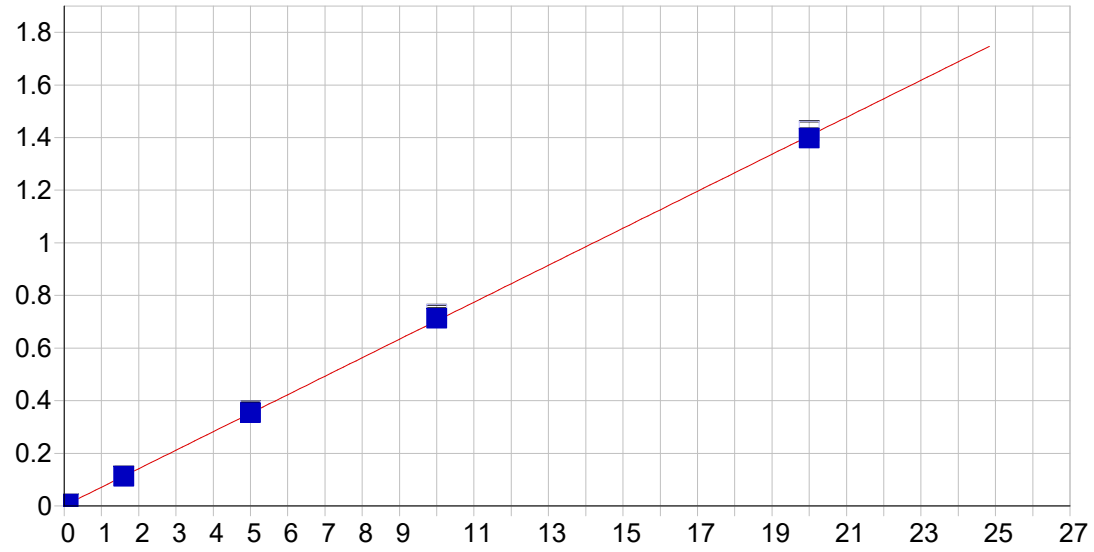
Sb 206.833 {463}

Date of Fit:	9/25/2025 15:42:31	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000821	Re-Slope:	1.000000
A1 (Gain):	0.076913	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999858	Status:	OK.
Std Error of Est:	0.000048		
Predicted MDL:	0.002309		
Predicted MQL:	0.007695		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00082	.000	1
S1	.05000	.05040	.000	.801	.00471	.000	1
S3	2.5000	2.5427	.043	1.71	.19691	.001	1
S4	5.0000	5.1032	.103	2.06	.39437	.001	1
S5	10.000	9.8816	-.118	-1.18	.76294	.002	1
S2	.80000	.77212	-.028	-3.49	.06037	.000	1

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314



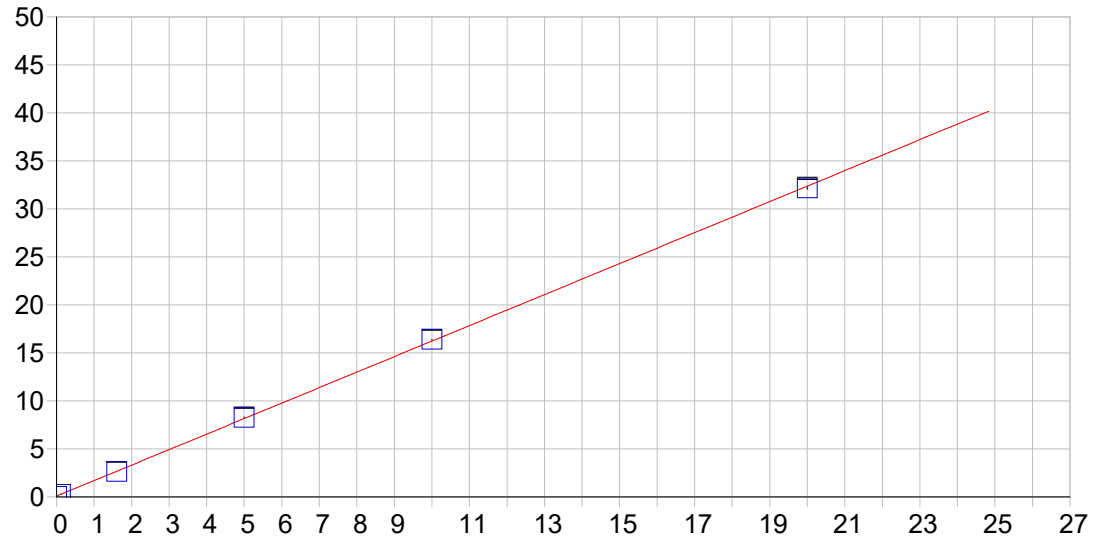
Al 396.152 { 85}

Date of Fit:	9/25/2025 15:42:31	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000837	Re-Slope:	1.000000
A1 (Gain):	0.070307	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999959	Status:	OK.
Std Error of Est:	0.000048		
Predicted MDL:	0.014212		
Predicted MQL:	0.047372		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00084	.000	1
S1	.10000	.09872	-.001	-1.28	.00832	.001	1
S3	5.0000	5.0295	.029	.590	.36127	.001	1
S4	10.000	10.132	.132	1.32	.72682	.002	1
S5	20.000	19.861	-.139	-.697	1.4245	.002	1
S2	1.6000	1.5794	-.021	-1.29	.11406	.001	1

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314



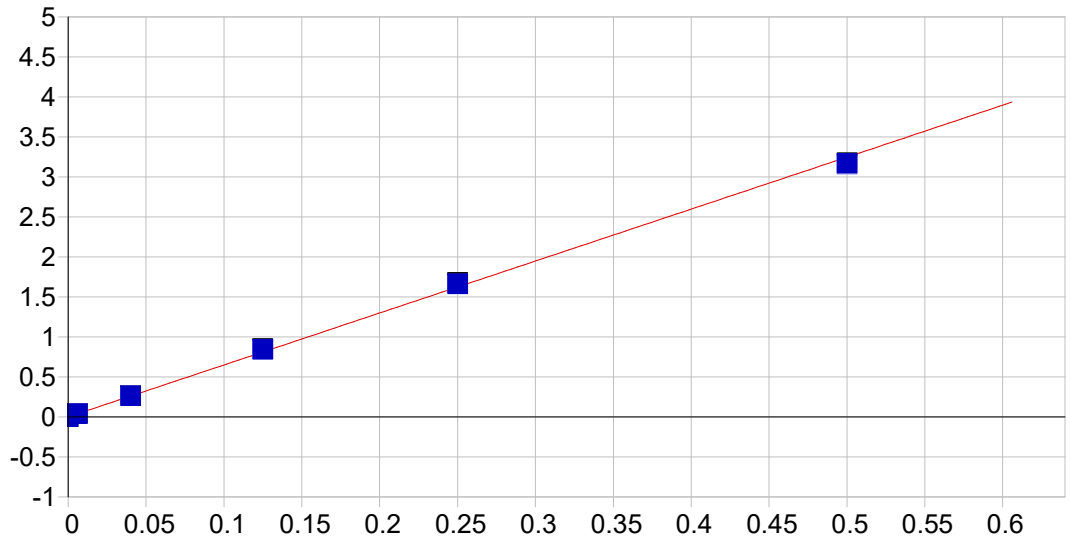
Ba 493.409 { 68}

Date of Fit:	9/25/2025 15:42:31	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.084287	Re-Slope:	1.000000
A1 (Gain):	1.614462	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999955	Status:	OK.
Std Error of Est:	0.001141		
Predicted MDL:	0.001578		
Predicted MQL:	0.005260		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.08428	.002	1
S1	.10000	.10446	.004	4.46	.25293	.001	1
S3	5.0000	5.0599	.060	1.20	8.2532	.066	1
S4	10.000	10.100	.100	.998	16.390	.045	1
S5	20.000	19.864	-.136	-.679	32.154	.125	1
S2	1.6000	1.5717	-.028	-1.77	2.6217	.021	1

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314



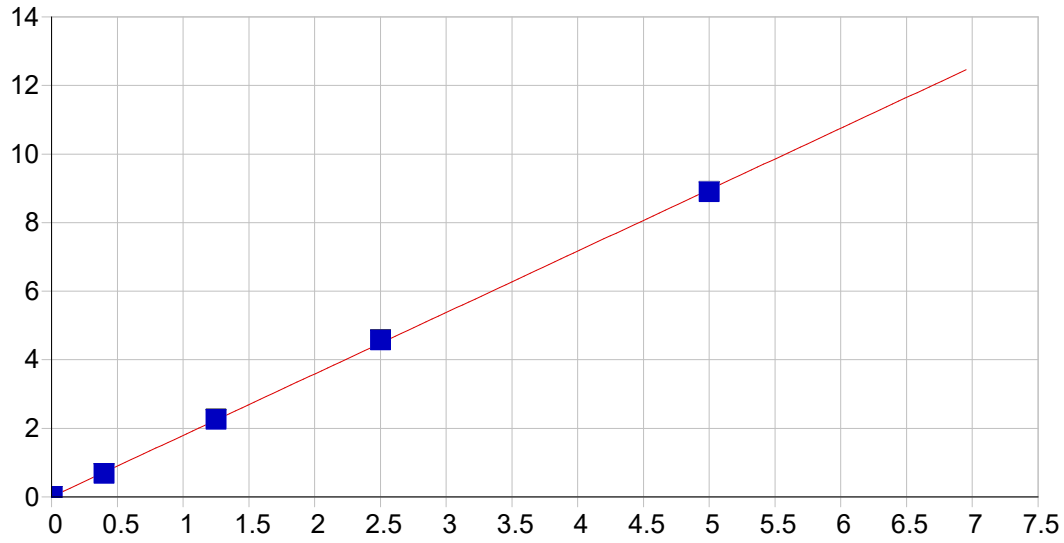
Be 234.861 {144}

Date of Fit:	9/25/2025 15:42:31	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000015	Re-Slope:	1.000000
A1 (Gain):	6.493958	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999611	Status:	OK.
Std Error of Est:	0.000519		
Predicted MDL:	0.000097		
Predicted MQL:	0.000323		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00001	.001	1
S1	.00600	.00646	.000	7.74	.04170	.000	1
S3	.12500	.12996	.005	3.96	.84031	.007	1
S4	.25000	.25635	.006	2.54	1.6575	.014	1
S5	.50000	.48762	-.012	-2.48	3.1520	.009	1
S2	.04000	.04061	.001	1.53	.26259	.002	1

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314



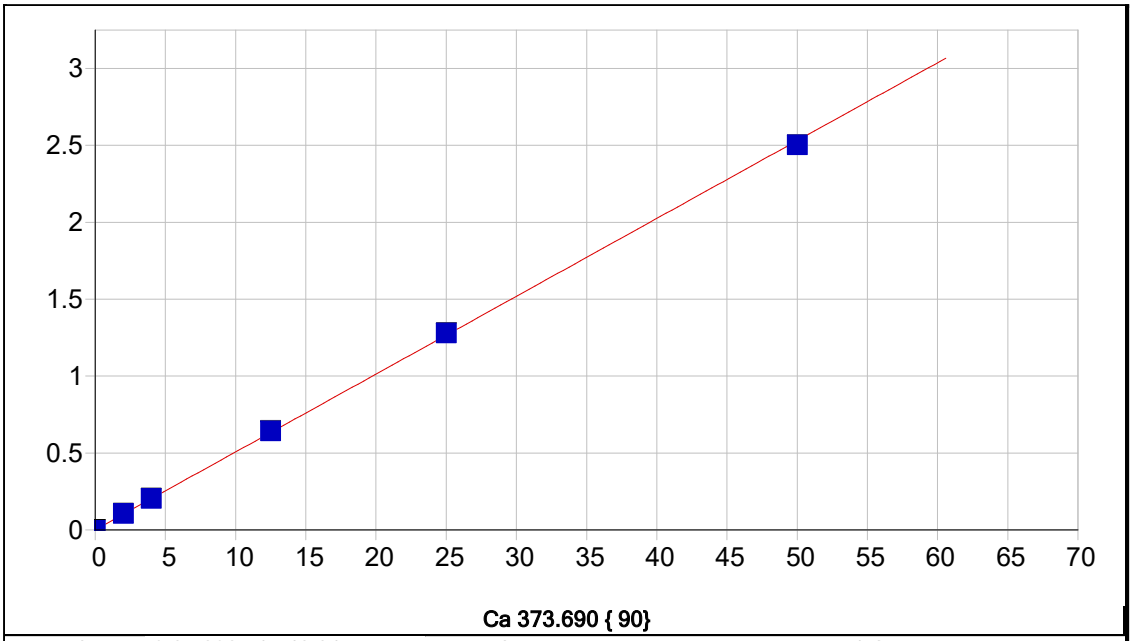
Cd 226.502 {449}

Date of Fit:	9/25/2025 15:42:31	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002096	Re-Slope:	1.000000
A1 (Gain):	1.791862	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999856	Status:	OK.
Std Error of Est:	0.000276		
Predicted MDL:	0.000121		
Predicted MQL:	0.000403		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00210	.000	1
S1	.00600	.00593	-.000	-1.11	.01276	.000	1
S3	1.2500	1.2599	.010	.793	2.2612	.011	1
S4	2.5000	2.5492	.049	1.97	4.5729	.010	1
S5	5.0000	4.9640	-.036	-.719	8.9029	.007	1
S2	.40000	.37691	-.023	-5.77	.67794	.003	1

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314



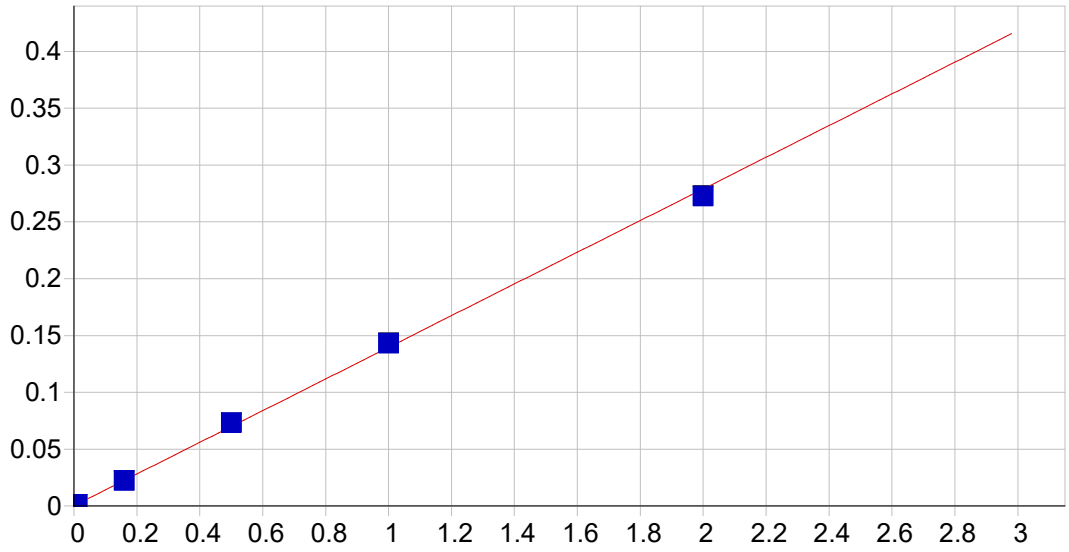
Ca 373.690 { 90}

Date of Fit:	9/25/2025 15:42:31	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000791	Re-Slope:	1.000000
A1 (Gain):	0.050609	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999916	Status:	OK.
Std Error of Est:	0.000348		
Predicted MDL:	0.015617		
Predicted MQL:	0.052057		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00012	-.000	.000	.00078	.000	1
S2	4.0000	4.0027	.003	.067	.20336	.002	1
S3	12.500	12.669	.169	1.35	.64196	.004	1
S4	25.000	25.284	.284	1.14	1.2804	.002	1
S5	50.000	49.452	-.548	-1.10	2.5035	.002	1
S1	2.0000	2.0922	.092	4.61	.10668	.001	1

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314



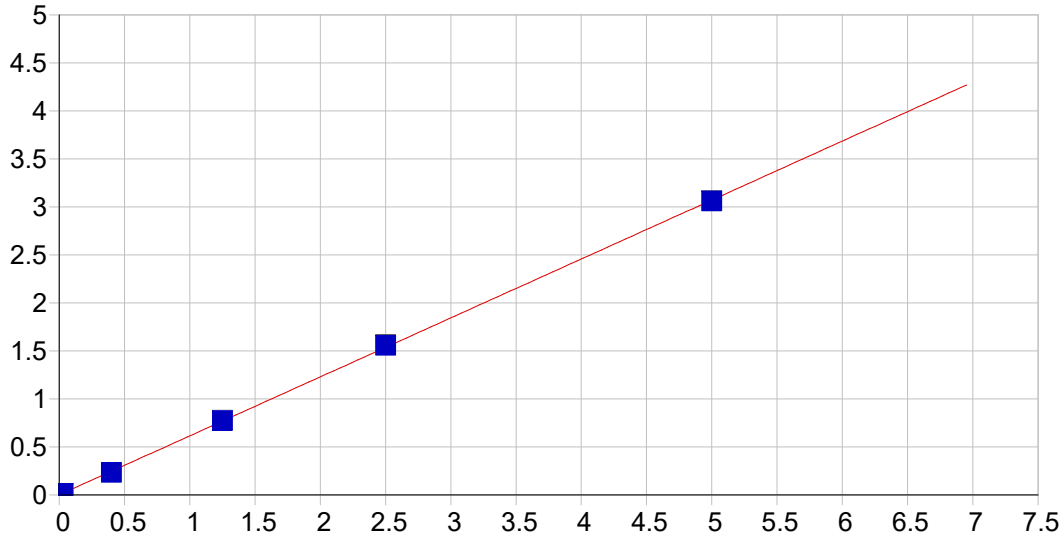
Cr 267.716 {126}

Date of Fit:	9/25/2025 15:42:31	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000203	Re-Slope:	1.000000
A1 (Gain):	0.139420	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999615	Status:	OK.
Std Error of Est:	0.000029		
Predicted MDL:	0.000502		
Predicted MQL:	0.001673		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00020	.000	1
S1	.01000	.01024	.000	2.40	.00163	.000	1
S3	.50000	.52303	.023	4.61	.07318	.000	1
S4	1.0000	1.0256	.026	2.56	.14330	.000	1
S5	2.0000	1.9536	-.046	-2.32	.27280	.000	1
S2	.16000	.15755	-.002	-1.53	.02219	.000	1

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314



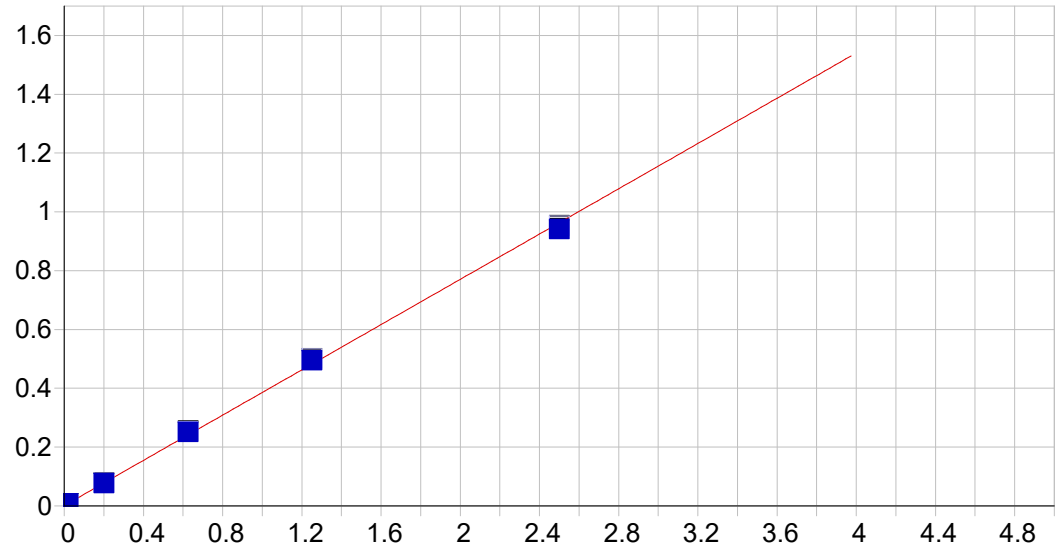
Co 228.616 {448}

Date of Fit:	9/25/2025 15:42:31	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000864	Re-Slope:	1.000000
A1 (Gain):	0.614155	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999909	Status:	OK.
Std Error of Est:	0.000169		
Predicted MDL:	0.000310		
Predicted MQL:	0.001033		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00086	.000	1
S1	.03000	.02996	-.000	-.145	.01918	.000	1
S3	1.2500	1.2574	.007	.594	.77442	.003	1
S4	2.5000	2.5341	.034	1.37	1.5598	.002	1
S5	5.0000	4.9793	-.021	-.413	3.0642	.003	1
S2	.40000	.37914	-.021	-5.21	.23413	.001	1

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314



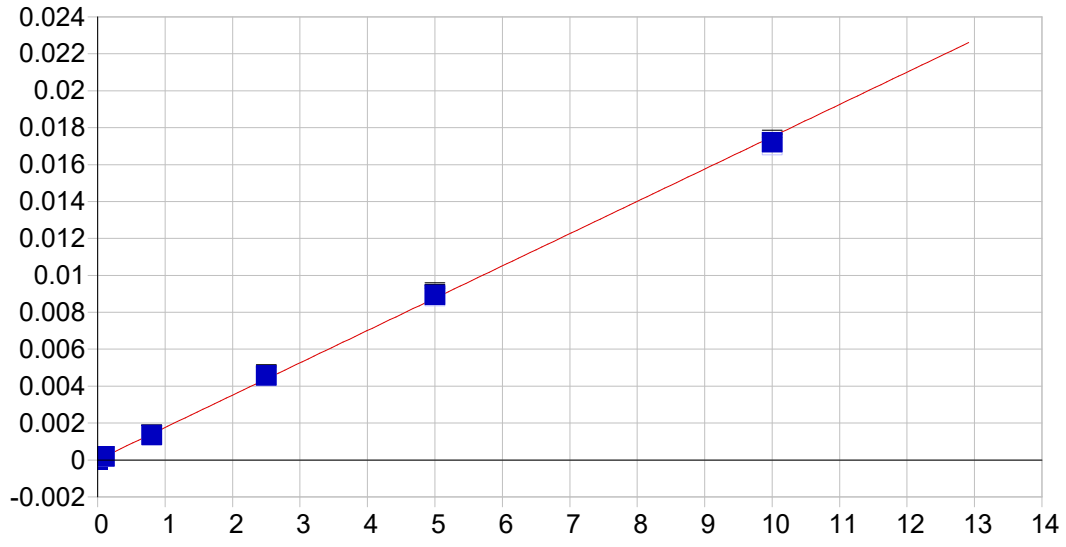
Cu 224.700 {450}

Date of Fit:	9/25/2025 15:42:31	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001007	Re-Slope:	1.000000
A1 (Gain):	0.384874	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999656	Status:	OK.
Std Error of Est:	0.000120		
Predicted MDL:	0.000647		
Predicted MQL:	0.002157		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00101	.000	1
S1	.02000	.02092	.001	4.62	.00918	.000	1
S3	.62500	.64972	.025	3.96	.25395	.001	1
S4	1.2500	1.2831	.033	2.65	.50060	.001	1
S5	2.5000	2.4422	-.058	-2.31	.95247	.002	1
S2	.20000	.19902	-.001	-.490	.07853	.000	1

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314



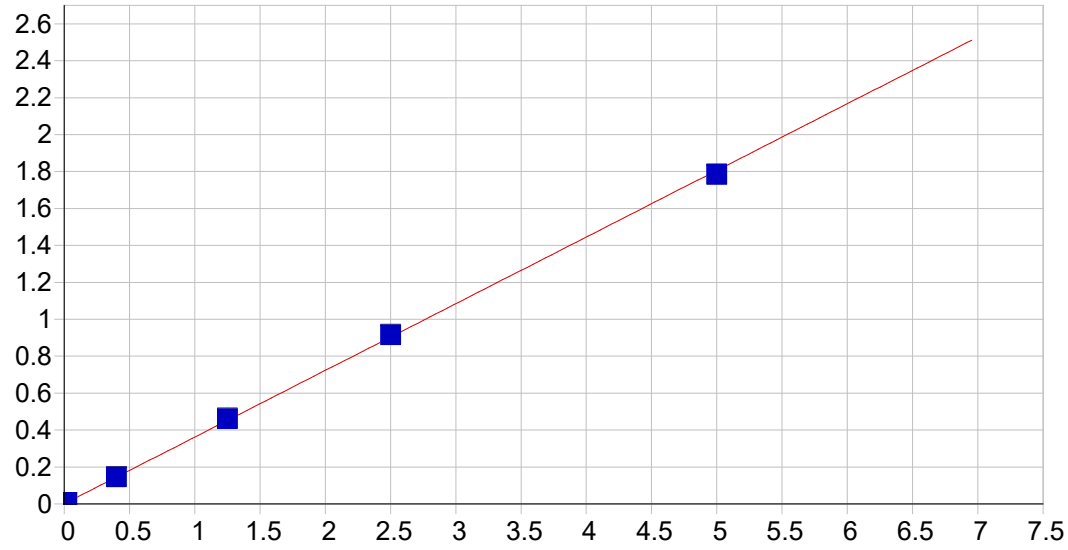
Fe 240.488 {140}

Date of Fit:	9/25/2025 15:42:31	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000013	Re-Slope:	1.000000
A1 (Gain):	0.001750	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999691	Status:	OK.
Std Error of Est:	0.000002		
Predicted MDL:	0.011807		
Predicted MQL:	0.039356		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00001	.000	1
S1	.10000	.09775	-.002	-2.25	.00018	.000	1
S3	2.5000	2.6057	.106	4.23	.00453	.000	1
S4	5.0000	5.1047	.105	2.09	.00887	.000	1
S5	10.000	9.8256	-.174	-1.74	.01706	.000	1
S2	.80000	.76633	-.034	-4.21	.00134	.000	1

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314



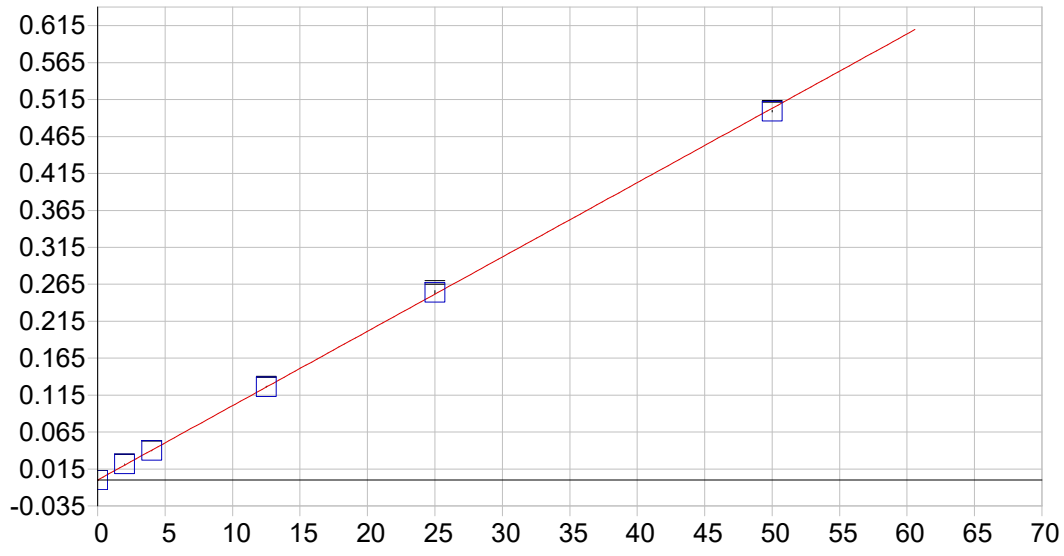
Mn 257.610 {131}

Date of Fit:	9/25/2025 15:42:31	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000698	Re-Slope:	1.000000
A1 (Gain):	0.361108	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999884	Status:	OK.
Std Error of Est:	0.000091		
Predicted MDL:	0.000804		
Predicted MQL:	0.002680		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00070	.000	1
S1	.02000	.02256	.003	12.8	.00885	.000	1
S3	1.2500	1.2757	.026	2.06	.46145	.004	1
S4	2.5000	2.5326	.033	1.31	.91543	.003	1
S5	5.0000	4.9360	-.064	-1.28	1.7835	.003	1
S2	.40000	.40308	.003	.770	.14628	.001	1

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314



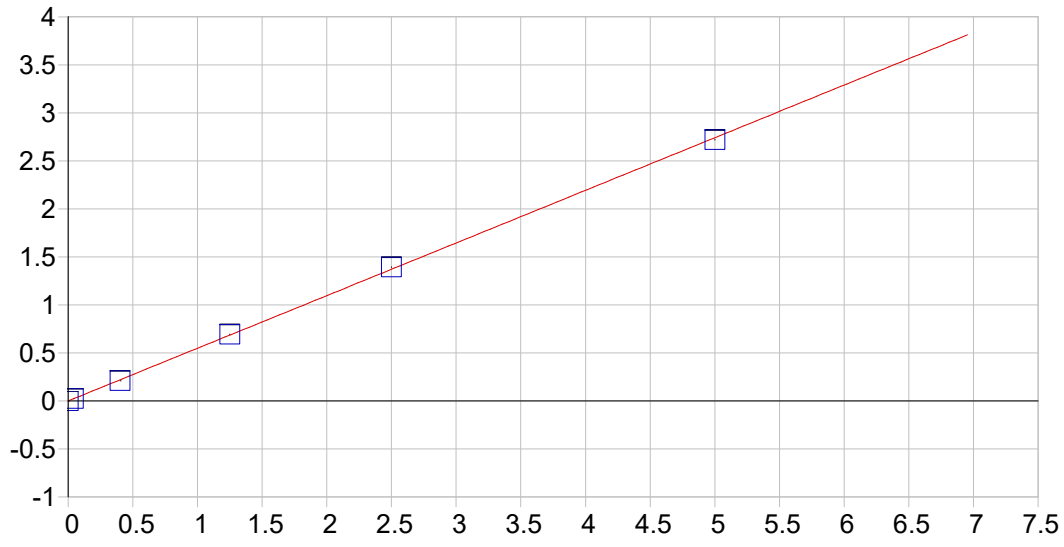
Mg 279.079 {121}

Date of Fit:	9/25/2025 15:42:31	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000075	Re-Slope:	1.000000
A1 (Gain):	0.010063	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999907	Status:	OK.
Std Error of Est:	0.000072		
Predicted MDL:	0.036720		
Predicted MQL:	0.122399		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00013	-.000	.000	.00007	.000	1
S2	4.0000	3.9494	-.051	-1.26	.03982	.000	1
S3	12.500	12.544	.044	.350	.12630	.001	1
S4	25.000	25.248	.248	.991	.25414	.002	1
S5	50.000	49.611	-.389	-.779	.49930	.001	1
S1	2.0000	2.1485	.149	7.43	.02170	.000	1

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314



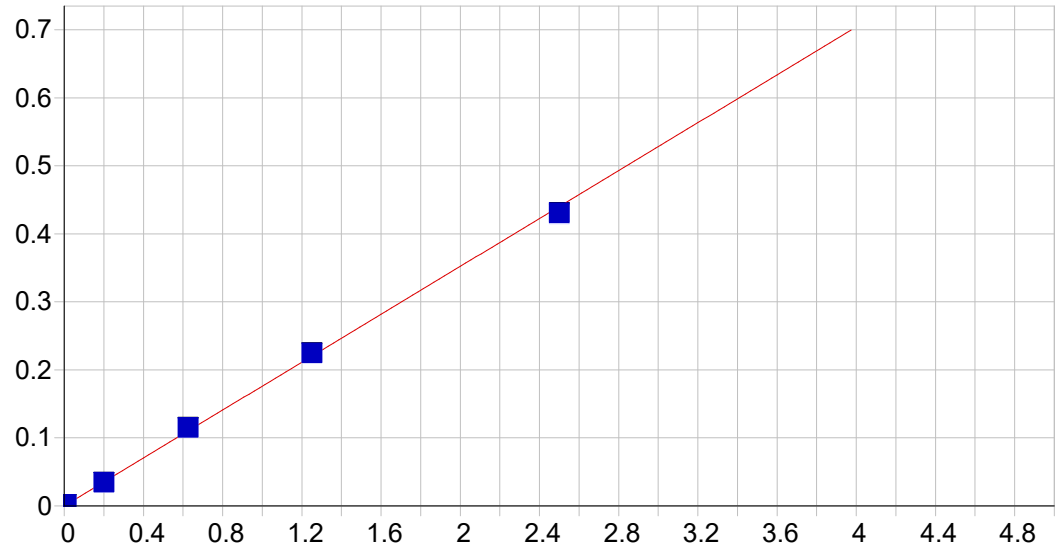
Ni 231.604 {446}

Date of Fit:	9/25/2025 15:42:31	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000081	Re-Slope:	1.000000
A1 (Gain):	0.548185	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999891	Status:	OK.
Std Error of Est:	0.000190		
Predicted MDL:	0.000403		
Predicted MQL:	0.001344		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00008	.000	1
S1	.04000	.04047	.000	1.18	.02211	.000	1
S3	1.2500	1.2636	.014	1.09	.69262	.003	1
S4	2.5000	2.5428	.043	1.71	1.3939	.003	1
S5	5.0000	4.9612	-.039	-.777	2.7196	.004	1
S2	.40000	.38190	-.018	-4.52	.20927	.000	1

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314



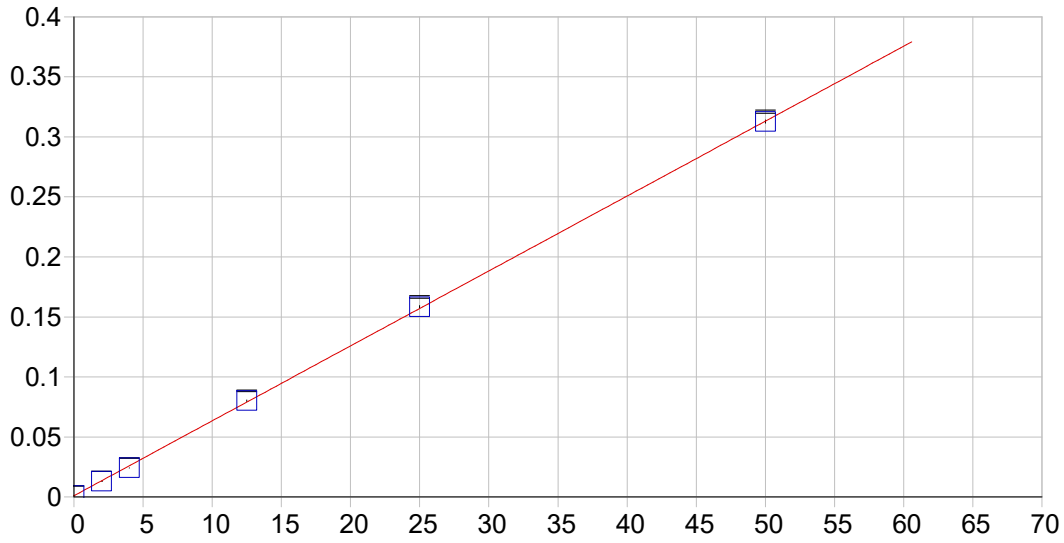
Ag 328.068 {103}

Date of Fit:	9/25/2025 15:42:31	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000146	Re-Slope:	1.000000
A1 (Gain):	0.176047	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999663	Status:	OK.
Std Error of Est:	0.000038		
Predicted MDL:	0.000658		
Predicted MQL:	0.002192		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00015	.000	1
S1	.01000	.00995	-.000	-.455	.00189	.000	1
S3	.62500	.65316	.028	4.51	.11469	.000	1
S4	1.2500	1.2781	.028	2.24	.22425	.000	1
S5	2.5000	2.4479	-.052	-2.08	.42931	.000	1
S2	.20000	.19595	-.004	-2.02	.03450	.000	1

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314



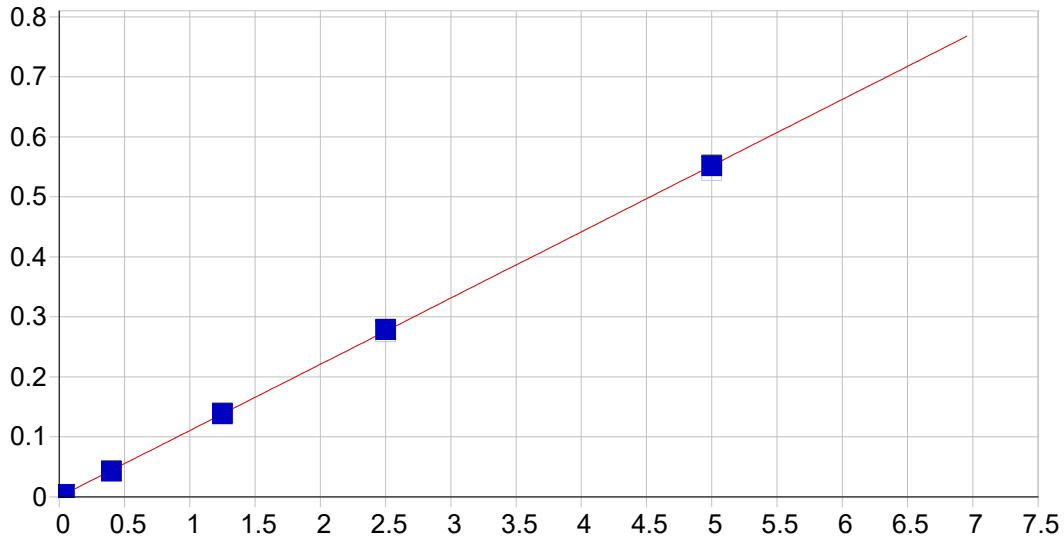
Na 589.592 { 57}

Date of Fit:	9/25/2025 15:42:31	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000994	Re-Slope:	1.000000
A1 (Gain):	0.006242	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999858	Status:	OK.
Std Error of Est:	0.000056		
Predicted MDL:	0.024112		
Predicted MQL:	0.080372		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00016	.000	.000	.00100	.000	1
S2	4.0000	3.7191	-.281	-7.02	.02421	.000	1
S3	12.500	12.691	.191	1.53	.08022	.001	1
S4	25.000	25.211	.211	.845	.15837	.001	1
S5	50.000	49.942	-.058	-.116	.31276	.001	1
S1	2.0000	1.9360	-.064	-3.20	.01308	.000	1

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314



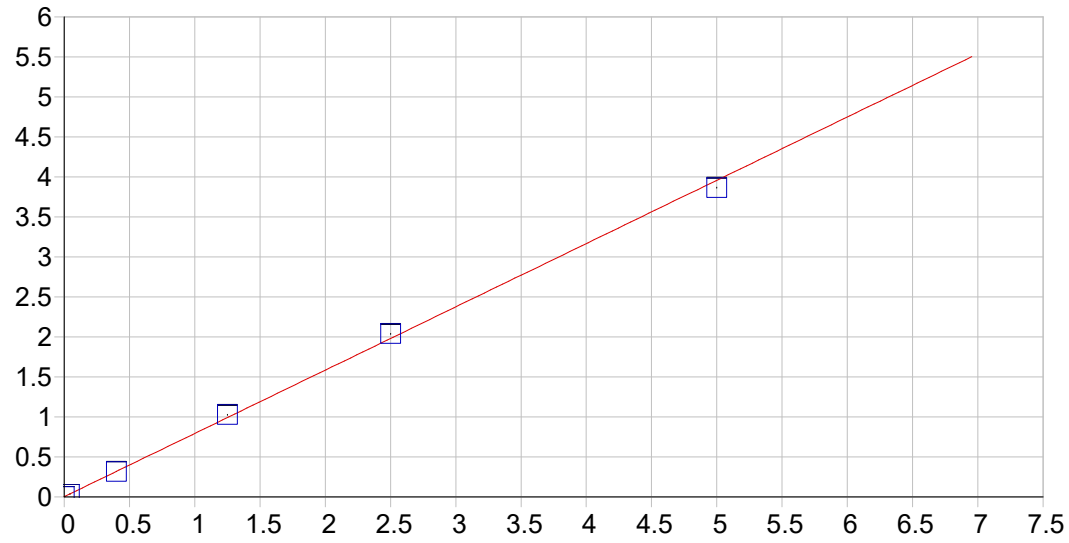
V 292.402 {115}

Date of Fit:	9/25/2025 15:42:31	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000252	Re-Slope:	1.000000
A1 (Gain):	0.110364	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999932	Status:	OK.
Std Error of Est:	0.000030		
Predicted MDL:	0.003942		
Predicted MQL:	0.013140		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00025	.000	1
S1	.04000	.03544	-.005	-11.4	.00400	.000	1
S3	1.2500	1.2537	.004	.294	.13660	.001	1
S4	2.5000	2.5218	.022	.871	.27454	.001	1
S5	5.0000	4.9929	-.007	-.141	.54325	.002	1
S2	.40000	.38606	-.014	-3.48	.04222	.000	1

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314



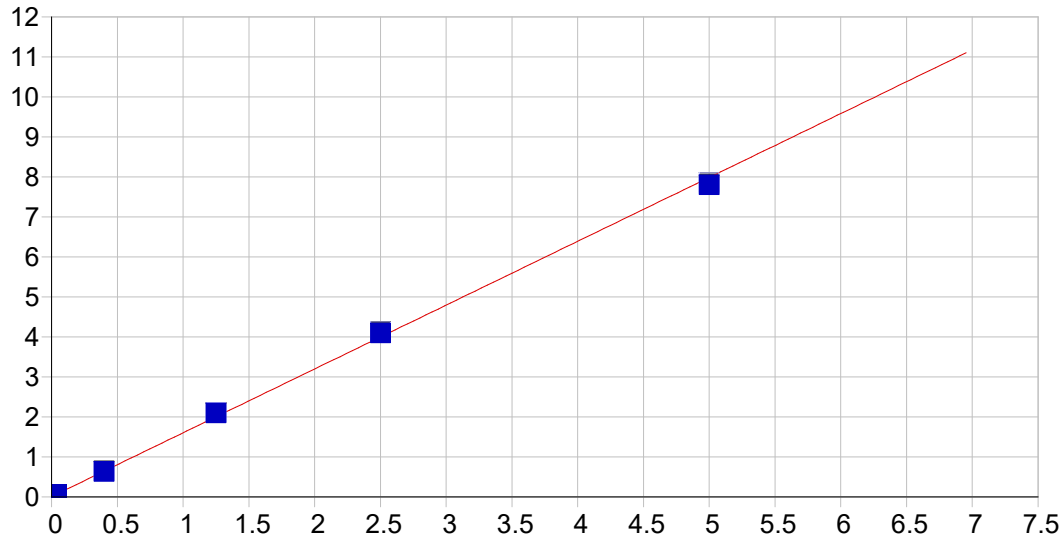
Zn 206.200 {464}

Date of Fit:	9/25/2025 15:42:31	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002686	Re-Slope:	1.000000
A1 (Gain):	0.791005	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999645	Status:	OK.
Std Error of Est:	0.000494		
Predicted MDL:	0.000192		
Predicted MQL:	0.000641		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00268	.000	1
S1	.04000	.04162	.002	4.06	.03561	.000	1
S3	1.2500	1.2939	.044	3.51	1.0262	.005	1
S4	2.5000	2.5735	.073	2.94	2.0383	.006	1
S5	5.0000	4.8829	-.117	-2.34	3.8651	.007	1
S2	.40000	.39813	-.002	-.467	.31761	.001	1

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314



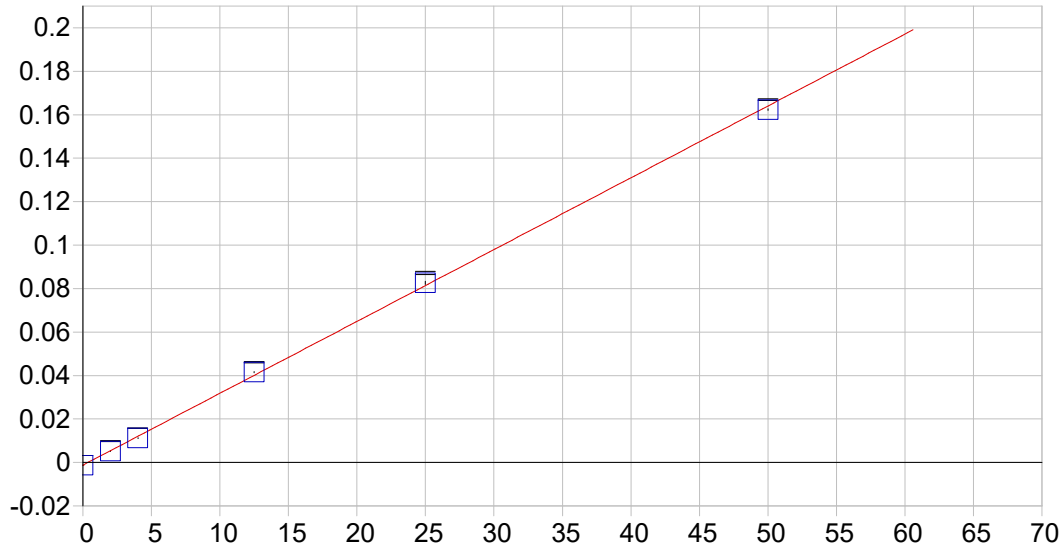
Zn 213.856 {158}

Date of Fit:	9/25/2025 15:42:31	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.007178	Re-Slope:	1.000000
A1 (Gain):	1.595933	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999607	Status:	OK.
Std Error of Est:	0.001057		
Predicted MDL:	0.000333		
Predicted MQL:	0.001111		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00717	.001	1
S1	.04000	.04112	.001	2.81	.07325	.000	1
S3	1.2500	1.3087	.059	4.69	2.1096	.002	1
S4	2.5000	2.5644	.064	2.58	4.1276	.007	1
S5	5.0000	4.8822	-.118	-2.36	7.8544	.002	1
S2	.40000	.39357	-.006	-1.61	.63974	.005	1

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314



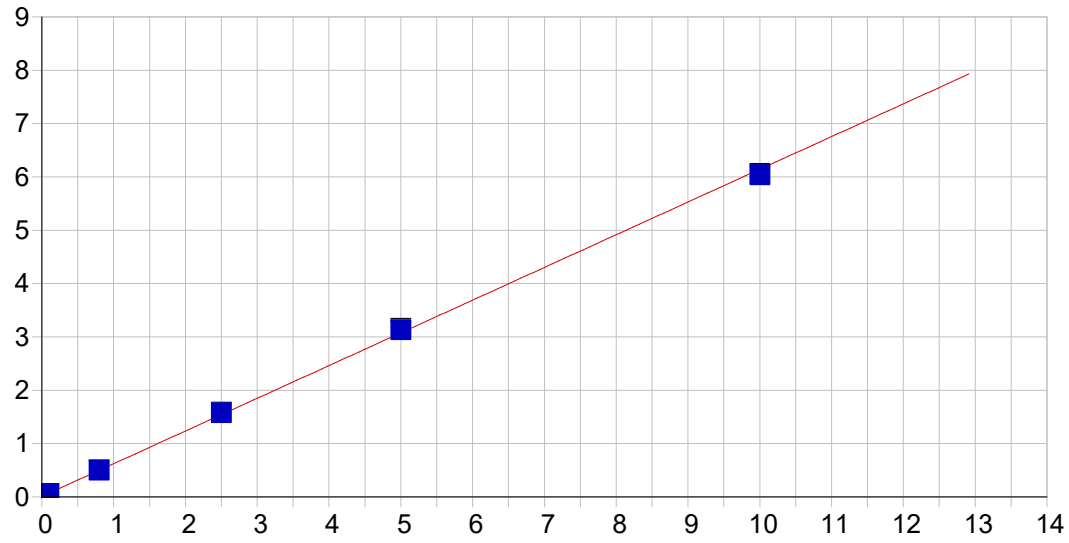
K 766.490 { 44}

Date of Fit:	9/25/2025 15:42:31	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001232	Re-Slope:	1.000000
A1 (Gain):	0.003305	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999781	Status:	OK.
Std Error of Est:	0.000037		
Predicted MDL:	0.054150		
Predicted MQL:	0.180500		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00009	.000	.000	-.00123	.000	1
S2	4.0000	3.7641	-.236	-5.90	.01121	.000	1
S3	12.500	12.940	.440	3.52	.04154	.000	1
S4	25.000	25.355	.355	1.42	.08258	.001	1
S5	50.000	49.492	-.508	-1.02	.16236	.000	1
S1	2.0000	1.9478	-.052	-2.61	.00521	.000	1

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314



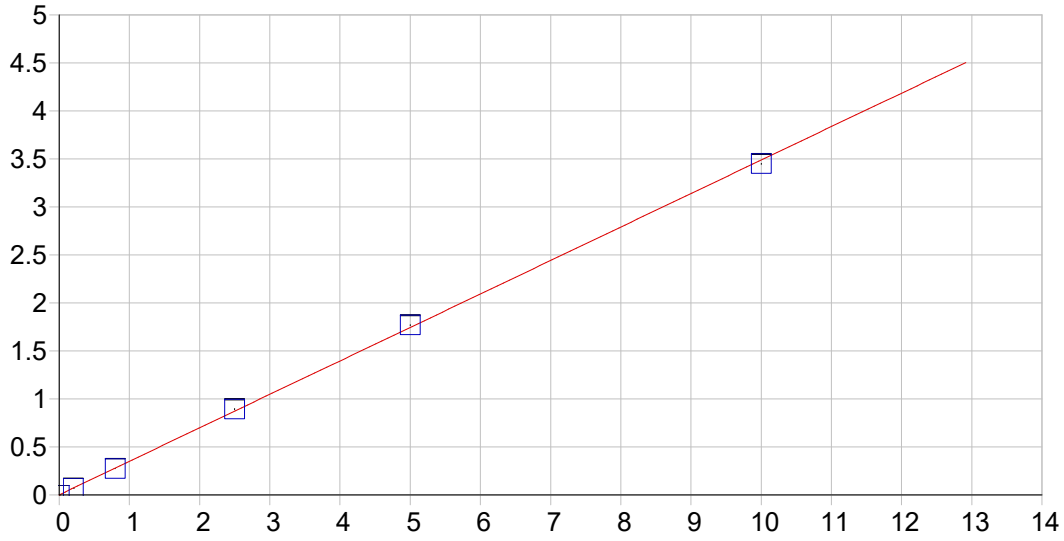
B 249.678 {135}

Date of Fit:	9/25/2025 15:42:31	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.008667	Re-Slope:	1.000000
A1 (Gain):	0.613418	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999838	Status:	OK.
Std Error of Est:	0.000577		
Predicted MDL:	0.001071		
Predicted MQL:	0.003569		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00866	.000	1
S1	.10000	.10395	.004	3.95	.07207	.000	1
S3	2.5000	2.5579	.058	2.31	1.5722	.011	1
S4	5.0000	5.0958	.096	1.92	3.1235	.027	1
S5	10.000	9.8399	-.160	-1.60	6.0226	.021	1
S2	.80000	.80240	.002	.300	.49911	.003	1

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314



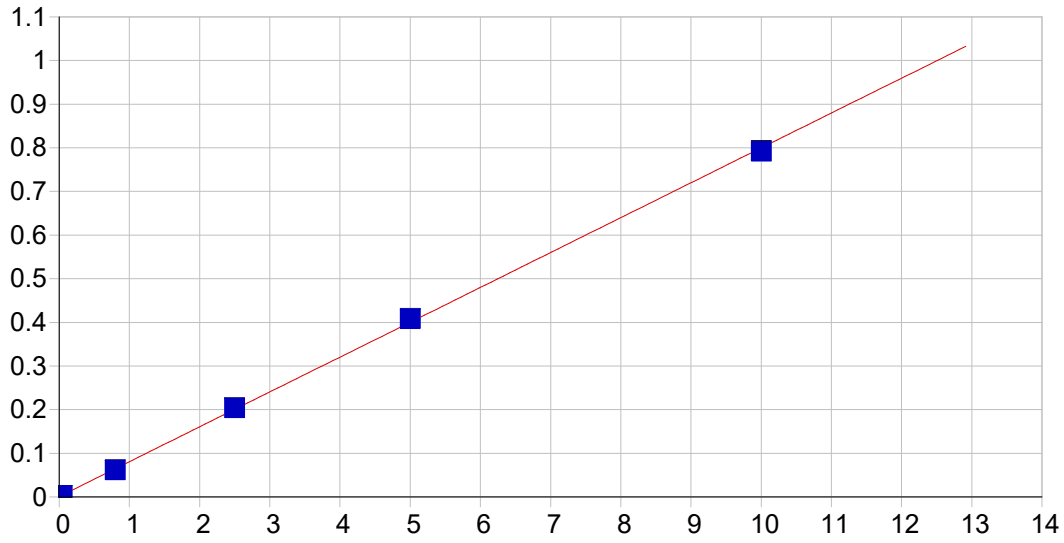
Mo 202.030 {467}

Date of Fit:	9/25/2025 15:42:31	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001414	Re-Slope:	1.000000
A1 (Gain):	0.348625	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999895	Status:	OK.
Std Error of Est:	0.000376		
Predicted MDL:	0.000441		
Predicted MQL:	0.001471		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00141	.000	1
S1	.20000	.19811	-.002	-.947	.07048	.000	1
S3	2.5000	2.5570	.057	2.28	.89283	.006	1
S4	5.0000	5.0714	.071	1.43	1.7694	.005	1
S5	10.000	9.8895	-.110	-1.10	3.4492	.006	1
S2	.80000	.78400	-.016	-2.00	.27474	.001	1

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314



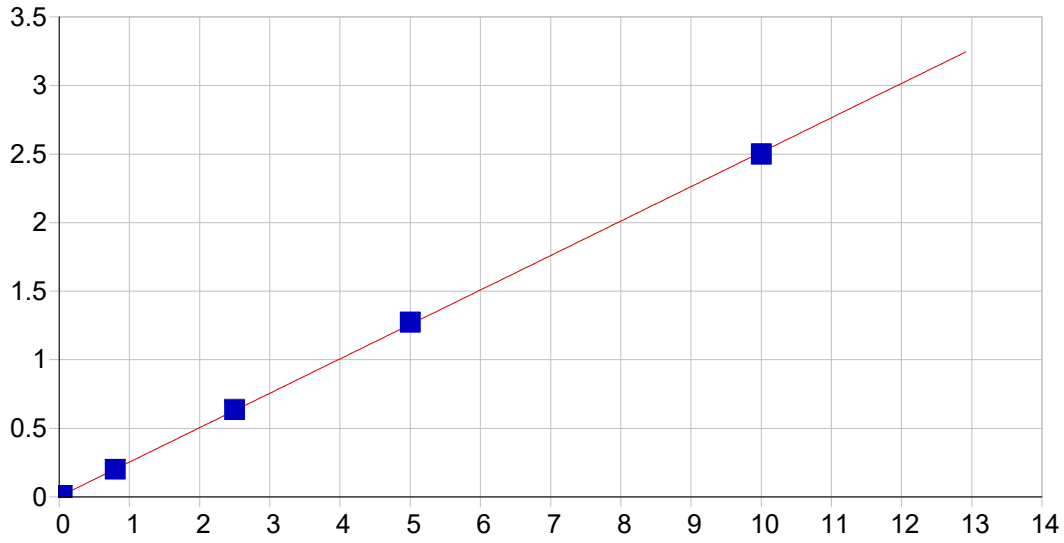
Sn 189.989 {478}

Date of Fit:	9/25/2025 15:42:31	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000753	Re-Slope:	1.000000
A1 (Gain):	0.079897	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999845	Status:	OK.
Std Error of Est:	0.000047		
Predicted MDL:	0.001107		
Predicted MQL:	0.003689		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00075	.000	1
S1	.04000	.03981	-.000	-.469	.00393	.000	1
S3	2.5000	2.5410	.041	1.64	.20357	.001	1
S4	5.0000	5.0993	.099	1.99	.40777	.001	1
S5	10.000	9.9001	-.100	-.999	.79093	.001	1
S2	.80000	.75975	-.040	-5.03	.06139	.000	1

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314



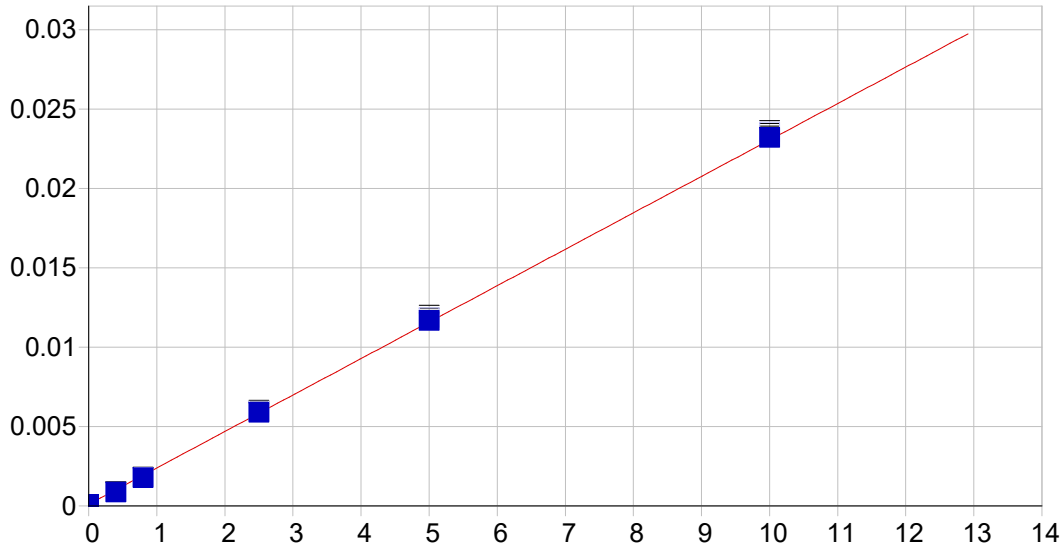
Ti 336.121 {100}

Date of Fit:	9/25/2025 15:42:31	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002381	Re-Slope:	1.000000
A1 (Gain):	0.251080	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999965	Status:	OK.
Std Error of Est:	0.000070		
Predicted MDL:	0.002277		
Predicted MQL:	0.007591		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00238	.000	1
S1	.04000	.03952	-.000	-1.21	.01230	.000	1
S3	2.5000	2.5207	.021	.826	.63504	.003	1
S4	5.0000	5.0537	.054	1.07	1.2708	.003	1
S5	10.000	9.9369	-.063	-.631	2.4964	.004	1
S2	.80000	.78923	-.011	-1.35	.20047	.001	1

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314



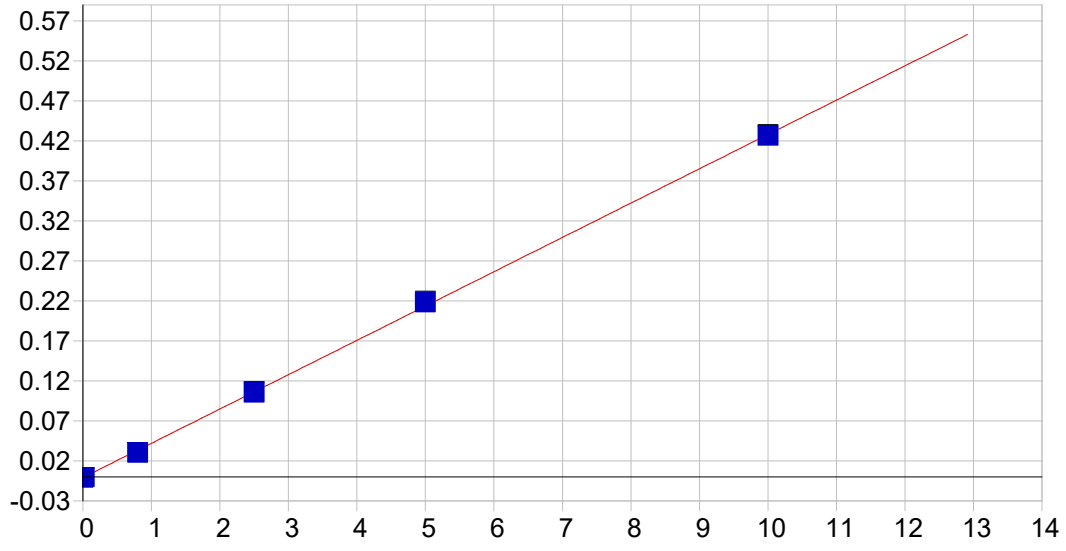
Si 288.158 {117}

Date of Fit:	9/25/2025 15:42:31	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000098	Re-Slope:	1.000000
A1 (Gain):	0.002296	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999526	Status:	OK.
Std Error of Est:	0.000008		
Predicted MDL:	0.016990		
Predicted MQL:	0.056634		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00009	.000	.000	.00010	.000	1
S1	.40000	.33474	-.065	-16.3	.00087	.000	1
S3	2.5000	2.5228	.023	.911	.00598	.000	1
S4	5.0000	5.0454	.045	.908	.01186	.000	1
S5	10.000	10.068	.068	.683	.02356	.000	1
S2	.80000	.72797	-.072	-9.00	.00180	.000	1

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314



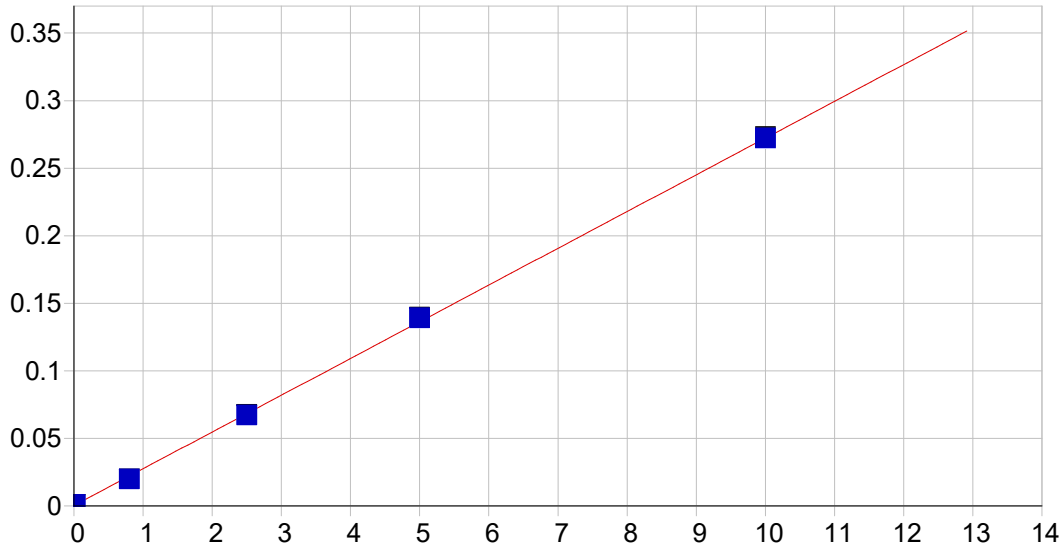
P 177.495 {490}

Date of Fit:	9/25/2025 15:42:31	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000870	Re-Slope:	1.000000
A1 (Gain):	0.042892	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999752	Status:	OK.
Std Error of Est:	0.000022		
Predicted MDL:	0.001883		
Predicted MQL:	0.006276		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00087	.000	1
S1	.02000	.02025	.000	1.27	-.00000	.000	1
S3	2.5000	2.4868	-.013	-.530	.10577	.001	1
S4	5.0000	5.1161	.116	2.32	.21853	.001	1
S5	10.000	9.9675	-.033	-.325	.42658	.001	1
S2	.80000	.72943	-.071	-8.82	.03041	.000	1

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314



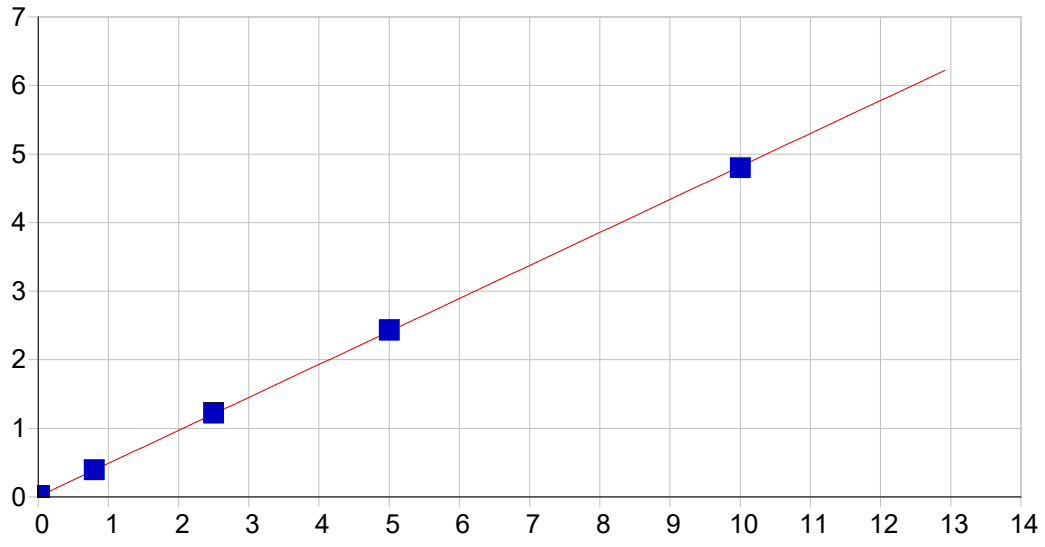
S 182.034 {485}

Date of Fit:	9/25/2025 15:42:31	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000341	Re-Slope:	1.000000
A1 (Gain):	0.027193	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999681	Status:	OK.
Std Error of Est:	0.000016		
Predicted MDL:	0.003284		
Predicted MQL:	0.010945		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00034	.000	1
S1	.02000	.02201	.002	10.1	.00092	.000	1
S3	2.5000	2.4620	-.038	-1.52	.06711	.000	1
S4	5.0000	5.1094	.109	2.19	.13893	.000	1
S5	10.000	10.009	.009	.088	.27180	.001	1
S2	.80000	.71784	-.082	-10.3	.01980	.000	1

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314



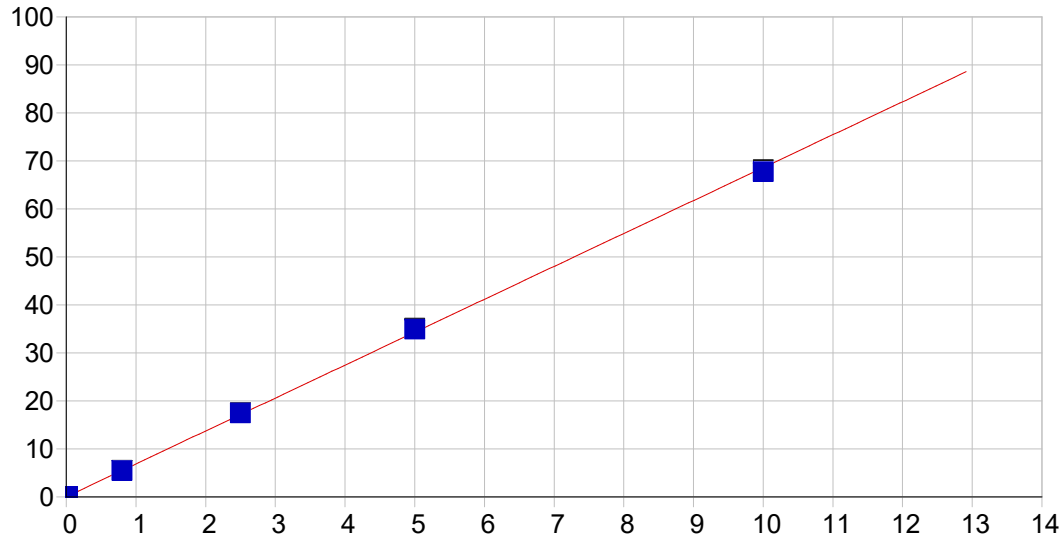
Li 670.784 { 50}

Date of Fit:	9/25/2025 15:42:31	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.007299	Re-Slope:	1.000000
A1 (Gain):	0.481128	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999983	Status:	OK.
Std Error of Est:	0.000065		
Predicted MDL:	0.003440		
Predicted MQL:	0.011466		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00730	.001	1
S5	10.000	9.9541	-.046	-.459	4.8004	.005	1
S4	5.0000	5.0323	.032	.645	2.4304	.008	1
S3	2.5000	2.5140	.014	.558	1.2178	.009	1
S1	.02000	.02152	.002	7.61	.01782	.000	1
S2	.80000	.79809	-.002	-.239	.39159	.003	1

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314



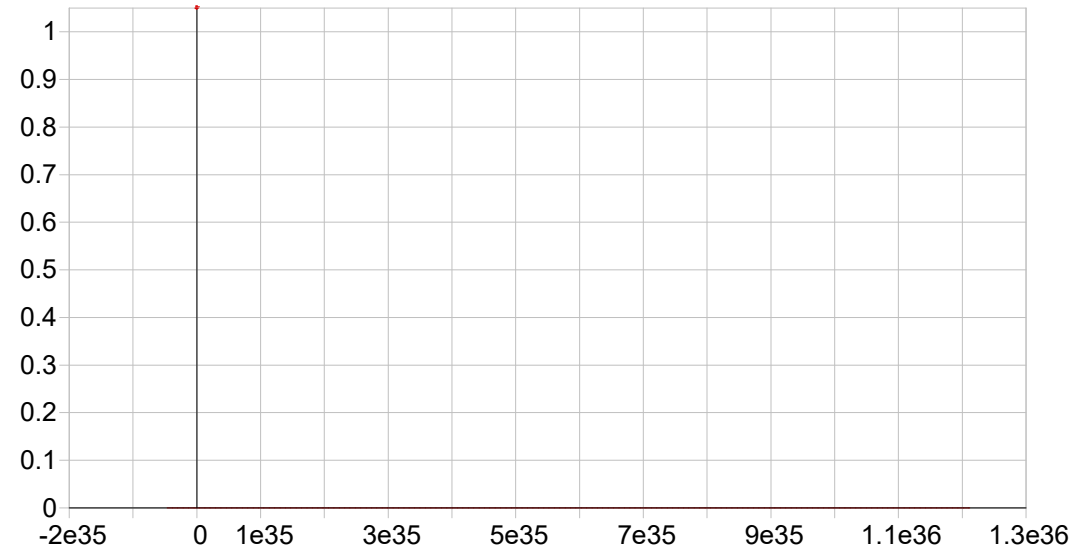
Sr 407.771 { 83}

Date of Fit:	9/25/2025 15:42:31	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.019844	Re-Slope:	1.000000
A1 (Gain):	6.857786	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999895	Status:	OK.
Std Error of Est:	0.002336		
Predicted MDL:	0.000143		
Predicted MQL:	0.000477		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.01983	.001	1
S1	.02000	.02117	.001	5.84	.16567	.001	1
S3	2.5000	2.5400	.040	1.60	17.455	.106	1
S4	5.0000	5.0884	.088	1.77	34.948	.205	1
S5	10.000	9.8742	-.126	-1.26	67.801	.343	1
S2	.80000	.79623	-.004	-.471	5.4855	.036	1

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

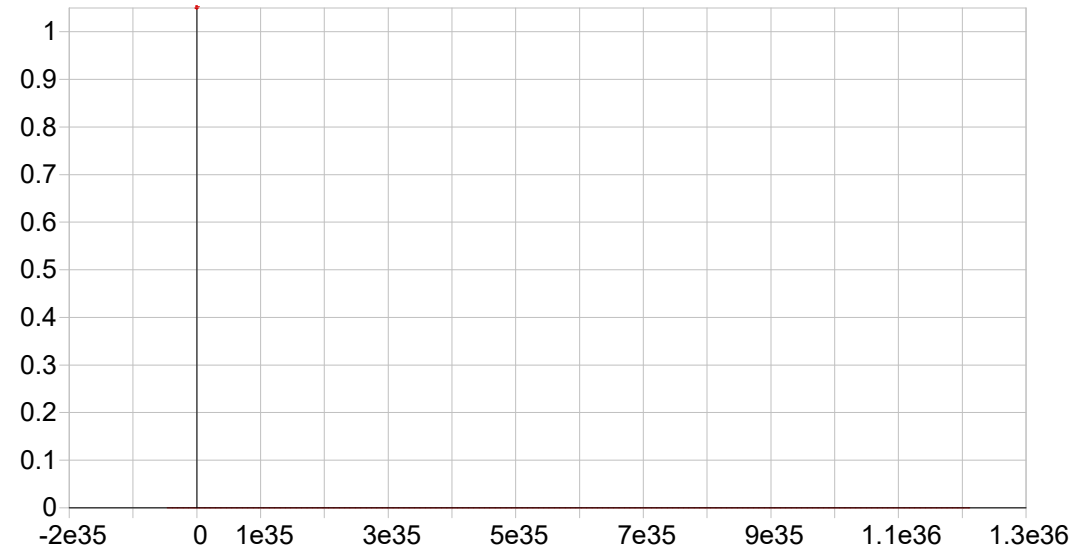


Y 224.306 {450}*

Date of Fit:	9/25/2025 15:42:31	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

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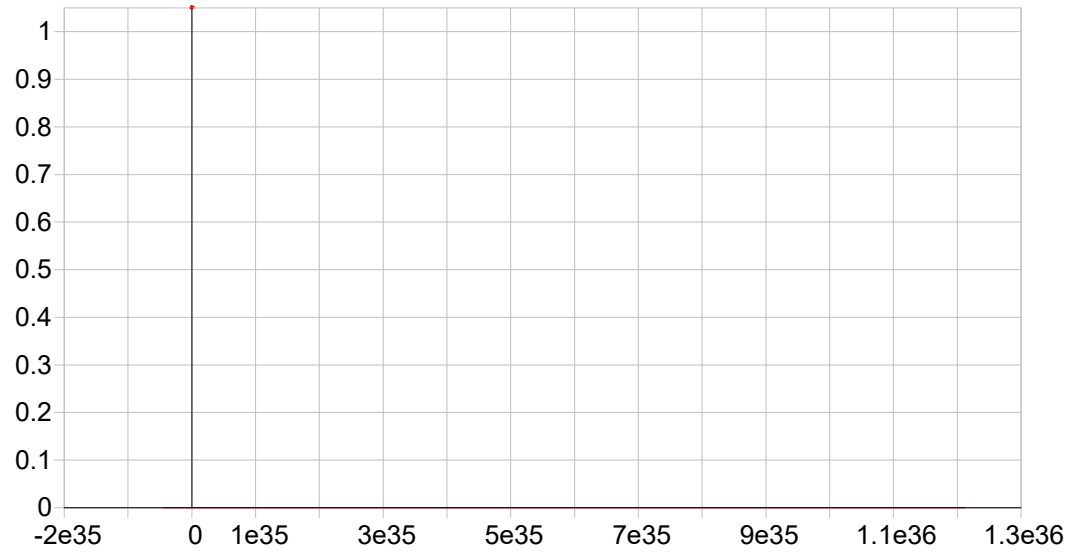
A2 (Curvature):	0.000000					
n (Exponent):	1.000000					
Correlation:	0.000000		Status:	Warning	Zero Gain	
Std Error of Est:	0.000000					
Predicted MDL:	n/a					
Predicted MQL:	n/a					

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

Reviewed By:jaswal
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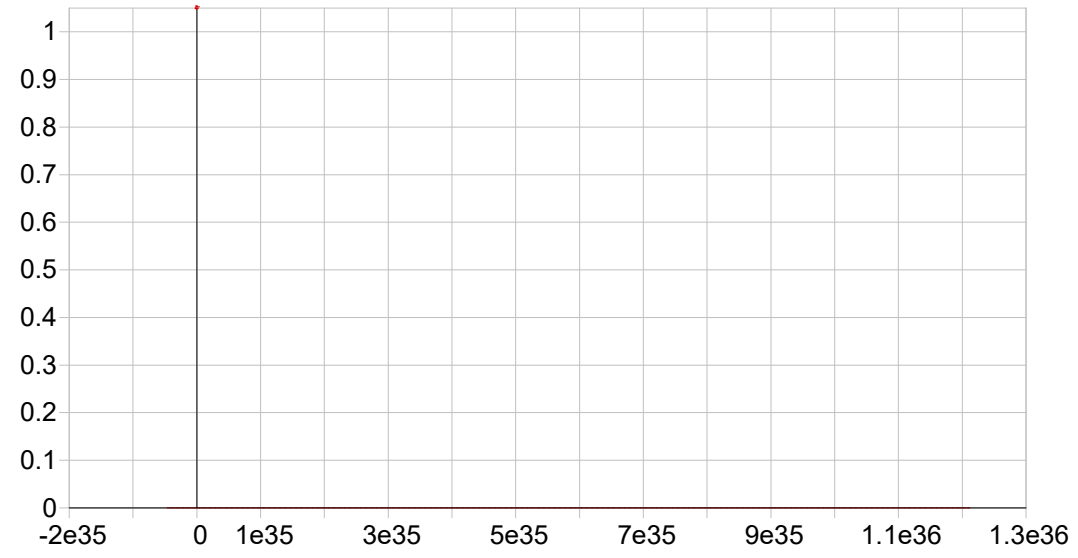
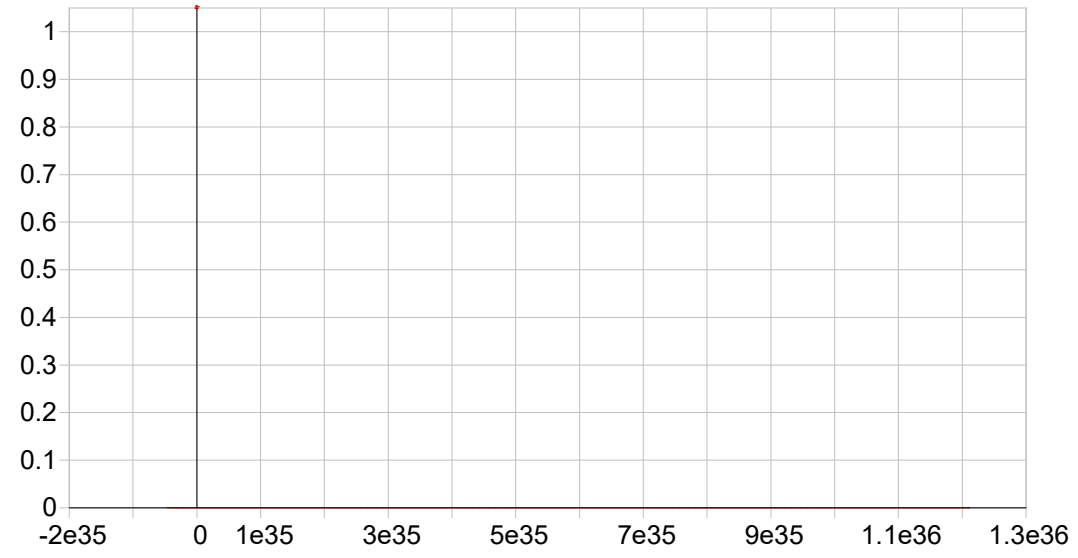
Inst Id :P4
LB :LB137314



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	

Reviewed By:jaswal
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Inst Id :P4
LB :LB137314

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:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: S0 Acquired: 9/25/2025 10:55:46 Type: Cal
Method: 6010-200.7 NEW(v204) 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	**-.00006**	**.00074**	**.00056**	**.00051**	**.00082**	**.00084**	**.08428**	**.00001**
Stddev	.00008	.00007	.00019	.00008	.00014	.00031	.00205	.00104
%RSD	141.69	9.1516	34.044	15.538	17.531	36.856	2.4289	10434.
#1	-.00002	.00071	.00059	.00059	.00085	.00075	.08261	.00120
#2	-.00000	.00082	.00036	.00043	.00095	.00058	.08656	-.00072
#3	-.00015	.00069	.00074	.00049	.00066	.00118	.08367	-.00045

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	**.00210**	**.00078**	**.00020**	**.00086**	**.00101**	**.00001**	**.00070**	**.00007**
Stddev	.00007	.00036	.00004	.00012	.00033	.00002	.00027	.00013
%RSD	3.3300	45.823	19.244	14.238	32.900	140.58	38.386	179.09
#1	.00206	.00091	.00025	.00091	.00072	.00001	.00045	-.00007
#2	.00218	.00107	.00017	.00095	.00137	-.00000	.00067	.00019
#3	.00206	.00038	.00019	.00072	.00093	.00003	.00098	.00011

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	**-.00008**	**.00015**	**.00100**	**.00025**	**.00717**	**-.00123**	**.00866**	**.00141**
Stddev	.00017	.00008	.00012	.00015	.00060	.00005	.00001	.00009
%RSD	212.26	57.460	12.290	59.418	8.4191	3.6548	.12462	6.6264
#1	-.00024	.00007	.00113	.00010	.00786	-.00119	.00865	.00139
#2	-.00011	.00024	.00089	.00027	.00692	-.00123	.00866	.00152
#3	.00010	.00013	.00097	.00040	.00674	-.00128	.00867	.00133

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	**.00075**	**.00238**	**.00010**	**-.00087**	**.00034**	**.00730**	**.01983**
Stddev	.00004	.00030	.00002	.00005	.00008	.00118	.00075
%RSD	5.7974	12.428	15.382	5.6929	24.662	16.180	3.7671
#1	.00071	.00208	.00009	-.00092	.00044	.00656	.02067
#2	.00075	.00267	.00009	-.00083	.00030	.00866	.01961
#3	.00080	.00239	.00011	-.00086	.00029	.00667	.01922

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On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: S0 Acquired: 9/25/2025 10:55:46 Type: Cal
Method: 6010-200.7 NEW(v204) 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	6322.1	98018.	8041.7	5087.7	7454.6
Stddev	7.5	307.	39.0	24.7	7.0
%RSD	.11790	.31330	.48481	.48459	.09325
#1	6328.5	98317.	8063.0	5115.5	7446.8
#2	6324.0	97704.	7996.7	5079.1	7456.8
#3	6313.9	98034.	8065.3	5068.4	7460.1

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: S1 Acquired: 9/25/2025 11:00:10 Type: Cal
Method: 6010-200.7 NEW(v204) 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	**.00068**	**.00327**	**.00249**	**.00137**	**.00471**	**.00832**	**.25293**	**.04170**
Stddev	.00006	.00006	.00025	.00008	.00012	.00068	.00140	.00049
%RSD	8.2165	1.7443	10.099	5.9946	2.5527	8.1835	.55224	1.1661
#1	.00075	.00327	.00232	.00128	.00484	.00806	.25219	.04120
#2	.00066	.00333	.00278	.00145	.00464	.00781	.25454	.04174
#3	.00064	.00322	.00237	.00138	.00463	.00910	.25205	.04217

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	**.01276**	**.10668**	**.00163**	**.01918**	**.00918**	**.00018**	**.00885**	**.02170**
Stddev	.00016	.00055	.00004	.00013	.00012	.00001	.00034	.00019
%RSD	1.2372	.51552	2.5285	.69420	1.3048	7.8896	3.8643	.85377
#1	.01290	.10685	.00162	.01932	.00918	.00017	.00846	.02185
#2	.01280	.10712	.00160	.01918	.00930	.00020	.00910	.02149
#3	.01259	.10606	.00168	.01905	.00906	.00017	.00898	.02174

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	**.02211**	**.00189**	**.01308**	**.00400**	**.07325**	**.00521**	**.07207**	**.07048**
Stddev	.00018	.00004	.00010	.00031	.00035	.00024	.00048	.00013
%RSD	.81512	1.9836	.74186	7.7884	.47673	4.6583	.66981	.18684
#1	.02192	.00188	.01319	.00372	.07302	.00549	.07151	.07056
#2	.02228	.00185	.01303	.00433	.07366	.00509	.07236	.07033
#3	.02211	.00193	.01302	.00395	.07309	.00505	.07234	.07055

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	**.00393**	**.01230**	**.00087**	**-.00000**	**.00092**	**.01782**	**.16567**
Stddev	.00002	.00020	.00002	.00008	.00003	.00043	.00079
%RSD	.59535	1.6437	2.0385	14382.	3.6023	2.4340	.47464
#1	.00393	.01251	.00089	-.00007	.00093	.01774	.16657
#2	.00396	.01225	.00086	-.00001	.00094	.01829	.16532
#3	.00391	.01212	.00086	.00008	.00088	.01744	.16511

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: S1 Acquired: 9/25/2025 11:00:10 Type: Cal
Method: 6010-200.7 NEW(v204) 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	6285.1	98914.	8001.4	5082.4	7348.0
Stddev	.4	601.	46.1	40.1	11.1
%RSD	.00683	.60728	.57663	.78901	.15137
#1	6285.6	98402.	8042.4	5055.2	7346.3
#2	6284.8	98765.	7951.5	5063.5	7337.9
#3	6285.0	99576.	8010.3	5128.4	7359.9

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: S2 Acquired: 9/25/2025 11:04:32 Type: Cal
Method: 6010-200.7 NEW(v204) 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	.02467	.05290	.14177	.02961	.06037	.11406	2.6217	.26259
Stddev	.00004	.00123	.00086	.00016	.00018	.00055	.0206	.00166
%RSD	.16940	2.3194	.60721	.54101	.29527	.47867	.78448	.63080
#1	.02467	.05418	.14116	.02953	.06017	.11412	2.6163	.26253
#2	.02463	.05277	.14139	.02980	.06047	.11349	2.6444	.26428
#3	.02472	.05174	.14275	.02951	.06048	.11458	2.6044	.26097

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	.67794	.20336	.02219	.23413	.07853	.00134	.14628	.03982
Stddev	.00273	.00168	.00010	.00084	.00015	.00001	.00051	.00016
%RSD	.40210	.82647	.45038	.35684	.19556	.79424	.35160	.40726
#1	.67546	.20297	.02230	.23332	.07836	.00135	.14643	.03980
#2	.67750	.20521	.02215	.23410	.07855	.00135	.14670	.03966
#3	.68086	.20191	.02211	.23499	.07867	.00133	.14571	.03999

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	.20927	.03450	.02421	.04222	.63974	.01121	.49911	.27474
Stddev	.00047	.00007	.00011	.00033	.00513	.00003	.00301	.00059
%RSD	.22347	.18931	.44459	.77735	.80184	.29668	.60303	.21602
#1	.20891	.03452	.02410	.04251	.64558	.01119	.49918	.27437
#2	.20911	.03455	.02431	.04228	.63768	.01119	.50208	.27442
#3	.20980	.03443	.02423	.04186	.63595	.01125	.49606	.27542

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	.06139	.20047	.00180	.03041	.01980	.39159	5.4855
Stddev	.00006	.00086	.00002	.00004	.00010	.00287	.0360
%RSD	.10384	.42756	1.1516	.12127	.50904	.73241	.65596
#1	.06132	.19953	.00182	.03039	.01990	.39184	5.4771
#2	.06140	.20121	.00178	.03039	.01970	.39432	5.5249
#3	.06145	.20067	.00180	.03045	.01980	.38861	5.4544

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: S2 Acquired: 9/25/2025 11:04:32 Type: Cal
Method: 6010-200.7 NEW(v204) 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	6490.3	101230.	8170.0	5157.1	7591.9
Stddev	25.4	321.	38.0	27.8	24.7
%RSD	.39073	.31751	.46462	.53811	.32534
#1	6516.7	100910.	8163.7	5129.3	7619.5
#2	6466.1	101550.	8135.5	5184.8	7571.9
#3	6487.9	101240.	8210.7	5157.1	7584.3

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: S3 Acquired: 9/25/2025 11:08:39 Type: Cal
Method: 6010-200.7 NEW(v204) 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	.08203	.17697	.46830	.09698	.19691	.36127	8.2532	.84031
Stddev	.00073	.00325	.00207	.00082	.00129	.00106	.0660	.00703
%RSD	.89504	1.8386	.44287	.84756	.65366	.29246	.79926	.83703
#1	.08143	.17381	.46629	.09619	.19578	.36038	8.2165	.83244
#2	.08181	.17679	.46818	.09691	.19664	.36099	8.2138	.84249
#3	.08285	.18031	.47043	.09783	.19831	.36243	8.3294	.84599

Elem	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2.2612	.64196	.07318	.77442	.25395	.00453	.46145	.12630
Stddev	.0109	.00449	.00017	.00335	.00129	.00005	.00354	.00063
%RSD	.48099	.69880	.22967	.43265	.50822	1.0878	.76626	.49804
#1	2.2521	.63787	.07299	.77134	.25269	.00456	.45888	.12592
#2	2.2581	.64124	.07323	.77393	.25389	.00448	.45999	.12596
#3	2.2732	.64675	.07332	.77799	.25526	.00457	.46549	.12703

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	.69262	.11469	.08022	.13660	2.1096	.04154	1.5722	.89283
Stddev	.00297	.00042	.00063	.00108	.0023	.00030	.0114	.00557
%RSD	.42903	.36242	.78298	.79401	.11054	.73039	.72681	.62383
#1	.69052	.11421	.07995	.13539	2.1090	.04133	1.5594	.88786
#2	.69132	.11489	.07978	.13691	2.1122	.04141	1.5757	.89179
#3	.69602	.11496	.08094	.13749	2.1076	.04189	1.5814	.89885

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	.20357	.63504	.00598	.10577	.06711	1.2178	17.455
Stddev	.00104	.00305	.00005	.00062	.00043	.0085	.106
%RSD	.50978	.48095	.88195	.58241	.63813	.69916	.60795
#1	.20263	.63200	.00592	.10509	.06668	1.2130	17.387
#2	.20339	.63501	.00601	.10596	.06713	1.2127	17.401
#3	.20468	.63811	.00600	.10628	.06753	1.2276	17.577

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: S3 Acquired: 9/25/2025 11:08:39 Type: Cal
Method: 6010-200.7 NEW(v204) 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	6043.8	90823.	7909.1	4723.1	6905.4
Stddev	20.1	275.	42.3	16.9	15.7
%RSD	.33207	.30262	.53519	.35831	.22766
#1	6060.4	91101.	7957.6	4717.7	6916.0
#2	6049.5	90552.	7890.1	4709.6	6912.9
#3	6021.5	90817.	7879.6	4742.1	6887.3

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: S4 Acquired: 9/25/2025 11:12:41 Type: Cal
Method: 6010-200.7 NEW(v204) 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	.16539	.34619	.93682	.19522	.39437	.72682	16.390	1.6575
Stddev	.00034	.00214	.00220	.00053	.00064	.00160	.045	.0137
%RSD	.20654	.61917	.23473	.26894	.16154	.22067	.27297	.82464
#1	.16542	.34856	.93529	.19509	.39379	.72507	16.357	1.6560
#2	.16504	.34439	.93583	.19477	.39426	.72716	16.441	1.6718
#3	.16572	.34563	.93934	.19580	.39505	.72823	16.372	1.6446

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	4.5729	1.2804	.14330	1.5598	.50060	.00887	.91543	.25414
Stddev	.0098	.0019	.00022	.0025	.00150	.00011	.00289	.00220
%RSD	.21508	.15014	.15479	.15998	.29867	1.2101	.31522	.86465
#1	4.5658	1.2784	.14304	1.5580	.49908	.00879	.91307	.25184
#2	4.5687	1.2823	.14343	1.5588	.50065	.00883	.91865	.25437
#3	4.5841	1.2805	.14343	1.5627	.50207	.00899	.91459	.25621

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	1.3939	.22425	.15837	.27454	4.1276	.08258	3.1235	1.7694
Stddev	.0032	.00044	.00103	.00090	.0070	.00075	.0272	.0046
%RSD	.23070	.19400	.65279	.32708	.17044	.90987	.87030	.25710
#1	1.3915	.22378	.15818	.27387	4.1232	.08212	3.1182	1.7688
#2	1.3926	.22464	.15745	.27419	4.1239	.08217	3.1529	1.7653
#3	1.3975	.22434	.15949	.27556	4.1357	.08344	3.0994	1.7743

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	.40777	1.2708	.01186	.21853	.13893	2.4304	34.948
Stddev	.00093	.0027	.00016	.00092	.00041	.0085	.205
%RSD	.22767	.21499	1.3195	.42209	.29681	.34866	.58761
#1	.40712	1.2678	.01174	.21940	.13896	2.4235	34.806
#2	.40735	1.2715	.01180	.21756	.13850	2.4398	35.184
#3	.40883	1.2732	.01203	.21864	.13932	2.4279	34.855

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: S4 Acquired: 9/25/2025 11:12:41 Type: Cal
Method: 6010-200.7 NEW(v204) 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	**5987.5**	**93968.**	**8036.9**	**4789.3**	**6710.9**
Stddev	13.9	425.	58.9	7.9	13.6
%RSD	.23290	.45270	.73322	.16471	.20199
#1	5997.8	94271.	8057.9	4785.6	6721.4
#2	5993.2	94152.	7970.4	4783.9	6715.7
#3	5971.7	93482.	8082.5	4798.3	6695.6

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: S5 Acquired: 9/25/2025 11:16:44 Type: Cal
Method: 6010-200.7 NEW(v204) 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	.31854	.66442	1.8443	.37128	.76294	1.4245	32.154	3.1520
Stddev	.00035	.02079	.0029	.00050	.00197	.0020	.125	.0086
%RSD	.10937	3.1287	.15510	.13511	.25790	.13812	.38846	.27167
#1	.31847	.68642	1.8425	.37126	.76145	1.4222	32.036	3.1457
#2	.31823	.66175	1.8427	.37079	.76219	1.4254	32.285	3.1487
#3	.31892	.64510	1.8476	.37179	.76517	1.4258	32.142	3.1618

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	8.9029	2.5035	.27280	3.0642	.95247	.01706	1.7835	.49930
Stddev	.0069	.0018	.00048	.0028	.00250	.00012	.0026	.00099
%RSD	.07768	.07243	.17669	.09140	.26200	.67929	.14709	.19831
#1	8.9040	2.5017	.27244	3.0617	.94995	.01718	1.7865	.49909
#2	8.8955	2.5053	.27260	3.0635	.95251	.01704	1.7825	.49843
#3	8.9092	2.5036	.27335	3.0672	.95494	.01695	1.7815	.50038

Elem	Ni2316	Ag3280	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2.7196	.42931	.31276	.54325	7.8544	.16236	6.0226	3.4492
Stddev	.0042	.00024	.00139	.00165	.0022	.00030	.0211	.0056
%RSD	.15477	.05704	.44348	.30286	.02758	.18579	.35105	.16378
#1	2.7166	.42954	.31396	.54514	7.8525	.16246	6.0077	3.4506
#2	2.7177	.42905	.31308	.54239	7.8567	.16260	6.0132	3.4429
#3	2.7244	.42933	.31124	.54221	7.8539	.16202	6.0468	3.4539

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	.79093	2.4964	.02356	.42658	.27180	4.8004	67.801
Stddev	.00150	.0036	.00010	.00099	.00091	.0046	.343
%RSD	.18962	.14236	.42311	.23216	.33570	.09475	.50529
#1	.79235	2.5005	.02345	.42704	.27263	4.8008	68.068
#2	.78936	2.4950	.02359	.42545	.27082	4.8047	67.414
#3	.79108	2.4938	.02365	.42727	.27194	4.7956	67.920

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: S5 Acquired: 9/25/2025 11:16:44 Type: Cal
Method: 6010-200.7 NEW(v204) 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	6110.9	96470.	8113.6	4814.5	6739.7
Stddev	16.2	223.	32.0	25.9	15.1
%RSD	.26571	.23101	.39457	.53739	.22379
#1	6099.7	96648.	8149.8	4835.4	6725.9
#2	6129.6	96220.	8089.2	4785.6	6755.8
#3	6103.5	96543.	8101.7	4822.6	6737.5

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: ICV01 Acquired: 9/25/2025 11:20:56 Type: Unk
Method: 6010-200.7 NEW(v204) 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	**3.967776**	**3.982153**	**3.854680**	**4.010225**	**4.085333**	**7.834360**
Stddev	.011341	.046411	.010416	.010752	.007380	.027651
%RSD	.2858243	1.165467	.2702269	.2681177	.1806549	.3529505
#1	3.975955	4.035146	3.846153	4.015087	4.077802	7.811840
#2	3.954829	3.948744	3.851596	3.997900	4.085645	7.826018
#3	3.972542	3.962570	3.866290	4.017687	4.092553	7.865222

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.805986**	**.1962148**	**1.965083**	**19.50524**	**.8155507**	**1.965920**
Stddev	.024160	.0007180	.006112	.01659	.0013992	.006363
%RSD	.3095011	.3659094	.3110155	.0850756	.1715610	.3236584
#1	7.814580	.1954321	1.960117	19.49416	.8142595	1.961241
#2	7.824674	.1968429	1.963223	19.52432	.8153552	1.963355
#3	7.778705	.1963693	1.971908	19.49725	.8170373	1.973166

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.010156**	**4.182282**	**1.945105**	**19.41885**	**1.972018**	**1.019465**
Stddev	.003803	.010815	.005193	.04911	.006585	.000705
%RSD	.3764531	.2585866	.2669701	.2528826	.3339000	.0691353
#1	1.006883	4.193684	1.948104	19.36220	1.966841	1.020053
#2	1.009259	4.180991	1.948102	19.44918	1.969783	1.019657
#3	1.014328	4.172170	1.939109	19.44519	1.979429	1.018683

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**20.51761**	**1.943540**	**2.027167**	**20.72801**	**3.802943**	**3.949876**
Stddev	.05751	.001923	.001818	.09245	.008453	.009411
%RSD	.2802772	.0989468	.0897041	.4460245	.2222852	.2382680
#1	20.58401	1.944664	2.025551	20.79252	3.796324	3.945230
#2	20.48398	1.944636	2.029136	20.76941	3.812465	3.943692
#3	20.48484	1.941320	2.026814	20.62209	3.800038	3.960707

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: ICV01 Acquired: 9/25/2025 11:20:56 Type: Unk
Method: 6010-200.7 NEW(v204) 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	3.911861	3.899570	F 3.785113	F .0074740	F .0286837	F .0019699
Stddev	.015693	.002687	.005551	.0022300	.0063375	.0008946
%RSD	.4011606	.0689014	.1466509	29.83737	22.09435	45.41374
#1	3.907410	3.897350	3.786743	.0057323	.0323639	.0023680
#2	3.898874	3.902557	3.789666	.0099874	.0213658	.0009453
#3	3.929298	3.898802	3.778929	.0067022	.0323213	.0025963

Elem	Sr4077
Units	ppm
Avg	F -.003417
Stddev	.000116
%RSD	3.403546
#1	-.003333
#2	-.003369
#3	-.003550

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6263.240	93454.34	8532.655	4847.519	7107.427
Stddev	22.269	261.40	28.471	20.826	29.431
%RSD	.3555574	.2797121	.3336746	.4296228	.4140865
#1	6278.929	93157.18	8516.269	4823.814	7126.030
#2	6273.041	93648.79	8516.165	4855.863	7122.754
#3	6237.752	93557.05	8565.531	4862.879	7073.495

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: LLICV01 Acquired: 9/25/2025 11:29:38 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.0223825	.0389199	.0101899	.0216220	.0478298	.1012889	.0974827
Stddev	.0014703	.0021338	.0011014	.0016038	.0011751	.0054071	.0021187
%RSD	6.568775	5.482624	10.80867	7.417548	2.456859	5.338269	2.173386
#1	.0208783	.0373955	.0108216	.0198384	.0465483	.0950500	.0950775
#2	.0238163	.0413585	.0108299	.0220821	.0480844	.1041983	.0990726
#3	.0224529	.0380056	.0089181	.0229454	.0488567	.1046183	.0982979

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0062079	.0059574	2.043997	.0104056	.0291563	.0205320	.1080638
Stddev	.0000529	.0000052	.003356	.0003828	.0001289	.0004865	.0032939
%RSD	.8523872	.0877933	.1641843	3.678730	.4422103	2.369272	3.048142
#1	.0061476	.0059520	2.047364	.0100605	.0291686	.0207377	.1093276
#2	.0062467	.0059577	2.040652	.0103388	.0292786	.0208817	.1105387
#3	.0062293	.0059624	2.043977	.0108173	.0290216	.0199764	.1043251

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0205980	2.076125	.0400953	.0098691	2.014418	.0353517	.0424221
Stddev	.0008080	.043629	.0003791	.0005855	.014737	.0017026	.0004104
%RSD	3.922781	2.101445	.9454953	5.932714	.7315864	4.816210	.9674206
#1	.0210915	2.028910	.0396655	.0104210	2.031394	.0373085	.0419483
#2	.0196655	2.114949	.0403819	.0099313	2.004901	.0345383	.0426534
#3	.0210368	2.084516	.0402385	.0092549	2.006960	.0342084	.0426648

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.119696	.1042082	.1968481	.0372675	.0365014	.3643775	.0190062
Stddev	.017886	.0010126	.0002997	.0016591	.0014539	.0150716	.0016274
%RSD	.8437998	.9717611	.1522267	4.451756	3.983038	4.136250	8.562735
#1	2.136970	.1031800	.1965972	.0353531	.0356242	.3497401	.0200662
#2	2.101255	.1052046	.1967670	.0382870	.0357003	.3635439	.0171324
#3	2.120863	.1042401	.1971799	.0381624	.0381796	.3798486	.0198200

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: LLICV01 Acquired: 9/25/2025 11:29:38 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.0219398	.0191682	.0202888
Stddev	.0029650	.0020128	.0002312
%RSD	13.51421	10.50090	1.139547
#1	.0219907	.0205302	.0202010
#2	.0248791	.0168562	.0205511
#3	.0189497	.0201182	.0201144

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6491.781	98588.06	8700.618	5002.192	7644.243
Stddev	3.120	289.49	59.601	19.140	5.969
%RSD	.0480535	.2936350	.6850249	.3826331	.0780799
#1	6494.858	98339.20	8761.757	4997.231	7650.237
#2	6491.865	98519.22	8642.683	4986.020	7644.194
#3	6488.621	98905.77	8697.414	5023.324	7638.300

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: ICB01 Acquired: 9/25/2025 11:33:53 Type: Unk
Method: 6010-200.7 NEW(v204) 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	**-.000453**	**-.002106**	**-.001232**	**-.000072**	**-.001729**	**-.010323**	**-.000582**
Stddev	.000681	.000698	.000489	.000934	.001566	.004798	.001120
%RSD	150.3574	33.15177	39.66606	1289.798	90.58812	46.47791	192.5154
#1	-.000899	-.001359	-.001338	.000579	-.003299	-.004799	-.001081
#2	.000331	-.002742	-.001658	.000346	-.001722	-.012726	.000701
#3	-.000791	-.002217	-.000698	-.001143	-.000166	-.013446	-.001366

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000003**	**-.000146**	**.0050654**	**-.000102**	**-.000163**	**-.000261**	**.0043342**
Stddev	.000092	.000094	.0044961	.000454	.000127	.000466	.0026816
%RSD	3392.877	64.50241	88.76016	444.4884	77.49059	178.7243	61.87050
#1	-.000034	-.000218	.0002879	-.000532	-.000043	-.000759	.0020087
#2	-.000076	-.000180	.0092138	.000373	-.000151	-.000188	.0037264
#3	.000101	-.000039	.0056946	-.000147	-.000296	.000165	.0072676

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000291**	**-.013489**	**.0001399**	**.0001082**	**-.098135**	**-.002137**	**.0003833**
Stddev	.000588	.021818	.0002559	.0005203	.026124	.001296	.0002013
%RSD	202.3367	161.7463	182.8734	480.8264	26.62062	60.66363	52.50798
#1	-.000839	-.016262	.0002109	.0004656	-.078652	-.003069	.0001605
#2	.000331	.009583	-.000144	-.000489	-.127821	-.000657	.0005518
#3	-.000363	-.033787	.000353	.000348	-.087932	-.002685	.0004376

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0088519**	**.0015345**	**-.000093**	**-.003274**	**.0005760**	**-.001884**	**-.000436**
Stddev	.0383907	.0003097	.000296	.000369	.0015666	.001503	.000574
%RSD	433.7013	20.18041	318.2591	11.26383	271.9810	79.76694	131.7358
#1	-.027525	.0018537	.000001	-.003481	-.001094	-.002633	-.000643
#2	.048981	.0015146	.000144	-.002848	.000808	-.000154	-.000877
#3	.005099	.0012353	-.000425	-.003493	.002014	-.002865	.000213

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: ICB01 Acquired: 9/25/2025 11:33:53 Type: Unk
Method: 6010-200.7 NEW(v204) 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	**-.002447**	**-.006044**	**-.000214**
Stddev	.001449	.000955	.000136
%RSD	59.24145	15.79565	63.35011
#1	-.003818	-.006833	-.000150
#2	-.002592	-.004983	-.000122
#3	-.000930	-.006317	-.000370

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6792.975**	**105828.0**	**8771.768**	**5264.248**	**8297.743**
Stddev	23.565	216.0	71.413	20.327	21.296
%RSD	.3469000	.2040629	.8141256	.3861280	.2566536
#1	6806.880	105726.5	8725.718	5270.898	8313.217
#2	6806.279	105681.5	8735.553	5241.429	8306.558
#3	6765.767	106076.0	8854.033	5280.417	8273.455

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: CRI01 Acquired: 9/25/2025 11:38:13 Type: Unk
Method: 6010-200.7 NEW(v204) 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	**.0218213**	**.0427876**	**.0113622**	**.0251669**	**.0542196**	**.1220249**	**.1045968**
Stddev	.0019947	.0001741	.0020558	.0026417	.0018831	.0044318	.0014506
%RSD	9.141130	.4067848	18.09361	10.49670	3.473040	3.631890	1.386813
#1	.0207923	.0428421	.0114350	.0281962	.0547192	.1218596	.1038418
#2	.0241204	.0425928	.0092709	.0239623	.0521372	.1265370	.1062692
#3	.0205513	.0429279	.0133807	.0233423	.0558025	.1176780	.1036795

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0065074**	**.0063382**	**2.180877**	**.0106552**	**.0315244**	**.0226469**	**.1141216**
Stddev	.0000687	.0001540	.010009	.0000579	.0001857	.0004137	.0044051
%RSD	1.055913	2.430163	.4589641	.5438374	.5889084	1.826540	3.859974
#1	.0064327	.0063770	2.179471	.0107096	.0315612	.0225664	.1093667
#2	.0065679	.0061685	2.171644	.0105943	.0313230	.0230949	.1149344
#3	.0065216	.0064691	2.191514	.0106618	.0316888	.0222795	.1180637

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0225774**	**2.191660**	**.0429206**	**.0109936**	**2.140194**	**.0360689**	**.0448148**
Stddev	.0001714	.021461	.0001935	.0002878	.014831	.0014279	.0006423
%RSD	.7589865	.9792243	.4507873	2.617815	.6929532	3.958925	1.433288
#1	.0225207	2.167626	.0429267	.0108033	2.150456	.0345026	.0440887
#2	.0227699	2.198445	.0431109	.0108528	2.123190	.0364057	.0453090
#3	.0224415	2.208908	.0427241	.0113247	2.146936	.0372983	.0450467

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.136501**	**.1066849**	**.2106928**	**.0409835**	**.0420821**	**.3936878**	**.0202238**
Stddev	.055363	.0007343	.0001404	.0005671	.0013806	.0133914	.0006966
%RSD	2.591294	.6883208	.0666401	1.383661	3.280692	3.401529	3.444292
#1	2.172861	.1058376	.2106467	.0409776	.0428978	.4087567	.0209637
#2	2.072785	.1071382	.2105812	.0404194	.0428605	.3831493	.0201269
#3	2.163857	.1070788	.2108504	.0415535	.0404881	.3891572	.0195807

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: CRI01 Acquired: 9/25/2025 11:38:13 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.0250535	.0212639	.0216356
Stddev	.0024174	.0028051	.0001138
%RSD	9.649089	13.19162	.5261860
#1	.0224980	.0236982	.0216223
#2	.0253584	.0218972	.0215290
#3	.0273040	.0181964	.0217556

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6060.382	94714.51	8335.621	4780.113	7091.034
Stddev	1.720	225.93	48.222	15.786	6.160
%RSD	.0283787	.2385385	.5785028	.3302524	.0868638
#1	6058.613	94876.66	8390.376	4762.006	7086.476
#2	6060.484	94810.43	8299.483	4790.990	7088.585
#3	6062.049	94456.45	8317.003	4787.343	7098.041

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: ICSA01 Acquired: 9/25/2025 11:42:28 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.0031151	.0004565	-.007232	.0105450	-.003992	283.4617
Stddev	.0036541	.0022158	.002219	.0025105	.001475	.1851
%RSD	117.3030	485.3944	30.68615	23.80732	36.95916	.0653025
#1	.0047454	.0015569	-.008929	.0112317	-.003528	283.5489
#2	.0056703	-.002094	-.008048	.0077627	-.005643	283.5871
#3	-.001070	.001907	-.004721	.0126408	-.002804	283.2491

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0018477	.0022897	.0013578	267.9063	.0517142	.0010362
Stddev	.0003657	.0000673	.0001302	.0801	.0002723	.0003771
%RSD	19.79393	2.940549	9.587322	.0299147	.5266022	36.39616
#1	.0019783	.0022768	.0015041	267.9985	.0518529	.0006536
#2	.0014346	.0022298	.0013147	267.8673	.0518893	.0010473
#3	.0021301	.0023626	.0012546	267.8532	.0514005	.0014077

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0131436	113.8594	.0068775	283.8247	.0030865	-.002794
Stddev	.0017828	.3694	.0003957	.2997	.0006815	.000322
%RSD	13.56356	.3244547	5.752910	.1055851	22.08007	11.53707
#1	.0149443	113.8216	.0067780	284.0143	.0023574	-.002604
#2	.0131072	113.5103	.0065411	283.9806	.0031947	-.002612
#3	.0113794	114.2462	.0073134	283.4792	.0037075	-.003166

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001076	.0020435	.0014585	.0815733	.0766922	-.001124
Stddev	.016614	.0041320	.0002620	.0785056	.0021394	.000311
%RSD	1544.619	202.2038	17.96575	96.23934	2.789644	27.69296
#1	.008126	-.001070	.0016859	.0171919	.0780281	-.001073
#2	-.020255	.000470	.0011719	.1690307	.0742246	-.000841
#3	.008902	.006731	.0015177	.0584973	.0778240	-.001458

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: ICSA01 Acquired: 9/25/2025 11:42:28 Type: Unk
Method: 6010-200.7 NEW(v204) 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	-.003422	-.006088	.0123409	.0059107	-.010202	F -.034043
Stddev	.001117	.001173	.0202925	.0010313	.002277	.002474
%RSD	32.62866	19.26884	164.4335	17.44808	22.31664	7.267948
#1	-.003099	-.007441	-.003280	.0048184	-.012544	-.033751
#2	-.004665	-.005342	.035277	.0060462	-.010065	-.031729
#3	-.002503	-.005483	.005026	.0068676	-.007997	-.036651

Elem	Sr4077
Units	ppm
Avg	.0027815
Stddev	.0002459
%RSD	8.839788
#1	.0026918
#2	.0030596
#3	.0025931

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5885.501	92142.21	8434.102	4626.012	6456.516
Stddev	9.508	121.84	18.490	11.297	9.204
%RSD	.1615578	.1322289	.2192331	.2442057	.1425522
#1	5876.517	92279.47	8437.379	4613.673	6447.436
#2	5884.527	92046.85	8414.192	4635.846	6456.273
#3	5895.459	92100.32	8450.734	4628.516	6465.839

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: ICSAB01 Acquired: 9/25/2025 11:46:39 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.1119717	.1145510	.0419292	.0607486	.6390060	251.3461
Stddev	.0045750	.0025290	.0010402	.0061110	.0037731	.6396
%RSD	4.085830	2.207753	2.480897	10.05955	.5904707	.2544822
#1	.1161416	.1145599	.0427163	.0645451	.6416683	250.8142
#2	.1070780	.1170755	.0407499	.0640015	.6406618	251.1683
#3	.1126954	.1120176	.0423214	.0536991	.6346881	252.0558

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4969562	.5116823	1.027130	237.4342	.5763972	.5139723
Stddev	.0023822	.0016692	.000750	.3947	.0009158	.0004824
%RSD	.4793517	.3262249	.0730530	.1662500	.1588930	.0938507
#1	.4966193	.5103089	1.027996	236.9786	.5761064	.5144644
#2	.4994888	.5111978	1.026669	237.6740	.5756621	.5135004
#3	.4947604	.5135402	1.026726	237.6500	.5774232	.5139521

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5111218	104.2308	.4945664	251.1878	1.025087	.2199825
Stddev	.0005599	.5815	.0011311	.5286	.000254	.0006023
%RSD	.1095468	.5578679	.2287114	.2104223	.0247316	.2738018
#1	.5110173	104.0304	.4939650	250.7256	1.025030	.2193710
#2	.5106214	104.8859	.4958712	251.0737	1.024867	.2205752
#3	.5117266	103.7759	.4938630	251.7641	1.025364	.2200013

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0353413	.4886317	1.092559	.0143992	1.038955	1.045243
Stddev	.0057364	.0045634	.003797	.0584671	.002519	.000748
%RSD	16.23141	.9339150	.3475684	406.0430	.2424926	.0715220
#1	.0361464	.4833869	1.088187	.0765320	1.036180	1.045519
#2	.0292449	.4916941	1.095032	.0062029	1.039585	1.045814
#3	.0406326	.4908142	1.094459	-.039537	1.041100	1.044397

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: ICSAB01 Acquired: 9/25/2025 11:46:39 Type: Unk
Method: 6010-200.7 NEW(v204) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICSAB01 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.024123	.9892889	1.032447	F .0084812	F -.000703	F -.031078
Stddev	.000979	.0027601	.016763	.0022186	.004593	.001137
%RSD	.0955746	.2789933	1.623644	26.15937	653.3209	3.659838
#1	1.023166	.9861397	1.031127	.0109772	.003281	-.032372
#2	1.025122	.9904390	1.016383	.0077329	-.005727	-.030625
#3	1.024079	.9912878	1.049831	.0067335	.000337	-.030236

Elem	Sr4077
Units	ppm
Avg	F -.001303
Stddev	.000276
%RSD	21.17096
#1	-.001088
#2	-.001614
#3	-.001207

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5568.586	86069.83	8152.007	4339.320	6130.564
Stddev	8.363	278.58	9.806	19.320	5.443
%RSD	.1501863	.3236678	.1202941	.4452375	.0887827
#1	5559.817	86053.37	8142.353	4352.046	6124.910
#2	5569.468	85799.85	8151.709	4317.089	6131.012
#3	5576.474	86356.28	8161.959	4348.827	6135.768

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: ICSADLX20 Acquired: 9/25/2025 11:50:40 Type: Unk
Method: 6010-200.7 NEW(v204) 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	**-.000505**	**-.002188**	**-.001006**	**-.000902**	**-.000575**	**11.50675**	**-.000466**
Stddev	.000666	.001424	.000797	.004635	.003687	.01396	.001337
%RSD	131.8106	65.07789	79.24678	513.8436	641.6223	.1212833	286.7323
#1	-.001274	-.002692	-.001751	-.006223	.000022	11.49255	.000855
#2	-.000091	-.000580	-.001100	.001257	.002778	11.50725	-.001817
#3	-.000152	-.003291	-.000166	.002259	-.004524	11.52045	-.000436

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001586**	**-.000091**	**11.32705**	**.0021855**	**.0001023**	**.0007019**	**4.660234**
Stddev	.0000356	.000048	.01596	.0002363	.0001132	.0004546	.033491
%RSD	22.44642	52.56281	.1409295	10.81342	110.5920	64.75836	.7186512
#1	.0001980	-.000140	11.30898	.0020576	.0000184	.0011467	4.624877
#2	.0001491	-.000044	11.33291	.0024582	.0000575	.0002382	4.664349
#3	.0001287	-.000089	11.33925	.0020408	.0002310	.0007208	4.691478

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000017**	**11.70689**	**.0004207**	**-.000096**	**-.047061**	**.0000469**	**.0073716**
Stddev	.0003442	.01429	.0003975	.000543	.011965	.0026240	.0002499
%RSD	20805.44	.1220616	94.49429	566.7471	25.42564	5597.571	3.389632
#1	.0003098	11.70929	.0000703	-.000359	-.053982	-.000624	.0075280
#2	.0000650	11.71982	.0008527	-.000457	-.033244	-.002176	.0075034
#3	-.000370	11.69155	.0003391	.000529	-.053956	.002941	.0070834

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.033203**	**.0018744**	**-.000048**	**-.001687**	**.0005484**	**-.000308**	**.0006193**
Stddev	.027819	.0004760	.000211	.000348	.0002717	.013542	.0008665
%RSD	83.78647	25.39608	439.5113	20.60329	49.54583	4392.172	139.9310
#1	-.029217	.0023630	.000151	-.001938	.0003167	.014616	.0009555
#2	-.062800	.0014121	-.000026	-.001832	.0004810	-.011812	.0012672
#3	-.007591	.0018481	-.000269	-.001290	.0008474	-.003729	-.000365

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: ICSADLX20 Acquired: 9/25/2025 11:50:40 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.0031000	-.004823	-.000393
Stddev	.0012757	.000424	.000070
%RSD	41.15245	8.793194	17.85152
#1	.0016269	-.004528	-.000321
#2	.0038360	-.005309	-.000461
#3	.0038369	-.004633	-.000396

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6321.735	96372.81	8582.270	4861.066	7433.220
Stddev	9.571	205.45	34.841	17.072	10.372
%RSD	.1514003	.2131802	.4059678	.3511956	.1395301
#1	6310.839	96205.73	8543.774	4841.355	7427.412
#2	6325.583	96310.51	8591.394	4870.718	7427.054
#3	6328.784	96602.20	8611.641	4871.126	7445.195

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: ICSABDLX20 Acquired: 9/25/2025 12:00:19 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.0080039	.0022898	.0010877	.0016686	.0254742	10.80527	.0203115
Stddev	.0025160	.0005647	.0009505	.0022770	.0013462	.01910	.0007986
%RSD	31.43465	24.66146	87.37991	136.4601	5.284555	.1767295	3.931623
#1	.0081303	.0016832	.0019116	.0042886	.0263909	10.80029	.0212133
#2	.0054271	.0023859	.0013037	.0005498	.0239286	10.82637	.0196940
#3	.0104543	.0028003	.0000479	.0001675	.0261030	10.78916	.0200272

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0222822	.0426214	10.61992	.0244193	.0211218	.0228267	4.373094
Stddev	.0000307	.0001259	.04450	.0001415	.0000356	.0005221	.019563
%RSD	.1377752	.2954878	.4190637	.5792566	.1687786	2.287368	.4473597
#1	.0222765	.0427637	10.60126	.0242979	.0210876	.0227486	4.386436
#2	.0222548	.0425761	10.67071	.0243854	.0211588	.0223480	4.382211
#3	.0223154	.0425243	10.58778	.0245747	.0211189	.0233835	4.350637

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0212990	11.00386	.0428750	.0089523	-.068063	.0153221	.0477178
Stddev	.0003337	.06274	.0001698	.0001982	.028003	.0011959	.0004950
%RSD	1.566677	.5701216	.3959202	2.213500	41.14304	7.804753	1.037431
#1	.0212170	10.95388	.0430432	.0087428	-.100221	.0157504	.0482795
#2	.0210139	10.98344	.0428780	.0089773	-.049059	.0162448	.0473454
#3	.0216660	11.07426	.0427037	.0091367	-.054908	.0139711	.0475285

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.043044	.0408522	.0431767	.0400506	.0412199	.0348730	-.000021
Stddev	.007170	.0002043	.0005704	.0005463	.0006742	.0094869	.002783
%RSD	16.65666	.5001772	1.321006	1.364055	1.635587	27.20407	13078.99
#1	-.047154	.0410618	.0436775	.0402090	.0414967	.0239807	.002502
#2	-.034765	.0406535	.0432968	.0405003	.0417116	.0413288	.000441
#3	-.047213	.0408412	.0425559	.0394427	.0404513	.0393093	-.003006

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: ICSABDLX20 Acquired: 9/25/2025 12:00:19 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.0013751	-.004852	-.000362
Stddev	.0016520	.002356	.000105
%RSD	120.1373	48.55781	28.94332
#1	.0017298	-.007364	-.000402
#2	-.000425	-.004502	-.000243
#3	.002821	-.002691	-.000440

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6375.961	98269.91	8698.092	4950.246	7501.247
Stddev	4.962	69.09	25.753	23.690	7.885
%RSD	.0778238	.0703100	.2960815	.4785668	.1051180
#1	6376.043	98336.95	8702.047	4939.675	7492.955
#2	6370.959	98198.93	8670.589	4933.682	7502.136
#3	6380.881	98273.83	8721.638	4977.381	7508.650

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: CCV01 Acquired: 9/25/2025 12:12:55 Type: Unk
Method: 6010-200.7 NEW(v204) 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	**4.908166**	**4.898562**	**4.796059**	**4.972713**	**4.931099**	**9.656144**	**9.591471**
Stddev	.034209	.050135	.012418	.024442	.025607	.024610	.094143
%RSD	.6969776	1.023465	.2589225	.4915208	.5192889	.2548615	.9815316
#1	4.874626	4.884672	4.782235	4.947734	4.903116	9.683147	9.618416
#2	4.906867	4.856836	4.799675	4.973824	4.936817	9.650310	9.669203
#3	4.943006	4.954177	4.806269	4.996580	4.953362	9.634975	9.486793

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2353081**	**2.415438**	**24.01687**	**.9812759**	**2.409687**	**1.227080**	**5.008039**
Stddev	.0011329	.007983	.08460	.0016421	.009074	.006681	.005550
%RSD	.4814418	.3305054	.3522320	.1673428	.3765613	.5444882	.1108274
#1	.2364480	2.407098	24.06866	.9822393	2.400119	1.219963	5.001879
#2	.2341824	2.416207	23.91925	.9793799	2.410774	1.228060	5.012652
#3	.2352938	2.423009	24.06270	.9822086	2.418168	1.233217	5.009585

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.378340**	**23.86961**	**2.413126**	**1.225206**	**24.60473**	**2.419986**	**2.491168**
Stddev	.008813	.04521	.007996	.000624	.06310	.001001	.001740
%RSD	.3705598	.1893875	.3313724	.0509172	.2564532	.0413477	.0698580
#1	2.378220	23.91469	2.404358	1.224620	24.56163	2.420811	2.492947
#2	2.387213	23.86986	2.415005	1.225136	24.67716	2.420275	2.489469
#3	2.369588	23.82428	2.420016	1.225861	24.57541	2.418873	2.491089

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.09276**	**4.668133**	**4.936805**	**4.813542**	**4.791488**	**4.978598**	**4.822842**
Stddev	.06362	.018917	.021330	.011604	.015340	.046903	.032069
%RSD	.2535485	.4052399	.4320595	.2410612	.3201574	.9420928	.6649455
#1	25.02321	4.688499	4.914770	4.802733	4.802616	4.924767	4.799080
#2	25.14802	4.651111	4.938294	4.812091	4.797861	5.010669	4.810128
#3	25.10704	4.664789	4.957352	4.825803	4.773989	5.000358	4.859319

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: CCV01 Acquired: 9/25/2025 12:12:55 Type: Unk
Method: 6010-200.7 NEW(v204) 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	**4.848628**	**4.752083**	**4.828341**
Stddev	.018988	.016782	.022927
%RSD	.3916089	.3531441	.4748423
#1	4.831089	4.771199	4.824717
#2	4.846003	4.745274	4.852864
#3	4.868791	4.739776	4.807441

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6331.481**	**99201.87**	**8865.499**	**4906.914**	**7183.636**
Stddev	11.669	188.99	54.351	14.191	9.697
%RSD	.1842954	.1905106	.6130584	.2892043	.1349842
#1	6344.601	99028.96	8803.480	4891.115	7190.814
#2	6322.263	99173.02	8888.188	4911.047	7172.605
#3	6327.581	99403.62	8904.830	4918.580	7187.490

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: CCB01 Acquired: 9/25/2025 12:17:22 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.0015799	-.003005	-.001152	-.000929	-.000860	-.010917	.0003876
Stddev	.0027103	.002359	.000387	.001170	.000916	.005701	.0019855
%RSD	171.5481	78.50180	33.60769	126.0302	106.5419	52.22493	512.2197
#1	.0041272	-.004729	-.001008	-.001628	-.000096	-.015793	-.001407
#2	.0018807	-.003971	-.001590	-.001581	-.000609	-.004648	.002520
#3	-.001268	-.000316	-.000857	.000423	-.001876	-.012310	.000050

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000589	-.000102	.0159080	.0000034	-.000087	-.000700	.0014286
Stddev	.0000387	.000078	.0050342	.0004096	.000206	.000283	.0041415
%RSD	65.69878	75.93446	31.64555	12013.77	236.5281	40.47213	289.8902
#1	.0000861	-.000013	.0184279	-.000469	.000051	-.000947	.0002487
#2	.0000759	-.000154	.0101115	.000254	-.000324	-.000763	.0060320
#3	.0000146	-.000140	.0191848	.000226	.000011	-.000391	-.001995

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004272	-.014065	.0001627	.0001003	-.088963	-.002949	.0028332
Stddev	.0009078	.033826	.0003255	.0007688	.009742	.000854	.0003856
%RSD	212.4734	240.4946	200.0874	766.8152	10.95115	28.97861	13.60886
#1	-.000338	-.037673	.0004155	.0004446	-.099615	-.003858	.0025552
#2	.000190	-.029210	-.000205	.0006367	-.086769	-.002163	.0026711
#3	.001430	.024687	.000277	-.000781	-.080504	-.002824	.0032734

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.082038	.0009554	.0001984	-.004239	.0004741	.0014831	-.000288
Stddev	.074668	.0005373	.0002035	.000751	.0008663	.0116645	.000495
%RSD	91.01661	56.24090	102.5612	17.70694	182.7151	786.5038	171.7199
#1	-.014463	.0009860	.0000229	-.003401	-.000276	-.011800	-.000854
#2	-.069451	.0014768	.0004215	-.004850	.001422	.006190	.000060
#3	-.162199	.0004034	.0001509	-.004466	.000276	.010058	-.000070

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: CCB01 Acquired: 9/25/2025 12:17:22 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.0022642	-.008210	-.000135
Stddev	.0011915	.001824	.000076
%RSD	52.62316	22.21380	56.47292
#1	.0019969	-.007665	-.000132
#2	.0012290	-.006720	-.000060
#3	.0035665	-.010244	-.000213

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6615.796	103592.5	9135.218	5134.278	7958.713
Stddev	9.992	823.8	35.045	39.753	14.128
%RSD	.1510339	.7952753	.3836221	.7742656	.1775143
#1	6627.318	104392.8	9171.073	5167.824	7974.410
#2	6609.524	103637.9	9133.537	5144.640	7947.018
#3	6610.544	102746.9	9101.044	5090.371	7954.712

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: LR-2 Acquired: 9/25/2025 12:40:24 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.0659858	-.153886	.0313647	.0755936	-.191910	1822.854	.0176933
Stddev	.0066100	.007399	.0087889	.0076769	.007549	33.326	.0007095
%RSD	10.01732	4.808230	28.02154	10.15549	3.933716	1.828217	4.010056
#1	.0643619	-.145571	.0413492	.0681056	-.183524	1860.172	.0177334
#2	.0732564	-.159746	.0247991	.0834464	-.198165	1796.061	.0169646
#3	.0603391	-.156340	.0279457	.0752288	-.194041	1812.330	.0183819

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0457938	.0218893	9.122841	-.305221	.0475390	.1486146	2680.593
Stddev	.0006191	.0020839	.111458	.002444	.0011082	.0245878	21.982
%RSD	1.351916	9.520347	1.221750	.8008710	2.331203	16.54468	.8200584
#1	.0463032	.0217757	9.081665	-.306200	.0466109	.1440947	2684.673
#2	.0459734	.0240277	9.037828	-.302439	.0487660	.1751487	2656.856
#3	.0451048	.0198645	9.249029	-.307025	.0472402	.1266003	2700.249

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.211722	2.161413	.0588119	-.088385	6.996645	.0533248	.0674966
Stddev	.004235	.021125	.0006850	.006268	.040145	.0022622	.0024661
%RSD	2.000106	.9773922	1.164766	7.091837	.5737719	4.242221	3.653656
#1	-.216388	2.182859	.0590548	-.087489	7.012905	.0514522	.0701599
#2	-.210656	2.160756	.0580386	-.095054	7.026109	.0558382	.0670377
#3	-.208122	2.140623	.0593424	-.082614	6.950921	.0526839	.0652921

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1868.244	^ *****	-.019204	.0291969	.0034641	.4832199	.1062825
Stddev	25.935	-----	.001339	.0030825	.0019912	.0203656	.0051114
%RSD	1.388194	-----	6.973220	10.55779	57.48178	4.214572	4.809227
#1	1884.032	^ -----	-.020703	.0306517	.0055778	.5067065	.1061768
#2	1882.389	^ -----	-.018783	.0256562	.0016236	.4704546	.1114460
#3	1838.312	^ -----	-.018126	.0312829	.0031908	.4724986	.1012249

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: LR-2 Acquired: 9/25/2025 12:40:24 Type: Unk
Method: 6010-200.7 NEW(v204) 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	**-.431491**	**.2821270**	**-2.57063**
Stddev	.007506	.0022855	.02110
%RSD	1.739509	.8100893	.8209149
#1	-.439520	.2810761	-2.57444
#2	-.424651	.2805560	-2.54788
#3	-.430302	.2847489	-2.58956

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5255.033**	**80547.42**	**8445.588**	**4046.843**	**4828.330**
Stddev	6.111	108.03	72.285	11.311	5.447
%RSD	.1162934	.1341198	.8558866	.2794916	.1128183
#1	5252.527	80560.09	8364.630	4035.242	4828.473
#2	5261.999	80433.62	8468.478	4047.449	4833.704
#3	5250.572	80648.56	8503.657	4057.839	4822.812

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: LR-3 Acquired: 9/25/2025 12:44:51 Type: Unk
Method: 6010-200.7 NEW(v204) 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	**.1178242**	**.0197326**	**249.2564**	**.0030768**	**.1723410**	**.0661706**	**-.002486**
Stddev	.0016248	.0027487	2.1026	.0010417	.0020727	.0064100	.000239
%RSD	1.379008	13.92982	.8435570	33.85741	1.202683	9.687022	9.613438
#1	.1168268	.0191614	250.6497	.0020047	.1743223	.0735334	-.002607
#2	.1169467	.0173144	246.8378	.0031406	.1701876	.0618339	-.002640
#3	.1196991	.0227221	250.2816	.0040852	.1725132	.0631445	-.002210

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.007162**	**-.003563**	**.2132144**	**24.22052**	**.0109489**	**54.40960**	**.0844179**
Stddev	.000120	.000077	.0079936	.06670	.0001918	.29772	.0059694
%RSD	1.668786	2.171797	3.749079	.2754033	1.751526	.5471777	7.071198
#1	-.007034	-.003581	.2213133	24.27158	.0107567	54.57486	.0782314
#2	-.007271	-.003478	.2053305	24.14505	.0111403	54.06591	.0901434
#3	-.007181	-.003629	.2129994	24.24495	.0109498	54.58802	.0848787

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**54.61961**	**-.286890**	**24.21294**	**.0017837**	**.7654105**	**-.040990**	**32.80542**
Stddev	.46408	.061559	.13580	.0001865	.0432140	.004193	.34917
%RSD	.8496650	21.45720	.5608446	10.45554	5.645862	10.22926	1.064363
#1	54.11092	-.220525	24.28142	.0019975	.8117282	-.037862	32.43143
#2	55.01989	-.298025	24.05654	.0016990	.7583280	-.039354	32.86197
#3	54.72803	-.342122	24.30086	.0016546	.7261752	-.045755	33.12287

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.282116**	**-.002565**	**-.022070**	**-.003700**	**-.044261**	**-.152824**	**.2177988**
Stddev	.137707	.000855	.000716	.001473	.003059	.017869	.0025111
%RSD	6.034172	33.32535	3.242963	39.80036	6.911448	11.69274	1.152935
#1	2.417481	-.002648	-.021493	-.002754	-.046943	-.171930	.2166440
#2	2.286685	-.003375	-.021847	-.005396	-.040929	-.136524	.2206796
#3	2.142181	-.001671	-.022871	-.002949	-.044912	-.150017	.2160729

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: LR-3 Acquired: 9/25/2025 12:44:51 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.0870290	.0075120	-.000029
Stddev	.0037984	.0037189	.000070
%RSD	4.364552	49.50645	245.7803
#1	.0851047	.0110276	-.000068
#2	.0845778	.0078898	-.000071
#3	.0914045	.0036186	.000053

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6032.201	101797.4	8862.153	4829.665	7490.376
Stddev	39.754	214.9	94.519	21.521	45.906
%RSD	.6590284	.2110806	1.066541	.4456098	.6128665
#1	5996.804	101995.1	8949.480	4852.178	7448.691
#2	6075.211	101828.4	8761.795	4827.521	7539.576
#3	6024.590	101568.7	8875.183	4809.296	7482.859

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: PB169800BL Acquired: 9/25/2025 12:54:28 Type: Unk
Method: 6010-200.7 NEW(v204) 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	**-.000398**	**-.003394**	**.0007093**	**-.000329**	**-.000448**	**-.012856**	**-.000133**
Stddev	.001111	.001152	.0005319	.001622	.001853	.002455	.001471
%RSD	279.1235	33.94032	74.98609	493.2071	413.7480	19.09495	1103.091
#1	.000383	-.003860	.0001430	-.001238	.000611	-.014734	-.000021
#2	.000093	-.002082	.0011983	.001544	.000633	-.013756	.001278
#3	-.001670	-.004240	.0007866	-.001292	-.002587	-.010078	-.001658

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000020**	**-.000261**	**.0011813**	**.0001638**	**-.000438**	**-.000135**	**.0086349**
Stddev	.000049	.000110	.0092719	.0000902	.000111	.000061	.0061422
%RSD	247.6095	42.14854	784.9065	55.06613	25.36657	45.46095	71.13222
#1	-.000045	-.000134	.0110548	.0002633	-.000557	-.000097	.0111485
#2	-.000052	-.000319	-.007341	.0001403	-.000337	-.000206	.0131217
#3	.000037	-.000330	-.000170	.0000876	-.000419	-.000102	.0016346

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0009300**	**-.020498**	**-.000144**	**-.000258**	**-.043010**	**-.004325**	**-.000149**
Stddev	.0001766	.021108	.000358	.000573	.016678	.003714	.000221
%RSD	18.98659	102.9756	248.2271	222.2682	38.77617	85.87054	147.6128
#1	.0008541	-.033739	-.000055	-.000477	-.025610	-.006405	-.000373
#2	.0011318	-.031599	.000160	.000393	-.044564	-.006534	-.000143
#3	.0008041	.003844	-.000538	-.000689	-.058857	-.000037	.000068

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.002616**	**-.007531**	**-.000093**	**-.006174**	**-.000945**	**-.005431**	**-.001274**
Stddev	.019140	.000497	.000121	.000456	.002183	.009835	.000398
%RSD	731.5490	6.593311	129.7191	7.382537	230.9325	181.1032	31.24965
#1	-.006184	-.007978	-.000202	-.005875	-.000234	-.015436	-.000888
#2	.018056	-.006997	.000037	-.005948	-.003396	.004225	-.001683
#3	-.019721	-.007619	-.000113	-.006699	.000793	-.005082	-.001250

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: PB169800BL Acquired: 9/25/2025 12:54:28 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.0000929	-.009975	-.000719
Stddev	.0034583	.002783	.000024
%RSD	3723.799	27.90416	3.399076
#1	.0040742	-.006916	-.000697
#2	-.002166	-.012359	-.000745
#3	-.001630	-.010649	-.000715

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6191.367	98382.04	8583.386	4936.297	7393.593
Stddev	12.142	429.62	82.704	9.686	12.169
%RSD	.1961049	.4366829	.9635387	.1962266	.1645949
#1	6199.630	98877.45	8678.256	4931.436	7399.740
#2	6197.045	98112.00	8526.473	4947.452	7401.462
#3	6177.427	98156.68	8545.430	4930.005	7379.576

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: PB169800BS Acquired: 9/25/2025 12:58:48 Type: Unk
Method: 6010-200.7 NEW(v204) 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	**.8342766**	**2.100159**	**1.007267**	**2.133041**	**.8510031**	**2.062250**
Stddev	.0054614	.020465	.003242	.006468	.0044467	.008527
%RSD	.6546292	.9744703	.3218570	.3032327	.5225263	.4134708
#1	.8315837	2.088947	1.003792	2.129695	.8462222	2.071832
#2	.8306847	2.087751	1.007798	2.128931	.8517717	2.059424
#3	.8405615	2.123781	1.010210	2.140497	.8550155	2.055496

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1995346**	**.2063934**	**.2043021**	**1.041951**	**.4215816**	**.2058236**
Stddev	.0011365	.0010231	.0004736	.003245	.0017306	.0004297
%RSD	.5695978	.4957045	.2318358	.3114642	.4104898	.2087720
#1	.1992156	.2069841	.2038572	1.038270	.4199855	.2055297
#2	.1985916	.2052121	.2042491	1.043178	.4213383	.2056244
#3	.2007965	.2069841	.2048001	1.044403	.4234209	.2063167

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3227637**	**3.159805**	**.2056851**	**2.066578**	**.5178273**	**.0740150**
Stddev	.0007566	.037534	.0003376	.021150	.0008841	.0005170
%RSD	.2344127	1.187853	.1641204	1.023437	.1707293	.6985159
#1	.3222377	3.118540	.2059757	2.086307	.5172176	.0739210
#2	.3224227	3.191913	.2057648	2.069181	.5174230	.0735514
#3	.3236308	3.168963	.2053148	2.044247	.5188412	.0745725

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.186949**	**.3088935**	**.2133516**	**10.80002**	**.2989034**	**.4277996**
Stddev	.034089	.0017246	.0017122	.12550	.0021335	.0017563
%RSD	1.069642	.5583032	.8025291	1.162076	.7137703	.4105504
#1	3.154017	.3092473	.2141707	10.66284	.3001799	.4267729
#2	3.184743	.3104138	.2113837	10.82813	.2964404	.4267983
#3	3.222087	.3070195	.2145003	10.90908	.3000899	.4298276

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: PB169800BS Acquired: 9/25/2025 12:58:48 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.7125610	.2006298	.9193756	6.030804	F -.003128	.2104392
Stddev	.0021010	.0005151	.0125847	.022950	.001319	.0023095
%RSD	.2948530	.2567279	1.368828	.3805472	42.15347	1.097455
#1	.7103642	.2005447	.9158691	6.021088	-.004355	.2119229
#2	.7145508	.2001625	.9333417	6.014310	-.003296	.2077783
#3	.7127681	.2011821	.9089161	6.057014	-.001734	.2116163

Elem	Sr4077
Units	ppm
Avg	.1999604
Stddev	.0002986
%RSD	.1493138
#1	.2000250
#2	.1996348
#3	.2002214

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6061.303	96182.11	8406.533	4746.365	7113.125
Stddev	12.626	352.54	41.178	12.809	3.018
%RSD	.2082994	.3665320	.4898382	.2698623	.0424225
#1	6075.776	96543.02	8374.298	4745.341	7116.531
#2	6055.582	96164.72	8452.922	4759.655	7110.787
#3	6052.550	95838.59	8392.379	4734.099	7112.056

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: PB169812BL Acquired: 9/25/2025 13:02:50 Type: Unk
Method: 6010-200.7 NEW(v204) 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	**-.001009**	**-.004670**	**-.000570**	**.0016358**	**-.002964**	**-.013927**	**-.001763**
Stddev	.002696	.001660	.000913	.0018648	.001856	.005625	.001169
%RSD	267.1531	35.55537	160.2648	114.0013	62.62735	40.38769	66.28813
#1	-.000959	-.006094	.000237	.0024565	-.004498	-.020407	-.001101
#2	.001662	-.005070	-.000385	-.000499	-.000900	-.011078	-.001076
#3	-.003730	-.002846	-.001562	.002949	-.003494	-.010297	-.003113

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000052**	**-.000303**	**.0026314**	**-.000041**	**-.000492**	**-.000270**	**-.001251**
Stddev	.000096	.000022	.0188426	.000020	.000322	.000417	.011131
%RSD	184.4801	7.424792	716.0635	47.75608	65.32549	154.4140	890.0151
#1	-.000029	-.000328	-.010449	-.000056	-.000132	-.000313	.008356
#2	-.000157	-.000285	.024229	-.000019	-.000751	-.000665	.001341
#3	.000031	-.000295	-.005885	-.000049	-.000593	.000167	-.013449

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0007977**	**-.002928**	**-.000151**	**-.000261**	**-.095698**	**-.003134**	**-.000440**
Stddev	.0005400	.000428	.000259	.000057	.020865	.002912	.000157
%RSD	67.69556	14.62769	171.2938	21.77753	21.80340	92.93595	35.62509
#1	.0011693	-.003300	-.000008	-.000262	-.115998	-.006341	-.000605
#2	.0001783	-.002460	.000004	-.000318	-.074310	-.002407	-.000421
#3	.0010455	-.003024	-.000450	-.000204	-.096785	-.000654	-.000293

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0098411**	**-.007802**	**-.000539**	**-.005994**	**-.000714**	**-.018669**	**-.000461**
Stddev	.0584584	.000349	.000148	.000882	.001805	.001835	.001019
%RSD	594.0240	4.470000	27.55276	14.71933	252.7547	9.828505	221.1504
#1	.0738421	-.007465	-.000687	-.006995	.001129	-.020724	-.001507
#2	-.040742	-.007778	-.000538	-.005656	-.000792	-.018089	.000528
#3	-.003577	-.008162	-.000390	-.005331	-.002478	-.017195	-.000403

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: PB169812BL Acquired: 9/25/2025 13:02:50 Type: Unk
Method: 6010-200.7 NEW(v204) 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	**-.003603**	**-.008674**	**-.000693**
Stddev	.000868	.002337	.000178
%RSD	24.08383	26.94285	25.73366
#1	-.004603	-.006181	-.000899
#2	-.003053	-.009025	-.000583
#3	-.003152	-.010816	-.000598

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6787.943**	**106819.3**	**8945.682**	**5177.896**	**8449.865**
Stddev	13.544	403.8	11.738	7.923	18.595
%RSD	.1995285	.3779871	.1312121	.1530179	.2200654
#1	6790.167	107225.5	8937.079	5175.140	8455.736
#2	6800.238	106418.0	8940.913	5171.719	8464.815
#3	6773.425	106814.3	8959.053	5186.829	8429.042

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: PB169812BS Acquired: 9/25/2025 13:07:10 Type: Unk
Method: 6010-200.7 NEW(v204) 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	**.7522916**	**1.907786**	**.9064319**	**1.934854**	**.7819152**	**1.866230**
Stddev	.0026427	.018368	.0034192	.001689	.0017528	.009367
%RSD	.3512861	.9628001	.3772133	.0873154	.2241696	.5019326
#1	.7541249	1.908636	.9101260	1.934920	.7836495	1.876945
#2	.7534874	1.889007	.9057918	1.936509	.7819518	1.859596
#3	.7492623	1.925714	.9033781	1.933132	.7801444	1.862148

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1745640**	**.1892336**	**.1837236**	**.9387107**	**.3869501**	**.1845036**
Stddev	.0010308	.0013939	.0004993	.0062265	.0002641	.0004424
%RSD	.5904791	.7365977	.2717562	.6632993	.0682411	.2398037
#1	.1746105	.1908345	.1841135	.9327525	.3868637	.1849790
#2	.1735108	.1882897	.1838963	.9382051	.3867400	.1844282
#3	.1755707	.1885765	.1831608	.9451745	.3872465	.1841038

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2918239**	**2.886569**	**.1837426**	**1.862452**	**.4644816**	**.0694173**
Stddev	.0007259	.020691	.0005825	.023048	.0001677	.0004510
%RSD	.2487595	.7168095	.3170077	1.237525	.0361004	.6496435
#1	.2916398	2.876044	.1834107	1.846778	.4643218	.0698179
#2	.2926242	2.910406	.1844152	1.851662	.4646562	.0695051
#3	.2912078	2.873255	.1834020	1.888916	.4644667	.0689289

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.800617**	**.2775254**	**.1971666**	**9.920771**	**.2714950**	**.3942772**
Stddev	.005153	.0011310	.0012080	.087175	.0022834	.0006381
%RSD	.1839914	.4075281	.6126732	.8787138	.8410416	.1618524
#1	2.799223	.2786977	.1985560	9.820498	.2740183	.3937574
#2	2.806324	.2774376	.1963654	9.963260	.2695710	.3949894
#3	2.796305	.2764408	.1965783	9.978555	.2708958	.3940848

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: PB169812BS Acquired: 9/25/2025 13:07:10 Type: Unk
Method: 6010-200.7 NEW(v204) 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	**.6515459**	**.1844700**	**.8591017**	**5.377085**	F **-.006369**	**.1841597**
Stddev	.0020208	.0028757	.0224320	.009112	.003621	.0005745
%RSD	.3101506	1.558886	2.611103	.1694669	56.84797	.3119636
#1	.6517946	.1874303	.8338699	5.367243	-.003581	.1836726
#2	.6494123	.1816871	.8666468	5.378780	-.005066	.1840132
#3	.6534309	.1842925	.8767885	5.385230	-.010461	.1847933

Elem	Sr4077
Units	ppm
Avg	**.1794872**
Stddev	.0003612
%RSD	.2012620
#1	.1791643
#2	.1798773
#3	.1794201

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6399.227**	**98126.55**	**8734.435**	**4875.925**	**7556.576**
Stddev	13.442	282.98	42.820	21.164	15.685
%RSD	.2100549	.2883784	.4902463	.4340489	.2075620
#1	6402.041	98311.49	8691.361	4861.232	7554.305
#2	6384.600	97800.79	8734.948	4866.359	7542.151
#3	6411.039	98267.38	8776.997	4900.182	7573.273

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: LR-1 Acquired: 9/25/2025 13:11:11 Type: Unk
Method: 6010-200.7 NEW(v204) 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	**-.004448**	**.0032179**	**-.003496**	**-.019073**	**.0180120**	**.2067932**	**.0106982**
Stddev	.004188	.0037465	.002225	.003332	.0026287	.0121889	.0016956
%RSD	94.13832	116.4267	63.64067	17.47055	14.59394	5.894245	15.84940
#1	-.004358	.0047358	-.004273	-.020009	.0203313	.1953763	.0093513
#2	-.000307	-.001049	-.000987	-.021837	.0185479	.2196298	.0101411
#3	-.008681	.005967	-.005228	-.015373	.0151566	.2053734	.0126023

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0008250**	**.0005606**	**2360.922**	**.0323298**	**.0061457**	**.0086008**	**.6172052**
Stddev	.0000755	.0002095	16.762	.0006760	.0001708	.0013532	.0204970
%RSD	9.149661	37.36436	.7099874	2.091110	2.779261	15.73303	3.320941
#1	.0007748	.0005228	2353.597	.0329495	.0062593	.0091861	.5935373
#2	.0009118	.0007864	2380.100	.0316088	.0059493	.0070535	.6290475
#3	.0007885	.0003726	2349.069	.0324310	.0062286	.0095628	.6290309

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0241878**	**2168.004**	**.0260876**	**-.001473**	**2402.134**	**.0097149**	**.0688655**
Stddev	.0005445	10.413	.0004501	.000272	40.753	.0010569	.0002581
%RSD	2.251174	.4803183	1.725407	18.47761	1.696540	10.87963	.3747529
#1	.0239959	2163.684	.0266026	-.001169	2421.058	.0084967	.0691634
#2	.0248023	2160.446	.0258910	-.001558	2429.985	.0103891	.0687244
#3	.0237652	2179.882	.0257692	-.001693	2355.360	.0102588	.0687088

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**11.82689**	**.0037639**	**.0041614**	**-.009868**	**-.105856**	**-.020313**	**.0156127**
Stddev	1.52648	.0010820	.0011249	.000452	.001774	.013049	.0008524
%RSD	12.90686	28.74660	27.03208	4.575696	1.676235	64.23821	5.459452
#1	10.30875	.0036078	.0028834	-.010305	-.107577	-.035293	.0147040
#2	11.81032	.0027684	.0050013	-.009897	-.104033	-.014230	.0157396
#3	13.36158	.0049155	.0045996	-.009403	-.105958	-.011417	.0163945

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: LR-1 Acquired: 9/25/2025 13:11:11 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.2298737	-.338436	.0580219
Stddev	.0065066	.002306	.0004622
%RSD	2.830524	.6812449	.7966583
#1	.2230415	-.336983	.0579792
#2	.2359966	-.341095	.0575825
#3	.2305829	-.337231	.0585040

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4321.587	71280.08	7786.288	3343.422	4484.210
Stddev	12.649	109.12	45.978	21.743	15.623
%RSD	.2926899	.1530854	.5905058	.6503243	.3483934
#1	4329.300	71305.74	7777.582	3360.023	4493.050
#2	4328.472	71160.41	7835.998	3318.810	4493.408
#3	4306.989	71374.08	7745.285	3351.432	4466.172

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3187-01 Acquired: 9/25/2025 13:15:40 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.2767923	-.016265	3.146132	.0122929	-.009756	173.1649
Stddev	.0017597	.001858	.001523	.0042220	.001002	.6843
%RSD	.6357516	11.42563	.0484236	34.34482	10.26927	.3951847
#1	.2786882	-.014819	3.147846	.0082500	-.010142	173.9541
#2	.2764774	-.015613	3.145617	.0119552	-.008618	172.7357
#3	.2752113	-.018361	3.144933	.0166736	-.010506	172.8049

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.538625	.0139150	.0183018	93.22723	.5084353	.1355736
Stddev	.011945	.0000573	.0001096	.35921	.0006102	.0000746
%RSD	.4705362	.4114282	.5988862	.3853059	.1200089	.0549988
#1	2.548473	.0139681	.0184054	93.63140	.5077308	.1355413
#2	2.542064	.0138544	.0183130	93.10586	.5087958	.1355206
#3	2.525338	.0139226	.0181870	92.94442	.5087793	.1356588

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8448270	274.4652	5.174778	76.78221	.3070341	.0058711
Stddev	.0023172	1.5063	.019416	.15610	.0002675	.0003615
%RSD	.2742809	.5488307	.3751972	.2033081	.0871206	6.158075
#1	.8473500	272.7420	5.195783	76.96063	.3068878	.0054540
#2	.8443371	275.5321	5.171060	76.67074	.3073428	.0060946
#3	.8427940	275.1214	5.157490	76.71528	.3068716	.0060647

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.120739	.5167829	2.439395	21.98385	.3172432	.0104629
Stddev	.038979	.0010421	.008996	.10011	.0047256	.0003433
%RSD	.9459159	.2016550	.3687627	.4554022	1.489570	3.280899
#1	4.143981	.5155817	2.448035	21.86942	.3118561	.0108094
#2	4.142498	.5173204	2.430082	22.02687	.3191847	.0104565
#3	4.075739	.5174465	2.440069	22.05527	.3206888	.0101229

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3187-01 Acquired: 9/25/2025 13:15:40 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.0848951	3.283219	F 13.58611	F 19.73736	8.842404	.1734063
Stddev	.0014536	.021047	.02794	.03310	.025999	.0012347
%RSD	1.712277	.6410386	.2056553	.1676861	.2940257	.7120166
#1	.0851702	3.303516	13.57936	19.70511	8.848426	.1747063
#2	.0861916	3.261495	13.56216	19.73573	8.864863	.1722494
#3	.0833236	3.284645	13.61681	19.77124	8.813922	.1732634

Elem	Sr4077
Units	ppm
Avg	.1033098
Stddev	.0029033
%RSD	2.810258
#1	.1065113
#2	.1025703
#3	.1008478

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7354.150	119041.0	11496.17	5672.589	6838.132
Stddev	1.340	421.3	57.33	25.653	4.520
%RSD	.0182231	.3539502	.4986581	.4522238	.0660966
#1	7352.862	119424.2	11430.54	5655.301	6839.675
#2	7354.053	119108.9	11536.42	5702.063	6833.043
#3	7355.537	118589.8	11521.56	5660.403	6841.678

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3188-02 Acquired: 9/25/2025 13:19:41 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.0668725	-.015721	.7071178	.0021910	-.018202	140.6347
Stddev	.0034964	.001983	.0018633	.0037692	.001625	.5233
%RSD	5.228389	12.61279	.2635115	172.0350	8.925700	.3720638
#1	.0685826	-.017043	.7089855	-.001718	-.018097	140.7229
#2	.0628502	-.013441	.7071090	.005802	-.019876	140.0729
#3	.0691846	-.016678	.7052589	.002489	-.016632	141.1082

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.479633	.0146342	.0098061	31.92491	.3071035	.1668619
Stddev	.005320	.0000565	.0002927	.07964	.0005663	.0000137
%RSD	.3595172	.3858255	2.984867	.2494604	.1843931	.0082028
#1	1.474849	.0146960	.0101213	31.88979	.3077115	.1668740
#2	1.478689	.0145853	.0097543	31.86886	.3065911	.1668646
#3	1.485362	.0146213	.0095428	32.01607	.3070080	.1668470

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3464936	260.6887	6.893006	63.82673	.2741124	-.002427
Stddev	.0009628	1.6033	.024272	.19780	.0007373	.000627
%RSD	.2778696	.6150317	.3521282	.3098975	.2689665	25.81513
#1	.3471508	259.6810	6.866416	63.75510	.2743243	-.003133
#2	.3469416	259.8475	6.898630	63.67473	.2732923	-.001935
#3	.3453885	262.5376	6.913972	64.05036	.2747204	-.002214

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.568894	.4814051	1.129650	32.88996	.2152043	.0016537
Stddev	.071358	.0033864	.004535	.12066	.0070238	.0004239
%RSD	.8327569	.7034352	.4014165	.3668709	3.263765	25.63390
#1	8.519017	.4804101	1.134044	32.91898	.2127143	.0015690
#2	8.537033	.4786277	1.124987	32.75744	.2097648	.0021135
#3	8.650632	.4851775	1.129918	32.99347	.2231339	.0012785

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3188-02 Acquired: 9/25/2025 13:19:41 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.0434653	7.878819	F 29.71493	F 10.05059	1.815307	.2212141
Stddev	.0007697	.054774	.35415	.00877	.006497	.0015586
%RSD	1.770857	.6952099	1.191841	.0872493	.3579155	.7045753
#1	.0442945	7.874843	29.31422	10.04673	1.810375	.2215720
#2	.0433279	7.826141	29.98600	10.04441	1.812877	.2195077
#3	.0427736	7.935473	29.84458	10.06062	1.822669	.2225627

Elem	Sr4077
Units	ppm
Avg	-.066168
Stddev	.001061
%RSD	1.602731
#1	-.065517
#2	-.065596
#3	-.067392

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7714.162	123748.3	11553.98	5987.633	6879.682
Stddev	7.684	61.4	33.13	7.322	3.217
%RSD	.0996057	.0495940	.2867086	.1222854	.0467594
#1	7706.333	123719.3	11566.24	5982.979	6875.967
#2	7721.692	123818.8	11516.47	5983.846	6881.562
#3	7714.460	123706.8	11579.23	5996.073	6881.516

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: CCV02 Acquired: 9/25/2025 13:23:44 Type: Unk
Method: 6010-200.7 NEW(v204) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV02 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.028755**	**5.175792**	**4.878717**	**5.114900**	**5.077321**	**9.807001**	**9.694713**
Stddev	.019900	.078071	.013123	.018281	.005044	.010701	.059087
%RSD	.3957233	1.508395	.2689752	.3574073	.0993439	.1091206	.6094799
#1	5.021060	5.163985	4.868620	5.097310	5.072257	9.803935	9.627345
#2	5.013851	5.104296	4.873980	5.113590	5.082345	9.798167	9.719043
#3	5.051353	5.259094	4.893550	5.133802	5.077361	9.818901	9.737751

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2345030**	**2.464775**	**24.29476**	**1.010582**	**2.460744**	**1.254873**	**5.218837**
Stddev	.0013008	.006471	.05583	.028488	.004804	.002085	.147932
%RSD	.5546830	.2625518	.2298190	2.819006	.1952087	.1661874	2.834576
#1	.2331007	2.460203	24.23988	.994643	2.457360	1.253889	5.153598
#2	.2347383	2.461943	24.29290	.993631	2.458629	1.253460	5.114738
#3	.2356701	2.472180	24.35150	1.043472	2.466242	1.257268	5.388174

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.389077**	**24.04230**	**2.464517**	**1.258476**	**25.20434**	**2.463440**	**2.632971**
Stddev	.006310	.06160	.006014	.036713	.65593	.014153	.089597
%RSD	.2641020	.2562063	.2440281	2.917262	2.602457	.5745109	3.402870
#1	2.381794	23.99738	2.460670	1.236184	24.91644	2.448296	2.579999
#2	2.392902	24.01700	2.461432	1.238394	24.74160	2.465695	2.582495
#3	2.392535	24.11252	2.471447	1.300849	25.95499	2.476331	2.736418

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**26.42813**	**4.643901**	**5.091608**	**4.899332**	**4.851154**	**5.134471**	**4.969633**
Stddev	.59118	.038687	.012320	.017401	.015714	.160669	.018133
%RSD	2.236942	.8330621	.2419579	.3551684	.3239329	3.129230	.3648826
#1	26.10538	4.601052	5.079929	4.892915	4.833422	5.053612	4.953311
#2	26.06857	4.654387	5.090414	4.886051	4.863354	5.030294	4.966435
#3	27.11043	4.676263	5.104481	4.919030	4.856688	5.319507	4.989152

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: CCV02 Acquired: 9/25/2025 13:23:44 Type: Unk
Method: 6010-200.7 NEW(v204) 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	**4.958561**	**4.752305**	**4.801615**
Stddev	.019587	.010139	.035106
%RSD	.3950230	.2133477	.7311263
#1	4.945644	4.741181	4.762810
#2	4.948940	4.754709	4.831168
#3	4.981098	4.761027	4.810866

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6247.432**	**98855.42**	**9078.133**	**4800.731**	**7096.600**
Stddev	12.090	2359.24	21.256	124.011	15.479
%RSD	.1935150	2.386553	.2341411	2.583164	.2181142
#1	6255.374	100053.1	9102.138	4849.696	7103.579
#2	6253.404	100375.5	9061.701	4892.784	7107.361
#3	6233.519	96137.6	9070.559	4659.713	7078.861

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: CCB02 Acquired: 9/25/2025 13:27:53 Type: Unk
Method: 6010-200.7 NEW(v204) 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	**.0001044**	**-.004037**	**-.002123**	**.0004957**	**-.001590**	**.0058088**	**-.006120**
Stddev	.0006499	.000656	.001561	.0023923	.002117	.0032555	.000803
%RSD	622.7524	16.25802	73.53554	482.6658	133.1893	56.04444	13.11681
#1	-.000228	-.003849	-.001840	.0023247	.000689	.0036808	-.006898
#2	.000853	-.004766	-.000723	-.002212	-.003496	.0095564	-.006168
#3	-.000312	-.003494	-.003806	.001374	-.001963	.0041890	-.005295

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000028**	**-.000228**	**.0566454**	**-.000357**	**-.000384**	**-.000129**	**.0168731**
Stddev	.000032	.000097	.0115756	.000340	.000204	.000232	.0017569
%RSD	115.4809	42.64841	20.43512	95.11702	53.23412	180.0198	10.41253
#1	-.000058	-.000291	.0471578	.000018	-.000446	-.000001	.0171937
#2	.000005	-.000116	.0695429	-.000446	-.000550	.000011	.0149779
#3	-.000030	-.000277	.0532354	-.000643	-.000156	-.000397	.0184476

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004638**	**-.001418**	**.0001658**	**-.000103**	**.3636895**	**-.003107**	**.0097839**
Stddev	.0005327	.031963	.0003990	.000085	.0149634	.001349	.0003288
%RSD	114.8467	2254.508	240.6143	83.07466	4.114324	43.42264	3.360213
#1	-.000111	-.035471	.0006230	-.000194	.3502022	-.004665	.0099640
#2	.000561	.003284	-.000112	-.000025	.3797858	-.002300	.0099832
#3	.000941	.027934	-.000014	-.000089	.3610805	-.002356	.0094044

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5802676**	**-.003008**	**-.000925**	**-.000869**	**.0018800**	**-.004739**	**-.000114**
Stddev	.0538607	.000076	.000377	.000715	.0013812	.022010	.000751
%RSD	9.282040	2.532280	40.78430	82.18537	73.46957	464.4868	658.7869
#1	.5628912	-.003096	-.000504	-.000166	.0007914	.020633	.000594
#2	.5372400	-.002964	-.001039	-.001595	.0034337	-.016143	-.000035
#3	.6406715	-.002964	-.001232	-.000847	.0014148	-.018705	-.000901

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: CCB02 Acquired: 9/25/2025 13:27:53 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.0063160	.0010284	-.000563
Stddev	.0038000	.0040610	.000093
%RSD	60.16358	394.8688	16.53817
#1	.0024997	.0054385	-.000653
#2	.0063491	-.002557	-.000569
#3	.0100994	.000204	-.000467

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6412.914	100227.4	8990.468	4912.835	7672.195
Stddev	20.588	216.1	31.550	15.772	15.111
%RSD	.3210420	.2156184	.3509242	.3210432	.1969534
#1	6393.327	100456.0	9008.548	4897.742	7658.566
#2	6434.375	100026.4	9008.819	4911.554	7688.445
#3	6411.040	100199.8	8954.038	4929.208	7669.575

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: PB169833BL Acquired: 9/25/2025 13:32:12 Type: Unk
Method: 6010-200.7 NEW(v204) 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	**-.000433**	**-.005128**	**-.002039**	**.0012153**	**-.003028**	**-.013211**	**-.002825**
Stddev	.001975	.000365	.000644	.0008452	.000766	.007030	.000608
%RSD	455.8217	7.127218	31.56893	69.54389	25.30229	53.21259	21.53475
#1	.001844	-.005496	-.002781	.0005085	-.003830	-.009009	-.003297
#2	-.001464	-.004765	-.001697	.0009859	-.002952	-.021327	-.003040
#3	-.001679	-.005123	-.001638	.0021515	-.002303	-.009298	-.002139

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000009**	**-.000336**	**-.000315**	**-.000179**	**-.000448**	**.0001472**	**-.010954**
Stddev	.000070	.000054	.012035	.000137	.000193	.0003685	.007514
%RSD	773.2613	16.14118	3821.778	76.46637	42.98343	250.3225	68.59586
#1	-.000035	-.000274	-.006607	-.000056	-.000656	.0003940	-.019584
#2	.000070	-.000374	.013562	-.000326	-.000412	.0003241	-.007412
#3	-.000062	-.000360	-.007899	-.000155	-.000276	-.000276	-.005865

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003515**	**-.045950**	**-.000046**	**-.000262**	**-.061792**	**-.004358**	**-.000473**
Stddev	.0008660	.016216	.000243	.000186	.018682	.000917	.000151
%RSD	246.3827	35.29127	532.6087	71.14106	30.23460	21.04178	31.91144
#1	-.000163	-.063930	.000224	-.000412	-.083282	-.003904	-.000494
#2	-.000134	-.041486	-.000247	-.000054	-.049412	-.003757	-.000313
#3	.001351	-.032433	-.000113	-.000319	-.052681	-.005414	-.000612

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.032003**	**-.006385**	**-.000397**	**-.006102**	**-.001336**	**-.020900**	**-.001139**
Stddev	.027963	.000541	.000171	.000856	.001080	.006685	.000317
%RSD	87.37614	8.475144	43.17541	14.02164	80.82372	31.98385	27.81355
#1	-.005315	-.006861	-.000512	-.005985	-.002572	-.028431	-.000947
#2	-.061087	-.005796	-.000200	-.007010	-.000868	-.015671	-.001505
#3	-.029607	-.006497	-.000479	-.005311	-.000569	-.018597	-.000966

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: PB169833BL Acquired: 9/25/2025 13:32:12 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.0002537	-.009439	-.000746
Stddev	.0011452	.001065	.000097
%RSD	451.4141	11.28233	13.03187
#1	.0011445	-.008340	-.000642
#2	.0006546	-.009511	-.000759
#3	-.001038	-.010466	-.000835

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6455.821	102981.3	9164.838	5088.478	7719.152
Stddev	10.252	442.9	25.632	29.955	11.810
%RSD	.1588099	.4300685	.2796753	.5886749	.1529938
#1	6452.634	102526.4	9175.507	5087.578	7721.105
#2	6467.289	103411.2	9183.413	5118.873	7729.864
#3	6447.541	103006.1	9135.595	5058.984	7706.487

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: PB169833BS Acquired: 9/25/2025 13:36:32 Type: Unk
Method: 6010-200.7 NEW(v204) 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	**.7431369**	**1.901356**	**.8928430**	**1.899866**	**.7755479**	**1.885345**
Stddev	.0040849	.007923	.0019294	.000740	.0009186	.012850
%RSD	.5496800	.4167109	.2160918	.0389625	.1184483	.6815494
#1	.7451053	1.909645	.8914711	1.899066	.7752187	1.880810
#2	.7384405	1.900565	.8920088	1.900527	.7765858	1.899847
#3	.7458648	1.893857	.8950491	1.900004	.7748392	1.875378

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1790995**	**.1866361**	**.1801636**	**.9658377**	**.3800506**	**.1824031**
Stddev	.0022999	.0013242	.0000548	.0159592	.0010982	.0000830
%RSD	1.284123	.7095139	.0303923	1.652366	.2889518	.0454796
#1	.1811974	.1874084	.1801141	.9476794	.3798636	.1823876
#2	.1794605	.1851071	.1802224	.9776377	.3790579	.1823290
#3	.1766404	.1873928	.1801544	.9721960	.3812302	.1824928

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2899333**	**2.831954**	**.1883488**	**1.896124**	**.4590053**	**.0675021**
Stddev	.0006800	.018494	.0003625	.020183	.0008033	.0009139
%RSD	.2345475	.6530587	.1924468	1.064427	.1750071	1.353894
#1	.2907078	2.830681	.1883602	1.917339	.4587195	.0679025
#2	.2896579	2.851052	.1887055	1.893869	.4583840	.0681475
#3	.2894342	2.814129	.1879808	1.877163	.4599124	.0664564

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.869951**	**.2850089**	**.1957321**	**9.609682**	**.2705450**	**.3970293**
Stddev	.001083	.0013212	.0008131	.038047	.0019227	.0003809
%RSD	.0377457	.4635472	.4154369	.3959278	.7106781	.0959376
#1	2.869604	.2834833	.1957625	9.614993	.2706408	.3974410
#2	2.871166	.2857716	.1965296	9.644794	.2685763	.3969575
#3	2.869084	.2857717	.1949042	9.569258	.2724181	.3966895

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: PB169833BS Acquired: 9/25/2025 13:36:32 Type: Unk
Method: 6010-200.7 NEW(v204) 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	**.6392883**	**.1868211**	**.8339876**	**5.223667**	F **-.003386**	**.1917682**
Stddev	.0017658	.0007484	.0007977	.005647	.000452	.0017066
%RSD	.2762097	.4006069	.0956523	.1080981	13.33708	.8899021
#1	.6379018	.1876613	.8337867	5.228749	-.002993	.1898039
#2	.6386870	.1862258	.8333095	5.224663	-.003285	.1928857
#3	.6412763	.1865762	.8348665	5.217589	-.003879	.1926151

Elem	Sr4077
Units	ppm
Avg	**.1834158**
Stddev	.0003444
%RSD	.1877681
#1	.1838029
#2	.1831433
#3	.1833012

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6619.679**	**105813.4**	**9036.146**	**5074.876**	**7939.975**
Stddev	10.682	222.2	29.935	28.271	11.830
%RSD	.1613669	.2099990	.3312816	.5570858	.1489919
#1	6623.923	105871.9	9015.547	5089.631	7949.178
#2	6607.527	105567.8	9070.484	5042.280	7926.631
#3	6627.587	106000.5	9022.406	5092.718	7944.116

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3125-02 Acquired: 9/25/2025 13:40:33 Type: Unk
Method: 6010-200.7 NEW(v204) 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	**-.001451**	**-.003340**	**.0400969**	**.0057383**	**.0329747**	**2.584505**
Stddev	.002399	.000625	.0011250	.0011931	.0023517	.011401
%RSD	165.2860	18.70826	2.805628	20.79233	7.131818	.4411199
#1	.000234	-.004057	.0390073	.0050169	.0354296	2.576610
#2	-.004198	-.003048	.0400294	.0071155	.0307419	2.579329
#3	-.000390	-.002914	.0412542	.0050825	.0327526	2.597575

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1157399**	**.0001248**	**.0019990**	**15.26535**	**.0209532**	**.0024096**
Stddev	.0006356	.0000295	.0000524	.08050	.0002022	.0003428
%RSD	.5491687	23.66118	2.621620	.5273406	.9650856	14.22793
#1	.1161621	.0001230	.0019400	15.22370	.0210147	.0020898
#2	.1160488	.0000962	.0020399	15.21420	.0207273	.0023676
#3	.1150089	.0001551	.0020172	15.35814	.0211174	.0027716

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1767740**	**6.834078**	**.1080081**	**4.310203**	**.0271057**	**.0017135**
Stddev	.0003929	.058015	.0011384	.040436	.0004359	.0007845
%RSD	.2222684	.8489111	1.053978	.9381531	1.608160	45.78558
#1	.1764075	6.767096	.1087528	4.276614	.0266070	.0021248
#2	.1767258	6.868486	.1066977	4.298910	.0272955	.0008088
#3	.1771888	6.866652	.1085738	4.355085	.0274145	.0022068

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**504.4740**	**.0002520**	**.9994456**	**11.78716**	**.0969587**	**.0154993**
Stddev	9.5498	.0049679	.0055502	.07757	.0009414	.0004201
%RSD	1.893028	1971.659	.5553272	.6581291	.9708911	2.710242
#1	514.7779	-.000948	.9931637	11.70265	.0968746	.0152541
#2	495.9203	-.004006	1.001487	11.85514	.0979393	.0159844
#3	502.7240	.005710	1.003686	11.80368	.0960622	.0152595

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3125-02 Acquired: 9/25/2025 13:40:33 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.0102421	.1077493	F 32.22832	4.855710	F 13.47520	.0092767
Stddev	.0008356	.0044246	.17278	.001784	.03750	.0026953
%RSD	8.158908	4.106376	.5361219	.0367314	.2782925	29.05470
#1	.0106162	.1100288	32.05581	4.854049	13.48750	.0114266
#2	.0092848	.1105694	32.40137	4.855487	13.50500	.0062529
#3	.0108254	.1026498	32.22779	4.857595	13.43309	.0101506

Elem	Sr4077
Units	ppm
Avg	.1155808
Stddev	.0003314
%RSD	.2867169
#1	.1153695
#2	.1154102
#3	.1159628

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5855.704	90936.28	8409.729	4491.886	6484.070
Stddev	21.173	278.27	29.483	20.519	17.650
%RSD	.3615871	.3060072	.3505807	.4567923	.2722122
#1	5862.947	91257.38	8419.672	4512.381	6489.386
#2	5872.305	90786.07	8432.955	4491.932	6498.451
#3	5831.859	90765.40	8376.560	4471.344	6464.372

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3125-02DUP Acquired: 9/25/2025 13:44:53 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.0049495	.0037746	.0428072	.0110859	.0364480	2.616864
Stddev	.0004298	.0018423	.0014968	.0029430	.0021740	.045622
%RSD	8.684057	48.80703	3.496659	26.54742	5.964708	1.743394
#1	.0044538	.0050090	.0412638	.0090255	.0348628	2.591984
#2	.0051766	.0046579	.0429051	.0144565	.0389263	2.669517
#3	.0052182	.0016570	.0442527	.0097757	.0355548	2.589090

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1154696	.0009069	.0028465	15.16861	.0228266	.0033845
Stddev	.0003660	.0000483	.0000314	.03714	.0009496	.0005026
%RSD	.3169871	5.330319	1.103662	.2448302	4.159929	14.84986
#1	.1152719	.0009593	.0028287	15.14074	.0217800	.0030586
#2	.1152449	.0008974	.0028280	15.21077	.0236331	.0039633
#3	.1158919	.0008641	.0028828	15.15433	.0230667	.0031316

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1771485	6.824796	.1066010	4.390717	.0289115	.0015716
Stddev	.0004188	.019588	.0003439	.031031	.0001133	.0004942
%RSD	.2363809	.2870130	.3226367	.7067519	.3919512	31.44652
#1	.1775678	6.804554	.1063552	4.410064	.0289166	.0016820
#2	.1767303	6.826177	.1064538	4.407163	.0287957	.0020013
#3	.1771474	6.843657	.1069941	4.354924	.0290222	.0010316

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	496.8289	.0043299	.9855617	11.81909	.0977434	.0180265
Stddev	3.1659	.0012463	.0016033	.04288	.0017757	.0000344
%RSD	.6372231	28.78400	.1626783	.3628392	1.816726	.1907131
#1	499.8284	.0036491	.9838685	11.81597	.0958870	.0179897
#2	497.1390	.0057684	.9857599	11.77785	.0979175	.0180319
#3	493.5194	.0035723	.9870566	11.86345	.0994257	.0180578

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3125-02DUP Acquired: 9/25/2025 13:44:53 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.0133021	.1083410	F 31.89960	4.892823	F 13.29137	.0095084
Stddev	.0009608	.0024230	.17530	.021543	.08221	.0020633
%RSD	7.222978	2.236444	.5495324	.4403007	.6185157	21.69927
#1	.0140122	.1094532	31.75665	4.895321	13.32498	.0091188
#2	.0122089	.1055616	32.09519	4.913008	13.35145	.0117387
#3	.0136854	.1100082	31.84697	4.870139	13.19768	.0076677

Elem	Sr4077
Units	ppm
Avg	.1162400
Stddev	.0007478
%RSD	.6433482
#1	.1163099
#2	.1154597
#3	.1169504

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5853.272	91536.55	8411.360	4525.509	6479.500
Stddev	2.232	231.63	42.738	24.533	6.651
%RSD	.0381384	.2530516	.5081030	.5421047	.1026526
#1	5851.173	91803.84	8447.135	4553.048	6485.397
#2	5855.618	91394.43	8422.912	4505.990	6472.290
#3	5853.026	91411.38	8364.033	4517.488	6480.813

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3125-02LX5 Acquired: 9/25/2025 13:49:12 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.0004420	-.003859	.0070742	-.001686	.0067879	.5114268	.0175107
Stddev	.0020215	.000722	.0000703	.001616	.0023595	.0134997	.0020078
%RSD	457.3317	18.71028	.9941753	95.85822	34.76087	2.639611	11.46635
#1	.0027641	-.004339	.0070403	-.002994	.0093730	.5171313	.0193523
#2	-.000513	-.004209	.0071551	-.002184	.0062406	.4960113	.0153701
#3	-.000925	-.003028	.0070272	.000121	.0047501	.5211377	.0178096

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001215	.0000720	3.041928	.0038015	.0002100	.0360433	1.310760
Stddev	.0000943	.0000747	.016096	.0001861	.0001226	.0001486	.000697
%RSD	77.65919	103.8158	.5291458	4.894151	58.36610	.4124000	.0531531
#1	.0001278	.0000179	3.060511	.0039895	.0001019	.0359286	1.311100
#2	.0000241	.0001573	3.032974	.0036175	.0001850	.0359900	1.309959
#3	.0002125	.0000407	3.032300	.0037974	.0003432	.0362112	1.311222

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0213760	.8671756	.0050743	.0000973	93.80373	-.004878	.1937831
Stddev	.0009618	.0039744	.0003537	.0006190	.65609	.002835	.0016903
%RSD	4.499645	.4583108	6.970308	636.2803	.6994240	58.12171	.8722425
#1	.0204552	.8661347	.0051667	.0007392	94.44282	-.001608	.1956088
#2	.0223742	.8715668	.0053726	-.000496	93.83649	-.006653	.1934679
#3	.0212985	.8638252	.0046835	.000049	93.13188	-.006374	.1922727

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.391845	.0149839	.0022789	.0008171	.0190812	5.939613	.9322331
Stddev	.033870	.0008266	.0002429	.0002391	.0003302	.065415	.0066632
%RSD	.9985709	5.516677	10.65780	29.26446	1.730547	1.101338	.7147621
#1	3.376517	.0143892	.0024580	.0007635	.0193988	5.985835	.9382952
#2	3.430669	.0159278	.0020024	.0010785	.0187397	5.968239	.9333052
#3	3.368348	.0146348	.0023762	.0006094	.0191050	5.864764	.9250987

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3125-02LX5 Acquired: 9/25/2025 13:49:12 Type: Unk
Method: 6010-200.7 NEW(v204) 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	**2.592805**	**.0192701**	**.0224818**
Stddev	.004391	.0056913	.0000250
%RSD	.1693540	29.53435	.1112488
#1	2.592238	.0257600	.0224889
#2	2.597453	.0169208	.0224539
#3	2.588726	.0151296	.0225024

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6140.953**	**98538.46**	**8748.052**	**4807.622**	**7058.825**
Stddev	11.499	459.54	14.054	32.695	22.060
%RSD	.1872499	.4663549	.1606519	.6800557	.3125184
#1	6143.533	98174.02	8737.337	4771.853	7062.118
#2	6128.383	98386.67	8742.854	4815.051	7035.304
#3	6150.943	99054.69	8763.965	4835.963	7079.055

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3125-02MS Acquired: 9/25/2025 13:53:27 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.7904539	1.873828	.9521997	1.946200	.8099032	4.312562
Stddev	.0037731	.011806	.0015276	.001310	.0090170	.019101
%RSD	.4773379	.6300349	.1604306	.0673058	1.113344	.4429161
#1	.7873975	1.871818	.9523283	1.944709	.8202485	4.316556
#2	.7946710	1.886510	.9536590	1.947165	.8057498	4.291779
#3	.7892933	1.863157	.9506119	1.946727	.8037115	4.329350

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2953051	.1811956	.1936184	15.39452	.4125565	.1962018
Stddev	.0018714	.0004106	.0003727	.04561	.0009206	.0003858
%RSD	.6337266	.2266236	.1925055	.2962504	.2231458	.1966597
#1	.2968523	.1807506	.1934178	15.40220	.4136019	.1960442
#2	.2958380	.1815600	.1940485	15.43580	.4118668	.1966415
#3	.2932250	.1812761	.1933890	15.34556	.4122010	.1959197

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4494728	9.269256	.2874855	5.926347	.5080184	.0481425
Stddev	.0003819	.019795	.0018127	.038722	.0008720	.0005961
%RSD	.0849575	.2135572	.6305501	.6533799	.1716510	1.238163
#1	.4492869	9.290449	.2889890	5.884248	.5081296	.0475672
#2	.4499120	9.251244	.2879950	5.934354	.5088294	.0487574
#3	.4492195	9.266075	.2854725	5.960439	.5070961	.0481027

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	474.4400	.2935479	1.135154	21.29794	.3440928	.4212653
Stddev	6.0690	.0012822	.002593	.17251	.0014550	.0010468
%RSD	1.279185	.4367854	.2283964	.8099615	.4228355	.2484962
#1	481.0505	.2941343	1.137147	21.47443	.3428881	.4218312
#2	469.1202	.2920774	1.132222	21.28968	.3436811	.4219073
#3	473.1492	.2944320	1.136092	21.12971	.3457092	.4200573

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3125-02MS Acquired: 9/25/2025 13:53:27 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.6512248	.2867386	F 30.90780	F 10.27857	F 12.61940	.1987364
Stddev	.0015678	.0087289	.06780	.02910	.03236	.0007729
%RSD	.2407445	3.044215	.2193532	.2830657	.2564510	.3889248
#1	.6500910	.2967827	30.92016	10.24645	12.59132	.1996026
#2	.6530139	.2809874	30.83467	10.28609	12.61209	.1984893
#3	.6505694	.2824459	30.96856	10.30316	12.65479	.1981172

Elem	Sr4077
Units	ppm
Avg	.2904865
Stddev	.0015822
%RSD	.5446710
#1	.2919669
#2	.2906735
#3	.2888191

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5881.396	91970.23	8424.569	4542.634	6509.831
Stddev	13.609	144.53	12.362	10.773	15.447
%RSD	.2313841	.1571520	.1467337	.2371460	.2372801
#1	5873.051	91860.53	8437.708	4540.425	6505.633
#2	5874.037	92134.00	8422.832	4554.340	6496.917
#3	5897.099	91916.15	8413.169	4533.137	6526.942

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3125-02MSD Acquired: 9/25/2025 13:57:33 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.7894419	1.904782	.9577671	1.952620	.8076537	4.312673
Stddev	.0032397	.037666	.0043344	.001752	.0024877	.020638
%RSD	.4103840	1.977439	.4525526	.0897378	.3080155	.4785359
#1	.7923537	1.909411	.9564423	1.954399	.8057611	4.307035
#2	.7900199	1.939919	.9542496	1.952565	.8104714	4.295440
#3	.7859520	1.865015	.9626092	1.950896	.8067286	4.335544

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2928610	.1819758	.1940073	15.30760	.4121889	.1970581
Stddev	.0016678	.0004510	.0002206	.07103	.0013730	.0003910
%RSD	.5694923	.2478216	.1137292	.4640467	.3331100	.1984347
#1	.2915296	.1821673	.1938520	15.23179	.4121558	.1971268
#2	.2923216	.1814607	.1942598	15.31839	.4135783	.1966373
#3	.2947317	.1822994	.1939100	15.37262	.4108328	.1974102

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4504219	9.123361	.2872841	5.971533	.5096310	.0490405
Stddev	.0005891	.074452	.0020338	.011120	.0004267	.0007633
%RSD	.1307791	.8160626	.7079517	.1862205	.0837359	1.556456
#1	.4498557	9.045052	.2851550	5.974532	.5092912	.0490113
#2	.4510315	9.193239	.2874904	5.959220	.5101100	.0498180
#3	.4503787	9.131794	.2892069	5.980846	.5094920	.0482922

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	462.3446	.2941527	1.126912	21.05348	.3443789	.4270433
Stddev	4.9308	.0029816	.000302	.13632	.0016214	.0004524
%RSD	1.066483	1.013635	.0267673	.6474768	.4708246	.1059481
#1	458.0498	.2917730	1.126983	20.89813	.3461855	.4273578
#2	467.7291	.2974973	1.127171	21.10921	.3430499	.4265248
#3	461.2549	.2931878	1.126581	21.15310	.3439014	.4272473

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3125-02MSD Acquired: 9/25/2025 13:57:33 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.6514060	.2726170	F 30.27604	F 10.26452	F 12.52259	.1980343
Stddev	.0021011	.0018386	.17960	.02614	.05196	.0037433
%RSD	.3225506	.6744121	.5932000	.2546719	.4149429	1.890230
#1	.6528143	.2734252	30.07611	10.23434	12.53074	.1970800
#2	.6524128	.2705128	30.32832	10.27935	12.57000	.1948606
#3	.6489909	.2739131	30.42371	10.27987	12.46703	.2021624

Elem	Sr4077
Units	ppm
Avg	.2909627
Stddev	.0018944
%RSD	.6510704
#1	.2888800
#2	.2914251
#3	.2925831

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5905.286	93117.00	8405.828	4578.271	6544.236
Stddev	11.365	457.17	28.922	5.845	11.321
%RSD	.1924515	.4909585	.3440681	.1276772	.1729931
#1	5915.198	93643.56	8429.443	4584.500	6551.565
#2	5892.882	92886.13	8414.470	4572.905	6531.197
#3	5907.777	92821.32	8373.570	4577.409	6549.947

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3125-02A Acquired: 9/25/2025 14:08:53 Type: Unk
Method: 6010-200.7 NEW(v204) 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	**.7948068**	**1.898256**	**.9577827**	**1.976785**	**.8095933**	**4.292256**
Stddev	.0026403	.012679	.0024257	.001071	.0008607	.010403
%RSD	.3321918	.6679337	.2532632	.0541876	.1063193	.2423578
#1	.7917883	1.896818	.9564610	1.976601	.8100996	4.293429
#2	.7966866	1.911592	.9563049	1.977937	.8085994	4.281317
#3	.7959456	1.886357	.9605822	1.975818	.8100808	4.302023

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2900536**	**.1807402**	**.1945031**	**15.11692**	**.4115082**	**.1966278**
Stddev	.0012557	.0015747	.0007149	.07587	.0015744	.0006941
%RSD	.4329136	.8712604	.3675427	.5019198	.3825884	.3529998
#1	.2896994	.1808804	.1946791	15.10778	.4133262	.1959677
#2	.2890131	.1791000	.1937166	15.04603	.4106054	.1965642
#3	.2914484	.1822401	.1951135	15.19695	.4105932	.1973515

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4510860**	**9.221679**	**.2845748**	**5.862233**	**.5102601**	**.0484153**
Stddev	.0009044	.036799	.0018976	.096877	.0009034	.0001890
%RSD	.2005005	.3990514	.6668263	1.652569	.1770367	.3903383
#1	.4503112	9.181487	.2839818	5.753055	.5104779	.0486116
#2	.4508670	9.253717	.2830445	5.895715	.5092678	.0483996
#3	.4520799	9.229833	.2866981	5.937927	.5110346	.0482346

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**464.3061**	**.2917369**	**1.126772**	**21.31047**	**.3419663**	**.4229724**
Stddev	3.4276	.0004833	.001962	.02786	.0030047	.0015019
%RSD	.7382199	.1656461	.1740828	.1307499	.8786413	.3550754
#1	461.2392	.2921948	1.127726	21.28385	.3433969	.4237510
#2	468.0061	.2912318	1.124516	21.30812	.3385137	.4212411
#3	463.6732	.2917843	1.128074	21.33943	.3439883	.4239251

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3125-02A Acquired: 9/25/2025 14:08:53 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.6532513	.2763325	F 30.67188	F 10.35562	F 12.76876	.1930854
Stddev	.0015235	.0037796	.14958	.01995	.03795	.0017624
%RSD	.2332154	1.367761	.4876635	.1926540	.2972469	.9127666
#1	.6542654	.2720519	30.52934	10.34700	12.78692	.1932453
#2	.6539892	.2792097	30.82762	10.37843	12.79423	.1912484
#3	.6514994	.2777357	30.65867	10.34142	12.72514	.1947624

Elem	Sr4077
Units	ppm
Avg	.2883935
Stddev	.0023594
%RSD	.8181172
#1	.2876503
#2	.2864951
#3	.2910350

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5834.763	91736.25	8440.515	4541.280	6438.290
Stddev	13.180	172.65	81.740	18.566	13.449
%RSD	.2258861	.1882023	.9684230	.4088201	.2088926
#1	5834.017	91583.20	8403.698	4525.140	6430.819
#2	5848.299	91923.41	8534.188	4561.569	6453.816
#3	5821.971	91702.15	8383.659	4537.132	6430.235

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3168-06 Acquired: 9/25/2025 14:13:00 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.0022433	-.004565	.0324624	.0006201	.0001776	1.826728	.0263547
Stddev	.0026092	.002185	.0010277	.0023931	.0023631	.011248	.0011978
%RSD	116.3114	47.85415	3.165669	385.9583	1330.846	.6157625	4.544805
#1	.0045198	-.002110	.0324810	-.002137	-.001213	1.825130	.0277375
#2	.0028142	-.006295	.0314255	.002155	.002906	1.816365	.0256384
#3	-.000604	-.005291	.0334806	.001842	-.001161	1.838690	.0256883

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001299	.0003173	29.38267	.0061849	.0007499	.0391918	3.016911
Stddev	.0000441	.0000989	.09654	.0003499	.0002072	.0003754	.015223
%RSD	33.93417	31.16699	.3285689	5.657480	27.62968	.9579604	.5045764
#1	.0000886	.0002549	29.46019	.0064370	.0006212	.0393572	3.002073
#2	.0001763	.0002657	29.41329	.0063323	.0009889	.0394562	3.016170
#3	.0001247	.0004314	29.27453	.0057854	.0006396	.0387621	3.032491

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0707648	1.422947	.0044045	.0001779	5.003034	.0013109	.3880171
Stddev	.0005383	.038505	.0001482	.0002701	.006110	.0005974	.0014101
%RSD	.7606431	2.706018	3.364180	151.8038	.1221290	45.57359	.3634176
#1	.0713731	1.394730	.0043981	.0002786	5.002866	.0008092	.3866022
#2	.0705710	1.466813	.0042596	.0003833	5.009227	.0011517	.3894224
#3	.0703503	1.407298	.0045558	-.000128	4.997010	.0019718	.3880269

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.745799	.0137028	.0002521	-.005461	.0439157	4.640671	.1827494
Stddev	.013259	.0012664	.0004697	.000642	.0014380	.004080	.0016199
%RSD	.4828715	9.241746	186.2967	11.75087	3.274533	.0879139	.8864107
#1	2.760763	.0146327	-.000182	-.004758	.0422596	4.641836	.1809161
#2	2.741116	.0142152	.000751	-.005608	.0448481	4.644042	.1833446
#3	2.735517	.0122605	.000187	-.006016	.0446395	4.636136	.1839875

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3168-06 Acquired: 9/25/2025 14:13:00 Type: Unk
Method: 6010-200.7 NEW(v204) 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	**1.614977**	**-.012344**	**.0719073**
Stddev	.014171	.001513	.0006234
%RSD	.8774986	12.25974	.8669118
#1	1.599061	-.012446	.0725629
#2	1.619642	-.010782	.0718368
#3	1.626228	-.013803	.0713221

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6408.158**	**101694.1**	**9002.668**	**5020.228**	**7534.062**
Stddev	6.075	180.8	16.170	19.993	8.414
%RSD	.0948002	.1777517	.1796084	.3982442	.1116752
#1	6411.365	101709.5	8986.047	5011.924	7539.817
#2	6411.958	101866.7	9003.614	5043.034	7537.962
#3	6401.152	101506.2	9018.344	5005.725	7524.405

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3172-01 Acquired: 9/25/2025 14:17:14 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.4300154	-.006306	.2847827	-.009151	-.027553	226.7344
Stddev	.0021496	.000866	.0017482	.002392	.005227	.2068
%RSD	.4998795	13.73864	.6138578	26.13751	18.97128	.0912237
#1	.4293079	-.006774	.2829127	-.008227	-.032434	226.4957
#2	.4283088	-.006837	.2863760	-.011867	-.022037	226.8598
#3	.4324296	-.005306	.2850595	-.007359	-.028187	226.8478

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.560602	.0193016	.0243540	870.1255	.2699199	.4020570
Stddev	.011698	.0000934	.0002771	3.2804	.0001165	.0005985
%RSD	.2565074	.4837499	1.137873	.3769979	.0431721	.1488629
#1	4.558613	.0192746	.0245722	866.6583	.2699997	.4020728
#2	4.550027	.0194055	.0240422	870.5383	.2699739	.4014508
#3	4.573168	.0192247	.0244476	873.1799	.2697862	.4026475

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4209206	382.9896	17.36101	210.2835	.7838559	-.007459
Stddev	.0028934	1.9208	.00361	.2622	.0008058	.000781
%RSD	.6873975	.5015172	.0208008	.1246686	.1027988	10.46936
#1	.4234969	381.1750	17.35684	210.2551	.7840650	-.007121
#2	.4214745	382.7925	17.36303	210.5587	.7829661	-.006905
#3	.4177902	385.0013	17.36316	210.0366	.7845364	-.008352

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	196.6127	.3808629	1.501264	85.99014	.7279360	.0050725
Stddev	1.7808	.0039057	.003654	.41845	.0123550	.0003839
%RSD	.9057378	1.025494	.2433677	.4866244	1.697267	7.568635
#1	197.9950	.3798103	1.498554	85.70184	.7162198	.0047698
#2	197.2400	.3775913	1.499820	85.79849	.7267448	.0049434
#3	194.6032	.3851871	1.505419	86.47009	.7408435	.0055043

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3172-01 Acquired: 9/25/2025 14:17:14 Type: Unk
Method: 6010-200.7 NEW(v204) 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	-.002584	2.336110	F 131.9736	F 25.63828	F 173.3111	.5397587
Stddev	.001058	.003752	.9108	.02402	.4336	.0030991
%RSD	40.94191	.1605883	.6901496	.0936871	.2502016	.5741636
#1	-.001634	2.335737	131.0285	25.64375	172.9170	.5361951
#2	-.002395	2.332559	132.0466	25.65909	173.7756	.5418233
#3	-.003724	2.340034	132.8458	25.61200	173.2405	.5412577

Elem	Sr4077
Units	ppm
Avg	2.374882
Stddev	.054423
%RSD	2.291625
#1	2.345161
#2	2.341790
#3	2.437694

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7414.274	115505.9	11500.47	5671.826	5368.748
Stddev	5.926	192.1	25.57	29.016	5.938
%RSD	.0799216	.1663541	.2223717	.5115799	.1105957
#1	7420.597	115622.5	11475.28	5688.267	5374.233
#2	7413.376	115611.1	11499.72	5688.888	5369.568
#3	7408.849	115284.1	11526.41	5638.323	5362.443

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: CCV03 Acquired: 9/25/2025 14:21:36 Type: Unk
Method: 6010-200.7 NEW(v204) 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	**4.988273**	**5.037376**	**4.835313**	**5.078996**	**4.993688**	**9.772306**	**9.551465**
Stddev	.038718	.091871	.026416	.031302	.025501	.041408	.029429
%RSD	.7761780	1.823783	.5463202	.6163076	.5106612	.4237289	.3081121
#1	4.947083	4.940640	4.805601	5.043968	4.967283	9.820099	9.585447
#2	4.993814	5.048036	4.844194	5.088788	4.995606	9.749637	9.534612
#3	5.023922	5.123452	4.856145	5.104232	5.018176	9.747183	9.534337

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2384860**	**2.442830**	**24.30132**	**.9812293**	**2.428345**	**1.241761**	**4.985871**
Stddev	.0013779	.015261	.03470	.0012769	.015014	.005714	.020358
%RSD	.5777560	.6247381	.1428105	.1301359	.6182887	.4601756	.4083223
#1	.2391370	2.425835	24.30003	.9815985	2.411800	1.235659	4.976975
#2	.2394177	2.447291	24.33664	.9822810	2.432132	1.242636	4.971476
#3	.2369033	2.455364	24.26727	.9798084	2.441103	1.246987	5.009164

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.387957**	**24.12588**	**2.436576**	**1.219513**	**24.16129**	**2.459281**	**2.469564**
Stddev	.005967	.07941	.015025	.000376	.11408	.008859	.008528
%RSD	.2498954	.3291312	.6166483	.0308230	.4721493	.3602092	.3453210
#1	2.381113	24.04624	2.420138	1.219830	24.29035	2.466340	2.477724
#2	2.392068	24.12635	2.439990	1.219611	24.11957	2.462162	2.470257
#3	2.390691	24.20505	2.449600	1.219098	24.07394	2.449341	2.460711

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**26.08264**	**4.710837**	**4.985274**	**4.873088**	**4.816388**	**5.444471**	**4.959151**
Stddev	.05933	.021325	.027505	.039179	.006680	.012007	.045375
%RSD	.2274864	.4526858	.5517254	.8039846	.1386980	.2205357	.9149752
#1	26.01425	4.718367	4.958073	4.828654	4.820635	5.448891	4.907766
#2	26.12034	4.727376	4.984675	4.887943	4.819841	5.430880	4.975981
#3	26.11334	4.686769	5.013073	4.902667	4.808688	5.453641	4.993707

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: CCV03 Acquired: 9/25/2025 14:21:36 Type: Unk
Method: 6010-200.7 NEW(v204) 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	**5.042280**	**4.733855**	**4.785726**
Stddev	.051011	.011129	.066806
%RSD	1.011658	.2351028	1.395952
#1	4.984490	4.725169	4.709564
#2	5.061314	4.746400	4.834418
#3	5.081038	4.729996	4.813196

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6132.671**	**98144.89**	**8624.798**	**4842.381**	**6926.896**
Stddev	23.787	179.17	28.669	18.505	29.097
%RSD	.3878700	.1825603	.3324009	.3821449	.4200569
#1	6144.655	98219.56	8608.381	4832.601	6952.626
#2	6148.082	98274.65	8608.112	4830.819	6932.742
#3	6105.276	97940.46	8657.902	4863.724	6895.320

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: CCB03 Acquired: 9/25/2025 14:30:52 Type: Unk
Method: 6010-200.7 NEW(v204) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB03 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000855**	**-.003573**	**-.001424**	**.0012642**	**-.003094**	**-.008584**
Stddev	.001743	.002284	.000988	.0019173	.001439	.010358
%RSD	203.9549	63.93168	69.39169	151.6571	46.50922	120.6702
#1	-.000703	-.003238	-.002101	.0010888	-.004627	-.017724
#2	-.002669	-.001474	-.000290	.0032632	-.002885	-.010694
#3	.000808	-.006006	-.001882	-.000559	-.001771	.002667

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001319**	**-.000045**	**-.000317**	**-.006002**	**.0003621**	**-.000382**
Stddev	.001912	.000075	.000078	.006141	.0002877	.000251
%RSD	144.9745	166.5419	24.68202	102.3145	79.46183	65.79475
#1	.000467	-.000130	-.000367	-.007942	.0004137	-.000351
#2	-.003337	-.000018	-.000227	-.010938	.0006205	-.000648
#3	-.001087	.000013	-.000358	.000875	.0000521	-.000148

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000443**	**.0058191**	**.0013634**	**-.018002**	**-.000098**	**.0000060**
Stddev	.000163	.0013576	.0007897	.019670	.000189	.0001678
%RSD	36.78477	23.33041	57.92254	109.2619	192.3790	2790.086
#1	-.000278	.0048473	.0020893	-.039969	.000061	-.000160
#2	-.000604	.0052398	.0014785	-.012019	-.000307	.000176
#3	-.000448	.0073703	.0005225	-.002019	-.000049	.000002

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.040358**	**-.002778**	**-.000519**	**.0060337**	**-.005620**	**-.000754**
Stddev	.016951	.003002	.000210	.0297344	.000365	.000196
%RSD	42.00176	108.0874	40.57639	492.8072	6.496340	26.05239
#1	-.041411	-.003039	-.000276	-.012415	-.005558	-.000817
#2	-.022905	.000347	-.000638	.040335	-.006012	-.000534
#3	-.056759	-.005641	-.000642	-.009819	-.005290	-.000911

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: CCB03 Acquired: 9/25/2025 14:30:52 Type: Unk
Method: 6010-200.7 NEW(v204) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB03 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.006437**	**.0001536**	**.0033824**	**-.003003**	**.0089166**	F **-.010260**
Stddev	.000328	.0000893	.0081804	.000697	.0016591	.002557
%RSD	5.097053	58.12801	241.8548	23.19386	18.60663	24.92340
#1	-.006688	.0001955	.0043590	-.002726	.0071373	-.010074
#2	-.006066	.0000511	.0110307	-.003796	.0104212	-.007801
#3	-.006557	.0002143	-.005243	-.002488	.0091912	-.012906

Elem	Sr4077
Units	ppm
Avg	**-.000890**
Stddev	.000035
%RSD	3.894662
#1	-.000865
#2	-.000875
#3	-.000929

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6337.003**	**96743.93**	**8686.417**	**4854.177**	**7544.682**
Stddev	3.018	426.99	12.200	33.301	5.272
%RSD	.0476236	.4413626	.1404535	.6860235	.0698816
#1	6339.294	96963.98	8693.002	4866.000	7544.853
#2	6333.583	96251.80	8693.911	4816.578	7549.867
#3	6338.132	97016.01	8672.339	4879.954	7539.326

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3172-02 Acquired: 9/25/2025 14:35:12 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.0600141	-.004647	.0123328	.0011094	-.001602	1.220264
Stddev	.0044290	.001317	.0007703	.0019841	.003973	.009237
%RSD	7.379851	28.34481	6.245797	178.8404	247.9654	.7569791
#1	.0553398	-.006067	.0114673	.0014313	.001352	1.213011
#2	.0605545	-.003466	.0129430	.0029129	-.006119	1.217117
#3	.0641481	-.004407	.0125881	-.001016	-.000040	1.230663

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2346174	.0002862	.0007091	84.52312	.0066682	.0051843
Stddev	.0006843	.0000399	.0001836	.20833	.0002446	.0001944
%RSD	.2916702	13.94131	25.89052	.2464714	3.667781	3.749420
#1	.2344717	.0002481	.0004987	84.32093	.0068918	.0054045
#2	.2353628	.0003277	.0007923	84.73708	.0067059	.0051116
#3	.2340176	.0002829	.0008364	84.51135	.0064070	.0050367

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0952057	27.66513	1.783034	7.956285	.0105285	-.000109
Stddev	.0002756	.08975	.001344	.033301	.0002563	.000395
%RSD	.2894381	.3244065	.0753534	.4185453	2.433843	360.9974
#1	.0952551	27.56205	1.781568	7.969478	.0107593	.000289
#2	.0954533	27.70742	1.783329	7.980967	.0105734	-.000500
#3	.0949088	27.72591	1.784206	7.918409	.0102527	-.000116

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	39.19727	.0022155	.2330585	21.27554	.1644576	.0057497
Stddev	.09149	.0016045	.0005458	.05218	.0015330	.0003753
%RSD	.2334155	72.42241	.2341908	.2452459	.9321673	6.527572
#1	39.10090	.0004043	.2327774	21.22263	.1627423	.0060401
#2	39.20796	.0027830	.2336875	21.27702	.1656940	.0053259
#3	39.28294	.0034591	.2327106	21.32696	.1649365	.0058830

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3172-02 Acquired: 9/25/2025 14:35:12 Type: Unk
Method: 6010-200.7 NEW(v204) 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	-.007926	.0424783	F 10.37006	2.562887	9.564424	.0166990
Stddev	.001374	.0007522	.03800	.006162	.033551	.0008079
%RSD	17.34085	1.770725	.3664653	.2404413	.3507913	4.838160
#1	-.007049	.0424782	10.35847	2.566445	9.545076	.0175825
#2	-.009510	.0432306	10.33920	2.555771	9.545030	.0165168
#3	-.007220	.0417263	10.41250	2.566445	9.603165	.0159978

Elem	Sr4077
Units	ppm
Avg	.3520053
Stddev	.0007396
%RSD	.2101078
#1	.3513697
#2	.3528171
#3	.3518291

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6092.880	96647.43	8711.132	4749.944	6996.716
Stddev	3.575	61.24	10.343	10.659	2.728
%RSD	.0586741	.0633648	.1187370	.2243944	.0389858
#1	6088.887	96642.43	8719.683	4749.997	6993.653
#2	6093.972	96711.01	8699.636	4739.258	6998.884
#3	6095.783	96588.84	8714.077	4760.575	6997.610

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3168-05 Acquired: 9/25/2025 14:39:22 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.0004250	-.005810	.0257084	-.000870	.0019011	1.255313	.0309916
Stddev	.0001789	.001273	.0017665	.002280	.0015260	.008598	.0007698
%RSD	42.10810	21.91925	6.871172	262.2086	80.26622	.6849090	2.483919
#1	.0004704	-.005398	.0268616	-.000912	.0001725	1.251421	.0316470
#2	.0002277	-.007238	.0265888	.001431	.0024698	1.249349	.0311839
#3	.0005768	-.004793	.0236747	-.003129	.0030611	1.265168	.0301439

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000698	.0002361	55.27961	.0038373	.0005609	.0247693	3.332345
Stddev	.0000568	.0001000	.04257	.0001648	.0001160	.0002107	.045931
%RSD	81.29121	42.34218	.0770055	4.294648	20.68163	.8508075	1.378342
#1	.0001039	.0001620	55.32145	.0036497	.0006491	.0247042	3.290591
#2	.0001013	.0003498	55.23635	.0039035	.0006042	.0245987	3.324900
#3	.0000043	.0001965	55.28103	.0039587	.0004295	.0250049	3.381544

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0922668	2.007240	.0033357	.0000248	7.749974	.0020675	.7098960
Stddev	.0006370	.017184	.0002640	.0004648	.112067	.0040936	.0023395
%RSD	.6903834	.8561032	7.914374	1874.859	1.446027	198.0012	.3295529
#1	.0928865	1.991484	.0036228	-.000188	7.651011	.0066297	.7083854
#2	.0916138	2.025563	.0031034	.000558	7.727248	-.001285	.7087119
#3	.0923003	2.004672	.0032809	-.000296	7.871661	.000857	.7125909

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.876220	.0228776	.0019484	-.005438	.0335568	4.993639	.2158934
Stddev	.029501	.0002591	.0002410	.000664	.0023317	.075724	.0019612
%RSD	.7610703	1.132384	12.37122	12.20378	6.948463	1.516413	.9083858
#1	3.843082	.0230303	.0022055	-.006200	.0342261	4.919529	.2143466
#2	3.885957	.0225785	.0019120	-.004983	.0309637	4.990508	.2180992
#3	3.899622	.0230241	.0017276	-.005132	.0354808	5.070881	.2152345

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3168-05 Acquired: 9/25/2025 14:39:22 Type: Unk
Method: 6010-200.7 NEW(v204) 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	1.532963	-.017353	.1246563
Stddev	.010093	.001365	.0009799
%RSD	.6584212	7.863263	.7860634
#1	1.524295	-.017180	.1239716
#2	1.544044	-.018796	.1242186
#3	1.530550	-.016083	.1257788

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6228.608	99943.43	8785.910	4853.538	7336.602
Stddev	11.981	383.95	62.813	26.807	4.718
%RSD	.1923605	.3841677	.7149234	.5523164	.0643052
#1	6215.971	100371.3	8736.170	4881.181	7331.170
#2	6239.804	99830.0	8765.065	4851.780	7338.966
#3	6230.048	99629.0	8856.495	4827.654	7339.671

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3168-05DUP Acquired: 9/25/2025 14:43:38 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.0005865	-.006607	.0274358	.0005827	.0005099	1.152036	.0382187
Stddev	.0017952	.000588	.0010450	.0010888	.0020136	.011428	.0023597
%RSD	306.0762	8.896336	3.808917	186.8535	394.8961	.9919446	6.174103
#1	.0023348	-.006032	.0267969	.0017645	-.001799	1.148381	.0402256
#2	-.001252	-.007206	.0268688	-.000380	.001899	1.164844	.0388113
#3	.000677	-.006582	.0286418	.000363	.001430	1.142884	.0356192

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000000	.0002320	63.05257	.0037285	.0006484	.0241106	3.477903
Stddev	.000038	.0000441	.09954	.0002719	.0004229	.0001142	.029511
%RSD	9700.831	18.98829	.1578713	7.293582	65.21283	.4735847	.8485267
#1	.000022	.0002827	62.95476	.0040423	.0003962	.0240301	3.445826
#2	.000021	.0002034	63.15376	.0035625	.0004125	.0242412	3.483984
#3	-.000044	.0002099	63.04918	.0035806	.0011366	.0240603	3.503900

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1041025	2.266877	.0032617	-.000419	9.034468	.0032347	.7922704
Stddev	.0006987	.034666	.0002870	.000179	.076291	.0017427	.0034397
%RSD	.6711419	1.529220	8.798230	42.65236	.8444464	53.87493	.4341519
#1	.1032991	2.285700	.0029492	-.000217	8.955479	.0024660	.7930464
#2	.1044409	2.288058	.0035134	-.000557	9.040185	.0052297	.7885090
#3	.1045676	2.226871	.0033226	-.000482	9.107740	.0020086	.7952557

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.380730	.0246035	.0018309	-.006375	.0295450	4.991888	.2132007
Stddev	.065709	.0005932	.0004671	.000205	.0005734	.007146	.0007581
%RSD	1.499947	2.411180	25.50966	3.218600	1.940676	.1431535	.3555878
#1	4.306822	.0246099	.0019913	-.006181	.0290984	5.000095	.2132760
#2	4.432546	.0251935	.0021966	-.006354	.0293450	4.987045	.2124077
#3	4.402822	.0240070	.0013048	-.006590	.0301916	4.988523	.2139183

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3168-05DUP Acquired: 9/25/2025 14:43:38 Type: Unk
Method: 6010-200.7 NEW(v204) 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	1.620997	-.013251	.1424273
Stddev	.003856	.001648	.0010363
%RSD	.2378478	12.43497	.7275797
#1	1.625237	-.011678	.1413188
#2	1.617702	-.014964	.1425912
#3	1.620053	-.013112	.1433718

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6352.919	99748.40	8801.620	4844.969	7528.451
Stddev	8.594	235.74	17.251	18.458	10.028
%RSD	.1352758	.2363317	.1960017	.3809764	.1331999
#1	6344.381	99940.92	8783.615	4861.623	7517.338
#2	6361.568	99485.48	8803.242	4848.161	7536.825
#3	6352.809	99818.80	8818.004	4825.123	7531.190

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3168-05LX5 Acquired: 9/25/2025 14:47:53 Type: Unk
Method: 6010-200.7 NEW(v204) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000394**	**-.003233**	**.0038166**	**-.000439**	**-.001556**	**.2778138**	**.0050879**
Stddev	.001274	.001053	.0014402	.002591	.001211	.0046955	.0012591
%RSD	323.7401	32.56584	37.73494	590.3874	77.81360	1.690150	24.74661
#1	-.001700	-.002048	.0037714	-.001447	-.001061	.2735406	.0048160
#2	-.000326	-.003592	.0052788	.002505	-.000671	.2770603	.0064608
#3	.000845	-.004060	.0023995	-.002375	-.002936	.2828404	.0039870

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000242**	**-.000146**	**12.04138**	**.0005764**	**-.000217**	**.0046649**	**.7355991**
Stddev	.0000170	.000071	.07695	.0002224	.000233	.0002743	.0104064
%RSD	70.26634	48.56037	.6390606	38.58826	107.6111	5.879163	1.414690
#1	.0000429	-.000172	12.11203	.0003197	-.000192	.0043534	.7316453
#2	.0000097	-.000066	12.05272	.0006973	.000003	.0047712	.7277491
#3	.0000201	-.000200	11.95939	.0007122	-.000461	.0048701	.7474030

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0194550**	**.4478147**	**.0007346**	**.0004007**	**2.141638**	**-.001812**	**.1476076**
Stddev	.0006290	.0437653	.0004321	.0004095	.017191	.002115	.0005502
%RSD	3.232987	9.773082	58.81578	102.2150	.8027036	116.7621	.3727247
#1	.0198123	.4211781	.0011487	.0008504	2.122855	-.004240	.1480066
#2	.0187287	.4239407	.0002866	.0003025	2.145467	-.000828	.1469800
#3	.0198240	.4983254	.0007686	.0000491	2.156591	-.000367	.1478361

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.170171**	**-.000579**	**-.000716**	**-.003247**	**.0089538**	**1.197559**	**.0433912**
Stddev	.043357	.000859	.000095	.000605	.0006907	.009846	.0006580
%RSD	3.705143	148.4836	13.27491	18.64035	7.713450	.8221550	1.516383
#1	1.148344	.000212	-.000755	-.002754	.0093856	1.200677	.0427742
#2	1.142065	-.000455	-.000607	-.003063	.0093186	1.205468	.0440836
#3	1.220103	-.001494	-.000785	-.003922	.0081572	1.186532	.0433158

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3168-05LX5 Acquired: 9/25/2025 14:47:53 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.3338538	.0004813	.0262917
Stddev	.0055978	.0012456	.0001883
%RSD	1.676728	258.8192	.7163052
#1	.3383661	-.000881	.0264264
#2	.3275895	.001562	.0263722
#3	.3356057	.000762	.0260765

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6292.338	98754.53	8645.237	4859.687	7422.339
Stddev	7.525	602.58	68.049	5.123	10.603
%RSD	.1195963	.6101794	.7871254	.1054197	.1428560
#1	6292.546	99363.93	8587.001	4863.926	7417.691
#2	6284.711	98740.66	8628.671	4861.140	7414.854
#3	6299.757	98159.01	8720.040	4853.994	7434.473

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3168-05MS Acquired: 9/25/2025 14:52:10 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.7734365	1.976536	.9310403	1.919188	.7702821	3.038396	.2159672
Stddev	.0005562	.018715	.0015930	.005649	.0018631	.022603	.0019414
%RSD	.0719073	.9468713	.1711024	.2943592	.2418763	.7439097	.8989203
#1	.7730414	1.997227	.9322154	1.916295	.7724200	3.024548	.2137285
#2	.7731957	1.971591	.9316785	1.925698	.7694209	3.026160	.2169852
#3	.7740725	1.960789	.9292272	1.915572	.7690053	3.064479	.2171878

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1833107	.1837420	63.80539	.4069240	.1885796	.3145430	6.389628
Stddev	.0016619	.0002337	.47450	.0009341	.0003837	.0007532	.035542
%RSD	.9066248	.1272096	.7436734	.2295624	.2034737	.2394707	.5562518
#1	.1815646	.1837150	63.40744	.4071075	.1881422	.3153986	6.408735
#2	.1834941	.1839881	63.67820	.4059117	.1888593	.3142507	6.348618
#3	.1848733	.1835230	64.33052	.4077528	.1887374	.3139798	6.411529

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2860345	4.044944	.4715730	.0671501	11.91776	.2877975	1.006708
Stddev	.0021752	.084074	.0005050	.0004136	.07080	.0017494	.002013
%RSD	.7604715	2.078486	.1070864	.6158734	.5940671	.6078415	.1999165
#1	.2854217	3.963719	.4713201	.0667744	11.99816	.2858121	1.004432
#2	.2842315	4.039509	.4721545	.0670826	11.89034	.2884680	1.007437
#3	.2884504	4.131603	.4712444	.0675932	11.86476	.2891125	1.008254

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	14.43725	.2814429	.4191192	.6405015	.2118689	5.946596	5.703639
Stddev	.13298	.0021037	.0000786	.0010699	.0013298	.021547	.003083
%RSD	.9210790	.7474599	.0187448	.1670381	.6276437	.3623428	.0540472
#1	14.49930	.2790655	.4190483	.6415328	.2103792	5.968153	5.703320
#2	14.28458	.2821996	.4192037	.6393968	.2129362	5.946573	5.700728
#3	14.52785	.2830635	.4191058	.6405748	.2122913	5.925059	5.706868

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3168-05MS Acquired: 9/25/2025 14:52:10 Type: Unk
Method: 6010-200.7 NEW(v204) 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	1.645945	.1672913	.3210243
Stddev	.003548	.0005035	.0018807
%RSD	.2155622	.3009473	.5858449
#1	1.650005	.1674203	.3202788
#2	1.643443	.1677177	.3196307
#3	1.644386	.1667359	.3231635

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6154.462	95056.90	8735.474	4695.129	7177.773
Stddev	13.473	195.17	72.131	10.721	17.880
%RSD	.2189158	.2053186	.8257271	.2283346	.2490977
#1	6150.523	95274.27	8805.964	4697.245	7173.988
#2	6143.398	94999.75	8738.653	4704.635	7162.088
#3	6169.466	94896.69	8661.807	4683.509	7197.242

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3168-05MSD Acquired: 9/25/2025 14:56:08 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.7542145	1.940126	.9017663	1.869813	.7901923	2.952646	.2165304
Stddev	.0041403	.002889	.0017576	.002043	.0014481	.019289	.0027803
%RSD	.5489570	.1489216	.1949014	.1092690	.1832616	.6532729	1.284011
#1	.7589785	1.943065	.9022739	1.870145	.7912406	2.930548	.2137459
#2	.7514851	1.940022	.8998109	1.871671	.7907964	2.961281	.2165388
#3	.7521800	1.937289	.9032143	1.867625	.7885400	2.966109	.2193065

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1796118	.1779603	60.63625	.3925702	.1830426	.3037934	6.036908
Stddev	.0001324	.0000732	.16318	.0007080	.0005069	.0002956	.004619
%RSD	.0737205	.0411286	.2691168	.1803567	.2769359	.0973014	.0765050
#1	.1797410	.1778850	60.47472	.3933771	.1836005	.3041180	6.042132
#2	.1796181	.1780312	60.80104	.3922804	.1826103	.3037226	6.035221
#3	.1794764	.1779646	60.63299	.3920530	.1829169	.3035396	6.033369

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2818677	3.945030	.4569871	.0634030	11.68399	.2903080	.9357150
Stddev	.0017377	.021961	.0003677	.0008762	.06076	.0046268	.0035657
%RSD	.6165121	.5566754	.0804587	1.381920	.5200485	1.593752	.3810647
#1	.2800420	3.929514	.4573060	.0644030	11.61699	.2875725	.9398009
#2	.2835016	3.935417	.4570704	.0630359	11.73554	.2956500	.9341119
#3	.2820595	3.970158	.4565849	.0627700	11.69943	.2877014	.9332323

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	13.79285	.2749346	.4287851	.6568484	.2201842	5.592987	5.524809
Stddev	.07940	.0005784	.0005946	.0012284	.0014909	.034831	.019984
%RSD	.5756656	.2103912	.1386697	.1870136	.6771048	.6227621	.3617054
#1	13.72990	.2755996	.4284609	.6568052	.2185317	5.554187	5.542911
#2	13.88205	.2746561	.4294713	.6556421	.2214283	5.621559	5.528151
#3	13.76659	.2745481	.4284231	.6580978	.2205926	5.603215	5.503365

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3168-05MSD Acquired: 9/25/2025 14:56:08 Type: Unk
Method: 6010-200.7 NEW(v204) 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	1.527108	.1717055	.3127384
Stddev	.004333	.0014724	.0014399
%RSD	.2837455	.8575400	.4604154
#1	1.531731	.1714624	.3110773
#2	1.526453	.1732843	.3136315
#3	1.523140	.1703696	.3135064

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6207.607	96779.70	8710.624	4767.449	7248.483
Stddev	3.292	241.43	8.027	16.491	2.180
%RSD	.0530355	.2494621	.0921539	.3459181	.0300777
#1	6204.325	96946.58	8718.566	4752.149	7246.432
#2	6207.587	96502.87	8702.515	4765.280	7248.244
#3	6210.910	96889.65	8710.792	4784.917	7250.773

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3168-05A Acquired: 9/25/2025 15:00:07 Type: Unk
Method: 6010-200.7 NEW(v204) 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	**.7629876**	**1.922107**	**.9221823**	**1.911850**	**.7841696**	**3.260219**	**.2214663**
Stddev	.0040904	.019221	.0007415	.006014	.0015767	.005705	.0007219
%RSD	.5361094	.9999757	.0804069	.3145801	.2010658	.1749821	.3259533
#1	.7645514	1.928581	.9219162	1.916114	.7830841	3.264496	.2216950
#2	.7660654	1.937255	.9230201	1.914465	.7834465	3.253741	.2220461
#3	.7583459	1.900486	.9216106	1.904971	.7859781	3.262419	.2206578

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1830320**	**.1813153**	**55.88247**	**.3979739**	**.1866701**	**.3138771**	**6.339709**
Stddev	.0010091	.0003199	.10879	.0013458	.0002623	.0016474	.053897
%RSD	.5513257	.1764465	.1946815	.3381613	.1405266	.5248544	.8501519
#1	.1829346	.1814772	55.85148	.3993980	.1865054	.3128591	6.359091
#2	.1840863	.1809468	56.00339	.3978004	.1865323	.3157777	6.278801
#3	.1820751	.1815220	55.79253	.3967233	.1869726	.3129945	6.381235

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2812707**	**3.921634**	**.4663565**	**.0600974**	**10.78158**	**.3005149**	**.8962824**
Stddev	.0013688	.012129	.0003429	.0020671	.03888	.0052871	.0009747
%RSD	.4866603	.3092915	.0735255	3.439671	.3606344	1.759342	.1087542
#1	.2824848	3.919811	.4663029	.0591214	10.75413	.3040918	.8959011
#2	.2815400	3.910519	.4667230	.0586989	10.76455	.3030109	.8973902
#3	.2797872	3.934572	.4660435	.0624718	10.82607	.2944419	.8955560

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**13.64098**	**.2809877**	**.4242830**	**.6576969**	**.2350025**	**6.428989**	**5.589090**
Stddev	.06402	.0001995	.0007997	.0018018	.0082410	.096442	.017527
%RSD	.4693453	.0709947	.1884785	.2739481	3.506779	1.500112	.3135850
#1	13.60426	.2807589	.4245263	.6556202	.2443111	6.413240	5.575355
#2	13.60378	.2811252	.4249328	.6586270	.2286374	6.341390	5.608830
#3	13.71491	.2810791	.4233900	.6588435	.2320589	6.532336	5.583086

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3168-05A Acquired: 9/25/2025 15:00:07 Type: Unk
Method: 6010-200.7 NEW(v204) 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	**1.469506**	**.1773761**	**.3089148**
Stddev	.003410	.0022244	.0006950
%RSD	.2320838	1.254048	.2249867
#1	1.467903	.1786154	.3085255
#2	1.473422	.1748081	.3097172
#3	1.467192	.1787047	.3085016

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6320.630**	**99157.02**	**8793.523**	**4827.367**	**7445.398**
Stddev	6.490	202.39	62.595	31.515	13.677
%RSD	.1026780	.2041149	.7118328	.6528473	.1836923
#1	6324.516	98948.24	8776.289	4802.381	7448.712
#2	6324.236	99170.47	8741.350	4816.947	7457.113
#3	6313.138	99352.36	8862.930	4862.773	7430.369

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3189-01 Acquired: 9/25/2025 15:04:07 Type: Unk
Method: 6010-200.7 NEW(v204) 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	**.0818744**	**-.015593**	**.4995942**	**.0040638**	**-.013165**	**94.76807**	**.4658891**
Stddev	.0047476	.001118	.0020218	.0044712	.000895	.37159	.0026475
%RSD	5.798674	7.169603	.4046945	110.0258	6.796824	.3921016	.5682725
#1	.0767099	-.014346	.4990769	-.001098	-.014006	94.35029	.4629315
#2	.0828642	-.015926	.5018245	.006750	-.013264	94.89228	.4680378
#3	.0860492	-.016507	.4978813	.006539	-.012224	95.06164	.4666981

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0077591**	**.0048109**	**33.52160**	**.1523049**	**.0787598**	**.3085501**	**171.6274**
Stddev	.0001040	.0001923	.09373	.0004374	.0005719	.0015810	.7083
%RSD	1.340312	3.997196	.2796119	.2872119	.7261501	.5123970	.4127227
#1	.0076452	.0048291	33.41781	.1518498	.0791850	.3087399	171.0426
#2	.0078490	.0046101	33.60007	.1523427	.0781096	.3068827	172.4151
#3	.0077831	.0049934	33.54691	.1527222	.0789848	.3100276	171.4246

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.128878**	**39.33519**	**.1704207**	**.0015175**	**3.523025**	**.2328653**	**.8721882**
Stddev	.012231	.19450	.0003833	.0008355	.027713	.0001398	.0001052
%RSD	.3909037	.4944699	.2249175	55.05494	.7866238	.0600142	.0120635
#1	3.117519	39.11254	.1705316	.0007656	3.498667	.2329064	.8720678
#2	3.141825	39.47205	.1707362	.0013701	3.553177	.2329800	.8722622
#3	3.127290	39.42097	.1699941	.0024169	3.517232	.2327097	.8722347

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.191839**	**.1205327**	**.0011513**	**.0260276**	**2.989597**	**8.670035**	**4.773518**
Stddev	.063543	.0021160	.0001459	.0015896	.014898	.173551	.016966
%RSD	.6912979	1.755561	12.67043	6.107199	.4983219	2.001729	.3554201
#1	9.120410	.1214641	.0009875	.0248233	2.978733	8.596306	4.791103
#2	9.242083	.1220233	.0012672	.0254302	3.006580	8.868278	4.757248
#3	9.213025	.1181108	.0011992	.0278293	2.983479	8.545522	4.772205

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3189-01 Acquired: 9/25/2025 15:04:07 Type: Unk
Method: 6010-200.7 NEW(v204) 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	1.225829	.1295168	-.053977
Stddev	.008880	.0014735	.000604
%RSD	.7243803	1.137675	1.118617
#1	1.233986	.1307288	-.053462
#2	1.216371	.1299449	-.054642
#3	1.227130	.1278767	-.053828

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6852.117	107236.0	9881.221	5298.442	6966.932
Stddev	12.129	278.4	37.312	8.791	8.921
%RSD	.1770092	.2595799	.3776074	.1659180	.1280527
#1	6859.190	107555.0	9924.070	5292.442	6969.916
#2	6859.050	107041.9	9863.688	5294.352	6973.979
#3	6838.112	107111.3	9855.905	5308.533	6956.901

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3176-01 Acquired: 9/25/2025 15:08:12 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.0911251	-.002456	.2196205	.0160471	-.014995	318.6043
Stddev	.0008002	.002796	.0011088	.0046776	.004862	.7307
%RSD	.8781573	113.8654	.5048622	29.14890	32.42064	.2293374
#1	.0914773	-.005349	.2200345	.0114082	-.013762	318.3192
#2	.0902092	-.002251	.2183643	.0159708	-.010869	319.4346
#3	.0916888	.000232	.2204628	.0207624	-.020354	318.0592

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6892568	.0076685	.0046146	70.37106	.2700993	.0596998
Stddev	.0029826	.0001991	.0001955	.20896	.0004151	.0003161
%RSD	.4327267	2.595838	4.235875	.2969418	.1537035	.5295332
#1	.6924981	.0076202	.0045520	70.34610	.2698823	.0600426
#2	.6886446	.0078872	.0044581	70.59139	.2698375	.0594198
#3	.6866279	.0074980	.0048337	70.17571	.2705780	.0596370

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2770644	230.9534	16.75299	24.83726	.1496077	.0004082
Stddev	.0026066	1.8296	.04001	.10785	.0004677	.0001758
%RSD	.9407794	.7922065	.2388299	.4342235	.3125855	43.07843
#1	.2783804	229.6567	16.75482	24.85916	.1490870	.0005217
#2	.2787506	230.1572	16.79206	24.93248	.1499920	.0004973
#3	.2740622	233.0462	16.71210	24.72014	.1497441	.0002056

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.319748	.3261169	.7469952	16.28714	.2435593	.0175001
Stddev	.045061	.0057919	.0015015	.10257	.0102451	.0003589
%RSD	1.357373	1.776012	.2010036	.6297585	4.206417	2.050949
#1	3.272777	.3246193	.7472212	16.20635	.2367583	.0179040
#2	3.323849	.3325105	.7483708	16.25253	.2385769	.0172177
#3	3.362619	.3212209	.7453935	16.40254	.2553427	.0173785

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3176-01 Acquired: 9/25/2025 15:08:12 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.0379285	2.051147	F 12.81278	F 21.48862	F 23.79127	.1083380
Stddev	.0015236	.018911	.20654	.05405	.01471	.0023306
%RSD	4.017061	.9219770	1.611997	.2515165	.0618128	2.151197
#1	.0396857	2.040860	12.68138	21.44400	23.77446	.1110291
#2	.0369752	2.039610	12.70612	21.54872	23.79764	.1069997
#3	.0371246	2.072972	13.05085	21.47316	23.80172	.1069853

Elem	Sr4077
Units	ppm
Avg	.0302882
Stddev	.0020804
%RSD	6.868737
#1	.0316453
#2	.0313262
#3	.0278930

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6388.170	101321.6	9472.497	4991.650	6629.801
Stddev	9.838	504.5	42.412	26.155	8.197
%RSD	.1539968	.4979229	.4477378	.5239821	.1236320
#1	6396.443	101747.4	9463.329	5021.616	6637.756
#2	6390.773	101453.1	9435.419	4979.928	6630.265
#3	6377.292	100764.4	9518.743	4973.405	6621.383

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3176-02 Acquired: 9/25/2025 15:12:14 Type: Unk
Method: 6010-200.7 NEW(v204) 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	**.0858168**	**-.006036**	**.2088284**	**.0162583**	**-.014392**	**280.1779**
Stddev	.0016983	.001802	.0015935	.0022665	.001785	1.4879
%RSD	1.978993	29.85961	.7630765	13.94032	12.40591	.5310587
#1	.0875676	-.007839	.2103397	.0188533	-.013978	281.8915
#2	.0841764	-.004234	.2071637	.0146672	-.012849	279.4290
#3	.0857064	-.006034	.2089818	.0152543	-.016348	279.2132

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5944605**	**.0063125**	**.0036684**	**75.34196**	**.2149064**	**.0491329**
Stddev	.0012311	.0000172	.0001064	.44410	.0007314	.0001392
%RSD	.2070984	.2728444	2.899936	.5894420	.3403246	.2833516
#1	.5943650	.0063280	.0035473	75.84673	.2155207	.0489735
#2	.5957366	.0063155	.0037467	75.16782	.2140973	.0491939
#3	.5932800	.0062940	.0037113	75.01132	.2151012	.0492311

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2652092**	**206.9677**	**14.37940**	**23.01697**	**.1185927**	**.0017108**
Stddev	.0015049	1.3645	.04159	.18582	.0005788	.0003138
%RSD	.5674293	.6592725	.2892383	.8073195	.4880698	18.34062
#1	.2668836	205.6412	14.42329	23.23132	.1180890	.0017603
#2	.2639696	206.8945	14.37435	22.91823	.1184640	.0019969
#3	.2647745	208.3673	14.34057	22.90137	.1192250	.0013752

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.543944**	**.2910543**	**.7024431**	**14.67677**	**.2147728**	**.0175656**
Stddev	.046146	.0017742	.0019557	.10543	.0053026	.0005137
%RSD	1.302106	.6095673	.2784069	.7183464	2.468942	2.924714
#1	3.490660	.2928006	.7003674	14.55520	.2098613	.0174324
#2	3.570845	.2911088	.7042511	14.74299	.2140622	.0171315
#3	3.570327	.2892535	.7027109	14.73214	.2203949	.0181328

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3176-02 Acquired: 9/25/2025 15:12:14 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.0319057	2.016104	F 13.62915	F 23.10701	F 23.79479	.0826469
Stddev	.0013061	.023789	.44083	.06172	.09282	.0018630
%RSD	4.093526	1.179957	3.234460	.2671135	.3900850	2.254142
#1	.0307740	2.043055	13.12143	23.14556	23.77930	.0846288
#2	.0333349	1.998029	13.85141	23.13965	23.89437	.0809315
#3	.0316083	2.007228	13.91459	23.03582	23.71068	.0823803

Elem	Sr4077
Units	ppm
Avg	.0458025
Stddev	.0016634
%RSD	3.631559
#1	.0472766
#2	.0461319
#3	.0439992

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6391.148	98832.21	9380.081	4903.063	6716.149
Stddev	12.050	296.98	69.022	25.136	15.372
%RSD	.1885401	.3004900	.7358363	.5126575	.2288826
#1	6404.200	99021.84	9300.918	4915.495	6733.216
#2	6388.797	98984.84	9411.666	4919.561	6703.391
#3	6380.447	98489.95	9427.660	4874.134	6711.840

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: CCV04 Acquired: 9/25/2025 15:16:17 Type: Unk
Method: 6010-200.7 NEW(v204) 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	**4.945938**	**5.189826**	**4.830858**	**5.035950**	**4.975879**	**9.858870**	**9.577488**
Stddev	.017818	.064119	.010398	.020133	.005869	.104659	.059452
%RSD	.3602501	1.235485	.2152374	.3997885	.1179431	1.061573	.6207431
#1	4.943066	5.263842	4.823802	5.042530	4.969310	9.742698	9.518339
#2	4.929731	5.154403	4.825974	5.013350	4.977720	9.888118	9.576888
#3	4.965018	5.151233	4.842799	5.051970	4.980606	9.945793	9.637237

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2395203**	**2.436923**	**24.36510**	**.9991338**	**2.430773**	**1.239386**	**4.976052**
Stddev	.0026976	.003972	.21150	.0028913	.004859	.002202	.008158
%RSD	1.126252	.1629901	.8680411	.2893825	.1998890	.1777074	.1639496
#1	.2368244	2.434657	24.16012	.9984690	2.427130	1.239848	4.966632
#2	.2395170	2.434602	24.35261	1.002300	2.428900	1.236990	4.980784
#3	.2422196	2.441509	24.58257	.996633	2.436290	1.241322	4.980741

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.382695**	**24.28489**	**2.436879**	**1.234335**	**23.80228**	**2.481054**	**2.507790**
Stddev	.014689	.22539	.006612	.001524	.15345	.026189	.001616
%RSD	.6164883	.9281277	.2713385	.1234288	.6446978	1.055563	.0644265
#1	2.367029	24.06110	2.432812	1.233206	23.97120	2.452151	2.507327
#2	2.384898	24.28171	2.433316	1.233731	23.76416	2.487805	2.506457
#3	2.396158	24.51186	2.444509	1.236068	23.67148	2.503207	2.509587

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.24347**	**4.717505**	**5.046316**	**4.868577**	**4.834684**	**5.261547**	**4.892005**
Stddev	.04471	.054590	.012293	.009932	.031973	.014116	.016451
%RSD	.1771011	1.157181	.2435940	.2040028	.6613354	.2682888	.3362876
#1	25.29312	4.664522	5.052453	4.863945	4.801207	5.262236	4.879946
#2	25.20640	4.714422	5.032163	4.861808	4.837939	5.247100	4.885324
#3	25.23089	4.773571	5.054331	4.879979	4.864905	5.275307	4.910746

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: CCV04 Acquired: 9/25/2025 15:16:17 Type: Unk
Method: 6010-200.7 NEW(v204) 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	**4.913347**	**4.698365**	**4.807726**
Stddev	.013917	.028530	.049092
%RSD	.2832451	.6072233	1.021107
#1	4.922033	4.669009	4.756816
#2	4.897296	4.700097	4.811591
#3	4.920714	4.725989	4.854772

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6136.702**	**96563.68**	**8546.712**	**4730.164**	**6961.316**
Stddev	6.791	469.90	85.229	20.702	2.635
%RSD	.1106607	.4866212	.9972191	.4376612	.0378501
#1	6130.835	96615.46	8644.386	4728.218	6963.083
#2	6144.141	96070.03	8508.308	4710.504	6962.578
#3	6135.129	97005.54	8487.441	4751.770	6958.288

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: CCB04 Acquired: 9/25/2025 15:20:20 Type: Unk
Method: 6010-200.7 NEW(v204) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB04 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0007705**	**-.004454**	**-.002110**	**-.000475**	**-.003230**	**-.016759**
Stddev	.0006112	.001221	.000554	.002349	.002495	.011799
%RSD	79.32980	27.40738	26.26646	494.3911	77.23572	70.40666
#1	.0011398	-.003384	-.002543	-.000346	-.002071	-.003138
#2	.0011066	-.004195	-.001485	.001807	-.001526	-.023278
#3	.0000650	-.005784	-.002301	-.002887	-.006094	-.023860

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.003865**	**-.000047**	**-.000441**	**.0038716**	**-.000045**	**-.000292**
Stddev	.001657	.000074	.000070	.0036414	.000280	.000149
%RSD	42.87566	155.3976	15.83298	94.05461	616.6472	50.96955
#1	-.003707	.000020	-.000502	.0080702	-.000236	-.000421
#2	-.002293	-.000126	-.000365	.0019681	.000276	-.000326
#3	-.005596	-.000036	-.000457	.0015764	-.000176	-.000129

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000950**	**-.001232**	**.0008511**	**.0003742**	**-.000257**	**.0002476**
Stddev	.000084	.005466	.0006427	.0055372	.000299	.0001446
%RSD	8.830250	443.6415	75.51431	1479.834	116.1597	58.40350
#1	-.000915	-.007197	.0008623	-.006017	-.000602	.0000958
#2	-.001046	.003536	.0014880	.003730	-.000081	.0003837
#3	-.000890	-.000035	.0002028	.003410	-.000088	.0002632

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.087597**	**-.004115**	**-.000479**	**.0304190**	**-.003492**	**-.000744**
Stddev	.005168	.000799	.000457	.0334875	.000713	.000215
%RSD	5.899438	19.41419	95.33976	110.0873	20.42530	28.85867
#1	-.087379	-.005032	-.000686	.0630031	-.002770	-.000781
#2	-.082542	-.003567	.000044	.0321581	-.004196	-.000938
#3	-.092870	-.003746	-.000795	-.003904	-.003510	-.000513

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: CCB04 Acquired: 9/25/2025 15:20:20 Type: Unk
Method: 6010-200.7 NEW(v204) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB04 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.006665**	**.0001486**	**.0039689**	**-.001678**	**.0008551**	F **-.011030**
Stddev	.000508	.0019794	.0047527	.000598	.0024056	.001179
%RSD	7.618463	1331.822	119.7487	35.65814	281.3360	10.69061
#1	-.006530	.0020436	.0046260	-.001814	.0013039	-.010272
#2	-.006238	.0003078	.0083588	-.002196	-.001743	-.010429
#3	-.007226	-.001906	-.001078	-.001023	.003005	-.012388

Elem	Sr4077
Units	ppm
Avg	**-.001035**
Stddev	.000112
%RSD	10.78500
#1	-.001111
#2	-.001086
#3	-.000907

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6432.294**	**99751.45**	**8646.020**	**4946.414**	**7686.849**
Stddev	10.281	149.73	26.495	20.178	11.414
%RSD	.1598405	.1501025	.3064385	.4079236	.1484924
#1	6420.723	99697.46	8628.906	4968.788	7674.817
#2	6435.777	99920.69	8632.617	4940.855	7697.524
#3	6440.382	99636.21	8676.539	4929.599	7688.207

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3176-03 Acquired: 9/25/2025 15:24:39 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.1006247	-.008979	.2455135	.0140264	-.015968	268.2153
Stddev	.0042571	.000216	.0022271	.0035088	.004434	.5247
%RSD	4.230677	2.402118	.9071363	25.01566	27.76785	.1956313
#1	.1046920	-.008831	.2468453	.0127740	-.010930	267.9607
#2	.1009817	-.008880	.2467529	.0113156	-.019276	267.8665
#3	.0962003	-.009226	.2429424	.0179895	-.017698	268.8188

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6550975	.0085127	.0047085	86.95424	.2067318	.0617629
Stddev	.0014503	.0000177	.0003964	.19999	.0002640	.0005175
%RSD	.2213849	.2075530	8.417801	.2299925	.1276985	.8379171
#1	.6534491	.0084923	.0042705	86.90445	.2066607	.0611720
#2	.6556663	.0085240	.0048125	86.78385	.2070240	.0619814
#3	.6561772	.0085218	.0050424	87.17442	.2065106	.0621353

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3539667	251.3701	13.65094	23.88210	.1400172	-.000198
Stddev	.0029579	.9560	.05998	.08479	.0010281	.000347
%RSD	.8356427	.3803081	.4393540	.3550303	.7342855	175.1038
#1	.3511062	252.2623	13.60683	23.79246	.1388482	.000152
#2	.3537808	251.4868	13.62676	23.89282	.1404222	-.000206
#3	.3570132	250.3611	13.71923	23.96101	.1407811	-.000541

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.686886	.3305782	.8148079	15.59911	.2172300	.0138032
Stddev	.039346	.0028556	.0016524	.03997	.0054975	.0007801
%RSD	1.464381	.8638050	.2027961	.2562356	2.530738	5.651718
#1	2.697741	.3333318	.8154653	15.63986	.2199476	.0130391
#2	2.719664	.3307721	.8160304	15.59749	.2208394	.0145984
#3	2.643251	.3276306	.8129280	15.55997	.2109029	.0137720

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3176-03 Acquired: 9/25/2025 15:24:39 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.0376826	1.903951	F 13.80052	F 28.51380	F 20.44334	.1133812
Stddev	.0014320	.032389	.31353	.11853	.07217	.0006718
%RSD	3.800212	1.701150	2.271857	.4156824	.3530433	.5925055
#1	.0361669	1.901514	13.47594	28.38754	20.36738	.1135678
#2	.0390129	1.872849	14.10169	28.62268	20.51101	.1139399
#3	.0378679	1.937490	13.82392	28.53117	20.45163	.1126358

Elem	Sr4077
Units	ppm
Avg	.0311687
Stddev	.0018158
%RSD	5.825714
#1	.0300838
#2	.0301574
#3	.0332650

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6429.433	101333.3	9313.247	4986.242	6687.652
Stddev	20.373	188.5	60.981	22.915	21.578
%RSD	.3168672	.1860579	.6547725	.4595728	.3226478
#1	6447.990	101119.9	9350.873	4966.002	6709.731
#2	6432.675	101477.3	9345.978	4981.601	6686.611
#3	6407.633	101402.7	9242.889	5011.122	6666.613

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3178-01 Acquired: 9/25/2025 15:28:40 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.0940903	-.011198	.1969587	.0169443	-.016298	237.8585
Stddev	.0037946	.002525	.0024824	.0052330	.001226	.9004
%RSD	4.032954	22.54973	1.260348	30.88387	7.521923	.3785465
#1	.0899430	-.014092	.1940923	.0215481	-.015283	237.2811
#2	.0949395	-.009445	.1983807	.0112529	-.017660	237.3985
#3	.0973883	-.010057	.1984029	.0180318	-.015951	238.8960

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5655614	.0070943	.0028352	79.40916	.1784335	.0510967
Stddev	.0021941	.0001066	.0001594	.21640	.0011128	.0001719
%RSD	.3879567	1.501981	5.622214	.2725166	.6236213	.3364312
#1	.5658242	.0070890	.0028421	79.23085	.1796235	.0511976
#2	.5632477	.0069904	.0026725	79.34671	.1774189	.0508982
#3	.5676123	.0072033	.0029911	79.64992	.1782580	.0511943

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2873766	230.0576	10.62527	20.64224	.1091796	.0015159
Stddev	.0023840	.7302	.01944	.11320	.0003321	.0004124
%RSD	.8295578	.3174178	.1829163	.5483843	.3042050	27.20455
#1	.2851997	230.7960	10.61385	20.52924	.1095012	.0011363
#2	.2870058	230.0410	10.61425	20.64185	.1088379	.0019547
#3	.2899242	229.3358	10.64771	20.75563	.1091998	.0014567

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.214463	.3016649	.7182098	13.93403	.2318106	.0120133
Stddev	.014675	.0017603	.0017344	.13619	.0028843	.0004582
%RSD	.6627009	.5835425	.2414950	.9774218	1.244261	3.814192
#1	2.197933	.3032513	.7169745	14.05634	.2350324	.0125415
#2	2.225958	.2997711	.7201927	13.95849	.2294689	.0117216
#3	2.219498	.3019721	.7174623	13.78727	.2309305	.0117769

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3178-01 Acquired: 9/25/2025 15:28:40 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.0432429	1.881437	F 13.37642	F 25.63878	F 19.24171	.0866105
Stddev	.0011789	.009476	.51486	.03609	.11146	.0042828
%RSD	2.726266	.5036424	3.848978	.1407668	.5792459	4.944847
#1	.0443719	1.890724	13.92334	25.62787	19.13949	.0905308
#2	.0433369	1.871783	13.30480	25.60940	19.22509	.0820397
#3	.0420197	1.881805	12.90112	25.67906	19.36054	.0872611

Elem	Sr4077
Units	ppm
Avg	.0250883
Stddev	.0011701
%RSD	4.663894
#1	.0237901
#2	.0254133
#3	.0260616

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6330.773	97577.68	9355.271	4858.600	6655.323
Stddev	8.519	18.53	59.455	22.456	4.345
%RSD	.1345594	.0189860	.6355249	.4621831	.0652924
#1	6340.309	97567.77	9404.337	4876.902	6659.077
#2	6328.096	97599.05	9372.323	4865.357	6656.329
#3	6323.915	97566.20	9289.153	4833.542	6650.563

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3178-02 Acquired: 9/25/2025 15:40:22 Type: Unk
Method: 6010-200.7 NEW(v204) 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	**.8573493**	**1.981500**	**1.161325**	**1.877382**	**.3943665**	**273.2508**
Stddev	.0014828	.014654	.000954	.006697	.0042717	.2564
%RSD	.1729467	.7395342	.0821665	.3567268	1.083179	.0938460
#1	.8573431	1.997903	1.161850	1.880819	.3895023	273.1803
#2	.8558697	1.969700	1.160224	1.869664	.3960901	273.5352
#3	.8588352	1.976899	1.161902	1.881663	.3975072	273.0371

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8016849**	**.1812159**	**.1976793**	**81.53498**	**.5926344**	**.2548509**
Stddev	.0055402	.0005714	.0004125	.20761	.0014087	.0003265
%RSD	.6910690	.3152998	.2086879	.2546272	.2377077	.1281190
#1	.8073263	.1812209	.1980461	81.66679	.5911783	.2544769
#2	.8014765	.1806420	.1972327	81.64249	.5939904	.2550790
#3	.7962518	.1817847	.1977590	81.29567	.5927345	.2549970

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5590112**	**251.3355**	**12.39129**	**23.40710**	**.6200431**	**.1202656**
Stddev	.0022586	.7758	.06383	.06409	.0004916	.0001737
%RSD	.4040388	.3086840	.5150935	.2738201	.0792805	.1444262
#1	.5586872	251.2633	12.45453	23.42081	.6200660	.1200669
#2	.5569321	252.1449	12.39247	23.33726	.6195405	.1203411
#3	.5614144	250.5983	12.32689	23.46323	.6205229	.1203888

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.201448**	**.6057241**	**.9784596**	**25.91664**	**.4829485**	**.3959260**
Stddev	.002259	.0019735	.0045454	.06418	.0041276	.0005461
%RSD	.0434229	.3258048	.4645449	.2476515	.8546741	.1379230
#1	5.198915	.6040622	.9741537	25.85763	.4811026	.3956963
#2	5.203251	.6079053	.9832116	25.98498	.4876769	.3955323
#3	5.202178	.6052049	.9780134	25.90730	.4800659	.3965494

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3178-02 Acquired: 9/25/2025 15:40:22 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.6890009	2.130483	F 14.58142	F 33.44903	F 21.32444	.2802543
Stddev	.0018042	.013903	.25592	.04720	.03678	.0005675
%RSD	.2618577	.6525739	1.755113	.1410978	.1724977	.2025022
#1	.6910437	2.143502	14.49467	33.49375	21.35892	.2808135
#2	.6876253	2.132108	14.86944	33.45365	21.32868	.2796788
#3	.6883337	2.115839	14.38015	33.39970	21.28572	.2802708

Elem	Sr4077
Units	ppm
Avg	.2043253
Stddev	.0022509
%RSD	1.101614
#1	.2065662
#2	.2043452
#3	.2020645

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6307.476	97963.75	9391.587	4828.871	6574.875
Stddev	10.434	154.60	26.075	22.671	7.103
%RSD	.1654263	.1578136	.2776436	.4694816	.1080300
#1	6311.302	98092.53	9361.485	4840.330	6576.978
#2	6315.457	97792.29	9407.189	4802.758	6580.689
#3	6295.669	98006.43	9406.088	4843.524	6566.958

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3178-03 Acquired: 9/25/2025 15:44:18 Type: Unk
Method: 6010-200.7 NEW(v204) 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	**.8461659**	**1.989125**	**1.169439**	**1.899918**	**.4000221**	**246.1856**
Stddev	.0065962	.013923	.002388	.012892	.0011833	.6786
%RSD	.7795429	.6999560	.2041761	.6785482	.2958057	.2756382
#1	.8388184	1.978241	1.167928	1.892677	.4010894	245.5289
#2	.8515777	2.004814	1.172191	1.914802	.3987496	246.1437
#3	.8481016	1.984319	1.168197	1.892274	.4002272	246.8841

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8100188**	**.1864785**	**.1994934**	**87.83206**	**.5935244**	**.2556524**
Stddev	.0031832	.0010192	.0007132	.39997	.0050815	.0007631
%RSD	.3929793	.5465703	.3575047	.4553852	.8561483	.2985036
#1	.8067177	.1861048	.1987222	87.39842	.5984596	.2551690
#2	.8102694	.1856989	.2001293	87.91123	.5938052	.2565321
#3	.8130693	.1876319	.1996286	88.18653	.5883084	.2552560

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5640568**	**244.7507**	**12.17723**	**24.98804**	**.6258633**	**.1215032**
Stddev	.0038879	1.8856	.05398	.08242	.0013499	.0010030
%RSD	.6892687	.7704071	.4433072	.3298428	.2156840	.8255121
#1	.5597761	245.8201	12.12408	24.89412	.6248109	.1220780
#2	.5650258	245.8585	12.17560	25.04834	.6273853	.1220865
#3	.5673686	242.5736	12.23201	25.02166	.6253938	.1203450

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.470480**	**.6036231**	**.9837486**	**26.35263**	**.4961914**	**.4009222**
Stddev	.043650	.0026502	.0061455	.24874	.0083487	.0005372
%RSD	.7979115	.4390540	.6247030	.9438956	1.682556	.1339998
#1	5.486067	.6020154	.9859116	26.50321	.5008863	.4005856
#2	5.504196	.6066820	.9885201	26.48916	.5011357	.4015418
#3	5.421176	.6021720	.9768140	26.06552	.4865522	.4006392

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3178-03 Acquired: 9/25/2025 15:44:18 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.6980399	2.113136	F 15.73914	F 32.05965	F 19.58261	.2868437
Stddev	.0034542	.030803	.51551	.19625	.11106	.0006337
%RSD	.4948501	1.457705	3.275334	.6121364	.5671466	.2209079
#1	.6964598	2.148704	16.22689	31.88223	19.47682	.2861652
#2	.7020015	2.095131	15.79077	32.27044	19.69828	.2869457
#3	.6956582	2.095574	15.19976	32.02627	19.57272	.2874202

Elem	Sr4077
Units	ppm
Avg	.2192662
Stddev	.0046809
%RSD	2.134784
#1	.2153719
#2	.2179674
#3	.2244593

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6410.353	97323.71	9365.595	4841.301	6698.486
Stddev	13.219	802.06	29.308	50.301	21.205
%RSD	.2062111	.8241135	.3129293	1.039006	.3165596
#1	6419.717	96652.81	9385.917	4820.928	6710.306
#2	6395.232	97106.24	9378.870	4804.382	6674.006
#3	6416.110	98212.07	9331.999	4898.593	6711.146

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3178-01A Acquired: 9/25/2025 15:48:14 Type: Unk
Method: 6010-200.7 NEW(v204) 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	**.8585761**	**2.053572**	**1.150126**	**1.964213**	**.7679521**	**234.2590**
Stddev	.0068588	.030810	.003530	.004983	.0011219	1.0898
%RSD	.7988521	1.500305	.3069246	.2536903	.1460931	.4651974
#1	.8594302	2.050753	1.149284	1.963474	.7673207	233.0038
#2	.8513303	2.024268	1.147093	1.959641	.7672882	234.9634
#3	.8649678	2.085694	1.154000	1.969524	.7692474	234.8099

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7355383**	**.1851578**	**.2002089**	**78.64499**	**.5517252**	**.2503913**
Stddev	.0032567	.0012096	.0002835	.26753	.0037688	.0002881
%RSD	.4427679	.6532636	.1416154	.3401686	.6830945	.1150664
#1	.7317778	.1838094	.2005044	78.34280	.5473756	.2505392
#2	.7373936	.1855164	.2001832	78.74058	.5537785	.2505754
#3	.7374434	.1861474	.1999391	78.85159	.5540215	.2500593

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5876968**	**221.3050**	**10.61399**	**21.98283**	**.6058874**	**.1150912**
Stddev	.0017600	.6803	.03577	.12418	.0005741	.0008280
%RSD	.2994795	.3074010	.3369797	.5648843	.0947609	.7194041
#1	.5892148	220.7805	10.57373	21.85681	.6065496	.1141494
#2	.5881080	221.0609	10.62612	21.98659	.6055280	.1154195
#3	.5857675	222.0737	10.64211	22.10508	.6055847	.1157046

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.994068**	**.5772052**	**.8792148**	**23.29296**	**.4608529**	**.4129989**
Stddev	.027802	.0043092	.0037702	.12162	.0028559	.0004815
%RSD	.5567083	.7465673	.4288112	.5221356	.6197057	.1165756
#1	4.963340	.5725145	.8758981	23.15643	.4641371	.4134196
#2	5.017483	.5809885	.8833153	23.38969	.4589521	.4124738
#3	5.001381	.5781125	.8784310	23.33277	.4594695	.4131034

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3178-01A Acquired: 9/25/2025 15:48:14 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.7446736	2.022399	F 13.16974	F 30.23038	F 18.46629	.2760373
Stddev	.0002462	.010946	.20177	.04348	.10308	.0030121
%RSD	.0330642	.5412182	1.532048	.1438320	.5581858	1.091196
#1	.7446873	2.010458	13.29836	30.27697	18.50296	.2736580
#2	.7444208	2.031957	13.27365	30.19087	18.34989	.2794240
#3	.7449126	2.024783	12.93719	30.22332	18.54601	.2750300

Elem	Sr4077
Units	ppm
Avg	.2110373
Stddev	.0019135
%RSD	.9067177
#1	.2093757
#2	.2131294
#3	.2106069

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6417.993	101524.1	9424.494	4956.269	6763.840
Stddev	7.844	326.5	32.824	8.811	9.928
%RSD	.1222265	.3216089	.3482864	.1777839	.1467771
#1	6411.712	101892.7	9462.025	4952.273	6754.632
#2	6415.481	101408.5	9401.146	4950.164	6762.532
#3	6426.786	101271.1	9410.310	4966.370	6774.358

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3183-01 Acquired: 9/25/2025 15:52:10 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.0910959	-.019689	.8215642	.0068716	-.015799	231.6919
Stddev	.0056688	.001459	.0039779	.0025063	.003990	.2803
%RSD	6.222950	7.409800	.4841822	36.47298	25.25740	.1209688
#1	.0874190	-.021372	.8245955	.0093611	-.017998	231.8364
#2	.0976243	-.018775	.8230371	.0069048	-.018207	231.8706
#3	.0882443	-.018921	.8170599	.0043488	-.011193	231.3689

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8884176	.0154392	.0084844	31.04303	.3759717	.1581593
Stddev	.0030144	.0001247	.0001370	.02264	.0014713	.0009115
%RSD	.3392989	.8077774	1.614974	.0729315	.3913363	.5762981
#1	.8915682	.0153582	.0083347	31.05180	.3772439	.1591089
#2	.8881235	.0155828	.0086036	31.05996	.3763109	.1580774
#3	.8855610	.0153765	.0085147	31.01731	.3743605	.1572915

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4665780	332.4553	4.723638	76.91991	.2847732	.0663938
Stddev	.0024986	3.3277	.019841	.32469	.0016939	.0006876
%RSD	.5355097	1.000941	.4200428	.4221130	.5948272	1.035646
#1	.4638977	336.1111	4.746034	76.72578	.2866110	.0671387
#2	.4669936	331.6521	4.716621	77.29475	.2832745	.0662593
#3	.4688428	329.6028	4.708258	76.73920	.2844341	.0657834

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	16.22467	.8072118	1.064223	25.22547	.2524906	.0065743
Stddev	.20513	.0043386	.004151	.23815	.0123255	.0002513
%RSD	1.264301	.5374847	.3900384	.9440808	4.881582	3.822257
#1	16.45366	.8108476	1.068185	25.47275	.2667222	.0068624
#2	16.16262	.8024090	1.064577	25.20604	.2452486	.0064005
#3	16.05774	.8083787	1.059906	24.99764	.2455011	.0064598

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3183-01 Acquired: 9/25/2025 15:52:10 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.0637278	F 13.53867	F 32.69653	7.710577	.6694386	.3590521
Stddev	.0010084	.03824	.50502	.029632	.0032207	.0005779
%RSD	1.582346	.2824194	1.544569	.3842978	.4811064	.1609403
#1	.0627124	13.56315	32.99088	7.736984	.6722057	.3595558
#2	.0647290	13.55824	32.98531	7.716217	.6702068	.3584212
#3	.0637419	13.49461	32.11339	7.678531	.6659032	.3591793

Elem	Sr4077
Units	ppm
Avg	-.073365
Stddev	.001845
%RSD	2.515383
#1	-.075351
#2	-.073040
#3	-.071703

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6923.870	106001.1	10236.88	5258.479	6502.823
Stddev	16.372	630.2	15.56	34.801	17.930
%RSD	.2364630	.5945353	.1519588	.6618120	.2757220
#1	6913.910	105387.2	10251.04	5224.147	6483.937
#2	6914.935	105969.6	10220.23	5257.558	6504.919
#3	6942.766	106646.4	10239.37	5293.732	6519.612

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3183-04 Acquired: 9/25/2025 15:56:14 Type: Unk
Method: 6010-200.7 NEW(v204) 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	**.0824784**	**-.017148**	**.6222120**	**.0041197**	**-.020112**	**180.1242**
Stddev	.0034629	.006192	.0011428	.0026709	.003352	.1142
%RSD	4.198603	36.10765	.1836680	64.83248	16.66678	.0633973
#1	.0861727	-.021530	.6208979	.0068409	-.023828	180.1791
#2	.0819563	-.010064	.6227645	.0015022	-.017318	179.9930
#3	.0793061	-.019848	.6229736	.0040159	-.019189	180.2007

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.083989**	**.0139872**	**.0107014**	**32.23958**	**.3168317**	**.1485712**
Stddev	.008482	.0002508	.0003318	.16593	.0013266	.0009042
%RSD	.7824528	1.792737	3.100385	.5146835	.4187062	.6086114
#1	1.093029	.0142321	.0110830	32.41376	.3176813	.1478302
#2	1.076206	.0139984	.0105395	32.08335	.3175107	.1483048
#3	1.082732	.0137310	.0104816	32.22163	.3153030	.1495787

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4909297**	**286.7015**	**7.318373**	**56.09369**	**.2560964**	**.0563640**
Stddev	.0020726	.1887	.046621	.04002	.0001084	.0004296
%RSD	.4221697	.0658322	.6370457	.0713374	.0423478	.7621206
#1	.4886330	286.9113	7.365422	56.13980	.2560324	.0560819
#2	.4926604	286.5454	7.272191	56.06802	.2560352	.0561518
#3	.4914959	286.6479	7.317507	56.07325	.2562216	.0568584

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**16.41489**	**.6304826**	**1.091938**	**26.85611**	**.1719051**	**.0173805**
Stddev	.04824	.0020669	.003996	.02612	.0036050	.0003322
%RSD	.2938696	.3278271	.3659547	.0972741	2.097077	1.911135
#1	16.46388	.6309063	1.090233	26.88593	.1744000	.0169970
#2	16.36744	.6282367	1.096504	26.83725	.1677719	.0175799
#3	16.41337	.6323048	1.089077	26.84515	.1735434	.0175645

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3183-04 Acquired: 9/25/2025 15:56:14 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.0394608	8.100033	F 10.43851	F 10.47546	1.755060	.2668224
Stddev	.0013815	.040260	.30486	.02918	.010305	.0032433
%RSD	3.500954	.4970368	2.920538	.2785529	.5871625	1.215510
#1	.0408846	8.143129	10.09598	10.50867	1.750502	.2664570
#2	.0381259	8.063387	10.53946	10.46376	1.747819	.2637773
#3	.0393720	8.093584	10.68009	10.45394	1.766858	.2702328

Elem	Sr4077
Units	ppm
Avg	-.071839
Stddev	.001159
%RSD	1.613585
#1	-.070517
#2	-.072682
#3	-.072319

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7345.174	115690.6	10691.39	5624.304	6596.421
Stddev	8.644	294.6	37.64	19.793	12.897
%RSD	.1176775	.2546064	.3520224	.3519161	.1955134
#1	7353.966	115806.7	10647.93	5620.429	6609.489
#2	7344.867	115355.7	10713.29	5606.736	6596.070
#3	7336.687	115909.4	10712.95	5645.748	6583.703

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3183-07 Acquired: 9/25/2025 16:00:16 Type: Unk
Method: 6010-200.7 NEW(v204) 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	**.1150816**	**-.018155**	**.9193314**	**.0019184**	**-.016470**	**151.8393**	**.8461086**
Stddev	.0032917	.001292	.0024577	.0025252	.000744	.0795	.0009916
%RSD	2.860347	7.114260	.2673364	131.6268	4.519524	.0523559	.1171970
#1	.1187157	-.016939	.9208212	-.000474	-.015639	151.9168	.8465901
#2	.1142292	-.018016	.9164947	.004558	-.016696	151.7579	.8449682
#3	.1123000	-.019511	.9206783	.001671	-.017075	151.8432	.8467675

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0141768**	**.0213757**	**48.06484**	**.3200494**	**.1437661**	**.3603623**	**257.8621**
Stddev	.0000517	.0000977	.11653	.0003905	.0002790	.0025654	1.0176
%RSD	.3644536	.4569837	.2424523	.1220252	.1940455	.7118917	.3946350
#1	.0142239	.0214358	48.14961	.3197414	.1436069	.3632588	256.7374
#2	.0141216	.0212629	48.11296	.3204886	.1436031	.3583767	258.1298
#3	.0141850	.0214282	47.93195	.3199180	.1440882	.3594513	258.7192

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.946534**	**57.71711**	**.2910930**	**.0508710**	**8.359336**	**.5285944**	**1.594761**
Stddev	.008258	.03621	.0004517	.0004960	.017740	.0016917	.010434
%RSD	.2802545	.0627398	.1551634	.9749634	.2122128	.3200307	.6542707
#1	2.954938	57.68113	.2912377	.0502983	8.342227	.5268909	1.594918
#2	2.946232	57.75355	.2914546	.0511601	8.358136	.5286184	1.605116
#3	2.938431	57.71667	.2905867	.0511546	8.377645	.5302740	1.584249

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**14.11250**	**.1747125**	**.0051388**	**.0433493**	**7.383500**	**9.241923**	**8.395563**
Stddev	.05911	.0060720	.0005020	.0007816	.017254	.053128	.020354
%RSD	.4188142	3.475433	9.768226	1.802938	.2336825	.5748536	.2424358
#1	14.05782	.1677282	.0056154	.0424514	7.402020	9.189612	8.418363
#2	14.10447	.1776715	.0051861	.0438767	7.380599	9.240325	8.379222
#3	14.17521	.1787377	.0046148	.0437198	7.367880	9.295831	8.389105

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3183-07 Acquired: 9/25/2025 16:00:16 Type: Unk
Method: 6010-200.7 NEW(v204) 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	1.092916	.2387623	-.004631
Stddev	.000965	.0017346	.001482
%RSD	.0883259	.7264892	32.00560
#1	1.093558	.2406154	-.003230
#2	1.093383	.2384939	-.004480
#3	1.091806	.2371775	-.006183

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7573.025	120047.2	11222.85	5844.942	6626.618
Stddev	10.677	253.2	55.21	23.598	12.540
%RSD	.1409810	.2109047	.4919529	.4037304	.1892363
#1	7564.686	120228.2	11159.99	5861.242	6619.959
#2	7569.331	120155.5	11245.08	5817.882	6618.812
#3	7585.058	119757.9	11263.49	5855.702	6641.083

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3178-01DUP Acquired: 9/25/2025 16:07:51 Type: Unk
Method: 6010-200.7 NEW(v204) 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	**.0959047**	**-.011569**	**.1929372**	**.0174735**	**-.017605**	**240.5133**
Stddev	.0009462	.005635	.0009264	.0024066	.001601	.6446
%RSD	.9865877	48.70797	.4801683	13.77297	9.094924	.2680042
#1	.0966743	-.013479	.1927001	.0155356	-.016249	240.8429
#2	.0961916	-.016001	.1939591	.0167175	-.019371	239.7706
#3	.0948483	-.005227	.1921523	.0201673	-.017194	240.9265

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5637054**	**.0072490**	**.0036697**	**80.50037**	**.1782409**	**.0511347**
Stddev	.0035537	.0000483	.0000701	.20522	.0002608	.0006422
%RSD	.6304199	.6656627	1.911123	.2549293	.1463015	1.255908
#1	.5615677	.0072365	.0037115	80.46407	.1782997	.0516819
#2	.5617408	.0073023	.0035887	80.31573	.1779557	.0512947
#3	.5678077	.0072082	.0037087	80.72132	.1784672	.0504277

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3188725**	**224.7781**	**10.72676**	**20.76133**	**.1091848**	**.0462010**
Stddev	.0002043	.2678	.05434	.03729	.0005130	.0004393
%RSD	.0640592	.1191454	.5065736	.1796097	.4698707	.9508198
#1	.3190330	224.7572	10.71846	20.79421	.1097196	.0465184
#2	.3189420	225.0557	10.67705	20.72081	.1086967	.0456996
#3	.3186426	224.5213	10.78478	20.76895	.1091382	.0463850

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.058165**	**.3034375**	**.7197464**	**13.34373**	**.1963091**	**.0115494**
Stddev	.022811	.0041123	.0015606	.09418	.0042483	.0003830
%RSD	1.108303	1.355227	.2168273	.7057667	2.164103	3.315941
#1	2.036023	.3007866	.7194708	13.31146	.1962009	.0119586
#2	2.056881	.3013512	.7214265	13.44980	.2006104	.0111996
#3	2.081590	.3081747	.7183420	13.26993	.1921159	.0114902

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3178-01DUP Acquired: 9/25/2025 16:07:51 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.0443880	1.825792	9.023728	F 25.56498	F 18.96175	.0826079
Stddev	.0013172	.017647	.051516	.15140	.15804	.0011786
%RSD	2.967519	.9665611	.5708936	.5922272	.8334498	1.426691
#1	.0432669	1.827419	8.977782	25.73652	19.14247	.0814701
#2	.0440584	1.807388	9.013982	25.50842	18.89328	.0838234
#3	.0458387	1.842570	9.079421	25.45000	18.84949	.0825303

Elem	Sr4077
Units	ppm
Avg	.0316616
Stddev	.0019605
%RSD	6.192069
#1	.0316961
#2	.0296840
#3	.0336046

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6412.642	100225.3	9271.776	4904.207	6750.332
Stddev	5.007	220.5	35.620	6.635	10.336
%RSD	.0780833	.2200321	.3841802	.1352947	.1531182
#1	6408.768	100085.2	9259.075	4897.214	6740.363
#2	6410.861	100111.2	9312.006	4910.415	6749.634
#3	6418.296	100479.5	9244.247	4904.990	6760.999

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3178-01LX5 Acquired: 9/25/2025 16:11:56 Type: Unk
Method: 6010-200.7 NEW(v204) 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	**.0193872**	**-.005236**	**.0367665**	**.0017449**	**-.005822**	**49.21140**	**.1102142**
Stddev	.0003539	.001923	.0006703	.0002411	.001468	.04743	.0003181
%RSD	1.825261	36.71843	1.823170	13.81966	25.20939	.0963732	.2885823
#1	.0196529	-.004663	.0373143	.0016554	-.006188	49.23521	.1105264
#2	.0189855	-.003665	.0360190	.0020179	-.004206	49.24221	.1098906
#3	.0195232	-.007380	.0369661	.0015612	-.007072	49.15679	.1102255

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0015284**	**-.000104**	**16.73026**	**.0369613**	**.0093373**	**.0669692**	**46.82433**
Stddev	.0000463	.000121	.05467	.0002667	.0001016	.0005391	.31138
%RSD	3.030644	116.0033	.3267546	.7214586	1.088165	.8050088	.6649873
#1	.0015459	.000035	16.76880	.0366978	.0094141	.0668911	47.06026
#2	.0014758	-.000185	16.75430	.0369550	.0093758	.0664734	46.94133
#3	.0015633	-.000162	16.66770	.0372310	.0092221	.0675431	46.47140

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.235889**	**4.384121**	**.0209744**	**.0100488**	**.5044737**	**.0590075**	**.1462739**
Stddev	.008497	.012212	.0000988	.0008059	.0337596	.0029515	.0008118
%RSD	.3800239	.2785407	.4708530	8.020087	6.692040	5.001918	.5549720
#1	2.238414	4.376573	.0210865	.0109383	.4690977	.0585423	.1470007
#2	2.242838	4.377581	.0209363	.0098411	.5363432	.0563162	.1453979
#3	2.226416	4.398210	.0209004	.0093671	.5079802	.0621640	.1464233

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.892316**	**.0385280**	**.0013909**	**.0059209**	**.4054503**	**3.008223**	**5.089490**
Stddev	.013132	.0002622	.0003114	.0006167	.0141831	.075121	.010675
%RSD	.4540199	.6806600	22.38476	10.41618	3.498121	2.497191	.2097393
#1	2.907325	.0388307	.0014791	.0058414	.4052708	3.030829	5.094298
#2	2.882944	.0383847	.0010450	.0053478	.3913578	3.069446	5.077257
#3	2.886678	.0383686	.0016487	.0065735	.4197224	2.924395	5.096914

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3178-01LX5 Acquired: 9/25/2025 16:11:56 Type: Unk
Method: 6010-200.7 NEW(v204) 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	3.684466	.0139542	.0053521
Stddev	.006000	.0006176	.0000695
%RSD	.1628594	4.425900	1.298593
#1	3.689445	.0146356	.0053699
#2	3.677804	.0134312	.0052754
#3	3.686150	.0137958	.0054109

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6231.722	95790.34	8850.905	4783.712	7142.250
Stddev	10.761	280.86	20.510	32.147	5.136
%RSD	.1726886	.2932033	.2317309	.6720135	.0719054
#1	6220.550	95494.27	8855.240	4747.559	7139.435
#2	6232.597	95823.73	8868.901	4794.497	7139.137
#3	6242.020	96053.01	8828.573	4809.081	7148.178

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: CCV05 Acquired: 9/25/2025 16:16:09 Type: Unk
Method: 6010-200.7 NEW(v204) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV05 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.170839**	**5.382786**	**4.988827**	**5.280386**	**5.182292**	**10.13882**
Stddev	.011679	.146409	.017525	.018376	.015826	.03758
%RSD	.2258599	2.719955	.3512772	.3480055	.3053890	.3706714
#1	5.174313	5.271280	5.001458	5.294522	5.196406	10.18200
#2	5.180387	5.548587	4.996204	5.287022	5.185289	10.11350
#3	5.157817	5.328491	4.968820	5.259613	5.165182	10.12096

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.752262**	**.2469301**	**2.524473**	**25.19741**	**1.036091**	**2.512780**
Stddev	.067501	.0014948	.008531	.02648	.003549	.008565
%RSD	.6921611	.6053383	.3379461	.1050982	.3425103	.3408609
#1	9.740914	.2456740	2.531791	25.18616	1.033262	2.521418
#2	9.691154	.2465331	2.526526	25.17841	1.034939	2.512633
#3	9.824718	.2485833	2.515103	25.22766	1.040073	2.504290

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.290044**	**5.351935**	**2.478502**	**24.98230**	**2.524196**	**1.292717**
Stddev	.003627	.007080	.005093	.02058	.007925	.006239
%RSD	.2811846	.1322819	.2054838	.0823983	.3139760	.4826206
#1	1.293961	5.350401	2.479856	24.99748	2.532134	1.286961
#2	1.289372	5.359656	2.482782	24.95887	2.524171	1.291845
#3	1.286800	5.345748	2.472870	24.99056	2.516283	1.299347

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.30734**	**2.562706**	**2.640683**	**26.57149**	**4.844762**	**5.177789**
Stddev	.12028	.003696	.011937	.11339	.029778	.012853
%RSD	.4752841	.1442381	.4520328	.4267250	.6146388	.2482330
#1	25.40503	2.564925	2.626940	26.61627	4.818477	5.189592
#2	25.34401	2.558439	2.648462	26.65565	4.838707	5.179680
#3	25.17300	2.564754	2.646648	26.44256	4.877102	5.164095

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: CCV05 Acquired: 9/25/2025 16:16:09 Type: Unk
Method: 6010-200.7 NEW(v204) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV05 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.038711**	**5.009033**	F **5.547607**	**5.200524**	**5.184457**	**4.812803**
Stddev	.014742	.009868	.013534	.026966	.034562	.007752
%RSD	.2925789	.1969987	.2439686	.5185249	.6666450	.1610785
#1	5.039477	5.018750	5.532248	5.210477	5.192402	4.819191
#2	5.053055	5.009328	5.552783	5.221098	5.214355	4.815041
#3	5.023601	4.999021	5.557789	5.169996	5.146615	4.804178

Elem	Sr4077
Units	ppm
Avg	**4.948055**
Stddev	.017050
%RSD	.3445847
#1	4.942872
#2	4.934198
#3	4.967095

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5907.359**	**92105.34**	**8401.713**	**4561.158**	**6674.716**
Stddev	11.026	208.53	31.360	8.750	18.581
%RSD	.1866451	.2264076	.3732558	.1918381	.2783715
#1	5896.516	92104.84	8409.000	4571.127	6659.072
#2	5907.003	92314.12	8428.788	4557.599	6669.822
#3	5918.559	91897.05	8367.351	4554.748	6695.254

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: CCB05 Acquired: 9/25/2025 16:20:58 Type: Unk
Method: 6010-200.7 NEW(v204) 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	**.0017734**	**-.003568**	**-.001953**	**-.000412**	**-.002064**	**-.011664**
Stddev	.0039076	.000463	.001059	.003198	.001583	.000845
%RSD	220.3429	12.97871	54.20221	775.8173	76.68838	7.248115
#1	.0032359	-.003553	-.002059	.003281	-.000684	-.012636
#2	.0047388	-.003113	-.002955	-.002263	-.001716	-.011254
#3	-.002654	-.004038	-.000846	-.002254	-.003792	-.011101

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.003221**	**-.000115**	**-.000521**	**-.004779**	**-.000012**	**-.000435**
Stddev	.001140	.000041	.000072	.005682	.000350	.000490
%RSD	35.39374	35.33865	13.78523	118.9045	2835.206	112.5740
#1	-.003134	-.000154	-.000579	-.002570	-.000408	-.000517
#2	-.002127	-.000118	-.000543	-.011234	.000114	.000091
#3	-.004402	-.000073	-.000441	-.000533	.000257	-.000880

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000924**	**.0001856**	**.0006795**	**-.055334**	**-.000152**	**.0000979**
Stddev	.000367	.0042668	.0008335	.015386	.000196	.0005262
%RSD	39.72539	2298.612	122.6749	27.80645	128.5293	537.6906
#1	-.000664	-.000470	.0009563	-.068718	-.000332	.0006815
#2	-.001344	-.003715	.0013394	-.058760	.000056	-.000340
#3	-.000764	.004742	-.000257	-.038523	-.000181	-.000048

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.089390**	**-.004899**	**-.000608**	**-.052408**	**-.005045**	**-.000873**
Stddev	.015772	.002720	.000312	.015006	.000171	.000389
%RSD	17.64355	55.51548	51.23573	28.63225	3.380959	44.54516
#1	-.107561	-.002445	-.000711	-.035263	-.005106	-.000432
#2	-.081347	-.007823	-.000856	-.058813	-.004853	-.001022
#3	-.079260	-.004429	-.000258	-.063149	-.005178	-.001166

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: CCB05 Acquired: 9/25/2025 16:20:58 Type: Unk
Method: 6010-200.7 NEW(v204) 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	**-.007470**	**.0000643**	**.0012207**	**-.003393**	**.0000414**	F **-.010807**
Stddev	.000640	.0003410	.0022855	.000775	.0037905	.000553
%RSD	8.564377	530.6576	187.2312	22.84324	9164.003	5.119420
#1	-.008072	.0000538	-.001219	-.003902	.0042096	-.010342
#2	-.006798	-.000271	.003311	-.002501	-.000886	-.011419
#3	-.007538	.000410	.001570	-.003775	-.003199	-.010661

Elem	Sr4077
Units	ppm
Avg	**-.001017**
Stddev	.000098
%RSD	9.678088
#1	-.000975
#2	-.000946
#3	-.001129

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6160.634**	**96217.22**	**8546.252**	**4794.047**	**7334.738**
Stddev	33.492	346.26	9.538	18.664	39.044
%RSD	.5436519	.3598783	.1116075	.3893145	.5323199
#1	6178.392	96615.47	8539.334	4811.946	7354.185
#2	6181.507	95987.32	8557.133	4774.702	7360.240
#3	6122.002	96048.88	8542.290	4795.492	7289.789

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: PB169832BL Acquired: 9/25/2025 16:29:45 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.0008351	-.005795	-.002473	.0005847	-.002570	-.008705
Stddev	.0014958	.001649	.001375	.0008001	.001481	.007770
%RSD	179.1141	28.45891	55.58063	136.8464	57.62672	89.25734
#1	-.000675	-.004065	-.001744	.0014982	-.002289	-.000059
#2	.000864	-.007350	-.001618	.0000086	-.001249	-.015103
#3	.002316	-.005969	-.004059	.0002472	-.004171	-.010952

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.004162	-.000045	-.000431	.0003563	-.000430	-.000441
Stddev	.001500	.000053	.000048	.0136566	.000122	.000123
%RSD	36.03912	116.6503	11.19126	3832.600	28.38610	27.79971
#1	-.002767	-.000015	-.000459	-.012235	-.000568	-.000582
#2	-.005749	-.000106	-.000457	-.001570	-.000381	-.000376
#3	-.003970	-.000014	-.000375	.014874	-.000340	-.000364

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000655	.0004683	.0006040	-.019648	-.000441	.0000309
Stddev	.000258	.0111215	.0005269	.008273	.000201	.0003407
%RSD	39.45149	2375.122	87.22605	42.10436	45.55411	1101.650
#1	-.000626	-.011808	.0006057	-.028427	-.000316	-.000171
#2	-.000412	.009872	.0011301	-.011997	-.000673	-.000161
#3	-.000927	.003341	.0000763	-.018520	-.000335	.000424

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.082888	-.004009	.0022705	-.014868	-.006982	-.000776
Stddev	.006936	.001055	.0002040	.035525	.000876	.000325
%RSD	8.368207	26.31483	8.984566	238.9332	12.54529	41.88472
#1	-.078518	-.003520	.0020612	.021784	-.006787	-.001032
#2	-.090886	-.003287	.0022816	-.049147	-.006220	-.000410
#3	-.079261	-.005220	.0024688	-.017242	-.007939	-.000886

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: PB169832BL Acquired: 9/25/2025 16:29:45 Type: Unk
Method: 6010-200.7 NEW(v204) 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	-.007165	-.001457	.0044124	-.002218	-.000813	F -.011164
Stddev	.000399	.000933	.0121729	.001701	.001789	.000946
%RSD	5.569407	64.03868	275.8763	76.69797	220.1132	8.471101
#1	-.007517	-.001975	-.006102	-.002970	.001235	-.011813
#2	-.006731	-.002016	.017748	-.003414	-.001604	-.010079
#3	-.007247	-.000380	.001591	-.000270	-.002069	-.011601

Elem	Sr4077
Units	ppm
Avg	-.001214
Stddev	.000042
%RSD	3.429413
#1	-.001175
#2	-.001208
#3	-.001258

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6439.812	99608.82	8690.375	4909.235	7781.482
Stddev	22.227	549.29	52.435	29.399	24.121
%RSD	.3451458	.5514475	.6033712	.5988605	.3099818
#1	6462.021	100075.8	8629.943	4931.780	7805.720
#2	6439.848	99003.6	8717.357	4875.983	7781.245
#3	6417.568	99747.1	8723.825	4919.942	7757.479

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: PB169832BS Acquired: 9/25/2025 16:43:50 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.7633588	2.008200	.9223336	1.961481	.7846020	1.910920
Stddev	.0027678	.029602	.0012938	.005445	.0008069	.013732
%RSD	.3625790	1.474053	.1402741	.2775953	.1028422	.7185878
#1	.7602747	2.028480	.9208454	1.960410	.7853196	1.910338
#2	.7641750	1.974231	.9229644	1.956652	.7847578	1.924932
#3	.7656267	2.021889	.9231909	1.967382	.7837286	1.897488

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1755423	.1912940	.1865712	.9714854	.3975749	.1877561
Stddev	.0010222	.0010048	.0001410	.0090485	.0005613	.0002656
%RSD	.5823150	.5252794	.0755853	.9314077	.1411738	.1414394
#1	.1744479	.1923975	.1865921	.9616763	.3981950	.1877374
#2	.1757066	.1910529	.1864209	.9795062	.3971016	.1875004
#3	.1764724	.1904317	.1867006	.9732738	.3974281	.1880306

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2968946	3.066047	.1890838	1.900049	.4732856	.0718666
Stddev	.0008800	.019729	.0005541	.027901	.0009911	.0006242
%RSD	.2964187	.6434605	.2930448	1.468449	.2094160	.8685347
#1	.2965715	3.043324	.1885650	1.930916	.4729390	.0716216
#2	.2962218	3.075995	.1896675	1.892609	.4725143	.0714020
#3	.2978906	3.078821	.1890190	1.876622	.4744035	.0725761

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.097595	.2884616	.2042449	10.33384	.2724694	.3993271
Stddev	.056397	.0016067	.0007380	.14018	.0014704	.0011019
%RSD	1.820665	.5569764	.3613245	1.356488	.5396673	.2759301
#1	3.032473	.2900264	.2045148	10.17550	.2734359	.3982968
#2	3.130043	.2868162	.2034099	10.38390	.2731950	.3991958
#3	3.130267	.2885421	.2048099	10.44211	.2707772	.4004888

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: PB169832BS Acquired: 9/25/2025 16:43:50 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.6559125	.1846937	.8944675	5.636017	F -.000846	.1906412
Stddev	.0006108	.0005590	.0089195	.018169	.003037	.0033113
%RSD	.0931243	.3026578	.9971831	.3223667	359.1593	1.736918
#1	.6554629	.1851988	.8872077	5.652991	.000039	.1915991
#2	.6556666	.1847893	.9044242	5.616853	.001650	.1933679
#3	.6566079	.1840931	.8917705	5.638208	-.004226	.1869566

Elem	Sr4077
Units	ppm
Avg	.1830149
Stddev	.0007795
%RSD	.4259254
#1	.1823244
#2	.1838602
#3	.1828601

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6279.288	94251.43	8675.473	4739.220	7411.514
Stddev	1.653	367.59	14.176	23.885	3.077
%RSD	.0263213	.3900112	.1634043	.5039771	.0415166
#1	6277.967	94609.60	8668.132	4742.839	7410.851
#2	6281.142	94269.60	8666.473	4761.088	7414.868
#3	6278.755	93875.09	8691.815	4713.732	7408.822

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: PB169754TB Acquired: 9/25/2025 16:47:53 Type: Unk
Method: 6010-200.7 NEW(v204) 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	**-.000301**	**-.002820**	**-.000765**	**-.000472**	**-.001119**	**-.010451**	**-.001751**
Stddev	.002354	.000993	.001132	.000407	.002752	.009868	.000833
%RSD	780.7949	35.22829	148.0307	86.27120	245.8985	94.42669	47.57667
#1	-.003007	-.001990	-.002045	-.000936	-.004233	-.005634	-.002365
#2	.000822	-.003920	-.000352	-.000307	.000982	-.021803	-.000803
#3	.001281	-.002549	.000103	-.000173	-.000106	-.003916	-.002083

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000049**	**-.000293**	**.0130153**	**.0015992**	**-.000653**	**-.000388**	**.0175548**
Stddev	.000021	.000108	.0128588	.0001432	.000143	.000725	.0111164
%RSD	42.93840	36.88331	98.79748	8.957230	21.83823	186.5590	63.32389
#1	-.000030	-.000246	.0255281	.0014998	-.000765	-.000487	.0105285
#2	-.000072	-.000216	-.000164	.0017634	-.000701	-.001059	.0117648
#3	-.000044	-.000416	.013681	.0015344	-.000492	.000380	.0303710

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0009935**	**.2269762**	**.0005604**	**.0002319**	**295.4389**	**-.001156**	**.0040486**
Stddev	.0001861	.0352841	.0003817	.0002191	4.9573	.001370	.0001596
%RSD	18.72626	15.54530	68.11449	94.47826	1.677943	118.5250	3.942956
#1	.0009472	.2392059	.0007511	.0003623	291.7843	-.002125	.0038644
#2	.0008350	.2545184	.0008092	-.000021	301.0816	-.001752	.0041352
#3	.0011984	.1872044	.0001209	.000355	293.4508	.000411	.0041461

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0583036**	**-.007857**	**-.000700**	**-.006323**	**-.001117**	**-.005595**	**-.002780**
Stddev	.0176525	.000452	.000312	.001125	.001876	.011481	.001267
%RSD	30.27677	5.755699	44.53693	17.79251	167.9476	205.2021	45.58016
#1	.0518703	-.007732	-.000620	-.005026	-.002251	.005269	-.003450
#2	.0447702	-.007481	-.001044	-.007038	.001049	-.017607	-.001319
#3	.0782705	-.008359	-.000436	-.006906	-.002150	-.004447	-.003572

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: PB169754TB Acquired: 9/25/2025 16:47:53 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.0052478	-.009158	-.001289
Stddev	.0007496	.001553	.000127
%RSD	14.28419	16.96224	9.867927
#1	.0044240	-.007544	-.001434
#2	.0054296	-.009286	-.001196
#3	.0058898	-.010643	-.001238

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6050.973	91252.30	8489.738	4591.422	6735.501
Stddev	13.434	247.38	3.171	24.177	15.567
%RSD	.2220202	.2710903	.0373504	.5265759	.2311242
#1	6053.487	91024.65	8490.562	4573.192	6732.240
#2	6062.973	91216.69	8486.236	4582.226	6752.441
#3	6036.460	91515.54	8492.415	4618.849	6721.823

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: PB169816TB Acquired: 9/25/2025 16:52:21 Type: Unk
Method: 6010-200.7 NEW(v204) 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	**.0000804**	**-.006347**	**-.001626**	**.0023453**	**-.000503**	**-.003271**	**-.006242**
Stddev	.0018261	.002889	.001139	.0017876	.002934	.013225	.000844
%RSD	2271.613	45.51908	70.01924	76.21832	583.1605	404.3048	13.52881
#1	-.001484	-.008657	-.000320	.0003754	-.002822	.006413	-.007217
#2	-.000361	-.003107	-.002151	.0038642	-.001483	-.018339	-.005750
#3	.002087	-.007277	-.002407	.0027964	.002796	.002112	-.005759

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000083**	**-.000475**	**.0423031**	**.0016876**	**-.000730**	**-.000362**	**.0751339**
Stddev	.000056	.000073	.0068376	.0000861	.000188	.000506	.0025983
%RSD	67.45036	15.40309	16.16341	5.103612	25.69095	139.6400	3.458221
#1	-.000021	-.000391	.0499025	.0016489	-.000947	-.000251	.0778807
#2	-.000098	-.000508	.0403582	.0016277	-.000624	.000079	.0748059
#3	-.000129	-.000526	.0366486	.0017863	-.000620	-.000914	.0727153

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0083259**	**-.007837**	**.0007459**	**-.000186**	**428.3739**	**-.001542**	**.0009136**
Stddev	.0002795	.021783	.0003250	.000195	4.5617	.004586	.0001079
%RSD	3.357054	277.9287	43.56996	104.9296	1.064893	297.3920	11.80491
#1	.0082846	.011719	.0004852	-.000128	428.1303	.003666	.0010334
#2	.0086237	-.031314	.0006425	-.000026	423.9388	-.004975	.0008242
#3	.0080693	-.003918	.0011099	-.000403	433.0525	-.003317	.0008832

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2551146**	**-.007559**	**-.000440**	**-.004545**	**.0005094**	**.0248199**	**.0025283**
Stddev	.0229616	.000271	.000255	.000430	.0012356	.0134008	.0011122
%RSD	9.000512	3.587722	57.96224	9.452710	242.5598	53.99191	43.99183
#1	.2790573	-.007289	-.000415	-.004270	.0009093	.0093483	.0030252
#2	.2530071	-.007556	-.000199	-.004326	.0014955	.0327847	.0012542
#3	.2332794	-.007832	-.000708	-.005040	-.000877	.0323268	.0033054

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: PB169816TB Acquired: 9/25/2025 16:52:21 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.1451674	-.010996	-.001226
Stddev	.0026387	.000594	.000044
%RSD	1.817677	5.403398	3.627675
#1	.1423272	-.011222	-.001269
#2	.1475429	-.010322	-.001180
#3	.1456321	-.011444	-.001228

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5847.636	91099.73	8409.050	4523.890	6537.081
Stddev	9.307	253.82	5.867	27.982	11.694
%RSD	.1591577	.2786219	.0697672	.6185378	.1788815
#1	5837.329	90815.35	8402.477	4491.706	6525.956
#2	5850.155	91180.52	8413.755	4537.502	6536.017
#3	5855.425	91303.33	8410.917	4542.462	6549.271

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3168-04 Acquired: 9/25/2025 16:56:49 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.0012494	-.007972	.0787873	.0008405	.0011213	1.404596	.1810075
Stddev	.0008283	.001948	.0010104	.0027851	.0021786	.009042	.0007688
%RSD	66.29659	24.43093	1.282385	331.3666	194.2800	.6437680	.4247050
#1	.0011358	-.006096	.0799450	.0034813	.0036298	1.415033	.1816159
#2	.0021287	-.009985	.0783334	.0011097	-.000297	1.399647	.1801436
#3	.0004838	-.007836	.0780834	-.002069	.000032	1.399108	.1812632

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001518	-.000211	22.70332	.0027360	.0023522	.0051594	6.622905
Stddev	.0000566	.000096	.07431	.0002501	.0002192	.0002581	.011788
%RSD	37.28645	45.69624	.3273233	9.140616	9.320515	5.001784	.1779893
#1	.0001671	-.000305	22.76252	.0029742	.0025454	.0051769	6.627628
#2	.0000891	-.000215	22.61992	.0027582	.0021139	.0048930	6.631599
#3	.0001991	-.000113	22.72751	.0024755	.0023971	.0054082	6.609488

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1443568	1.131272	.0063643	.0011622	249.6960	-.000584	1.440208
Stddev	.0009876	.009539	.0001145	.0003686	3.4416	.001022	.003867
%RSD	.6841140	.8432070	1.798987	31.71925	1.378331	175.0630	.2684723
#1	.1453215	1.141974	.0062866	.0015876	253.2515	.000460	1.439685
#2	.1433478	1.128177	.0063105	.0009370	249.4554	-.000628	1.436629
#3	.1444010	1.123665	.0064957	.0009619	246.3809	-.001583	1.444309

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.539343	.0333196	-.000315	-.004647	.0068909	1.394412	.2021012
Stddev	.038154	.0006167	.000249	.000702	.0003742	.023817	.0008196
%RSD	1.502519	1.850758	79.24670	15.09830	5.430102	1.708059	.4055516
#1	2.499404	.0340179	-.000503	-.005457	.0072998	1.371841	.2015067
#2	2.575418	.0330910	-.000032	-.004222	.0065655	1.419306	.2017606
#3	2.543208	.0328498	-.000409	-.004262	.0068075	1.392090	.2030361

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3168-04 Acquired: 9/25/2025 16:56:49 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.8600231	-.011464	.0984520
Stddev	.0018159	.002358	.0002652
%RSD	.2111469	20.56810	.2693475
#1	.8617306	-.012450	.0986958
#2	.8602233	-.008773	.0981696
#3	.8581154	-.013169	.0984905

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5947.120	92426.29	8354.489	4537.186	6705.535
Stddev	8.618	114.04	29.032	25.472	12.044
%RSD	.1449132	.1233813	.3474976	.5613975	.1796129
#1	5952.736	92341.31	8339.450	4561.270	6710.232
#2	5951.427	92381.67	8387.955	4539.767	6714.523
#3	5937.198	92555.89	8336.063	4510.523	6691.850

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3168-04DUP Acquired: 9/25/2025 17:01:10 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.0009354	-.006386	.0599880	.0011937	-.001114	1.137807	.1501380
Stddev	.0018663	.001531	.0015158	.0013102	.001026	.018052	.0007282
%RSD	199.5267	23.97993	2.526889	109.7591	92.10388	1.586597	.4850513
#1	.0030405	-.004625	.0598957	.0025653	.000019	1.123567	.1505519
#2	.0002818	-.007405	.0615479	-.000045	-.001981	1.158110	.1505649
#3	-.000516	-.007129	.0585204	.001061	-.001379	1.131742	.1492971

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000023	-.000405	18.43633	.0022875	.0014905	.0038592	5.346082
Stddev	.0000560	.000090	.07437	.0001345	.0003583	.0001297	.040516
%RSD	2404.029	22.11906	.4033715	5.880984	24.03964	3.359648	.7578714
#1	-.000001	-.000475	18.35061	.0022958	.0017500	.0037330	5.314682
#2	-.000052	-.000435	18.48370	.0024177	.0016398	.0038527	5.391818
#3	.000060	-.000304	18.47467	.0021490	.0010817	.0039920	5.331747

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1106564	.8964125	.0050149	.0008809	213.3371	-.000278	1.136740
Stddev	.0014972	.0068227	.0004804	.0002108	.6242	.004152	.002071
%RSD	1.353037	.7611108	9.579618	23.93074	.2925726	1491.830	.1821530
#1	.1089787	.8984867	.0047837	.0007402	213.3324	.001835	1.138998
#2	.1118567	.9019575	.0055672	.0007792	213.9636	-.005062	1.136291
#3	.1111338	.8887935	.0046937	.0011233	212.7152	.002391	1.134930

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.951516	.0251583	-.000206	-.006395	.0066894	1.133405	.1586669
Stddev	.030993	.0016814	.000579	.000141	.0008157	.005873	.0027864
%RSD	1.588147	6.683101	281.2021	2.205319	12.19392	.5181339	1.756137
#1	1.953413	.0270649	-.000805	-.006383	.0060590	1.132409	.1613998
#2	1.981517	.0245223	.000351	-.006261	.0076107	1.139712	.1558299
#3	1.919618	.0238877	-.000163	-.006542	.0063986	1.128095	.1587708

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3168-04DUP Acquired: 9/25/2025 17:01:10 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.5917445	-.012066	.0797168
Stddev	.0036074	.002334	.0003893
%RSD	.6096201	19.34147	.4883538
#1	.5911448	-.014752	.0793279
#2	.5956141	-.010917	.0797162
#3	.5884745	-.010530	.0801065

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6045.998	93636.79	8441.212	4620.765	6865.346
Stddev	7.589	52.89	34.551	7.615	6.802
%RSD	.1255209	.0564855	.4093141	.1647889	.0990773
#1	6041.229	93618.71	8477.226	4618.038	6865.881
#2	6042.015	93696.35	8438.073	4629.367	6858.293
#3	6054.749	93595.31	8408.338	4614.889	6871.865

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3168-04LX5 Acquired: 9/25/2025 17:05:26 Type: Unk
Method: 6010-200.7 NEW(v204) 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	**.0030006**	**-.005025**	**.0132723**	**-.000616**	**-.001147**	**.2830238**	**.0335653**
Stddev	.0019560	.001385	.0015269	.003192	.001765	.0064631	.0012755
%RSD	65.18553	27.57310	11.50456	518.1957	153.8456	2.283581	3.800145
#1	.0007933	-.003846	.0149503	-.004294	-.002478	.2901085	.0323423
#2	.0045186	-.004677	.0119647	.001418	.000855	.2815128	.0334661
#3	.0036900	-.006551	.0129018	.001029	-.001817	.2774500	.0348876

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000006**	**-.000543**	**4.695098**	**.0002766**	**-.000200**	**.0004744**	**1.385574**
Stddev	.000103	.000037	.016284	.0001726	.000223	.0006771	.024074
%RSD	1795.540	6.786200	.3468329	62.40465	111.2318	142.7342	1.737508
#1	.000100	-.000585	4.713447	.0000790	-.000387	.0004616	1.386286
#2	-.000105	-.000526	4.689482	.0003981	.000046	-.000196	1.409284
#3	-.000013	-.000517	4.682365	.0003526	-.000260	.001158	1.361151

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0290334**	**.2234541**	**.0011440**	**.0000386**	**51.71334**	**-.002447**	**.2957297**
Stddev	.0004324	.0075745	.0002049	.0004294	.91531	.002311	.0013931
%RSD	1.489185	3.389722	17.90976	1111.210	1.769970	94.46485	.4710795
#1	.0295139	.2321631	.0012610	.0004071	52.43328	-.005113	.2950602
#2	.0289104	.2184010	.0012636	.0001418	52.02348	-.001207	.2973312
#3	.0286758	.2197983	.0009074	-.000433	50.68325	-.001020	.2947977

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.618245**	**.0016920**	**-.001153**	**-.002599**	**-.000470**	**.2866051**	**.0384623**
Stddev	.012097	.0005999	.000575	.000766	.000837	.0192209	.0014434
%RSD	.7475108	35.45548	49.85121	29.46351	178.1939	6.706397	3.752791
#1	1.607147	.0010040	-.000700	-.002457	-.000787	.2830894	.0395327
#2	1.631139	.0019664	-.001799	-.001914	-.001101	.3073412	.0368207
#3	1.616448	.0021056	-.000960	-.003426	.000479	.2693848	.0390334

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3168-04LX5 Acquired: 9/25/2025 17:05:26 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.1682424	.0103696	.0191860
Stddev	.0035870	.0018037	.0001653
%RSD	2.132010	17.39378	.8613727
#1	.1695716	.0082873	.0193757
#2	.1641806	.0113794	.0190732
#3	.1709751	.0114423	.0191092

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6146.179	92266.88	8499.959	4621.916	7099.433
Stddev	6.523	677.56	34.647	33.968	8.610
%RSD	.1061273	.7343534	.4076086	.7349267	.1212714
#1	6138.956	92195.40	8526.173	4640.378	7093.336
#2	6147.943	91627.88	8513.024	4582.715	7095.681
#3	6151.639	92977.35	8460.679	4642.655	7109.282

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3168-04MS Acquired: 9/25/2025 17:09:42 Type: Unk
Method: 6010-200.7 NEW(v204) 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	**.8100782**	**1.935500**	**1.022592**	**2.033832**	**.8072783**	**3.397953**	**.3761199**
Stddev	.0063740	.118995	.000609	.013527	.0015536	.011122	.0024222
%RSD	.7868389	6.148048	.0595373	.6651092	.1924472	.3273272	.6440082
#1	.8111171	1.996354	1.022416	2.039858	.8073298	3.398991	.3734194
#2	.8158689	2.011763	1.023270	2.043299	.8056996	3.408521	.3781010
#3	.8032485	1.798385	1.022091	2.018339	.8088055	3.386348	.3768392

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1882333**	**.1960779**	**23.67718**	**.4157557**	**.2011388**	**.3000075**	**9.820575**
Stddev	.0006333	.0000749	.06521	.0009627	.0003360	.0005301	.035101
%RSD	.3364525	.0381895	.2754331	.2315603	.1670263	.1767005	.3574200
#1	.1889590	.1960541	23.74271	.4164054	.2007687	.2997137	9.783001
#2	.1879488	.1961618	23.67654	.4162121	.2014245	.2996894	9.852522
#3	.1877921	.1960178	23.61229	.4146497	.2012231	.3006195	9.826203

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3285049**	**3.063450**	**.5018677**	**.0717054**	**256.0653**	**.3048079**	**1.614187**
Stddev	.0020511	.024137	.0005679	.0003047	.3879	.0009269	.001379
%RSD	.6243861	.7878956	.1131498	.4248778	.1515040	.3040909	.0854571
#1	.3266956	3.067198	.5012356	.0719368	255.6179	.3037627	1.614545
#2	.3307332	3.085494	.5023348	.0718191	256.2697	.3055302	1.612664
#3	.3280858	3.037659	.5020325	.0713602	256.3084	.3051308	1.615352

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**12.98203**	**.2958962**	**.4322400**	**.6905651**	**.2054341**	**2.335446**	**6.232715**
Stddev	.09919	.0009653	.0006899	.0028339	.0008511	.013082	.037264
%RSD	.7640827	.3262361	.1596092	.4103680	.4142843	.5601303	.5978827
#1	12.93893	.2969617	.4329558	.6921839	.2061784	2.321922	6.254703
#2	13.09549	.2956469	.4321849	.6922186	.2045062	2.348034	6.253752
#3	12.91168	.2950799	.4315794	.6872929	.2056176	2.336383	6.189689

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3168-04MS Acquired: 9/25/2025 17:09:42 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.7332863	.1782601	.2875234
Stddev	.0135868	.0011268	.0009044
%RSD	1.852858	.6320947	.3145358
#1	.7339089	.1772741	.2870013
#2	.7465511	.1794883	.2885676
#3	.7193990	.1780180	.2870012

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5984.727	93582.29	8518.303	4601.729	6739.273
Stddev	9.182	6.09	15.289	9.098	2.677
%RSD	.1534233	.0065116	.1794851	.1977131	.0397206
#1	5988.058	93578.26	8510.065	4604.877	6741.173
#2	5991.779	93579.32	8535.944	4608.835	6740.436
#3	5974.344	93589.30	8508.899	4591.475	6736.212

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3168-04MSD Acquired: 9/25/2025 17:13:49 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.7832831	1.785979	1.000970	1.965209	.7843014	3.547897	.3960733
Stddev	.0008181	.021712	.002563	.004009	.0048346	.016350	.0009351
%RSD	.1044399	1.215697	.2560958	.2039863	.6164222	.4608420	.2360909
#1	.7831045	1.765292	.998457	1.961837	.7788315	3.555578	.3959350
#2	.7841757	1.808588	1.000873	1.964149	.7860701	3.529120	.3952151
#3	.7825691	1.784056	1.003581	1.969642	.7880026	3.558991	.3970699

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1812372	.1895404	26.88206	.4013796	.1948624	.2892324	10.78328
Stddev	.0001604	.0005727	.05808	.0002160	.0003723	.0011180	.02752
%RSD	.0885222	.3021474	.2160615	.0538105	.1910578	.3865298	.2551702
#1	.1813958	.1889116	26.83267	.4013629	.1945018	.2887169	10.77553
#2	.1810750	.1896773	26.94605	.4016034	.1948401	.2884652	10.81384
#3	.1812407	.1900322	26.86746	.4011725	.1952454	.2905151	10.76047

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3393250	3.151880	.4855163	.0695034	295.4432	.2940000	1.830783
Stddev	.0015029	.016873	.0013104	.0009953	2.3504	.0038558	.003365
%RSD	.4429178	.5353271	.2699087	1.431939	.7955572	1.311493	.1837846
#1	.3376420	3.132397	.4847768	.0683593	298.1167	.2958599	1.833989
#2	.3405333	3.161665	.4847428	.0701690	293.7017	.2965734	1.831079
#3	.3397995	3.161577	.4870294	.0699820	294.5113	.2895668	1.827280

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	13.06346	.2925591	.4181165	.6643912	.2000256	2.551735	6.184879
Stddev	.03305	.0012566	.0003884	.0005308	.0006140	.012470	.014953
%RSD	.2530304	.4295217	.0928925	.0798869	.3069719	.4886858	.2417728
#1	13.09007	.2918412	.4179902	.6647802	.1993176	2.549801	6.176798
#2	13.07386	.2918261	.4178069	.6637865	.2004122	2.540345	6.175706
#3	13.02646	.2940101	.4185523	.6646068	.2003471	2.565059	6.202134

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3168-04MSD Acquired: 9/25/2025 17:13:49 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.8594655	.1691163	.2937288
Stddev	.0070925	.0010097	.0005803
%RSD	.8252185	.5970583	.1975566
#1	.8526186	.1681990	.2940634
#2	.8589976	.1701982	.2930587
#3	.8667803	.1689516	.2940642

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6012.170	93412.74	8599.443	4585.097	6759.760
Stddev	4.896	316.96	13.555	25.206	5.778
%RSD	.0814355	.3393141	.1576223	.5497392	.0854757
#1	6016.765	93443.15	8591.811	4568.395	6766.400
#2	6007.020	93081.67	8591.425	4572.805	6756.999
#3	6012.723	93713.40	8615.093	4614.091	6755.880

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3168-04A Acquired: 9/25/2025 17:23:27 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.9535219	2.319395	1.192954	2.405614	1.067266	3.743960	.4110158
Stddev	.0056635	.023509	.004713	.013406	.002470	.015286	.0016923
%RSD	.5939564	1.013603	.3951067	.5572776	.2314262	.4082849	.4117448
#1	.9474896	2.308070	1.188155	2.390652	1.064812	3.759282	.4109153
#2	.9587252	2.346424	1.193129	2.409652	1.067235	3.728710	.4093760
#3	.9543508	2.303692	1.197577	2.416536	1.069752	3.743888	.4127562

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2160827	.2297150	24.63152	.4766453	.2347241	.3500637	10.89675
Stddev	.0019360	.0006415	.04258	.0009956	.0008547	.0012735	.08008
%RSD	.8959543	.2792510	.1728706	.2088702	.3641232	.3637792	.7348672
#1	.2170524	.2290105	24.65277	.4761937	.2337837	.3486397	10.81920
#2	.2138535	.2298691	24.58250	.4759556	.2349351	.3510934	10.97913
#3	.2173423	.2302654	24.65930	.4777867	.2354535	.3504580	10.89193

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3711199	3.402217	.5871580	.0838855	279.3257	.3495179	1.726048
Stddev	.0011500	.018524	.0027724	.0006046	1.0062	.0036874	.005132
%RSD	.3098608	.5444597	.4721726	.7206854	.3602158	1.055006	.2973440
#1	.3705291	3.400553	.5842190	.0838309	278.2593	.3459897	1.724011
#2	.3703854	3.421517	.5875284	.0845154	279.4598	.3492177	1.722247
#3	.3724451	3.384582	.5897265	.0833100	280.2582	.3533463	1.731886

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.06420	.3412239	.5627730	.9194957	.2611897	2.741129	7.430633
Stddev	.10005	.0018309	.0014622	.0060437	.0024842	.031331	.002941
%RSD	.6641579	.5365756	.2598189	.6572819	.9511146	1.143002	.0395830
#1	14.95698	.3421887	.5612847	.9130811	.2599259	2.706530	7.429631
#2	15.15506	.3391124	.5628265	.9203226	.2640517	2.749273	7.433944
#3	15.08056	.3423707	.5642076	.9250833	.2595914	2.767584	7.428323

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3168-04A Acquired: 9/25/2025 17:23:27 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.8580852	.2104191	.3210403
Stddev	.0062539	.0015297	.0001435
%RSD	.7288211	.7269729	.0446889
#1	.8530330	.2087904	.3212044
#2	.8650799	.2106415	.3209778
#3	.8561428	.2118255	.3209387

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5916.227	91794.49	8609.655	4574.847	6633.668
Stddev	10.723	254.50	46.370	19.366	14.502
%RSD	.1812494	.2772461	.5385796	.4233051	.2186165
#1	5925.963	92068.71	8577.442	4593.885	6645.598
#2	5917.984	91565.89	8662.801	4575.485	6637.880
#3	5904.733	91748.87	8588.723	4555.170	6617.526

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: CCV06 Acquired: 9/25/2025 17:27:35 Type: Unk
Method: 6010-200.7 NEW(v204) 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	**5.025127**	**5.255235**	**4.884394**	**5.106251**	**5.058308**	**10.20169**	**9.992705**
Stddev	.025135	.012337	.027570	.025709	.034766	.02419	.079888
%RSD	.5001902	.2347607	.5644579	.5034714	.6872997	.2370888	.7994668
#1	5.001644	5.261787	4.854323	5.084905	5.028864	10.17594	9.947011
#2	5.022097	5.241004	4.890377	5.099057	5.049397	10.20520	9.946154
#3	5.051640	5.262914	4.908482	5.134790	5.096661	10.22393	10.08495

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2447537**	**2.465273**	**25.20054**	**1.000694**	**2.459666**	**1.257873**	**5.026850**
Stddev	.0007715	.014799	.12455	.011140	.013731	.010173	.061122
%RSD	.3152267	.6003007	.4942298	1.113254	.5582442	.8087836	1.215918
#1	.2438662	2.450019	25.11640	1.013394	2.445216	1.247816	5.059082
#2	.2451306	2.466228	25.14159	.992569	2.461241	1.257644	4.956358
#3	.2452644	2.479571	25.34362	.996120	2.472542	1.268159	5.065111

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.501680**	**25.28252**	**2.464949**	**1.238298**	**24.78959**	**2.568125**	**2.515821**
Stddev	.017148	.06507	.013583	.013235	.37263	.016596	.033959
%RSD	.6854695	.2573743	.5510395	1.068808	1.503158	.6462338	1.349798
#1	2.487018	25.21048	2.450328	1.253352	25.16619	2.551423	2.554785
#2	2.497485	25.30007	2.467343	1.228490	24.42106	2.568339	2.492528
#3	2.520536	25.33702	2.477176	1.233053	24.78151	2.584613	2.500149

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**26.29827**	**4.828819**	**5.114163**	**4.926393**	**5.059783**	**5.216886**	**5.051251**
Stddev	.35028	.021212	.023253	.028071	.026412	.049704	.024470
%RSD	1.331939	.4392836	.4546830	.5698111	.5219919	.9527560	.4844337
#1	26.64391	4.804337	5.092352	4.897963	5.043136	5.271654	5.027941
#2	25.94353	4.841723	5.111505	4.927124	5.045977	5.174639	5.049076
#3	26.30737	4.840397	5.138630	4.954091	5.090237	5.204366	5.076735

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: CCV06 Acquired: 9/25/2025 17:27:35 Type: Unk
Method: 6010-200.7 NEW(v204) 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	**4.971208**	**4.940622**	**4.957044**
Stddev	.019272	.033902	.021625
%RSD	.3876782	.6861974	.4362510
#1	4.950821	4.916060	4.936704
#2	4.973674	4.926504	4.954671
#3	4.989128	4.979302	4.979758

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6016.081**	**95861.04**	**8289.125**	**4674.143**	**6832.813**
Stddev	30.204	1180.15	12.274	69.107	34.391
%RSD	.5020623	1.231108	.1480677	1.478505	.5033162
#1	6042.937	94515.26	8303.287	4594.499	6866.540
#2	6021.924	96719.46	8282.507	4718.253	6834.103
#3	5983.382	96348.41	8281.581	4709.678	6797.795

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: CCB06 Acquired: 9/25/2025 17:31:38 Type: Unk
Method: 6010-200.7 NEW(v204) 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	**.0012749**	**-.001776**	**-.001966**	**-.000977**	**-.001723**	**-.007124**	**-.006092**
Stddev	.0011895	.001442	.000685	.002223	.002486	.002672	.000949
%RSD	93.30057	81.19956	34.84170	227.6195	144.3108	37.50518	15.58311
#1	.0021776	-.001839	-.002652	.001302	-.003704	-.008033	-.005002
#2	-.000073	-.000304	-.001965	-.003140	.001067	-.004116	-.006737
#3	.001720	-.003187	-.001282	-.001092	-.002531	-.009223	-.006538

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000022**	**-.000313**	**.0097661**	**-.000108**	**-.000412**	**-.000605**	**-.000034**
Stddev	.0000408	.000033	.0214069	.000431	.000198	.000762	.009012
%RSD	1827.583	10.44367	219.1971	398.3711	48.11884	125.8508	26251.27
#1	.0000179	-.000347	-.011951	-.000023	-.000486	-.000206	.010002
#2	-.000044	-.000282	.030849	.000274	-.000187	-.000126	-.007435
#3	.000033	-.000308	.010401	-.000575	-.000563	-.001484	-.002670

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001077**	**-.016059**	**-.000287**	**.0004671**	**.5722323**	**-.000709**	**-.000986**
Stddev	.000985	.029324	.000103	.0003201	.0032262	.003668	.000140
%RSD	91.46505	182.6096	35.83966	68.53146	.5637896	517.1473	14.17465
#1	-.000315	-.016428	-.000403	.0007093	.5710071	.002852	-.001043
#2	-.000726	.013449	-.000206	.0005877	.5758916	-.004475	-.000827
#3	-.002189	-.045197	-.000252	.0001042	.5697983	-.000504	-.001089

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8146517**	**-.002249**	**-.001068**	**-.001454**	**-.000776**	**.0033789**	**-.002154**
Stddev	.0219276	.000506	.000207	.000612	.000858	.0065193	.000936
%RSD	2.691655	22.51641	19.41829	42.12760	110.6258	192.9400	43.47155
#1	.7907404	-.002164	-.000867	-.001215	-.001762	-.003968	-.002753
#2	.8338190	-.001791	-.001056	-.000996	-.000375	.008473	-.002635
#3	.8193957	-.002793	-.001281	-.002149	-.000191	.005632	-.001075

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: CCB06 Acquired: 9/25/2025 17:31:38 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.0008437	.0056512	-.000575
Stddev	.0010708	.0016851	.000065
%RSD	126.9198	29.81818	11.33867
#1	.0010888	.0047666	-.000635
#2	-.000328	.0075944	-.000584
#3	.001771	.0045927	-.000506

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6308.019	98466.61	8297.220	4813.090	7641.288
Stddev	6.476	104.69	29.520	13.904	6.807
%RSD	.1026631	.1063184	.3557807	.2888759	.0890838
#1	6302.148	98347.11	8271.940	4805.596	7648.044
#2	6314.966	98510.61	8290.059	4804.540	7641.390
#3	6306.944	98542.12	8329.662	4829.133	7634.431

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3170-02DLX5 Acquired: 9/25/2025 17:35:58 Type: Unk
Method: 6010-200.7 NEW(v204) 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	**.0010410**	**-.002518**	**-.001378**	**-.000291**	**-.000358**	**-.005690**	**-.006636**
Stddev	.0001141	.001014	.000703	.000644	.000675	.006837	.001702
%RSD	10.96237	40.25178	50.98999	220.8741	188.4279	120.1665	25.64515
#1	.0011658	-.003362	-.001517	-.000695	-.000407	-.010785	-.006169
#2	.0010153	-.001394	-.002001	-.000630	.000340	-.008364	-.005217
#3	.0009419	-.002799	-.000616	.000451	-.001008	.002080	-.008523

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000069**	**-.000452**	**.0763703**	**-.000248**	**-.000681**	**.0057811**	**.1135567**
Stddev	.000096	.000014	.0246729	.000185	.000222	.0007361	.0082132
%RSD	138.9801	3.201617	32.30685	74.71544	32.55556	12.73318	7.232718
#1	.000027	-.000443	.1048549	-.000422	-.000737	.0049850	.1204260
#2	-.000164	-.000444	.0625985	-.000269	-.000436	.0064371	.1044593
#3	-.000069	-.000469	.0616576	-.000053	-.000868	.0059211	.1157848

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000418**	**-.007611**	**-.000191**	**.0010709**	**.2896888**	**-.005201**	**.1625174**
Stddev	.000478	.018461	.000080	.0005205	.0141893	.004559	.0016530
%RSD	114.4007	242.5445	42.16643	48.60670	4.898120	87.64380	1.017138
#1	-.000888	.001655	-.000267	.0005324	.2742886	-.002469	.1636614
#2	-.000432	-.028870	-.000198	.0015714	.2925452	-.010464	.1632685
#3	.000067	.004381	-.000107	.0011088	.3022327	-.002671	.1606221

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3460607**	**.0563592**	**.1345261**	**-.000960**	**-.000564**	**.0108207**	**.6278552**
Stddev	.0297800	.0009855	.0009126	.001051	.001205	.0063759	.0011316
%RSD	8.605420	1.748596	.6783419	109.3770	213.7754	58.92297	.1802305
#1	.3239819	.0568991	.1334875	-.001021	-.000931	.0181752	.6267442
#2	.3799308	.0569568	.1348916	-.001979	.000782	.0074361	.6278151
#3	.3342695	.0552217	.1351992	.000119	-.001542	.0068508	.6290063

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: Q3170-02DLX5 Acquired: 9/25/2025 17:35:58 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.3400576	-.002255	-.001296
Stddev	.0014102	.001405	.000064
%RSD	.4147029	62.28998	4.914675
#1	.3415358	-.001703	-.001322
#2	.3387270	-.003853	-.001343
#3	.3399099	-.001211	-.001223

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6425.380	97138.14	8971.188	4819.220	7672.556
Stddev	21.857	817.54	48.075	48.946	15.071
%RSD	.3401684	.8416241	.5358806	1.015632	.1964317
#1	6449.620	97164.22	8983.170	4801.466	7687.945
#2	6419.347	96307.88	8918.255	4781.629	7671.898
#3	6407.173	97942.33	9012.138	4874.564	7657.823

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: CCV07 Acquired: 9/25/2025 17:40:15 Type: Unk
Method: 6010-200.7 NEW(v204) 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	**5.117776**	**5.358931**	**4.984052**	**5.213427**	**5.165168**	**10.05722**	**9.782516**
Stddev	.010992	.094585	.012139	.019727	.010769	.02703	.089647
%RSD	.2147786	1.765005	.2435513	.3783933	.2084883	.2687280	.9164024
#1	5.117128	5.334905	4.983435	5.198692	5.175973	10.03157	9.755677
#2	5.107123	5.278675	4.972234	5.205751	5.154435	10.05464	9.709354
#3	5.129078	5.463212	4.996488	5.235839	5.165095	10.08544	9.882517

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2444815**	**2.516763**	**24.86934**	**1.035722**	**2.512031**	**1.283735**	**5.170007**
Stddev	.0019686	.006418	.03728	.002570	.005620	.001257	.013183
%RSD	.8052107	.2549944	.1499128	.2481002	.2237316	.0979028	.2549866
#1	.2423104	2.513845	24.84209	1.038681	2.507995	1.284999	5.161012
#2	.2449839	2.512323	24.85410	1.034423	2.509649	1.282486	5.163870
#3	.2461502	2.524121	24.91182	1.034060	2.518450	1.283718	5.185140

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.437537**	**24.88474**	**2.516976**	**1.279977**	**24.34694**	**2.530477**	**2.594714**
Stddev	.010306	.08675	.005553	.000221	.16101	.019801	.007576
%RSD	.4227877	.3485935	.2206177	.0172727	.6613072	.7825061	.2919601
#1	2.426726	24.80108	2.513019	1.279910	24.47625	2.507613	2.602725
#2	2.438636	24.87887	2.514585	1.279798	24.39796	2.542039	2.593752
#3	2.447249	24.97427	2.523324	1.280224	24.16660	2.541779	2.587666

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**26.06799**	**4.813848**	**5.208690**	**5.008027**	**4.948382**	**5.302149**	**5.145520**
Stddev	.05088	.038313	.004773	.007124	.012946	.030356	.019932
%RSD	.1951738	.7958982	.0916441	.1422446	.2616181	.5725237	.3873609
#1	26.12507	4.769675	5.210050	5.004890	4.935700	5.317870	5.130629
#2	26.05148	4.833818	5.203384	5.003009	4.947870	5.267156	5.137768
#3	26.02742	4.838051	5.212636	5.016180	4.961577	5.321419	5.168163

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: CCV07 Acquired: 9/25/2025 17:40:15 Type: Unk
Method: 6010-200.7 NEW(v204) 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	5.067652	4.752240	4.902409
Stddev	.033013	.016657	.020051
%RSD	.6514386	.3505145	.4090097
#1	5.049843	4.736329	4.883863
#2	5.047368	4.750836	4.923686
#3	5.105745	4.769555	4.899680

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5893.200	92656.06	8349.043	4522.310	6689.746
Stddev	9.894	258.64	47.575	24.678	4.072
%RSD	.1678853	.2791364	.5698278	.5456944	.0608719
#1	5883.107	92498.20	8403.954	4497.112	6689.681
#2	5893.612	92515.44	8322.996	4523.385	6693.851
#3	5902.882	92954.54	8320.178	4546.433	6685.707

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: CCB07 Acquired: 9/25/2025 17:44:22 Type: Unk
Method: 6010-200.7 NEW(v204) 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	**-.000159**	**-.002707**	**-.002268**	**.0002167**	**-.003242**	**.0047189**	**-.003134**
Stddev	.000518	.001307	.000280	.0010820	.002068	.0071766	.001716
%RSD	324.8874	48.26082	12.33141	499.4164	63.77722	152.0826	54.73851
#1	.000058	-.003363	-.002207	.0014546	-.001766	.0071809	-.003995
#2	-.000750	-.001203	-.002023	-.000256	-.002355	.0103404	-.001159
#3	.000215	-.003557	-.002573	-.000549	-.005605	-.003365	-.004249

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000057**	**-.000471**	**.0489055**	**.0000481**	**-.000470**	**-.000653**	**.0082866**
Stddev	.0000041	.000074	.0063024	.0004351	.000135	.000486	.0011680
%RSD	72.85677	15.64785	12.88680	904.2318	28.81911	74.34440	14.09550
#1	.0000089	-.000388	.0424747	-.000135	-.000607	-.001158	.0096349
#2	.0000072	-.000496	.0550710	-.000266	-.000466	-.000613	.0076422
#3	.0000010	-.000529	.0491708	.000545	-.000336	-.000189	.0075827

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002392**	**.0108405**	**-.000115**	**.0003203**	**.1787576**	**-.003158**	**.0096311**
Stddev	.0003863	.0326804	.000203	.0002984	.0231784	.003979	.0000580
%RSD	161.5345	301.4653	175.9519	93.15181	12.96638	126.0059	.6018401
#1	-.000206	-.026761	.000025	.0003390	.2053543	-.003858	.0096811
#2	.000432	.026881	-.000348	.0000130	.1628711	.001125	.0095676
#3	.000491	.032401	-.000023	.0006088	.1680474	-.006741	.0096445

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2501207**	**-.000541**	**-.001051**	**-.001714**	**-.000590**	**-.005172**	**-.000990**
Stddev	.0253777	.001787	.000397	.000297	.001664	.009448	.000525
%RSD	10.14618	330.3155	37.73557	17.31987	282.1078	182.6912	53.06760
#1	.2426847	.000830	-.001310	-.001917	.001112	-.015017	-.001484
#2	.2292917	.000109	-.000594	-.001852	-.002213	-.004319	-.001049
#3	.2783857	-.002562	-.001248	-.001373	-.000668	.003821	-.000438

Reviewed By:jaswal
On:9/29/2025 8:59:26 PM
Inst Id :P4
LB :LB137314

Sample Name: CCB07 Acquired: 9/25/2025 17:44:22 Type: Unk
Method: 6010-200.7 NEW(v204) 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	.0093962	-.001128	-.000786
Stddev	.0016737	.003431	.000074
%RSD	17.81293	304.2253	9.412584
#1	.0087713	-.002874	-.000703
#2	.0081248	.002825	-.000813
#3	.0112925	-.003334	-.000844

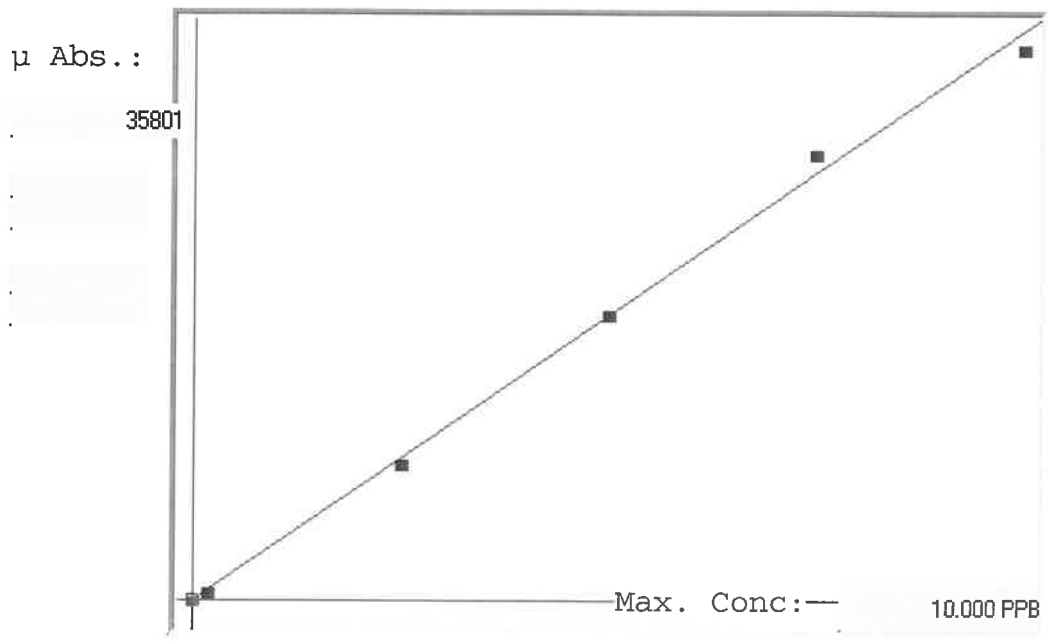
Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6380.611	99339.51	8564.366	4832.256	7789.731
Stddev	1.235	481.23	33.170	23.006	7.561
%RSD	.0193494	.4844305	.3873039	.4760972	.0970645
#1	6381.678	99608.54	8587.052	4842.025	7798.462
#2	6379.259	99626.07	8579.749	4848.766	7785.422
#3	6380.897	98783.93	8526.297	4805.978	7785.311

LB137343
INSTROMENT ID: CV1

Reviewed By:jaswal
On:10/1/2025 12:08:05 AM
Inst Id :CV1
LB :LB137343

7470A

Linear



A= 0.0000e+000
B= 2.7118e-004
C= 5.0059e-003
Rho= 0.9986687
Accept=Accepted

Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	%D
0.0	0.000	0.003	0.003	-7	0.000	-7	0				—
0.2	0.200	0.171	-0.029	612	0.0 %	612	0				
2.5	2.500	2.418	-0.082	8900	0.0 %	8900	0				
5.0	5.000	5.039	0.039	18563	0.0 %	18563					
7.5	7.500	7.855	0.355	28949	0.0 %	28949					
10.0	10.000	9.713	-0.287	35801	0.0 %	35801					

Reviewed By:jaswal
On:10/1/2025 12:08:05 AM
Inst Id :CV1
LB :LB137343

LB137343 INSTRUMENT ID:CV1

Method: 7470A Operator: Admin Date of Analysis: 29 Sep 2025 10:12:07

Type	Sample ID	Extended ID	Conc.	µ Abs.	Units	Type	Stnd Conc	Method	Date
S	0.0 - 1	50	-	-7	PPB	Std	0.0000	7470A	29 Sep 2025 10:29:34
S	0.2 - 1	50.2	-	612	PPB	Std	0.2000	7470A	29 Sep 2025 10:31:52
S	2.5 - 1	S2.5	-	8900	PPB	Std	2.5000	7470A	29 Sep 2025 10:34:09
S	5.0 - 1	S5.0	-	18563	PPB	Std	5.0000	7470A	29 Sep 2025 10:36:26
S	7.5 - 1	S7.5	-	28949	PPB	Std	7.5000	7470A	29 Sep 2025 10:38:45
S	10.0 - 1	S10.0	-	35801	PPB	Std	10.0000	7470A	29 Sep 2025 10:41:04
U	ICV50 - 1	ICV50	3.7141	13678	PPB	SMPL		7470A	29 Sep 2025 10:44:42
U	ICB50 - 1	ICB50	-0.0541	-218	PPB	SMPL		7470A	29 Sep 2025 10:46:57
U	CCV51 - 1	CCV51	5.0215	18499	PPB	SMPL		7470A	29 Sep 2025 10:49:15
U	CCB51 - 1	CCB51	-0.0704	-278	PPB	SMPL		7470A	29 Sep 2025 10:51:30
U	CRA - 1	CRA	0.1739	623	PPB	SMPL		7470A	29 Sep 2025 10:56:27
U	HighStd - 1	HighStd	9.6602	35605	PPB	SMPL		7470A	29 Sep 2025 10:58:41
U	ChkStd - 1	ChkStd	6.9178	25492	PPB	SMPL		7470A	29 Sep 2025 11:00:57
U	PB169867BL - 1	PBW	-0.0864	-337	PPB	SMPL		7470A	29 Sep 2025 11:03:22
U	PB169867BS - 1	LCSW	4.0941	15079	PPB	SMPL		7470A	29 Sep 2025 11:08:34
U	Q3181-03 - 1	WC-A3-01-C	-0.0644	-256	PPB	SMPL		7470A	29 Sep 2025 11:10:50
U	Q3181-07 - 1	WC-A3-02-C	-0.0026	-28	PPB	SMPL		7470A	29 Sep 2025 11:13:09
U	Q3181-11 - 1	WC-A3-03-C	-0.0023	-27	PPB	SMPL		7470A	29 Sep 2025 11:15:26
U	Q3183-10 - 1	WC-1	-0.0004	-20	PPB	SMPL		7470A	29 Sep 2025 11:17:43
U	Q3183-11 - 1	WC-4	0.0215	61	PPB	SMPL		7470A	29 Sep 2025 11:19:59
U	CCV52 - 1	CCV52	5.0906	18754	PPB	SMPL		7470A	29 Sep 2025 11:22:15
U	CCB52 - 1	CCB52	-0.0384	-160	PPB	SMPL		7470A	29 Sep 2025 11:24:30
U	Q3183-12 - 1	WC-3	0.0072	8	PPB	SMPL		7470A	29 Sep 2025 11:26:48
U	Q3188-05 - 1	4135	0.0028	-8	PPB	SMPL		7470A	29 Sep 2025 11:29:05
U	Q3191-01 - 1	459	0.0449	147	PPB	SMPL		7470A	29 Sep 2025 11:31:36
U	Q3196-01 - 1	FMC-9-24-25-1	-0.0045	-35	PPB	SMPL		7470A	29 Sep 2025 11:33:52
U	Q3196-02 - 1	FMC-9-24-25-2	0.0351	111	PPB	SMPL		7470A	29 Sep 2025 11:36:44
U	Q3196-03 - 1	FMC-9-24-25-3	-0.0123	-64	PPB	SMPL		7470A	29 Sep 2025 11:39:44
U	Q3196-04 - 1	FMC-9-24-25-4	0.0009	-15	PPB	SMPL		7470A	29 Sep 2025 11:42:00
U	Q3196-05 - 1	FMC-9-24-25-5	0.0018	-12	PPB	SMPL		7470A	29 Sep 2025 11:44:17
U	Q3208-06 - 1	SU-ESM-COMP-01	0.0161	41	PPB	SMPL		7470A	29 Sep 2025 11:46:35
U	Q3208-12 - 1	SU-ESM-COMP-02	0.0074	9	PPB	SMPL		7470A	29 Sep 2025 11:48:51
U	CCV53 - 1	CCV53	4.8439	17844	PPB	SMPL		7470A	29 Sep 2025 11:51:07
U	CCB53 - 1	CCB53	-0.0330	-140	PPB	SMPL		7470A	29 Sep 2025 11:53:22
U	Q3208-12DUP - 1	SU-ESM-COMP-02DUP	0.0584	197	PPB	SMPL		7470A	29 Sep 2025 11:55:41
U	Q3208-12MS - 1	SU-ESM-COMP-02MS	4.2080	15499	PPB	SMPL		7470A	29 Sep 2025 11:57:57
U	Q3208-12MSD - 1	SU-ESM-COMP-02MSD	4.3579	16052	PPB	SMPL		7470A	29 Sep 2025 12:00:12
U	PB169868BL - 1	PBW	-0.0205	-94	PPB	SMPL		7470A	29 Sep 2025 12:02:31
U	PB169868BS - 1	LCSW	4.6473	17119	PPB	SMPL		7470A	29 Sep 2025 12:04:51
U	Q3196-06 - 1	TOTE-FMC-9-24-25-1	-0.0359	-151	PPB	SMPL		7470A	29 Sep 2025 12:07:08
U	Q3196-07 - 1	TOTE-FMC-9-24-25-2	0.0262	78	PPB	SMPL		7470A	29 Sep 2025 12:09:28
U	Q3196-09 - 1	FMC-9-24-25-DRUM-1	0.0050	0	PPB	SMPL		7470A	29 Sep 2025 12:11:45
U	Q3199-09 - 1	ELZ-25-000107	0.0091	15	PPB	SMPL		7470A	29 Sep 2025 12:14:02
U	Q3199-09DUP - 1	ELZ-25-000107DUP	0.0131	30	PPB	SMPL		7470A	29 Sep 2025 12:16:17
U	CCV54 - 1	CCV54	4.6500	17129	PPB	SMPL		7470A	29 Sep 2025 12:18:33
U	CCB54 - 1	CCB54	-0.0110	-59	PPB	SMPL		7470A	29 Sep 2025 12:20:49
U	Q3199-09MS - 1	ELZ-25-000107MS	4.7061	17336	PPB	SMPL		7470A	29 Sep 2025 12:23:08
U	Q3199-09MSD - 1	ELZ-25-000107MSD	4.5987	16940	PPB	SMPL		7470A	29 Sep 2025 12:25:24
U	PB169872BL - 1	PBW	0.0883	307	PPB	SMPL		7470A	29 Sep 2025 12:27:43
U	PB169872BS - 1	LCSW	3.5867	13208	PPB	SMPL		7470A	29 Sep 2025 12:30:09
U	Q2893-09 - 1	MDL-WATER-03-QT3-2025	0.0500	166	PPB	SMPL		7470A	29 Sep 2025 12:35:30
U	Q3172-01 - 1	FW7D	0.7206	2639	PPB	SMPL		7470A	29 Sep 2025 12:37:46
U	Q3172-02 - 1	FW6D	0.0872	303	PPB	SMPL		7470A	29 Sep 2025 12:40:03
U	Q3205-01 - 1	TRE-25-0106	0.0853	296	PPB	SMPL		7470A	29 Sep 2025 12:42:21
U	Q3205-01DUP - 1	TRE-25-0106DUP	-0.0302	-130	PPB	SMPL		7470A	29 Sep 2025 12:44:38
U	Q3205-01MS - 1	TRE-25-0106MS	3.8741	14268	PPB	SMPL		7470A	29 Sep 2025 12:51:41
U	CCV55 - 1	CCV55	4.7533	17510	PPB	SMPL		7470A	29 Sep 2025 12:53:56
U	CCB55 - 1	CCB55	-0.0587	-235	PPB	SMPL		7470A	29 Sep 2025 12:56:16
U	Q3205-01MSD - 1	TRE-25-0106MSD	4.0236	14819	PPB	SMPL		7470A	29 Sep 2025 12:58:34
U	PB169840TB - 1		-0.0397	-165	PPB	SMPL		7470A	29 Sep 2025 13:00:50
U	PB169843TB - 1		0.0327	102	PPB	SMPL		7470A	29 Sep 2025 13:03:08
U	Q3208-12LX5 - 1		0.0256	76	PPB	SMPL		7470A	29 Sep 2025 13:08:16
U	Q3208-12A - 1		3.5875	13211	PPB	SMPL		7470A	29 Sep 2025 13:10:31
U	Q3199-09LX5 - 1		-0.0376	-157	PPB	SMPL		7470A	29 Sep 2025 13:12:48
U	Q3199-09A - 1		3.5956	13241	PPB	SMPL		7470A	29 Sep 2025 13:15:06
U	Q3205-01LX5 - 1		-0.0048	-36	PPB	SMPL		7470A	29 Sep 2025 13:17:24
U	Q3205-01A - 1		4.0111	14773	PPB	SMPL		7470A	29 Sep 2025 13:19:44
U	CCV56 - 1	CCV56	4.8504	17868	PPB	SMPL		7470A	29 Sep 2025 13:22:00
U	CCB56 - 1	CCB56	-0.0517	-209	PPB	SMPL		7470A	29 Sep 2025 13:24:19
U	Q2893-07 - 1		0.0525	175	PPB	SMPL		7470A	29 Sep 2025 13:26:38
U	Q2893-07RE - 1		0.1297	460	PPB	SMPL		7470A	29 Sep 2025 13:34:20
U	CCV57 - 1	CCV57	4.8108	17722	PPB	SMPL		7470A	29 Sep 2025 13:36:36
U	CCB57 - 1	CCB57	-0.0443	-182	PPB	SMPL		7470A	29 Sep 2025 13:38:52

Alliance TECHNICAL GROUP

Water Metals Preparation Sheet

PB169812

SOP ID : M3010A-Digestion-17

SDG No : N/A

Matrix : WATER

Pippete ID: ICP A

Balance ID : N/A

Filter paper ID : N/A

pH Strip ID : M6069

Hood ID : #3

Block ID: 1. HOT BLOCK #1 2. N/A

Start Digest Date: 09/24/2025 **Time :** 12:35 **Temp :** 96 °C

End Digest Date: 09/24/2025 **Time :** 15:40 **Temp :** 96 °C

Digestion tube ID: M5595

Block thermometer ID: MET-DIG. #1

Dig Technician Signature: SPS,

Supervisor Signature:

Temp : 1. 96°C 2. N/A

Standared Name	MLS USED	STD REF. # FROM LOG
LFS-1	0.25	M6180
LFS-2	0.25	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	3.00	M6158
1:1 HCL	5.00	MP87148
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Extraction Conformance/Non-Conformance Comments:

HOT BLOCK#1 CELL#50 96 C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
09/24/25 16:40	SPS metals	(Metals Lab)
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

Water Metals Preparation Sheet

PB169812

Lab Sample ID	Client Sample ID	pH	Initial Vol (ml)	Final Vol (ml)	Color Before	Color After	Clarity Before	Clarity After	Comment	Prep Pos
PB169812BL	PBW812	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	1
PB169812BS	LCS812	<2	50	25	Colorless	Colorless	Clear	Clear	M6180,M6181	2
Q3168-05MS	TOTES COMP#1MS	<2	50	25	Colorless	Colorless	Clear	Clear	M6180,M6181	5
Q3168-05MSD	TOTES COMP#1MSD	<2	50	25	Colorless	Colorless	Clear	Clear	M6180,M6181	6
Q3168-05DUP	TOTES COMP#1DUP	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	4
Q3168-05	TOTES COMP#1	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	3
Q3168-06	TOTES COMP#2	<2	50	50	Colorless	Colorless	Clear	Clear	N/A	7
Q3172-01	FW7D	<2	50	25	Brown	Colorless	Cloudy	Clear	N/A	8
Q3172-02	FW6D	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	9

WORKLIST(Hardcopy Internal Chain)

WorkList Name : PB169812 **WorkList ID :** 192043 **Department :** Digestion **Date :** 09-24-2025 09:35:20

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q3168-05	TOTES COMP#1	Water	Metals PSEG Group2	1:1 HNO3 to pH < 2	PSEG03	J11	09/23/2025	6010D
Q3168-06	TOTES COMP#2	Water	Metals PSEG Group2	1:1 HNO3 to pH < 2	PSEG03	J11	09/23/2025	6010D
Q3172-01	FW7D	Water	Metals ICP-TAL	1:1 HNO3 to pH < 2	GENV01	J43	09/22/2025	6010D
Q3172-02	FW6D	Water	Metals ICP-TAL	1:1 HNO3 to pH < 2	GENV01	J43	09/22/2025	6010D

Date/Time 09/24/25 12:15

Raw Sample Received by: SHJ met dig

Raw Sample Relinquished by: CPCSM

Date/Time 09/24/25 13:13

Raw Sample Received by: CPCSM

Raw Sample Relinquished by: SHJ met dig

Alliance TECHNICAL GROUP

Water Mercury Preparation Sheet

PB169872

SOP ID : M7470A-Mercury-20

SDG No : NA

Matrix : WATER

Pippete ID: HG A

Balance ID : N/A

Filter paper ID : NA

pH Strip ID : M6069

Hood ID : #1

Block ID: 1. HG HOT BLOCK#3 2. N/A

Start Digest Date: 09/26/2025 **Time :** 14:40 **Temp :** 95 °C

End Digest Date: 09/26/2025 **Time :** 16:40 **Temp :** 95 °C

Digestion tube ID: M5595

Block thermometer ID: HG-DIG#3

Dig Technician Signature:

Supervisor Signature:

Temp : 1. 95°C 2. N/A

Standared Name	MLS USED	STD REF. # FROM LOG
ICV	30mL	MP87362
CCV	30mL	MP87364
CRA	30mL	MP87366
Blank Spike	0.48mL	MP87355
Matrix Spike	0.48mL	MP87355

Chemical Used	ML/SAMPLE USED	Lot Number
HNO3/H2SO4(1:2)	2.25mL	MP87071
KMnO4 (5%)	4.5mL	MP87072
K2S2O8 (5%)	2.4mL	MP87073
Hydroxylamine HCL (12%)	1.8mL	MP87149
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	MP87356
0.05 ppb	S0.05	N/A	N/A
0.2 ppb	S0.2	30Ml	MP87357
2.5 ppb	S2.5	30Ml	MP87358
5.0 ppb	S5.0	30Ml	MP87359
7.5 ppb	S7.5	30Ml	MP87360
10.0 ppb	S10.0	30Ml	MP87361
ICV	ICV	30Ml	MP87362
ICB	ICB	30Ml	MP87363
CCV	CCV	30Ml	MP87364
CCB	CCB	30Ml	MP87365
CRI	CRI	30Ml	MP87366
CHK STD	CHK STD	30Ml	MP87367

Extraction Conformance/Non-Conformance Comments:

N/A

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
9/26/25 @ 17:10	[illegible]	[illegible] Metal Lab
	Preparation Group	**Analysis Group**

Alliance TECHNICAL GROUP

Water Mercury Preparation Sheet

PB169872

Lab Sample ID	Client Sample ID	Initial Vol (ml)	Final Vol (ml)	pH	Comment	Prep Pos
PB169872BL	PBW872	30	30	<2	N/A	3-1
PB169872BS	LCS872	30	30	<2	MP87355	2
Q2893-09	MDL-WATER-03-QT3-2025	30	30	<2	N/A	3
Q3172-01	FW7D	30	30	<2	N/A	4
Q3172-02	FW6D	30	30	<2	N/A	5
Q3205-01	TRE-25-0106	30	30	<2	N/A	6
Q3205-01DUP	TRE-25-0106DUP	30	30	<2	N/A	7
Q3205-01MS	TRE-25-0106MS	30	30	<2	MP87355	8
Q3205-01MSD	TRE-25-0106MSD	30	30	<2	MP87355	9

WORKLIST(Hardcopy Internal Chain)

WorkList Name : 092625_7470 **WorkList ID :** 192110 **Department :** Digestion **Date :** 09-26-2025 08:21:57

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2893-09	MDL-WATER-03-QT3-2025	Water	Mercury	NONE	ALLI03	QA Of	08/18/2025	7470A
Q3172-01	FW7D	Water	Mercury	1:1 HNO3 to pH < 2	GENV01	J43	09/22/2025	7470A
Q3172-02	FW6D	Water	Mercury	1:1 HNO3 to pH < 2	GENV01	J43	09/22/2025	7470A
Q3205-01	TRE-25-0106	Water	Mercury	1:1 HNO3 to pH < 2	PSEG03	D31	09/25/2025	7470A

Date/Time 9/26/25 @ 14:20

Raw Sample Received by: [illegible]

Raw Sample Relinquished by: [illegible]

Date/Time 9/26/25 @ 14:50

Raw Sample Received by: [illegible]

Raw Sample Relinquished by: [illegible]

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 # LB137314

Review By	Janvi	Review On	9/26/2025 3:50:56 PM
Supervise By	jaswal	Supervise On	9/29/2025 8:59:26 PM

STD. NAME	STD REF.#
ICAL Standard	MP87031,MP87038,MP87035,MP87034,MP87033,MP87032
ICV Standard	MP87047,MP87038
CCV Standard	MP87042
ICSA Standard	MP87040,MP87048
CRI Standard	MP87038
LCS Standard	
Chk Standard	MP87043,MP87044,MP87045,MP87046,MP87049

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	09/25/25 10:55		Jaswal	OK
2	S1	S1	CAL2	09/25/25 11:00		Jaswal	OK
3	S2	S2	CAL3	09/25/25 11:04		Jaswal	OK
4	S3	S3	CAL4	09/25/25 11:08		Jaswal	OK
5	S4	S4	CAL5	09/25/25 11:12		Jaswal	OK
6	S5	S5	CAL6	09/25/25 11:16		Jaswal	OK
7	ICV01	ICV01	ICV	09/25/25 11:20		Jaswal	OK
8	LLICV01	LLICV01	LLICV	09/25/25 11:29		Jaswal	OK
9	ICB01	ICB01	ICB	09/25/25 11:33		Jaswal	OK
10	CRI01	CRI01	CRDL	09/25/25 11:38		Jaswal	OK
11	ICSA01	ICSA01	ICSA	09/25/25 11:42		Jaswal	OK
12	ICSAB01	ICSAB01	ICSAB	09/25/25 11:46		Jaswal	OK
13	ICSADL	ICSADL	ICSA	09/25/25 11:50		Jaswal	OK
14	ICSABDL	ICSABDL	ICSAB	09/25/25 12:00		Jaswal	OK
15	CCV01	CCV01	CCV	09/25/25 12:12		Jaswal	OK
16	CCB01	CCB01	CCB	09/25/25 12:17		Jaswal	OK
17	LR-2	LR-2	HIGH STD	09/25/25 12:40		Jaswal	OK
18	LR-3	LR-3	HIGH STD	09/25/25 12:44		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 # LB137314

Review By	Janvi	Review On	9/26/2025 3:50:56 PM
Supervise By	jaswal	Supervise On	9/29/2025 8:59:26 PM

STD. NAME	STD REF.#
ICAL Standard	MP87031,MP87038,MP87035,MP87034,MP87033,MP87032
ICV Standard	MP87047,MP87038
CCV Standard	MP87042
ICSA Standard	MP87040,MP87048
CRI Standard	MP87038
LCS Standard	
Chk Standard	MP87043,MP87044,MP87045,MP87046,MP87049

19	PB169800BL	PB169800BL	MB	09/25/25 12:54		Jaswal	OK
20	PB169800BS	PB169800BS	LCS	09/25/25 12:58		Jaswal	OK
21	PB169812BL	PB169812BL	MB	09/25/25 13:02		Jaswal	OK
22	PB169812BS	PB169812BS	LCS	09/25/25 13:07		Jaswal	OK
23	LR-1	LR-1	HIGH STD	09/25/25 13:11		Jaswal	OK
24	Q3187-01	228	SAM	09/25/25 13:15		Jaswal	OK
25	Q3188-02	RB22120	SAM	09/25/25 13:19		Jaswal	OK
26	CCV02	CCV02	CCV	09/25/25 13:23		Jaswal	OK
27	CCB02	CCB02	CCB	09/25/25 13:27		Jaswal	OK
28	PB169833BL	PB169833BL	MB	09/25/25 13:32		Jaswal	OK
29	PB169833BS	PB169833BS	LCS	09/25/25 13:36		Jaswal	OK
30	Q3125-02	Comp	SAM	09/25/25 13:40		Jaswal	OK
31	Q3125-02DUP	CompDUP	DUP	09/25/25 13:44		Jaswal	OK
32	Q3125-02L	CompL	SD	09/25/25 13:49		Jaswal	OK
33	Q3125-02MS	CompMS	MS	09/25/25 13:53		Jaswal	OK
34	Q3125-02MSD	CompMSD	MSD	09/25/25 13:57		Jaswal	OK
35	Q3125-02A	CompA	PS	09/25/25 14:08	0.1 ML OF EACH M6008 AND M6017 IN 10ML OF SAMPLE.	Jaswal	OK
36	Q3168-06	TOTES COMP#2	SAM	09/25/25 14:13	Confirm wt/vol	Jaswal	OK
37	Q3172-01	FW7D	SAM	09/25/25 14:17		Jaswal	OK

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Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB137314

Review By	Janvi	Review On	9/26/2025 3:50:56 PM
Supervise By	jaswal	Supervise On	9/29/2025 8:59:26 PM

STD. NAME	STD REF.#
ICAL Standard	MP87031,MP87038,MP87035,MP87034,MP87033,MP87032
ICV Standard	MP87047,MP87038
CCV Standard	MP87042
ICSA Standard	MP87040,MP87048
CRI Standard	MP87038
LCS Standard	
Chk Standard	MP87043,MP87044,MP87045,MP87046,MP87049

38	CCV03	CCV03	CCV	09/25/25 14:21		Jaswal	OK
39	CCB03	CCB03	CCB	09/25/25 14:30		Jaswal	OK
40	Q3172-02	FW6D	SAM	09/25/25 14:35		Jaswal	OK
41	Q3168-05	TOTES COMP#1	SAM	09/25/25 14:39		Jaswal	OK
42	Q3168-05DUP	TOTES COMP#1DUP	DUP	09/25/25 14:43		Jaswal	OK
43	Q3168-05L	TOTES COMP#1L	SD	09/25/25 14:47		Jaswal	OK
44	Q3168-05MS	TOTES COMP#1MS	MS	09/25/25 14:52		Jaswal	OK
45	Q3168-05MSD	TOTES COMP#1MSD	MSD	09/25/25 14:56		Jaswal	OK
46	Q3168-05A	TOTES COMP1A	PS	09/25/25 15:00	0.1 ML OF EACH M6008 AND M6017 IN 10ML OF SAMPLE.	Jaswal	OK
47	Q3189-01	72-11989	SAM	09/25/25 15:04		Jaswal	OK
48	Q3176-01	EME-TS12-01	SAM	09/25/25 15:08		Jaswal	OK
49	Q3176-02	EME-TS13-01	SAM	09/25/25 15:12		Jaswal	OK
50	CCV04	CCV04	CCV	09/25/25 15:16		Jaswal	OK
51	CCB04	CCB04	CCB	09/25/25 15:20		Jaswal	OK
52	Q3176-03	EME-TS14-02	SAM	09/25/25 15:24		Jaswal	OK
53	Q3178-01	EME-TS14-01	SAM	09/25/25 15:28		Jaswal	OK
54	Q3178-02	EME-TS14-01MS	MS	09/25/25 15:40		Jaswal	OK
55	Q3178-03	EME-TS14-01MSD	MSD	09/25/25 15:44		Jaswal	OK

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Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB137314

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Supervise By	jaswal	Supervise On	9/29/2025 8:59:26 PM

STD. NAME	STD REF.#
ICAL Standard	MP87031,MP87038,MP87035,MP87034,MP87033,MP87032
ICV Standard	MP87047,MP87038
CCV Standard	MP87042
ICSA Standard	MP87040,MP87048
CRI Standard	MP87038
LCS Standard	
Chk Standard	MP87043,MP87044,MP87045,MP87046,MP87049

56	Q3178-01A	EME-TS14-01A	PS	09/25/25 15:48	0.1 ML OF EACH M6008 AND M6017 IN 10ML OF SAMPLE.	Jaswal	OK
57	Q3183-01	WC-1	SAM	09/25/25 15:52		Jaswal	OK
58	Q3183-04	WC-4	SAM	09/25/25 15:56		Jaswal	OK
59	Q3183-07	WC-3	SAM	09/25/25 16:00		Jaswal	OK
60	Q3178-01DUP	EME-TS14-01DUP	DUP	09/25/25 16:07		Jaswal	OK
61	Q3178-01L	EME-TS14-01L	SD	09/25/25 16:11		Jaswal	OK
62	CCV05	CCV05	CCV	09/25/25 16:16		Jaswal	OK
63	CCB05	CCB05	CCB	09/25/25 16:20		Jaswal	OK
64	PB169832BL	PB169832BL	MB	09/25/25 16:29		Jaswal	OK
65	PB169832BS	PB169832BS	LCS	09/25/25 16:43		Jaswal	OK
66	PB169754TB	PB169754TB	MB	09/25/25 16:47		Jaswal	OK
67	PB169816TB	PB169816TB	MB	09/25/25 16:52		Jaswal	OK
68	Q3168-04	ARS20-0010-Oily Soil	SAM	09/25/25 16:56		Jaswal	OK
69	Q3168-04DUP	ARS20-0010-Oily Soil	DUP	09/25/25 17:01		Jaswal	OK
70	Q3168-04L	ARS20-0010-Oily Soil	SD	09/25/25 17:05		Jaswal	OK
71	Q3168-04MS	ARS20-0010-Oily Soil	MS	09/25/25 17:09		Jaswal	OK
72	Q3168-04MSD	ARS20-0010-Oily Soil	MSD	09/25/25 17:13		Jaswal	OK
73	Q3168-04A	ARS20-0010-Oily Soil	PS	09/25/25 17:23	0.1 ML OF EACH M6008 AND M6017 IN 10ML OF SAMPLE.	Jaswal	OK

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Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB137314

Review By	Janvi	Review On	9/26/2025 3:50:56 PM
Supervise By	jaswal	Supervise On	9/29/2025 8:59:26 PM

STD. NAME	STD REF.#
ICAL Standard	MP87031,MP87038,MP87035,MP87034,MP87033,MP87032
ICV Standard	MP87047,MP87038
CCV Standard	MP87042
ICSA Standard	MP87040,MP87048
CRI Standard	MP87038
LCS Standard	
Chk Standard	MP87043,MP87044,MP87045,MP87046,MP87049

74	CCV06	CCV06	CCV	09/25/25 17:27		Jaswal	OK
75	CCB06	CCB06	CCB	09/25/25 17:31		Jaswal	OK
76	Q3170-02DL	MOD-25-0271DL	SAM	09/25/25 17:35	Confirm wt/vol & Straight 5x Dilution for all elements	Jaswal	OK
77	CCV07	CCV07	CCV	09/25/25 17:40		Jaswal	OK
78	CCB07	CCB07	CCB	09/25/25 17:44		Jaswal	OK

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Instrument ID: CV1

Daily Analysis Runlog For Sequence/QCBatch ID # LB137343

Review By	mohan	Review On	9/30/2025 10:14:53 AM
Supervise By	jaswal	Supervise On	10/1/2025 12:08:05 AM

STD. NAME	STD REF.#
ICAL Standard	MP87372,MP87373,MP87374,MP87375,MP87376,MP87377
ICV Standard	MP87378
CCV Standard	MP87380
ICSA Standard	
CRI Standard	MP87382
LCS Standard	
Chk Standard	MP87379,MP87381,MP87383,MP87385

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	09/29/25 10:29		mohan	OK
2	S0.2	S0.2	CAL2	09/29/25 10:31		mohan	OK
3	S2.5	S2.5	CAL3	09/29/25 10:34		mohan	OK
4	S5	S5	CAL4	09/29/25 10:36		mohan	OK
5	S7.5	S7.5	CAL5	09/29/25 10:38		mohan	OK
6	S10	S10	CAL6	09/29/25 10:41		mohan	OK
7	ICV50	ICV50	ICV	09/29/25 10:44		mohan	OK
8	ICB50	ICB50	ICB	09/29/25 10:46		mohan	OK
9	CCV51	CCV51	CCV	09/29/25 10:49		mohan	OK
10	CCB51	CCB51	CCB	09/29/25 10:51		mohan	OK
11	CRA	CRA	CRDL	09/29/25 10:56		mohan	OK
12	HighStd	HighStd	HIGH STD	09/29/25 10:58		mohan	OK
13	ChkStd	ChkStd	SAM	09/29/25 11:00		mohan	OK
14	PB169867BL	PB169867BL	MB	09/29/25 11:03		mohan	OK
15	PB169867BS	PB169867BS	LCS	09/29/25 11:08		mohan	OK
16	Q3181-03	WC-A3-01-C	SAM	09/29/25 11:10		mohan	OK
17	Q3181-07	WC-A3-02-C	SAM	09/29/25 11:13		mohan	OK
18	Q3181-11	WC-A3-03-C	SAM	09/29/25 11:15		mohan	OK

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Instrument ID: CV1

Daily Analysis Runlog For Sequence/QCBatch ID # LB137343

Review By	mohan	Review On	9/30/2025 10:14:53 AM
Supervise By	jaswal	Supervise On	10/1/2025 12:08:05 AM

STD. NAME	STD REF.#
ICAL Standard	MP87372,MP87373,MP87374,MP87375,MP87376,MP87377
ICV Standard	MP87378
CCV Standard	MP87380
ICSA Standard	
CRI Standard	MP87382
LCS Standard	
Chk Standard	MP87379,MP87381,MP87383,MP87385

19	Q3183-10	WC-1	SAM	09/29/25 11:17		mohan	OK
20	Q3183-11	WC-4	SAM	09/29/25 11:19		mohan	OK
21	CCV52	CCV52	CCV	09/29/25 11:22		mohan	OK
22	CCB52	CCB52	CCB	09/29/25 11:24		mohan	OK
23	Q3183-12	WC-3	SAM	09/29/25 11:26		mohan	OK
24	Q3188-05	4135	SAM	09/29/25 11:29		mohan	OK
25	Q3191-01	459	SAM	09/29/25 11:31		mohan	OK
26	Q3196-01	FMC-9-24-25-1	SAM	09/29/25 11:33		mohan	OK
27	Q3196-02	FMC-9-24-25-2	SAM	09/29/25 11:36		mohan	OK
28	Q3196-03	FMC-9-24-25-3	SAM	09/29/25 11:39		mohan	OK
29	Q3196-04	FMC-9-24-25-4	SAM	09/29/25 11:42		mohan	OK
30	Q3196-05	FMC-9-24-25-5	SAM	09/29/25 11:44		mohan	OK
31	Q3208-06	SU-ESM-COMP-01	SAM	09/29/25 11:46		mohan	OK
32	Q3208-12	SU-ESM-COMP-02	SAM	09/29/25 11:48		mohan	OK
33	CCV53	CCV53	CCV	09/29/25 11:51		mohan	OK
34	CCB53	CCB53	CCB	09/29/25 11:53		mohan	OK
35	Q3208-12DUP	SU-ESM-COMP-02DU	DUP	09/29/25 11:55		mohan	OK
36	Q3208-12MS	SU-ESM-COMP-02MS	MS	09/29/25 11:57		mohan	OK
37	Q3208-12MSD	SU-ESM-COMP-02MS	MSD	09/29/25 12:00		mohan	OK
38	PB169868BL	PB169868BL	MB	09/29/25 12:02		mohan	OK

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Instrument ID: CV1

Daily Analysis Runlog For Sequence/QCBatch ID # LB137343

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Supervise By	jaswal	Supervise On	10/1/2025 12:08:05 AM

STD. NAME	STD REF.#
ICAL Standard	MP87372,MP87373,MP87374,MP87375,MP87376,MP87377
ICV Standard	MP87378
CCV Standard	MP87380
ICSA Standard	
CRI Standard	MP87382
LCS Standard	
Chk Standard	MP87379,MP87381,MP87383,MP87385

39	PB169868BS	PB169868BS	LCS	09/29/25 12:04		mohan	OK
40	Q3196-06	TOTE-FMC-9-24-25-1	SAM	09/29/25 12:07		mohan	OK
41	Q3196-07	TOTE-FMC-9-24-25-2	SAM	09/29/25 12:09		mohan	OK
42	Q3196-09	FMC-9-24-25-DRUM-	SAM	09/29/25 12:11		mohan	OK
43	Q3199-09	ELZ-25-000107	SAM	09/29/25 12:14		mohan	OK
44	Q3199-09DUP	ELZ-25-000107DUP	DUP	09/29/25 12:16		mohan	OK
45	CCV54	CCV54	CCV	09/29/25 12:18		mohan	OK
46	CCB54	CCB54	CCB	09/29/25 12:20		mohan	OK
47	Q3199-09MS	ELZ-25-000107MS	MS	09/29/25 12:23		mohan	OK
48	Q3199-09MSD	ELZ-25-000107MSD	MSD	09/29/25 12:25		mohan	OK
49	PB169872BL	PB169872BL	MB	09/29/25 12:27		mohan	OK
50	PB169872BS	PB169872BS	LCS	09/29/25 12:30		mohan	OK
51	Q2893-09	MDL-WATER-03-QT3	SAM	09/29/25 12:35		mohan	OK
52	Q3172-01	FW7D	SAM	09/29/25 12:37		mohan	OK
53	Q3172-02	FW6D	SAM	09/29/25 12:40		mohan	OK
54	Q3205-01	TRE-25-0106	SAM	09/29/25 12:42		mohan	OK
55	Q3205-01DUP	TRE-25-0106DUP	DUP	09/29/25 12:44		mohan	OK
56	Q3205-01MS	TRE-25-0106MS	MS	09/29/25 12:51		mohan	OK
57	CCV55	CCV55	CCV	09/29/25 12:53		mohan	OK
58	CCB55	CCB55	CCB	09/29/25 12:56		mohan	OK

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Instrument ID: CV1

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Supervise By	jaswal	Supervise On	10/1/2025 12:08:05 AM

STD. NAME	STD REF.#
ICAL Standard	MP87372,MP87373,MP87374,MP87375,MP87376,MP87377
ICV Standard	MP87378
CCV Standard	MP87380
ICSA Standard	
CRI Standard	MP87382
LCS Standard	
Chk Standard	MP87379,MP87381,MP87383,MP87385

59	Q3205-01MSD	TRE-25-0106MSD	MSD	09/29/25 12:58		mohan	OK
60	PB169840TB	PB169840TB	MB	09/29/25 13:00		mohan	OK
61	PB169843TB	PB169843TB	MB	09/29/25 13:03		mohan	OK
62	Q3208-12L	SU-ESM-COMP-02L	SD	09/29/25 13:08		mohan	OK
63	Q3208-12A	SU-ESM-COMP-02A	PS	09/29/25 13:10		mohan	OK
64	Q3199-09L	ELZ-25-000107L	SD	09/29/25 13:12		mohan	OK
65	Q3199-09A	ELZ-25-000107A	PS	09/29/25 13:15		mohan	OK
66	Q3205-01L	TRE-25-0106L	SD	09/29/25 13:17		mohan	OK
67	Q3205-01A	TRE-25-0106A	PS	09/29/25 13:19		mohan	OK
68	CCV56	CCV56	CCV	09/29/25 13:22		mohan	OK
69	CCB56	CCB56	CCB	09/29/25 13:24		mohan	OK
70	Q2893-07	LOD-MDL-WATER-01	SAM	09/29/25 13:26		mohan	OK
71	Q2893-07RE	LOD-MDL-WATER-01	SAM	09/29/25 13:34		mohan	OK
72	CCV57	CCV57	CCV	09/29/25 13:36		mohan	OK
73	CCB57	CCB57	CCB	09/29/25 13:38		mohan	OK

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Prep Standard - Chemical Standard Summary

Order ID : Q3172

Test : Mercury,Metals ICP-TAL

Prepbatch ID : PB169812,PB169872,

Sequence ID/Qc Batch ID: LB137314,LB137314,LB137343,

Standard ID :

MP87031,MP87032,MP87033,MP87034,MP87035,MP87036,MP87038,MP87040,MP87042,MP87043,MP87044,MP87045,MP87046,MP87047,MP87048,MP87049,MP87071,MP87072,MP87073,MP87148,MP87149,MP87355,MP87362,MP87364,MP87366,MP87371,MP87372,MP87373,MP87374,MP87375,MP87376,MP87377,MP87378,MP87379,MP87380,MP87381,MP87382,MP87383,MP87385,

Chemical ID :

M4397,M4916,M5062,M5467,M5658,M5748,M5751,M5798,M5799,M5800,M5801,M5814,M5820,M5882,M5884,M5962,M5969,M5971,M5979,M5985,M5998,M6021,M6023,M6026,M6027,M6028,M6030,M6032,M6058,M6076,M6077,M6128,M6137,M6138,M6140,M6142,M6144,M6145,M6151,M6157,M6158,M6159,M6160,M6161,M6163,M6164,M6165,M6171,M6174,M6176,M6177,M6178,M6179,M6180,M6181,M6182,M6184,M6187,M6196,M6200,W3112,

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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)	MP87031	09/02/2025	10/03/2025	Sarabjit Jaswal	None	None	Janvi Patel 09/04/2025

FROM 125.00000ml of M6151 + 2350.00000ml of W3112 + 25.00000ml of M6187 = Final Quantity: 2500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
907	ICP AES STD S (S5)	MP87032	09/02/2025	10/03/2025	Sarabjit Jaswal	None	None	Janvi Patel 09/04/2025

FROM 5.00000ml of M5467 + 5.00000ml of M5820 + 5.00000ml of M5969 + 5.00000ml of M5971 + 5.00000ml of M5998 + 5.00000ml of M6077 + 5.00000ml of M6160 + 5.00000ml of M6174 + 5.00000ml of M6176 + 455.00000ml of MP87031 = Final Quantity: 500.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
910	ICP AES STD S4	MP87033	09/02/2025	10/03/2025	Sarabjit Jaswal	None	None	Janvi Patel 09/04/2025

FROM 50.00000ml of MP87031 + 50.00000ml of MP87032 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
909	ICP AES STD S3	MP87034	09/02/2025	10/03/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Janvi Patel 09/04/2025

FROM 25.00000ml of MP87032 + 75.00000ml of MP87031 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3913	ICP AES STD S2	MP87035	09/02/2025	10/03/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Janvi Patel 09/04/2025

FROM 16.00000ml of MP87032 + 184.00000ml of MP87031 = Final Quantity: 200.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2950	ICP AES S1/CRI STOCK STD	MP87036	09/02/2025	10/03/2025	Sarabjit Jaswal	None	None	Janvi Patel 09/04/2025

FROM 0.03000ml of M5798 + 0.03000ml of M6028 + 0.04000ml of M6137 + 0.05000ml of M5658 + 0.05000ml of M6030 + 0.05000ml of M6140 + 0.05000ml of M6159 + 0.06000ml of M6177 + 0.10000ml of M5751 + 0.10000ml of M5801 + 0.10000ml of M5820 + 0.10000ml of M5962 + 0.10000ml of M5971 + 0.10000ml of M6128 + 0.10000ml of M6176 + 0.15000ml of M5800 + 0.20000ml of M5799 + 0.20000ml of M6021 + 0.20000ml of M6023 + 0.20000ml of M6027 + 0.20000ml of M6145 + 0.25000ml of M5467 + 0.25000ml of M6160 + 0.50000ml of M5814 + 0.50000ml of M6032 + 1.00000ml of M5979 + 1.00000ml of M6138 + 1.00000ml of M6142 + 1.00000ml of M6144 + 1.00000ml of M6171 + 1.00000ml of M6178 + 2.00000ml of M5969 + 88.29000ml of MP87031 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2951	ICP AES S1/CRI WORK STD	MP87038	09/02/2025	10/03/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Janvi Patel 09/04/2025

FROM 2.00000ml of MP87036 + 98.00000ml of MP87031 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
904	ICP AES ICSA SOLN	MP87040	09/02/2025	10/03/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Janvi Patel 09/04/2025

FROM 25.00000ml of M6182 + 225.00000ml of MP87031 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
911	ICP AES CCV SOLN	MP87042	09/02/2025	10/03/2025	Sarabjit Jaswal	None	None	Janvi Patel 09/04/2025

FROM 50.00000ml of MP87031 + 50.00000ml of MP87032 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
919	ICP AES INTERNAL STD	MP87043	09/02/2025	10/03/2025	Sarabjit Jaswal	None	None	Janvi Patel 09/04/2025

FROM 1.00000ml of M6179 + 10.00000ml of M5985 + 1969.00000ml of W3112 + 20.00000ml of M6187 = Final Quantity: 2000.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
903	ICP AES RINSE SOLN	MP87044	09/02/2025	10/03/2025	Sarabjit Jaswal	None	None	Janvi Patel 09/04/2025

FROM 200.00000ml of M6187 + 9800.00000ml of W3112 = Final Quantity: 10000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
4225	LR-1	MP87045	09/02/2025	10/03/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Janvi Patel 09/04/2025

FROM 11.50000ml of M6138 + 11.50000ml of M6144 + 11.50000ml of M6171 + 15.50000ml of MP87031 = Final Quantity: 50.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
4226	LR-2	MP87046	09/02/2025	10/03/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Janvi Patel 09/04/2025

FROM 13.50000ml of M6140 + 9.00000ml of M6142 + 9.50000ml of M6159 + 18.00000ml of MP87031 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
4163	NEW ICV-060925	MP87047	09/02/2025	10/03/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 09/04/2025

FROM 0.20000ml of M6058 + 0.40000ml of M6163 + 0.40000ml of M6164 + 0.40000ml of M6165 + 48.60000ml of MP87031 = Final Quantity: 50.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3494	ICP AES ICSAB SOLN-1	MP87048	09/02/2025	10/03/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 09/04/2025

FROM 0.05000ml of M6076 + 5.00000ml of M6182 + 5.00000ml of M6184 + 39.95000ml of MP87031 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
4227	LR-3	MP87049	09/02/2025	10/03/2025	Sarabjit Jaswal	None	None	Janvi Patel 09/04/2025

FROM 1.15000ml of M6026 + 1.25000ml of M5658 + 1.25000ml of M5748 + 1.50000ml of M6145 + 2.50000ml of M5751 + 2.50000ml of M6128 + 39.85000ml of MP87031 = Final Quantity: 50.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3965	2:1 H2SO4 : HNO3	MP87071	09/04/2025	11/07/2025	Mohan Bera	None	None	Sarabjit Jaswal 09/04/2025

FROM 1600.00000ml of M6157 + 800.00000ml of M6187 = Final Quantity: 3200.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
65	POTASSIUM PERMANGANATE SOLUTION 5 %	MP87072	09/04/2025	03/04/2026	Mohan Bera	METALS_SCALE_3 (M SC-3)	None	Sarabjit Jaswal 09/04/2025

FROM 100.00000gram of M4916 + 2000.00000ml of W3112 = Final Quantity: 2000.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
66	POTASSIUM PERSULFATE SOLUTION 5 %	MP87073	09/04/2025	03/05/2026	Mohan Bera	METALS_SCALE_3 (M SC-3)	None	Sarabjit Jaswal 09/04/2025

FROM 100.00000ml of M4397 + 2000.00000ml of W3112 = Final Quantity: 2000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
170	1:1HCL	MP87148	09/09/2025	02/17/2026	Sagar Kanani	None	None	Sarabjit Jaswal 09/10/2025

FROM 1250.00000ml of M6151 + 1250.00000ml of W3112 = Final Quantity: 2500.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
67	SODIUM CHLORIDE - HYDROXYL- CHLORIDE SOLUTION	MP87149	09/09/2025	02/03/2026	Mohan Bera	METALS_SCALE_2 (M SC-2)	None	Sarabjit Jaswal 09/10/2025

FROM 2000.00000ml of W3112 + 240.00000gram of M5884 + 240.00000ml of M6196 = Final Quantity: 2000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
871	MERCURY INTERMEDIATE B 250PPB WORKING STD.	MP87355	09/26/2025	09/27/2025	Mohan Bera	None	METALS_PIPETTE_5 (HG A)	Sarabjit Jaswal 09/29/2025

FROM 1.00000ml of M6187 + 2.50000ml of M5062 + 96.50000ml of W3112 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1346	Hg ICV SOLUTION	MP87362	09/26/2025	09/27/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 09/29/2025

FROM 2.50000ml of M6161 + 2.50000ml of M6187 + 245.00000ml of W3112 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1358	CCV (Hg 5.0 PPB SOLUTION)	MP87364	09/26/2025	09/27/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 09/29/2025

FROM 485.00000ml of W3112 + 5.00000ml of M6187 + 10.00000ml of MP87355 = Final Quantity: 500.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1349	CRA/CRI (Hg 0.2 PPB SOLUTION)	MP87366	09/26/2025	09/27/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 09/29/2025

FROM 2.50000ml of M6187 + 247.30000ml of W3112 + 0.20000ml of MP87355 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
871	MERCURY INTERMEDIATE B 250PPB WORKING STD.	MP87371	09/29/2025	09/30/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 09/29/2025

FROM 1.00000ml of M6187 + 2.50000ml of M5062 + 96.50000ml of W3112 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1340	Hg 0.00 PPB STD	MP87372	09/29/2025	09/30/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 09/29/2025

FROM 2.50000ml of M6187 + 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	MP87373	09/29/2025	09/30/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 09/29/2025

FROM 2.50000ml of M6187 + 247.50000ml of W3112 + 0.20000ml of MP87371 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1342	Hg 2.5 PPB STD	MP87374	09/29/2025	09/30/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 09/29/2025

FROM 2.50000ml of M6187 + 245.00000ml of W3112 + 2.50000ml of MP87371 = 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	MP87375	09/29/2025	09/30/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 09/29/2025

FROM 2.50000ml of M6187 + 242.50000ml of W3112 + 5.00000ml of MP87371 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1344	Hg 7.5 PPB STD	MP87376	09/29/2025	09/30/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 09/29/2025

FROM 2.50000ml of M6187 + 240.00000ml of W3112 + 7.50000ml of MP87371 = 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	MP87377	09/29/2025	09/30/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 09/29/2025

FROM 2.50000ml of M6187 + 237.50000ml of W3112 + 10.00000ml of MP87371 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1346	Hg ICV SOLUTION	MP87378	09/29/2025	09/30/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 09/29/2025

FROM 2.50000ml of M6161 + 2.50000ml of M6187 + 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)	MP87379	09/29/2025	09/30/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 09/29/2025

FROM 2.50000ml of M6187 + 247.50000ml of W3112 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1358	CCV (Hg 5.0 PPB SOLUTION)	MP87380	09/29/2025	09/30/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 09/29/2025

FROM 485.00000ml of W3112 + 5.00000ml of M6187 + 10.00000ml of MP87371 = 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)	MP87381	09/29/2025	09/30/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 09/29/2025

FROM 495.00000ml of W3112 + 5.00000ml of M6187 = Final Quantity: 500.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1349	CRA/CRI (Hg 0.2 PPB SOLUTION)	MP87382	09/29/2025	09/30/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 09/29/2025

FROM 2.50000ml of M6187 + 247.50000ml of W3112 + 0.20000ml of MP87371 = 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)	MP87383	09/29/2025	09/30/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 09/29/2025

FROM 2.50000ml of M6187 + 240.50000ml of W3112 + 7.00000ml of MP87371 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
68	STANNOUS CHLORIDE SOLUTION	MP87385	09/29/2025	09/30/2025	Mohan Bera	METALS_SCALE_3 (M SC-3)	None	Sarabjit Jaswal 09/29/2025

FROM 450.00000ml of W3112 + 50.00000gram of M5882 + 50.00000ml of M6200 = Final Quantity: 500.000 ml

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3238-05 / Potassium Persulfate (2.5kg)	0000227540	09/24/2025	08/16/2019 / RICHARD	07/17/2019 / RICHARD	M4397

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 #
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.	/ Nickel (Ni) 1000PPM	091223	09/12/2026	01/02/2024 / bin	12/20/2023 / jaswal	M5748

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58029 / Cu, 1000 PPM, 500 ml	071723	07/17/2026	10/01/2024 / Jaswal	08/25/2023 / jaswal	M5751

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57004 / Be, 1000 PPM, 125 ml	102523	10/25/2026	02/09/2024 / bin	02/09/2024 / bin	M5798

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57050 / Sn, 1000 PPM, 125 ml	071123	07/11/2026	02/09/2024 / bin	02/09/2024 / bin	M5799

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57027 / CO, 1000 PPM, 125 ml	091923	09/19/2026	05/31/2024 / bin	02/09/2024 / bin	M5800

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57033 / As, 1000 PPM, 125 ml	111323	11/13/2026	02/09/2024 / bin	02/09/2024 / bin	M5801

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57005 / B, 1000 PPM, 125 ml	071123	07/11/2026	03/26/2024 / Sohil	01/03/2024 / jaswal	M5814

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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 #
Seidler Chemical	BA-3980-01 / Stannous Chloride (cs/4x500g)	232820	08/31/2028	04/30/2024 / mohan	04/25/2024 / mohan	M5882

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3624-05 / Sodium Chloride, Crystal (cs/4x2.5kg)	0000281938	07/06/2026	04/30/2024 / mohan	04/25/2024 / mohan	M5884

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57034 / Se, 1000 PPM, 125 ml	060624	06/06/2027	07/02/2024 / Jaswal	06/14/2024 / Jaswal	M5962

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	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	06/06/2025 / Janvi	07/01/2024 / Jaswal	M5971

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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

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.	57182 / Pb, 10000 PPM, 125 ml	110923	11/09/2026	12/05/2024 / janvi	08/05/2024 / Jaswal	M6026

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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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	Z9651Q / CHEM-CLP-4/.25L	V2-MEB746762	01/01/2026	01/01/2025 / kareem	09/19/2024 / kareem	M6076

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	Z9651Q / CHEM-CLP-4/.25L	V2-MEB746762	09/06/2029	01/23/2025 / kareem	09/19/2024 / kareem	M6077

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58025 / Mn, 1000 PPM, 500 ml	101124	10/11/2027	01/13/2025 / kareem	01/13/2025 / kareem	M6128

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGSI1-1 / SILICON 125mL 1000ug/mL	V2-SI744713	07/10/2029	01/14/2025 / Jaswal	10/03/2024 / Jaswal	M6137

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58120 / Ca, 10000 PPM, 500 ml	121824	12/18/2027	04/17/2025 / Janvi	01/13/2025 / Jaswal	M6138

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

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

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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 /	01/13/2025 / Jaswal	M6145

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-9673-33 / Sulfuric Acid, Instra-Analyzed (cs/6c2.5L)	24i1262013	11/07/2025	05/07/2025 / RUPESH	02/18/2025 / Mohan	M6157

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	10/09/2025	03/10/2025 / Eman	02/02/2025 / Sagar	M6158

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58113 / Al, 10000 PPM, 500 ml	011325	03/18/2026	03/18/2025 / kareem	02/09/2025 / kareem	M6159

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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	03/24/2025 / kareem	10/18/2024 / kareem	M6160

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	ICV-5 / ICV (HG) STOCK SOLN	ICV 5 0415	12/31/2025	05/01/2025 / mohan	03/30/2024 / mohan	M6161

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
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 #
Absolute Standards, Inc.	58112 / Mg, 10000 PPM, 500 ml	011525	01/15/2028	07/15/2025 /	02/13/2025 / Janvi	M6171

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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

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

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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	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	24H0162012	01/28/2026	08/29/2025 / Sagar	08/08/2025 / Sagar	M6187

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	H330-500 / HYDROXYLAMINE HYDROCHLORIDE ACS 500G	243373	02/03/2026	09/04/2025 / mohan	08/04/2025 / mohan	M6196

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)	24D1562005	02/10/2026	09/11/2025 / Sagar	08/25/2025 / Sagar	M6200

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	DIW / DI Water	Daily Lab-Certified	07/03/2029	07/03/2024 / Iwona	07/03/2024 / Iwona	W3112

Certificate of Analysis

ThermoFisher SCIENTIFIC

M5882 M3

Certificate of Analysis

1 Reagent Lane
Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 fax

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120633

This is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Thermo Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Products are for research use or further manufacturing. Not for direct administration to humans or animals. It is the responsibility of the final formulator and end user to determine suitability based upon the intended use of the end product. Products are tested to meet the analytical requirements of the noted grade. The following information is the actual analytical results obtained.

Catalog Number	T142	Quality Test / Release Date	08/17/2023
Lot Number	232820		
Description	STANNOUS CHLORIDE, DIHYDRATE CERTIFIED ACS (Suitable for Mercury Determination)		
Country of Origin	United States	Suggested Retest Date	Aug/2028
Chemical Origin	Inorganic-non animal		
BSE/TSE Comment	No animal products are used as starting raw material ingredients, or used in processing, including lubricants, processing aids, or any other material that might migrate to the finished product.		

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	Clear crystals
ASSAY	%	Inclusive Between 98 - 103	100.65
CALCIUM	%	<= 0.005	0.0017
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
IRON (Fe)	%	<= 0.003	0.0011
LEAD (Pb)	%	<= 0.01	0.0006
MERCURY (Hg)	ppm	<= 0.05	<0.05
POTASSIUM (K)	%	<= 0.005	0.0001
SODIUM (Na)	%	<= 0.01	<0.01
SOLUBILITY IN HCL	PASS/FAIL	= PASS TEST	PASS TEST
SULFATE (SO4)	PASS/FAIL	= P.T. (ABOUT 0.003%)	P.T. (ABOUT 0.003%)

Harout Sahagian - Quality Control Supervisor - Fair Lawn

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
If there are any questions with this certificate, please call at (800) 227-6701.
*Based on suggested storage condition.

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M6032

R: 8/5/24

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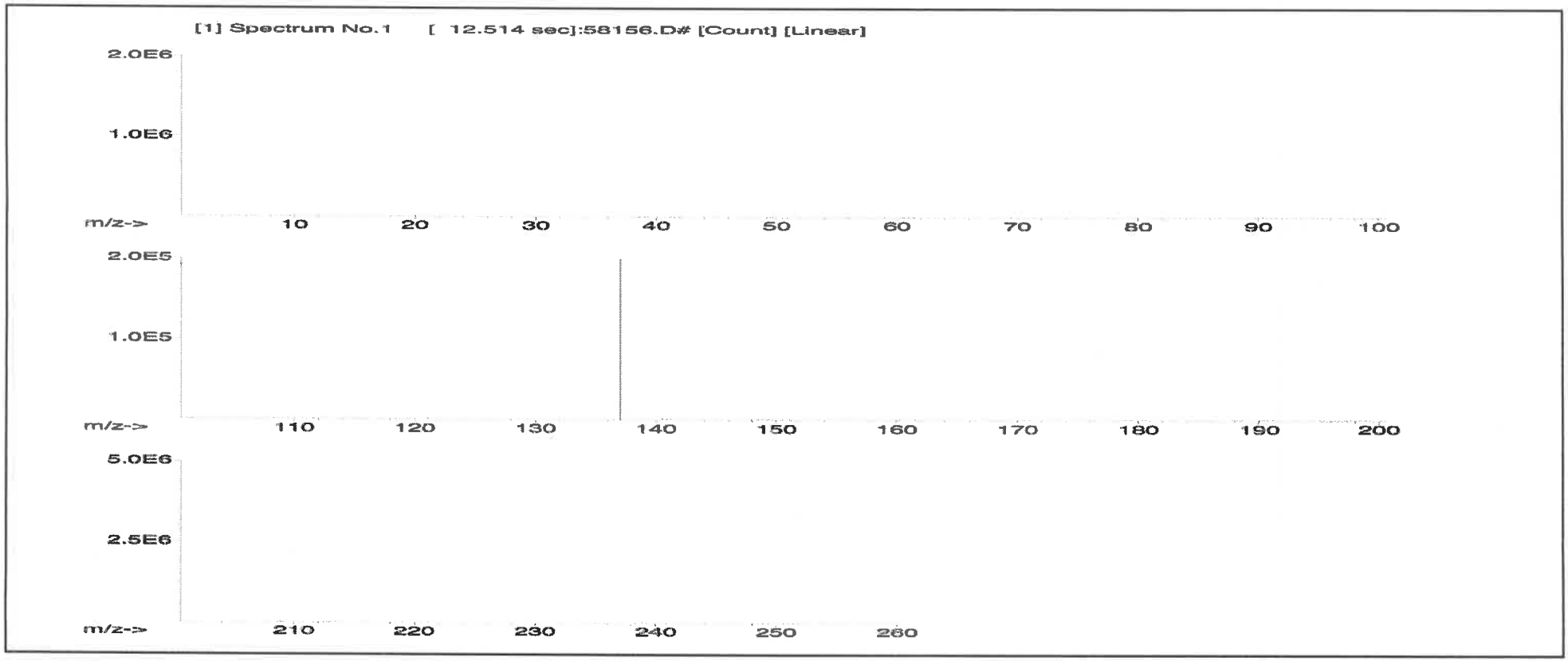
CERTIFIED WEIGHT REPORT:

Part Number:	**57056**		**Lot #**		
Lot Number:	**010924**	**Solvent:**	24002546	Nitric Acid	
Description:	**Barium (Ba)**				
		2%	40.0 (mL)	Nitric Acid	
Expiration Date:	010927				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Giovanni Esposito

Formulated By:	Giovanni Esposito	010924
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



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	T	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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M6028

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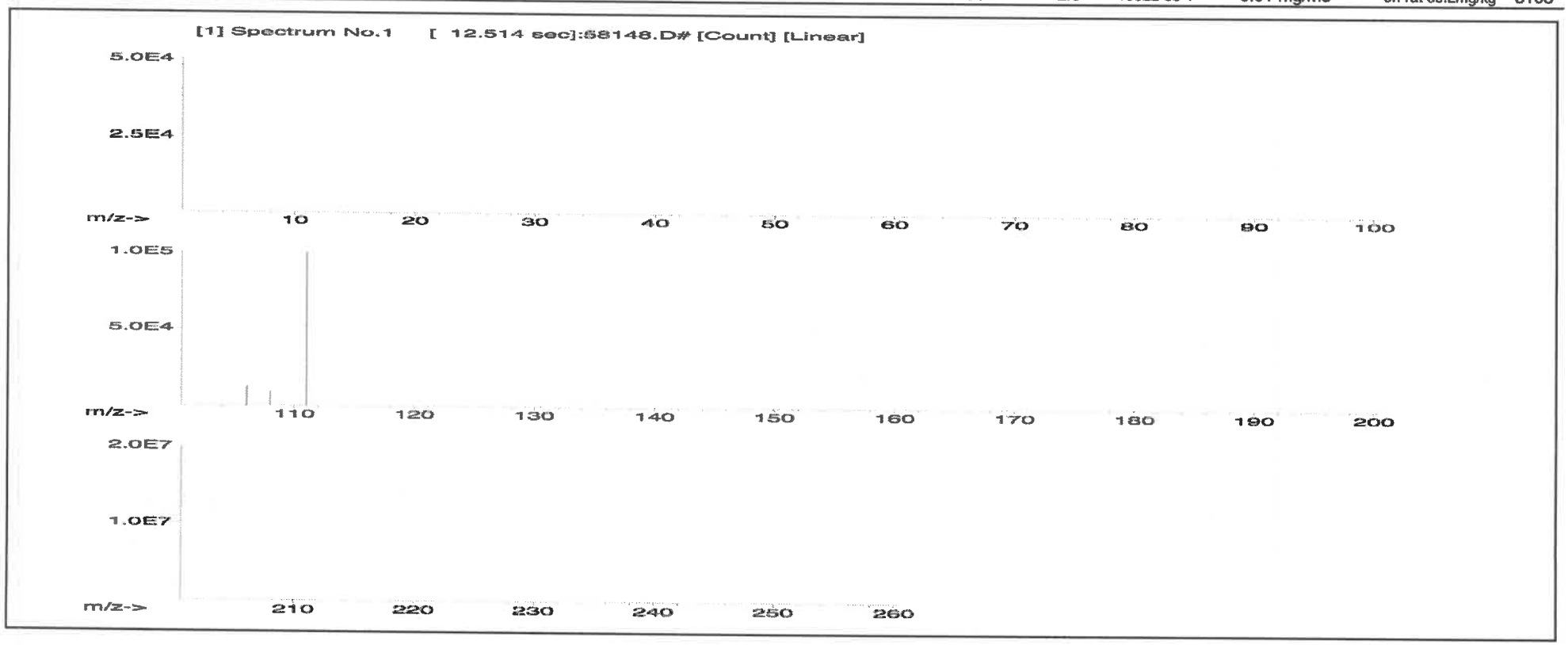
CERTIFIED WEIGHT REPORT:

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
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



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	T	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

R: 8/5/24

M6026

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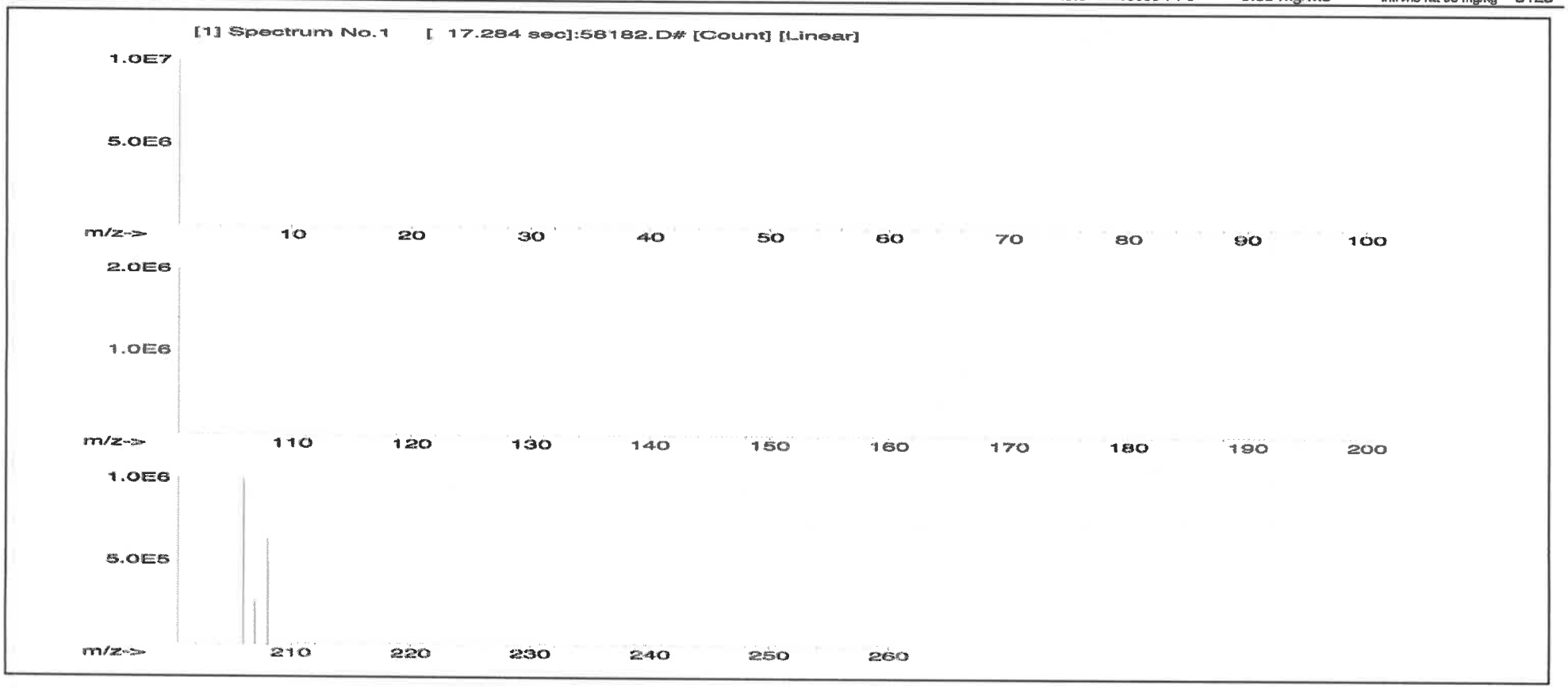
CERTIFIED WEIGHT REPORT:

Part Number:	**57182**			**Lot #**	
Lot Number:	**110923**	**Solvent:**	24002546	Nitric Acid	
Description:	**Lead (Pb)**				
		2%	40.0 (mL)	Nitric Acid	
Expiration Date:	110926				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**10000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Formulated By:	Lawence Barry	110923
Reviewed By:	Pedro L. Rentas	110923

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	10000	99.999	0.10	62.5	32.0006	32.0040	**10001.1**	**20.0**	10099-74-8	0.05 mg/m3	intrvns-rat 93 mg/kg	3128



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	T	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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* Standards are 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).

Potassium Permanganate
BAKER ANALYZED® A.C.S. Reagent
Suitable for Mercury Determination

avantor™ | J.T.Baker®

M4397
Supplied – 07.17.19
Opened – 08.16.19
exp – 09.24.25

Material No.: 3227-05
Batch No.: 0000227540
Manufactured Date: 2018/09/26
Retest Date: 2025/09/24
Revision No: 1

Certificate of Analysis

Meets ACS Reagent Chemical Requirements,

Test	Specification	Result
ACS - Assay ($KMnO_4$)	>= 99.0 %	99.0
ACS - Insoluble Matter	<= 0.2 %	< 0.1
ACS - Chloride and Chlorate (as Cl)	<= 0.005 %	0.005
ACS - Sulfate (SO_4)	<= 0.02 %	0.02
Trace Impurities - Mercury (Hg)	<= 0.050 ppm	0.004

For Laboratory, Research or Manufacturing Use

Country of Origin: US
Packaging Site: Paris Mfg Ctr & DC

RS
08.16.19

James Ethier
Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

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 HNO_3. 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% HNO_3 / LDPE container, stable in 10% HNO_3 packaged in borosilicate glass. 1-100 ppm levels stable in 7% HNO_3 packaged in borosilicate glass. 1000-10,000 ppm solutions are chemically stable for years in 5-10% HNO_3 / LDPE container.

Hg Containing Samples (Preparation and Solution) - Metal (soluble in HNO_3); Oxide (Soluble in HNO_3); 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

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.
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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 Number: 020623
Description: Cerium (Ce)

Expiration Date: 020626
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

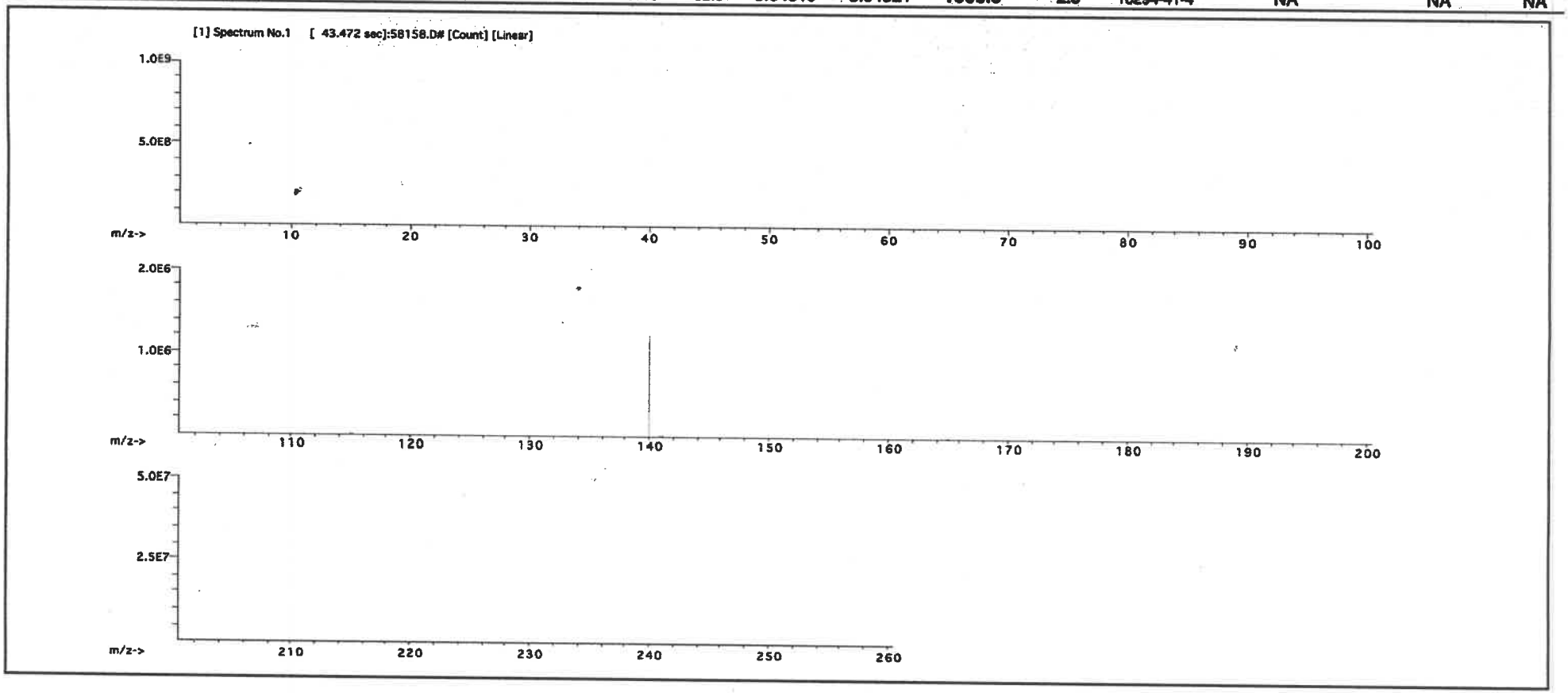
Weight shown below was diluted to (mL): 1000.12 0.058 Flask Uncertainty

		Lot #	
Solvent:	21110221	Nitric Acid	
2%	20.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

Formulated By:	Lawrence Barry	020623
Reviewed By:	Pedro L. Rentas	020623

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Cerium nitrate hexahydrate (Ce)	IN146	Z512CEB1	1000	99.999	0.10	32.8	3.04919	3.04921	**1000.0**	**2.0**	10294-41-4	NA	NA	NA



Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	T	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

M5658 R ! 8/25/23

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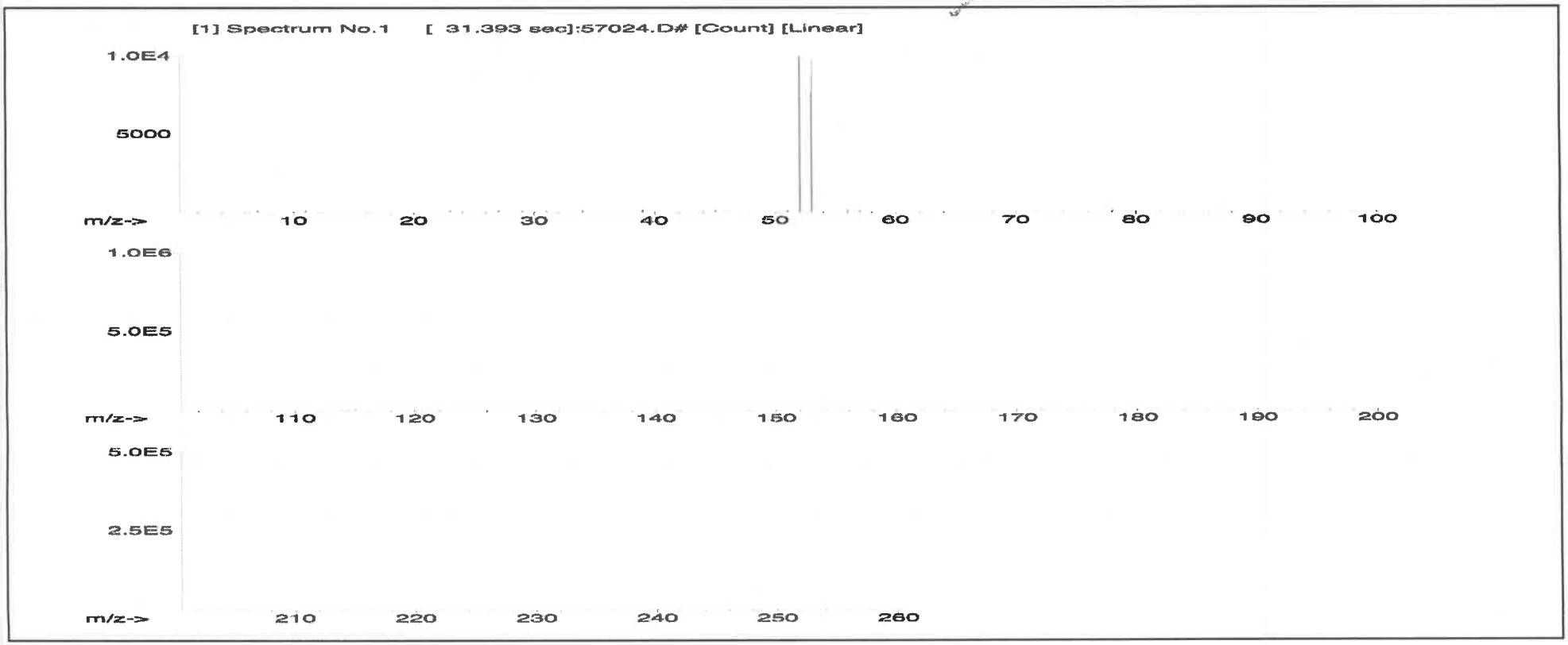
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**58024**	21110221	Nitric Acid	
Lot Number:	**060523**			
Description:	**Chromium (Cr)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	060526			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	060523
Reviewed By:	Pedro L. Rentas	060523

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Chromium(III) nitrate nonahydrate (Cr)	58124	071122	0.1000	200.0	0.084	1000	10000.1	**1000.0**	**2.2**	7789-02-8	0.5 mg(Cr)/m3	orl-rat 3250 mg/kg	3112a



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).

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Certified Reference Material CRM

R: 12/20/23 M5748

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AR-1539 Certificate Number
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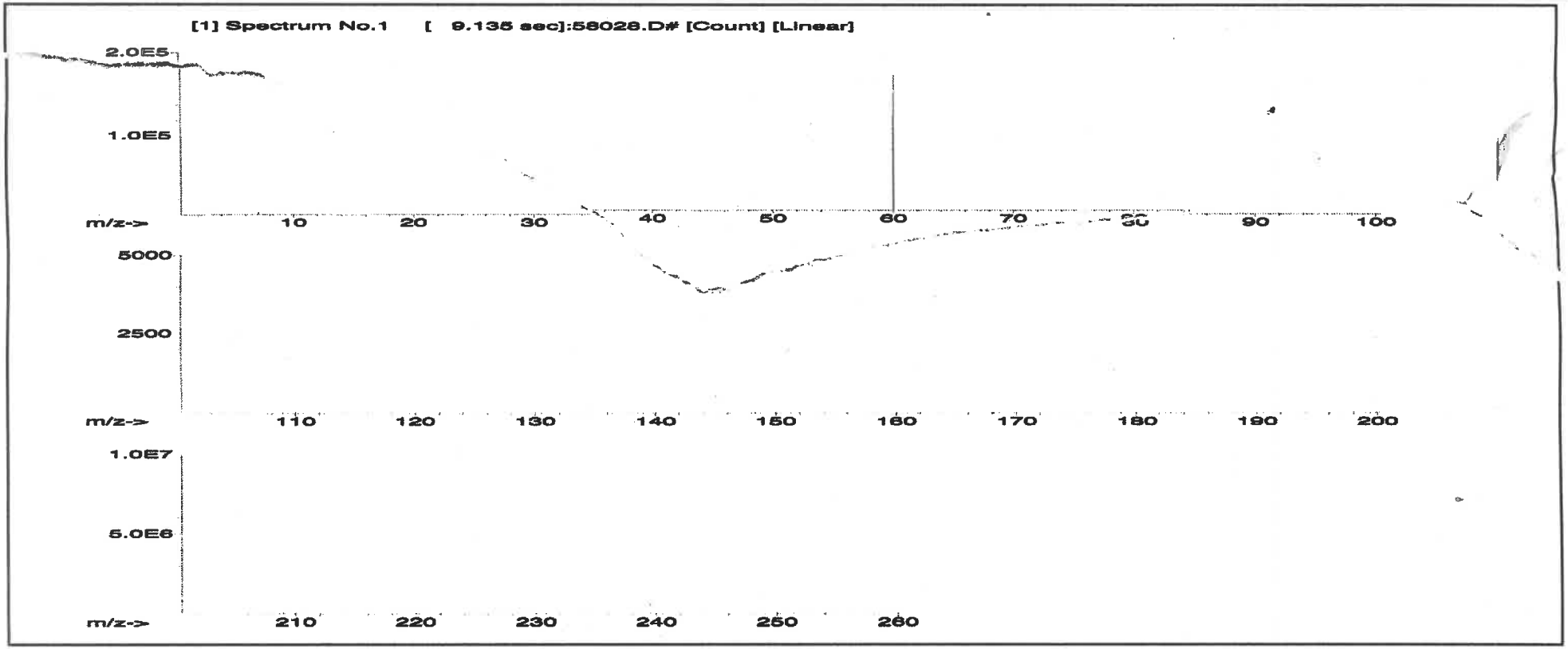
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57028**	24002546	Nitric Acid	
Lot Number:	**091223**			
Description:	**Nickel (Ni)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	091226			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	091223
Reviewed By:	Pedro L. Rentas	091223

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Nickel(II) nitrate hexahydrate (Ni)	58128	062023	0.1000	200.0	0.084	1000	10000.4	**1000.0**	**2.2**	13478-00-7	1 mg/m3	orl-rat 1620 mg/kg	3136



Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	T	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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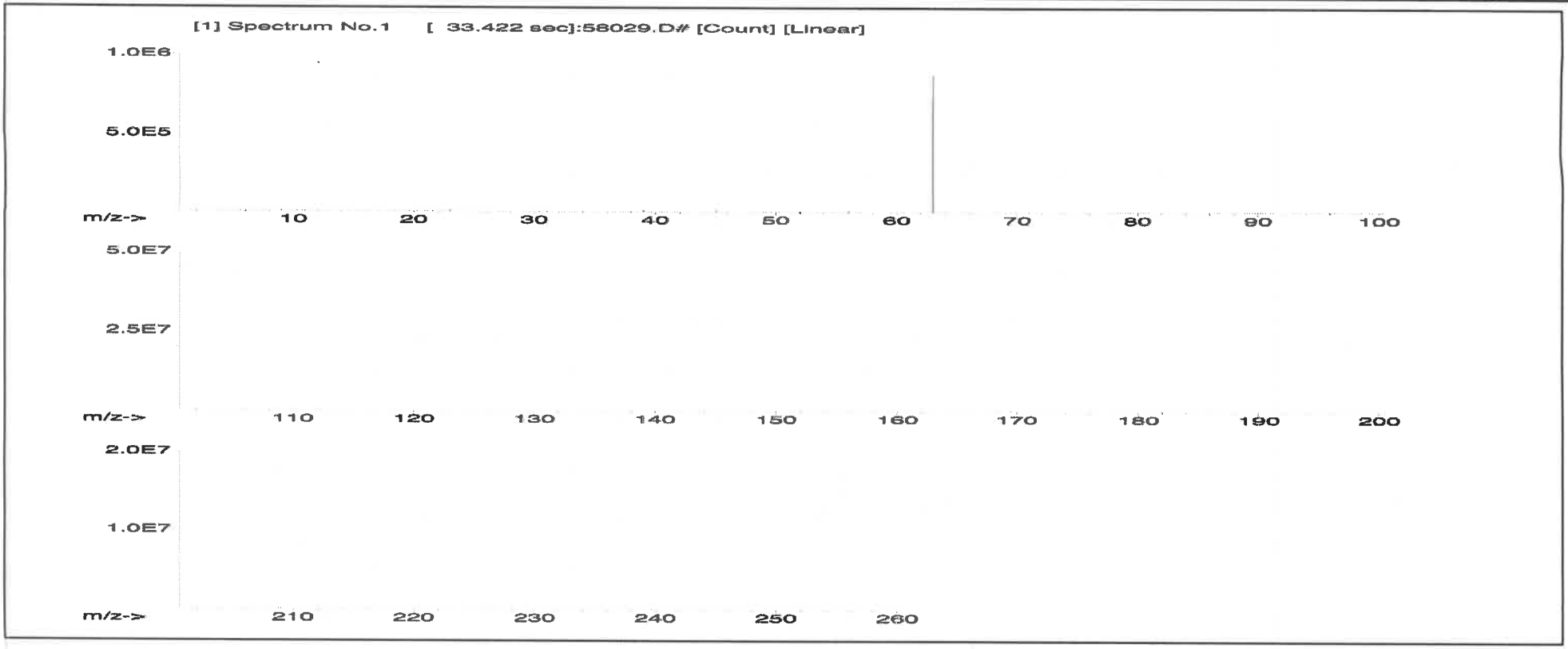
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**58029**	21110221	Nitric Acid	
Lot Number:	**071723**			
Description:	**Copper (Cu)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	071726			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Benson Chan	071723
Reviewed By:	Pedro L. Rentas	071723

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Copper(II) nitrate trihydrate (Cu)	58129	022723	0.1000	200.0	0.084	1000	10000.5	**1000.0**	**2.2**	10031-43-3	1 mg/m3	orl-rat 794 mg/kg	3114



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:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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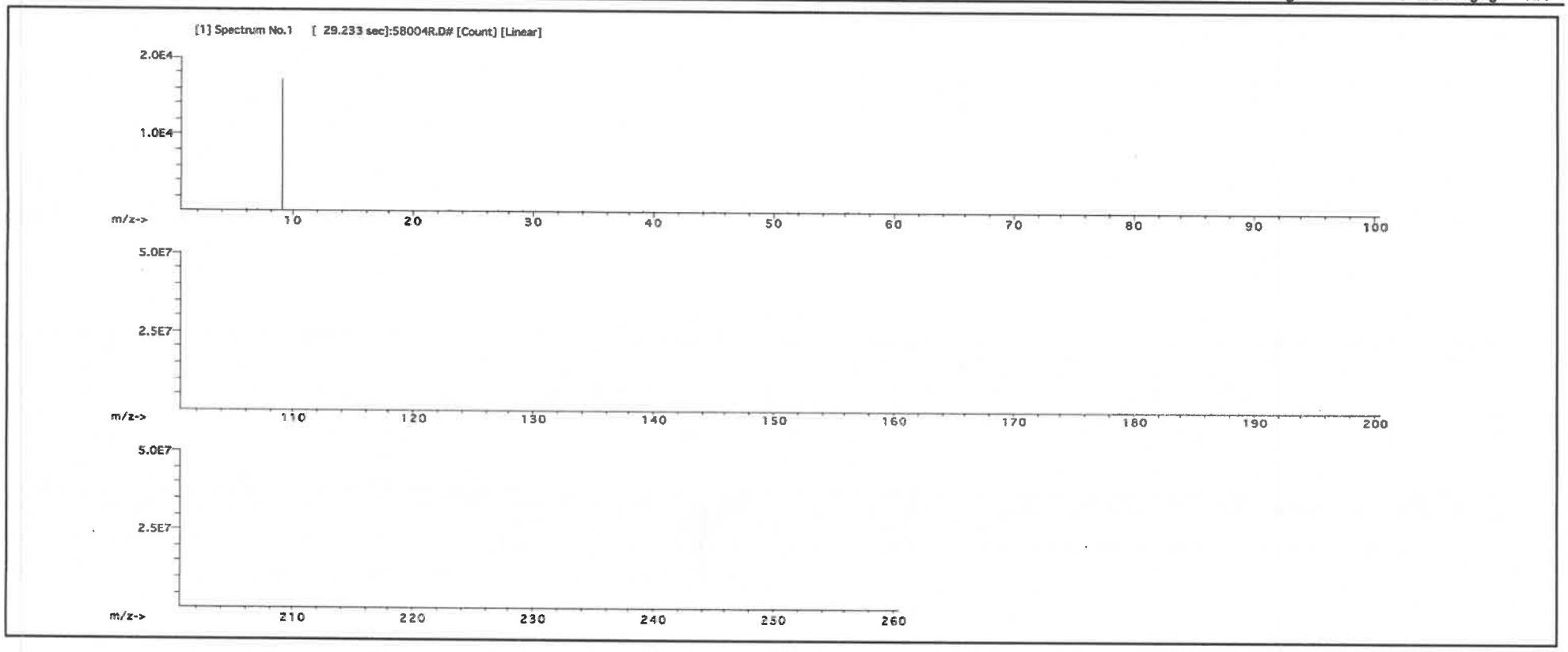
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57004**	24002546	Nitric Acid	
Lot Number:	**102523**			
Description:	**Beryllium (Be)**	2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	102526			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Benson Chan	102523
Reviewed By:	Pedro L. Rentas	102523

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Beryllium nitrate (Be)	58104	091423	0.1000	200.0	0.084	1000	10001.5	**1000.0**	**2.2**	13597-99-4	0.2ug/m3	intrvns-rat 3.16mg/kg	NA



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	T	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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CERTIFIED WEIGHT REPORT:

Part Number: 57050
Lot Number: 071123
Description: Tin (Sn)

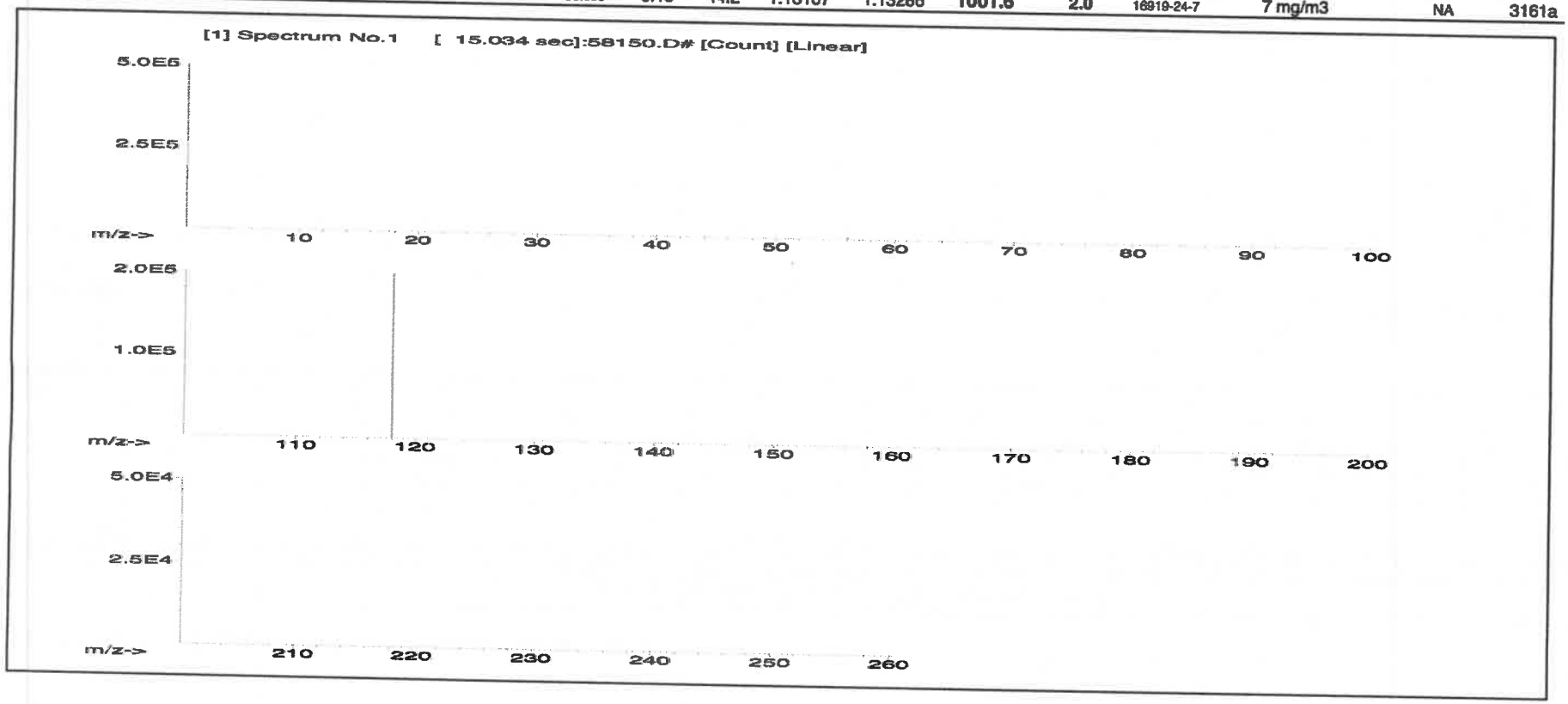
Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 499.93

	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



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<500	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	T	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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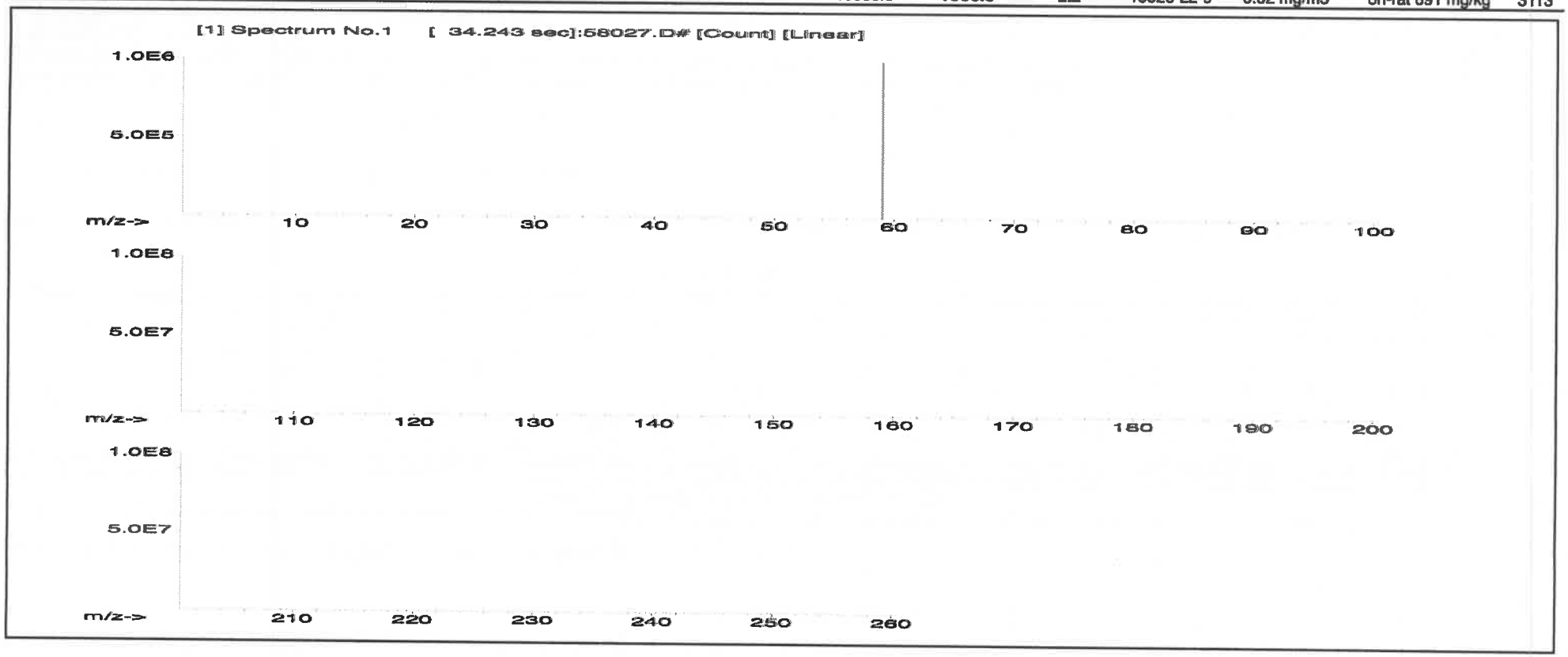
CERTIFIED WEIGHT REPORT:

		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



Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	T	Gé	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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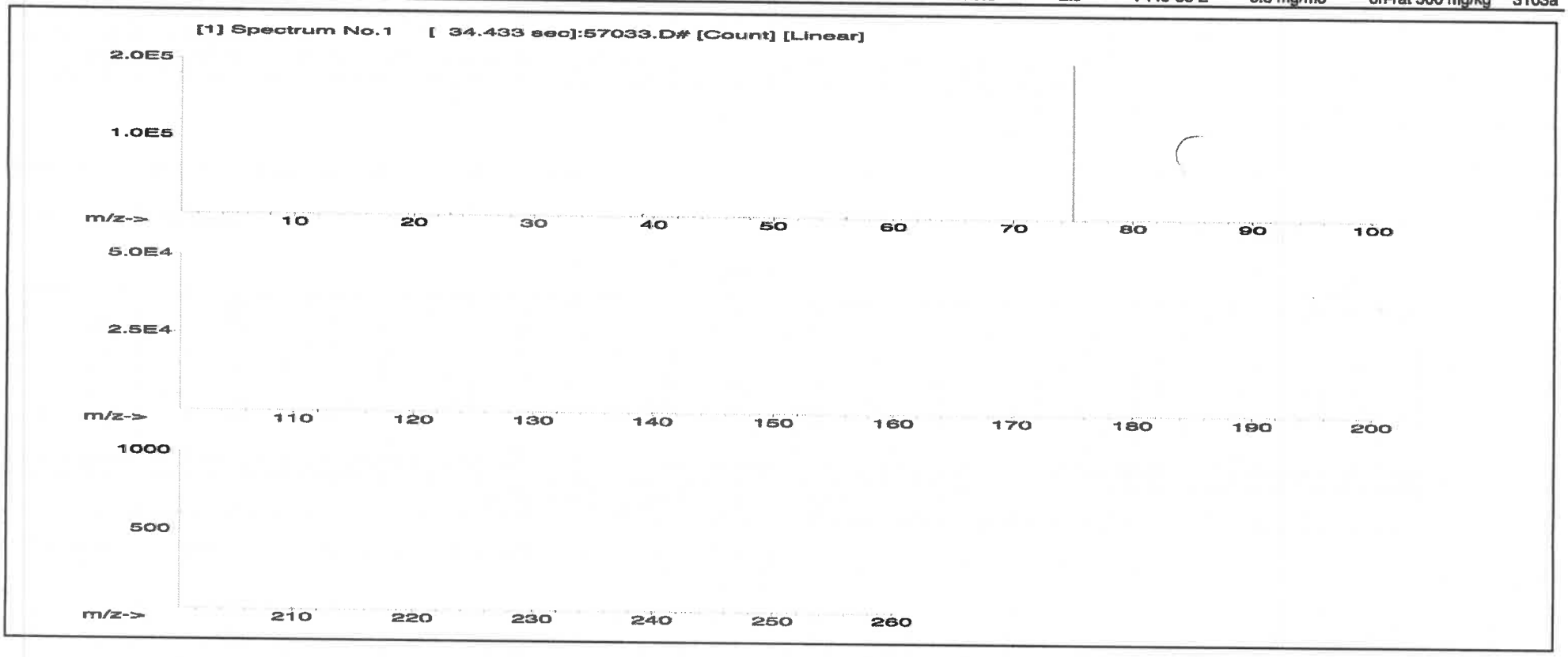
CERTIFIED **WEIGHT** REPORT:

		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



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	T	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge*	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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A: 02/09/24 M.5814

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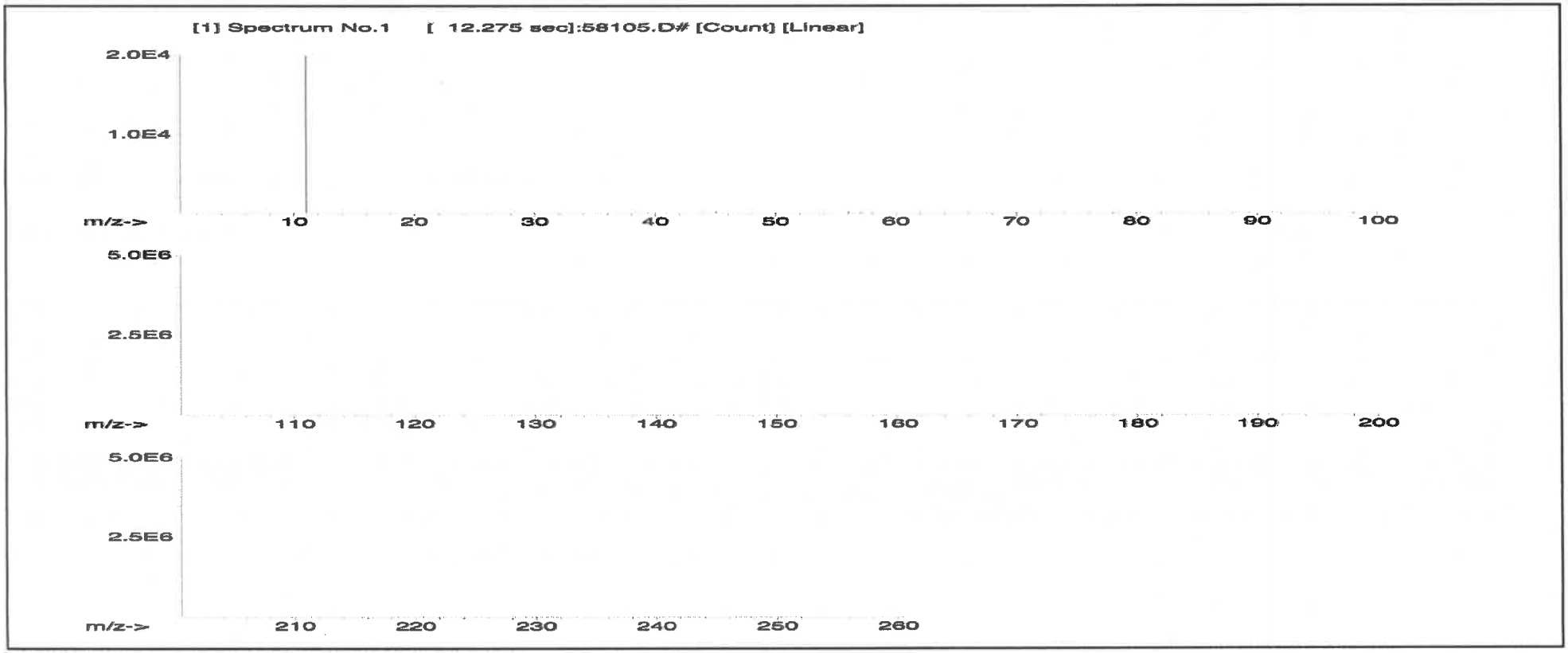
CERTIFIED WEIGHT REPORT:

Part Number:	**57005**		**Solvent:**	MKBQ8597V	Ammonium hydroxide
Lot Number:	**071123**				
Description:	**Boron (B)**		2.0%	40.0 (mL)	Ammonium hydroxide
Expiration Date:	071126				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	1999.48	0.058	Flask Uncertainty		

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



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.
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* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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R: 02/09/24 M5820

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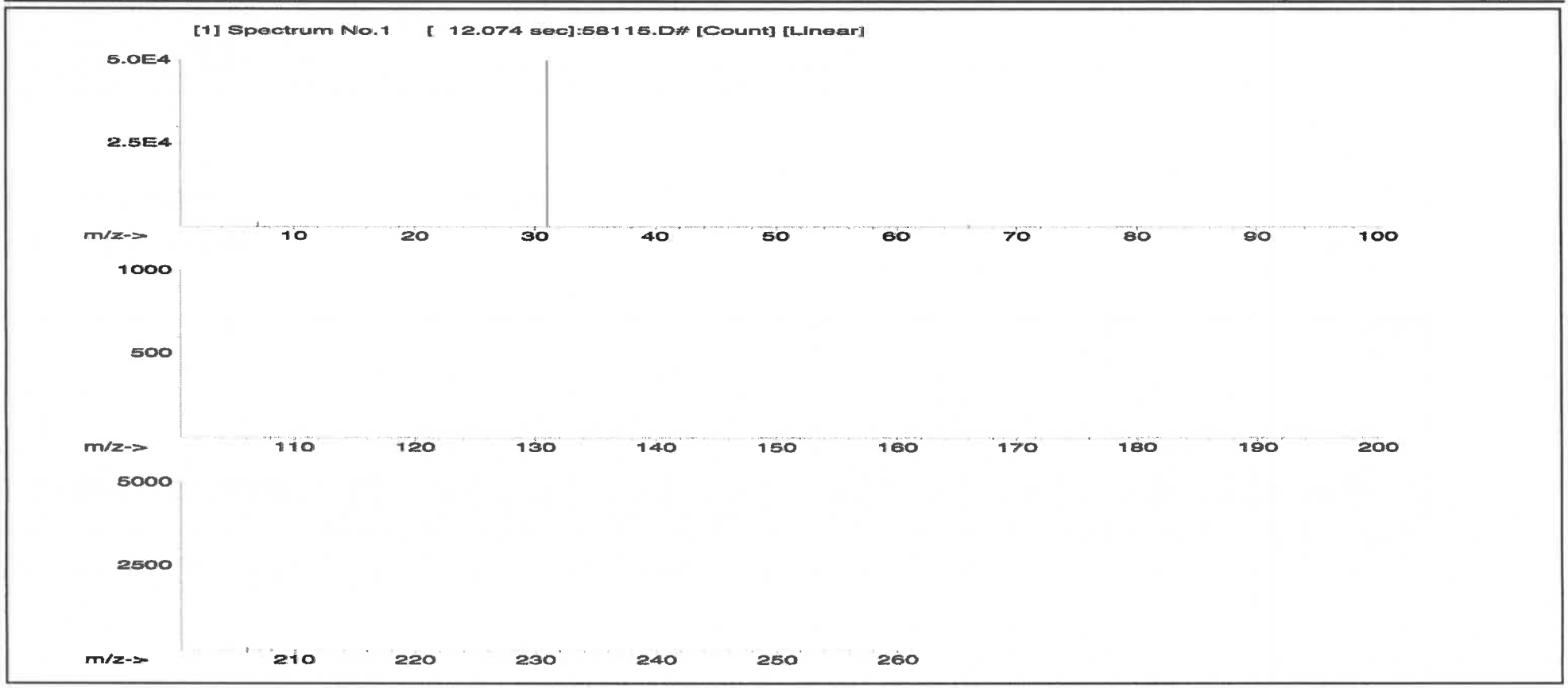
CERTIFIED WEIGHT REPORT:

Part Number:	**57015**		**Lot #**		
Lot Number:	**091123**	**Solvent:**	24002546	Nitric Acid	
Description:	**Phosphorous (P)**				
		2%	40.0 (mL)	Nitric Acid	
Expiration Date:	091126				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Formulated By:	Lawrence Barry	091123
Reviewed By:	Pedro L. Rentas	091123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium dihydrogen phosphate (P)	IN008	PV082019A1	1000	99.999	0.10	27.5	7.2729	7.2730	**1000.0**	**2.0**	7722-76-1	5 mg/m3	orl-rat >2000mg/k	3186



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.
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* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Sodium Chloride, Crystal
BAKER ANALYZED® A.C.S. Reagent

MT884
MB

avantor™ | J.T.Baker®

Material No.: 3624-01
Batch No.: 0000281938
Manufactured Date: 2021-06-07
Retest Date: 2026-06-07
Revision No.: 1

Certificate of Analysis

Test	Specification	Result
Assay (NaCl) (by Ag titrn)	≥ 99.0 %	100.0 %
pH of 5% Solution at 25°C	5.0 - 9.0	6.3
Insoluble Matter	≤ 0.005 %	0.003 %
Iodide (I)	≤ 0.002 %	< 0.002 %
Bromide (Br)	≤ 0.01 %	< 0.01 %
Chlorate and Nitrate (as NO_3)	≤ 0.003 %	< 0.001 %
ACS - Phosphate (PO_4)	≤ 5 ppm	< 5 ppm
Sulfate (SO_4)	≤ 0.004 %	< 0.004 %
Barium (Ba)	Passes Test	Passes Test
ACS - Heavy Metals (as Pb)	≤ 5 ppm	< 5 ppm
Iron (Fe)	≤ 2 ppm	< 1 ppm
Calcium (Ca)	≤ 0.002 %	< 0.001 %
Magnesium (Mg)	≤ 0.001 %	< 0.001 %
Potassium (K)	≤ 0.005 %	0.001 %

For Laboratory,Research,or Manufacturing Use
Meets Reagent Specifications for testing USP/NF monographs
Country of Origin: USA
Packaging Site: Paris Mfg Ctr & DC

James T Ethier

Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Mansford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone 610.386.1700

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M5962 R! 06/14/24.

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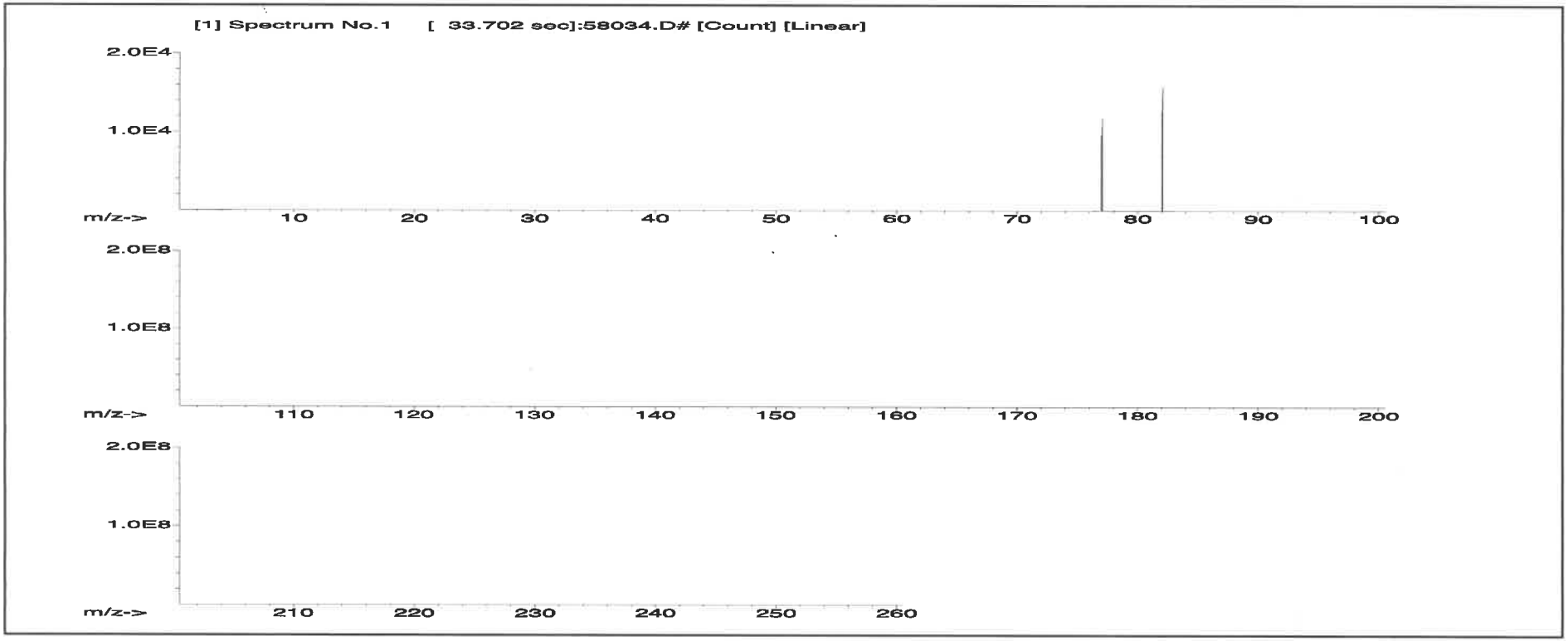
CERTIFIED WEIGHT REPORT:

		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



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.
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M5969 R: 06/11/24

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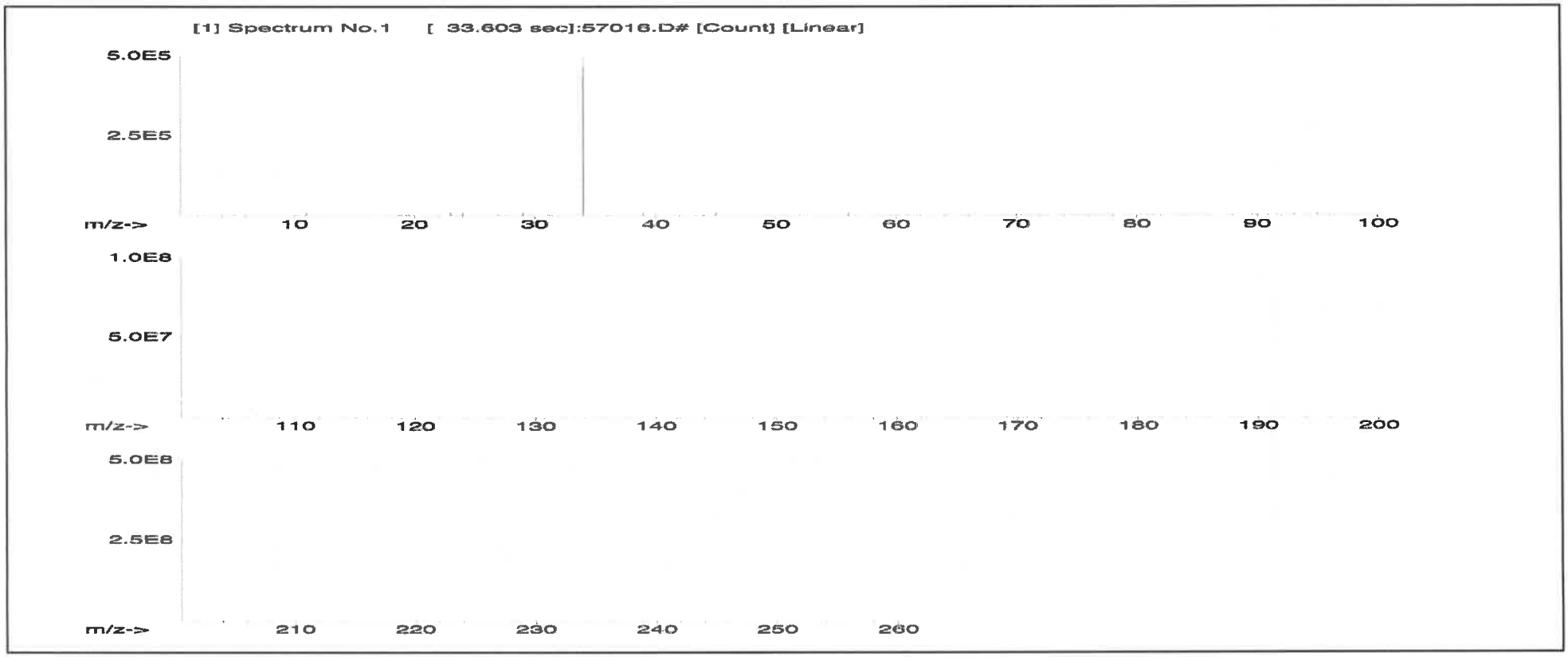
CERTIFIED WEIGHT REPORT:

Part Number:	**57016**	**Solvent:**	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	

Lot #

Formulated By:	Benson Chan	122923
Reviewed By:	Pedro L. Rentas	122923

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium sulfate (S)	IN117	SLBR7225V	1000	99.9	0.10	24.3	16.4979	16.4980	**1000.0**	**2.0**	7783-20-2	NA	orl-rat 4250mg/kg	3181



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M5970, M5971 R: 7/01/24

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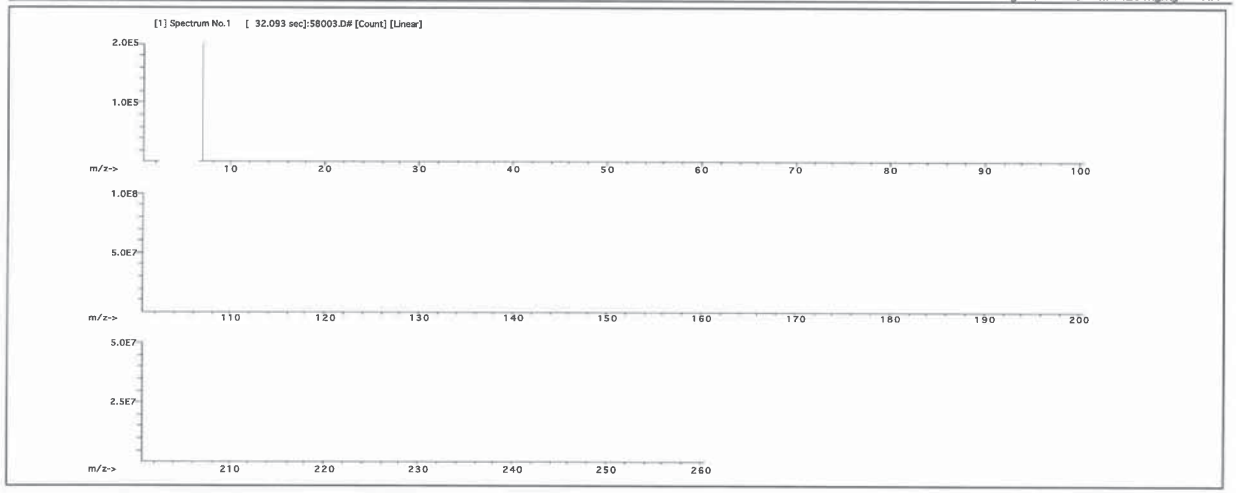
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:
Part Number:	**57003**	24002546	Nitric Acid
Lot Number:	**062124**		
Description:	**Lithium (Li)**		
		2.0%	5.0 (mL) Nitric Acid
Expiration Date:	062127		
Recommended Storage:	Ambient (20 °C)		
Nominal Concentration (µg/mL):	**1000**		
NIST Test Number:	6UTB	5E-05 Balance Uncertainty	
Volume shown below was diluted to (mL):	250.11	0.016 Flask Uncertainty	

Giovanni Esposito
Formulated By: Giovanni Esposito 062124

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



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
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B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

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Certified by:

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M5978, M5979

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info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGTI1
Lot Number:	T2-TI719972
Matrix:	2% (v/v) HNO_3 tr. HF
Value / Analyte(s):	1 000 µg/mL ea: Titanium
Starting Material:	Ti Metal
Starting Material Lot#:	2094
Starting Material Purity:	99.9975%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1002 ± 5 µg/mL

Density: 1.012 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **1002 ± 4 µg/mL**
ICP Assay NIST SRM 3162a Lot Number: 130925

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance

$w_i = (1/u_{char\ i}^2) / (\Sigma(1/u_{char\ i}^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma(w_i)^2\ (u_{char\ i})^2]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000536	M	Eu	<	0.000268	O	Na	<	0.032670	M	Se		0.001204	O	Zn	<	0.003267
O	Al		0.000872	O	Fe		0.003225	O	Nb	<	0.043560	O	Si		0.004735	O	Zr	<	0.043560
M	As	<	0.008586	M	Ga	<	0.000268	M	Nd	<	0.000268	M	Sm	<	0.000268				
M	Au	<	0.004577	M	Gd	<	0.000268	O	Ni	<	0.010890	M	Sn		0.000096				
O	B	<	0.008929	M	Ge	<	0.002146	M	Os	<	0.000269	O	Sr		0.000096				
M	Ba	<	0.002683	M	Hf		0.002161	O	P	<	0.054450	M	Ta		0.010560				
M	Be	<	0.005366	M	Hg	<	0.003231	M	Pb	<	0.001073	M	Tb	<	0.000268				
M	Bi	<	0.001609	M	Ho	<	0.000268	M	Pd	<	0.000268	M	Te	<	0.001341				
O	Ca		0.000676	M	In	<	0.002683	M	Pr	<	0.000268	M	Th	<	0.053663				
M	Cd	<	0.000268	M	Ir	<	0.000269	M	Pt	<	0.000536	s	Ti	<					
M	Ce	<	0.000268	M	K		0.001172	M	Rb	<	0.000268	M	Tl	<	0.000268				
M	Co	<	0.004293	M	La	<	0.000268	M	Re	<	0.000268	M	Tm	<	0.000268				
M	Cr		0.000752	O	Li	<	0.027225	M	Rh	<	0.000268	M	U	<	0.000268				
M	Cs	<	0.000268	M	Lu	<	0.000268	M	Ru	<	0.000269	M	V	<	0.019855				
O	Cu	<	0.010890	O	Mg	<	0.005445	i	S	<		M	W		0.000473				
M	Dy	<	0.000268	O	Mn	<	0.003267	M	Sb	<	0.006976	M	Y	<	0.002146				
M	Er	<	0.000268	M	Mo		0.000774	O	Sc	<	0.004900	M	Yb	<	0.000536				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 47.87 +4 6 Ti(F)6-2

Chemical Compatibility - Soluble in concentrated HCl, HF, H3PO4 H2SO4 and HNO3. Avoid neutral to basic media. Unstable at ppm levels with metals that would pull F- away (i.e. Do not mix with Alkaline or Rare Earths or high levels of transition elements unless they are fluorinated). Stable with most inorganic anions with a tendency to hydrolyze forming the hydrated oxide in all dilute acids except HF.

Stability - 2-100 ppb levels stable (Alone or mixed with all other metals) as the Ti(F)6-2 for months in 1% HNO3 / LDPE container. 1-10,000 ppm single element solutions as the Ti(F)6-2 chemically stable for years in 2-5% HNO3 / trace HF in an LDPE container.

Ti Containing Samples (Preparation and Solution) - Metal (Soluble in H2O / HF caution -powder reacts violently); Oxide - low temperature history anatase or rutile (Dissolved by heating in 1:1:1 H2O / HF / H2SO4); Oxide - high temperature history (~800EC) brookite (fuse in Pt0 with K2S2O7); Ores (fuse in Pt0 with KF + K2S2O7 - no KF if silica not present); Organic Matrices (Dry ash at 450EC in Pt0 and dissolve by heating with 1:1:1 H2O / HF / H2SO4 or fuse ash with pyrosulfate if oxide is as plastic pigment and likely in brookite crystalline form).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 48 amu	14 ppt	N/A	32S16O, 32S14N, 14N16O18O, 14N17N2, 36Ar12C, 48Ca, [96X=2 (where X = Zr, Mo, Ru)]
ICP-OES 323.452 nm	0.0054 / 0.00092 µg/mL	1	Ce, Ar, Ni
ICP-OES 334.941 nm	0.0038 / 0.000028 µg/mL	1	Nb, Ta, Cr, U
ICP-OES 336.121 nm	0.0053 / 0.000034 µg/mL	1	W, Mo, Co

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 17, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- June 17, 2027

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certificate of Analysis

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MS985
R: 6/14/24

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 863.01
ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGIN10
Lot Number:	U2-IN729349
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Indium
Starting Material:	Indium Metal
Starting Material Lot#:	2511
Starting Material Purity:	99.9995%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10022 ± 30 µg/mL

Density: 1.044 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	**10021 ± 56 µg/mL** ICP Assay NIST SRM 3124a Lot Number: 110516
Assay Method #2	**10035 ± 25 µg/mL** EDTA NIST SRM 928 Lot Number: 928
Assay Method #3	**10001 ± 33 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000760	M	Eu	<	0.000760	O	Na		0.012771	M	Se	<	0.023000	M	Zn	<	0.006100
M	Al		0.003385	O	Fe		0.004462	M	Nb	<	0.000760	O	Si		0.024619	M	Zr	<	0.000760
M	As	<	0.004600	M	Ga	<	0.000760	M	Nd	<	0.000760	M	Sm	<	0.000760				
M	Au	<	0.002300	M	Gd	<	0.000760	O	Ni	<	0.005100	M	Sn	<	0.000760				
O	B		0.003692	M	Ge	<	0.001600	M	Os	<	0.000760	O	Sr	<	0.000610				
M	Ba	<	0.001600	M	Hf	<	0.000760	n	P	<		M	Ta	<	0.000760				
O	Be	<	0.000130	M	Hg	<	0.003100	M	Pb		0.001400	M	Tb	<	0.000760				
M	Bi	<	0.000760	M	Ho	<	0.000760	M	Pd	<	0.001600	M	Te	<	0.000760				
O	Ca		0.004616	s	In	<		M	Pr	<	0.000760	M	Th	<	0.000760				
M	Cd	<	0.000760	M	Ir	<	0.000760	M	Pt	<	0.000760	O	Ti	<	0.001100				
M	Ce	<	0.000760	O	K		0.007078	M	Rb	<	0.000760	M	Tl	<	0.000760				
M	Co	<	0.000760	M	La	<	0.000760	M	Re	<	0.000760	M	Tm	<	0.000760				
O	Cr	<	0.001300	O	Li	<	0.000130	M	Rh	<	0.000760	M	U	<	0.000760				
M	Cs	<	0.000760	M	Lu	<	0.000760	M	Ru	<	0.000760	M	V	<	0.001600				
M	Cu	<	0.003800	O	Mg		0.000707	n	S	<		M	W	<	0.001600				
M	Dy	<	0.000760	O	Mn		0.000149	M	Sb	<	0.000760	M	Y	<	0.000760				
M	Er	<	0.000760	M	Mo	<	0.002300	M	Sc	<	0.000760	M	Yb	<	0.000760				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 114.82 +3 6 In(H2O)6+3

Chemical Compatibility -Soluble in HCl, HNO3, and H2SO4. Avoid neutral and basic media. Stable with most metals and inorganic anions. The oxalate, sulfide, carbonate, hydroxide and phosphate are insoluble in water.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.

In Containing Samples (Preparation and Solution) -Metal (Best dissolved in HCl / HNO3); Oxide (Soluble in mineral acids); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Sulfuric/peroxide digestion or dry ash and dissolution in dilute HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 115 amu	1 ppt	n/a	115Sn, 99Ru16O
ICP-OES 158.583 nm	0.05 / 0.002 µg/mL	1	
ICP-OES 230.606 nm	0.1 / 0.03 µg/mL	1	Ni, Os
ICP-OES 325.609 nm	0.2 / 0.05 µg/mL	1	Mn, Mo, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 21, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- February 21, 2028

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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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 (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i}^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 21, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- December 21, 2027

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CHEM-CLP-4
Lot Number:	V2-MEB746172
Matrix:	3% (v/v) HNO_3 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

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 12, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- August 12, 2029

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Joseph Burns
Custom VS Manager

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certificate of Analysis

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F: 540-585-3012
info@inorganicventures.com

EXP.: 9/6/2029

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CHEM-CLP-4
Lot Number:	V2-MEB746762
Matrix:	3% (v/v) HNO3 3% (v/v) HF
Value / Analyte(s):	1 000 µg/mL ea: Boron, Molybdenum, Silicon, Tin, Titanium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Boron, B	**1 000 ± 5 µg/mL**	**Molybdenum, Mo**	**1 000 ± 5 µg/mL**
Silicon, Si	**1 000 ± 7 µg/mL**	**Tin, Sn**	**1 000 ± 5 µg/mL**
Titanium, Ti	**1 000 ± 6 µg/mL**		

Density: 1.033 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
B	ICP Assay	3107	190605
B	Calculated		See Sec. 4.2
Mo	ICP Assay	traceable to 3134	U2-MO739068
Si	ICP Assay	Traceable to 3150	S2-SI702546
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	traceable to 3162a	T2-TI725816

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

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$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

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u_{bb} = bottle to bottle homogeneity standard uncertainty

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- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

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7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

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- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

September 06, 2024

- 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

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11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

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Lot Number:	V2-MEB746762
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Value / Analyte(s):	1 000 µg/mL ea: Boron, Molybdenum, Silicon, Tin, Titanium

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ANALYTE	METHOD	NIST SRM#	SRM LOT#
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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.

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HF Note: This standard should not be prepared or stored in glass.

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9.0 HOMOGENEITY

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

September 06, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- September 06, 2029

- The date after which this CRM/RM should not be used.

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11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

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12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Joseph Burns
Custom VS Manager

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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->1/13/28

M6128

Part Number:	**58025**	**Solvent:**	**Lot #** 24002546	Nitric Acid
Lot Number:	**101124**			
Description:	**Manganese (Mn)**	2%	80.0 (mL)	Nitric Acid
Expiration Date:	101127			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	4000.2	0.10	Flask Uncertainty	

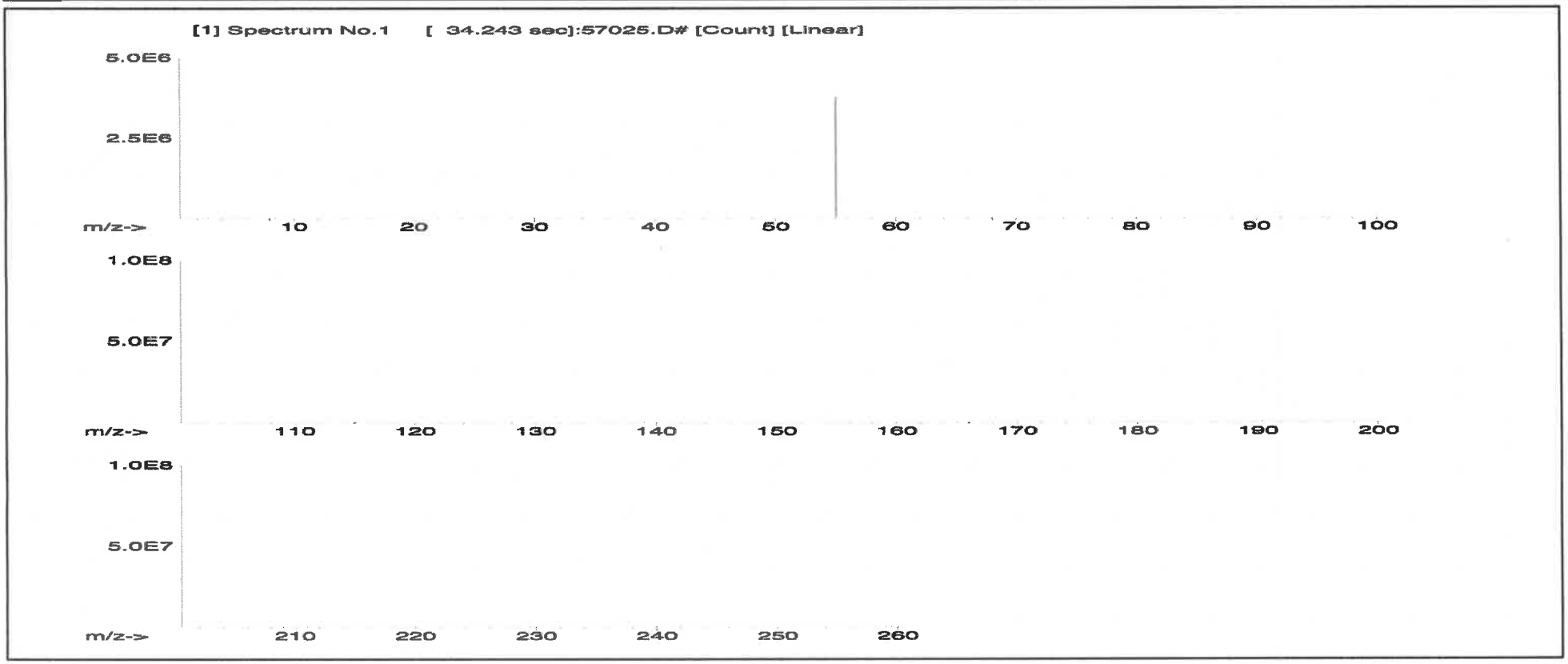
Giovanni Esposito

Formulated By:	Giovanni Esposito	101124

Pedro Rentas

Reviewed By:	Pedro L. Rentas	101124

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	**Actual Conc. (µg/mL)**	Expanded Uncertainty +/- (µg/mL)	**SDS Information** (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Manganese(II) nitrate hydrate (Mn)	IN031	MNM092020A1	1000	99.999	0.10	20.8	19.2322	19.2344	**1000.1**	**2.0**	15710-66-4	5 mg/m3	orl-rat >300mg/kg	3132



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	T	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the 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

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M6138
R->1/13/25

CERTIFIED WEIGHT REPORT:

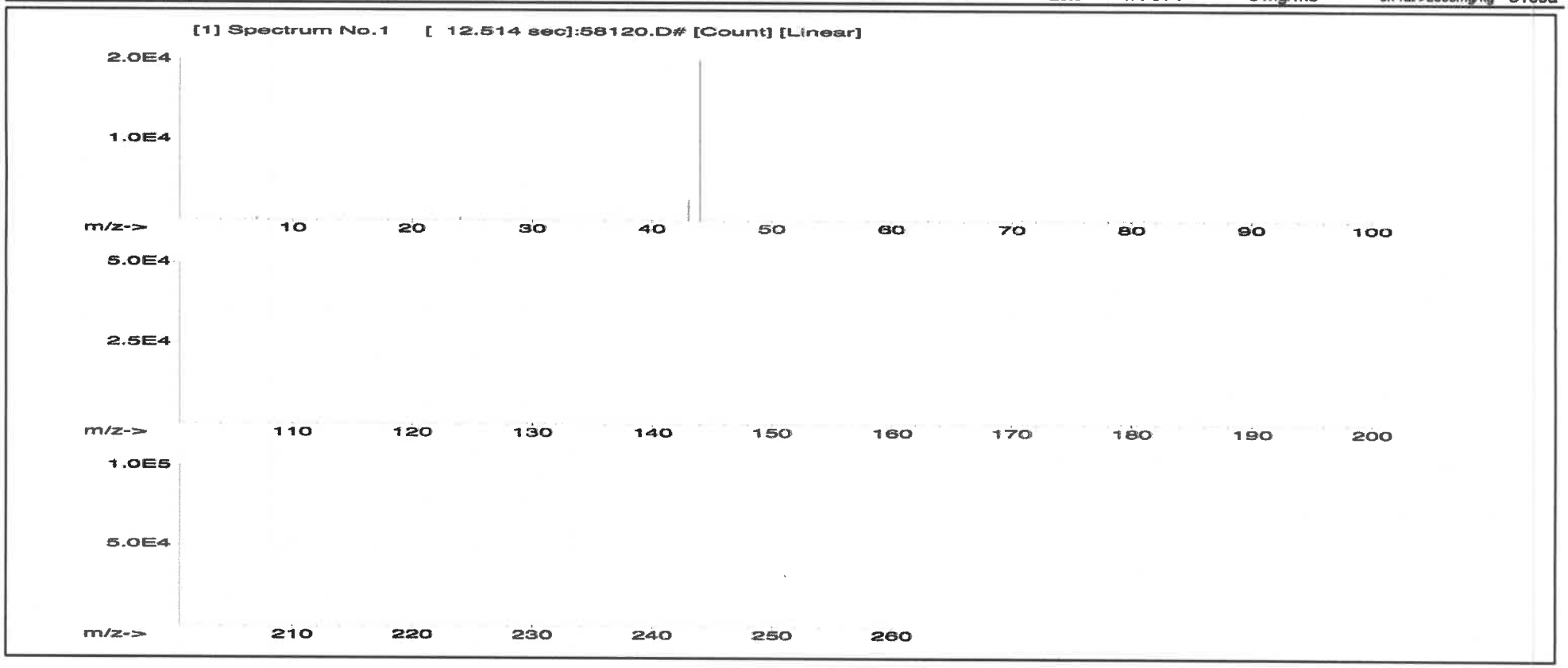
Part Number: 58120
Lot Number: 121824
Description: Calcium (Ca)
Expiration Date: 121827
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 4000.1

	Lot #		
Solvent:	24012496	Nitric Acid	
2%	80.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	
	0.15	Flask Uncertainty	

Giovanni Esposito

Formulated By:	Giovanni Esposito	121824
Reviewed By:	Pedro L. Rentas	121824

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Calcium carbonate (Ca)	IN014	CAD03203B3	10000	99.999	0.10	39.9	100.2537	100.2677	**10001.4**	**20.0**	471-34-1	5 mg/m3	orl-rat >2000mg/kg	3109a



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).

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Certified Reference Material CRM

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AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

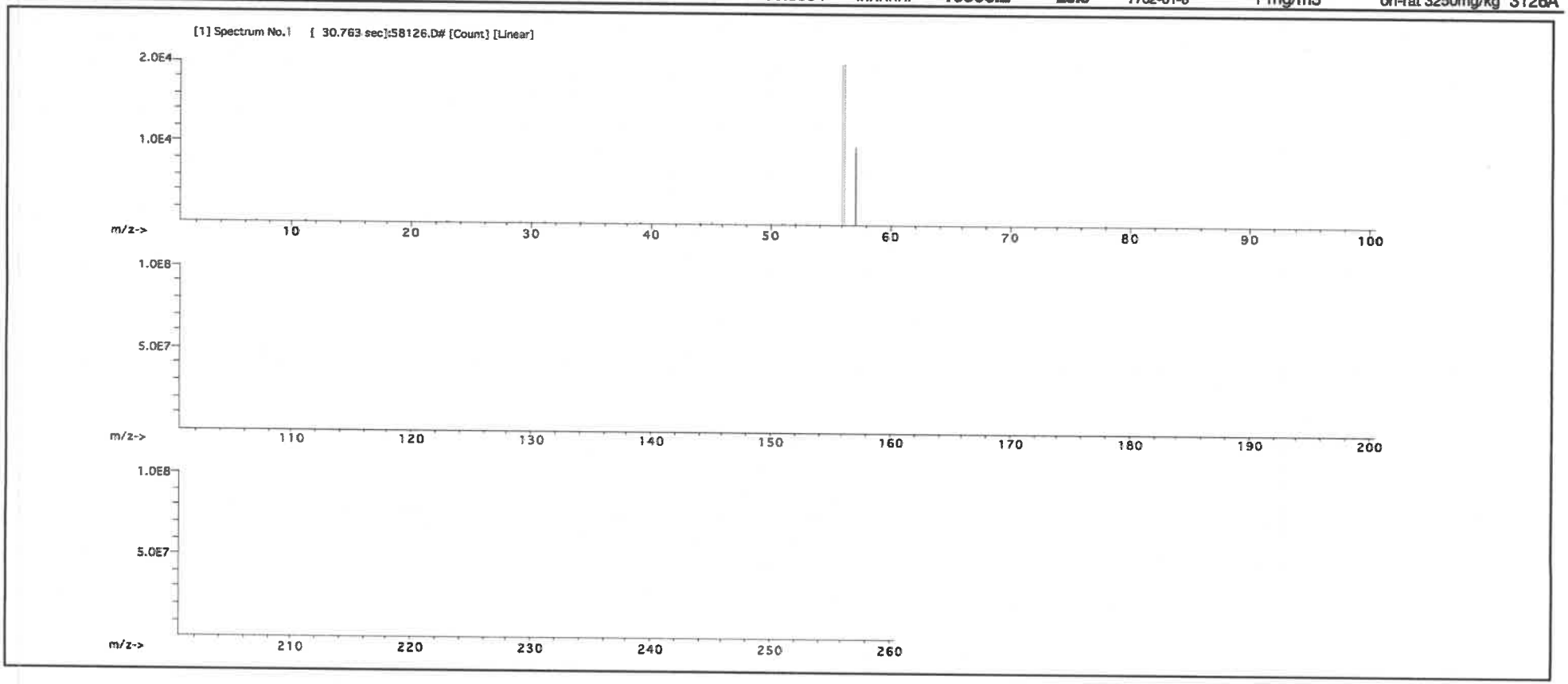
Part Number: 58126 R->1|B|2S
Lot Number: 011025
Description: Iron (Fe) M6140
Expiration Date: 011028
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.07 ± 0.100 Flask Uncertainty

		Lot #	
Solvent:	24012496	Nitric Acid	
	2%	40.0 (mL)	Nitric Acid

5E-05 Balance 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



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:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

R-> 1/13/25

Part Number: 57119
Lot Number: 103024
Description: Potassium (K)

M6141
M6142
M6143

Expiration Date: 103027
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB

		Lot #	
Solvent:	24002546	Nitric Acid	
2%	80.0 (mL)	Nitric Acid	

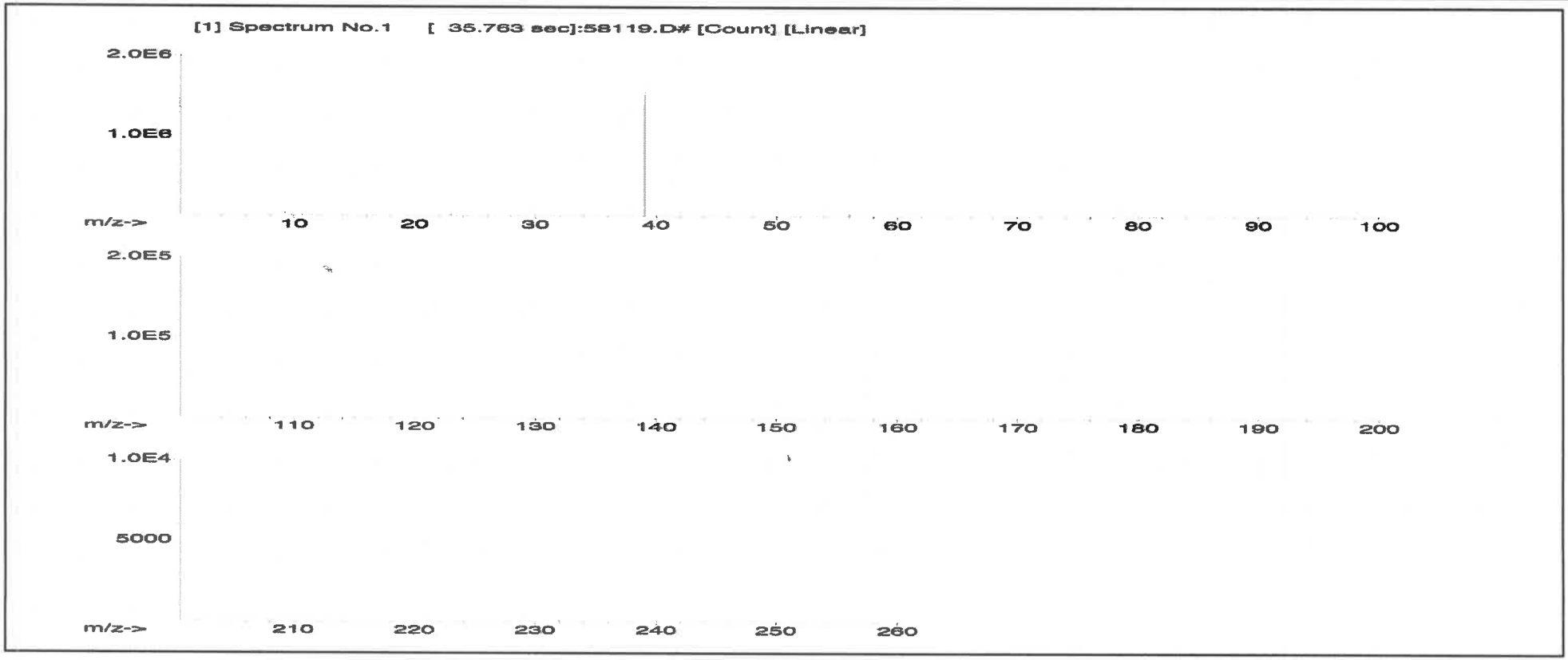
5E-05 Balance Uncertainty

Weight shown below was diluted to (mL): 4000.1 0.15 Flask Uncertainty

Giovanni Esposito

Formulated By:	Giovanni Esposito	103024
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



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

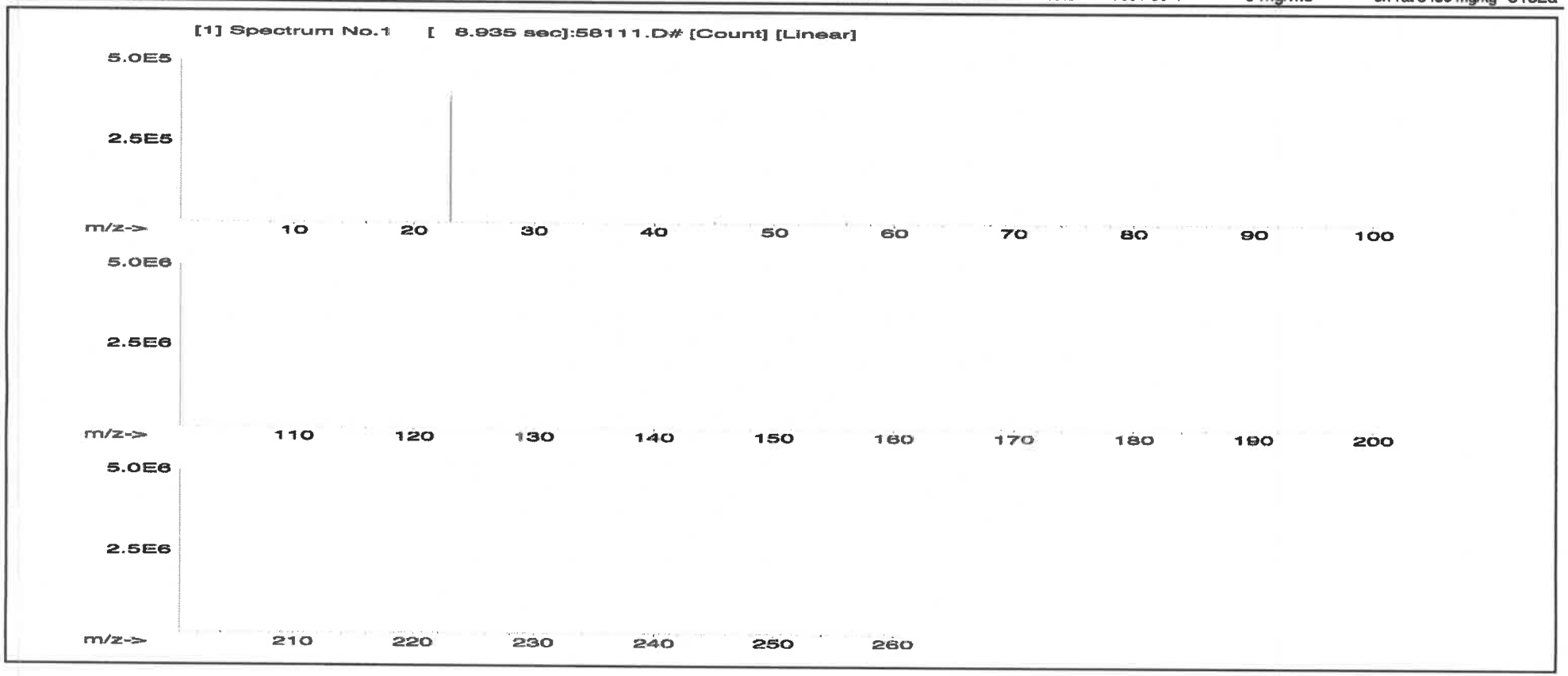
CERTIFIED WEIGHT REPORT:

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



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.

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* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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Certified Reference Material CRM

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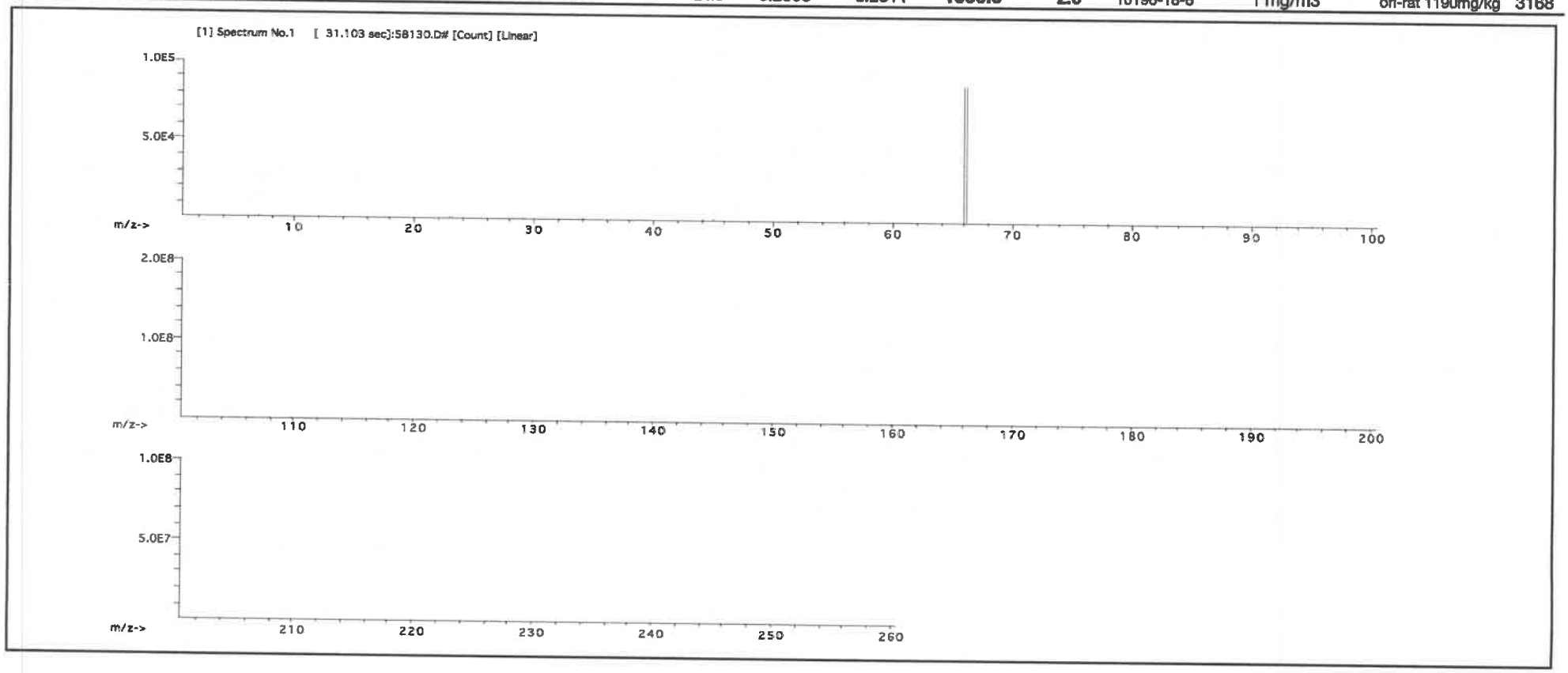
CERTIFIED WEIGHT REPORT:

Part Number:	**58030**	R → 1/13/25	**Solvent:**	**Lot #** 24012496	Nitric Acid
Lot Number:	**121724**				
Description:	**Zinc (Zn)**	M6145	2%	40.0 (mL)	Nitric Acid
Expiration Date:	121727				
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	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	orl-rat 1190mg/kg	3168



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.
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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

Sulfuric Acid
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis
Low Selenium

avantor | J.T.Baker

M615 MB

Material No.: 9673-33
Batch No.: 24I1262013
Manufactured Date: 2024-08-07
Retest Date:2029-08-06
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
ACS - Assay (H_2SO_4)	95.0 - 98.0 %	96.2 %
Appearance	Passes Test	Passes Test
ACS - Color (APHA)	<= 10	5
ACS - Residue after Ignition	<= 3 ppm	<1 ppm
ACS - Substances Reducing Permanganate(as SO2)	<= 2 ppm	<2 ppm
Ammonium (NH_4)	<= 1 ppm	<1 ppm
Chloride (Cl)	<= 0.1 ppm	<0.1 ppm
Nitrate (NO_3)	<= 0.2 ppm	0.1 ppm
Phosphate (PO_4)	<= 0.5 ppm	<0.1 ppm
Trace Impurities - Aluminum (Al)	<= 30.0 ppb	<5.0 ppb
Arsenic & Antimony (as As)	<= 4.0 ppb	<2.0 ppb
Trace Impurities - Boron (B)	<= 10.0 ppb	<5.0 ppb
Trace Impurities - Cadmium (Cd)	<= 2.0 ppb	<1.0 ppb
Trace Impurities - Chromium (Cr)	<= 6.0 ppb	<1.0 ppb
Trace Impurities - Cobalt (Co)	<= 0.5 ppb	<0.3 ppb
Trace Impurities - Copper (Cu)	<= 1.0 ppb	<1.0 ppb
Trace Impurities - Gold (Au)	<= 10.0 ppb	<5.0 ppb
Heavy Metals (as Pb)	<= 500.0 ppb	<100.0 ppb
Trace Impurities - Iron (Fe)	<= 50.0 ppb	<1.0 ppb
Trace Impurities - Lead (Pb)	<= 0.5 ppb	<0.5 ppb
Trace Impurities - Magnesium (Mg)	<= 7.0 ppb	<1.0 ppb
Trace Impurities - Manganese (Mn)	<= 1.0 ppb	<1.0 ppb
Trace Impurities - Mercury (Hg)	<= 0.5 ppb	<0.1 ppb
Trace Impurities - Nickel (Ni)	<= 2.0 ppb	<0.3 ppb
Trace Impurities - Potassium (K)	<= 500.0 ppb	<10.0 ppb
Trace Impurities - Selenium (Se)	<= 50.0 ppb	7.2 ppb
Trace Impurities - Silicon (Si)	<= 100.0 ppb	12.8 ppb
Trace Impurities - Silver (Ag)	<= 1.0 ppb	<1.0 ppb

Sulfuric Acid
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis
Low Selenium

avantor™ | J.T.Baker

Material No.: 9673-33
Batch No.: 24I1262013

Test	Specification	Result
Trace Impurities - Sodium (Na)	<= 500.0 ppb	<5.0 ppb
Trace Impurities - Strontium (Sr)	<= 5.0 ppb	<1.0 ppb
Trace Impurities - Tin (Sn)	<= 5.0 ppb	1.1 ppb
Trace Impurities - Zinc (Zn)	<= 5.0 ppb	<1.0 ppb

For Laboratory,Research,or Manufacturing Use

Country of Origin: United States
Packaging Site: Phillipsburg Mfg Ctr & DC

J Croak

Jamie Croak
Director Quality Operations, Bioscience Production

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®

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

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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

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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

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

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k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

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4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

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.

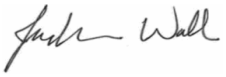
12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

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
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u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with
$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

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.

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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.

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- 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"

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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

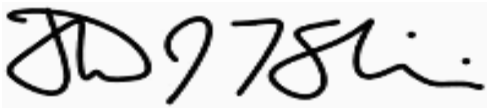
- Sealed TCT Bag Open Date: _____

- 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

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	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

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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.

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- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

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9.0 HOMOGENEITY

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- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 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.

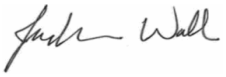
12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Justin Dirico
Stock Processing Supervisor

Certificate Approved By:

Jodie Wall
Stock VSM Coordinator



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

R -> 2/13/25

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: 58112
Lot Number: 011525
Description: Magnesium (Mg)

M 6171

	Lot #	
Solvent:	24012496	Nitric Acid
2%	40.0 (mL)	Nitric Acid

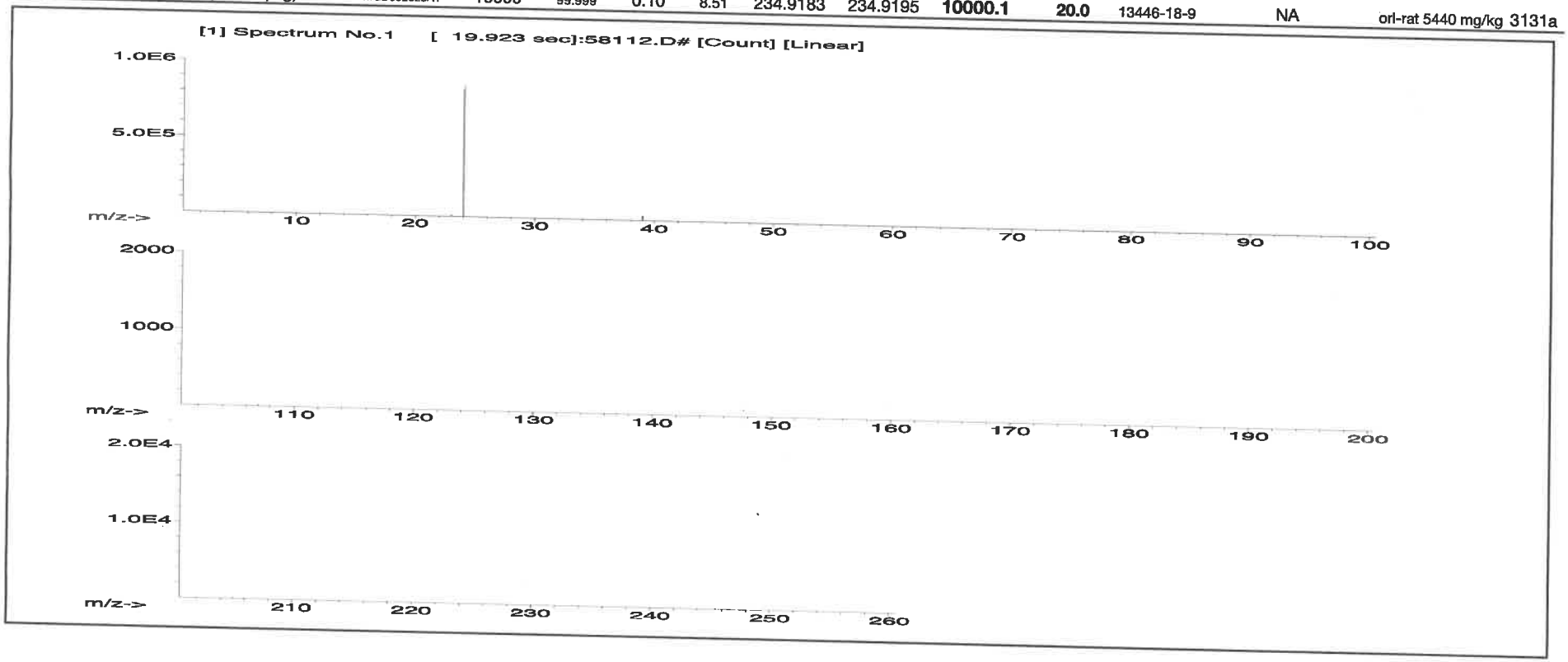
Expiration Date: 011528
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB

5E-05	Balance Uncertainty	
0.100	Flask Uncertainty	

Weight shown below was diluted to (mL): 2000.07

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



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).

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Certificate of Analysis

300 Technology Drive
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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

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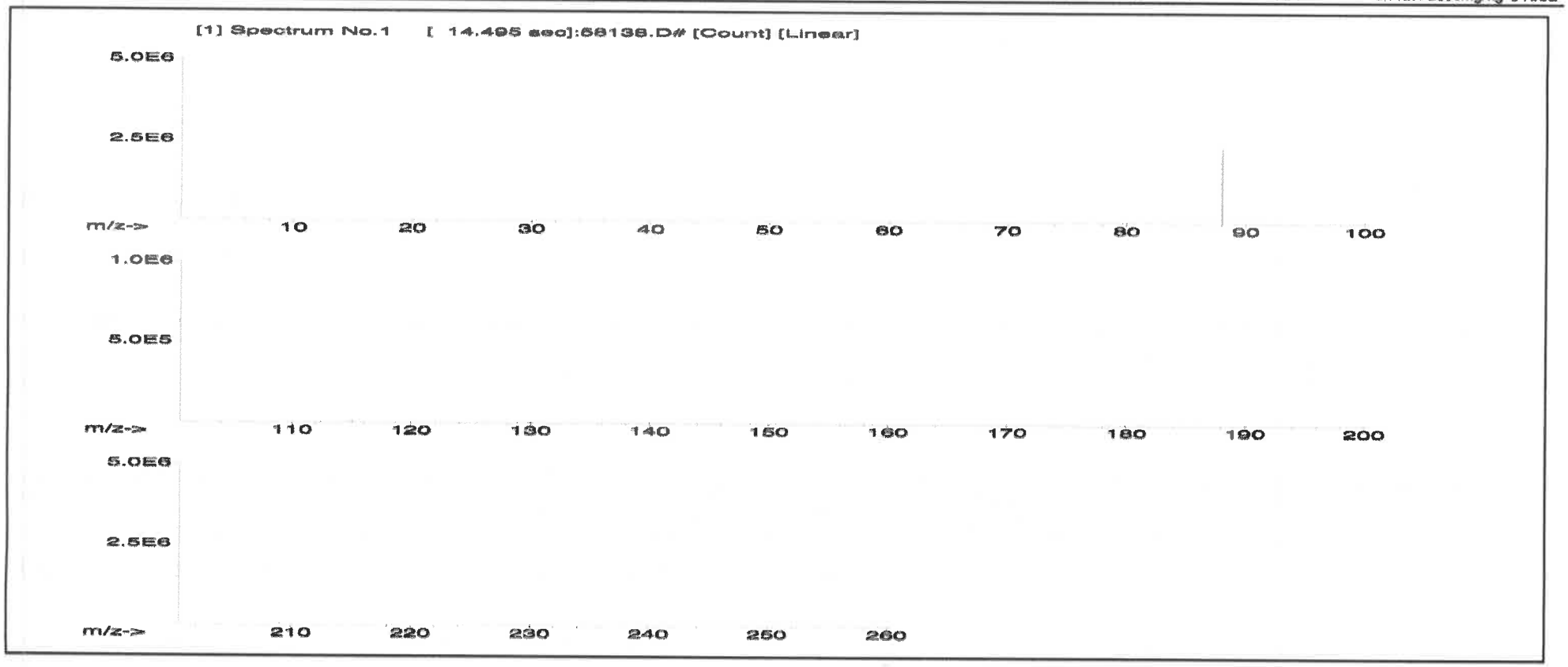
CERTIFIED WEIGHT REPORT:

R->8/6/29

Part Number:	57038		**Lot #**		
Lot Number:	092724	**Solvent:**	24002546	Nitric Acid	
Description:	Strontium (Sr)				
		M6176 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



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	T	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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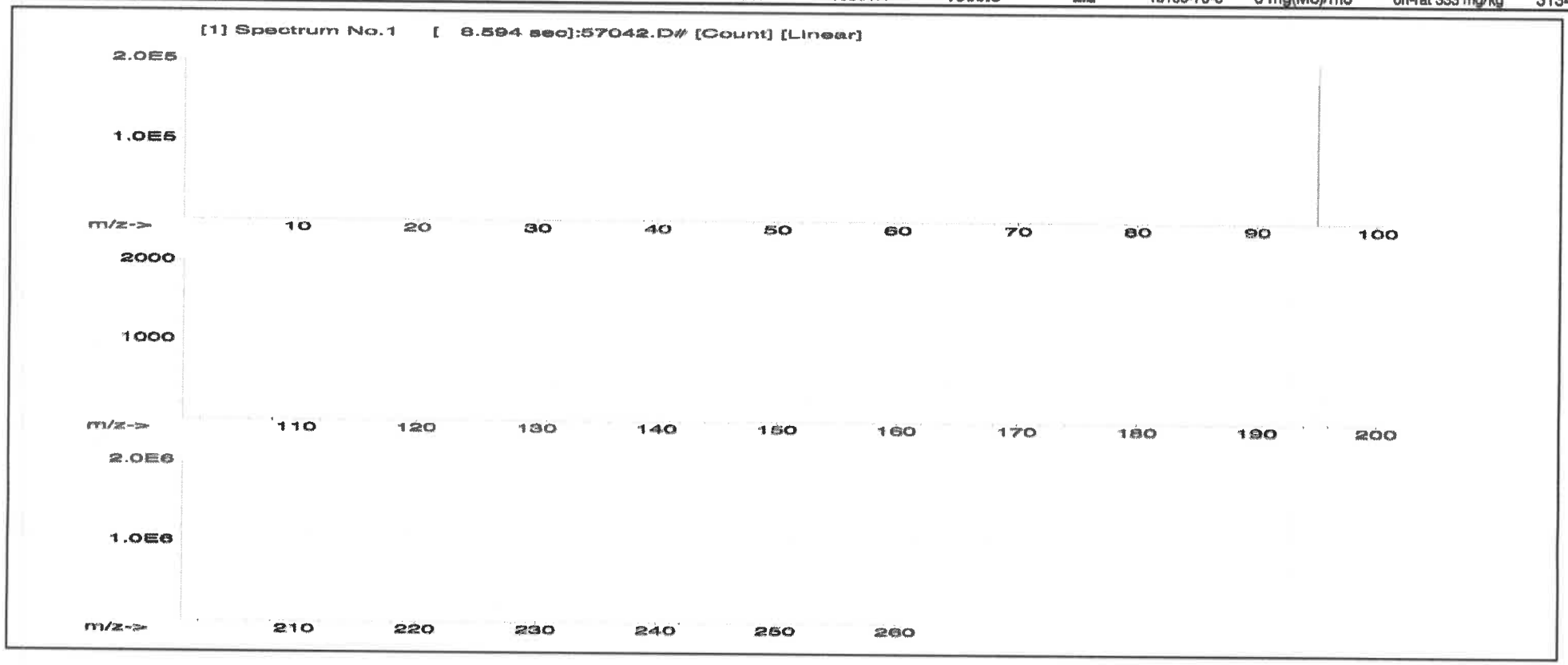
CERTIFIED WEIGHT REPORT:

R→ 8/6/25
M6177

		Lot #	Solvent:		
Part Number:	57042	MKBQ8597V	Ammonium hydroxide		
Lot Number:	080525	080525	ASTM Type 1 Water		
Description:	Molybdenum (Mo)	0.5%	10.0 (mL)	Ammonium hydroxide	
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		

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



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

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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		

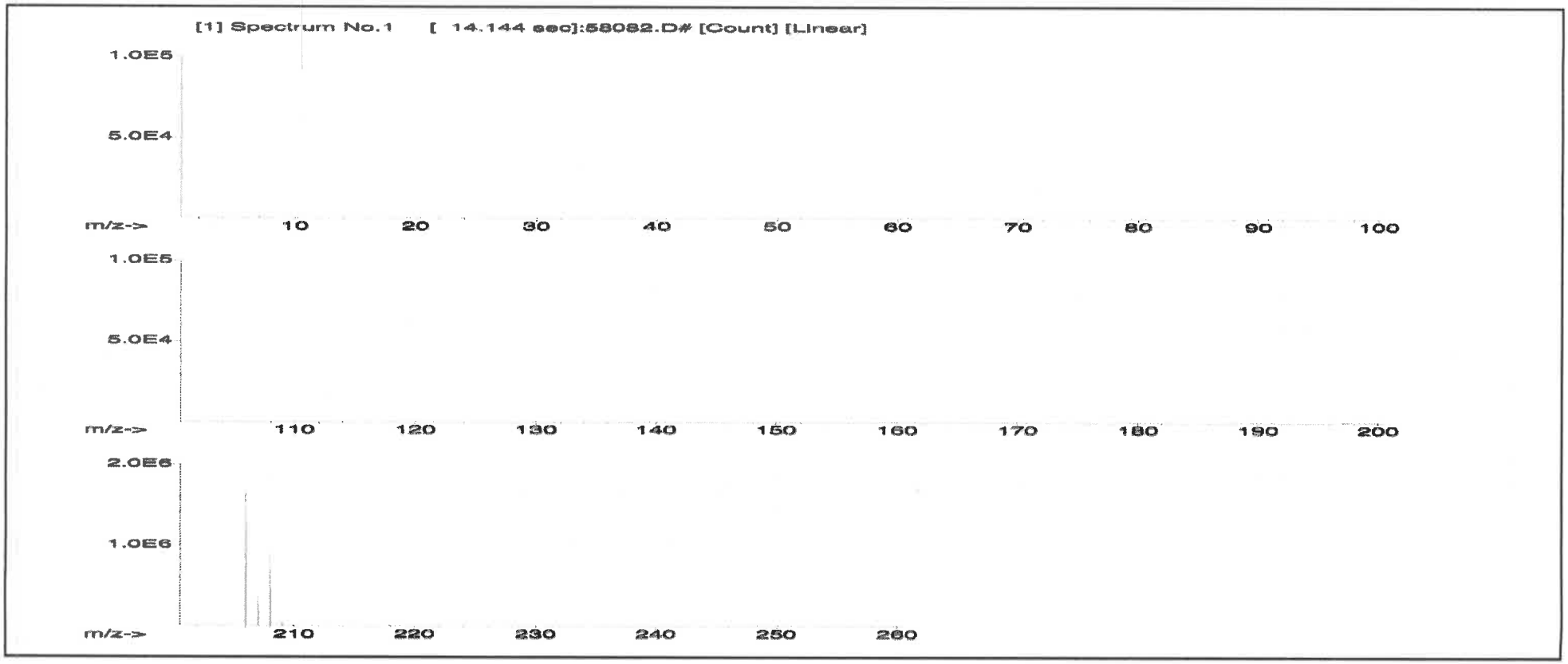
Giovanni Esposito

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



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).

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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 (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.004600	M	Eu		0.009037	M	Na		0.086360	M	Se	<	0.005200	M	Zn		0.030125
M	Al		0.014862	O	Fe		0.002410	M	Nb	<	0.000570	O	Si		0.024100	O	Zr	<	0.002600
M	As	<	0.003500	M	Ga	<	0.000570	M	Nd		0.000923	M	Sm		0.000461				
M	Au	<	0.001700	M	Gd	<	0.003500	M	Ni	<	0.005700	M	Sn	<	0.002300				
O	B		0.002209	M	Ge	<	0.005200	M	Os	<	0.001200	M	Sr	<	0.004600				
O	Ba	<	0.002500	M	Hf	<	0.000570	n	P	<		M	Ta	<	0.000570				
O	Be	<	0.001400	M	Hg	<	0.000570	M	Pb		0.005020	M	Tb		0.001044				
M	Bi	<	0.003500	M	Ho		0.009037	M	Pd	<	0.005100	M	Te	<	0.002300				
O	Ca		0.009841	M	In	<	0.002300	M	Pr	<	0.002300	M	Th	<	0.000570				
M	Cd	<	0.000570	M	Ir	<	0.000570	M	Pt	<	0.000570	M	Ti	<	0.003500				
M	Ce	<	0.002300	O	K		0.018677	M	Rb	<	0.000570	M	Tl	<	0.000570				
M	Co	<	0.000570	M	La		0.000461	M	Re	<	0.000570	M	Tm	<	0.003500				
M	Cr	<	0.004000	O	Li	<	0.009300	M	Rh	<	0.008000	M	U	<	0.000570				
M	Cs	<	0.000570	M	Lu		0.000582	M	Ru	<	0.000570	M	V		0.001265				
M	Cu		0.002610	O	Mg		0.001486	n	S	<		M	W	<	0.002300				
M	Dy		0.003815	M	Mn		0.000582	M	Sb		0.005422	s	Y	<					
M	Er		0.003615	M	Mo	<	0.005700	M	Sc	<	0.001200	M	Yb		0.001827				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 88.91 +3 6 Y(OH)(H2O)x+2

Chemical Compatibility -Soluble in HCl, H2SO4 and HNO3. Avoid HF, H3PO4 and neutral to basic media. Stable with most metals and inorganic anions forming an insoluble carbonate, oxide, oxalate, and fluoride. Avoid mixing with elements / solutions containing moderate amounts of fluoride.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.

Y Containing Samples (Preparation and Solution) - Metal (Soluble in acids); Oxide (Dissolve by heating in H2O/ HNO3); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Dry ash and dissolve in 1:1 H2O / HCl or HNO3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 89 amu	0.8 ppt	N/A	73Ge16O, 178Hf+2
ICP-OES 360.073 nm	0.005 / 0.000036 µg/mL	1	Ce, Th
ICP-OES 371.030 nm	0.004 / 0.00007 µg/mL	1	Ce
ICP-OES 377.433 nm	0.005 / 0.0009 µg/mL	1	Ta, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 20, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- February 20, 2029

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Custom Processing Supervisor

Certificate Approved By:

Muzzammil Khan
Stock Laboratory Supervisor

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	WW-LFS-1
Lot Number:	W2-MEB752149
Matrix:	5% (v/v) HNO3

M6180
R-7/22/23

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"

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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

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Certificate of Analysis

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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	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.

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k = coverage factor = 2

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5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

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6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

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

R→03/06/24

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,

The Quality Assurance Technical Support (QATS) contract is operated by APTIM Federal Services, LLC.

Cd, Co, Cr, Cu, Mn, Ni, Pb, Tl, Se, V, and Zn. This instruction sheet provides the nominal values for ICP-AES Part A and Part B target analytes when diluted as directed.

Using Class "A" glassware, preparation and analysis must be performed according to the following instructions:

ICSA-1211, Interferents: Pipet 10 mL of the ICSA solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this ICSA solution by ICP-AES.

ICSB-0710, Analytes, mixed with ICSA-1211, Interferents: Pipet 10 mL of the ICSA solution and 10 mL of the ICSB solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this ICSAB solution by ICP-AES.

(D) *"CERTIFIED VALUE" CONCENTRATIONS OF QATS ICP-AES ICS SOLUTION(S)*

The "Certified Value" concentrations of the elements, listed in Table 1 below, were derived from statistically pooled analysis results from the following sources, if available: QATS Laboratory, CLP laboratories, Quarterly Blind (QB)/Proficiency Testing (PT) events, CLP pre-award events, and external referee laboratories.

Table 1. "CERTIFIED VALUES" FOR INTERFERENCE CHECK SAMPLE ICP-AES ICSA-1211, AND ICSA-1211 MIXED WITH ICSB-0710

Element	CRQL	Part A (µg/L)	Low Limit (µg/L)	High Limit (µg/L)	Part A +Part B (µg/L)	Low Limit (µg/L)	High Limit (µg/L)
Al	200	255000	216000	294000	247000	209000	285000
Sb	60	(0.0)	-60.0	60.0	618	525	711
As	10	(0.0)	-10.0	10.0	104	88.4	120
Ba	200	(6.0)	-194	206	(537)	337	737
Be	5.0	(0.0)	-5.0	5.0	495	420	570
Cd	5.0	(1.0)	-4.0	6.0	972	826	1120
Ca	5000	245000	208000	282000	235000	199000	271000
Cr	10	(52.0)	42.0	62.0	542	460	624
Co	50	(0.0)	-50.0	50.0	476	404	548
Cu	25	(2.0)	-23.0	27.0	511	434	588
Fe	100	101000	85600	116500	99300	84400	114500
Pb	10	(0.0)	-10.0	10.0	(49.0)	39.0	59.0
Mg	5000	255000	216000	294000	248000	210000	286000
Mn	15	(7.0)	-8.0	22.0	507	430	584
Ni	40	(2.0)	-38.0	42.0	954	810	1100
Se	35	(0.0)	-35.0	35.0	(46.0)	11.0	81.0
Ag	10	(0.0)	-10.0	10.0	201	170	232
Tl	25	(0.0)	-25.0	25.0	(108)	83.0	133
V	50	(0.0)	-50.0	50.0	491	417	565
Zn	60	(0.0)	-60.0	60.0	952	809	1095

The acceptance ranges for all analytes in parentheses in the above table were determined using the listed certified value ± 1 times the associated CLP SOW CRQL. The acceptance ranges for all other analytes were determined using the certified value ± 15 percent of the listed certified value.

R→03/06/24

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,

The Quality Assurance Technical Support (QATS) contract is operated by APTIM Federal Services, LLC.

Cd, Co, Cr, Cu, Mn, Ni, Pb, Tl, Se, V, and Zn. This instruction sheet provides the nominal values for ICP-AES Part A and Part B target analytes when diluted as directed.

Using Class "A" glassware, preparation and analysis must be performed according to the following instructions:

ICSA-1211, Interferents: Pipet 10 mL of the ICSA solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this ICSA solution by ICP-AES.

ICSB-0710, Analytes, mixed with ICSA-1211, Interferents: Pipet 10 mL of the ICSA solution and 10 mL of the ICSB solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this ICSAB solution by ICP-AES.

(D) *"CERTIFIED VALUE" CONCENTRATIONS OF QATS ICP-AES ICS SOLUTION(S)*

The "Certified Value" concentrations of the elements, listed in Table 1 below, were derived from statistically pooled analysis results from the following sources, if available: QATS Laboratory, CLP laboratories, Quarterly Blind (QB)/Proficiency Testing (PT) events, CLP pre-award events, and external referee laboratories.

Table 1. "CERTIFIED VALUES" FOR INTERFERENCE CHECK SAMPLE ICP-AES ICSA-1211, AND ICSA-1211 MIXED WITH ICSB-0710

Element	CRQL	Part A (µg/L)	Low Limit (µg/L)	High Limit (µg/L)	Part A +Part B (µg/L)	Low Limit (µg/L)	High Limit (µg/L)
Al	200	255000	216000	294000	247000	209000	285000
Sb	60	(0.0)	-60.0	60.0	618	525	711
As	10	(0.0)	-10.0	10.0	104	88.4	120
Ba	200	(6.0)	-194	206	(537)	337	737
Be	5.0	(0.0)	-5.0	5.0	495	420	570
Cd	5.0	(1.0)	-4.0	6.0	972	826	1120
Ca	5000	245000	208000	282000	235000	199000	271000
Cr	10	(52.0)	42.0	62.0	542	460	624
Co	50	(0.0)	-50.0	50.0	476	404	548
Cu	25	(2.0)	-23.0	27.0	511	434	588
Fe	100	101000	85600	116500	99300	84400	114500
Pb	10	(0.0)	-10.0	10.0	(49.0)	39.0	59.0
Mg	5000	255000	216000	294000	248000	210000	286000
Mn	15	(7.0)	-8.0	22.0	507	430	584
Ni	40	(2.0)	-38.0	42.0	954	810	1100
Se	35	(0.0)	-35.0	35.0	(46.0)	11.0	81.0
Ag	10	(0.0)	-10.0	10.0	201	170	232
Tl	25	(0.0)	-25.0	25.0	(108)	83.0	133
V	50	(0.0)	-50.0	50.0	491	417	565
Zn	60	(0.0)	-60.0	60.0	952	809	1095

The acceptance ranges for all analytes in parentheses in the above table were determined using the listed certified value ± 1 times the associated CLP SOW CRQL. The acceptance ranges for all other analytes were determined using the certified value ± 15 percent of the listed certified value.

Nitric Acid 69%
CMOS

M6187
R.D :- 08/08/25

avantor™ | J.T.Baker®

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 >>>

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

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

M6200
R.0 → 08/25/25

avantor™ | J.T.Baker®

Material No.: 9530-33
Batch No.: 24D1562005
Manufactured Date: 2024-03-18
Retest Date: 2029-03-17
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
ACS – Assay (as HCl) (by acid-base titrn)	36.5 – 38.0 %	37.6 %
ACS – Color (APHA)	≤ 10	5
ACS – Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS – Specific Gravity at 60°/60°F	1.185 – 1.192	1.192
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	< 5.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 3.0 ppb
Trace Impurities – Barium (Ba)	≤ 1.0 ppb	< 1.0 ppb
Trace Impurities – Beryllium (Be)	≤ 1.0 ppb	< 1.0 ppb
Trace Impurities – Bismuth (Bi)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities – Boron (B)	≤ 20.0 ppb	2.2 ppb
Trace Impurities – Cadmium (Cd)	≤ 1.0 ppb	< 1.0 ppb
Trace Impurities – Calcium (Ca)	≤ 50.0 ppb	31.0 ppb
Trace Impurities – Chromium (Cr)	≤ 1.0 ppb	0.5 ppb
Trace Impurities – Cobalt (Co)	≤ 1.0 ppb	0.2 ppb
Trace Impurities – Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities – Gallium (Ga)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Germanium (Ge)	≤ 3.0 ppb	< 2.0 ppb
Trace Impurities – Gold (Au)	≤ 4.0 ppb	< 0.2 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities – Iron (Fe)	≤ 15 ppb	3 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.: 24D1562005

Test	Specification	Result
Trace Impurities - Lead (Pb)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Lithium (Li)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities - Magnesium (Mg)	≤ 10.0 ppb	2.2 ppb
Trace Impurities - Manganese (Mn)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Mercury (Hg)	≤ 0.5 ppb	< 0.1 ppb
Trace Impurities - Molybdenum (Mo)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities - Nickel (Ni)	≤ 4.0 ppb	0.2 ppb
Trace Impurities - Niobium (Nb)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Potassium (K)	≤ 9.0 ppb	< 1.0 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	< 0.3 ppb
Trace Impurities - Sodium (Na)	≤ 100.0 ppb	2.0 ppb
Trace Impurities - Strontium (Sr)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Tantalum (Ta)	≤ 1.0 ppb	< 0.9 ppb
Trace Impurities - Thallium (Tl)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities - Tin (Sn)	≤ 5.0 ppb	< 0.4 ppb
Trace Impurities - Titanium (Ti)	≤ 1.0 ppb	0.2 ppb
Trace Impurities - Vanadium (V)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Zinc (Zn)	≤ 5.0 ppb	< 0.2 ppb
Trace Impurities - Zirconium (Zr)	≤ 1.0 ppb	< 0.1 ppb

>>> Continued on page 3 >>>

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

Material No.: 9530-33
Batch No.: 24D1562005

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

Jamie Croak
Director Quality Operations, Bioscience Production

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R 8/05/24

M6027

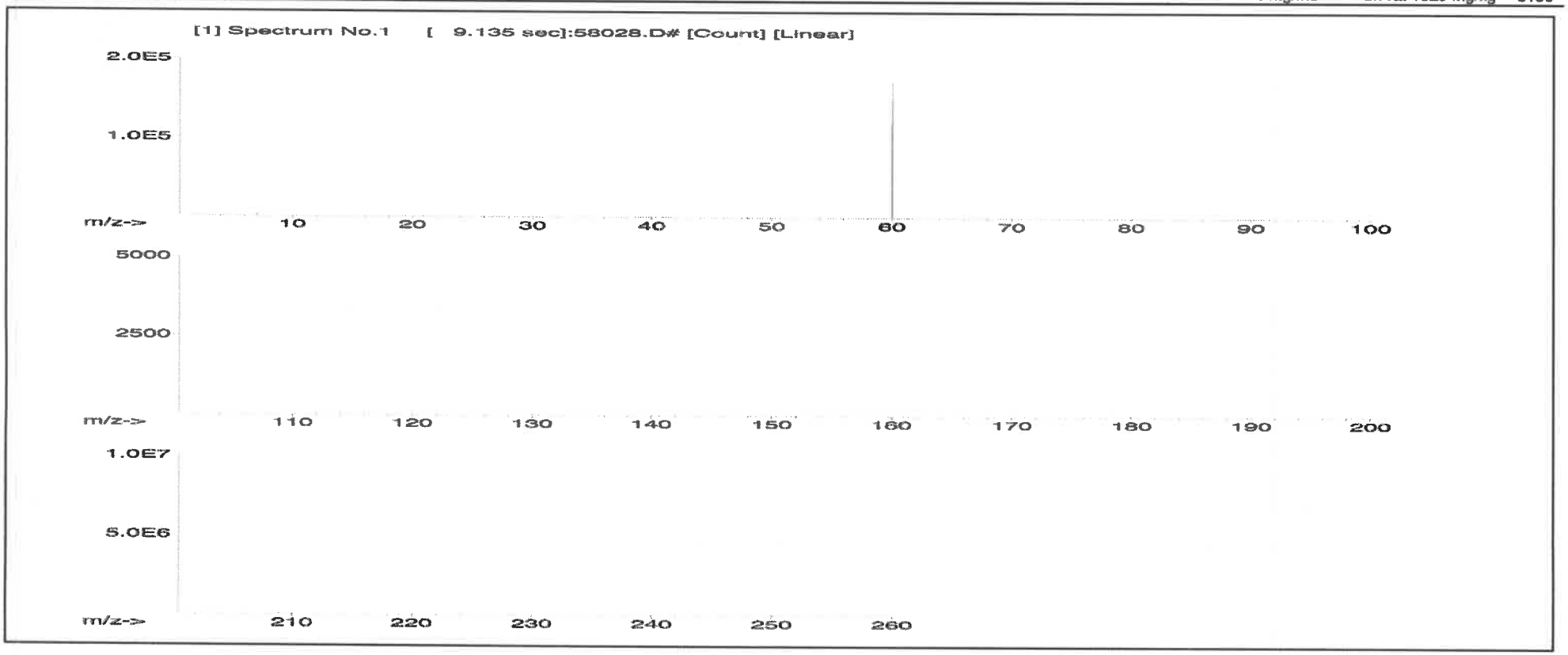
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57028**			
Lot Number:	**062024**	24002546	Nitric Acid	
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



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.

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M6030

R: 8/5/24

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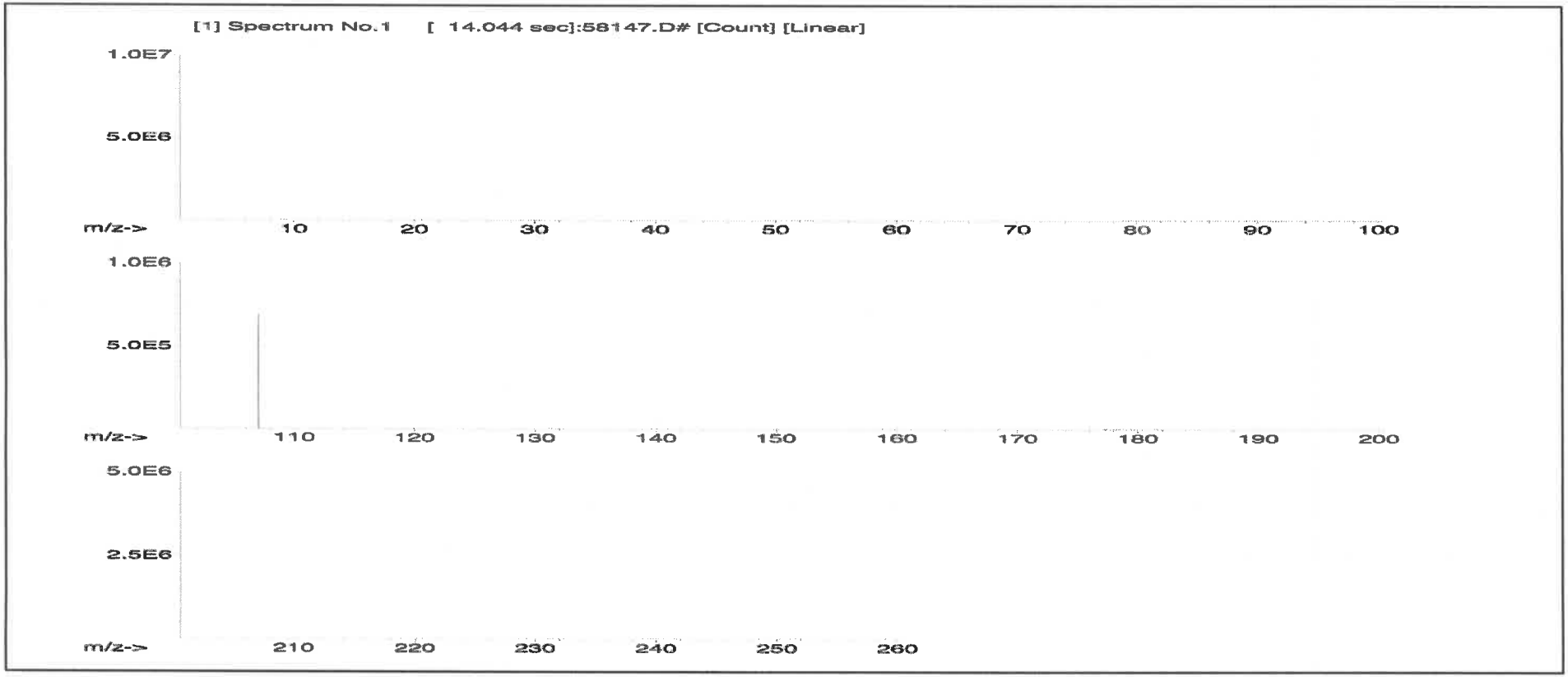
CERTIFIED WEIGHT REPORT:

Part Number:	**57047**		**Lot #**		
Lot Number:	**122823**	**Solvent:**	24002546	Nitric Acid	
Description:	**Silver (Ag)**	2%	80.0 (mL)	Nitric Acid	
Expiration Date:	122826				
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):	4000.30	0.058	Flask Uncertainty		

Formulated By:	Benson Chan	122823
Reviewed By:	Pedro L. Rentas	122823

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Silver nitrate (Ag)	IN035	J0612AGA1	1000.0	99.9999	0.10	63.7	6.27992	6.27998	**1000.0**	**2.0**	7761-88-8	10 ug/m3	NA	3151



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	T	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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opened : 3/24/25

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CERTIFIED WEIGHT REPORT:

M6160

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

Lot #	Solvent:		
24002546	Nitric Acid		
2.0%	40.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

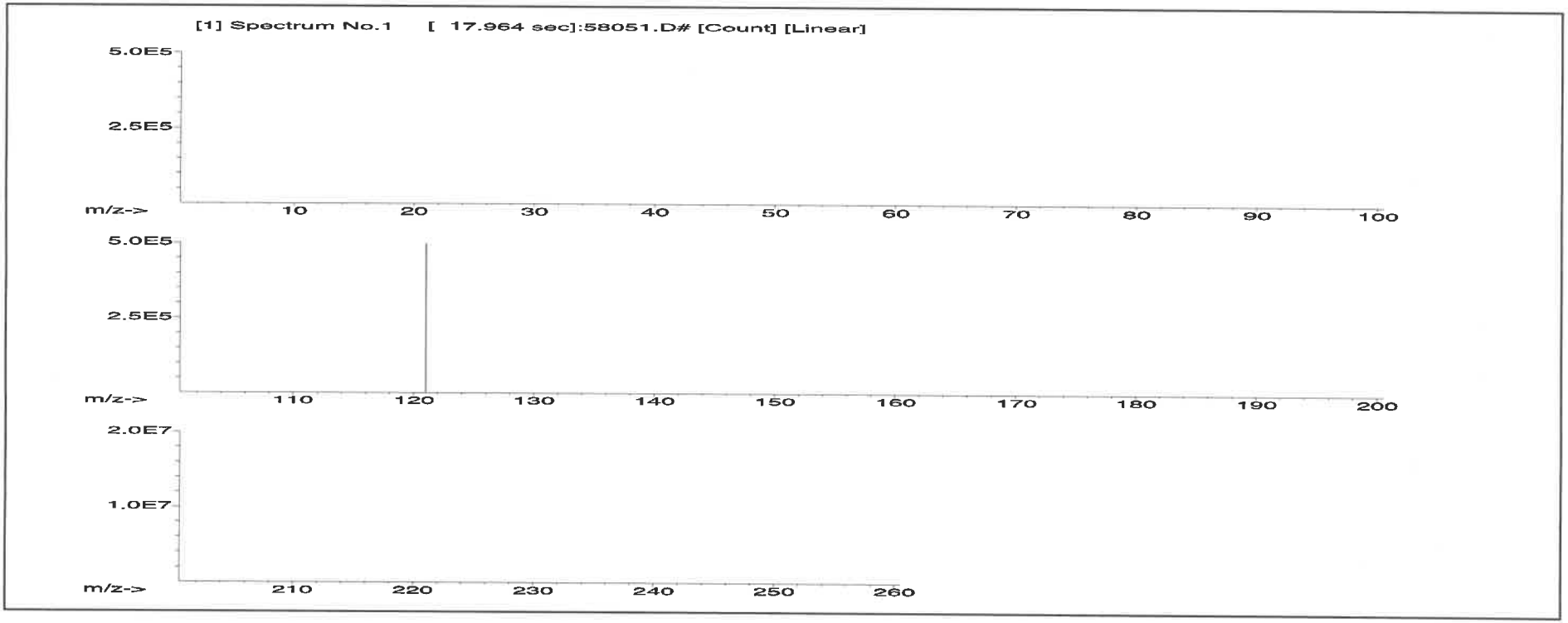
Giovanni Esposito

Formulated By:	Giovanni Esposito	071724

Pedro Rentas

Reviewed By:	Pedro L. Rentas	071724

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Antimony (Sb)	58151	060324	0.1000	200.0	0.084	1000	10001.4	**1000.0**	**2.2**	7440-36-0	0.5 mg/m3	orl-rat 7000 mg/kg	3102a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	T	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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R ! 8/5/24

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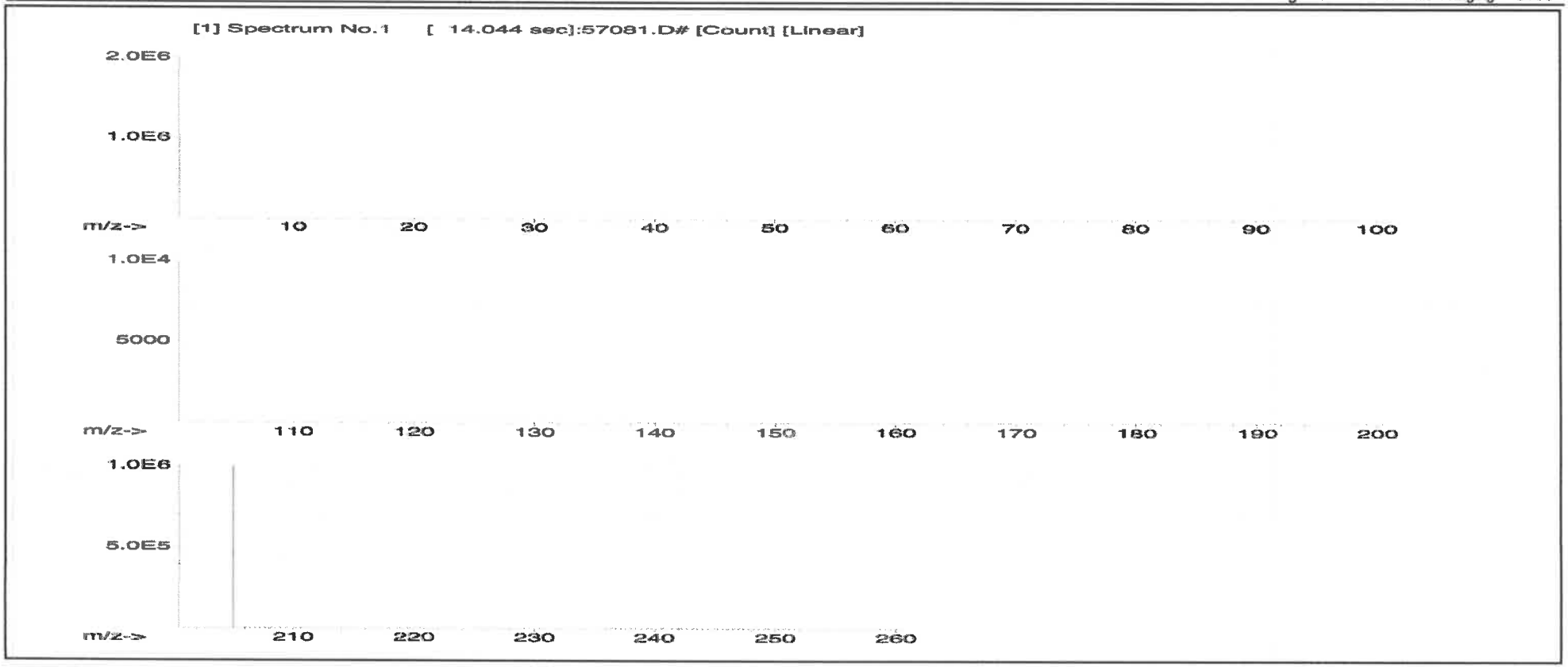
CERTIFIED WEIGHT REPORT:

Part Number:	**57081**		**Lot #**		
Lot Number:	**062724**	**Solvent:**	24002546	Nitric Acid	
Description:	**Thallium (Tl)**				
		2%	40.0 (mL)	Nitric Acid	
Expiration Date:	062727				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.1	0.10	Flask Uncertainty		

Aleah O'Brady

Formulated By:	Aleah O'Brady	062724
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



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	T	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

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Certified by:

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Bc. 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	

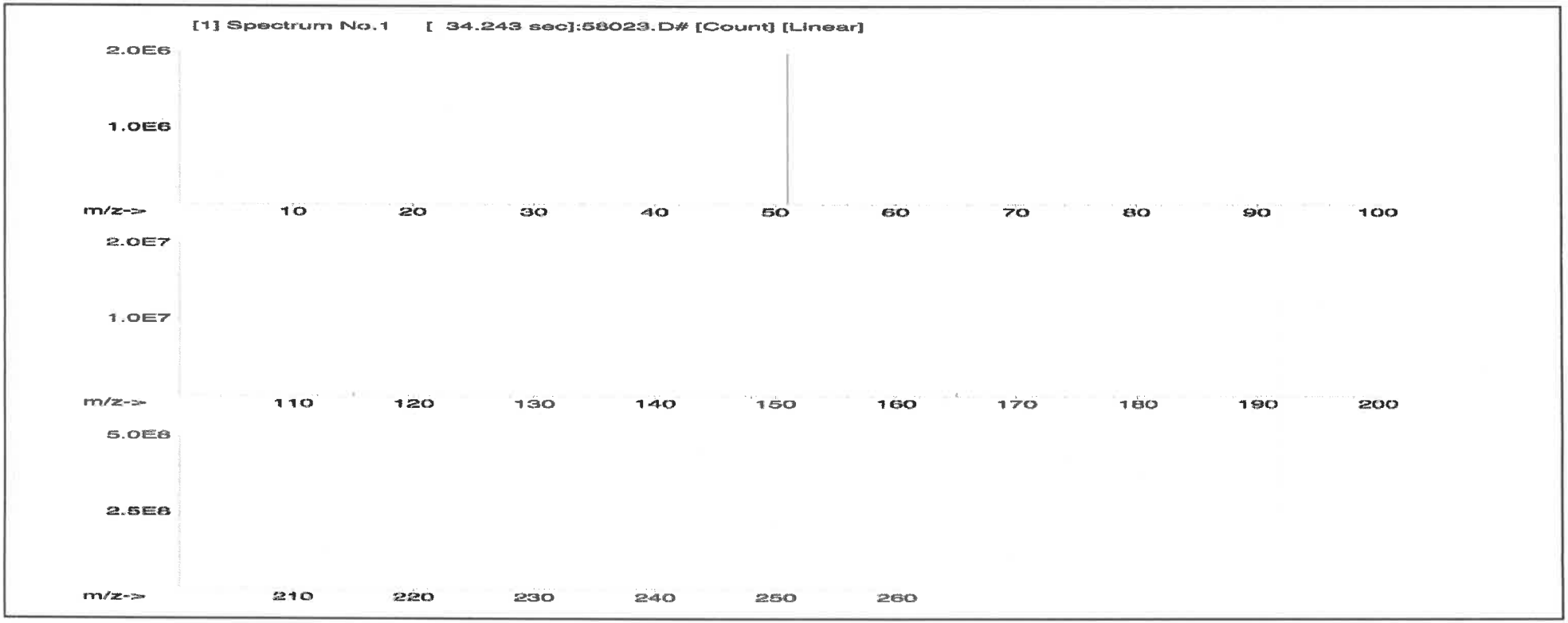
Aleah O'Brady

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



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	T
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

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SHIPPING DOCUMENTS

Alliance TECHNICAL GROUP

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 • Fax (908) 789-8922
www.chemtech.net

ALLIANCE PROJECT NO.
QUOTE NO. Q 3172
COC Number 2045035

CLIENT INFORMATION

REPORT TO BE SENT TO:
COMPANY: Environmental
ADDRESS: 8 Carriage
CITY Succasunna STATE: NJ ZIP:
ATTENTION:
PHONE: FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: Amsterdam
PROJECT NO.: LOCATION: NJ
PROJECT MANAGER: GBL
e-mail:
PHONE: FAX:

CLIENT BILLING INFORMATION

BILL TO: Environmental PO#:
ADDRESS: 8 Carriage
CITY Succasunna STATE: NJ ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX (RUSH) _____ DAYS*
HARDCOPY (DATA PACKAGE): STANDARD DAYS*
EDD: STANDARD DAYS*
*TO BE APPROVED BY CHEMTECH
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS

DATA DELIVERABLE INFORMATION

☐ Level 1 (Results Only) ☐ Level 4 (QC + Full Raw Data)
☐ Level 2 (Results + QC) X ☐ NJ Reduced ☐ US EPA CLP
☐ Level 3 (Results + QC + Raw Data) ☐ NYS ASP A ☐ NYS ASP B
X EDD FORMAT NJDEP SRP Excel Hazsite ☐ Other _____

ANALYSIS

1: TCL VOCs 2: TAL Metals 3. Sulfate 4 5 6 7 8 9

ALLIANCE SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	PRESERVATIVES 1	2	3	4	5	6	7	8	9	COMMENTS
								HCl	HNO3								← Specify Preservatives A-HCl D-NaOH B-HN03 E-ICE C-H2SO4 F-OTHER
1.	FW7D	GW		X	9/22/25	1239	4	X	X	X							
2.	FW6D	GW		X	9/22/25	1445	3	X	X								
3.	GB3W	GW		X	9/22/25	1200	2	X									
4.																	
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:
1.	9/22/25 1547	1.
2.		2.
3.		3.

Conditions of bottles or coolers at receipt: ☐ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP 2.2 °C
Comments:

Page ____ of

CLIENT: ☐ Hand Delivered ☐ Other

Shipment Complete ☐ YES ☐ NO

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Laboratory Certification

Certified By	License No.
Connecticut	PH-0830
DOD ELAP (ANAB)	L2219
Maine	2024021
Maryland	296
New Hampshire	255425
New Jersey	20012
New York	11376
Pennsylvania	68-00548
Soil Permit	525-24-234-08441
Texas	TX-C25-00189
Virginia	460312

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

LOGIN REPORT/SAMPLE TRANSFER

Order ID : Q3172 GENV01
Client Name : G Environmental
Client Contact : Gary Landis
Invoice Name : G Environmental
Invoice Contact : Gary Landis

Order Date : 9/24/2025 9:00:00 AM
Project Name : Amsterdam
Receive DateTime : 9/23/2025 1:15:00 PM
Purchase Order :

Project Mgr :
Report Type : ~~Level 4~~ NJ Reduced
EDD Type : HAZ/EXCEL
Hard Copy Date :
Date Signoff :

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
Q3172-01	FW7D	Water	09/22/2025	12:39					
					VOCMS Group1		8260-Low		10 Bus. Days
Q3172-02	FW6D	Water	09/22/2025	14:45					
					VOCMS Group1		8260-Low		10 Bus. Days
Q3172-03	GB3W	Water	09/22/2025	12:00					
					VOCMS Group1		8260-Low		10 Bus. Days

Relinguished By :
Date / Time : 9/24/25 0950

Received By :
Date / Time : 09/24/25 0950 Rgh 4

Storage Area : VOA Refridgerator Room