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

Order ID : Q2600

Project ID : Kingsland Point Park Water Main

Client : T&A Construction Inc

Lab Sample Number	Client Sample Number
Q2600-01	TRENCH
Q2600-02	TRENCH
Q2600-03	TRENCH
Q2600-04	TRENCH
Q2600-05	STOCK-PILE
Q2600-06	STOCK-PILE
Q2600-07	STOCK-PILE
Q2600-08	STOCK-PILE
Q2600-09	END-OF-TRENCH
Q2600-10	END-OF-TRENCH
Q2600-11	END-OF-TRENCH
Q2600-12	END-OF-TRENCH

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: 7/18/2025

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 #: **Q2600**

	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: **KETAN PATEL** **Date:** **07/18/2025**

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LAB CHRONICLE

OrderID:	Q2600	**OrderDate:**	7/14/2025 2:21:01 PM
Client:	T&A Construction Inc	**Project:**	Kingsland Point Park Water Main
Contact:	Garrett Johnson	**Location:**	D41,VOA Ref. #2 Soil

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q2600-01	**TRENCH**	**SOIL**			**07/14/25**			**07/14/25**
			Mercury	7471B		07/15/25	07/16/25	
			Metals ICP-TAL	6010D		07/14/25	07/17/25	
Q2600-02	**TRENCH**	**TCLP**			**07/14/25**			**07/14/25**
			TCLP ICP Metals	6010D		07/16/25	07/17/25	
			TCLP Mercury	7470A		07/16/25	07/17/25	
Q2600-05	**STOCK-PILE**	**SOIL**			**07/14/25**			**07/14/25**
			Mercury	7471B		07/15/25	07/16/25	
			Metals ICP-TAL	6010D		07/14/25	07/17/25	
Q2600-06	**STOCK-PILE**	**TCLP**			**07/14/25**			**07/14/25**
			TCLP ICP Metals	6010D		07/16/25	07/17/25	
			TCLP Mercury	7470A		07/16/25	07/17/25	
Q2600-09	**END-OF-TRENCH**	**SOIL**			**07/14/25**			**07/14/25**
			Mercury	7471B		07/15/25	07/16/25	
			Metals ICP-TAL	6010D		07/14/25	07/17/25	
Q2600-10	**END-OF-TRENCH**	**TCLP**			**07/14/25**			**07/14/25**
			TCLP ICP Metals	6010D		07/16/25	07/17/25	
			TCLP Mercury	7470A		07/16/25	07/17/25	

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Hit Summary Sheet
SW-846

SDG No.: Q2600 **Order ID:** Q2600

Client: T&A Construction Inc **Project ID:** Kingsland Point Park Water Main

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Client ID : TRENCH								
Q2600-01	TRENCH	SOIL	Aluminum	6870		1.04	6.22	mg/Kg
Q2600-01	TRENCH	SOIL	Antimony	6.54		0.27	3.11	mg/Kg
Q2600-01	TRENCH	SOIL	Arsenic	14.8		0.24	1.24	mg/Kg
Q2600-01	TRENCH	SOIL	Barium	507		0.91	6.22	mg/Kg
Q2600-01	TRENCH	SOIL	Beryllium	0.60		0.031	0.37	mg/Kg
Q2600-01	TRENCH	SOIL	Cadmium	4.05		0.030	0.37	mg/Kg
Q2600-01	TRENCH	SOIL	Calcium	21100		13.8	124	mg/Kg
Q2600-01	TRENCH	SOIL	Chromium	89.6		0.058	0.62	mg/Kg
Q2600-01	TRENCH	SOIL	Cobalt	8.26		0.12	1.87	mg/Kg
Q2600-01	TRENCH	SOIL	Copper	88.6		0.27	1.24	mg/Kg
Q2600-01	TRENCH	SOIL	Iron	21900		4.96	6.22	mg/Kg
Q2600-01	TRENCH	SOIL	Lead	1300		0.16	0.75	mg/Kg
Q2600-01	TRENCH	SOIL	Magnesium	5550		14.9	124	mg/Kg
Q2600-01	TRENCH	SOIL	Manganese	316		0.17	1.24	mg/Kg
Q2600-01	TRENCH	SOIL	Mercury	0.39		0.0090	0.017	mg/Kg
Q2600-01	TRENCH	SOIL	Nickel	19.8		0.16	2.49	mg/Kg
Q2600-01	TRENCH	SOIL	Potassium	1180		34.4	124	mg/Kg
Q2600-01	TRENCH	SOIL	Selenium	5.11		0.32	1.24	mg/Kg
Q2600-01	TRENCH	SOIL	Sodium	213		22.1	124	mg/Kg
Q2600-01	TRENCH	SOIL	Vanadium	23.5		0.31	2.49	mg/Kg
Q2600-01	TRENCH	SOIL	Zinc	917		0.14	2.49	mg/Kg
Client ID : STOCK-PILE								
Q2600-05	STOCK-PILE	SOIL	Aluminum	6640		0.87	5.16	mg/Kg
Q2600-05	STOCK-PILE	SOIL	Antimony	2.22	J	0.23	2.58	mg/Kg
Q2600-05	STOCK-PILE	SOIL	Arsenic	12.7		0.20	1.03	mg/Kg
Q2600-05	STOCK-PILE	SOIL	Barium	127		0.75	5.16	mg/Kg
Q2600-05	STOCK-PILE	SOIL	Beryllium	0.60		0.026	0.31	mg/Kg
Q2600-05	STOCK-PILE	SOIL	Cadmium	0.67		0.025	0.31	mg/Kg
Q2600-05	STOCK-PILE	SOIL	Calcium	7600		11.5	103	mg/Kg
Q2600-05	STOCK-PILE	SOIL	Chromium	31.2		0.049	0.52	mg/Kg
Q2600-05	STOCK-PILE	SOIL	Cobalt	8.00		0.10	1.55	mg/Kg
Q2600-05	STOCK-PILE	SOIL	Copper	37.3		0.23	1.03	mg/Kg
Q2600-05	STOCK-PILE	SOIL	Iron	22300		4.12	5.16	mg/Kg
Q2600-05	STOCK-PILE	SOIL	Lead	257		0.13	0.62	mg/Kg
Q2600-05	STOCK-PILE	SOIL	Magnesium	4110		12.4	103	mg/Kg
Q2600-05	STOCK-PILE	SOIL	Manganese	240		0.14	1.03	mg/Kg
Q2600-05	STOCK-PILE	SOIL	Mercury	0.076		0.0080	0.015	mg/Kg

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Hit Summary Sheet
SW-846

SDG No.: Q2600 **Order ID:** Q2600

Client: T&A Construction Inc **Project ID:** Kingsland Point Park Water Main

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Q2600-05	STOCK-PILE	SOIL	Nickel	15.6		0.13	2.06	mg/Kg
Q2600-05	STOCK-PILE	SOIL	Potassium	1360		28.6	103	mg/Kg
Q2600-05	STOCK-PILE	SOIL	Selenium	5.79		0.27	1.03	mg/Kg
Q2600-05	STOCK-PILE	SOIL	Sodium	127		18.4	103	mg/Kg
Q2600-05	STOCK-PILE	SOIL	Vanadium	16.3		0.26	2.06	mg/Kg
Q2600-05	STOCK-PILE	SOIL	Zinc	189		0.11	2.06	mg/Kg
Client ID :	**END-OF-TRENCH**							
Q2600-09	END-OF-TRENCH	SOIL	Aluminum	5550		0.83	4.95	mg/Kg
Q2600-09	END-OF-TRENCH	SOIL	Antimony	1.48	J	0.22	2.48	mg/Kg
Q2600-09	END-OF-TRENCH	SOIL	Arsenic	5.65		0.19	0.99	mg/Kg
Q2600-09	END-OF-TRENCH	SOIL	Barium	154		0.72	4.95	mg/Kg
Q2600-09	END-OF-TRENCH	SOIL	Beryllium	0.47		0.025	0.30	mg/Kg
Q2600-09	END-OF-TRENCH	SOIL	Cadmium	1.14		0.024	0.30	mg/Kg
Q2600-09	END-OF-TRENCH	SOIL	Calcium	9820		11.0	99.0	mg/Kg
Q2600-09	END-OF-TRENCH	SOIL	Chromium	39.7		0.047	0.50	mg/Kg
Q2600-09	END-OF-TRENCH	SOIL	Cobalt	7.10		0.099	1.49	mg/Kg
Q2600-09	END-OF-TRENCH	SOIL	Copper	57.9		0.22	0.99	mg/Kg
Q2600-09	END-OF-TRENCH	SOIL	Iron	17500		3.95	4.95	mg/Kg
Q2600-09	END-OF-TRENCH	SOIL	Lead	282		0.13	0.59	mg/Kg
Q2600-09	END-OF-TRENCH	SOIL	Magnesium	6490		11.9	99.0	mg/Kg
Q2600-09	END-OF-TRENCH	SOIL	Manganese	248		0.14	0.99	mg/Kg
Q2600-09	END-OF-TRENCH	SOIL	Mercury	0.050		0.0090	0.016	mg/Kg
Q2600-09	END-OF-TRENCH	SOIL	Nickel	12.7		0.13	1.98	mg/Kg
Q2600-09	END-OF-TRENCH	SOIL	Potassium	809		27.4	99.0	mg/Kg
Q2600-09	END-OF-TRENCH	SOIL	Selenium	4.24		0.26	0.99	mg/Kg
Q2600-09	END-OF-TRENCH	SOIL	Sodium	98.8	J	17.6	99.0	mg/Kg
Q2600-09	END-OF-TRENCH	SOIL	Vanadium	14.1		0.25	1.98	mg/Kg
Q2600-09	END-OF-TRENCH	SOIL	Zinc	206		0.11	1.98	mg/Kg

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SAMPLE DATA

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Report of Analysis

Client:	T&A Construction Inc	Date Collected:	07/14/25
Project:	Kingsland Point Park Water Main	Date Received:	07/14/25
Client Sample ID:	TRENCH	SDG No.:	Q2600
Lab Sample ID:	Q2600-01	Matrix:	SOIL
Level (low/med):	low	% Solid:	75.5

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.	Prep Met.
7429-90-5	Aluminum	6870		1	1.04	6.22	mg/Kg	07/14/25 16:10	07/17/25 16:37	6010D	SW3050
7440-36-0	Antimony	6.54	N	1	0.27	3.11	mg/Kg	07/14/25 16:10	07/17/25 16:37	6010D	SW3050
7440-38-2	Arsenic	14.8		1	0.24	1.24	mg/Kg	07/14/25 16:10	07/17/25 16:37	6010D	SW3050
7440-39-3	Barium	507		1	0.91	6.22	mg/Kg	07/14/25 16:10	07/17/25 16:37	6010D	SW3050
7440-41-7	Beryllium	0.60		1	0.031	0.37	mg/Kg	07/14/25 16:10	07/17/25 16:37	6010D	SW3050
7440-43-9	Cadmium	4.05		1	0.030	0.37	mg/Kg	07/14/25 16:10	07/17/25 16:37	6010D	SW3050
7440-70-2	Calcium	21100		1	13.8	124	mg/Kg	07/14/25 16:10	07/17/25 16:37	6010D	SW3050
7440-47-3	Chromium	89.6		1	0.058	0.62	mg/Kg	07/14/25 16:10	07/17/25 16:37	6010D	SW3050
7440-48-4	Cobalt	8.26		1	0.12	1.87	mg/Kg	07/14/25 16:10	07/17/25 16:37	6010D	SW3050
7440-50-8	Copper	88.6	N	1	0.27	1.24	mg/Kg	07/14/25 16:10	07/17/25 16:37	6010D	SW3050
7439-89-6	Iron	21900		1	4.96	6.22	mg/Kg	07/14/25 16:10	07/17/25 16:37	6010D	SW3050
7439-92-1	Lead	1300		1	0.16	0.75	mg/Kg	07/14/25 16:10	07/17/25 16:37	6010D	SW3050
7439-95-4	Magnesium	5550		1	14.9	124	mg/Kg	07/14/25 16:10	07/17/25 16:37	6010D	SW3050
7439-96-5	Manganese	316		1	0.17	1.24	mg/Kg	07/14/25 16:10	07/17/25 16:37	6010D	SW3050
7439-97-6	Mercury	0.39	N	1	0.0090	0.017	mg/Kg	07/15/25 15:40	07/16/25 12:57	7471B	
7440-02-0	Nickel	19.8		1	0.16	2.49	mg/Kg	07/14/25 16:10	07/17/25 16:37	6010D	SW3050
7440-09-7	Potassium	1180		1	34.4	124	mg/Kg	07/14/25 16:10	07/17/25 16:37	6010D	SW3050
7782-49-2	Selenium	5.11		1	0.32	1.24	mg/Kg	07/14/25 16:10	07/17/25 16:37	6010D	SW3050
7440-22-4	Silver	0.15	UN	1	0.15	0.62	mg/Kg	07/14/25 16:10	07/17/25 16:37	6010D	SW3050
7440-23-5	Sodium	213		1	22.1	124	mg/Kg	07/14/25 16:10	07/17/25 16:37	6010D	SW3050
7440-28-0	Thallium	0.29	U	1	0.29	2.49	mg/Kg	07/14/25 16:10	07/17/25 16:37	6010D	SW3050
7440-62-2	Vanadium	23.5		1	0.31	2.49	mg/Kg	07/14/25 16:10	07/17/25 16:37	6010D	SW3050
7440-66-6	Zinc	917	N	1	0.14	2.49	mg/Kg	07/14/25 16:10	07/17/25 16:37	6010D	SW3050

Color Before:	Brown	Clarity Before:		Texture:	Medium
Color After:	Yellow	Clarity After:		Artifacts:	
Comments:	TCL+30/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:	T&A Construction Inc	Date Collected:	07/14/25
Project:	Kingsland Point Park Water Main	Date Received:	07/14/25
Client Sample ID:	STOCK-PILE	SDG No.:	Q2600
Lab Sample ID:	Q2600-05	Matrix:	SOIL
Level (low/med):	low	% Solid:	82.1

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.	Prep Met.
7429-90-5	Aluminum	6640		1	0.87	5.16	mg/Kg	07/14/25 16:10	07/17/25 16:42	6010D	SW3050
7440-36-0	Antimony	2.22	JN	1	0.23	2.58	mg/Kg	07/14/25 16:10	07/17/25 16:42	6010D	SW3050
7440-38-2	Arsenic	12.7		1	0.20	1.03	mg/Kg	07/14/25 16:10	07/17/25 16:42	6010D	SW3050
7440-39-3	Barium	127		1	0.75	5.16	mg/Kg	07/14/25 16:10	07/17/25 16:42	6010D	SW3050
7440-41-7	Beryllium	0.60		1	0.026	0.31	mg/Kg	07/14/25 16:10	07/17/25 16:42	6010D	SW3050
7440-43-9	Cadmium	0.67		1	0.025	0.31	mg/Kg	07/14/25 16:10	07/17/25 16:42	6010D	SW3050
7440-70-2	Calcium	7600		1	11.5	103	mg/Kg	07/14/25 16:10	07/17/25 16:42	6010D	SW3050
7440-47-3	Chromium	31.2		1	0.049	0.52	mg/Kg	07/14/25 16:10	07/17/25 16:42	6010D	SW3050
7440-48-4	Cobalt	8.00		1	0.10	1.55	mg/Kg	07/14/25 16:10	07/17/25 16:42	6010D	SW3050
7440-50-8	Copper	37.3	N	1	0.23	1.03	mg/Kg	07/14/25 16:10	07/17/25 16:42	6010D	SW3050
7439-89-6	Iron	22300		1	4.12	5.16	mg/Kg	07/14/25 16:10	07/17/25 16:42	6010D	SW3050
7439-92-1	Lead	257		1	0.13	0.62	mg/Kg	07/14/25 16:10	07/17/25 16:42	6010D	SW3050
7439-95-4	Magnesium	4110		1	12.4	103	mg/Kg	07/14/25 16:10	07/17/25 16:42	6010D	SW3050
7439-96-5	Manganese	240		1	0.14	1.03	mg/Kg	07/14/25 16:10	07/17/25 16:42	6010D	SW3050
7439-97-6	Mercury	0.076	N	1	0.0080	0.015	mg/Kg	07/15/25 15:40	07/16/25 12:59	7471B	
7440-02-0	Nickel	15.6		1	0.13	2.06	mg/Kg	07/14/25 16:10	07/17/25 16:42	6010D	SW3050
7440-09-7	Potassium	1360		1	28.6	103	mg/Kg	07/14/25 16:10	07/17/25 16:42	6010D	SW3050
7782-49-2	Selenium	5.79		1	0.27	1.03	mg/Kg	07/14/25 16:10	07/17/25 16:42	6010D	SW3050
7440-22-4	Silver	0.12	UN	1	0.12	0.52	mg/Kg	07/14/25 16:10	07/17/25 16:42	6010D	SW3050
7440-23-5	Sodium	127		1	18.4	103	mg/Kg	07/14/25 16:10	07/17/25 16:42	6010D	SW3050
7440-28-0	Thallium	0.24	U	1	0.24	2.06	mg/Kg	07/14/25 16:10	07/17/25 16:42	6010D	SW3050
7440-62-2	Vanadium	16.3		1	0.26	2.06	mg/Kg	07/14/25 16:10	07/17/25 16:42	6010D	SW3050
7440-66-6	Zinc	189	N	1	0.11	2.06	mg/Kg	07/14/25 16:10	07/17/25 16:42	6010D	SW3050

Color Before:	Brown	Clarity Before:		Texture:	Medium
Color After:	Yellow	Clarity After:		Artifacts:	
Comments:	TCL+30/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:	T&A Construction Inc	Date Collected:	07/14/25
Project:	Kingsland Point Park Water Main	Date Received:	07/14/25
Client Sample ID:	END-OF-TRENCH	SDG No.:	Q2600
Lab Sample ID:	Q2600-09	Matrix:	SOIL
Level (low/med):	low	% Solid:	85.2

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.	Prep Met.
7429-90-5	Aluminum	5550		1	0.83	4.95	mg/Kg	07/14/25 16:10	07/17/25 16:47	6010D	SW3050
7440-36-0	Antimony	1.48	JN	1	0.22	2.48	mg/Kg	07/14/25 16:10	07/17/25 16:47	6010D	SW3050
7440-38-2	Arsenic	5.65		1	0.19	0.99	mg/Kg	07/14/25 16:10	07/17/25 16:47	6010D	SW3050
7440-39-3	Barium	154		1	0.72	4.95	mg/Kg	07/14/25 16:10	07/17/25 16:47	6010D	SW3050
7440-41-7	Beryllium	0.47		1	0.025	0.30	mg/Kg	07/14/25 16:10	07/17/25 16:47	6010D	SW3050
7440-43-9	Cadmium	1.14		1	0.024	0.30	mg/Kg	07/14/25 16:10	07/17/25 16:47	6010D	SW3050
7440-70-2	Calcium	9820		1	11.0	99.0	mg/Kg	07/14/25 16:10	07/17/25 16:47	6010D	SW3050
7440-47-3	Chromium	39.7		1	0.047	0.50	mg/Kg	07/14/25 16:10	07/17/25 16:47	6010D	SW3050
7440-48-4	Cobalt	7.10		1	0.099	1.49	mg/Kg	07/14/25 16:10	07/17/25 16:47	6010D	SW3050
7440-50-8	Copper	57.9	N	1	0.22	0.99	mg/Kg	07/14/25 16:10	07/17/25 16:47	6010D	SW3050
7439-89-6	Iron	17500		1	3.95	4.95	mg/Kg	07/14/25 16:10	07/17/25 16:47	6010D	SW3050
7439-92-1	Lead	282		1	0.13	0.59	mg/Kg	07/14/25 16:10	07/17/25 16:47	6010D	SW3050
7439-95-4	Magnesium	6490		1	11.9	99.0	mg/Kg	07/14/25 16:10	07/17/25 16:47	6010D	SW3050
7439-96-5	Manganese	248		1	0.14	0.99	mg/Kg	07/14/25 16:10	07/17/25 16:47	6010D	SW3050
7439-97-6	Mercury	0.050	N	1	0.0090	0.016	mg/Kg	07/15/25 15:40	07/16/25 13:02	7471B	
7440-02-0	Nickel	12.7		1	0.13	1.98	mg/Kg	07/14/25 16:10	07/17/25 16:47	6010D	SW3050
7440-09-7	Potassium	809		1	27.4	99.0	mg/Kg	07/14/25 16:10	07/17/25 16:47	6010D	SW3050
7782-49-2	Selenium	4.24		1	0.26	0.99	mg/Kg	07/14/25 16:10	07/17/25 16:47	6010D	SW3050
7440-22-4	Silver	0.12	UN	1	0.12	0.50	mg/Kg	07/14/25 16:10	07/17/25 16:47	6010D	SW3050
7440-23-5	Sodium	98.8	J	1	17.6	99.0	mg/Kg	07/14/25 16:10	07/17/25 16:47	6010D	SW3050
7440-28-0	Thallium	0.23	U	1	0.23	1.98	mg/Kg	07/14/25 16:10	07/17/25 16:47	6010D	SW3050
7440-62-2	Vanadium	14.1		1	0.25	1.98	mg/Kg	07/14/25 16:10	07/17/25 16:47	6010D	SW3050
7440-66-6	Zinc	206	N	1	0.11	1.98	mg/Kg	07/14/25 16:10	07/17/25 16:47	6010D	SW3050

Color Before:	Brown	Clarity Before:		Texture:	Medium
Color After:	Yellow	Clarity After:		Artifacts:	
Comments:	TCL+30/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: T&A Construction Inc

SDG No.: Q2600

Contract: TACO01

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
ICV29	Mercury	4.07	4.0	102	90 - 110	CV	07/16/2025	11:56	LB136499

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: T&A Construction Inc **SDG No.:** Q2600

Contract: TACO01 **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
CCV09	Mercury	5.31	5.0	106	90 - 110	CV	07/16/2025	12:01	LB136499
CCV10	Mercury	5.27	5.0	105	90 - 110	CV	07/16/2025	12:38	LB136499
CCV11	Mercury	5.28	5.0	106	90 - 110	CV	07/16/2025	13:12	LB136499
CCV12	Mercury	5.09	5.0	102	90 - 110	CV	07/16/2025	13:40	LB136499
CCV13	Mercury	5.13	5.0	103	90 - 110	CV	07/16/2025	14:07	LB136499
CCV14	Mercury	5.04	5.0	101	90 - 110	CV	07/16/2025	14:25	LB136499

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: T&A Construction Inc **SDG No.:** Q2600

Contract: TACO01 **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	7880	8000	98	90 - 110	P	07/17/2025	14:14	LB136534
	Antimony	4110	4000	103	90 - 110	P	07/17/2025	14:14	LB136534
	Arsenic	3840	4000	96	90 - 110	P	07/17/2025	14:14	LB136534
	Barium	8020	8000	100	90 - 110	P	07/17/2025	14:14	LB136534
	Beryllium	200	200	100	90 - 110	P	07/17/2025	14:14	LB136534
	Cadmium	1950	2000	97	90 - 110	P	07/17/2025	14:14	LB136534
	Calcium	19900	20000	99	90 - 110	P	07/17/2025	14:14	LB136534
	Chromium	791	800	99	90 - 110	P	07/17/2025	14:14	LB136534
	Cobalt	2000	2000	100	90 - 110	P	07/17/2025	14:14	LB136534
	Copper	1020	1000	102	90 - 110	P	07/17/2025	14:14	LB136534
	Iron	3850	4000	96	90 - 110	P	07/17/2025	14:14	LB136534
	Lead	3860	4000	96	90 - 110	P	07/17/2025	14:14	LB136534
	Magnesium	20100	20000	101	90 - 110	P	07/17/2025	14:14	LB136534
	Manganese	2000	2000	100	90 - 110	P	07/17/2025	14:14	LB136534
	Nickel	1990	2000	99	90 - 110	P	07/17/2025	14:14	LB136534
	Potassium	18100	20000	91	90 - 110	P	07/17/2025	14:14	LB136534
	Selenium	3940	4000	98	90 - 110	P	07/17/2025	14:14	LB136534
	Silver	936	1000	94	90 - 110	P	07/17/2025	14:14	LB136534
	Sodium	18700	20000	94	90 - 110	P	07/17/2025	14:14	LB136534
	Thallium	3850	4000	96	90 - 110	P	07/17/2025	14:14	LB136534
	Vanadium	2000	2000	100	90 - 110	P	07/17/2025	14:14	LB136534
	Zinc	2010	2000	100	90 - 110	P	07/17/2025	14:14	LB136534

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: T&A Construction Inc **SDG No.:** Q2600

Contract: TACO01 **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	119	100	119	80 - 120	P	07/17/2025	14:24	LB136534
	Antimony	52.4	50.0	105	80 - 120	P	07/17/2025	14:24	LB136534
	Arsenic	16.9	20.0	84	80 - 120	P	07/17/2025	14:24	LB136534
	Barium	102	100	102	80 - 120	P	07/17/2025	14:24	LB136534
	Beryllium	6.21	6.0	104	80 - 120	P	07/17/2025	14:24	LB136534
	Cadmium	5.65	6.0	94	80 - 120	P	07/17/2025	14:24	LB136534
	Calcium	2050	2000	103	80 - 120	P	07/17/2025	14:24	LB136534
	Chromium	10.2	10.0	102	80 - 120	P	07/17/2025	14:24	LB136534
	Cobalt	30.3	30.0	101	80 - 120	P	07/17/2025	14:24	LB136534
	Copper	21.3	20.0	107	80 - 120	P	07/17/2025	14:24	LB136534
	Iron	110	100	110	80 - 120	P	07/17/2025	14:24	LB136534
	Lead	10.9	12.0	91	80 - 120	P	07/17/2025	14:24	LB136534
	Magnesium	2220	2000	111	80 - 120	P	07/17/2025	14:24	LB136534
	Manganese	21.1	20.0	106	80 - 120	P	07/17/2025	14:24	LB136534
	Nickel	39.7	40.0	99	80 - 120	P	07/17/2025	14:24	LB136534
	Potassium	1740	2000	87	80 - 120	P	07/17/2025	14:24	LB136534
	Selenium	17.6	20.0	88	80 - 120	P	07/17/2025	14:24	LB136534
	Silver	10.5	10.0	105	80 - 120	P	07/17/2025	14:24	LB136534
	Sodium	1750	2000	87	80 - 120	P	07/17/2025	14:24	LB136534
	Thallium	41.1	40.0	103	80 - 120	P	07/17/2025	14:24	LB136534
	Vanadium	40.0	40.0	100	80 - 120	P	07/17/2025	14:24	LB136534
	Zinc	42.6	40.0	106	80 - 120	P	07/17/2025	14:24	LB136534

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Metals

- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: T&A Construction Inc **SDG No.:** Q2600

Contract: TACO01 **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	9950	10000	100	90 - 110	P	07/17/2025	14:56	LB136534
	Antimony	5020	5000	100	90 - 110	P	07/17/2025	14:56	LB136534
	Arsenic	4950	5000	99	90 - 110	P	07/17/2025	14:56	LB136534
	Barium	10100	10000	101	90 - 110	P	07/17/2025	14:56	LB136534
	Beryllium	254	250	102	90 - 110	P	07/17/2025	14:56	LB136534
	Cadmium	2500	2500	100	90 - 110	P	07/17/2025	14:56	LB136534
	Calcium	25100	25000	101	90 - 110	P	07/17/2025	14:56	LB136534
	Chromium	1020	1000	102	90 - 110	P	07/17/2025	14:56	LB136534
	Cobalt	2500	2500	100	90 - 110	P	07/17/2025	14:56	LB136534
	Copper	1260	1250	101	90 - 110	P	07/17/2025	14:56	LB136534
	Iron	5020	5000	100	90 - 110	P	07/17/2025	14:56	LB136534
	Lead	4990	5000	100	90 - 110	P	07/17/2025	14:56	LB136534
	Magnesium	25100	25000	100	90 - 110	P	07/17/2025	14:56	LB136534
	Manganese	2510	2500	100	90 - 110	P	07/17/2025	14:56	LB136534
	Nickel	2500	2500	100	90 - 110	P	07/17/2025	14:56	LB136534
	Potassium	25400	25000	102	90 - 110	P	07/17/2025	14:56	LB136534
	Selenium	5010	5000	100	90 - 110	P	07/17/2025	14:56	LB136534
	Silver	1270	1250	102	90 - 110	P	07/17/2025	14:56	LB136534
	Sodium	25400	25000	102	90 - 110	P	07/17/2025	14:56	LB136534
	Thallium	5050	5000	101	90 - 110	P	07/17/2025	14:56	LB136534
	Vanadium	2510	2500	100	90 - 110	P	07/17/2025	14:56	LB136534
	Zinc	2520	2500	101	90 - 110	P	07/17/2025	14:56	LB136534
CCV02	Aluminum	9800	10000	98	90 - 110	P	07/17/2025	15:44	LB136534
	Antimony	4760	5000	95	90 - 110	P	07/17/2025	15:44	LB136534
	Arsenic	4730	5000	95	90 - 110	P	07/17/2025	15:44	LB136534
	Barium	9920	10000	99	90 - 110	P	07/17/2025	15:44	LB136534
	Beryllium	250	250	100	90 - 110	P	07/17/2025	15:44	LB136534
	Cadmium	2410	2500	96	90 - 110	P	07/17/2025	15:44	LB136534
	Calcium	24700	25000	99	90 - 110	P	07/17/2025	15:44	LB136534
	Chromium	986	1000	99	90 - 110	P	07/17/2025	15:44	LB136534
	Cobalt	2390	2500	96	90 - 110	P	07/17/2025	15:44	LB136534
	Copper	1240	1250	100	90 - 110	P	07/17/2025	15:44	LB136534
	Iron	4950	5000	99	90 - 110	P	07/17/2025	15:44	LB136534
	Lead	4810	5000	96	90 - 110	P	07/17/2025	15:44	LB136534

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Metals

- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: T&A Construction Inc **SDG No.:** Q2600

Contract: TACO01 **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	24500	25000	98	90 - 110	P	07/17/2025	15:44	LB136534
	Manganese	2470	2500	99	90 - 110	P	07/17/2025	15:44	LB136534
	Nickel	2400	2500	96	90 - 110	P	07/17/2025	15:44	LB136534
	Potassium	24700	25000	99	90 - 110	P	07/17/2025	15:44	LB136534
	Selenium	4770	5000	95	90 - 110	P	07/17/2025	15:44	LB136534
	Silver	1230	1250	98	90 - 110	P	07/17/2025	15:44	LB136534
	Sodium	24900	25000	100	90 - 110	P	07/17/2025	15:44	LB136534
	Thallium	4820	5000	96	90 - 110	P	07/17/2025	15:44	LB136534
	Vanadium	2450	2500	98	90 - 110	P	07/17/2025	15:44	LB136534
	Zinc	2440	2500	98	90 - 110	P	07/17/2025	15:44	LB136534
CCV03	Aluminum	10100	10000	101	90 - 110	P	07/17/2025	17:18	LB136534
	Antimony	4980	5000	100	90 - 110	P	07/17/2025	17:18	LB136534
	Arsenic	4960	5000	99	90 - 110	P	07/17/2025	17:18	LB136534
	Barium	10100	10000	101	90 - 110	P	07/17/2025	17:18	LB136534
	Beryllium	258	250	103	90 - 110	P	07/17/2025	17:18	LB136534
	Cadmium	2520	2500	101	90 - 110	P	07/17/2025	17:18	LB136534
	Calcium	25300	25000	101	90 - 110	P	07/17/2025	17:18	LB136534
	Chromium	1020	1000	102	90 - 110	P	07/17/2025	17:18	LB136534
	Cobalt	2510	2500	100	90 - 110	P	07/17/2025	17:18	LB136534
	Copper	1280	1250	103	90 - 110	P	07/17/2025	17:18	LB136534
	Iron	5110	5000	102	90 - 110	P	07/17/2025	17:18	LB136534
	Lead	5040	5000	101	90 - 110	P	07/17/2025	17:18	LB136534
	Magnesium	25000	25000	100	90 - 110	P	07/17/2025	17:18	LB136534
	Manganese	2510	2500	100	90 - 110	P	07/17/2025	17:18	LB136534
	Nickel	2510	2500	100	90 - 110	P	07/17/2025	17:18	LB136534
	Potassium	25600	25000	102	90 - 110	P	07/17/2025	17:18	LB136534
	Selenium	4980	5000	100	90 - 110	P	07/17/2025	17:18	LB136534
	Silver	1270	1250	101	90 - 110	P	07/17/2025	17:18	LB136534
	Sodium	25800	25000	103	90 - 110	P	07/17/2025	17:18	LB136534
	Thallium	5050	5000	101	90 - 110	P	07/17/2025	17:18	LB136534
	Vanadium	2510	2500	100	90 - 110	P	07/17/2025	17:18	LB136534
	Zinc	2500	2500	100	90 - 110	P	07/17/2025	17:18	LB136534
CCV04	Aluminum	10000	10000	100	90 - 110	P	07/17/2025	18:45	LB136534
	Antimony	4990	5000	100	90 - 110	P	07/17/2025	18:45	LB136534

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Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: T&A Construction Inc
SDG No.: Q2600
Contract: TACO01
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	4880	5000	98	90 - 110	P	07/17/2025	18:45	LB136534
	Barium	10200	10000	102	90 - 110	P	07/17/2025	18:45	LB136534
	Beryllium	246	250	98	90 - 110	P	07/17/2025	18:45	LB136534
	Cadmium	2470	2500	99	90 - 110	P	07/17/2025	18:45	LB136534
	Calcium	25000	25000	100	90 - 110	P	07/17/2025	18:45	LB136534
	Chromium	1010	1000	101	90 - 110	P	07/17/2025	18:45	LB136534
	Cobalt	2480	2500	99	90 - 110	P	07/17/2025	18:45	LB136534
	Copper	1240	1250	99	90 - 110	P	07/17/2025	18:45	LB136534
	Iron	4990	5000	100	90 - 110	P	07/17/2025	18:45	LB136534
	Lead	4940	5000	99	90 - 110	P	07/17/2025	18:45	LB136534
	Magnesium	24600	25000	98	90 - 110	P	07/17/2025	18:45	LB136534
	Manganese	2450	2500	98	90 - 110	P	07/17/2025	18:45	LB136534
	Nickel	2490	2500	100	90 - 110	P	07/17/2025	18:45	LB136534
	Potassium	23500	25000	94	90 - 110	P	07/17/2025	18:45	LB136534
	Selenium	4950	5000	99	90 - 110	P	07/17/2025	18:45	LB136534
	Silver	1240	1250	99	90 - 110	P	07/17/2025	18:45	LB136534
	Sodium	24000	25000	96	90 - 110	P	07/17/2025	18:45	LB136534
	Thallium	4990	5000	100	90 - 110	P	07/17/2025	18:45	LB136534
	Vanadium	2470	2500	99	90 - 110	P	07/17/2025	18:45	LB136534
	Zinc	2490	2500	100	90 - 110	P	07/17/2025	18:45	LB136534
CCV05	Aluminum	10100	10000	101	90 - 110	P	07/17/2025	20:11	LB136534
	Antimony	4990	5000	100	90 - 110	P	07/17/2025	20:11	LB136534
	Arsenic	5000	5000	100	90 - 110	P	07/17/2025	20:11	LB136534
	Barium	10300	10000	103	90 - 110	P	07/17/2025	20:11	LB136534
	Beryllium	247	250	99	90 - 110	P	07/17/2025	20:11	LB136534
	Cadmium	2550	2500	102	90 - 110	P	07/17/2025	20:11	LB136534
	Calcium	25200	25000	101	90 - 110	P	07/17/2025	20:11	LB136534
	Chromium	1010	1000	101	90 - 110	P	07/17/2025	20:11	LB136534
	Cobalt	2510	2500	100	90 - 110	P	07/17/2025	20:11	LB136534
	Copper	1240	1250	99	90 - 110	P	07/17/2025	20:11	LB136534
	Iron	5000	5000	100	90 - 110	P	07/17/2025	20:11	LB136534
	Lead	5070	5000	101	90 - 110	P	07/17/2025	20:11	LB136534
	Magnesium	24600	25000	99	90 - 110	P	07/17/2025	20:11	LB136534
	Manganese	2470	2500	99	90 - 110	P	07/17/2025	20:11	LB136534

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: T&A Construction Inc **SDG No.:** Q2600

Contract: TACO01 **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	07/17/2025	20:11	LB136534
	Potassium	25100	25000	100	90 - 110	P	07/17/2025	20:11	LB136534
	Selenium	5040	5000	101	90 - 110	P	07/17/2025	20:11	LB136534
	Silver	1250	1250	100	90 - 110	P	07/17/2025	20:11	LB136534
	Sodium	25500	25000	102	90 - 110	P	07/17/2025	20:11	LB136534
	Thallium	5070	5000	101	90 - 110	P	07/17/2025	20:11	LB136534
	Vanadium	2490	2500	100	90 - 110	P	07/17/2025	20:11	LB136534
	Zinc	2500	2500	100	90 - 110	P	07/17/2025	20:11	LB136534
CCV06	Aluminum	10300	10000	103	90 - 110	P	07/17/2025	20:46	LB136534
	Antimony	4990	5000	100	90 - 110	P	07/17/2025	20:46	LB136534
	Arsenic	4910	5000	98	90 - 110	P	07/17/2025	20:46	LB136534
	Barium	10400	10000	104	90 - 110	P	07/17/2025	20:46	LB136534
	Beryllium	252	250	101	90 - 110	P	07/17/2025	20:46	LB136534
	Cadmium	2500	2500	100	90 - 110	P	07/17/2025	20:46	LB136534
	Calcium	25300	25000	101	90 - 110	P	07/17/2025	20:46	LB136534
	Chromium	1000	1000	100	90 - 110	P	07/17/2025	20:46	LB136534
	Cobalt	2480	2500	99	90 - 110	P	07/17/2025	20:46	LB136534
	Copper	1260	1250	101	90 - 110	P	07/17/2025	20:46	LB136534
	Iron	5150	5000	103	90 - 110	P	07/17/2025	20:46	LB136534
	Lead	4960	5000	99	90 - 110	P	07/17/2025	20:46	LB136534
	Magnesium	24900	25000	100	90 - 110	P	07/17/2025	20:46	LB136534
	Manganese	2490	2500	99	90 - 110	P	07/17/2025	20:46	LB136534
	Nickel	2490	2500	100	90 - 110	P	07/17/2025	20:46	LB136534
	Potassium	26800	25000	107	90 - 110	P	07/17/2025	20:46	LB136534
	Selenium	4960	5000	99	90 - 110	P	07/17/2025	20:46	LB136534
	Silver	1240	1250	99	90 - 110	P	07/17/2025	20:46	LB136534
	Sodium	25900	25000	104	90 - 110	P	07/17/2025	20:46	LB136534
	Thallium	5020	5000	100	90 - 110	P	07/17/2025	20:46	LB136534
	Vanadium	2530	2500	101	90 - 110	P	07/17/2025	20:46	LB136534
	Zinc	2510	2500	100	90 - 110	P	07/17/2025	20:46	LB136534

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Metals

- 2b -
CRDL STANDARD FOR AA & ICP

Client: T&A Construction Inc **SDG No.:** Q2600

Contract: TACO01 **Lab Code:** ACE

Initial Calibration Source:

Continuing Calibration Source:

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CRA	Mercury	0.22	0.2	109	70 - 130	CV	07/16/2025	12:06	LB136499
CRI01	Aluminum	101	100	101	65 - 135	P	07/17/2025	14:39	LB136534
	Antimony	54.0	50.0	108	65 - 135	P	07/17/2025	14:39	LB136534
	Arsenic	15.4	20.0	77	65 - 135	P	07/17/2025	14:39	LB136534
	Barium	101	100	102	65 - 135	P	07/17/2025	14:39	LB136534
	Beryllium	6.31	6.0	105	65 - 135	P	07/17/2025	14:39	LB136534
	Cadmium	5.72	6.0	95	65 - 135	P	07/17/2025	14:39	LB136534
	Calcium	2060	2000	103	65 - 135	P	07/17/2025	14:39	LB136534
	Chromium	10.2	10.0	102	65 - 135	P	07/17/2025	14:39	LB136534
	Cobalt	30.4	30.0	101	65 - 135	P	07/17/2025	14:39	LB136534
	Copper	22.2	20.0	111	65 - 135	P	07/17/2025	14:39	LB136534
	Iron	110	100	110	65 - 135	P	07/17/2025	14:39	LB136534
	Lead	11.9	12.0	99	65 - 135	P	07/17/2025	14:39	LB136534
	Magnesium	2300	2000	115	65 - 135	P	07/17/2025	14:39	LB136534
	Manganese	21.5	20.0	108	65 - 135	P	07/17/2025	14:39	LB136534
	Nickel	39.6	40.0	99	65 - 135	P	07/17/2025	14:39	LB136534
	Potassium	1760	2000	88	65 - 135	P	07/17/2025	14:39	LB136534
	Selenium	19.6	20.0	98	65 - 135	P	07/17/2025	14:39	LB136534
	Silver	9.57	10.0	96	65 - 135	P	07/17/2025	14:39	LB136534
	Sodium	1770	2000	88	65 - 135	P	07/17/2025	14:39	LB136534
	Thallium	40.3	40.0	101	65 - 135	P	07/17/2025	14:39	LB136534
	Vanadium	38.6	40.0	96	65 - 135	P	07/17/2025	14:39	LB136534
	Zinc	43.0	40.0	108	65 - 135	P	07/17/2025	14:39	LB136534

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Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: T&A Construction Inc **SDG No.:** Q2600

Contract: TACO01 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB29	Mercury	0.076	+/-0.2	U	0.20	CV	07/16/2025	11:59	LB136499

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Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: T&A Construction Inc **SDG No.:** Q2600

Contract: TACO01 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB09	Mercury	0.076	+/-0.2	U	0.20	CV	07/16/2025	12:03	LB136499
CCB10	Mercury	0.076	+/-0.2	U	0.20	CV	07/16/2025	12:43	LB136499
CCB11	Mercury	0.076	+/-0.2	U	0.20	CV	07/16/2025	13:14	LB136499
CCB12	Mercury	0.076	+/-0.2	U	0.20	CV	07/16/2025	13:42	LB136499
CCB13	Mercury	0.076	+/-0.2	U	0.20	CV	07/16/2025	14:10	LB136499
CCB14	Mercury	0.076	+/-0.2	U	0.20	CV	07/16/2025	14:28	LB136499

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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: T&A Construction Inc **SDG No.:** Q2600

Contract: TACO01 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB01	Aluminum	44.1	+/-50	J	100	P	07/17/2025	14:29	LB136534
	Antimony	6.76	+/-25	U	50.0	P	07/17/2025	14:29	LB136534
	Arsenic	5.12	+/-10	U	20.0	P	07/17/2025	14:29	LB136534
	Barium	14.6	+/-50	U	100	P	07/17/2025	14:29	LB136534
	Beryllium	0.56	+/-3	U	6.00	P	07/17/2025	14:29	LB136534
	Cadmium	0.50	+/-3	U	6.00	P	07/17/2025	14:29	LB136534
	Calcium	234	+/-1000	U	2000	P	07/17/2025	14:29	LB136534
	Chromium	2.12	+/-5	U	10.0	P	07/17/2025	14:29	LB136534
	Cobalt	2.26	+/-15	U	30.0	P	07/17/2025	14:29	LB136534
	Copper	4.60	+/-10	U	20.0	P	07/17/2025	14:29	LB136534
	Iron	23.4	+/-50	U	100	P	07/17/2025	14:29	LB136534
	Lead	2.30	+/-6	U	12.0	P	07/17/2025	14:29	LB136534
	Magnesium	244	+/-1000	U	2000	P	07/17/2025	14:29	LB136534
	Manganese	5.94	+/-10	U	20.0	P	07/17/2025	14:29	LB136534
	Nickel	3.06	+/-20	U	40.0	P	07/17/2025	14:29	LB136534
	Potassium	918	+/-1000	U	2000	P	07/17/2025	14:29	LB136534
	Selenium	9.64	+/-10	U	20.0	P	07/17/2025	14:29	LB136534
	Silver	1.62	+/-5	U	10.0	P	07/17/2025	14:29	LB136534
	Sodium	868	+/-1000	U	2000	P	07/17/2025	14:29	LB136534
	Thallium	4.38	+/-20	U	40.0	P	07/17/2025	14:29	LB136534
	Vanadium	6.26	+/-20	U	40.0	P	07/17/2025	14:29	LB136534
	Zinc	3.50	+/-20	U	40.0	P	07/17/2025	14:29	LB136534

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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: T&A Construction Inc **SDG No.:** Q2600

Contract: TACO01 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB01	Aluminum	34.3	+/-50	J	100	P	07/17/2025	15:01	LB136534
	Antimony	6.76	+/-25	U	50.0	P	07/17/2025	15:01	LB136534
	Arsenic	5.12	+/-10	U	20.0	P	07/17/2025	15:01	LB136534
	Barium	14.6	+/-50	U	100	P	07/17/2025	15:01	LB136534
	Beryllium	0.56	+/-3	U	6.00	P	07/17/2025	15:01	LB136534
	Cadmium	0.50	+/-3	U	6.00	P	07/17/2025	15:01	LB136534
	Calcium	234	+/-1000	U	2000	P	07/17/2025	15:01	LB136534
	Chromium	2.12	+/-5	U	10.0	P	07/17/2025	15:01	LB136534
	Cobalt	2.26	+/-15	U	30.0	P	07/17/2025	15:01	LB136534
	Copper	4.60	+/-10	U	20.0	P	07/17/2025	15:01	LB136534
	Iron	23.4	+/-50	U	100	P	07/17/2025	15:01	LB136534
	Lead	2.30	+/-6	U	12.0	P	07/17/2025	15:01	LB136534
	Magnesium	244	+/-1000	U	2000	P	07/17/2025	15:01	LB136534
	Manganese	5.94	+/-10	U	20.0	P	07/17/2025	15:01	LB136534
	Nickel	3.06	+/-20	U	40.0	P	07/17/2025	15:01	LB136534
	Potassium	918	+/-1000	U	2000	P	07/17/2025	15:01	LB136534
	Selenium	9.64	+/-10	U	20.0	P	07/17/2025	15:01	LB136534
	Silver	1.62	+/-5	U	10.0	P	07/17/2025	15:01	LB136534
	Sodium	868	+/-1000	U	2000	P	07/17/2025	15:01	LB136534
	Thallium	4.38	+/-20	U	40.0	P	07/17/2025	15:01	LB136534
	Vanadium	6.26	+/-20	U	40.0	P	07/17/2025	15:01	LB136534
	Zinc	3.50	+/-20	U	40.0	P	07/17/2025	15:01	LB136534
CCB02	Aluminum	20.6	+/-50	J	100	P	07/17/2025	15:49	LB136534
	Antimony	6.76	+/-25	U	50.0	P	07/17/2025	15:49	LB136534
	Arsenic	5.12	+/-10	U	20.0	P	07/17/2025	15:49	LB136534
	Barium	14.6	+/-50	U	100	P	07/17/2025	15:49	LB136534
	Beryllium	0.56	+/-3	U	6.00	P	07/17/2025	15:49	LB136534
	Cadmium	0.50	+/-3	U	6.00	P	07/17/2025	15:49	LB136534
	Calcium	234	+/-1000	U	2000	P	07/17/2025	15:49	LB136534
	Chromium	2.12	+/-5	U	10.0	P	07/17/2025	15:49	LB136534
	Cobalt	2.26	+/-15	U	30.0	P	07/17/2025	15:49	LB136534
	Copper	4.60	+/-10	U	20.0	P	07/17/2025	15:49	LB136534
	Iron	23.4	+/-50	U	100	P	07/17/2025	15:49	LB136534
	Lead	2.30	+/-6	U	12.0	P	07/17/2025	15:49	LB136534
	Magnesium	244	+/-1000	U	2000	P	07/17/2025	15:49	LB136534
	Manganese	5.94	+/-10	U	20.0	P	07/17/2025	15:49	LB136534
	Nickel	3.06	+/-20	U	40.0	P	07/17/2025	15:49	LB136534
	Potassium	918	+/-1000	U	2000	P	07/17/2025	15:49	LB136534
	Selenium	9.64	+/-10	U	20.0	P	07/17/2025	15:49	LB136534

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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: T&A Construction Inc **SDG No.:** Q2600

Contract: TACO01 **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	07/17/2025	15:49	LB136534
	Sodium	868	+/-1000	U	2000	P	07/17/2025	15:49	LB136534
	Thallium	4.38	+/-20	U	40.0	P	07/17/2025	15:49	LB136534
	Vanadium	6.26	+/-20	U	40.0	P	07/17/2025	15:49	LB136534
	Zinc	3.50	+/-20	U	40.0	P	07/17/2025	15:49	LB136534
CCB03	Aluminum	30.1	+/-50	J	100	P	07/17/2025	17:36	LB136534
	Antimony	6.76	+/-25	U	50.0	P	07/17/2025	17:36	LB136534
	Arsenic	5.12	+/-10	U	20.0	P	07/17/2025	17:36	LB136534
	Barium	14.6	+/-50	U	100	P	07/17/2025	17:36	LB136534
	Beryllium	0.56	+/-3	U	6.00	P	07/17/2025	17:36	LB136534
	Cadmium	0.50	+/-3	U	6.00	P	07/17/2025	17:36	LB136534
	Calcium	234	+/-1000	U	2000	P	07/17/2025	17:36	LB136534
	Chromium	2.12	+/-5	U	10.0	P	07/17/2025	17:36	LB136534
	Cobalt	2.26	+/-15	U	30.0	P	07/17/2025	17:36	LB136534
	Copper	4.60	+/-10	U	20.0	P	07/17/2025	17:36	LB136534
	Iron	23.4	+/-50	U	100	P	07/17/2025	17:36	LB136534
	Lead	2.30	+/-6	U	12.0	P	07/17/2025	17:36	LB136534
	Magnesium	244	+/-1000	U	2000	P	07/17/2025	17:36	LB136534
	Manganese	5.94	+/-10	U	20.0	P	07/17/2025	17:36	LB136534
	Nickel	3.06	+/-20	U	40.0	P	07/17/2025	17:36	LB136534
	Potassium	918	+/-1000	U	2000	P	07/17/2025	17:36	LB136534
	Selenium	9.64	+/-10	U	20.0	P	07/17/2025	17:36	LB136534
	Silver	1.62	+/-5	U	10.0	P	07/17/2025	17:36	LB136534
	Sodium	868	+/-1000	U	2000	P	07/17/2025	17:36	LB136534
	Thallium	4.38	+/-20	U	40.0	P	07/17/2025	17:36	LB136534
	Vanadium	6.26	+/-20	U	40.0	P	07/17/2025	17:36	LB136534
	Zinc	3.50	+/-20	U	40.0	P	07/17/2025	17:36	LB136534
CCB04	Aluminum	27.5	+/-50	J	100	P	07/17/2025	18:50	LB136534
	Antimony	6.76	+/-25	U	50.0	P	07/17/2025	18:50	LB136534
	Arsenic	5.12	+/-10	U	20.0	P	07/17/2025	18:50	LB136534
	Barium	14.6	+/-50	U	100	P	07/17/2025	18:50	LB136534
	Beryllium	0.56	+/-3	U	6.00	P	07/17/2025	18:50	LB136534
	Cadmium	0.50	+/-3	U	6.00	P	07/17/2025	18:50	LB136534
	Calcium	234	+/-1000	U	2000	P	07/17/2025	18:50	LB136534
	Chromium	2.12	+/-5	U	10.0	P	07/17/2025	18:50	LB136534
	Cobalt	2.26	+/-15	U	30.0	P	07/17/2025	18:50	LB136534
	Copper	4.60	+/-10	U	20.0	P	07/17/2025	18:50	LB136534
	Iron	23.4	+/-50	U	100	P	07/17/2025	18:50	LB136534
	Lead	2.30	+/-6	U	12.0	P	07/17/2025	18:50	LB136534

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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: T&A Construction Inc **SDG No.:** Q2600

Contract: TACO01 **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	07/17/2025	18:50	LB136534
	Manganese	5.94	+/-10	U	20.0	P	07/17/2025	18:50	LB136534
	Nickel	3.06	+/-20	U	40.0	P	07/17/2025	18:50	LB136534
	Potassium	918	+/-1000	U	2000	P	07/17/2025	18:50	LB136534
	Selenium	9.64	+/-10	U	20.0	P	07/17/2025	18:50	LB136534
	Silver	1.62	+/-5	U	10.0	P	07/17/2025	18:50	LB136534
	Sodium	868	+/-1000	U	2000	P	07/17/2025	18:50	LB136534
	Thallium	4.38	+/-20	U	40.0	P	07/17/2025	18:50	LB136534
	Vanadium	6.26	+/-20	U	40.0	P	07/17/2025	18:50	LB136534
	Zinc	3.50	+/-20	U	40.0	P	07/17/2025	18:50	LB136534
CCB05	Aluminum	19.5	+/-50	J	100	P	07/17/2025	20:16	LB136534
	Antimony	6.76	+/-25	U	50.0	P	07/17/2025	20:16	LB136534
	Arsenic	5.12	+/-10	U	20.0	P	07/17/2025	20:16	LB136534
	Barium	14.6	+/-50	U	100	P	07/17/2025	20:16	LB136534
	Beryllium	0.56	+/-3	U	6.00	P	07/17/2025	20:16	LB136534
	Cadmium	0.50	+/-3	U	6.00	P	07/17/2025	20:16	LB136534
	Calcium	234	+/-1000	U	2000	P	07/17/2025	20:16	LB136534
	Chromium	2.12	+/-5	U	10.0	P	07/17/2025	20:16	LB136534
	Cobalt	2.26	+/-15	U	30.0	P	07/17/2025	20:16	LB136534
	Copper	4.60	+/-10	U	20.0	P	07/17/2025	20:16	LB136534
	Iron	23.4	+/-50	U	100	P	07/17/2025	20:16	LB136534
	Lead	2.30	+/-6	U	12.0	P	07/17/2025	20:16	LB136534
	Magnesium	244	+/-1000	U	2000	P	07/17/2025	20:16	LB136534
	Manganese	5.94	+/-10	U	20.0	P	07/17/2025	20:16	LB136534
	Nickel	3.06	+/-20	U	40.0	P	07/17/2025	20:16	LB136534
	Potassium	918	+/-1000	U	2000	P	07/17/2025	20:16	LB136534
	Selenium	9.64	+/-10	U	20.0	P	07/17/2025	20:16	LB136534
	Silver	1.62	+/-5	U	10.0	P	07/17/2025	20:16	LB136534
	Sodium	868	+/-1000	U	2000	P	07/17/2025	20:16	LB136534
	Thallium	4.38	+/-20	U	40.0	P	07/17/2025	20:16	LB136534
	Vanadium	6.26	+/-20	U	40.0	P	07/17/2025	20:16	LB136534
	Zinc	3.50	+/-20	U	40.0	P	07/17/2025	20:16	LB136534
CCB06	Aluminum	12.5	+/-50	J	100	P	07/17/2025	20:51	LB136534
	Antimony	6.76	+/-25	U	50.0	P	07/17/2025	20:51	LB136534
	Arsenic	5.12	+/-10	U	20.0	P	07/17/2025	20:51	LB136534
	Barium	14.6	+/-50	U	100	P	07/17/2025	20:51	LB136534
	Beryllium	0.56	+/-3	U	6.00	P	07/17/2025	20:51	LB136534
	Cadmium	0.50	+/-3	U	6.00	P	07/17/2025	20:51	LB136534
	Calcium	234	+/-1000	U	2000	P	07/17/2025	20:51	LB136534

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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: T&A Construction Inc **SDG No.:** Q2600

Contract: TACO01 **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	07/17/2025	20:51	LB136534
	Cobalt	2.26	+/-15	U	30.0	P	07/17/2025	20:51	LB136534
	Copper	4.60	+/-10	U	20.0	P	07/17/2025	20:51	LB136534
	Iron	23.4	+/-50	U	100	P	07/17/2025	20:51	LB136534
	Lead	2.30	+/-6	U	12.0	P	07/17/2025	20:51	LB136534
	Magnesium	244	+/-1000	U	2000	P	07/17/2025	20:51	LB136534
	Manganese	5.94	+/-10	U	20.0	P	07/17/2025	20:51	LB136534
	Nickel	3.06	+/-20	U	40.0	P	07/17/2025	20:51	LB136534
	Potassium	918	+/-1000	U	2000	P	07/17/2025	20:51	LB136534
	Selenium	9.64	+/-10	U	20.0	P	07/17/2025	20:51	LB136534
	Silver	1.62	+/-5	U	10.0	P	07/17/2025	20:51	LB136534
	Sodium	868	+/-1000	U	2000	P	07/17/2025	20:51	LB136534
	Thallium	4.38	+/-20	U	40.0	P	07/17/2025	20:51	LB136534
	Vanadium	6.26	+/-20	U	40.0	P	07/17/2025	20:51	LB136534
	Zinc	3.50	+/-20	U	40.0	P	07/17/2025	20:51	LB136534

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Metals
- 3b -
PREPARATION BLANK SUMMARY

Client: T&A Construction Inc **SDG No.:** Q2600

Instrument: CV1

Sample ID	Analyte	Result (mg/Kg)	Acceptance Limit	Conc Qual	CRQL mg/Kg	M	Analysis Date	Analysis Time	Run
PB168891BL		**SOLID**		**Batch Number:**	**PB168891**		**Prep Date:**	**07/15/2025**	
	Mercury	0.0070	<0.013	U	0.013	CV	07/16/2025	12:12	LB136499

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Metals
- 3b -
PREPARATION BLANK SUMMARY

Client: T&A Construction Inc **SDG No.:** Q2600

Instrument: P5

Sample ID	Analyte	Result (mg/Kg)	Acceptance Limit	Conc Qual	CRQL mg/Kg	M	Analysis Date	Analysis Time	Run
PB168846BL		**SOLID**		**Batch Number:**	**PB168846**		**Prep Date:**	**07/14/2025**	
	Aluminum	2.11	<2.5	J	5.00	P	07/17/2025	18:58	LB136534
	Antimony	0.22	<1.25	U	2.50	P	07/17/2025	18:58	LB136534
	Arsenic	0.19	<0.5	U	1.00	P	07/17/2025	18:58	LB136534
	Barium	0.73	<2.5	U	5.00	P	07/17/2025	18:58	LB136534
	Beryllium	0.025	<0.15	U	0.30	P	07/17/2025	18:58	LB136534
	Cadmium	0.024	<0.15	U	0.30	P	07/17/2025	18:58	LB136534
	Calcium	11.1	<50	U	100	P	07/17/2025	18:58	LB136534
	Chromium	0.047	<0.25	U	0.50	P	07/17/2025	18:58	LB136534
	Cobalt	0.10	<0.75	U	1.50	P	07/17/2025	18:58	LB136534
	Copper	0.22	<0.5	U	1.00	P	07/17/2025	18:58	LB136534
	Iron	3.99	<2.5	U	5.00	P	07/17/2025	18:58	LB136534
	Lead	0.13	<0.3	U	0.60	P	07/17/2025	18:58	LB136534
	Magnesium	12.0	<50	U	100	P	07/17/2025	18:58	LB136534
	Manganese	0.14	<0.5	U	1.00	P	07/17/2025	18:58	LB136534
	Nickel	0.13	<1	U	2.00	P	07/17/2025	18:58	LB136534
	Potassium	27.7	<50	U	100	P	07/17/2025	18:58	LB136534
	Selenium	0.26	<0.5	U	1.00	P	07/17/2025	18:58	LB136534
	Silver	0.12	<0.25	U	0.50	P	07/17/2025	18:58	LB136534
	Sodium	17.8	<50	U	100	P	07/17/2025	18:58	LB136534
	Thallium	0.23	<1	U	2.00	P	07/17/2025	18:58	LB136534
	Vanadium	0.25	<1	U	2.00	P	07/17/2025	18:58	LB136534
	Zinc	0.11	<1	U	2.00	P	07/17/2025	18:58	LB136534

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Metals
- 4 -
INTERFERENCE CHECK SAMPLE

Client: T&A Construction Inc **SDG No.:** Q2600

Contract: TACO01 **Lab Code:** ACE

ICS Source: EPA **Instrument ID:** P5

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	243000	250000	97	216000	294000	07/17/2025	14:46	LB136534
	Antimony	20.2			-50	50	07/17/2025	14:46	LB136534
	Arsenic	-5.59			-20	20	07/17/2025	14:46	LB136534
	Barium	5.91	6.0	98	-94	106	07/17/2025	14:46	LB136534
	Beryllium	1.12			-6	6	07/17/2025	14:46	LB136534
	Cadmium	-0.95	1.0	95	-5	7	07/17/2025	14:46	LB136534
	Calcium	232000	240000	97	208000	282000	07/17/2025	14:46	LB136534
	Chromium	48.4	52.0	93	42	62	07/17/2025	14:46	LB136534
	Cobalt	21.5			-30	30	07/17/2025	14:46	LB136534
	Copper	-6.18	2.0	309	-18	22	07/17/2025	14:46	LB136534
	Iron	89400	100000	89	85600	116500	07/17/2025	14:46	LB136534
	Lead	1.20			-12	12	07/17/2025	14:46	LB136534
	Magnesium	242000	260000	93	216000	294000	07/17/2025	14:46	LB136534
	Manganese	3.52	7.0	50	-13	27	07/17/2025	14:46	LB136534
	Nickel	1.33	2.0	66	-38	42	07/17/2025	14:46	LB136534
	Potassium	3.55			0	0	07/17/2025	14:46	LB136534
	Selenium	-9.33			-20	20	07/17/2025	14:46	LB136534
	Silver	-1.63			-10	10	07/17/2025	14:46	LB136534
	Sodium	127			0	0	07/17/2025	14:46	LB136534
	Thallium	2.74			-40	40	07/17/2025	14:46	LB136534
	Vanadium	9.54			-40	40	07/17/2025	14:46	LB136534
	Zinc	11.6			-40	40	07/17/2025	14:46	LB136534
ICSAB01	Aluminum	243000	250000	97	209000	285000	07/17/2025	14:51	LB136534
	Antimony	586	620	94	525	711	07/17/2025	14:51	LB136534
	Arsenic	89.5	100	90	88.4	120	07/17/2025	14:51	LB136534
	Barium	490	540	91	437	637	07/17/2025	14:51	LB136534
	Beryllium	480	500	96	420	570	07/17/2025	14:51	LB136534
	Cadmium	954	970	98	826	1120	07/17/2025	14:51	LB136534
	Calcium	233000	230000	101	199000	271000	07/17/2025	14:51	LB136534
	Chromium	528	540	98	460	624	07/17/2025	14:51	LB136534
	Cobalt	493	480	103	404	548	07/17/2025	14:51	LB136534
	Copper	455	510	89	434	588	07/17/2025	14:51	LB136534
	Iron	90300	99000	91	84400	114500	07/17/2025	14:51	LB136534
	Lead	46.7	49.0	95	37	61	07/17/2025	14:51	LB136534
	Magnesium	242000	250000	97	210000	286000	07/17/2025	14:51	LB136534
	Manganese	475	510	93	430	584	07/17/2025	14:51	LB136534
	Nickel	941	950	99	810	1100	07/17/2025	14:51	LB136534
	Potassium	3.18			0	0	07/17/2025	14:51	LB136534
	Selenium	42.8	46.0	93	26	66	07/17/2025	14:51	LB136534
	Silver	204	200	102	170	232	07/17/2025	14:51	LB136534
	Sodium	145			0	0	07/17/2025	14:51	LB136534
	Thallium	91.9	110	84	68	148	07/17/2025	14:51	LB136534

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Metals
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INTERFERENCE CHECK SAMPLE

Client: T&A Construction Inc **SDG No.:** Q2600

Contract: TACO01 **Lab Code:** ACE

ICS Source: EPA **Instrument ID:** P5

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Low Limit (ug/L)	High Limit (ug/L)	Analysis Date	Analysis Time	Run Number
ICSAB01	Vanadium	470	490	96	417	565	07/17/2025	14:51	LB136534
	Zinc	999	950	105	809	1095	07/17/2025	14:51	LB136534

METAL QC DATA

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metals
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MATRIX SPIKE SUMMARY

client: T&A Construction Inc **level:** low **sdg no.:** Q2600

contract: TACO01 **lab code:** ACE

matrix: Solid **sample id:** Q2590-01 **client id:** NB-07-071125MS

Percent Solids for Sample: 96.6 **Spiked ID:** Q2590-01MS **Percent Solids for Spike Sample:** 96.6

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	mg/Kg	75 - 125	5140		4310		95.0	865		P
Antimony	mg/Kg	75 - 125	17.0		1.19	J	38.0	42	N	P
Arsenic	mg/Kg	75 - 125	38.5		1.94		38.0	96		P
Barium	mg/Kg	75 - 125	53.1		45.5		9.5	80		P
Beryllium	mg/Kg	75 - 125	9.16		0.34		9.5	93		P
Cadmium	mg/Kg	75 - 125	9.77		0.25	U	9.5	103		P
Calcium	mg/Kg	75 - 125	2060		2640		47.5	-1218		P
Chromium	mg/Kg	75 - 125	30.4		14.4		19.0	84		P
Cobalt	mg/Kg	75 - 125	16.0		5.95		9.5	106		P
Copper	mg/Kg	75 - 125	37.9		34.9		14.2	21	N	P
Iron	mg/Kg	75 - 125	10500		9610		140	632		P
Lead	mg/Kg	75 - 125	65.6		16.4		47.5	104		P
Magnesium	mg/Kg	75 - 125	3000		3040		95.0	-41		P
Manganese	mg/Kg	75 - 125	227		191		9.5	377		P
Mercury	mg/Kg	80 - 120	0.18		0.027		0.25	61	N	CV
Nickel	mg/Kg	75 - 125	35.7		10.2		23.7	107		P
Potassium	mg/Kg	75 - 125	1600		1210		470	81		P
Selenium	mg/Kg	75 - 125	77.9		2.37		95.0	80		P
Silver	mg/Kg	75 - 125	1.43		0.42	U	3.6	40	N	P
Sodium	mg/Kg	75 - 125	252		110		140	99		P
Thallium	mg/Kg	75 - 125	92.1		1.67	U	95.0	97		P
Vanadium	mg/Kg	75 - 125	28.6		15.1		14.2	95		P
Zinc	mg/Kg	75 - 125	39.1		26.8		9.5	130	N	P

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metals
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MATRIX SPIKE DUPLICATE SUMMARY

client: T&A Construction Inc **level:** low **sdg no.:** Q2600

contract: TACO01 **lab code:** ACE

matrix: Solid **sample id:** Q2590-01 **client id:** NB-07-071125MSD

Percent Solids for Sample: 96.6 **Spiked ID:** Q2590-01MSD **Percent Solids for Spike Sample:** 96.6

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	mg/Kg	75 - 125	5010		4310		95.9	723		P
Antimony	mg/Kg	75 - 125	16.5		1.19	J	38.3	40	N	P
Arsenic	mg/Kg	75 - 125	38.7		1.94		38.3	96		P
Barium	mg/Kg	75 - 125	52.6		45.5		9.6	74		P
Beryllium	mg/Kg	75 - 125	9.04		0.34		9.6	91		P
Cadmium	mg/Kg	75 - 125	9.80		0.25	U	9.6	102		P
Calcium	mg/Kg	75 - 125	1900		2640		47.9	-1544		P
Chromium	mg/Kg	75 - 125	29.7		14.4		19.2	80		P
Cobalt	mg/Kg	75 - 125	16.0		5.95		9.6	105		P
Copper	mg/Kg	75 - 125	40.8		34.9		14.4	41	N	P
Iron	mg/Kg	75 - 125	10300		9610		140	476		P
Lead	mg/Kg	75 - 125	65.0		16.4		47.9	102		P
Magnesium	mg/Kg	75 - 125	2910		3040		95.9	-140		P
Manganese	mg/Kg	75 - 125	218		191		9.6	280		P
Mercury	mg/Kg	80 - 120	0.20		0.027		0.26	68	N	CV
Nickel	mg/Kg	75 - 125	35.5		10.2		24.0	105		P
Potassium	mg/Kg	75 - 125	1650		1210		480	91		P
Selenium	mg/Kg	75 - 125	77.4		2.37		95.9	78		P
Silver	mg/Kg	75 - 125	1.39		0.42	U	3.6	39	N	P
Sodium	mg/Kg	75 - 125	246		110		140	95		P
Thallium	mg/Kg	75 - 125	92.4		1.67	U	95.9	96		P
Vanadium	mg/Kg	75 - 125	28.7		15.1		14.4	95		P
Zinc	mg/Kg	75 - 125	38.2		26.8		9.6	119		P

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Metals
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POST DIGEST SPIKE SUMMARY

Client: T&A Construction Inc **SDG No.:** Q2600

Contract: TACO01 **Lab Code:** ACE

Matrix: Solid **Level:** LOW **Client ID:** NB-07-071125A

Sample ID: Q2590-01 **Spiked ID:** Q2590-01A

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Antimony	mg/Kg	75 - 125	30.3		1.19	J	33.4	87		P
Copper	mg/Kg	75 - 125	44.9		34.9		12.5	80		P
Mercury	mg/Kg	80 - 120	0.26		0.027		0.26	91		CV
Silver	mg/Kg	75 - 125	2.59		0.42	U	3.10	84		P
Zinc	mg/Kg	75 - 125	33.0		26.8		8.30	74	N	P

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Metals

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DUPLICATE SAMPLE SUMMARY

Client: T&A Construction Inc **Level:** LOW **SDG No.:** Q2600

Contract: TACO01 **Lab Code:** ACE

Matrix: Solid **Sample ID:** Q2590-01 **Client ID:** NB-07-071125DUP

Percent Solids for Sample: 96.6 **Duplicate ID** Q2590-01DUP **Percent Solids for Spike Sample:** 96.6

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	mg/Kg	20	4310		4530		5		P
Antimony	mg/Kg	20	1.19	J	1.30	J	9		P
Arsenic	mg/Kg	20	1.94		2.16		11		P
Barium	mg/Kg	20	45.5		45.9		1		P
Beryllium	mg/Kg	20	0.34		0.37		7		P
Cadmium	mg/Kg	20	0.25	U	0.27	U			P
Calcium	mg/Kg	20	2640		2850		8		P
Chromium	mg/Kg	20	14.4		15.2		5		P
Cobalt	mg/Kg	20	5.95		6.24		5		P
Copper	mg/Kg	20	34.9		38.0		9		P
Iron	mg/Kg	20	9610		10300		7		P
Lead	mg/Kg	20	16.4		17.7		8		P
Magnesium	mg/Kg	20	3040		3170		4		P
Manganese	mg/Kg	20	191		205		7		P
Mercury	mg/Kg	20	0.027		0.026		4		CV
Nickel	mg/Kg	20	10.2		10.8		5		P
Potassium	mg/Kg	20	1210		1190		2		P
Selenium	mg/Kg	20	2.37		2.53		7		P
Silver	mg/Kg	20	0.42	U	0.45	U			P
Sodium	mg/Kg	20	110		120		9		P
Thallium	mg/Kg	20	1.67	U	1.80	U			P
Vanadium	mg/Kg	20	15.1		15.9		5		P
Zinc	mg/Kg	20	26.8		28.6		6		P

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

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Metals

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DUPLICATE SAMPLE SUMMARY

Client: T&A Construction Inc **Level:** LOW **SDG No.:** Q2600

Contract: TACO01 **Lab Code:** ACE

Matrix: Solid **Sample ID:** Q2590-01MS **Client ID:** NB-07-071125MSD

Percent Solids for Sample: 96.6 **Duplicate ID** Q2590-01MSD **Percent Solids for Spike Sample:** 96.6

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	mg/Kg	20	5140		5010		3		P
Antimony	mg/Kg	20	17.0		16.5		3		P
Arsenic	mg/Kg	20	38.5		38.7		1		P
Barium	mg/Kg	20	53.1		52.6		1		P
Beryllium	mg/Kg	20	9.16		9.04		1		P
Cadmium	mg/Kg	20	9.77		9.80		0		P
Calcium	mg/Kg	20	2060		1900		8		P
Chromium	mg/Kg	20	30.4		29.7		2		P
Cobalt	mg/Kg	20	16.0		16.0		0		P
Copper	mg/Kg	20	37.9		40.8		7		P
Iron	mg/Kg	20	10500		10300		2		P
Lead	mg/Kg	20	65.6		65.0		1		P
Magnesium	mg/Kg	20	3000		2910		3		P
Manganese	mg/Kg	20	227		218		4		P
Mercury	mg/Kg	20	0.18		0.20		12		CV
Nickel	mg/Kg	20	35.7		35.5		1		P
Potassium	mg/Kg	20	1600		1650		3		P
Selenium	mg/Kg	20	77.9		77.4		1		P
Silver	mg/Kg	20	1.43		1.39		3		P
Sodium	mg/Kg	20	252		246		2		P
Thallium	mg/Kg	20	92.1		92.4		0		P
Vanadium	mg/Kg	20	28.6		28.7		0		P
Zinc	mg/Kg	20	39.1		38.2		2		P

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

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LABORATORY CONTROL SAMPLE SUMMARY

Client: T&A Construction Inc **SDG No.:** Q2600

Contract: TACO01 **Lab Code:** ACE

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB168846BS							
Aluminum	mg/Kg	100	101		101	80 - 120	P
Antimony	mg/Kg	40.0	40.1		100	80 - 120	P
Arsenic	mg/Kg	40.0	35.5		89	80 - 120	P
Barium	mg/Kg	10.0	10.2		102	80 - 120	P
Beryllium	mg/Kg	10.0	10.3		103	80 - 120	P
Cadmium	mg/Kg	10.0	9.35		94	80 - 120	P
Calcium	mg/Kg	50.0	50.2	J	100	80 - 120	P
Chromium	mg/Kg	20.0	19.6		98	80 - 120	P
Cobalt	mg/Kg	10.0	9.66		97	80 - 120	P
Copper	mg/Kg	15.0	16.0		107	80 - 120	P
Iron	mg/Kg	150	162		108	80 - 120	P
Lead	mg/Kg	50.0	46.8		94	80 - 120	P
Magnesium	mg/Kg	100	101		101	80 - 120	P
Manganese	mg/Kg	10.0	9.98		100	80 - 120	P
Nickel	mg/Kg	25.0	24.3		97	80 - 120	P
Potassium	mg/Kg	500	507		101	80 - 120	P
Selenium	mg/Kg	100	97.2		97	80 - 120	P
Silver	mg/Kg	3.8	3.68		97	80 - 120	P
Sodium	mg/Kg	150	137		91	80 - 120	P
Thallium	mg/Kg	100	98.8		99	80 - 120	P
Vanadium	mg/Kg	15.0	14.6		97	80 - 120	P
Zinc	mg/Kg	10.0	10.4		104	80 - 120	P

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LABORATORY CONTROL SAMPLE SUMMARY

Client: T&A Construction Inc **SDG No.:** Q2600

Contract: TACO01 **Lab Code:** ACE

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB168891BS							
Mercury	mg/Kg	0.24	0.24		100	80 - 120	CV

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Metals

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ICP SERIAL DILUTIONS

SAMPLE NO.

NB-07-071125L

Lab Name: Alliance **Contract:** TACO01

Lab Code: ACE **Lb No.:** lb136534 **Lab Sample ID :** Q2590-01L **SDG No.:** Q2600

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

Concentration Units: mg/Kg

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Aluminum	4310		4530		5		P
Antimony	1.19	J	1.01	J	15		P
Arsenic	1.94		2.06	J	6		P
Barium	45.5		46.2		2		P
Beryllium	0.34		0.40	J	16		P
Cadmium	0.25	U	1.25	U			P
Calcium	2640		2870		9		P
Chromium	14.4		15.3		6		P
Cobalt	5.95		6.23	J	5		P
Copper	34.9		39.9		14		P
Iron	9610		11800		23		P
Lead	16.4		16.6		1		P
Magnesium	3040		3270		7		P
Manganese	191		206		8		P
Mercury	0.027		0.065	U	100.0		CV
Nickel	10.2		9.53		7		P
Potassium	1210		1100		10		P
Selenium	2.37		2.26	J	4		P
Silver	0.42	U	2.09	U			P
Sodium	110		126	J	14		P
Thallium	1.67	U	8.35	U			P
Vanadium	15.1		15.3		2		P
Zinc	26.8		28.9		8		P

METAL PREPARATION & INSTRUMENT DATA

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

Metals
- 11 -
ICP INTERELEMENT CORRECTION FACTORS

Client: T&A Construction Inc **SDG No.:** Q2600

Contract: TACO01 **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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Metals
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ICP INTERELEMENT CORRECTION FACTORS

Client: T&A Construction Inc **SDG No.:** Q2600

Contract: TACO01 **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: T&A Construction Inc **SDG No.:** Q2600

Contract: TACO01 **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
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ICP INTERELEMENT CORRECTION FACTORS

Client: T&A Construction Inc **SDG No.:** Q2600

Contract: TACO01 **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: T&A Construction Inc **SDG No.:** Q2600

Contract: TACO01 **Lab Code:** ACE

Instrument ID: **Date:**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

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

METAL PREPARATION & ANALYICAL SUMMARY

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
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Metals
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SAMPLE PREPARATION SUMMARY

Client: T&A Construction Inc **SDG No.:** Q2600

Contract: TACO01 **Lab Code:** ACE **Method:**

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(g)	Final Sample Volume (mL)	Percent Solids
Batch Number:	**PB168846**						
PB168846BL	PB168846BL	MB	SOLID	07/14/2025	2.00	100.0	100.00
PB168846BS	PB168846BS	LCS	SOLID	07/14/2025	2.00	100.0	100.00
Q2590-01DUP	NB-07-071125DUP	DUP	SOLID	07/14/2025	2.30	100.0	96.60
Q2590-01MS	NB-07-071125MS	MS	SOLID	07/14/2025	2.18	100.0	96.60
Q2590-01MSD	NB-07-071125MSD	MSD	SOLID	07/14/2025	2.16	100.0	96.60
Q2600-01	TRENCH	SAM	SOLID	07/14/2025	2.13	100.0	75.50
Q2600-05	STOCK-PILE	SAM	SOLID	07/14/2025	2.36	100.0	82.10
Q2600-09	END-OF-TRENCH	SAM	SOLID	07/14/2025	2.37	100.0	85.20

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SAMPLE PREPARATION SUMMARY

Client: T&A Construction Inc **SDG No.:** Q2600

Contract: TACO01 **Lab Code:** ACE **Method:**

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(g)	Final Sample Volume (mL)	Percent Solids
Batch Number:	**PB168891**						
PB168891BL	PB168891BL	MB	SOLID	07/15/2025	0.56	35.0	100.00
PB168891BS	PB168891BS	LCS	SOLID	07/15/2025	0.59	35.0	100.00
Q2590-01DUP	NB-7-071125DUP	DUP	SOLID	07/15/2025	0.57	35.0	96.60
Q2590-01MS	NB-07-071125MS	MS	SOLID	07/15/2025	0.58	35.0	96.60
Q2590-01MSD	NB-07-071125MSD	MSD	SOLID	07/15/2025	0.56	35.0	96.60
Q2600-01	TRENCH	SAM	SOLID	07/15/2025	0.55	35.0	75.50
Q2600-05	STOCK-PILE	SAM	SOLID	07/15/2025	0.56	35.0	82.10
Q2600-09	END-OF-TRENCH	SAM	SOLID	07/15/2025	0.52	35.0	85.20

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metals
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ANALYSIS RUN LOG

Client: T&A Construction Inc **Contract:** TACO01

Lab code: ACE **Sdg no.:** Q2600

Instrument id number: **Method:** **Run number:** LB136499

Start date: 07/16/2025 **End date:** 07/16/2025

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1142	HG
S0.2	S0.2	1	1144	HG
S2.5	S2.5	1	1146	HG
S5	S5	1	1149	HG
S7.5	S7.5	1	1151	HG
S10	S10	1	1153	HG
ICV29	ICV29	1	1156	HG
ICB29	ICB29	1	1159	HG
CCV09	CCV09	1	1201	HG
CCB09	CCB09	1	1203	HG
CRA	CRA	1	1206	HG
PB168891BL	PB168891BL	1	1212	HG
PB168891BS	PB168891BS	1	1219	HG
Q2590-01DUP	NB-7-071125DUP	1	1234	HG
Q2590-01MS	NB-07-071125MS	1	1236	HG
CCV10	CCV10	1	1238	HG
CCB10	CCB10	1	1243	HG
Q2590-01MSD	NB-07-071125MSD	1	1245	HG
Q2600-01	TRENCH	1	1257	HG
Q2600-05	STOCK-PILE	1	1259	HG
Q2600-09	END-OF-TRENCH	1	1302	HG
CCV11	CCV11	1	1312	HG
CCB11	CCB11	1	1314	HG
CCV12	CCV12	1	1340	HG
CCB12	CCB12	1	1342	HG
CCV13	CCV13	1	1407	HG
CCB13	CCB13	1	1410	HG
Q2590-01L	NB-7-071125L	5	1414	HG
Q2590-01A	NB-7-071125A	1	1417	HG
CCV14	CCV14	1	1425	HG
CCB14	CCB14	1	1428	HG

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metals
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ANALYSIS RUN LOG

Client: T&A Construction Inc **Contract:** TACO01

Lab code: ACE **Sdg no.:** Q2600

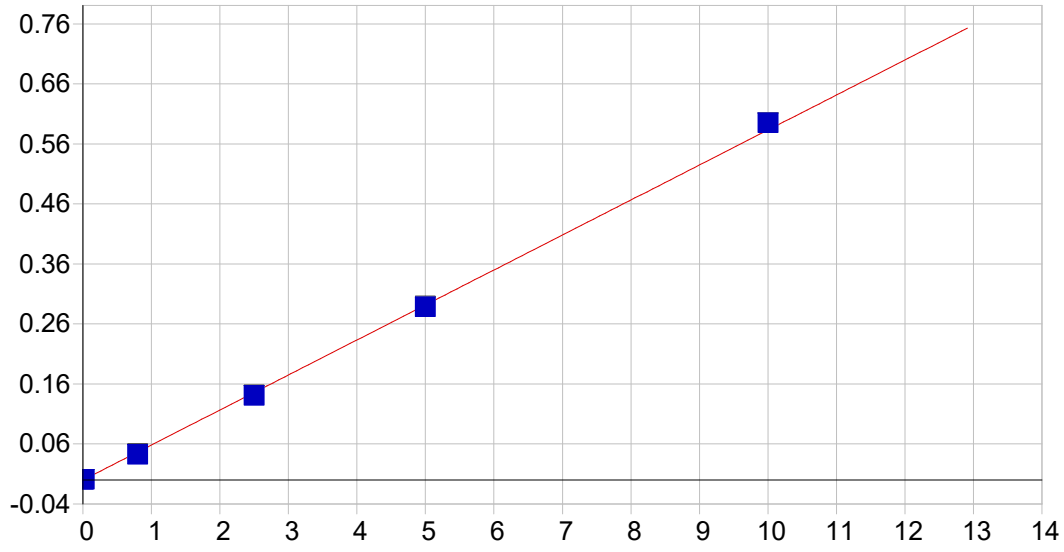
Instrument id number: **Method:** **Run number:** LB136534

Start date: 07/17/2025 **End date:** 07/17/2025

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1323	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	1328	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	1333	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	1338	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	1343	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	1348	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	1414	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	1424	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	1429	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	1439	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	1446	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	1451	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	1456	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	1501	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	1544	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	1549	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q2600-01	TRENCH	1	1637	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q2600-05	STOCK-PILE	1	1642	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q2600-09	END-OF-TRENCH	1	1647	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	1718	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	1736	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q2590-01A	NB-07-071125A	1	1840	Ag,Cu,Sb,Zn
CCV04	CCV04	1	1845	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	1850	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
PB168846BL	PB168846BL	1	1858	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
PB168846BS	PB168846BS	1	1916	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q2590-01DUP	NB-07-071125DUP	1	1941	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q2590-01MS	NB-07-071125MS	1	1951	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q2590-01MSD	NB-07-071125MSD	1	1956	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
Q2590-01L	NB-07-071125L	5	2001	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	2011	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	2016	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	2046	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	2051	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn

METAL
RAW DATA

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534



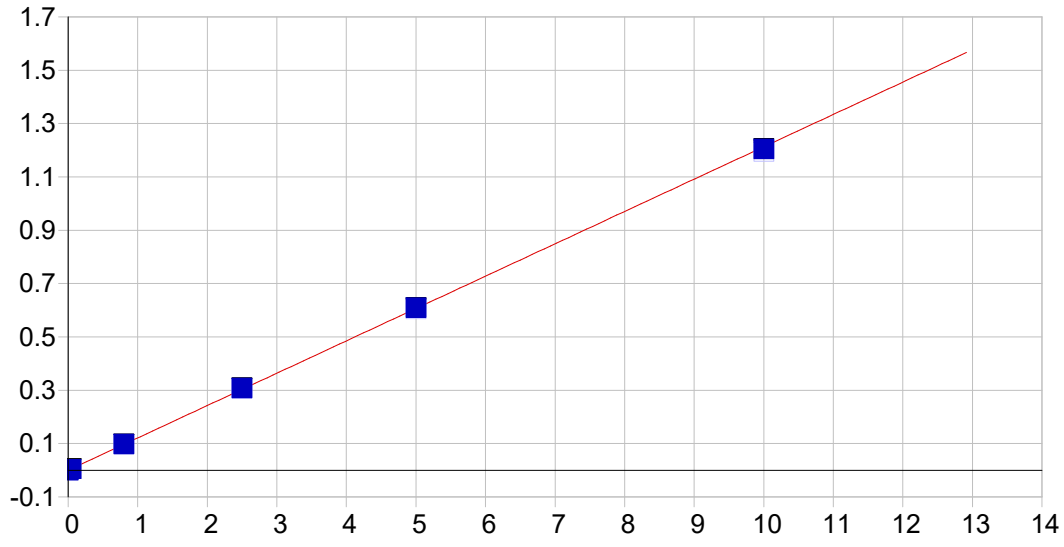
As 189.042 {479}

Date of Fit:	7/17/2025 14:35:45	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000047	Re-Slope:	1.000000
A1 (Gain):	0.058317	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999643	Status:	OK.
Std Error of Est:	0.000037		
Predicted MDL:	0.002292		
Predicted MQL:	0.007641		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00005	.000	1
S1	.02000	.01878	-.001	-6.09	.00105	.000	1
S2	.80000	.73289	-.067	-8.39	.04269	.000	1
S3	2.5000	2.4176	-.082	-3.30	.14092	.000	1
S4	5.0000	4.9477	-.052	-1.05	.28844	.001	1
S5	10.000	10.203	.203	2.03	.59487	.001	1

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534



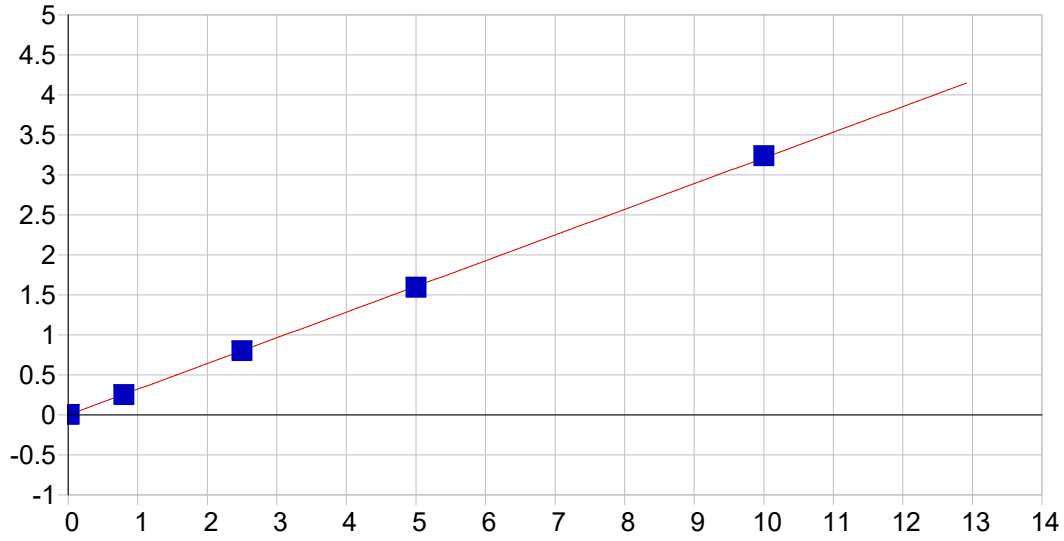
Tl 190.856 {477}

Date of Fit:	7/17/2025 14:35:45	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000013	Re-Slope:	1.000000
A1 (Gain):	0.121295	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999961	Status:	OK.
Std Error of Est:	0.000035		
Predicted MDL:	0.001643		
Predicted MQL:	0.005477		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00001	.000	1
S1	.04000	.04112	.001	2.79	.00486	.000	1
S2	.80000	.80552	.006	.690	.09693	.000	1
S3	2.5000	2.5408	.041	1.63	.30580	.000	1
S4	5.0000	5.0255	.025	.510	.60482	.001	1
S5	10.000	9.9271	-.073	-.729	1.1946	.003	1

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534



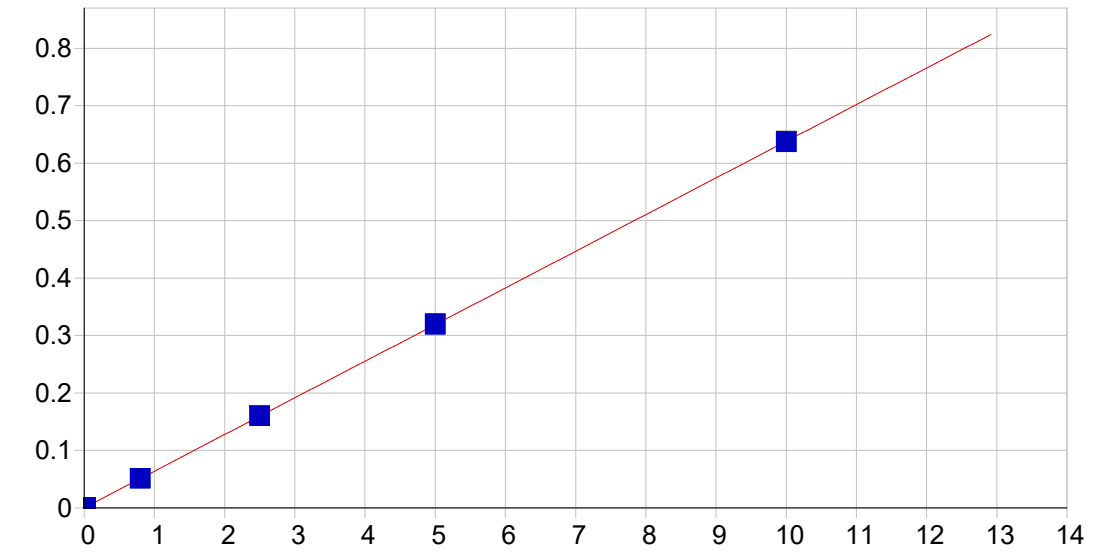
Pb 220.353 {453}

Date of Fit:	7/17/2025 14:35:45	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000117	Re-Slope:	1.000000
A1 (Gain):	0.321192	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999955	Status:	OK.
Std Error of Est:	0.000056		
Predicted MDL:	0.001311		
Predicted MQL:	0.004369		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00012	.000	1
S1	.01200	.01232	.000	2.68	.00399	.000	1
S2	.80000	.77840	-.022	-2.70	.24990	.000	1
S3	2.5000	2.4878	-.012	-.489	.79845	.002	1
S4	5.0000	4.9554	-.045	-.893	1.5903	.005	1
S5	10.000	10.078	.078	.782	3.2343	.005	1

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534



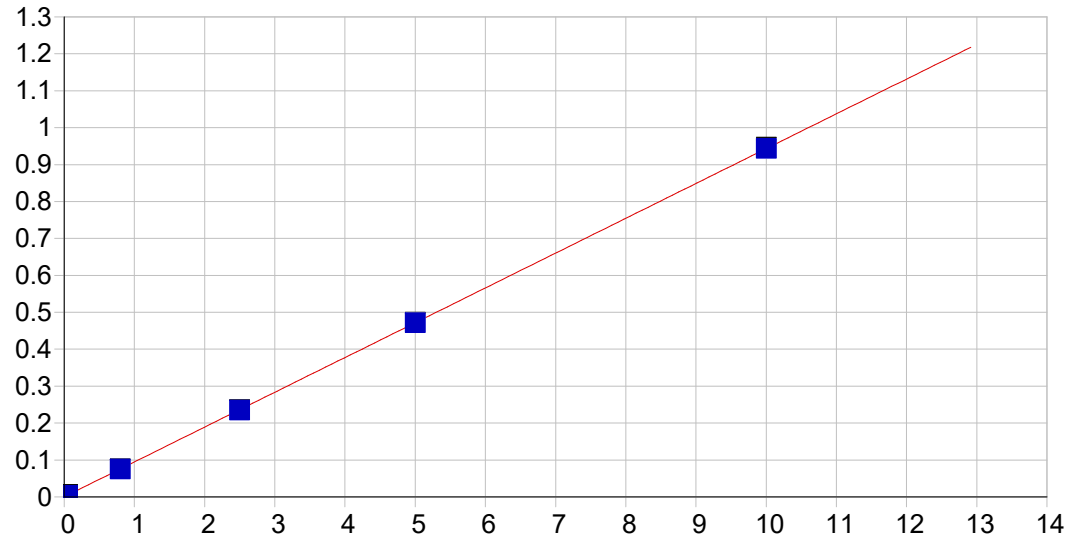
Se 196.090 {472}

Date of Fit:	7/17/2025 14:35:45	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000143	Re-Slope:	1.000000
A1 (Gain):	0.063792	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999981	Status:	OK.
Std Error of Est:	0.000009		
Predicted MDL:	0.003309		
Predicted MQL:	0.011031		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00014	.000	1
S1	.02000	.01662	-.003	-16.9	.00120	.000	1
S2	.80000	.79940	-.001	-.075	.05111	.000	1
S3	2.5000	2.5153	.015	.612	.16051	.001	1
S4	5.0000	5.0017	.002	.034	.31903	.001	1
S5	10.000	9.9870	-.013	-.130	.63686	.001	1

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534



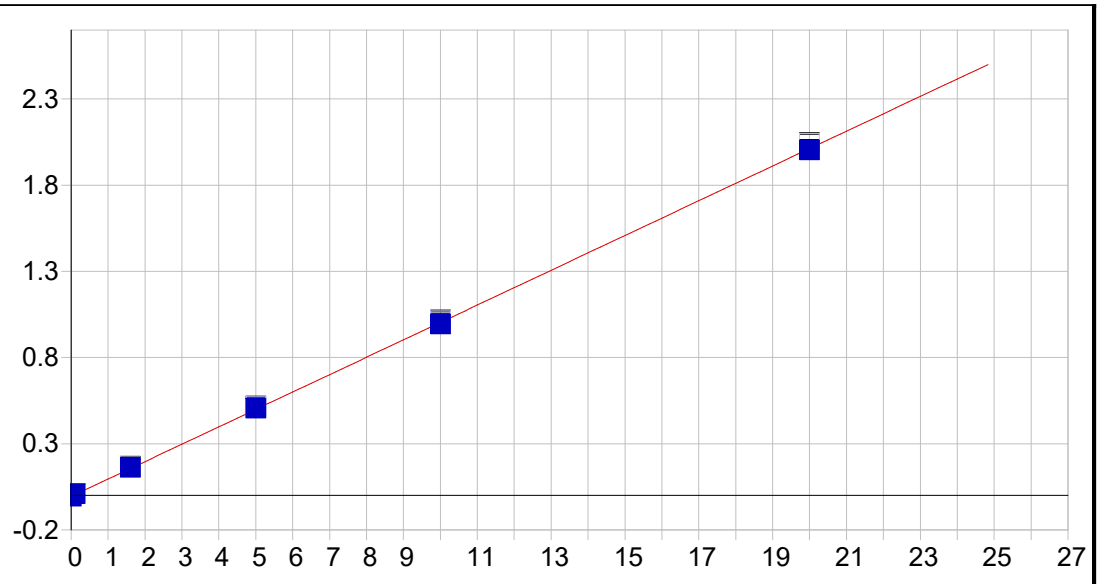
Sb 206.833 {463}

Date of Fit:	7/17/2025 14:35:45	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000418	Re-Slope:	1.000000
A1 (Gain):	0.094270	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999985	Status:	OK.
Std Error of Est:	0.000019		
Predicted MDL:	0.002834		
Predicted MQL:	0.009448		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00042	.000	1
S1	.05000	.05455	.005	9.10	.00551	.000	1
S2	.80000	.79174	-.008	-1.03	.07494	.000	1
S3	2.5000	2.4915	-.009	-.342	.23493	.000	1
S4	5.0000	5.0007	.001	.014	.47112	.001	1
S5	10.000	10.012	.012	.116	.94279	.003	1

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534



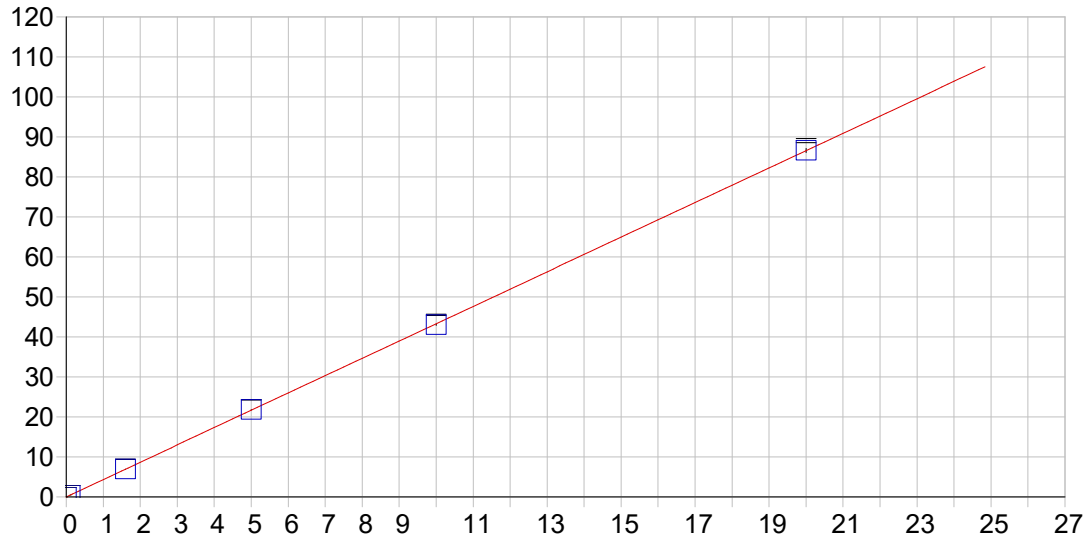
Al 396.152 { 85}

Date of Fit:	7/17/2025 14:35:45	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.005575	Re-Slope:	1.000000
A1 (Gain):	0.100907	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999687	Status:	OK.
Std Error of Est:	0.000191		
Predicted MDL:	0.022120		
Predicted MQL:	0.073733		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00005	-.000	.000	-.00558	.002	1
S1	.10000	.14375	.044	43.8	.00968	.001	1
S2	1.6000	1.6644	.064	4.03	.16538	.004	1
S3	5.0000	5.0674	.067	1.35	.51515	.003	1
S4	10.000	9.9075	-.093	-.925	1.0129	.004	1
S5	20.000	19.915	-.085	-.427	2.0415	.004	1

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534



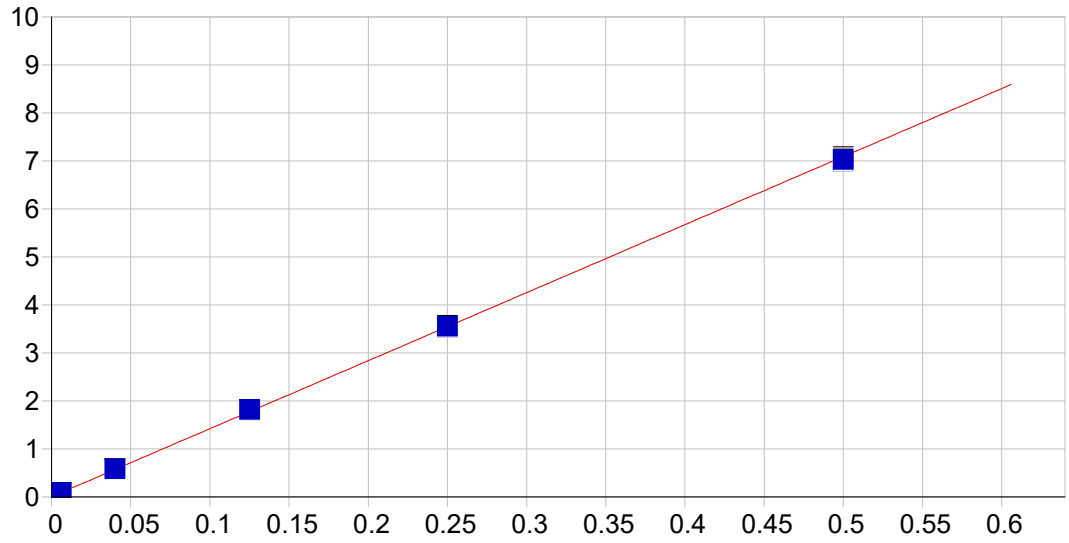
Ba 493.409 { 68}

Date of Fit:	7/17/2025 14:35:45	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.016779	Re-Slope:	1.000000
A1 (Gain):	4.327775	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999991	Status:	OK.
Std Error of Est:	0.001392		
Predicted MDL:	0.000951		
Predicted MQL:	0.003169		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.01677	.001	1
S1	.10000	.10292	.003	2.92	.46221	.008	1
S2	1.6000	1.5963	-.004	-.233	6.9251	.013	1
S3	5.0000	5.0400	.040	.799	21.829	.041	1
S4	10.000	9.9482	-.052	-.518	43.070	.164	1
S5	20.000	20.013	.013	.063	86.627	.532	1

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534



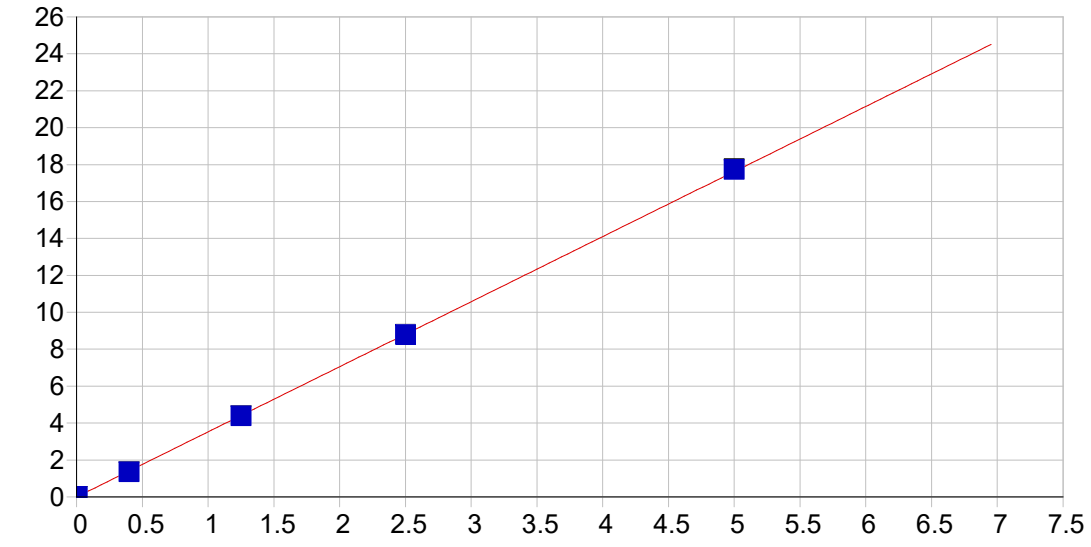
Be 234.861 {144}

Date of Fit:	7/17/2025 14:35:45	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.004112	Re-Slope:	1.000000
A1 (Gain):	14.170949	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999919	Status:	OK.
Std Error of Est:	0.000514		
Predicted MDL:	0.000112		
Predicted MQL:	0.000372		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00410	.001	1
S1	.00600	.00625	.000	4.16	.09177	.001	1
S2	.04000	.04103	.001	2.58	.58179	.005	1
S3	.12500	.12792	.003	2.34	1.8051	.005	1
S4	.25000	.25030	.000	.121	3.5275	.021	1
S5	.50000	.49549	-.005	-.901	6.9785	.063	1

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534



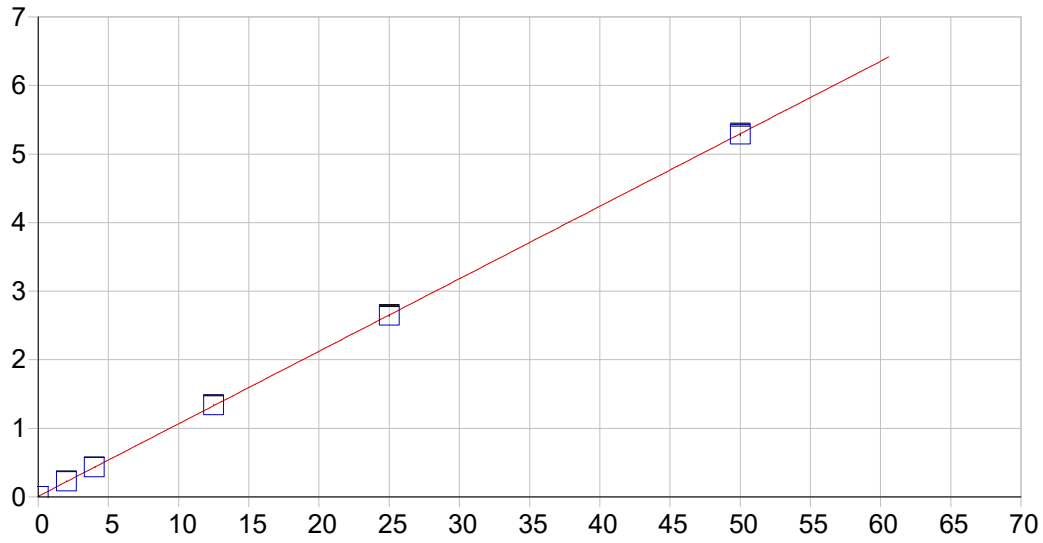
Cd 214.438 {457}

Date of Fit:	7/17/2025 14:35:45	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000275	Re-Slope:	1.000000
A1 (Gain):	3.524866	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999944	Status:	OK.
Std Error of Est:	0.000339		
Predicted MDL:	0.000074		
Predicted MQL:	0.000247		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00028	.000	1
S1	.00600	.00568	-.000	-5.32	.02031	.000	1
S2	.40000	.38250	-.017	-4.37	1.3487	.001	1
S3	1.2500	1.2444	-.006	-.448	4.3870	.004	1
S4	2.5000	2.4921	-.008	-.317	8.7852	.027	1
S5	5.0000	5.0313	.031	.627	17.736	.028	1

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534



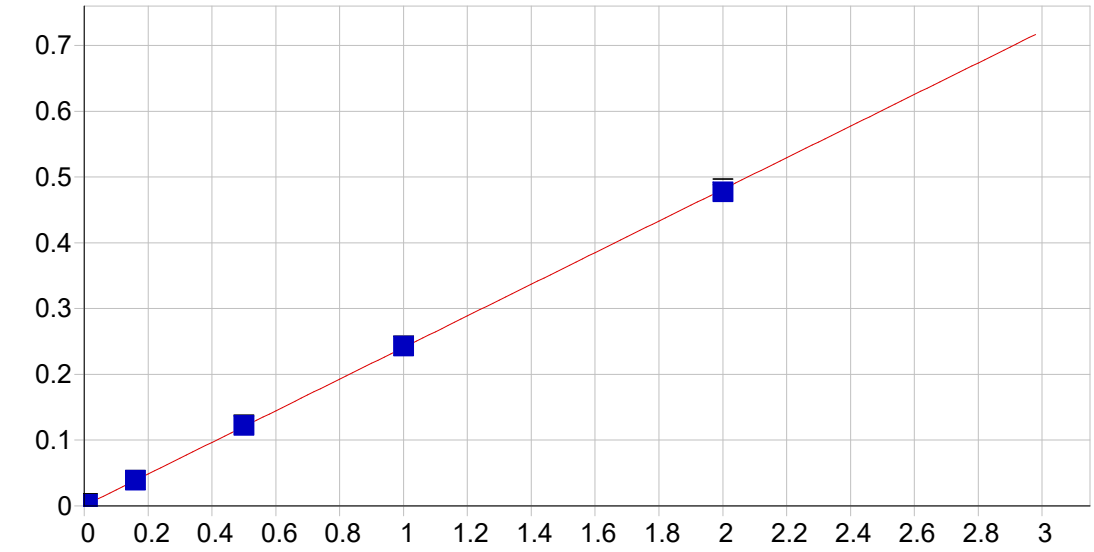
Ca 373.690 { 90}

Date of Fit:	7/17/2025 14:35:45	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.009487	Re-Slope:	1.000000
A1 (Gain):	0.105723	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999983	Status:	OK.
Std Error of Est:	0.000322		
Predicted MDL:	0.019964		
Predicted MQL:	0.066546		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00008	-.000	.000	.00948	.002	1
S1	2.0000	2.0678	.068	3.39	.22810	.005	1
S2	4.0000	4.0167	.017	.416	.43414	.002	1
S3	12.500	12.571	.071	.564	1.3385	.007	1
S4	25.000	24.934	-.066	-.265	2.6456	.014	1
S5	50.000	49.911	-.089	-.178	5.2862	.022	1

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534



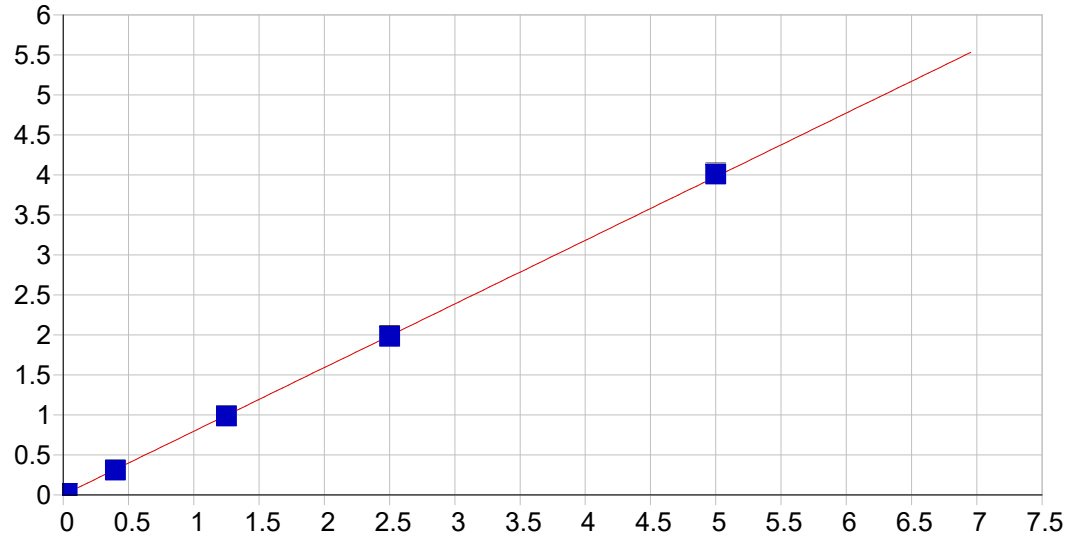
Cr 267.716 {126}

Date of Fit:	7/17/2025 14:35:45	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000392	Re-Slope:	1.000000
A1 (Gain):	0.240439	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999957	Status:	OK.
Std Error of Est:	0.000017		
Predicted MDL:	0.000919		
Predicted MQL:	0.003064		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00039	.000	1
S1	.01000	.01035	.000	3.54	.00288	.000	1
S2	.16000	.15961	-.000	-.244	.03880	.000	1
S3	.50000	.50709	.007	1.42	.12242	.001	1
S4	1.0000	1.0088	.009	.878	.24316	.001	1
S5	2.0000	1.9842	-.016	-.791	.47790	.004	1

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534



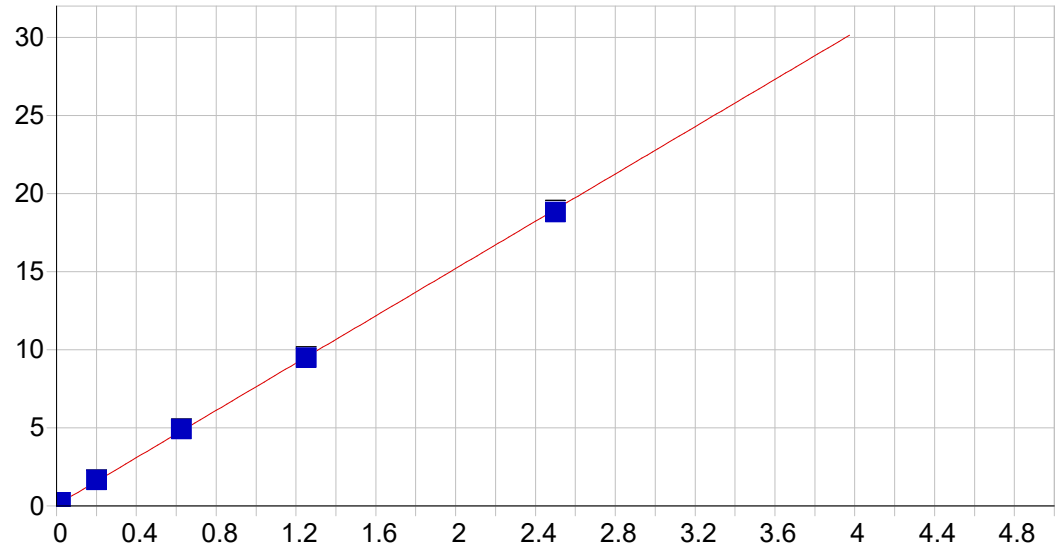
Co 228.616 {448}

Date of Fit:	7/17/2025 14:35:45	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000189	Re-Slope:	1.000000
A1 (Gain):	0.795497	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999943	Status:	OK.
Std Error of Est:	0.000172		
Predicted MDL:	0.000331		
Predicted MQL:	0.001105		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00019	.000	1
S1	.03000	.03025	.000	.846	.02412	.000	1
S2	.40000	.38603	-.014	-3.49	.30766	.000	1
S3	1.2500	1.2354	-.015	-1.17	.98415	.001	1
S4	2.5000	2.4881	-.012	-.475	1.9819	.006	1
S5	5.0000	5.0402	.040	.804	4.0145	.008	1

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534



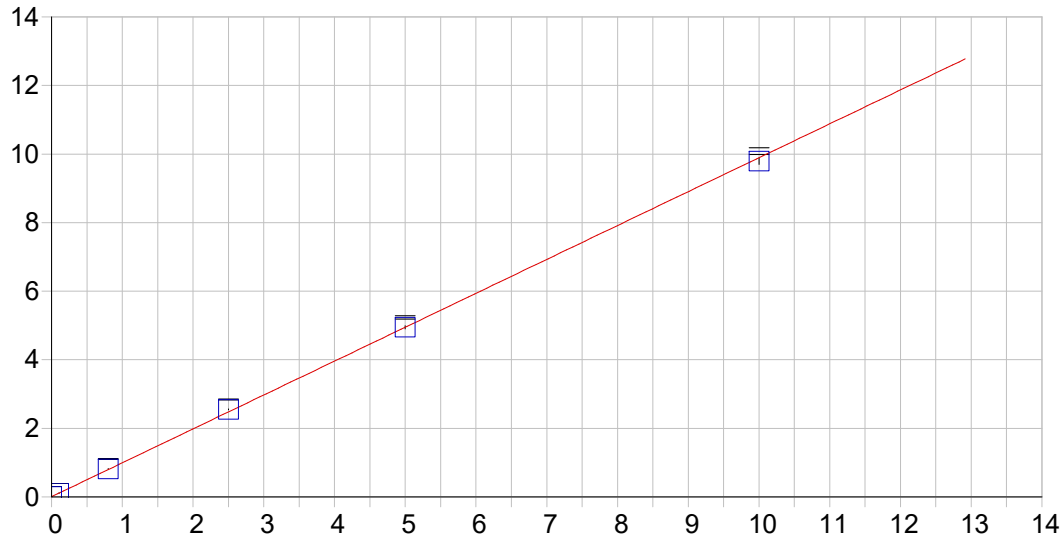
Cu 324.754 {104}

Date of Fit:	7/17/2025 14:35:45	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.060966	Re-Slope:	1.000000
A1 (Gain):	7.568102	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999842	Status:	OK.
Std Error of Est:	0.001577		
Predicted MDL:	0.000508		
Predicted MQL:	0.001692		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.06094	.004	1
S1	.02000	.02202	.002	10.1	.22765	.007	1
S2	.20000	.21123	.011	5.62	1.6604	.021	1
S3	.62500	.64029	.015	2.45	4.9091	.026	1
S4	1.2500	1.2449	-.005	-.408	9.4871	.065	1
S5	2.5000	2.4766	-.023	-.937	18.813	.120	1

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534



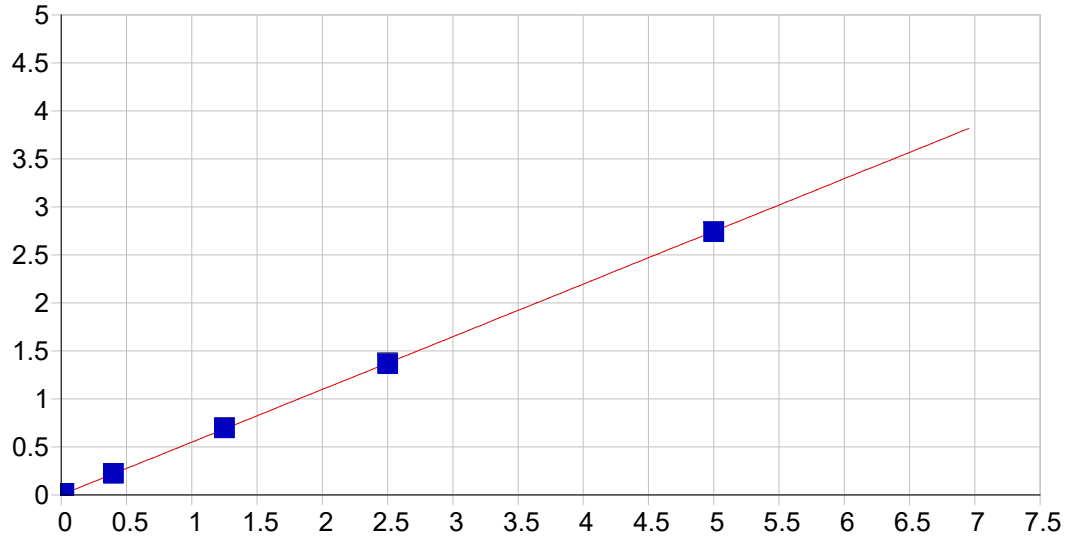
Fe 259.837 {130}

Date of Fit:	7/17/2025 14:35:45	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.005985	Re-Slope:	1.000000
A1 (Gain):	0.988684	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999886	Status:	OK.
Std Error of Est:	0.000785		
Predicted MDL:	0.001902		
Predicted MQL:	0.006341		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00597	.000	1
S1	.10000	.10760	.008	7.60	.11237	.001	1
S2	.80000	.81886	.019	2.36	.81558	.011	1
S3	2.5000	2.5743	.074	2.97	2.5511	.012	1
S4	5.0000	4.9982	-.002	-.036	4.9476	.048	1
S5	10.000	9.9011	-.099	-.989	9.7950	.102	1

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534



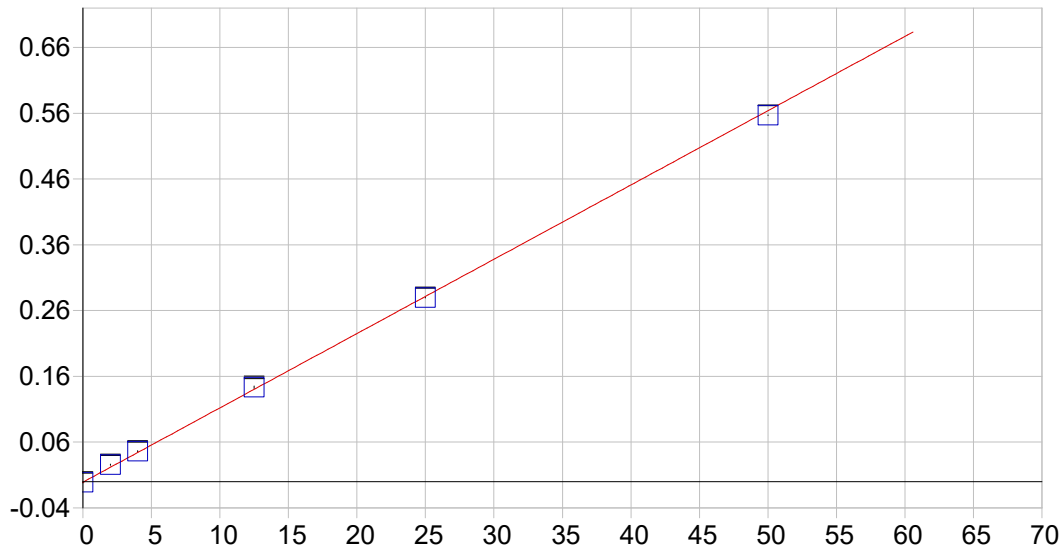
Mn 257.610 {131}

Date of Fit:	7/17/2025 14:35:45	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000754	Re-Slope:	1.000000
A1 (Gain):	0.548892	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999973	Status:	OK.
Std Error of Est:	0.000067		
Predicted MDL:	0.001187		
Predicted MQL:	0.003957		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00075	.001	1
S1	.02000	.02120	.001	5.98	.01241	.000	1
S2	.40000	.40744	.007	1.86	.22459	.000	1
S3	1.2500	1.2654	.015	1.23	.69594	.003	1
S4	2.5000	2.4871	-.013	-.515	1.3672	.006	1
S5	5.0000	4.9888	-.011	-.223	2.7415	.002	1

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534



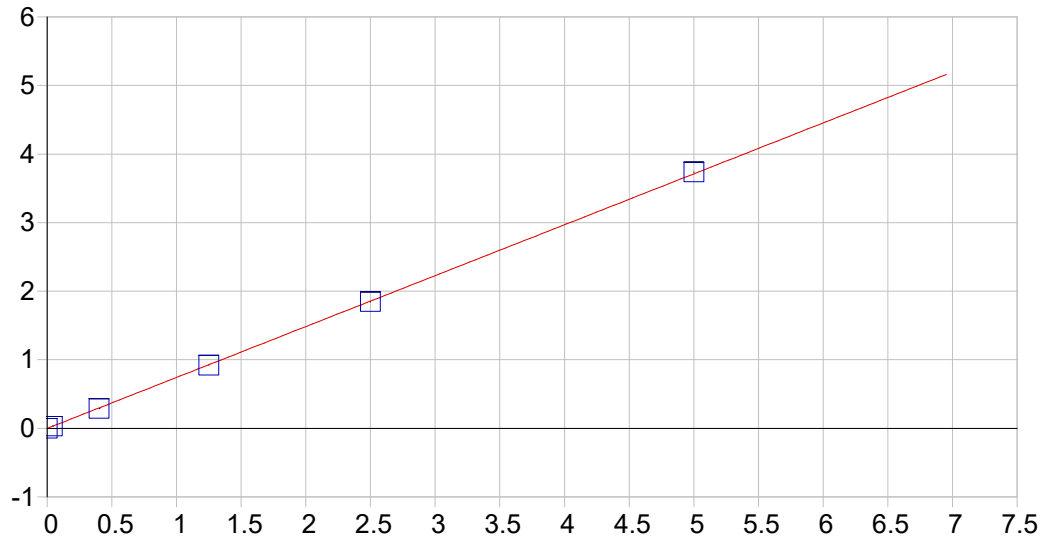
Mg 279.079 {121}

Date of Fit:	7/17/2025 14:35:45	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000889	Re-Slope:	1.000000
A1 (Gain):	0.011298	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999589	Status:	OK.
Std Error of Est:	0.000171		
Predicted MDL:	0.067772		
Predicted MQL:	0.225907		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00042	-.000	.000	-.00089	.001	1
S1	2.0000	2.3365	.337	16.8	.02551	.001	1
S2	4.0000	4.1539	.154	3.85	.04604	.001	1
S3	12.500	12.769	.269	2.16	.14338	.002	1
S4	25.000	24.854	-.146	-.585	.27991	.001	1
S5	50.000	49.386	-.614	-1.23	.55708	.001	1

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534



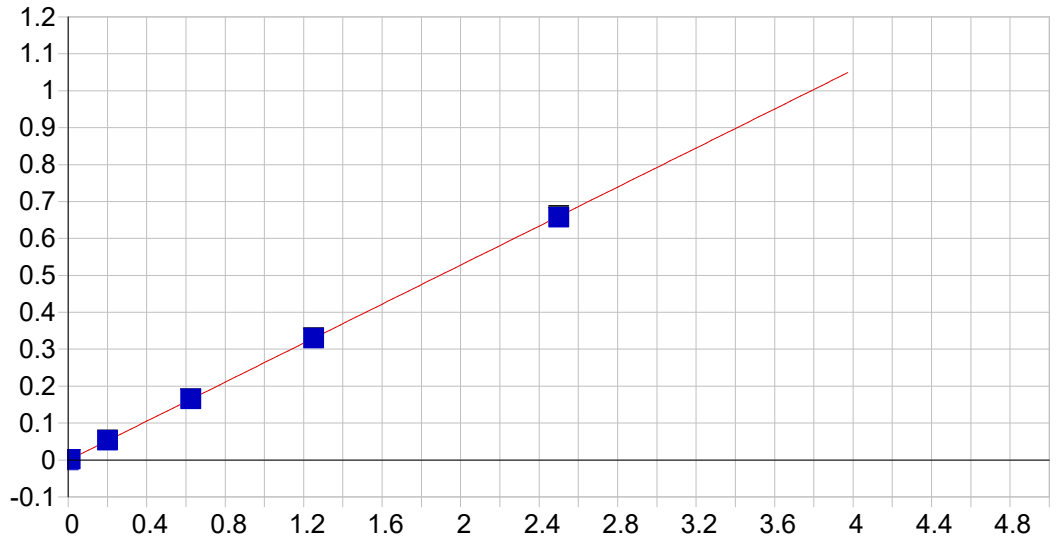
Ni 231.604 {446}

Date of Fit:	7/17/2025 14:35:45	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000352	Re-Slope:	1.000000
A1 (Gain):	0.742318	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999952	Status:	OK.
Std Error of Est:	0.000170		
Predicted MDL:	0.000415		
Predicted MQL:	0.001384		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00035	.000	1
S1	.04000	.03974	-.000	-.644	.02915	.000	1
S2	.40000	.38637	-.014	-3.41	.28645	.001	1
S3	1.2500	1.2392	-.011	-.863	.91954	.002	1
S4	2.5000	2.4885	-.012	-.462	1.8469	.005	1
S5	5.0000	5.0362	.036	.724	3.7381	.005	1

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534



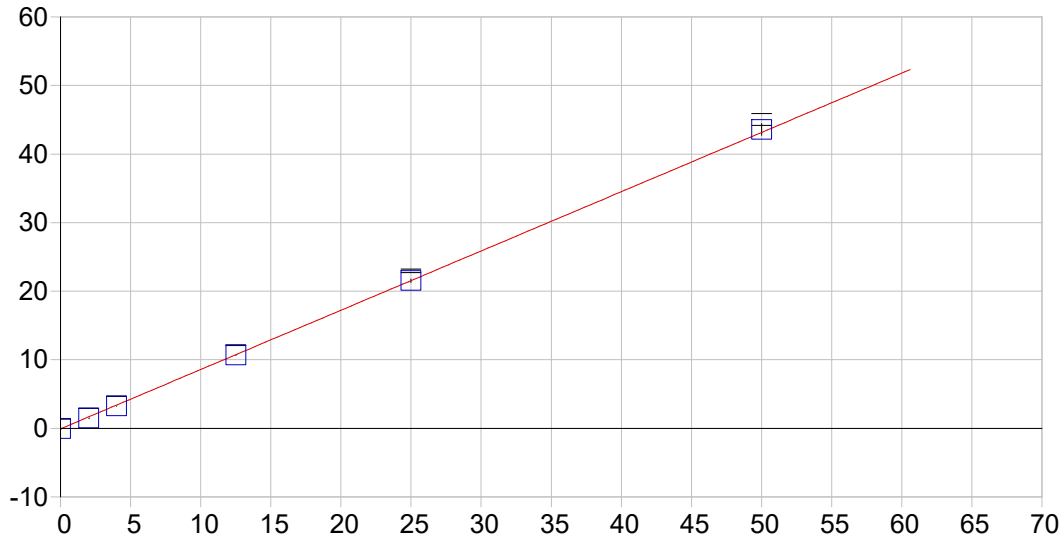
Ag 328.068 {103}

Date of Fit:	7/17/2025 14:35:45	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000533	Re-Slope:	1.000000
A1 (Gain):	0.264181	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999983	Status:	OK.
Std Error of Est:	0.000013		
Predicted MDL:	0.001029		
Predicted MQL:	0.003429		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00053	.000	1
S1	.01000	.01024	.000	2.40	.00217	.000	1
S2	.20000	.20446	.004	2.23	.05344	.000	1
S3	.62500	.62814	.003	.502	.16527	.000	1
S4	1.2500	1.2515	.001	.118	.32981	.001	1
S5	2.5000	2.4907	-.009	-.373	.65690	.004	1

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534



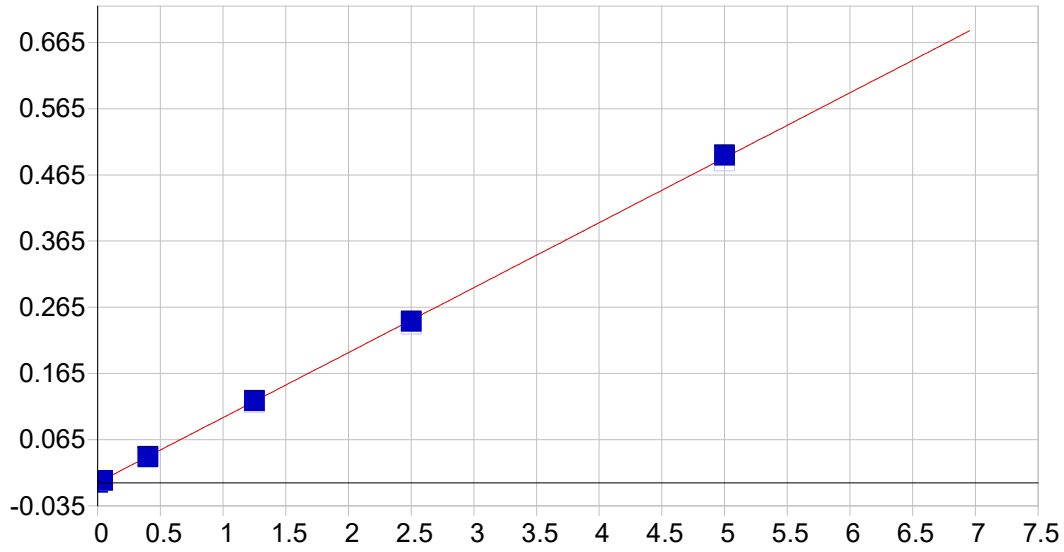
Na 818.326 { 41}

Date of Fit:	7/17/2025 14:35:45	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.065904	Re-Slope:	1.000000
A1 (Gain):	0.864376	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999787	Status:	OK.
Std Error of Est:	0.009445		
Predicted MDL:	0.012427		
Predicted MQL:	0.041424		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00031	.000	.000	-.06563	.009	1
S1	2.0000	1.7724	-.228	-11.4	1.4661	.006	1
S2	4.0000	3.8179	-.182	-4.55	3.2342	.036	1
S3	12.500	12.423	-.077	-.612	10.673	.041	1
S4	25.000	24.979	-.021	-.083	21.526	.276	1
S5	50.000	50.507	.507	1.01	43.591	.864	1

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534



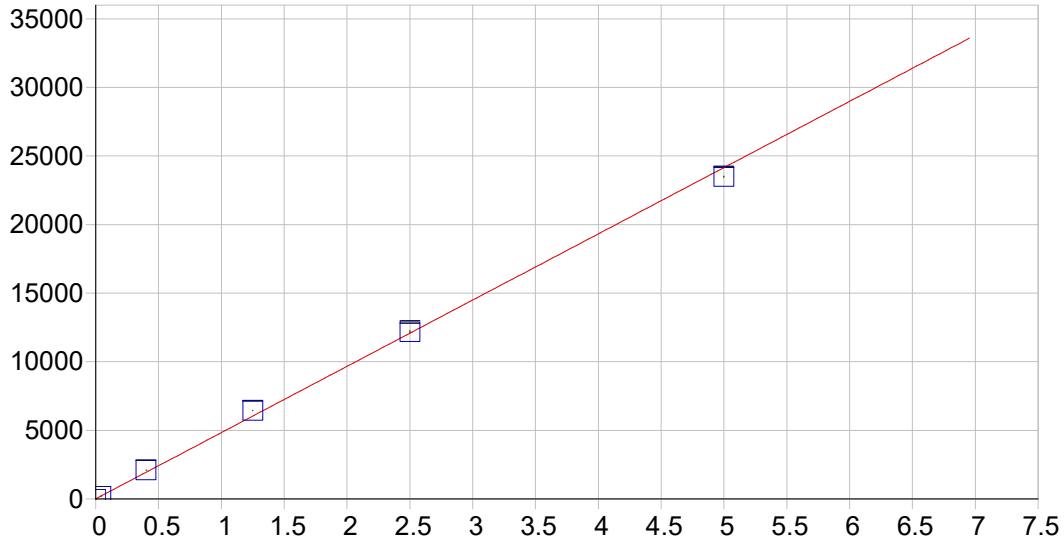
V 292.402 {115}

Date of Fit:	7/17/2025 14:35:45	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000292	Re-Slope:	1.000000
A1 (Gain):	0.098123	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999843	Status:	OK.
Std Error of Est:	0.000040		
Predicted MDL:	0.009044		
Predicted MQL:	0.030148		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00029	.001	1
S1	.04000	.03065	-.009	-23.4	.00313	.000	1
S2	.40000	.39280	-.007	-1.80	.03813	.001	1
S3	1.2500	1.2562	.006	.495	.12136	.001	1
S4	2.5000	2.4768	-.023	-.927	.23895	.001	1
S5	5.0000	5.0333	.033	.666	.48542	.001	1

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534



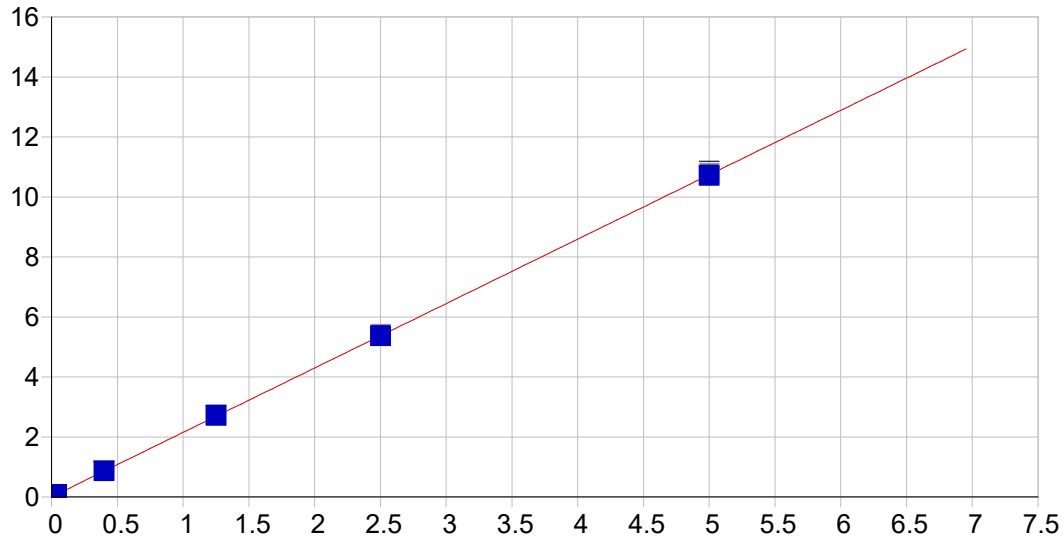
Zn 206.200 {464}

Date of Fit:	7/17/2025 14:35:45	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	5.427491	Re-Slope:	1.000000
A1 (Gain):	4830.063528	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999339	Status:	OK.
Std Error of Est:	4.122880		
Predicted MDL:	0.000248		
Predicted MQL:	0.000826		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	5.3874	.660	1
S1	.04000	.04322	.003	8.05	214.18	.543	1
S2	.40000	.43241	.032	8.10	2094.0	.405	1
S3	1.2500	1.3315	.081	6.52	6436.6	14.6	1
S4	2.5000	2.5205	.021	.822	12180.	85.8	1
S5	5.0000	4.8623	-.138	-2.75	23491.	49.1	1

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534



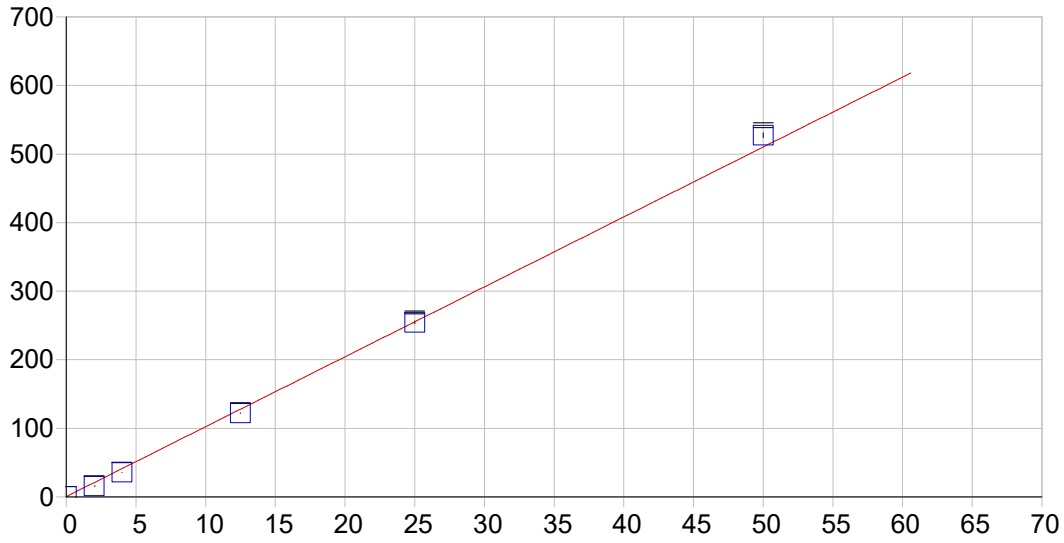
Zn 213.856 {158}

Date of Fit:	7/17/2025 14:35:45	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002623	Re-Slope:	1.000000
A1 (Gain):	2.147217	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999988	Status:	OK.
Std Error of Est:	0.000245		
Predicted MDL:	0.000396		
Predicted MQL:	0.001319		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00262	.000	1
S1	.04000	.04211	.002	5.27	.09366	.001	1
S2	.40000	.40165	.002	.412	.87130	.002	1
S3	1.2500	1.2594	.009	.756	2.7265	.006	1
S4	2.5000	2.4984	-.002	-.063	5.4064	.018	1
S5	5.0000	4.9884	-.012	-.233	10.792	.062	1

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534



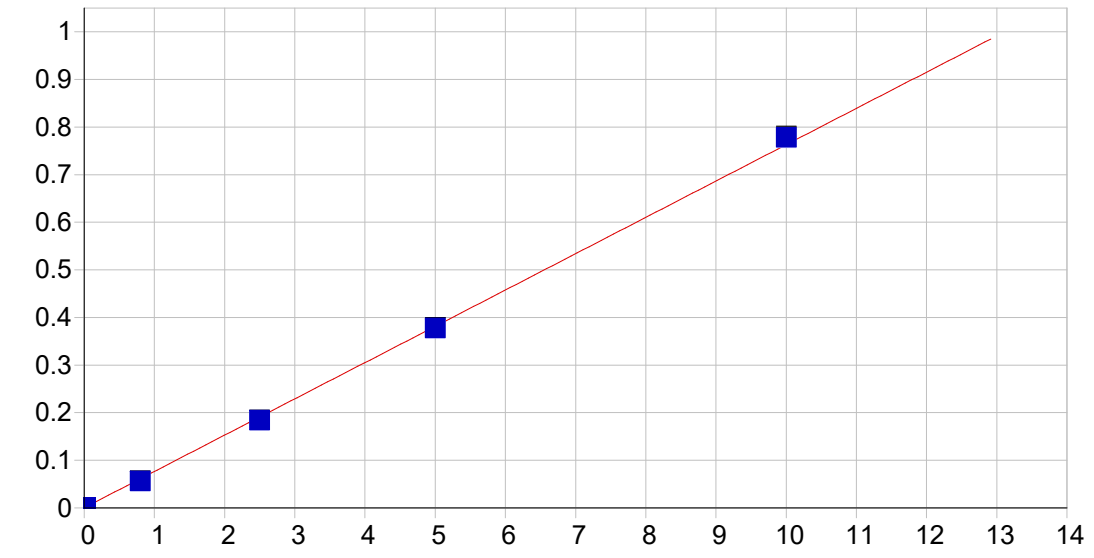
K 769.896 { 44}

Date of Fit:	7/17/2025 14:35:45	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.467815	Re-Slope:	1.000000
A1 (Gain):	10.194857	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998516	Status:	OK.
Std Error of Est:	0.294162		
Predicted MDL:	0.000979		
Predicted MQL:	0.003263		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00079	.001	.000	.47590	.011	1
S1	2.0000	1.5078	-.492	-24.6	15.839	.120	1
S2	4.0000	3.4591	-.541	-13.5	35.733	.425	1
S3	12.500	11.929	-.571	-4.57	122.08	.479	1
S4	25.000	24.916	-.084	-.337	254.48	2.02	1
S5	50.000	51.689	1.69	3.38	527.43	3.52	1

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534



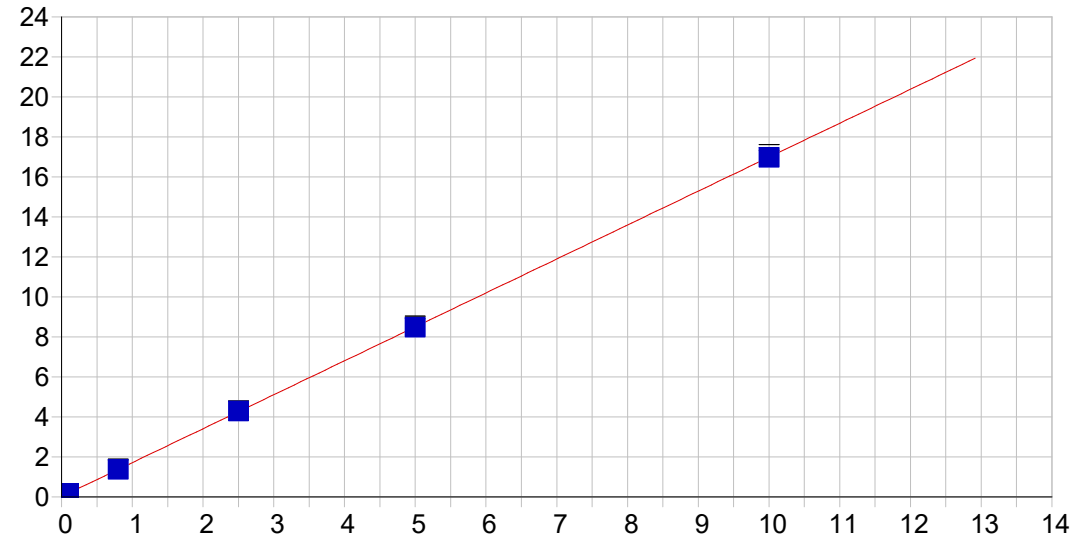
P 177.495 {490}

Date of Fit:	7/17/2025 14:35:45	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000233	Re-Slope:	1.000000
A1 (Gain):	0.076266	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999626	Status:	OK.
Std Error of Est:	0.000049		
Predicted MDL:	0.001846		
Predicted MQL:	0.006153		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00023	.000	1
S1	.02000	.01709	-.003	-14.6	.00152	.000	1
S2	.80000	.73354	-.066	-8.31	.05604	.000	1
S3	2.5000	2.4144	-.086	-3.42	.18393	.000	1
S4	5.0000	4.9491	-.051	-1.02	.37680	.001	1
S5	10.000	10.206	.206	2.06	.77683	.003	1

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534



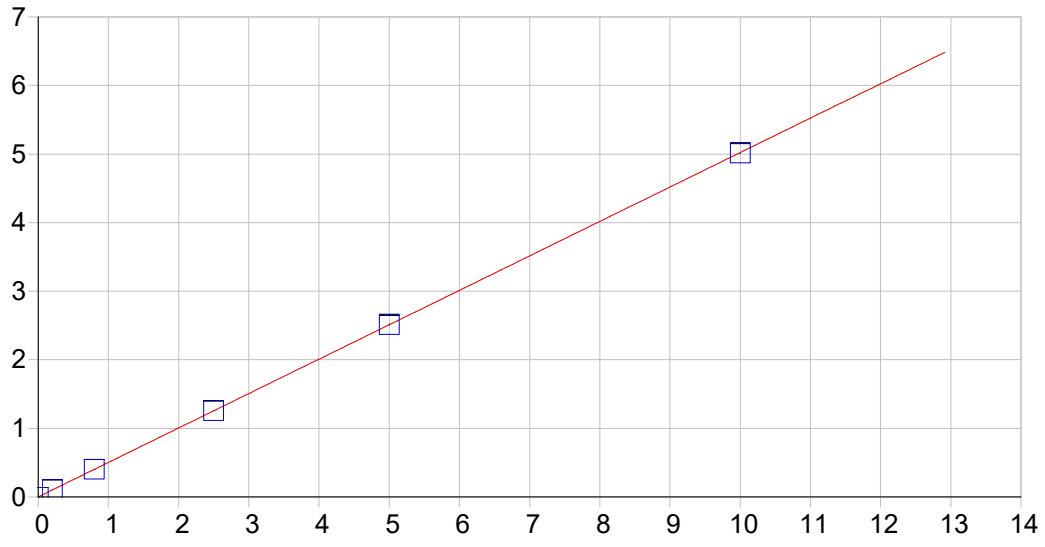
B 249.678 {135}

Date of Fit:	7/17/2025 14:35:45	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.016889	Re-Slope:	1.000000
A1 (Gain):	1.697033	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999994	Status:	OK.
Std Error of Est:	0.000319		
Predicted MDL:	0.001183		
Predicted MQL:	0.003944		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.01689	.002	1
S1	.10000	.09811	-.002	-1.89	.18319	.001	1
S2	.80000	.79637	-.004	-.454	1.3673	.018	1
S3	2.5000	2.5201	.020	.803	4.2903	.009	1
S4	5.0000	4.9900	-.010	-.200	8.4787	.064	1
S5	10.000	9.9954	-.005	-.046	16.967	.146	1

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534



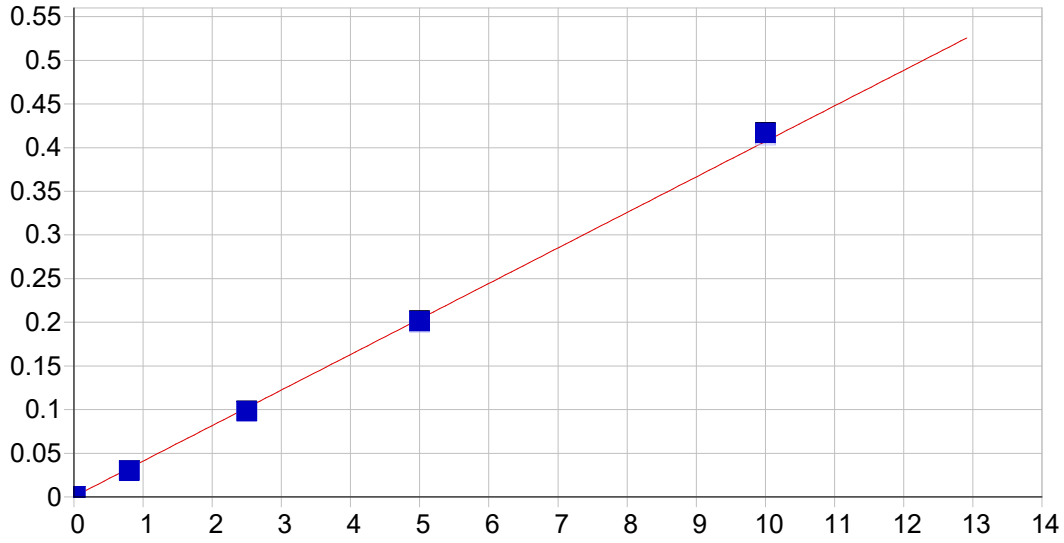
Mo 202.030 {467}

Date of Fit:	7/17/2025 14:35:45	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000345	Re-Slope:	1.000000
A1 (Gain):	0.502063	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999988	Status:	OK.
Std Error of Est:	0.000181		
Predicted MDL:	0.000461		
Predicted MQL:	0.001535		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00034	.000	1
S1	.20000	.20893	.009	4.47	.10524	.000	1
S2	.80000	.79732	-.003	-.335	.40065	.000	1
S3	2.5000	2.5034	.003	.135	1.2572	.002	1
S4	5.0000	5.0037	.004	.074	2.5125	.009	1
S5	10.000	9.9867	-.013	-.133	5.0143	.007	1

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534



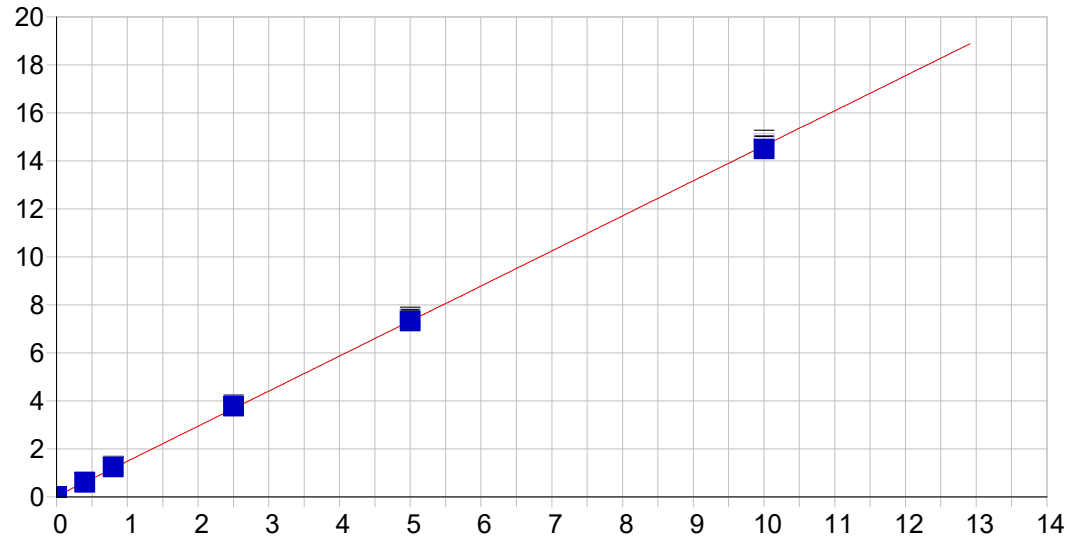
S 182.034 {485}

Date of Fit:	7/17/2025 14:35:45	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000374	Re-Slope:	1.000000
A1 (Gain):	0.040677	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999493	Status:	OK.
Std Error of Est:	0.000030		
Predicted MDL:	0.003264		
Predicted MQL:	0.010881		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00037	.000	1
S1	.02000	.01451	-.005	-27.4	.00090	.000	1
S2	.80000	.72730	-.073	-9.09	.02974	.000	1
S3	2.5000	2.4047	-.095	-3.81	.09752	.000	1
S4	5.0000	4.9337	-.066	-1.33	.19971	.001	1
S5	10.000	10.239	.239	2.39	.41417	.001	1

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534



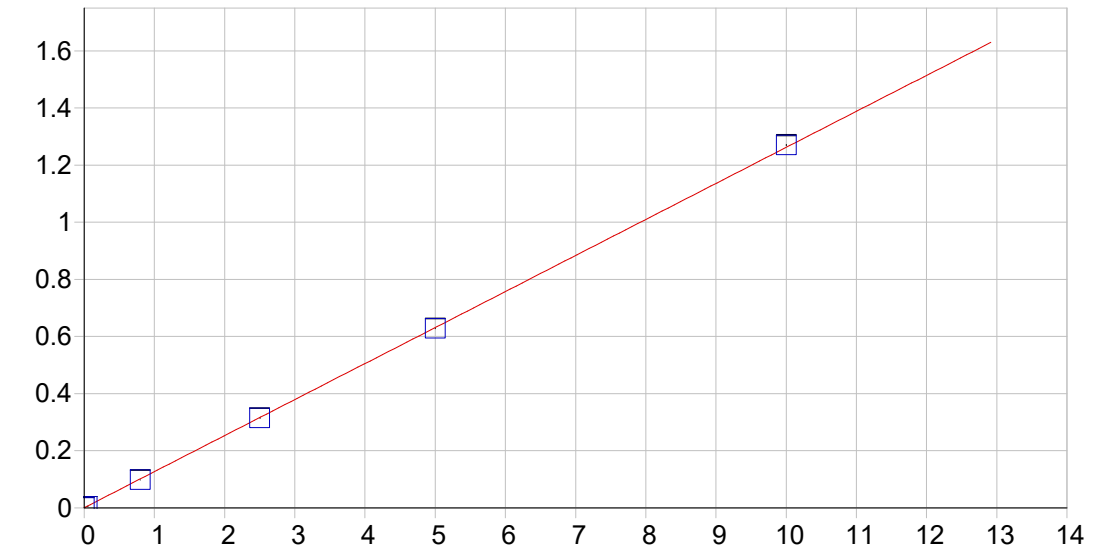
Si 251.611 {134}

Date of Fit:	7/17/2025 14:35:45	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.027069	Re-Slope:	1.000000
A1 (Gain):	1.460232	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999894	Status:	OK.
Std Error of Est:	0.002282		
Predicted MDL:	0.001250		
Predicted MQL:	0.004168		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00002	-.000	.000	.02704	.002	1
S1	.40000	.39470	-.005	-1.32	.60683	.004	1
S2	.80000	.83139	.031	3.92	1.2600	.015	1
S3	2.5000	2.5697	.070	2.79	3.8384	.013	1
S4	5.0000	4.9952	-.005	-.096	7.4393	.052	1
S5	10.000	9.9090	-.091	-.910	14.733	.128	1

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534



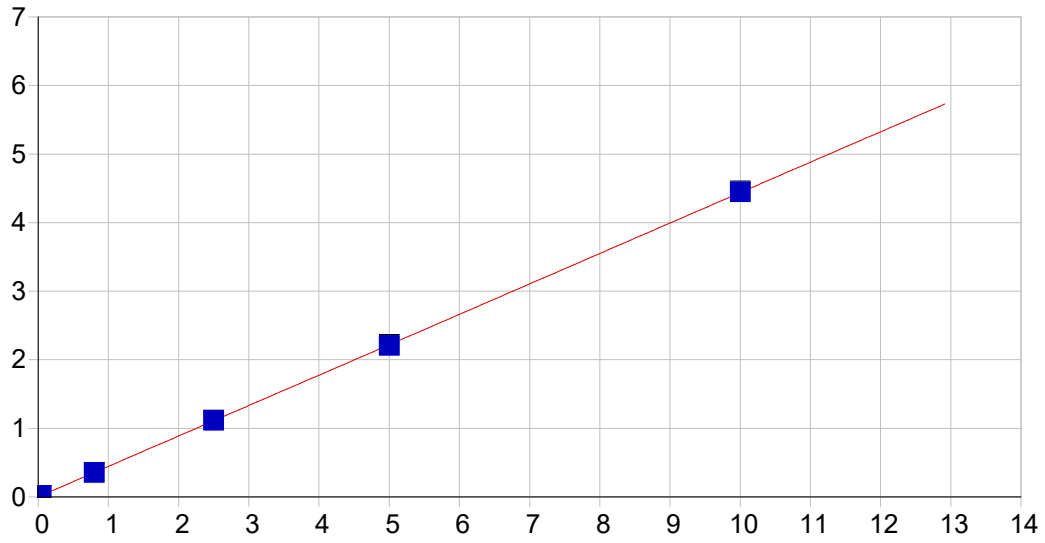
Sn 189.989 {478}

Date of Fit:	7/17/2025 14:35:45	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000786	Re-Slope:	1.000000
A1 (Gain):	0.126135	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999951	Status:	OK.
Std Error of Est:	0.000041		
Predicted MDL:	0.000986		
Predicted MQL:	0.003288		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00079	.000	1
S1	.04000	.03695	-.003	-7.62	.00545	.000	1
S2	.80000	.77203	-.028	-3.50	.09817	.000	1
S3	2.5000	2.4878	-.012	-.486	.31459	.000	1
S4	5.0000	4.9785	-.022	-.431	.62875	.001	1
S5	10.000	10.065	.065	.647	1.2703	.002	1

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534



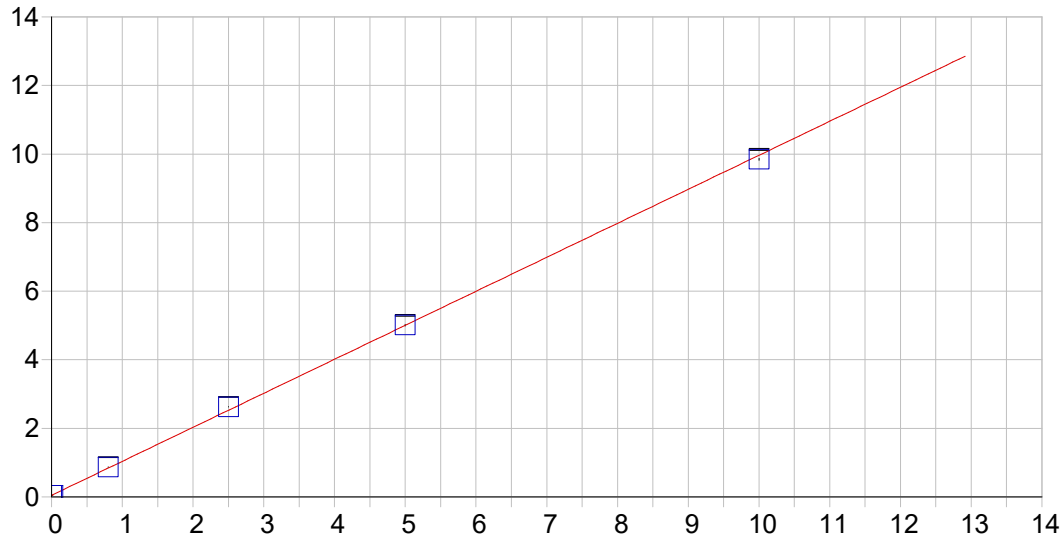
Ti 336.121 {100}

Date of Fit:	7/17/2025 14:35:45	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001147	Re-Slope:	1.000000
A1 (Gain):	0.443583	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999991	Status:	OK.
Std Error of Est:	0.000061		
Predicted MDL:	0.003130		
Predicted MQL:	0.010433		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00115	.001	1
S1	.04000	.04064	.001	1.61	.01916	.001	1
S2	.80000	.79184	-.008	-1.02	.35222	.002	1
S3	2.5000	2.5088	.009	.352	1.1134	.004	1
S4	5.0000	4.9741	-.026	-.519	2.2064	.014	1
S5	10.000	10.025	.025	.247	4.4457	.013	1

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534



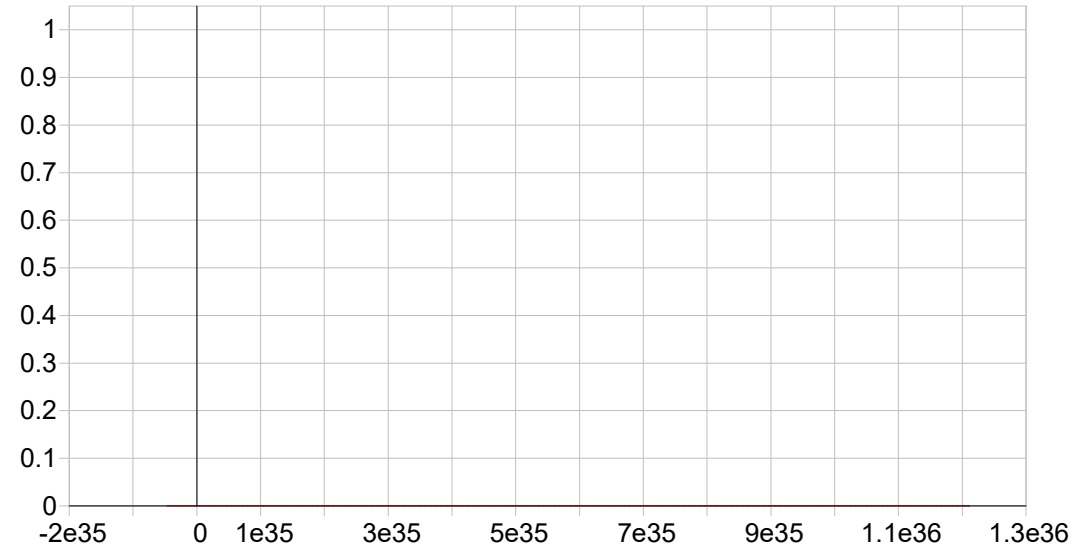
Li 670.784 { 50}

Date of Fit:	7/17/2025 14:35:45	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.046575	Re-Slope:	1.000000
A1 (Gain):	0.991711	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999484	Status:	OK.
Std Error of Est:	0.000747		
Predicted MDL:	0.005894		
Predicted MQL:	0.019645		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.04659	.005	1
S5	10.000	9.8805	-.119	-1.19	9.8452	.027	1
S4	5.0000	5.0026	.003	.052	5.0077	.026	1
S3	2.5000	2.6015	.101	4.06	2.6265	.001	1
S2	.80000	.83096	.031	3.87	.87064	.008	1
S1	.02000	.00441	-.016	-78.0	.05095	.007	1

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

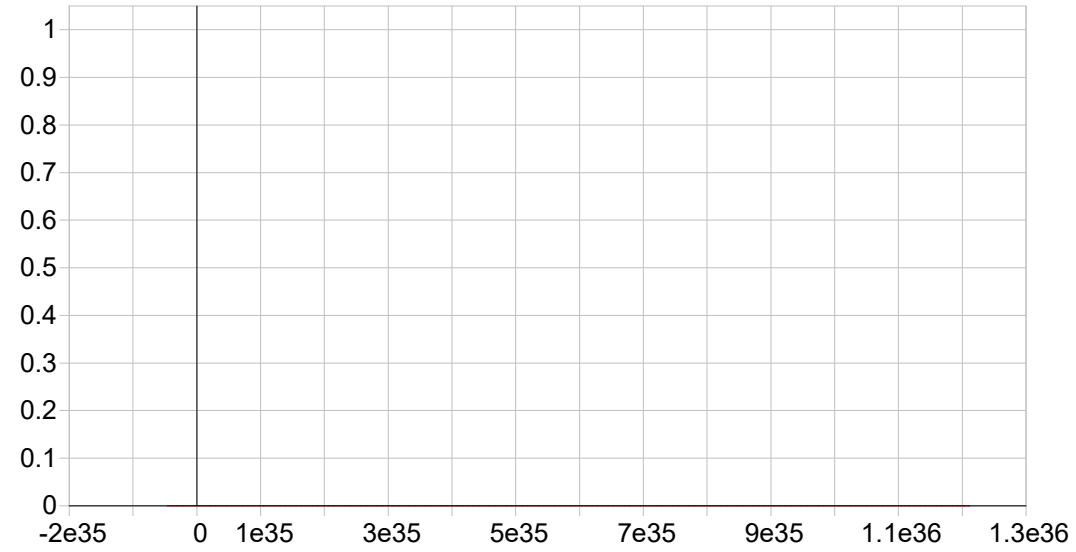


Y 224.306 {450}*

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

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

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



Y 360.073 { 94}*

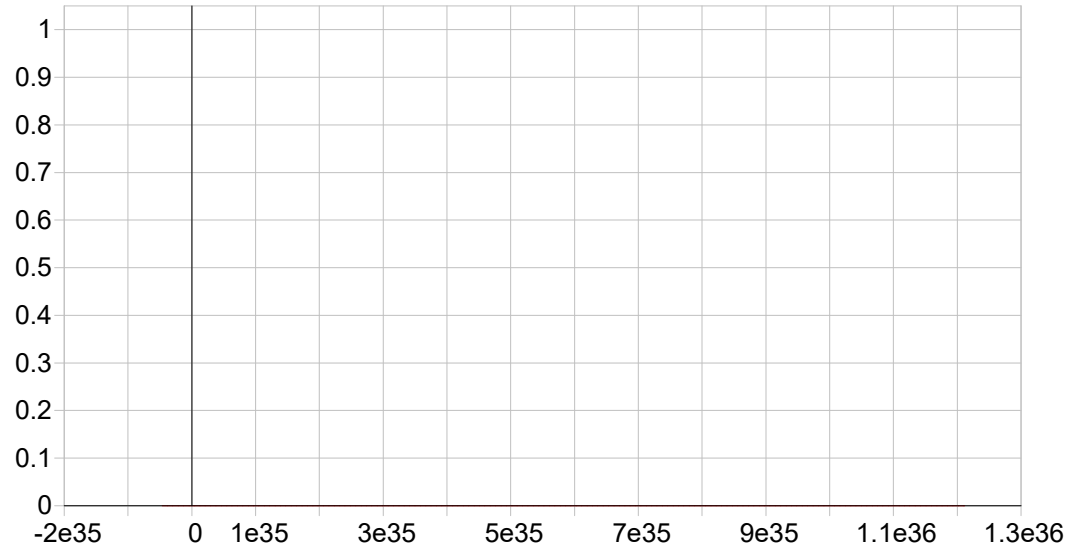
Date of Fit:	<not fit>	Type of Fit:	Linear	Weighting:	1/Conc

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

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

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

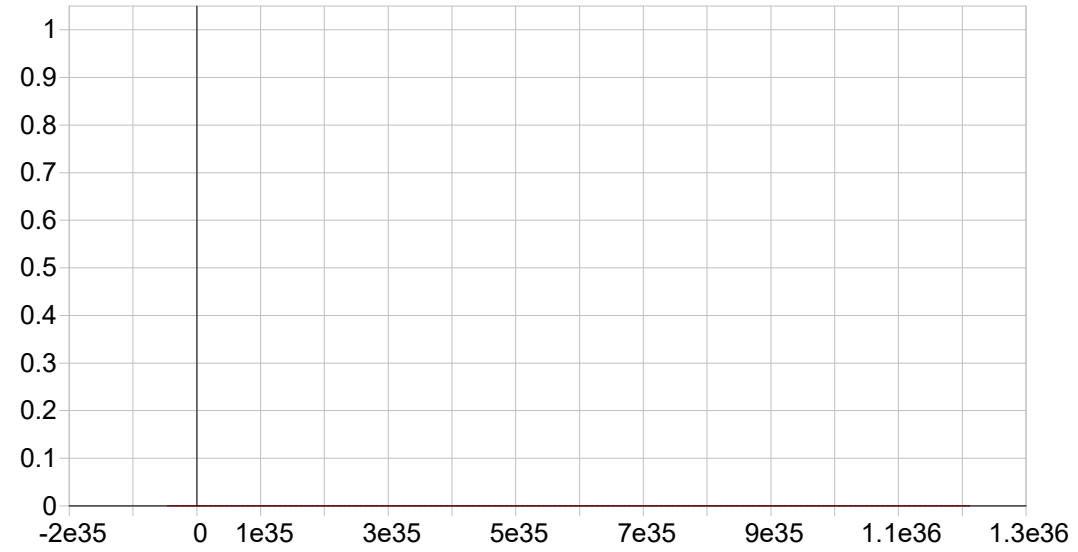


Y 371.030 { 91}*

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

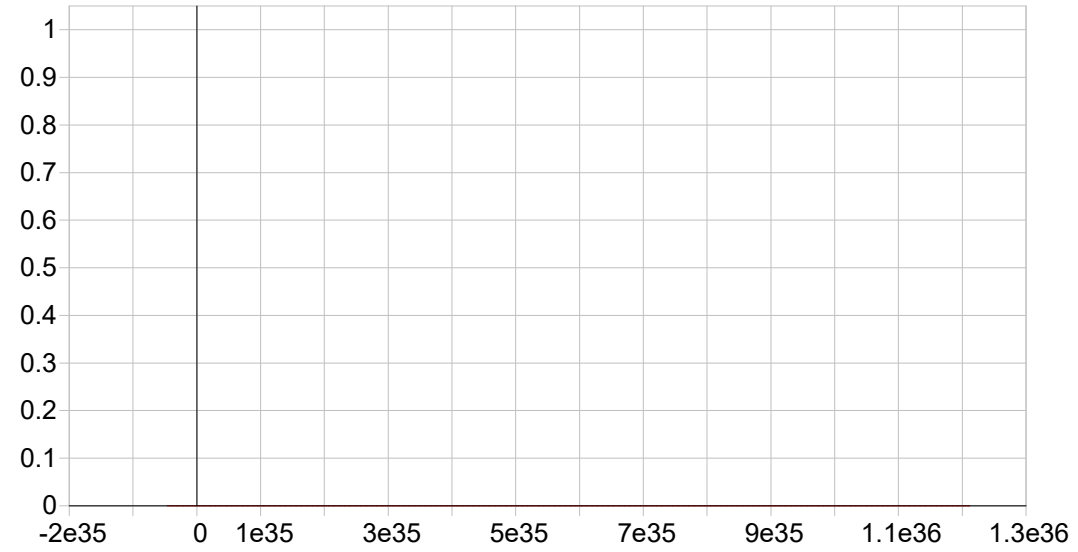
Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534



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



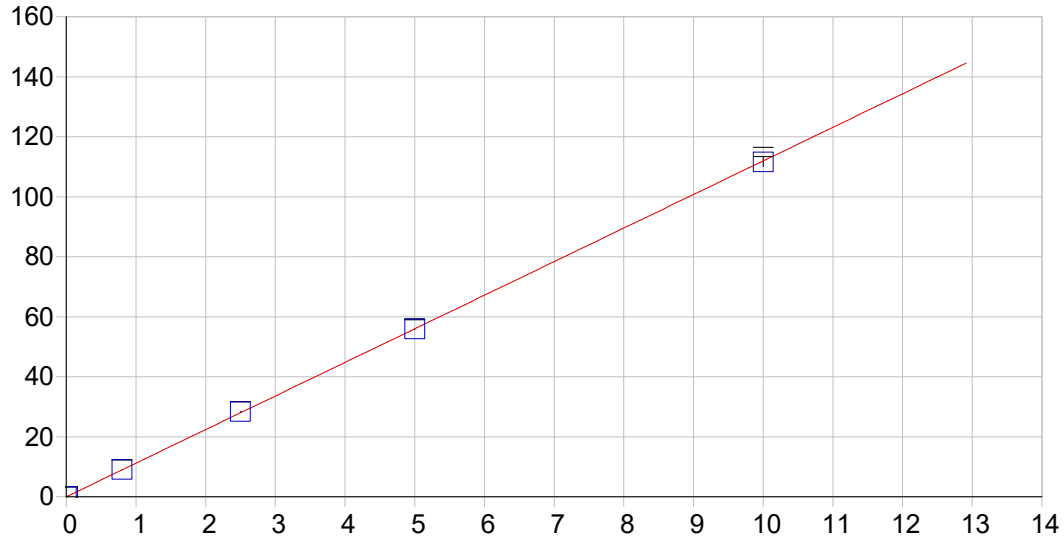
In 230.606 {446}*

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:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

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



Sr 407.771 { 83}

Date of Fit:	7/17/2025 14:35:45	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002141	Re-Slope:	1.000000
A1 (Gain):	11.194558	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999982	Status:	OK.
Std Error of Est:	0.001568		
Predicted MDL:	0.000210		
Predicted MQL:	0.000698		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00213	.002	1
S1	.02000	.02070	.001	3.52	.23392	.002	1
S2	.80000	.80521	.005	.651	9.0161	.038	1
S3	2.5000	2.5348	.035	1.39	28.378	.033	1
S4	5.0000	4.9886	-.011	-.228	55.848	.197	1
S5	10.000	9.9707	-.029	-.293	111.62	1.52	1

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: S0 Acquired: 7/17/2025 13:23:33 Type: Cal
Method: METHOD 6010D, 200.7 M(v51) Mode: IR Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.00005**	**-.00001**	**.00012**	**.00014**	**.00042**	**-.00558**	**.01677**	**.00410**
Stddev	.00006	.00036	.00018	.00010	.00012	.00176	.00051	.00132
%RSD	130.89	2669.6	153.31	66.631	27.974	31.455	3.0593	32.086
#1	.00002	-.00009	-.00006	.00011	.00055	-.00537	.01662	.00562
#2	-.00006	.00038	.00011	.00007	.00034	-.00394	.01734	.00346
#3	-.00010	-.00034	.00030	.00025	.00036	-.00743	.01634	.00324

Elem	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00028**	**.00948**	**.00039**	**.00019**	**.06094**	**.00597**	**.00075**	**-.00089**
Stddev	.00015	.00184	.00018	.00003	.00356	.00040	.00066	.00100
%RSD	53.690	19.372	44.886	14.913	5.8382	6.7276	88.214	111.44
#1	.00015	.00758	.00029	.00022	.06215	.00643	.00121	-.00076
#2	.00044	.00960	.00029	.00019	.06374	.00567	-.00001	.00003
#3	.00024	.01125	.00059	.00016	.05694	.00582	.00106	-.00195

Elem	Ni2316	Ag3280	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.00035**	**-.00053**	**-.06563**	**.00029**	**.00262**	**.47590**	**.00023**	**.01689**
Stddev	.00014	.00029	.00886	.00055	.00043	.01134	.00018	.00197
%RSD	41.014	53.469	13.494	186.52	16.562	2.3819	77.336	11.691
#1	-.00045	-.00086	-.07427	.00040	.00283	.47827	.00007	.01618
#2	-.00019	-.00040	-.06606	-.00030	.00291	.46357	.00043	.01537
#3	-.00041	-.00034	-.05657	.00078	.00212	.48587	.00021	.01912

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00034**	**.00037**	**.02704**	**.00079**	**.00115**	**.04659**	**.00213**
Stddev	.00023	.00010	.00183	.00010	.00094	.00455	.00167
%RSD	68.106	27.088	6.7792	13.141	81.988	9.7698	78.289
#1	.00061	.00027	.02905	.00067	.00039	.04933	.00403
#2	.00020	.00047	.02545	.00086	.00220	.04133	.00143
#3	.00022	.00039	.02664	.00083	.00085	.04911	.00092

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: S0 Acquired: 7/17/2025 13:23:33 Type: Cal
Method: METHOD 6010D, 200.7 M(v51) Mode: IR Corr. Factor: 1.000000
User: Janvi 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	5028.7	41386.	2720.0	3404.3	5893.2
Stddev	18.0	46.	4.8	19.0	20.1
%RSD	.35723	.11067	.17548	.55934	.34135
#1	5049.3	41439.	2724.8	3414.0	5916.2
#2	5016.8	41364.	2720.1	3416.4	5879.0
#3	5019.9	41355.	2715.2	3382.3	5884.3

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: S1 Acquired: 7/17/2025 13:28:42 Type: Cal
Method: METHOD 6010D, 200.7 M(v51) Mode: IR Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348	Cd2144
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00105	.00486	.00399	.00120	.00551	.00968	.46221	.09177	.02031
Stddev	.00006	.00027	.00031	.00004	.00027	.00091	.00832	.00142	.00017
%RSD	5.4712	5.5441	7.7296	3.2263	4.9323	9.4435	1.7993	1.5452	.81234
#1	.00111	.00455	.00410	.00118	.00533	.01022	.45749	.09087	.02035
#2	.00099	.00505	.00364	.00117	.00538	.00863	.45732	.09340	.02046
#3	.00105	.00498	.00423	.00124	.00582	.01020	.47181	.09103	.02013

Elem	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.22810	.00288	.02412	.22765	.11237	.01241	.02551	.02915	.00217
Stddev	.00462	.00030	.00018	.00687	.00100	.00032	.00100	.00011	.00015
%RSD	2.0257	10.348	.75648	3.0180	.89430	2.5696	3.9078	.39112	6.9494
#1	.22835	.00309	.02417	.22442	.11131	.01265	.02564	.02904	.00200
#2	.22336	.00254	.02392	.22299	.11331	.01253	.02644	.02927	.00230
#3	.23259	.00302	.02427	.23554	.11249	.01205	.02445	.02914	.00219

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1.4661	.00313	.09366	15.839	.00152	.18319	.10524	.00090	.60683
Stddev	.0057	.00036	.00094	.120	.00003	.00054	.00040	.00010	.00422
%RSD	.38695	11.371	1.0047	.75560	1.9910	.29350	.38095	11.517	.69567
#1	1.4692	.00354	.09413	15.721	.00156	.18290	.10479	.00078	.60205
#2	1.4696	.00290	.09428	15.960	.00151	.18381	.10539	.00098	.60837
#3	1.4596	.00295	.09258	15.837	.00150	.18286	.10555	.00094	.61006

Elem	Sn1899	Ti3361	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00545	.01916	.05095	.23392
Stddev	.00005	.00057	.00699	.00225
%RSD	.98299	2.9906	13.730	.96326
#1	.00545	.01901	.05424	.23651
#2	.00539	.01868	.05568	.23278
#3	.00550	.01979	.04291	.23245

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: S1 Acquired: 7/17/2025 13:28:42 Type: Cal
Method: METHOD 6010D, 200.7 M(v51) Mode: IR Corr. Factor: 1.000000
User: Janvi 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	5015.3	41096.	2700.6	3395.8	5788.8
Stddev	19.9	229.	11.3	20.6	24.1
%RSD	.39672	.55831	.41974	.60607	.41599
#1	5033.6	40852.	2708.9	3384.2	5811.3
#2	5018.2	41307.	2705.1	3419.5	5791.6
#3	4994.1	41128.	2687.7	3383.5	5763.4

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: S2 Acquired: 7/17/2025 13:33:47 Type: Cal
Method: METHOD 6010D, 200.7 M(v51) Mode: IR Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348	Cd2144
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.04269	.09693	.24990	.05111	.07494	.16538	6.9251	.58179	1.3487
Stddev	.00029	.00019	.00043	.00033	.00022	.00418	.0132	.00515	.0007
%RSD	.67135	.19566	.17386	.64062	.29501	2.5303	.19004	.88571	.05515
#1	.04263	.09687	.25024	.05094	.07469	.17011	6.9369	.58746	1.3479
#2	.04243	.09679	.25006	.05149	.07505	.16389	6.9273	.57738	1.3488
#3	.04300	.09715	.24941	.05090	.07509	.16215	6.9109	.58054	1.3493

Elem	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.43414	.03880	.30766	1.6604	.81558	.22459	.04604	.28645	.05344
Stddev	.00204	.00032	.00036	.0207	.01050	.00021	.00090	.00066	.00016
%RSD	.47031	.81591	.11622	1.2454	1.2875	.09202	1.9570	.23210	.29258
#1	.43586	.03867	.30729	1.6837	.82758	.22462	.04689	.28666	.05339
#2	.43468	.03858	.30769	1.6443	.81105	.22437	.04509	.28571	.05331
#3	.43188	.03916	.30800	1.6531	.80810	.22479	.04614	.28699	.05361

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3.2342	.03813	.87130	35.733	.05604	1.3673	.40065	.02974	1.2600
Stddev	.0360	.00088	.00182	.425	.00013	.0176	.00044	.00002	.0148
%RSD	1.1141	2.3090	.20905	1.1886	.23973	1.2898	.10966	.06738	1.1717
#1	3.2758	.03721	.86942	36.221	.05596	1.3870	.40091	.02974	1.2761
#2	3.2137	.03896	.87141	35.527	.05595	1.3530	.40014	.02972	1.2471
#3	3.2130	.03824	.87306	35.450	.05619	1.3620	.40089	.02976	1.2567

Elem	Sn1899	Ti3361	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.09817	.35222	.87064	9.0161
Stddev	.00015	.00180	.00809	.0378
%RSD	.15322	.50963	.92913	.41922
#1	.09834	.35368	.87975	9.0452
#2	.09808	.35276	.86430	9.0297
#3	.09808	.35021	.86788	8.9734

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: S2 Acquired: 7/17/2025 13:33:47 Type: Cal
Method: METHOD 6010D, 200.7 M(v51) Mode: IR Corr. Factor: 1.000000
User: Janvi 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	5105.8	41079.	2646.5	3440.6	5703.6
Stddev	7.6	354.	36.5	20.7	4.5
%RSD	.14907	.86144	1.3809	.60268	.07861
#1	5103.3	40913.	2607.4	3443.3	5699.8
#2	5114.3	40840.	2652.4	3418.7	5708.5
#3	5099.7	41486.	2679.7	3459.9	5702.4

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: S3 Acquired: 7/17/2025 13:38:41 Type: Cal
Method: METHOD 6010D, 200.7 M(v51) Mode: IR Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348	Cd2144
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.14092**	**.30580**	**.79845**	**.16051**	**.23493**	**.51515**	**21.829**	**1.8051**	**4.3870**
Stddev	.00016	.00043	.00153	.00055	.00038	.00293	.041	.0049	.0044
%RSD	.11343	.14154	.19171	.34515	.16078	.56933	.18776	.27193	.10110
#1	.14096	.30540	.79934	.16095	.23450	.51827	21.822	1.8087	4.3862
#2	.14105	.30626	.79933	.16069	.23519	.51245	21.873	1.8071	4.3917
#3	.14074	.30576	.79668	.15989	.23510	.51474	21.791	1.7995	4.3830

Elem	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1.3385**	**.12242**	**.98415**	**4.9091**	**2.5511**	**.69594**	**.14338**	**.91954**	**.16527**
Stddev	.0067	.00071	.00077	.0265	.0125	.00283	.00200	.00159	.00045
%RSD	.50382	.57658	.07773	.53922	.48966	.40720	1.3961	.17250	.27256
#1	1.3383	.12174	.98332	4.9380	2.5613	.69297	.14444	.91771	.16550
#2	1.3453	.12238	.98430	4.9031	2.5549	.69861	.14463	.92036	.16475
#3	1.3319	.12315	.98483	4.8861	2.5372	.69623	.14107	.92054	.16556

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**10.673**	**.12136**	**2.7265**	**122.08**	**.18393**	**4.2903**	**1.2572**	**.09752**	**3.8384**
Stddev	.041	.00095	.0065	.48	.00014	.0089	.0018	.00008	.0130
%RSD	.38419	.78220	.23662	.39262	.07572	.20780	.14548	.07946	.33760
#1	10.703	.12246	2.7285	122.37	.18406	4.3004	1.2572	.09758	3.8506
#2	10.689	.12075	2.7192	122.34	.18395	4.2836	1.2590	.09754	3.8398
#3	10.626	.12088	2.7316	121.53	.18378	4.2870	1.2554	.09743	3.8248

Elem	Sn1899	Ti3361	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.31459**	**1.1134**	**2.6265**	**28.378**
Stddev	.00018	.0037	.0012	.033
%RSD	.05672	.33239	.04549	.11602
#1	.31458	1.1145	2.6268	28.407
#2	.31442	1.1165	2.6275	28.384
#3	.31477	1.1093	2.6252	28.342

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: S3 Acquired: 7/17/2025 13:38:41 Type: Cal
Method: METHOD 6010D, 200.7 M(v51) Mode: IR Corr. Factor: 1.000000
User: Janvi 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	5028.8	40367.	2636.3	3393.6	5423.3
Stddev	8.2	129.	21.5	8.0	5.9
%RSD	.16362	.31868	.81559	.23548	.10949
#1	5029.9	40404.	2622.3	3391.8	5424.8
#2	5020.1	40223.	2625.6	3386.7	5416.7
#3	5036.5	40473.	2661.1	3402.3	5428.3

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: S4 Acquired: 7/17/2025 13:43:37 Type: Cal
Method: METHOD 6010D, 200.7 M(v51) Mode: IR Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348	Cd2144
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.28844**	**.60482**	**1.5903**	**.31903**	**.47112**	**1.0129**	**43.070**	**3.5275**	**8.7852**
Stddev	.00103	.00100	.0047	.00112	.00124	.0045	.164	.0205	.0271
%RSD	.35769	.16517	.29737	.35057	.26273	.44176	.38058	.58154	.30885
#1	.28775	.60401	1.5891	.31880	.46981	1.0181	43.259	3.5499	8.7937
#2	.28963	.60594	1.5955	.32024	.47227	1.0105	42.966	3.5230	8.8071
#3	.28795	.60451	1.5863	.31804	.47130	1.0103	42.985	3.5096	8.7549

Elem	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2.6456**	**.24316**	**1.9819**	**9.4871**	**4.9476**	**1.3672**	**.27991**	**1.8469**	**.32981**
Stddev	.0141	.00052	.0059	.0654	.0479	.0060	.00050	.0055	.00096
%RSD	.53378	.21238	.29953	.68916	.96766	.43536	.17992	.29685	.29012
#1	2.6582	.24262	1.9784	9.5577	4.9989	1.3739	.27996	1.8455	.32919
#2	2.6481	.24366	1.9888	9.4749	4.9399	1.3650	.28038	1.8529	.32932
#3	2.6303	.24319	1.9785	9.4286	4.9041	1.3626	.27938	1.8422	.33091

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**21.526**	**.23895**	**5.4064**	**254.48**	**.37680**	**8.4787**	**2.5125**	**.19971**	**7.4393**
Stddev	.276	.00088	.0176	2.02	.00144	.0642	.0093	.00072	.0521
%RSD	1.2830	.36794	.32606	.79316	.38189	.75712	.36916	.35888	.70054
#1	21.746	.23964	5.4101	256.81	.37658	8.5391	2.5030	.19980	7.4950
#2	21.615	.23796	5.3872	253.21	.37834	8.4856	2.5216	.20038	7.4310
#3	21.216	.23924	5.4218	253.43	.37548	8.4113	2.5129	.19895	7.3918

Elem	Sn1899	Ti3361	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.62875**	**2.2064**	**5.0077**	**55.848**
Stddev	.00125	.0144	.0260	.197
%RSD	.19915	.65393	.51821	.35266
#1	.62830	2.2223	5.0355	56.074
#2	.63016	2.2031	5.0034	55.720
#3	.62778	2.1940	4.9842	55.749

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: S4 Acquired: 7/17/2025 13:43:37 Type: Cal
Method: METHOD 6010D, 200.7 M(v51) Mode: IR Corr. Factor: 1.000000
User: Janvi 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	**4874.7**	**39624.**	**2628.4**	**3341.2**	**5144.0**
Stddev	37.6	101.	25.2	24.0	29.5
%RSD	.77166	.25372	.95947	.71684	.57332
#1	4917.8	39572.	2599.8	3334.4	5178.0
#2	4857.3	39740.	2637.7	3367.8	5126.7
#3	4848.9	39560.	2647.6	3321.3	5127.2

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: S5 Acquired: 7/17/2025 13:48:29 Type: Cal
Method: METHOD 6010D, 200.7 M(v51) Mode: IR Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348	Cd2144
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.59487	1.1946	3.2343	.63686	.94279	2.0415	86.627	6.9785	17.736
Stddev	.00072	.0027	.0046	.00089	.00293	.0041	.532	.0625	.028
%RSD	.12097	.22827	.14377	.14021	.31062	.20088	.61470	.89569	.15584
#1	.59533	1.1974	3.2396	.63584	.94005	2.0431	86.772	7.0430	17.762
#2	.59523	1.1920	3.2323	.63750	.94243	2.0368	87.072	6.9182	17.740
#3	.59404	1.1945	3.2309	.63725	.94587	2.0446	86.037	6.9742	17.707

Elem	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5.2862	.47790	4.0145	18.813	9.7950	2.7415	.55708	3.7381	.65690
Stddev	.0217	.00429	.0076	.120	.1021	.0017	.00053	.0054	.00409
%RSD	.40983	.89869	.18884	.63936	1.0428	.06186	.09523	.14363	.62290
#1	5.3009	.48229	4.0220	18.894	9.8992	2.7397	.55719	3.7430	.66037
#2	5.2614	.47370	4.0147	18.675	9.6951	2.7420	.55754	3.7390	.65239
#3	5.2964	.47770	4.0068	18.871	9.7906	2.7430	.55650	3.7324	.65795

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	43.591	.48542	10.792	527.43	.77683	16.967	5.0143	.41417	14.733
Stddev	.864	.00085	.062	3.52	.00251	.146	.0070	.00065	.128
%RSD	1.9821	.17519	.57022	.66728	.32348	.85827	.13943	.15754	.86961
#1	44.588	.48601	10.835	531.46	.77933	17.106	5.0085	.41462	14.865
#2	43.064	.48580	10.721	524.99	.77685	16.816	5.0124	.41448	14.609
#3	43.121	.48444	10.819	525.83	.77431	16.977	5.0220	.41343	14.725

Elem	Sn1899	Ti3361	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1.2703	4.4457	9.8452	111.62
Stddev	.0024	.0131	.0275	1.52
%RSD	.19325	.29561	.27921	1.3656
#1	1.2731	4.4510	9.8682	113.34
#2	1.2691	4.4307	9.8148	110.43
#3	1.2687	4.4554	9.8527	111.10

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: S5 Acquired: 7/17/2025 13:48:29 Type: Cal
Method: METHOD 6010D, 200.7 M(v51) Mode: IR Corr. Factor: 1.000000
User: Janvi 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	4728.9	38897.	2561.2	3244.1	4871.7
Stddev	8.1	261.	18.1	19.5	10.4
%RSD	.17122	.67017	.70798	.60037	.21310
#1	4737.0	38704.	2545.9	3252.6	4871.3
#2	4720.8	39194.	2581.3	3257.8	4861.5
#3	4728.8	38794.	2556.5	3221.8	4882.3

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: ICV01 Acquired: 7/17/2025 14:14:16 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: ICV01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.840315**	**3.850428**	**3.855353**	**3.939962**	**4.110019**	**7.878172**	**8.017451**
Stddev	.005698	.000982	.005047	.000375	.002403	.033157	.038631
%RSD	.1483632	.0255006	.1309007	.0095108	.0584778	.4208773	.4818375
#1	3.833931	3.850616	3.850996	3.939592	4.107612	7.915984	8.061800
#2	3.842130	3.849365	3.854180	3.939954	4.110027	7.854059	7.999422
#3	3.844884	3.851302	3.860883	3.940341	4.112419	7.864473	7.991130

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2001052**	**1.946593**	**19.85204**	**.7906110**	**1.998654**	**1.019639**	**3.847630**
Stddev	.0013868	.001249	.04575	.0017954	.000968	.009318	.033305
%RSD	.6930466	.0641411	.2304366	.2270917	.0484477	.9138108	.8656000
#1	.2016349	1.945153	19.90151	.7890978	1.998246	1.027203	3.875258
#2	.1989301	1.947249	19.84332	.7925949	1.997956	1.009231	3.810648
#3	.1997507	1.947377	19.81127	.7901405	1.999759	1.022484	3.856984

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.996745**	**20.12135**	**1.985385**	**.9358570**	**18.70915**	**2.001415**	**2.005413**
Stddev	.006676	.11262	.000922	.0021197	.14757	.004963	.001692
%RSD	.3343356	.5596933	.0464491	.2264958	.7887414	.2479579	.0843774
#1	2.004412	20.17075	1.984339	.9367532	18.80380	2.000506	2.007011
#2	1.992221	19.99248	1.985734	.9373814	18.53912	2.006770	2.005586
#3	1.993601	20.20083	1.986081	.9334364	18.78453	1.996970	2.003640

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**18.13723**	**.0185992**	**3.674213**	**3.794095**	**.0383447**	**3.492530**	**3.762779**
Stddev	.15358	.0023112	.030334	.001329	.0025553	.031515	.008372
%RSD	.8467753	12.42650	.8255959	.0350229	6.663927	.9023631	.2224895
#1	18.29528	.0201172	3.700348	3.793107	.0409407	3.516637	3.753737
#2	17.98855	.0197412	3.640949	3.793571	.0382610	3.456868	3.770261
#3	18.12786	.0159393	3.681342	3.795605	.0358322	3.504086	3.764339

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: ICV01 Acquired: 7/17/2025 14:14:16 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: ICV01 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**3.798910**	**-.008385**	**.0000812**
Stddev	.005113	.003483	.0000566
%RSD	.1345962	41.54251	69.63343
#1	3.802600	-.004447	.0000162
#2	3.793074	-.009647	.0001084
#3	3.801058	-.011062	.0001191

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4951.312**	**39935.59**	**2699.627**	**3327.040**	**5290.394**
Stddev	13.350	166.47	18.994	12.904	15.503
%RSD	.2696330	.4168509	.7035686	.3878506	.2930321
#1	4946.521	40109.90	2696.159	3341.940	5287.756
#2	4941.018	39778.26	2720.116	3319.714	5276.380
#3	4966.396	39918.60	2682.607	3319.467	5307.047

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: LLICV01 Acquired: 7/17/2025 14:24:48 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: LLICV01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0168529**	**.0410748**	**.0109004**	**.0176192**	**.0524494**	**.1190615**
Stddev	.0020936	.0003727	.0008803	.0046310	.0033481	.0078182
%RSD	12.42308	.9074545	8.075530	26.28378	6.383506	6.566487
#1	.0184972	.0408252	.0110803	.0135839	.0542968	.1192291
#2	.0144960	.0408959	.0116768	.0226755	.0485846	.1267945
#3	.0175656	.0415032	.0099441	.0165981	.0544668	.1111609

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1016861**	**.0062119**	**.0056491**	**2.053602**	**.0101574**	**.0303001**
Stddev	.0005171	.0001203	.0000357	.006964	.0003576	.0000840
%RSD	.5084916	1.937035	.6315763	.3390933	3.521048	.2773021
#1	.1015199	.0061471	.0056659	2.049117	.0105461	.0302310
#2	.1022659	.0063507	.0056733	2.061624	.0100836	.0302757
#3	.1012726	.0061379	.0056082	2.050065	.0098424	.0303937

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0213300**	**.1104788**	**.0211390**	**2.215974**	**.0397212**	**.0104759**
Stddev	.0001261	.0023137	.0007462	.089048	.0005255	.0008280
%RSD	.5911196	2.094278	3.529850	4.018459	1.323074	7.903585
#1	.0212556	.1110273	.0203797	2.269709	.0403034	.0102783
#2	.0212589	.1124690	.0211661	2.265028	.0395782	.0113847
#3	.0214756	.1079401	.0218713	2.113186	.0392820	.0097645

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.746145**	**.0400271**	**.0425677**	**1.737150**	**.0186746**	**.0970444**
Stddev	.011973	.0024000	.0005127	.010215	.0008856	.0023675
%RSD	.6857042	5.995889	1.204508	.5880427	4.741974	2.439614
#1	1.744455	.0381260	.0419778	1.725419	.0194571	.0943107
#2	1.758874	.0427239	.0428199	1.741952	.0177133	.0983942
#3	1.735107	.0392315	.0429056	1.744080	.0188534	.0984282

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: LLICV01 Acquired: 7/17/2025 14:24:48 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: LLICV01 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2085612	.0163892	.3956365	.0366454	.0382821	F .0064326
Stddev	.0005652	.0015742	.0023302	.0004060	.0026674	.0068246
%RSD	.2710134	9.605051	.5889795	1.107884	6.967694	106.0942
#1	.2085183	.0180891	.3934658	.0363383	.0355069	.0009473
#2	.2080187	.0149819	.3953448	.0364921	.0408267	.0140752
#3	.2091467	.0160965	.3980988	.0371057	.0385127	.0042754

Elem	Sr4077
Units	ppm
Avg	.0206811
Stddev	.0002439
%RSD	1.179397
#1	.0206828
#2	.0209241
#3	.0204363

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5055.144	41500.72	2763.915	3412.762	5831.589
Stddev	12.293	207.33	18.399	24.250	17.465
%RSD	.2431875	.4995784	.6656803	.7105770	.2994862
#1	5057.459	41739.20	2784.442	3438.925	5826.053
#2	5066.115	41363.24	2748.909	3391.037	5851.151
#3	5041.858	41399.72	2758.394	3408.324	5817.564

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: ICB01 Acquired: 7/17/2025 14:29:40 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi 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	**-.001272**	**-.000475**	**-.000139**	**-.001465**	**-.001308**	**.0440765**	**.0001082**
Stddev	.002945	.000657	.000897	.000298	.002097	.0201868	.0012056
%RSD	231.4559	138.2789	645.1924	20.36154	160.3119	45.79956	1114.585
#1	-.004174	-.000868	-.001002	-.001719	-.000884	.0578613	.0006874
#2	.001714	.000283	.000789	-.001136	-.003584	.0534628	.0009148
#3	-.001357	-.000840	-.000205	-.001539	.000545	.0209055	-.001278

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000032**	**-.000048**	**-.001480**	**.0002215**	**.0001681**	**-.000258**	**-.003072**
Stddev	.000098	.000046	.004278	.0001245	.0002928	.000452	.001562
%RSD	309.7743	96.44313	288.9627	56.19828	174.1804	175.1121	50.83290
#1	-.000092	-.000095	.003069	.0001408	-.000155	-.000145	-.003394
#2	.000081	-.000043	-.002088	.0001589	.000244	-.000756	-.004448
#3	-.000083	-.000004	-.005422	.0003648	.000415	.000127	-.001375

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001358**	**-.003298**	**.0000776**	**-.001029**	**.0000027**	**-.010534**	**.0000271**
Stddev	.000310	.081414	.0001812	.000249	.0068976	.015443	.0001669
%RSD	22.82792	2468.411	233.5548	24.17634	251731.8	146.5996	615.3297
#1	-.001328	.090290	-.000089	-.000950	.0004421	.007099	-.000143
#2	-.001064	-.042402	.000051	-.000829	.0066702	-.021652	.000033
#3	-.001681	-.057783	.000271	-.001307	-.007104	-.017050	.000191

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0036316**	**.0005460**	**-.005805**	**-.000086**	**-.004511**	**-.000814**	**-.000601**
Stddev	.0003774	.0017065	.001056	.000241	.004018	.001129	.000578
%RSD	10.39293	312.5645	18.19874	279.4783	89.06660	138.6551	96.18945
#1	.0035990	-.001384	-.005985	-.000326	-.000871	-.000603	-.001106
#2	.0032715	.001168	-.006760	.000156	-.003840	.000194	-.000726
#3	.0040243	.001854	-.004670	-.000089	-.008823	-.002034	.000030

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: ICB01 Acquired: 7/17/2025 14:29:40 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: ICB01 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.002596	-.013894	-.000207
Stddev	.001565	.002361	.000154
%RSD	60.29529	16.99373	74.34108
#1	-.000864	-.012988	-.000293
#2	-.003016	-.016574	-.000029
#3	-.003908	-.012121	-.000297

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5082.521	41689.24	2703.997	3449.060	5952.837
Stddev	20.439	63.39	53.104	13.139	20.958
%RSD	.4021446	.1520618	1.963914	.3809358	.3520660
#1	5062.452	41733.05	2748.239	3440.648	5929.780
#2	5103.311	41718.12	2718.645	3442.332	5970.730
#3	5081.802	41616.55	2645.106	3464.200	5958.002

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: CRI01 Acquired: 7/17/2025 14:39:49 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: CRI01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0154256**	**.0402546**	**.0119093**	**.0196195**	**.0539648**	**.1006458**
Stddev	.0016665	.0009222	.0003777	.0018503	.0002664	.0283870
%RSD	10.80313	2.290791	3.171403	9.430698	.4937165	28.20486
#1	.0138800	.0391940	.0115803	.0182035	.0540412	.1057258
#2	.0152058	.0407022	.0123218	.0217130	.0536685	.1261498
#3	.0171910	.0408674	.0118259	.0189420	.0541847	.0700618

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1014924**	**.0063079**	**.0057246**	**2.059190**	**.0102412**	**.0303728**
Stddev	.0002563	.0000851	.0000362	.033738	.0005613	.0002282
%RSD	.2525446	1.349599	.6325903	1.638412	5.480317	.7513134
#1	.1012621	.0063241	.0057125	2.024283	.0108409	.0305389
#2	.1017686	.0063837	.0057653	2.091622	.0101541	.0304668
#3	.1014465	.0062158	.0056959	2.061665	.0097286	.0301126

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0221613**	**.1104971**	**.0215407**	**2.304693**	**.0396259**	**.0095698**
Stddev	.0002331	.0007972	.0009444	.048933	.0006564	.0010642
%RSD	1.051789	.7214902	4.384005	2.123187	1.656535	11.12030
#1	.0222281	.1100251	.0204503	2.257958	.0394732	.0084544
#2	.0223538	.1114176	.0220865	2.355562	.0403453	.0096809
#3	.0219022	.1100486	.0220854	2.300559	.0390594	.0105741

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.770442**	**.0385700**	**.0430484**	**1.760771**	**.0189092**	**.0949349**
Stddev	.019074	.0066042	.0013134	.014459	.0012535	.0004026
%RSD	1.077352	17.12273	3.050921	.8211538	6.629120	.4240752
#1	1.771163	.0309746	.0419964	1.766697	.0203203	.0949048
#2	1.789145	.0417772	.0426284	1.771325	.0184825	.0945481
#3	1.751018	.0429582	.0445204	1.744291	.0179247	.0953516

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: CRI01 Acquired: 7/17/2025 14:39:49 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: CRI01 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2091141	.0165011	.4040468	.0379633	.0374821	F .0043996
Stddev	.0024117	.0010924	.0005791	.0010211	.0008020	.0029860
%RSD	1.153308	6.620107	.1433122	2.689814	2.139751	67.86988
#1	.2096596	.0170295	.4041561	.0391418	.0371533	.0074665
#2	.2112063	.0172289	.4034208	.0373398	.0383962	.0042308
#3	.2064763	.0152450	.4045633	.0374083	.0368967	.0015016

Elem	Sr4077
Units	ppm
Avg	.0206960
Stddev	.0001996
%RSD	.9643098
#1	.0204997
#2	.0208987
#3	.0206897

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5040.971	41060.58	2722.498	3379.791	5808.563
Stddev	63.405	538.94	17.229	54.835	68.764
%RSD	1.257786	1.312556	.6328483	1.622447	1.183837
#1	5014.765	41594.23	2706.597	3433.716	5786.966
#2	4994.870	41071.03	2720.094	3381.569	5753.189
#3	5113.278	40516.49	2740.803	3324.088	5885.533

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: ICSA01 Acquired: 7/17/2025 14:46:10 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: ICSA01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.005585**	**.0027447**	**.0012044**	**-.009325**	**.0201772**	**243.1330**
Stddev	.004673	.0009659	.0017086	.000199	.0025620	.8630
%RSD	83.67136	35.19060	141.8569	2.132986	12.69768	.3549334
#1	-.010976	.0016307	-.000706	-.009200	.0186851	243.6702
#2	-.003073	.0032541	.001732	-.009221	.0187110	242.1376
#3	-.002705	.0033492	.002587	-.009554	.0231356	243.5912

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0059097**	**.0011154**	**-.000951**	**232.1325**	**.0483927**	**.0215428**
Stddev	.0009802	.0001046	.000120	.0333	.0014998	.0004538
%RSD	16.58655	9.379238	12.59224	.0143362	3.099323	2.106529
#1	.0070105	.0010381	-.000928	232.1425	.0466635	.0219670
#2	.0055873	.0010737	-.000844	232.0953	.0493405	.0210643
#3	.0051313	.0012345	-.001080	232.1596	.0491740	.0215973

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.006180**	**89.38079**	**.0035207**	**241.9021**	**.0013346**	**-.001630**
Stddev	.000157	.59351	.0009832	.5913	.0005494	.000450
%RSD	2.540460	.6640229	27.92673	.2444186	41.16754	27.60283
#1	-.006309	90.03029	.0026648	242.1401	.0008654	-.001187
#2	-.006226	88.86667	.0033028	241.2290	.0011994	-.001616
#3	-.006005	89.24540	.0045946	242.3373	.0019390	-.002087

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1270227**	**.0095394**	**.0116449**	**.0035542**	**.0073256**	**.0123968**
Stddev	.0121902	.0019991	.0002656	.0008962	.0034457	.0016536
%RSD	9.596886	20.95579	2.281260	25.21556	47.03616	13.33881
#1	.1136792	.0075998	.0118774	.0045889	.0065918	.0129270
#2	.1375759	.0094254	.0117018	.0030531	.0110790	.0105432
#3	.1298131	.0115930	.0113554	.0030206	.0043059	.0137203

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: ICSA01 Acquired: 7/17/2025 14:46:10 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: ICSA01 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0055834	.0168987	-.009983	.0080798	-.003188	-.007344
Stddev	.0000988	.0030254	.001074	.0001292	.001018	.003902
%RSD	1.768567	17.90308	10.75993	1.598843	31.95129	53.12868
#1	.0054932	.0147522	-.009683	.0081827	-.004216	-.011016
#2	.0055680	.0155851	-.011176	.0081218	-.003168	-.003247
#3	.0056889	.0203589	-.009091	.0079348	-.002179	-.007770

Elem	Sr4077
Units	ppm
Avg	F .0975705
Stddev	.0002960
%RSD	.3033213
#1	.0978945
#2	.0973144
#3	.0975024

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4587.533	36123.24	2630.146	3085.564	4638.433
Stddev	13.690	131.73	14.807	14.900	9.733
%RSD	.2984213	.3646776	.5629557	.4828841	.2098388
#1	4602.082	36216.76	2613.240	3102.503	4647.406
#2	4585.613	35972.59	2636.397	3074.486	4639.807
#3	4574.904	36180.38	2640.803	3079.703	4628.086

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: ICSAB01 Acquired: 7/17/2025 14:51:12 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: ICSAB01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0894509**	**.0918927**	**.0466520**	**.0428276**	**.5860113**	**243.3366**
Stddev	.0006431	.0005193	.0011206	.0032711	.0065773	1.4165
%RSD	.7189853	.5651316	2.401940	7.637847	1.122390	.5821034
#1	.0901294	.0914700	.0454549	.0442548	.5786596	242.8694
#2	.0893731	.0924724	.0468251	.0451426	.5913382	244.9276
#3	.0888502	.0917357	.0476759	.0390854	.5880361	242.2127

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4901539**	**.4803106**	**.9539652**	**233.0518**	**.5281168**	**.4932341**
Stddev	.0034855	.0036515	.0035308	1.0095	.0079985	.0022494
%RSD	.7111069	.7602288	.3701147	.4331804	1.514532	.4560584
#1	.4885655	.4797791	.9499657	232.9687	.5306286	.4909686
#2	.4941507	.4841986	.9566499	234.1003	.5191639	.4954672
#3	.4877454	.4769539	.9552801	232.0864	.5345579	.4932666

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4547608**	**90.27692**	**.4752355**	**242.4871**	**.9407677**	**.2038247**
Stddev	.0040203	1.27890	.0029628	2.0293	.0046409	.0014831
%RSD	.8840379	1.416645	.6234319	.8368695	.4933097	.7276201
#1	.4532478	90.63951	.4726202	241.9484	.9359060	.2054341
#2	.4593181	91.33539	.4784532	244.7313	.9451508	.2025132
#3	.4517166	88.85588	.4746330	240.7814	.9412463	.2035269

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1445918**	**.4703917**	**.9989369**	**.0031843**	F **.0173863**	**.9156456**
Stddev	.0067667	.0072939	.0147835	.0004896	.0013268	.0077383
%RSD	4.679874	1.550600	1.479925	15.37614	7.631059	.8451254
#1	.1367868	.4726209	1.009451	.0032486	.0184328	.9122701
#2	.1481775	.4763109	.982033	.0036387	.0178322	.9244983
#3	.1488111	.4622434	1.005327	.0026658	.0158941	.9101683

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: ICSAB01 Acquired: 7/17/2025 14:51:12 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: ICSAB01 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9762397	F .0245409	F .8369701	.9921779	.9807575	1.043608
Stddev	.0032774	.0080023	.0082686	.0053766	.0052834	.002259
%RSD	.3357160	32.60778	.9879247	.5419003	.5387041	.2164476
#1	.9725741	.0319000	.8351592	.9877364	.9806812	1.042592
#2	.9788872	.0257008	.8459941	.9981553	.9860785	1.046197
#3	.9772578	.0160220	.8297570	.9906420	.9755126	1.042036

Elem	Sr4077
Units	ppm
Avg	1.060565
Stddev	.007407
%RSD	.6983832
#1	1.058468
#2	1.068794
#3	1.054432

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4605.599	36052.03	2628.871	3066.971	4645.331
Stddev	14.862	588.55	21.599	53.860	13.226
%RSD	.3227047	1.632493	.8215949	1.756118	.2847222
#1	4616.365	35609.56	2624.030	3017.972	4655.533
#2	4588.642	36719.98	2610.103	3124.639	4630.387
#3	4611.792	35826.55	2652.479	3058.301	4650.073

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: CCV01 Acquired: 7/17/2025 14:56:09 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi 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	**4.950023**	**5.046355**	**4.989689**	**5.008573**	**5.022567**	**9.952644**	**10.07428**
Stddev	.015236	.016589	.027525	.009518	.008688	.145538	.10188
%RSD	.3078021	.3287382	.5516400	.1900305	.1729877	1.462307	1.011251
#1	4.967165	5.065299	5.021121	5.019541	5.019438	10.10926	10.19191
#2	4.944880	5.034426	4.969891	5.002480	5.015876	9.92711	10.01492
#3	4.938023	5.039340	4.978055	5.003698	5.032386	9.82156	10.01600

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2542258**	**2.504852**	**25.14975**	**1.021180**	**2.503781**	**1.263740**	**5.024575**
Stddev	.0028112	.014594	.28906	.001255	.005136	.014353	.071416
%RSD	1.105769	.5826268	1.149345	.1229023	.2051110	1.135766	1.421334
#1	.2573452	2.521702	25.47586	1.019740	2.509612	1.280006	5.105110
#2	.2534436	2.496273	25.04827	1.021764	2.499931	1.258355	4.999660
#3	.2518886	2.496580	24.92511	1.022037	2.501801	1.252857	4.968953

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.510286**	**25.11188**	**2.500856**	**1.269371**	**25.37523**	**2.510205**	**2.522421**
Stddev	.021781	.30536	.008584	.003735	.31821	.012072	.004699
%RSD	.8676596	1.215986	.3432496	.2942160	1.254015	.4809329	.1863060
#1	2.535436	25.45774	2.510433	1.265492	25.71230	2.523853	2.518399
#2	2.497660	24.99836	2.493854	1.272942	25.33336	2.505837	2.521278
#3	2.497761	24.87955	2.498281	1.269677	25.08002	2.500924	2.527587

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.41944**	**4.982049**	**5.040476**	**5.026728**	**4.936910**	**5.175399**	**5.017275**
Stddev	.36546	.020666	.064201	.009170	.019428	.044273	.019317
%RSD	1.437729	.4148074	1.273701	.1824257	.3935213	.8554467	.3850040
#1	25.83995	5.005231	5.112856	5.020660	4.958168	5.225048	5.039151
#2	25.23994	4.965558	5.018160	5.022246	4.932489	5.161125	5.002565
#3	25.17844	4.975358	4.990410	5.037277	4.920074	5.140025	5.010110

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: CCV01 Acquired: 7/17/2025 14:56:09 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: CCV01 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**5.031966**	**5.010577**	**5.059024**
Stddev	.051825	.050253	.050161
%RSD	1.029907	1.002941	.9915124
#1	5.091658	5.067908	5.116813
#2	5.005789	4.989670	5.033512
#3	4.998452	4.974152	5.026748

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4880.976**	**39448.79**	**2616.971**	**3324.323**	**5146.677**
Stddev	20.850	50.27	34.213	7.366	7.385
%RSD	.4271646	.1274220	1.307355	.2215840	.1434970
#1	4900.981	39506.43	2578.608	3330.187	5151.336
#2	4882.574	39414.09	2627.982	3326.727	5150.534
#3	4859.373	39425.83	2644.323	3316.055	5138.162

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: CCB01 Acquired: 7/17/2025 15:01:01 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi 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	**-.001613**	**-.000049**	**.0003282**	**-.001623**	**.0001401**	**.0342546**	**-.000309**
Stddev	.002089	.000137	.0008769	.002501	.0012031	.0118188	.000268
%RSD	129.5108	278.3772	267.1557	154.0243	858.7330	34.50287	86.65360
#1	-.002631	-.000101	.0013335	-.001480	-.000937	.0419309	-.000526
#2	.000790	.000106	-.000280	.000802	.001439	.0401882	-.000392
#3	-.002998	-.000153	-.000069	-.004192	-.000082	.0206445	-.000010

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000991**	**-.000019**	**-.019329**	**.0000139**	**.0003156**	**.0004172**	**-.000737**
Stddev	.0000660	.000062	.004446	.0004174	.0001707	.0006107	.001455
%RSD	66.63807	323.1189	23.00025	2996.076	54.09845	146.3612	197.3609
#1	.0001744	.000016	-.020460	-.000434	.0001429	.0010749	.000867
#2	.0000511	.000017	-.023100	.000391	.0003195	.0003086	-.001973
#3	.0000717	-.000090	-.014427	.000085	.0004843	-.000132	-.001106

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000597**	**.0165229**	**.0001392**	**-.000360**	**.0160498**	**-.004940**	**.0009402**
Stddev	.000495	.0431168	.0001436	.000594	.0127590	.006825	.0002437
%RSD	82.87962	260.9515	103.1402	164.9017	79.49652	138.1450	25.91646
#1	-.000092	.0388483	.0002863	.000219	.0013418	-.006052	.0010571
#2	-.000619	-.033179	-.000001	-.000967	.0226627	-.011141	.0006601
#3	-.001081	.043899	.000132	-.000333	.0241448	.002372	.0011034

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0084774**	**.0020593**	**.0059172**	**.0000802**	**-.001238**	**.0007689**	**-.000375**
Stddev	.0034178	.0006428	.0018879	.0005803	.002694	.0010090	.000615
%RSD	40.31607	31.21613	31.90580	723.6180	217.6692	131.2175	164.2274
#1	.0124061	.0020092	.0080970	-.000137	-.001723	.0017480	.000334
#2	.0068365	.0014430	.0048015	-.000360	-.003655	-.000268	-.000771
#3	.0061895	.0027257	.0048532	.000738	.001666	.000826	-.000688

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: CCB01 Acquired: 7/17/2025 15:01:01 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: CCB01 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.000286	.0037376	-.000142
Stddev	.003793	.0076138	.000172
%RSD	1326.522	203.7102	121.5117
#1	.002892	.0119986	-.000193
#2	-.004485	.0022120	.000050
#3	.000735	-.002998	-.000283

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5148.357	41900.86	2580.703	3491.532	5992.067
Stddev	17.303	280.72	151.728	11.753	20.968
%RSD	.3360854	.6699543	5.879316	.3366083	.3499263
#1	5135.942	42221.32	2405.639	3502.122	5975.953
#2	5168.121	41782.85	2662.249	3493.586	6015.773
#3	5141.006	41698.42	2674.221	3478.887	5984.474

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2515-01 Acquired: 7/17/2025 15:09:25 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0282371**	**-.070612**	**.1432100**	**.0991311**	**.0356168**	**200.2687**
Stddev	.0032138	.001688	.0017582	.0023869	.0038102	1.5137
%RSD	11.38157	2.390207	1.227711	2.407836	10.69760	.7558199
#1	.0277787	-.069749	.1436256	.0965259	.0400155	198.8921
#2	.0316555	-.069531	.1412812	.0996545	.0333385	200.0243
#3	.0252771	-.072557	.1447231	.1012129	.0334965	201.8897

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9291425**	**.0109372**	**-.000207**	**41.70539**	**.5382581**	**.4008909**
Stddev	.0062313	.0002093	.000305	.21460	.0050418	.0003735
%RSD	.6706517	1.913561	147.0032	.5145532	.9366960	.0931671
#1	.9224143	.0108558	.000140	41.53069	.5440412	.4011575
#2	.9302982	.0107808	-.000431	41.64055	.5359469	.4004641
#3	.9347151	.0111750	-.000330	41.94493	.5347861	.4010513

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3870220**	**376.1222**	**13.83257**	**75.94576**	**.4186373**	**-.026457**
Stddev	.0026561	2.7889	.07687	.39921	.0012686	.002096
%RSD	.6862864	.7414968	.5557384	.5256572	.3030219	7.921542
#1	.3885478	374.6468	13.78430	75.69080	.4197136	-.028491
#2	.3885631	379.3390	13.79220	75.74065	.4172386	-.024304
#3	.3839550	374.3809	13.92122	76.40583	.4189596	-.026575

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.042641**	**1.149431**	**.6356981**	**4.879339**	**5.721938**	**.0349281**
Stddev	.019125	.000388	.0055782	.027748	.005269	.0005714
%RSD	.4730796	.0337607	.8774955	.5686935	.0920849	1.635985
#1	4.049688	1.148997	.6420925	4.906035	5.717777	.0344807
#2	4.057243	1.149549	.6318300	4.850646	5.720174	.0355718
#3	4.020993	1.149746	.6331718	4.881334	5.727863	.0347318

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2515-01 Acquired: 7/17/2025 15:09:25 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0028509	.4334224	F 20.37064	-.012817	11.74486	.0991730
Stddev	.0007983	.0046251	.12695	.000204	.07209	.0039626
%RSD	28.00052	1.067119	.6232198	1.588381	.6137966	3.995679
#1	.0024337	.4345792	20.44364	-.012956	11.68219	.0961059
#2	.0023477	.4373593	20.44424	-.012912	11.72875	.0977659
#3	.0037713	.4283287	20.22405	-.012583	11.82364	.1036471

Elem	Sr4077
Units	ppm
Avg	.1585307
Stddev	.0015675
%RSD	.9887694
#1	.1574027
#2	.1578689
#3	.1603206

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6434.165	50455.74	3483.774	4327.625	4933.754
Stddev	19.912	338.63	3.360	39.829	15.814
%RSD	.3094793	.6711503	.0964342	.9203478	.3205278
#1	6416.824	50092.73	3481.295	4292.695	4921.392
#2	6455.911	50763.11	3482.431	4370.999	4951.574
#3	6429.760	50511.38	3487.598	4319.182	4928.295

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2515-01DUP Acquired: 7/17/2025 15:14:32 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0346644	-.077439	.2091068	.1062406	.0356853	198.1190
Stddev	.0014816	.000350	.0013185	.0036803	.0031184	.9054
%RSD	4.274124	.4519765	.6305391	3.464135	8.738688	.4570142
#1	.0331842	-.077333	.2106135	.1097883	.0320849	198.3680
#2	.0346617	-.077830	.2081645	.1064928	.0374355	198.8739
#3	.0361474	-.077154	.2085422	.1024406	.0375354	197.1152

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8605529	.0115154	-.000276	42.57858	.5563566	.4093572
Stddev	.0046623	.0001411	.000163	.19512	.0028219	.0002618
%RSD	.5417830	1.225066	59.01304	.4582482	.5072082	.0639581
#1	.8608013	.0114148	-.000458	42.74233	.5549656	.4090572
#2	.8650860	.0114547	-.000222	42.63071	.5596040	.4095394
#3	.8557713	.0116766	-.000146	42.36269	.5545003	.4094750

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3924904	392.6296	12.55003	82.24864	.4333177	-.026236
Stddev	.0043646	4.8881	.04934	.43801	.0002920	.000768
%RSD	1.112018	1.244973	.3931273	.5325393	.0673878	2.927894
#1	.3973657	396.0446	12.57559	82.45499	.4334637	-.025451
#2	.3911589	394.8141	12.58135	82.54536	.4335079	-.026271
#3	.3889468	387.0302	12.49316	81.74557	.4329815	-.026986

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.064749	1.203157	.6745172	4.819240	5.839939	.0347062
Stddev	.049264	.005319	.0028144	.050449	.012680	.0043304
%RSD	1.211974	.4420953	.4172463	1.046822	.2171216	12.47735
#1	4.121009	1.208450	.6759250	4.848469	5.840695	.0317405
#2	4.043903	1.203210	.6763499	4.848264	5.852225	.0396756
#3	4.029336	1.197812	.6712767	4.760986	5.826899	.0327025

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2515-01DUP Acquired: 7/17/2025 15:14:32 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0029665	.4665444	F 18.50719	-.007219	12.45772	.0988830
Stddev	.0000470	.0043706	.22223	.001888	.04150	.0007250
%RSD	1.583351	.9367972	1.200793	26.15719	.3331623	.7331353
#1	.0029234	.4708386	18.75919	-.007916	12.47787	.0981246
#2	.0030165	.4621013	18.42312	-.005081	12.48531	.0995691
#3	.0029597	.4666934	18.33926	-.008659	12.40999	.0989554

Elem	Sr4077
Units	ppm
Avg	.1588370
Stddev	.0003746
%RSD	.2358277
#1	.1590076
#2	.1590959
#3	.1584075

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6358.159	50482.83	3482.963	4326.537	4908.532
Stddev	11.457	421.19	27.803	34.018	10.009
%RSD	.1801891	.8343261	.7982569	.7862643	.2039194
#1	6356.524	50677.55	3460.659	4347.773	4901.495
#2	6347.608	49999.51	3474.118	4287.301	4904.110
#3	6370.345	50771.43	3514.113	4344.536	4919.991

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2515-01LREX5 Acquired: 7/17/2025 15:19:38 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0102672**	**-.014858**	**.0313043**	**.0289713**	**.0084765**	**47.90925**	**.2235058**
Stddev	.0024017	.002751	.0009946	.0036054	.0003926	.11922	.0005949
%RSD	23.39221	18.51845	3.177186	12.44483	4.632152	.2488518	.2661598
#1	.0105146	-.011721	.0324269	.0296886	.0089143	48.01609	.2236540
#2	.0125356	-.015990	.0305329	.0321641	.0083597	47.93101	.2240125
#3	.0077513	-.016862	.0309532	.0250611	.0081555	47.78064	.2228507

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0025528**	**-.001545**	**10.18877**	**.1268704**	**.0775779**	**.0970147**	**108.7440**
Stddev	.0000653	.000076	.02346	.0005234	.0002154	.0008653	.4264
%RSD	2.556674	4.902202	.2302824	.4125804	.2776228	.8919398	.3920895
#1	.0024882	-.001570	10.17274	.1262818	.0778070	.0977887	108.8287
#2	.0025515	-.001604	10.21570	.1272836	.0773796	.0971749	109.1216
#3	.0026187	-.001459	10.17787	.1270459	.0775473	.0960805	108.2816

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.411829**	**18.79303**	**.0791604**	**.0005262**	**.9396857**	**.2688597**	**.1572531**
Stddev	.012214	.10075	.0004085	.0013346	.0146398	.0040965	.0012211
%RSD	.3579857	.5360803	.5160756	253.6036	1.557950	1.523669	.7765463
#1	3.410648	18.83080	.0790165	-.000615	.9376357	.2717553	.1582725
#2	3.424590	18.67886	.0796215	.000201	.9552425	.2706512	.1558997
#3	3.400249	18.86943	.0788434	.001993	.9261789	.2641725	.1575871

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9038207**	**1.050558**	**.0212348**	**.0007379**	**.0742134**	**5.149926**	**-.002242**
Stddev	.0071827	.002828	.0024244	.0002005	.0015414	.049355	.000536
%RSD	.7947038	.2691768	11.41693	27.16737	2.076952	.9583644	23.90820
#1	.9099785	1.052493	.0185627	.0005254	.0750721	5.198772	-.001979
#2	.9055535	1.047313	.0232937	.0009237	.0724339	5.150930	-.002858
#3	.8959301	1.051869	.0218479	.0007645	.0751341	5.100077	-.001888

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2515-01LREX5 Acquired: 7/17/2025 15:19:38 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**2.835303**	**.0103869**	**.0381658**
Stddev	.003949	.0033207	.0003514
%RSD	.1392958	31.97030	.9205766
#1	2.831792	.0065713	.0378949
#2	2.839579	.0119659	.0380397
#3	2.834539	.0126236	.0385628

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5336.867**	**42914.36**	**2896.591**	**3591.110**	**5444.984**
Stddev	3.928	286.96	19.490	22.182	2.785
%RSD	.0736039	.6686912	.6728649	.6176917	.0511566
#1	5337.866	43196.47	2901.084	3614.863	5445.877
#2	5332.536	42622.78	2875.246	3570.933	5441.862
#3	5340.199	42923.82	2913.442	3587.534	5447.213

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2515-01MS Acquired: 7/17/2025 15:24:39 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7737712	1.841298	1.111545	1.424219	.2196360	212.1131
Stddev	.0027981	.003096	.004945	.003900	.0012629	.2337
%RSD	.3616153	.1681396	.4448485	.2738557	.5749830	.1101780
#1	.7729538	1.839059	1.109514	1.422651	.2210922	212.3693
#2	.7714729	1.840005	1.107939	1.421348	.2188419	212.0581
#3	.7768870	1.844831	1.117182	1.428660	.2189738	211.9117

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.203994	.1595761	.1971862	37.88722	.8333619	.5169533
Stddev	.003815	.0018930	.0004772	.06185	.0035471	.0009050
%RSD	.3168660	1.186250	.2419797	.1632445	.4256367	.1750728
#1	1.208286	.1617554	.1967724	37.93734	.8302742	.5166106
#2	1.202708	.1583409	.1970781	37.90622	.8325751	.5162697
#3	1.200988	.1586319	.1977082	37.81810	.8372363	.5179797

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5437507	307.5077	15.78023	62.74865	.8366898	.0464558
Stddev	.0077871	4.4074	.02934	.24735	.0018341	.0003380
%RSD	1.432118	1.433266	.1859267	.3941911	.2192097	.7276516
#1	.5527380	311.8838	15.81290	62.89117	.8354316	.0466826
#2	.5390118	303.0696	15.75615	62.89175	.8358437	.0460673
#3	.5395022	307.5696	15.77163	62.46304	.8387943	.0466175

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.173106	1.001954	.7927975	12.75555	10.70996	.2062681
Stddev	.062731	.008435	.0032150	.21489	.02438	.0028080
%RSD	1.212643	.8418389	.4055241	1.684683	.2276452	1.361309
#1	5.243371	1.009137	.7917151	12.96774	10.69107	.2090464
#2	5.122729	1.004058	.7902634	12.53805	10.70133	.2034314
#3	5.153219	.992666	.7964140	12.76085	10.73748	.2063266

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2515-01MS Acquired: 7/17/2025 15:24:39 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2588571	.6553771	F 15.10063	.6789949	6.662310	.2665215
Stddev	.0005278	.0025139	.20057	.0022007	.011612	.0045928
%RSD	.2039127	.3835788	1.328221	.3241135	.1742925	1.723249
#1	.2582586	.6580713	15.33113	.6788171	6.657333	.2717861
#2	.2590563	.6530943	14.96586	.6768886	6.675581	.2644431
#3	.2592563	.6549657	15.00490	.6812792	6.654017	.2633353

Elem	Sr4077
Units	ppm
Avg	.3048527
Stddev	.0002542
%RSD	.0833863
#1	.3050565
#2	.3049338
#3	.3045679

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6332.973	49780.93	3438.678	4274.408	4938.774
Stddev	17.859	180.52	42.268	16.359	12.894
%RSD	.2819945	.3626303	1.229191	.3827114	.2610747
#1	6346.983	49946.28	3391.381	4286.676	4945.279
#2	6339.071	49808.19	3472.758	4280.712	4947.119
#3	6312.864	49588.33	3451.896	4255.835	4923.923

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2515-01MSD Acquired: 7/17/2025 15:29:41 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8000743**	**1.832592**	**1.142665**	**1.444433**	**.2431457**	**205.2059**	**.9645295**
Stddev	.0080596	.009397	.002456	.000599	.0019314	.8735	.0045014
%RSD	1.007354	.5127697	.2149085	.0414364	.7943499	.4256808	.4666955
#1	.8066311	1.833883	1.139862	1.445003	.2411140	205.0420	.9644802
#2	.8025154	1.841277	1.144438	1.443810	.2433649	204.4259	.9600529
#3	.7910763	1.822616	1.143694	1.444485	.2449581	206.1497	.9690553

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1630830**	**.1978827**	**36.17252**	**.8396834**	**.5185680**	**.5701161**	**356.2718**
Stddev	.0003514	.0007608	.07167	.0045094	.0007626	.0027034	1.0280
%RSD	.2154675	.3844915	.1981261	.5370359	.1470640	.4741793	.2885320
#1	.1629331	.1971842	36.23988	.8415847	.5178057	.5690956	357.4566
#2	.1628313	.1986934	36.09721	.8345347	.5193309	.5680715	355.7422
#3	.1634844	.1977705	36.18047	.8429307	.5185674	.5731812	355.6167

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.02922**	**63.66499**	**.8379289**	**.0373660**	**5.542778**	**1.261297**	**.7918471**
Stddev	.03324	.37305	.0011371	.0014456	.029858	.011759	.0051125
%RSD	.3314523	.5859582	.1357065	3.868792	.5386915	.9322804	.6456478
#1	10.02165	63.75553	.8368210	.0376663	5.533616	1.249007	.7971971
#2	10.00041	63.25500	.8390931	.0386379	5.518574	1.262441	.7870108
#3	10.06559	63.98444	.8378724	.0357939	5.576144	1.272441	.7913336

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**12.67176**	**11.29749**	**.2149535**	**.2652991**	**.6595151**	**12.20742**	**.6801673**
Stddev	.20972	.01685	.0036537	.0002164	.0028459	.04487	.0006147
%RSD	1.654999	.1491544	1.699762	.0815601	.4315128	.3675816	.0903686
#1	12.51557	11.28055	.2191662	.2655469	.6599749	12.17785	.6795716
#2	12.58959	11.31425	.2130455	.2652025	.6621031	12.18536	.6807994
#3	12.91012	11.29765	.2126488	.2651478	.6564673	12.25905	.6801310

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2515-01MSD Acquired: 7/17/2025 15:29:41 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**8.363650**	**.2753412**	**.2925180**
Stddev	.030985	.0082629	.0008757
%RSD	.3704727	3.000972	.2993810
#1	8.357071	.2662901	.2918845
#2	8.336483	.2772527	.2921521
#3	8.397396	.2824808	.2935173

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6383.487**	**50398.98**	**3470.641**	**4313.708**	**4962.695**
Stddev	18.187	196.67	7.551	11.880	11.219
%RSD	.2849121	.3902200	.2175568	.2754097	.2260705
#1	6381.543	50221.31	3477.384	4301.831	4968.062
#2	6402.568	50610.30	3472.056	4325.591	4970.222
#3	6366.350	50365.34	3462.483	4313.703	4949.800

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2515-01A Acquired: 7/17/2025 15:34:43 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8210052**	**1.819740**	**1.102595**	**1.513636**	**.6157939**	**196.7450**
Stddev	.0015394	.005695	.001967	.002122	.0030420	1.5998
%RSD	.1875079	.3129304	.1783959	.1402152	.4940028	.8131253
#1	.8205582	1.826308	1.100951	1.513707	.6179300	196.3292
#2	.8197387	1.816194	1.104774	1.511479	.6171407	198.5117
#3	.8227186	1.816717	1.102059	1.515721	.6123109	195.3942

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.055565**	**.1617479**	**.1993709**	**41.52420**	**.8269634**	**.5912230**
Stddev	.008250	.0018652	.0004320	.20672	.0027569	.0005956
%RSD	.7815647	1.153151	.2166815	.4978386	.3333749	.1007410
#1	1.053694	.1607481	.1998670	41.38588	.8282562	.5917085
#2	1.064590	.1638998	.1991677	41.76184	.8237977	.5914019
#3	1.048412	.1605957	.1990779	41.42488	.8288364	.5905584

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6045166**	**371.0885**	**13.58458**	**75.56821**	**.9092124**	**.0320521**
Stddev	.0071150	3.3912	.10005	.36230	.0026121	.0024131
%RSD	1.176978	.9138644	.7364722	.4794343	.2872972	7.528770
#1	.6016131	372.1485	13.53656	75.57231	.9114028	.0328569
#2	.6126243	373.8231	13.69959	75.92844	.9099129	.0339599
#3	.5993125	367.2938	13.51761	75.20387	.9063214	.0293394

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.074222**	**1.344548**	**.7703929**	**13.12009**	**11.43644**	**.2358527**
Stddev	.053155	.008616	.0027922	.19467	.01273	.0053858
%RSD	.8750864	.6407949	.3624413	1.483762	.1113159	2.283560
#1	6.059113	1.339858	.7733153	13.06658	11.44878	.2415917
#2	6.133295	1.354492	.7701111	13.33592	11.42335	.2350581
#3	6.030257	1.339296	.7677522	12.95777	11.43720	.2309084

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2515-01A Acquired: 7/17/2025 15:34:43 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2997949**	**.4122476**	F **20.95788**	**.6862192**	**11.62931**	**.2543170**
Stddev	.0003272	.0018547	.19983	.0049980	.08153	.0031563
%RSD	.1091541	.4499091	.9534733	.7283396	.7011021	1.241086
#1	.2997015	.4101471	20.87836	.6917742	11.60159	.2521159
#2	.3001587	.4136599	21.18523	.6847970	11.72109	.2579332
#3	.2995245	.4129357	20.81006	.6820865	11.56525	.2529020

Elem	Sr4077
Units	ppm
Avg	**.3042655**
Stddev	.0018195
%RSD	.5980086
#1	.3031852
#2	.3063662
#3	.3032451

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6400.434**	**50575.53**	**3490.364**	**4328.235**	**4929.494**
Stddev	23.998	356.37	26.060	36.563	19.827
%RSD	.3749490	.7046259	.7466166	.8447461	.4022166
#1	6372.724	50251.58	3494.113	4286.794	4906.606
#2	6414.049	50957.26	3462.633	4355.941	4940.466
#3	6414.528	50517.74	3514.346	4341.970	4941.411

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2515-01LX5 Acquired: 7/17/2025 15:39:44 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0121502**	**-.013618**	**.0322049**	**.0299619**	**.0079002**	**46.90633**	**.2207154**
Stddev	.0021164	.000700	.0008903	.0045369	.0013069	.39858	.0015472
%RSD	17.41895	5.136688	2.764350	15.14228	16.54283	.8497397	.7009815
#1	.0119305	-.012823	.0323895	.0340221	.0075325	46.76060	.2201545
#2	.0101522	-.014141	.0329884	.0250648	.0068166	46.60112	.2195270
#3	.0143679	-.013891	.0312368	.0307986	.0093516	47.35726	.2224648

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0025689**	**-.001717**	**10.03531**	**.1259213**	**.0765018**	**.0979640**	**110.8123**
Stddev	.0000899	.000039	.09575	.0004316	.0003568	.0012861	1.7652
%RSD	3.500606	2.244915	.9541217	.3427441	.4663375	1.312794	1.592940
#1	.0026298	-.001754	9.95631	.1260225	.0762056	.0975845	110.2103
#2	.0024656	-.001677	10.00782	.1254480	.0768978	.0969103	109.4268
#3	.0026112	-.001721	10.14179	.1262932	.0764018	.0993971	112.7997

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.360765**	**18.40547**	**.0783015**	**.0017137**	**.9886980**	**.2631862**	**.1548059**
Stddev	.032524	.24008	.0003645	.0011851	.0173702	.0086130	.0011377
%RSD	.9677661	1.304389	.4655619	69.15669	1.756873	3.272580	.7348985
#1	3.353733	18.38322	.0787064	.0030811	.9947095	.2532991	.1535239
#2	3.332332	18.17729	.0779995	.0009831	.9691206	.2690616	.1556954
#3	3.396230	18.65590	.0781985	.0010769	1.002264	.2671978	.1551983

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9608737**	**1.042789**	**.0242198**	**.0009481**	**.0745539**	**5.239423**	**-.001937**
Stddev	.0167204	.004748	.0006207	.0000660	.0039236	.065702	.000691
%RSD	1.740127	.4553633	2.562900	6.959465	5.262810	1.254001	35.67903
#1	.9556908	1.038628	.0249340	.0009207	.0775321	5.220471	-.002644
#2	.9473584	1.047962	.0238106	.0009003	.0760217	5.185280	-.001901
#3	.9795718	1.041776	.0239147	.0010234	.0701080	5.312518	-.001264

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2515-01LX5 Acquired: 7/17/2025 15:39:44 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**2.777303**	**.0072038**	**.0372753**
Stddev	.025840	.0069887	.0001239
%RSD	.9304102	97.01508	.3322763
#1	2.777342	.0003534	.0372434
#2	2.751444	.0069348	.0371705
#3	2.803124	.0143231	.0374119

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5402.671**	**42995.96**	**2824.900**	**3641.340**	**5486.083**
Stddev	8.380	256.86	36.973	17.703	13.129
%RSD	.1551152	.5974007	1.308837	.4861604	.2393126
#1	5400.768	43277.64	2833.484	3660.658	5491.684
#2	5395.405	42935.56	2856.826	3625.894	5471.082
#3	5411.839	42774.69	2784.389	3637.467	5495.482

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: CCV02 Acquired: 7/17/2025 15:44:46 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: CCV02 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.729249**	**4.823163**	**4.809187**	**4.767711**	**4.755010**	**9.802079**	**9.918800**
Stddev	.239608	.228541	.239151	.242257	.236084	.105724	.067501
%RSD	5.066506	4.738395	4.972803	5.081196	4.964946	1.078592	.6805344
#1	4.849880	4.951798	4.944341	4.903409	4.881282	9.772779	9.923596
#2	4.884568	4.958397	4.950161	4.911707	4.901104	9.919364	9.983774
#3	4.453300	4.559295	4.533059	4.488019	4.482644	9.714095	9.849029

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2504107**	**2.410892**	**24.71160**	**.9856602**	**2.394418**	**1.244714**	**4.945135**
Stddev	.0024016	.116827	.20937	.0049852	.115394	.009935	.039308
%RSD	.9590591	4.845793	.8472452	.5057726	4.819283	.7981912	.7948742
#1	.2499642	2.476533	24.79457	.9799570	2.459020	1.242215	4.952398
#2	.2530042	2.480135	24.86677	.9891882	2.463041	1.255660	4.980305
#3	.2482637	2.276008	24.47347	.9878355	2.261193	1.236267	4.902703

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.465143**	**24.46041**	**2.397341**	**1.230214**	**24.88963**	**2.453988**	**2.438543**
Stddev	.026255	.21585	.115169	.004615	.18647	.014805	.007241
%RSD	1.065041	.8824613	4.804041	.3751388	.7491872	.6033028	.2969222
#1	2.478651	24.47303	2.461291	1.225481	24.74771	2.464997	2.443488
#2	2.481894	24.66967	2.466345	1.230462	25.10082	2.459810	2.430232
#3	2.434885	24.23852	2.264387	1.234701	24.82036	2.437157	2.441908

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.67822**	**4.777453**	**4.980519**	**4.777418**	**4.702434**	**4.993376**	**4.819963**
Stddev	.05751	.243603	.032965	.228670	.237155	.030328	.234602
%RSD	.2330330	5.099004	.6618865	4.786472	5.043241	.6073556	4.867293
#1	24.62583	4.912562	4.980969	4.902802	4.828671	4.987627	4.954739
#2	24.66909	4.923560	5.013257	4.915970	4.849770	5.026167	4.956081
#3	24.73975	4.496237	4.947331	4.513482	4.428862	4.966334	4.549069

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: CCV02 Acquired: 7/17/2025 15:44:46 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: CCV02 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**4.941598**	**4.893068**	**4.959728**
Stddev	.033820	.032605	.037843
%RSD	.6844020	.6663481	.7630046
#1	4.949587	4.889950	4.963352
#2	4.970708	4.927120	4.995628
#3	4.904498	4.862134	4.920203

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4996.892**	**39823.48**	**2595.084**	**3356.962**	**5256.071**
Stddev	125.803	134.09	16.381	22.292	136.013
%RSD	2.517628	.3367039	.6312439	.6640663	2.587735
#1	4908.642	39798.58	2586.014	3337.742	5161.853
#2	4941.090	39968.26	2585.244	3381.401	5194.359
#3	5140.944	39703.58	2613.994	3351.742	5412.000

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: CCB02 Acquired: 7/17/2025 15:49:38 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi 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	-.000989	.0010170	-.000140	-.002460	.0005467	.0206163	-.000682
Stddev	.001616	.0009420	.001745	.003829	.0037648	.0066470	.000981
%RSD	163.3994	92.62967	1247.516	155.6956	688.6486	32.24130	143.7075
#1	.000067	-.000019	-.001468	-.006433	.0016630	.0233679	.000449
#2	-.002849	.001823	.001837	.001207	-.003650	.0130354	-.001216
#3	-.000185	.001246	-.000789	-.002153	.003627	.0254457	-.001280

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000458	.0000062	-.003641	.0002468	.0000181	-.000132	-.000882
Stddev	.0000655	.0000133	.008705	.0008712	.0003479	.000544	.001601
%RSD	143.2753	214.4959	239.0951	352.9962	1918.621	412.7830	181.4614
#1	.0000720	.0000140	-.007129	.0006623	.0003603	-.000689	-.002367
#2	.0000941	-.000009	.006268	.0008324	.0000295	.000397	.000814
#3	-.000029	.000014	-.010062	-.000754	-.000335	-.000103	-.001094

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000370	.0450911	.0000953	-.000581	-.002437	.0022909	.0007798
Stddev	.000879	.0484774	.0004046	.001480	.001107	.0032925	.0002595
%RSD	237.2667	107.5101	424.4411	254.7954	45.44766	143.7191	33.27303
#1	.000568	.0651348	-.000275	.000776	-.003605	.0007571	.0008967
#2	-.001174	-.010194	.000034	-.000360	-.002302	.0060705	.0004825
#3	-.000505	.080332	.000527	-.002159	-.001403	.0000452	.0009603

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0073683	.0024511	-.000289	.0001094	-.002121	-.001417	-.000141
Stddev	.0011958	.0005677	.000715	.0003129	.003301	.000749	.000566
%RSD	16.22865	23.16191	247.1859	286.1517	155.6033	52.85044	402.9942
#1	.0060243	.0020663	-.000895	.0004514	-.004371	-.001114	.000294
#2	.0077662	.0031032	-.000473	-.000163	.001668	-.000867	.000065
#3	.0083144	.0021839	.000500	.000039	-.003660	-.002269	-.000781

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: CCB02 Acquired: 7/17/2025 15:49:38 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: CCB02 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.002587	-.004672	-.000210
Stddev	.003072	.008613	.000125
%RSD	118.7707	184.3579	59.27828
#1	-.001976	-.004101	-.000112
#2	.000134	.003642	-.000350
#3	-.005918	-.013556	-.000168

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5157.532	41996.60	2648.227	3487.309	6011.130
Stddev	14.794	134.28	14.968	22.828	19.978
%RSD	.2868427	.3197519	.5652006	.6546052	.3323557
#1	5146.703	42001.14	2663.849	3482.331	5998.322
#2	5151.506	41860.10	2646.821	3467.381	6000.917
#3	5174.389	42128.56	2634.012	3512.216	6034.150

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2565-01 Acquired: 7/17/2025 16:27:06 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0948142**	**-.001305**	**.2093178**	**-.014482**	**.0248479**	**5.825303**
Stddev	.0079060	.001869	.0060361	.003382	.0016192	.111031
%RSD	8.338383	143.2827	2.883691	23.34978	6.516397	1.906004
#1	.1033628	-.000208	.2156506	-.018163	.0248777	5.697719
#2	.0877657	-.000243	.2036303	-.013771	.0264520	5.878170
#3	.0933143	-.003463	.2086723	-.011512	.0232141	5.900021

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5128156**	**.0006055**	**.0004246**	**185.6228**	**.0268320**	**.1072289**
Stddev	.0105578	.0000688	.0001576	2.8860	.0008326	.0023195
%RSD	2.058791	11.36577	37.10947	1.554763	3.102927	2.163096
#1	.5011450	.0006814	.0006036	182.5227	.0277757	.1098505
#2	.5217030	.0005472	.0003066	188.2316	.0262011	.1054432
#3	.5155989	.0005878	.0003637	186.1142	.0265193	.1063930

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0508716**	**22.56361**	**2.061897**	**32.44932**	**.0983406**	**-.000265**
Stddev	.0020218	.37388	.040174	.60977	.0013928	.000689
%RSD	3.974261	1.657022	1.948419	1.879157	1.416320	260.0358
#1	.0493313	22.24902	2.018603	31.75716	.0999379	.000004
#2	.0531610	22.97696	2.097973	32.90727	.0973791	.000249
#3	.0501225	22.46485	2.069114	32.68352	.0977050	-.001049

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**266.3384**	**.0276186**	**1.238125**	**^ *****	**11.52572**	**.5851690**
Stddev	4.2471	.0025605	.017785	-----	.27155	.0106840
%RSD	1.594615	9.270972	1.436405	-----	2.356042	1.825799
#1	261.4756	.0284823	1.256053	^ -----	11.83266	.5768755
#2	269.3197	.0296356	1.237835	^ -----	11.31675	.5972253
#3	268.2200	.0247379	1.220488	^ -----	11.42775	.5814061

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2565-01 Acquired: 7/17/2025 16:27:06 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0502380	F 56.34121	F 59.75197	.0166721	.1218860	.0026191
Stddev	.0011145	1.47993	1.16352	.0012439	.0035840	.0034684
%RSD	2.218525	2.626736	1.947247	7.460855	2.940430	132.4285
#1	.0513798	58.01830	58.88485	.0168293	.1183905	-.000393
#2	.0501811	55.21851	61.07427	.0178299	.1255524	.006411
#3	.0491530	55.78682	59.29680	.0153571	.1217152	.001839

Elem	Sr4077
Units	ppm
Avg	1.581561
Stddev	.024496
%RSD	1.548872
#1	1.554500
#2	1.602223
#3	1.587958

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4635.272	35703.11	2709.216	3134.436	4013.523
Stddev	53.831	555.24	35.787	34.095	52.598
%RSD	1.161332	1.555153	1.320942	1.087769	1.310530
#1	4574.363	35206.33	2748.728	3098.010	3952.942
#2	4654.989	36302.50	2678.979	3165.585	4040.061
#3	4676.465	35600.50	2699.942	3139.712	4047.565

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2598-01 Acquired: 7/17/2025 16:32:11 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0382554**	**-.038806**	**.3475283**	**.0573579**	**.0221876**	**116.3472**	**.6215340**
Stddev	.0039835	.001717	.0004666	.0045403	.0033975	.9774	.0030207
%RSD	10.41303	4.423810	.1342666	7.915727	15.31243	.8400311	.4860003
#1	.0357188	-.040204	.3474128	.0556788	.0209269	117.0347	.6229401
#2	.0362006	-.036890	.3480418	.0538963	.0196007	116.7785	.6235952
#3	.0428468	-.039323	.3471302	.0624986	.0260352	115.2284	.6180666

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0073192**	**-.001142**	**79.67904**	**.2400341**	**.1636520**	**.3569368**	**239.9925**
Stddev	.0004194	.000419	.33534	.0034217	.0006228	.0209990	10.4557
%RSD	5.730431	36.71347	.4208691	1.425497	.3805940	5.883121	4.356687
#1	.0071881	-.001004	79.91766	.2434168	.1632040	.3453234	236.2357
#2	.0069810	-.000809	79.82382	.2401108	.1633888	.3443096	231.9342
#3	.0077885	-.001613	79.29562	.2365747	.1643633	.3811773	251.8075

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.396949**	**56.61737**	**.2544154**	**-.005587**	**5.947783**	**.4100040**	**.5462318**
Stddev	.013560	.01808	.0004972	.004452	.236688	.0056373	.0024960
%RSD	.3084021	.0319350	.1954437	79.67684	3.979439	1.374938	.4569492
#1	4.410585	56.60981	.2549804	-.009151	5.980096	.4070352	.5478289
#2	4.396798	56.63800	.2540446	-.007015	5.696598	.4165053	.5433555
#3	4.383466	56.60429	.2542211	-.000597	6.166655	.4064716	.5475110

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**23.72688**	**11.95426**	**.0772590**	**.0133618**	**9.631330**	**5.047882**	**.0283749**
Stddev	2.10893	.00706	.0021445	.0004754	.003768	.255597	.0014828
%RSD	8.888342	.0590640	2.775723	3.557601	.0391238	5.063442	5.225783
#1	26.11697	11.95399	.0773755	.0132664	9.631679	4.947188	.0282534
#2	22.12790	11.94733	.0750586	.0129414	9.627400	4.857969	.0269566
#3	22.93576	11.96145	.0793428	.0138776	9.634912	5.338490	.0299148

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2598-01 Acquired: 7/17/2025 16:32:11 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	6.656294	.1665308	.1349699
Stddev	.053691	.0064885	.0012355
%RSD	.8066231	3.896258	.9154107
#1	6.695699	.1646079	.1360237
#2	6.678044	.1612211	.1352760
#3	6.595141	.1737634	.1336101

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6149.441	48706.38	3295.823	4154.502	4932.776
Stddev	6.213	98.50	171.236	39.074	8.866
%RSD	.1010295	.2022302	5.195555	.9405156	.1797330
#1	6156.096	48599.60	3383.443	4196.967	4936.902
#2	6148.436	48725.84	3405.519	4146.472	4938.827
#3	6143.793	48793.69	3098.508	4120.067	4922.599

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2600-01 Acquired: 7/17/2025 16:37:18 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2382991**	**-.014227**	**20.89072**	**.0821976**	**.1051334**	**110.5346**	**8.149566**
Stddev	.0021740	.001515	.14194	.0029151	.0042831	.2631	.013945
%RSD	.9123161	10.64915	.6794309	3.546405	4.073995	.2380348	.1711114
#1	.2368614	-.014548	20.79309	.0793012	.1003747	110.2813	8.133696
#2	.2372356	-.015555	21.05355	.0821607	.1086795	110.5160	8.159861
#3	.2408001	-.012577	20.82554	.0851310	.1063461	110.8065	8.155141

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0096728**	**.0651396**	**339.8267**	**1.440818**	**.1328960**	**1.424580**	**352.2190**
Stddev	.0003633	.0001656	1.1120	.003540	.0013084	.038077	10.2303
%RSD	3.755776	.2541935	.3272171	.2457060	.9845020	2.672827	2.904533
#1	.0094853	.0652579	339.2680	1.437426	.1329565	1.395947	342.0555
#2	.0100916	.0652106	341.1072	1.440539	.1341731	1.467792	362.5149
#3	.0094416	.0649504	339.1048	1.444490	.1315585	1.410002	352.0865

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.076122**	**89.28465**	**.3185131**	**-.012843**	**3.425990**	**.3781438**	**14.74384**
Stddev	.008444	.60309	.0012058	.003950	.120741	.0057840	.03424
%RSD	.1663434	.6754633	.3785798	30.75861	3.524274	1.529588	.2322544
#1	5.074347	88.80380	.3174216	-.017104	3.335492	.3720195	14.71237
#2	5.085312	89.96131	.3198075	-.009303	3.563087	.3788985	14.73884
#3	5.068706	89.08884	.3183103	-.012121	3.379391	.3835135	14.78031

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**18.96940**	**17.51150**	**.1931148**	**.0487020**	**14.86910**	**6.221454**	**.7889826**
Stddev	.54629	.08817	.0053926	.0008641	.05711	.194882	.0059276
%RSD	2.879851	.5034722	2.792406	1.774219	.3840848	3.132423	.7512918
#1	18.84061	17.55158	.1870259	.0489625	14.91866	6.080828	.7849039
#2	19.56857	17.57250	.1972878	.0494059	14.88200	6.443909	.7957821
#3	18.49901	17.41041	.1950306	.0477377	14.80665	6.139624	.7862617

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2600-01 Acquired: 7/17/2025 16:37:18 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**4.564987**	**.1604078**	**1.006260**
Stddev	.014177	.0041657	.002305
%RSD	.3105498	2.596971	.2290443
#1	4.548748	.1650931	1.004681
#2	4.571316	.1571221	1.008904
#3	4.574897	.1590082	1.005193

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5177.956**	**40819.08**	**2843.095**	**3500.956**	**4750.655**
Stddev	51.595	207.30	70.431	19.812	47.599
%RSD	.9964372	.5078630	2.477272	.5659114	1.001943
#1	5118.385	40604.11	2893.028	3487.792	4696.603
#2	5207.032	41017.75	2762.535	3523.742	4769.054
#3	5208.451	40835.37	2873.721	3491.334	4786.309

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2600-05 Acquired: 7/17/2025 16:42:21 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2464214**	**-.020769**	**4.970415**	**.1122518**	**.0429980**	**128.5854**	**2.457261**
Stddev	.0062644	.001131	.028928	.0269514	.0034582	.6356	.005170
%RSD	2.542157	5.444467	.5819954	24.00977	8.042667	.4942788	.2104141
#1	.2493124	-.022068	4.944424	.1431865	.0448085	127.8578	2.459309
#2	.2507183	-.020005	5.001581	.0997266	.0390105	129.0323	2.461094
#3	.2392336	-.020235	4.965241	.0938421	.0451752	128.8660	2.451380

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0117120**	**.0129835**	**147.2652**	**.6051351**	**.1549188**	**.7218754**	**432.2079**
Stddev	.0010787	.0021095	.2502	.0058806	.0011251	.0493163	49.7424
%RSD	9.210172	16.24741	.1699101	.9717877	.7262208	6.831686	11.50892
#1	.0129403	.0105677	147.2748	.6114787	.1539112	.7785885	489.0978
#2	.0112769	.0139219	147.0104	.6040609	.1561327	.6890676	410.6155
#3	.0109188	.0144610	147.5105	.5998656	.1547124	.6979701	396.9103

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.657659**	**79.69544**	**.3022291**	**-.015627**	**2.458435**	**.3155283**	**3.667222**
Stddev	.013798	.38415	.0012339	.015122	.281488	.0096107	.036601
%RSD	.2962392	.4820216	.4082554	96.77075	11.44990	3.045905	.9980516
#1	4.666599	80.13403	.3009065	.001747	2.778311	.3050492	3.708476
#2	4.664611	79.53357	.3024314	-.022802	2.348451	.3176044	3.638645
#3	4.641769	79.41871	.3033493	-.025825	2.248544	.3239312	3.654543

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**26.36084**	**8.902096**	**.0801857**	**.0279555**	**10.39600**	**6.081365**	**1.442878**
Stddev	2.51793	.123508	.0181133	.0002281	.18756	.519036	.012287
%RSD	9.551773	1.387409	22.58921	.8160638	1.804174	8.534860	.8515653
#1	29.19193	8.817518	.0978362	.0278481	10.28056	6.680310	1.432220
#2	25.51858	9.043830	.0810785	.0278008	10.61242	5.763265	1.456317
#3	24.37201	8.844939	.0616425	.0282175	10.29503	5.800521	1.440097

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2600-05 Acquired: 7/17/2025 16:42:21 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**5.567814**	**.2224632**	**.3694574**
Stddev	.021239	.0036138	.0002872
%RSD	.3814528	1.624427	.0777370
#1	5.546732	.2221696	.3695897
#2	5.589206	.2262148	.3691279
#3	5.567504	.2190052	.3696546

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5288.550**	**41215.86**	**2715.649**	**3554.989**	**4852.886**
Stddev	102.627	775.57	220.933	19.165	94.437
%RSD	1.940545	1.881732	8.135567	.5390914	1.945992
#1	5349.057	40354.27	2460.537	3561.618	4914.352
#2	5170.055	41435.07	2842.774	3569.959	4744.148
#3	5346.537	41858.23	2843.635	3533.389	4900.158

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2600-09 Acquired: 7/17/2025 16:47:25 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1141504**	**-.013598**	**5.691941**	**.0856636**	**.0299037**	**111.9958**	**3.102431**
Stddev	.0066732	.001819	.048088	.0107968	.0034040	.7670	.028928
%RSD	5.845994	13.37558	.8448418	12.60372	11.38301	.6848718	.9324227
#1	.1190801	-.014917	5.738148	.0741946	.0338336	111.1171	3.069363
#2	.1065566	-.014354	5.695506	.0871653	.0279996	112.5312	3.114884
#3	.1168143	-.011523	5.642170	.0956310	.0278779	112.3391	3.123048

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0095768**	**.0229223**	**198.2775**	**.8021284**	**.1433975**	**1.169734**	**353.7399**
Stddev	.0006669	.0012103	1.8545	.0062523	.0009905	.082173	20.5493
%RSD	6.963344	5.280062	.9353170	.7794680	.6907660	7.024953	5.809165
#1	.0089744	.0240694	196.2253	.8092181	.1444528	1.112413	332.9948
#2	.0094627	.0230400	198.7740	.7997640	.1432519	1.132911	354.1372
#3	.0102934	.0216574	199.8334	.7974031	.1424878	1.263879	374.0877

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.014982**	**131.1149**	**.2574472**	**-.011881**	**1.994319**	**.2847322**	**4.160579**
Stddev	.047290	1.2065	.0013420	.009161	.109501	.0030617	.012914
%RSD	.9429649	.9202128	.5212593	77.10658	5.490636	1.075276	.3103956
#1	4.960379	129.7336	.2584720	-.021589	1.911886	.2836682	4.167043
#2	5.041895	131.6478	.2579413	-.010668	1.952506	.2823445	4.168986
#3	5.042672	131.9632	.2559282	-.003387	2.118566	.2881839	4.145710

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**16.32996**	**10.78661**	**.0493594**	**.0220602**	**10.32203**	**4.378960**	**2.552568**
Stddev	1.68151	.22070	.0078213	.0002554	.24078	.299927	.019988
%RSD	10.29709	2.046031	15.84550	1.157626	2.332691	6.849285	.7830671
#1	14.77172	11.03841	.0440811	.0217672	10.59546	4.159578	2.573669
#2	18.11227	10.69472	.0583450	.0222354	10.22893	4.256573	2.550115
#3	16.10588	10.62671	.0456523	.0221781	10.14170	4.720728	2.533919

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2600-09 Acquired: 7/17/2025 16:47:25 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**4.785520**	**.1565143**	**.2748896**
Stddev	.041404	.0056819	.0023532
%RSD	.8651874	3.630303	.8560523
#1	4.737920	.1522267	.2721901
#2	4.813182	.1543573	.2759711
#3	4.805458	.1629589	.2765076

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5268.627**	**42287.23**	**2869.133**	**3612.364**	**4738.808**
Stddev	97.225	313.80	175.258	23.558	86.365
%RSD	1.845353	.7420576	6.108398	.6521398	1.822503
#1	5164.837	42084.77	3012.973	3605.240	4643.495
#2	5357.581	42128.21	2920.493	3593.190	4811.871
#3	5283.463	42648.70	2673.933	3638.661	4761.060

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2602-01 Acquired: 7/17/2025 16:52:30 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.013724**	**-.003307**	**.0058141**	**-.027450**	**.0186680**	**.8422958**
Stddev	.002169	.003641	.0015242	.001661	.0019210	.0105971
%RSD	15.80720	110.0995	26.21508	6.049639	10.29011	1.258116
#1	-.012036	-.004398	.0065548	-.027888	.0187077	.8421795
#2	-.012965	.000755	.0040611	-.025615	.0167275	.8317574
#3	-.016170	-.006276	.0068263	-.028849	.0205688	.8529506

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2154051**	**-.000122**	**-.000127**	**123.3235**	**.3416345**	**.0183006**
Stddev	.0023634	.000132	.000046	1.0407	.0052255	.0008022
%RSD	1.097196	107.5355	36.31274	.8438459	1.529571	4.383373
#1	.2168736	-.000206	-.000098	124.0403	.3400320	.0183038
#2	.2126788	.000029	-.000103	122.1298	.3474737	.0174968
#3	.2166629	-.000191	-.000180	123.8003	.3373979	.0191012

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0067923**	**.0717181**	**.0004951**	**.5412357**	**-.000248**	**-.000177**
Stddev	.0007606	.0021130	.0006862	.0209249	.000111	.000596
%RSD	11.19825	2.946299	138.5784	3.866137	44.78949	336.9328
#1	.0070742	.0741385	.0011919	.5641117	-.000279	-.000034
#2	.0059310	.0702410	-.000180	.5365331	-.000341	-.000831
#3	.0073717	.0707749	.000473	.5230622	-.000125	.000335

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**270.7799**	**.0306209**	**.0060855**	**40.53433**	**.0248557**	**.2692334**
Stddev	12.9509	.0087853	.0000931	2.15032	.0012211	.0061014
%RSD	4.782808	28.69041	1.530045	5.304945	4.912905	2.266196
#1	278.8802	.0296579	.0059785	42.96343	.0249948	.2736135
#2	277.6162	.0398480	.0061301	38.87424	.0235709	.2622645
#3	255.8433	.0223568	.0061479	39.76533	.0260013	.2718222

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2602-01 Acquired: 7/17/2025 16:52:30 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0877404	F 33.19044	9.759892	.0023684	-.004414	-.023248
Stddev	.0004955	.46644	.118109	.0011551	.004045	.003696
%RSD	.5647457	1.405344	1.210144	48.77080	91.62824	15.89772
#1	.0881254	32.78766	9.875440	.0015801	-.001810	-.024150
#2	.0879144	33.08217	9.639379	.0036943	-.002359	-.019184
#3	.0871813	33.70149	9.764857	.0018309	-.009074	-.026409

Elem	Sr4077
Units	ppm
Avg	1.280904
Stddev	.011127
%RSD	.8687007
#1	1.284287
#2	1.268479
#3	1.289948

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4769.172	37012.45	2576.160	3189.842	4947.015
Stddev	6.331	505.99	35.151	20.000	16.120
%RSD	.1327447	1.367091	1.364490	.6270022	.3258573
#1	4765.693	37286.50	2542.070	3191.310	4963.998
#2	4765.343	36428.54	2612.285	3209.069	4945.122
#3	4776.479	37322.30	2574.124	3169.149	4931.925

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2602-01DUP Acquired: 7/17/2025 16:57:45 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.018344**	**-.002079**	**.0069427**	**-.028058**	**.0181443**	**.8282679**
Stddev	.002169	.003350	.0009462	.003575	.0047261	.0199642
%RSD	11.82216	161.1727	13.62868	12.74015	26.04715	2.410355
#1	-.016689	-.005655	.0080131	-.027553	.0194100	.8090143
#2	-.017545	-.001568	.0062180	-.024762	.0129142	.8269155
#3	-.020799	.000987	.0065969	-.031858	.0221086	.8488740

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2127608**	**-.000010**	**-.000144**	**121.4857**	**.3406388**	**.0189977**
Stddev	.0039369	.000060	.000023	2.0971	.0025850	.0004824
%RSD	1.850400	574.6391	15.84278	1.726213	.7588619	2.539246
#1	.2084336	-.000079	-.000153	120.6330	.3413931	.0190985
#2	.2161311	.000030	-.000161	123.8749	.3427628	.0184728
#3	.2137175	.000018	-.000118	119.9493	.3377606	.0194217

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0088150**	**.0836168**	**.0018353**	**.5280698**	**-.000113**	**.0007462**
Stddev	.0031937	.0121872	.0017945	.0347826	.000047	.0008813
%RSD	36.23057	14.57504	97.77157	6.586744	41.63770	118.0964
#1	.0063288	.0751769	.0023663	.5668245	-.000091	.0015393
#2	.0076993	.0780846	-.000165	.5178242	-.000167	.0009019
#3	.0124169	.0975888	.003304	.4995609	-.000081	-.000202

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**308.9921**	**.0185376**	**.0055694**	**48.60032**	**.0275842**	**.3058667**
Stddev	47.5591	.0103585	.0003405	7.29077	.0029076	.0439695
%RSD	15.39167	55.87868	6.112847	15.00148	10.54095	14.37536
#1	278.1233	.0068956	.0058990	40.62719	.0276850	.2794634
#2	285.0920	.0267352	.0055903	50.24653	.0246274	.2815122
#3	363.7610	.0219819	.0052190	54.92723	.0304401	.3566244

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2602-01DUP Acquired: 7/17/2025 16:57:45 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0873767	F 34.17467	10.91413	.0021816	-.000593	-.020105
Stddev	.0010326	.69343	1.56234	.0005765	.001800	.003964
%RSD	1.181765	2.029088	14.31481	26.42565	303.5152	19.71524
#1	.0881104	34.59415	9.95458	.0028057	.000393	-.023912
#2	.0861959	33.37427	10.07091	.0016689	-.002671	-.020402
#3	.0878238	34.55558	12.71692	.0020703	.000498	-.016001

Elem	Sr4077
Units	ppm
Avg	1.258766
Stddev	.020500
%RSD	1.628581
#1	1.243194
#2	1.281991
#3	1.251111

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4688.012	37194.49	2334.651	3210.366	4844.280
Stddev	102.268	190.03	310.633	10.074	110.649
%RSD	2.181471	.5109164	13.30533	.3137994	2.284126
#1	4608.177	37014.08	2522.296	3207.767	4759.651
#2	4803.285	37176.51	2505.565	3221.485	4969.490
#3	4652.575	37392.87	1976.093	3201.846	4803.698

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2602-01LX5 Acquired: 7/17/2025 17:02:59 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.014018**	**-.000980**	**.0030323**	**-.011850**	**.0042784**	**.2144315**	**.0455017**
Stddev	.001438	.001353	.0011460	.003996	.0016949	.0337722	.0004210
%RSD	10.25706	138.0590	37.79119	33.72187	39.61580	15.74963	.9252963
#1	-.013650	-.000241	.0040349	-.010084	.0054342	.2298398	.0454195
#2	-.012800	-.000157	.0017832	-.009041	.0023327	.2377515	.0451278
#3	-.015604	-.002541	.0032789	-.016425	.0050684	.1757032	.0459577

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000068**	**-.000065**	**25.80944**	**.0685064**	**.0088326**	**.0013431**	**.0124949**
Stddev	.000050	.000100	.09780	.0000237	.0002045	.0003657	.0025478
%RSD	72.74619	153.4741	.3789129	.0346608	2.314891	27.22910	20.39060
#1	-.000121	.000020	25.70054	.0685314	.0086057	.0015162	.0112241
#2	-.000061	-.000175	25.83799	.0684841	.0090025	.0015901	.0154281
#3	-.000022	-.000041	25.88978	.0685039	.0088896	.0009230	.0108325

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000460**	**.1093124**	**-.000117**	**.0005949**	**61.97119**	**.0042060**	**.0015338**
Stddev	.000677	.0106546	.000256	.0008982	.61871	.0069738	.0003610
%RSD	147.0107	9.746955	219.5154	150.9690	.9983857	165.8064	23.53434
#1	-.000594	.1213904	.000162	.0015192	62.67670	.0118912	.0019469
#2	.000273	.1053014	-.000342	.0005401	61.71587	-.001719	.0013755
#3	-.001060	.1012455	-.000170	-.000275	61.52100	.002446	.0012791

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.160846**	**.0069840**	**.0550966**	**.0185972**	**6.281361**	**2.163779**	**.0015893**
Stddev	.105722	.0007931	.0005950	.0000710	.091172	.019540	.0007590
%RSD	1.476395	11.35648	1.080015	.3818865	1.451475	.9030650	47.75656
#1	7.239892	.0062894	.0554898	.0186614	6.376958	2.186342	.0008896
#2	7.201889	.0068143	.0544120	.0186094	6.271751	2.152604	.0023962
#3	7.040756	.0078482	.0553880	.0185209	6.195375	2.152391	.0014821

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2602-01LX5 Acquired: 7/17/2025 17:02:59 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.000687	.0533438	.2683221
Stddev	.002400	.0033988	.0001804
%RSD	349.4777	6.371452	.0672264
#1	-.003283	.0547577	.2681996
#2	-.000227	.0558073	.2685292
#3	.001450	.0494663	.2682375

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5002.557	39678.03	2624.426	3353.178	5458.211
Stddev	6.446	232.70	9.376	31.032	2.090
%RSD	.1288510	.5864605	.3572652	.9254437	.0382918
#1	5007.837	39946.06	2613.876	3388.783	5456.905
#2	5004.460	39527.73	2631.805	3331.886	5460.621
#3	4995.374	39560.29	2627.599	3338.865	5457.106

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2602-01MS Acquired: 7/17/2025 17:08:08 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8181238**	**1.908894**	**1.002301**	**1.940905**	**.8472159**	**2.915752**
Stddev	.0056179	.005591	.002634	.004997	.0029354	.019029
%RSD	.6866763	.2928952	.2628287	.2574767	.3464802	.6526426
#1	.8225321	1.906269	.999265	1.941969	.8489411	2.912710
#2	.8117983	1.905097	1.003989	1.935461	.8438265	2.898426
#3	.8200410	1.915314	1.003649	1.945284	.8488800	2.936119

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4787874**	**.2065800**	**.2107525**	**203.2804**	**.7706139**	**.2276302**
Stddev	.0037479	.0022448	.0005271	.8365	.0030145	.0002619
%RSD	.7827949	1.086667	.2501255	.4115084	.3911829	.1150536
#1	.4828556	.2090220	.2103720	204.1788	.7739327	.2274958
#2	.4780317	.2061118	.2105313	203.1386	.7698636	.2274628
#3	.4754750	.2046062	.2113542	202.5239	.7680454	.2279320

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3077789**	**3.177128**	**.2056078**	**2.829824**	**.5224337**	**.0762783**
Stddev	.0037529	.023148	.0005968	.006088	.0004701	.0011594
%RSD	1.219359	.7285686	.2902458	.2151320	.0899833	1.519949
#1	.3120131	3.203023	.2057990	2.836011	.5229697	.0774639
#2	.3064605	3.169916	.2060855	2.823841	.5220915	.0762239
#3	.3048630	3.158445	.2049389	2.829621	.5222399	.0751470

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**282.2503**	**.3464672**	**.2203631**	**53.06451**	**6.444759**	**.5620134**
Stddev	1.6611	.0151999	.0014413	.09190	.011223	.0050596
%RSD	.5885265	4.387105	.6540536	.1731767	.1741339	.9002537
#1	280.4155	.3515871	.2209057	53.01746	6.450966	.5678414
#2	282.6838	.3293685	.2187292	53.17040	6.431804	.5594535
#3	283.6518	.3584461	.2214543	53.00566	6.451507	.5587455

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2602-01MS Acquired: 7/17/2025 17:08:08 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5202983	F 34.89025	11.02316	.7530143	.2030927	.1793382
Stddev	.0010681	.06230	.10494	.0022138	.0017521	.0031850
%RSD	.2052870	.1785738	.9520152	.2939851	.8627141	1.775972
#1	.5206627	34.86808	11.13818	.7534831	.2023037	.1784860
#2	.5211366	34.84206	10.99867	.7506037	.2051006	.1828627
#3	.5190957	34.96061	10.93263	.7549561	.2018738	.1766661

Elem	Sr4077
Units	ppm
Avg	2.098612
Stddev	.012683
%RSD	.6043723
#1	2.113171
#2	2.092706
#3	2.089958

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4639.024	37134.30	2567.308	3142.074	4808.478
Stddev	20.535	318.73	4.499	29.422	16.333
%RSD	.4426489	.8583038	.1752448	.9363748	.3396803
#1	4635.247	37467.98	2570.673	3168.657	4809.372
#2	4620.640	37101.92	2569.053	3147.102	4791.716
#3	4661.185	36833.00	2562.198	3110.462	4824.347

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2602-01MSD Acquired: 7/17/2025 17:13:11 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8161199**	**1.892580**	**.9915774**	**1.935539**	**.8431776**	**2.913208**
Stddev	.0068982	.003748	.0021288	.006319	.0023225	.022144
%RSD	.8452490	.1980217	.2146928	.3264691	.2754451	.7601215
#1	.8083435	1.888276	.9906239	1.930126	.8457426	2.890077
#2	.8215019	1.895119	.9900919	1.942483	.8412172	2.934212
#3	.8185143	1.894346	.9940163	1.934008	.8425729	2.915336

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5026112**	**.2043850**	**.2092506**	**244.8280**	**.7675253**	**.2270827**
Stddev	.0052725	.0024949	.0003989	2.0627	.0047798	.0003965
%RSD	1.049017	1.220678	.1906113	.8425199	.6227587	.1746236
#1	.4966927	.2015060	.2088541	242.4510	.7620222	.2266570
#2	.5068064	.2059151	.2096517	246.1485	.7706430	.2274416
#3	.5043344	.2057338	.2092461	245.8844	.7699105	.2271496

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3056190**	**3.152781**	**.2056826**	**3.011754**	**.5186394**	**.0753392**
Stddev	.0022435	.030437	.0016060	.064190	.0004000	.0005216
%RSD	.7340792	.9654116	.7808137	2.131304	.0771251	.6923822
#1	.3033762	3.118088	.2054438	2.972546	.5189081	.0754121
#2	.3078631	3.174997	.2073947	3.085831	.5188304	.0747850
#3	.3056177	3.165258	.2042094	2.976884	.5181797	.0758206

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**282.6491**	**.3412035**	**.2202709**	**53.25436**	**6.423826**	**.5584764**
Stddev	.9846	.0050450	.0015445	.31991	.012594	.0045055
%RSD	.3483554	1.478587	.7011954	.6007281	.1960451	.8067556
#1	282.4135	.3459439	.2217419	52.91794	6.409690	.5536062
#2	283.7302	.3359010	.2204087	53.55471	6.433847	.5624961
#3	281.8037	.3417656	.2186621	53.29043	6.427942	.5593268

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2602-01MSD Acquired: 7/17/2025 17:13:11 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5162186	F 34.99832	10.99186	.7459417	.1992213	.1801906
Stddev	.0013171	.01953	.08778	.0018052	.0015190	.0035827
%RSD	.2551419	.0557941	.7986229	.2420081	.7624797	1.988281
#1	.5161498	34.99596	10.89410	.7472401	.1980674	.1760537
#2	.5175688	35.01892	11.06393	.7467048	.2009423	.1822408
#3	.5149373	34.98008	11.01756	.7438802	.1986543	.1822773

Elem	Sr4077
Units	ppm
Avg	2.409373
Stddev	.027457
%RSD	1.139601
#1	2.377695
#2	2.426332
#3	2.424093

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4648.341	37159.24	2581.913	3152.764	4815.122
Stddev	10.825	160.42	21.844	9.260	14.802
%RSD	.2328810	.4317206	.8460559	.2937128	.3074111
#1	4637.333	37238.01	2605.625	3156.243	4801.481
#2	4658.974	37265.04	2577.507	3159.781	4830.862
#3	4648.716	36974.65	2562.608	3142.268	4813.025

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: CCV03 Acquired: 7/17/2025 17:18:14 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi 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	**4.960223**	**5.045662**	**5.036934**	**4.981960**	**4.978659**	**10.05544**	**10.13790**
Stddev	.021755	.015392	.012737	.013947	.020201	.04661	.02133
%RSD	.4385817	.3050448	.2528760	.2799506	.4057614	.4634828	.2104133
#1	4.962536	5.042337	5.038502	4.976452	4.970116	10.07896	10.16171
#2	4.937404	5.032205	5.023485	4.971609	4.964132	10.00176	10.12055
#3	4.980729	5.062444	5.048814	4.997820	5.001728	10.08559	10.13143

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2575675**	**2.524768**	**25.29313**	**1.016365**	**2.505825**	**1.282658**	**5.114904**
Stddev	.0006716	.006804	.08174	.008472	.007637	.002352	.008946
%RSD	.2607416	.2694912	.3231643	.8335444	.3047761	.1833503	.1748981
#1	.2583045	2.525032	25.34310	1.007096	2.501914	1.283629	5.123264
#2	.2574078	2.517835	25.19880	1.023709	2.500936	1.279976	5.105469
#3	.2569901	2.531436	25.33748	1.018288	2.514626	1.284369	5.115978

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.505262**	**24.97176**	**2.508022**	**1.266836**	**25.76692**	**2.511245**	**2.504415**
Stddev	.006302	.17594	.006504	.008164	.08472	.017371	.011979
%RSD	.2515544	.7045453	.2593190	.6444691	.3287760	.6917327	.4783234
#1	2.512298	25.15783	2.506163	1.258335	25.68158	2.514584	2.490653
#2	2.503354	24.80810	2.502651	1.274616	25.85099	2.492446	2.510088
#3	2.500135	24.94936	2.515253	1.267557	25.76818	2.526704	2.512505

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.60979**	**5.018776**	**5.107160**	**4.990802**	**4.951187**	**5.490938**	**5.051481**
Stddev	.07637	.020967	.007714	.012644	.020292	.006887	.015893
%RSD	.2981978	.4177720	.1510463	.2533499	.4098398	.1254263	.3146300
#1	25.69328	5.015915	5.110868	4.986606	4.943772	5.491646	5.056191
#2	25.59261	4.999386	5.098292	4.980790	4.935645	5.483724	5.033765
#3	25.54347	5.041026	5.112320	5.005011	4.974143	5.497443	5.064488

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: CCV03 Acquired: 7/17/2025 17:18:14 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: CCV03 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**5.059648**	**5.129190**	**5.073675**
Stddev	.027266	.017703	.006680
%RSD	.5388857	.3451383	.1316667
#1	5.087236	5.148826	5.078081
#2	5.032716	5.124291	5.065988
#3	5.058993	5.114452	5.076954

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4945.331**	**39739.74**	**2583.904**	**3349.054**	**5192.207**
Stddev	1.783	252.18	2.474	24.557	2.040
%RSD	.0360456	.6345870	.0957388	.7332604	.0392978
#1	4945.015	40019.03	2583.843	3377.325	5193.731
#2	4947.250	39528.72	2586.407	3336.815	5193.001
#3	4943.727	39671.46	2581.461	3333.022	5189.889

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: CCB03 Acquired: 7/17/2025 17:36:12 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001294**	**.0004004**	**.0002656**	**-.000947**	**-.001865**	**.0300960**
Stddev	.003000	.0009213	.0005895	.002596	.001559	.0106093
%RSD	231.7926	230.1148	221.9482	274.0731	83.60272	35.25155
#1	-.004726	-.000662	-.000414	.000438	-.003662	.0418218
#2	.000833	.000883	.000642	-.003942	-.001059	.0211612
#3	.000010	.000980	.000568	.000662	-.000874	.0273051

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003493**	**.0001535**	**-.000013**	**.0016239**	**-.000166**	**-.000017**
Stddev	.0007828	.0000873	.000056	.0216584	.000214	.000194
%RSD	224.1199	56.84592	425.4195	1333.771	128.9326	1123.154
#1	-.000462	.0000827	-.000058	.0190021	-.000341	.000080
#2	.001100	.0001268	-.000030	.0085098	.000073	.000109
#3	.000409	.0002510	.000049	-.022640	-.000230	-.000240

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002487**	**-.001278**	**-.000476**	**.0119084**	**.0000261**	**-.000318**
Stddev	.0000775	.001815	.001185	.0216167	.0003219	.000274
%RSD	31.14185	142.0704	248.8837	181.5244	1231.315	86.12255
#1	.0003080	-.000810	.000275	.0020364	-.000341	-.000621
#2	.0001611	.000258	-.001841	-.003010	.000159	-.000088
#3	.0002771	-.003281	.000139	.036699	.000261	-.000244

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0299920**	**-.005613**	**.0002743**	**.0214461**	**-.000085**	**-.006531**
Stddev	.0200159	.009410	.0002456	.0017149	.001038	.000557
%RSD	66.73727	167.6390	89.52433	7.996154	1219.337	8.535531
#1	.0415543	-.015900	.0003711	.0219094	.000205	-.007147
#2	.0415420	.002560	.0004568	.0195472	.000777	-.006384
#3	.0068797	-.003500	-.000005	.0228818	-.001237	-.006061

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: CCB03 Acquired: 7/17/2025 17:36:12 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004419	.0064980	.0017986	.0001372	.0009291	F .0242769
Stddev	.0002400	.0007795	.0003960	.0005435	.0026582	.0009637
%RSD	54.32465	11.99524	22.01900	396.0303	286.0996	3.969441
#1	.0004041	.0070672	.0015460	.0007625	.0002922	.0241776
#2	.0002230	.0056096	.0015948	-.000221	-.001353	.0233667
#3	.0006986	.0068173	.0022551	-.000130	.003848	.0252864

Elem	Sr4077
Units	ppm
Avg	-.000164
Stddev	.000072
%RSD	44.07015
#1	-.000213
#2	-.000081
#3	-.000199

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5175.081	41717.91	2611.212	3477.600	6015.048
Stddev	28.490	250.27	31.987	32.065	23.186
%RSD	.5505178	.5999185	1.225000	.9220372	.3854598
#1	5158.630	41884.14	2591.476	3493.485	5998.305
#2	5158.635	41430.07	2648.118	3440.694	6005.327
#3	5207.978	41839.53	2594.042	3498.621	6041.511

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2602-01A Acquired: 7/17/2025 17:41:18 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8230034**	**1.912641**	**1.011601**	**1.962519**	**.8429275**	**2.893310**
Stddev	.0141983	.020385	.013780	.029541	.0097797	.042443
%RSD	1.725176	1.065815	1.362207	1.505274	1.160202	1.466923
#1	.8074262	1.890307	.999975	1.935636	.8328105	2.942071
#2	.8352195	1.930247	1.026822	1.994144	.8523308	2.873192
#3	.8263646	1.917367	1.008005	1.957775	.8436412	2.864667

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4876427**	**.2097886**	**.2133731**	**222.8933**	**.7859674**	**.2283759**
Stddev	.0060139	.0094792	.0027935	1.8856	.0209857	.0021954
%RSD	1.233253	4.518450	1.309197	.8459851	2.670050	.9612968
#1	.4942741	.2102664	.2106645	225.0176	.7931592	.2261651
#2	.4861113	.2000796	.2162443	222.2451	.8024116	.2305555
#3	.4825425	.2190199	.2132105	221.4173	.7623313	.2284070

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3104852**	**3.262544**	**.1997527**	**2.860189**	**.5230899**	**.0773560**
Stddev	.0155496	.132676	.0027643	.026239	.0070027	.0008935
%RSD	5.008163	4.066648	1.383849	.9173844	1.338713	1.155013
#1	.3081366	3.289029	.2021632	2.838482	.5159356	.0772408
#2	.2962436	3.118623	.1967355	2.852738	.5299304	.0783015
#3	.3270756	3.379980	.2003593	2.889348	.5234037	.0765257

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**295.5274**	**.3436828**	**.2244958**	**54.75872**	**6.510194**	**.5722009**
Stddev	7.0804	.0126646	.0045464	1.57094	.084206	.0259583
%RSD	2.395866	3.684972	2.025166	2.868834	1.293445	4.536578
#1	299.2274	.3582155	.2243227	53.88961	6.426568	.5725753
#2	287.3635	.3378284	.2291264	53.81439	6.594967	.5460574
#3	299.9912	.3350046	.2200385	56.57216	6.509046	.5979700

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2602-01A Acquired: 7/17/2025 17:41:18 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5169035	F 35.53335	11.32624	.7581246	.1980034	.1858815
Stddev	.0062292	.52118	.41452	.0125466	.0020203	.0024996
%RSD	1.205093	1.466745	3.659804	1.654946	1.020345	1.344736
#1	.5103752	35.05816	11.33658	.7456876	.1988163	.1840221
#2	.5227827	36.09075	10.90665	.7707779	.1957032	.1887230
#3	.5175526	35.45115	11.73549	.7579082	.1994906	.1848993

Elem	Sr4077
Units	ppm
Avg	2.242074
Stddev	.026219
%RSD	1.169415
#1	2.271122
#2	2.234941
#3	2.220160

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4686.241	36235.58	2501.102	3126.978	4830.842
Stddev	42.246	1215.98	82.001	72.935	45.601
%RSD	.9014945	3.355754	3.278587	2.332445	.9439542
#1	4730.937	36573.01	2527.604	3180.561	4880.172
#2	4646.969	34886.52	2566.574	3043.918	4790.229
#3	4680.818	37247.21	2409.127	3156.456	4822.124

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2586-01 Acquired: 7/17/2025 17:46:20 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0717186**	**-.009575**	**.2300264**	**.0571173**	**.0117046**	**83.72472**	**1.979174**
Stddev	.0022617	.001501	.0009001	.0037669	.0022490	.16697	.003374
%RSD	3.153524	15.68016	.3913013	6.595108	19.21511	.1994310	.1704639
#1	.0737383	-.009922	.2307919	.0585844	.0141761	83.84884	1.977606
#2	.0692750	-.007931	.2302524	.0599299	.0097783	83.53489	1.976870
#3	.0721425	-.010873	.2290348	.0528375	.0111593	83.79043	1.983046

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0101926**	**-.002192**	**26.11267**	**.1694261**	**.1157003**	**.4122239**	**211.6663**
Stddev	.0005411	.000312	.08706	.0007092	.0008164	.0155475	6.9449
%RSD	5.308345	14.24441	.3334165	.4185925	.7056413	3.771617	3.281044
#1	.0099630	-.002063	26.09437	.1702414	.1166246	.4020279	209.3547
#2	.0108106	-.002548	26.20742	.1690855	.1153990	.4301186	219.4722
#3	.0098042	-.001965	26.03620	.1689515	.1150774	.4045252	206.1720

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.815874**	**32.80302**	**.1968454**	**.0011358**	**13.85305**	**.3273553**	**.4665336**
Stddev	.010688	.17954	.0014877	.0020566	.60602	.0040179	.0015193
%RSD	.2219252	.5473297	.7557842	181.0766	4.374652	1.227376	.3256521
#1	4.803785	32.65347	.1985619	.0000497	13.46321	.3319026	.4682291
#2	4.819771	33.00213	.1960459	.0035077	14.55124	.3242850	.4652957
#3	4.824066	32.75345	.1959283	-.000150	13.54470	.3258783	.4660760

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**12.81904**	**5.789693**	**.0754485**	**.0068067**	**1.132156**	**3.740812**	**.0116989**
Stddev	.38412	.034149	.0030483	.0003796	.008291	.152215	.0004065
%RSD	2.996485	.5898296	4.040178	5.576485	.7323274	4.069049	3.474722
#1	12.75871	5.828307	.0765097	.0066236	1.141707	3.642304	.0115398
#2	13.22975	5.763464	.0778243	.0072431	1.127952	3.916129	.0113959
#3	12.46865	5.777309	.0720115	.0065533	1.126809	3.664004	.0121608

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2586-01 Acquired: 7/17/2025 17:46:20 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**2.113886**	**.1539904**	**.2078376**
Stddev	.006827	.0042220	.0005332
%RSD	.3229538	2.741745	.2565600
#1	2.114983	.1511659	.2073203
#2	2.106576	.1588439	.2078070
#3	2.120097	.1519615	.2083854

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5952.181**	**47759.48**	**3087.807**	**4026.057**	**5143.123**
Stddev	22.373	191.10	122.650	14.371	9.957
%RSD	.3758718	.4001235	3.972068	.3569579	.1935977
#1	5977.897	47571.55	3168.071	4009.468	5151.009
#2	5937.187	47753.29	2946.625	4034.741	5131.935
#3	5941.460	47953.59	3148.726	4033.961	5146.426

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2589-01 Acquired: 7/17/2025 17:51:29 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2788215**	**-.016789**	**.3212172**	**.1204587**	**.0320323**	**103.4576**	**.4896464**
Stddev	.0023158	.001775	.0025307	.0022882	.0008222	.2348	.0015297
%RSD	.8305625	10.57317	.7878415	1.899542	2.566759	.2269323	.3124007
#1	.2801316	-.014740	.3216853	.1230748	.0329375	103.2690	.4911581
#2	.2801853	-.017774	.3234810	.1194715	.0313317	103.3832	.4880994
#3	.2761477	-.017855	.3184851	.1188298	.0318278	103.7205	.4896817

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0156253**	**-.003747**	**109.1892**	**.3634952**	**.1019758**	**.0811775**	**477.5124**
Stddev	.0004370	.000158	.2342	.0061605	.0005458	.0005471	2.9526
%RSD	2.796810	4.212082	.2144896	1.694797	.5352789	.6739878	.6183263
#1	.0156987	-.003876	109.2487	.3651020	.1020795	.0817764	479.9320
#2	.0160209	-.003794	108.9310	.3686931	.1024624	.0807039	478.3828
#3	.0151562	-.003571	109.3879	.3566905	.1013856	.0810523	474.2225

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.739114**	**51.10834**	**.1572218**	**-.034550**	**11.48685**	**1.175563**	**.6973068**
Stddev	.002849	.03247	.0002832	.002727	.13339	.006319	.0082614
%RSD	.1638350	.0635295	.1801521	7.893855	1.161280	.5374952	1.184755
#1	1.740023	51.14181	.1570840	-.034792	11.59555	1.168441	.7033494
#2	1.735921	51.07697	.1575476	-.037149	11.52701	1.177752	.7006781
#3	1.741398	51.10625	.1570339	-.031710	11.33799	1.180495	.6878929

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**22.44330**	**6.638647**	**.1027665**	**.0111873**	**6.296272**	**4.501639**	**.0212926**
Stddev	.38469	.035800	.0013833	.0003444	.020047	.039196	.0013777
%RSD	1.714047	.5392703	1.346018	3.078236	.3184006	.8707029	6.470075
#1	22.53077	6.626304	.1025390	.0107972	6.281125	4.545755	.0201003
#2	22.02241	6.678986	.1042494	.0113159	6.319006	4.470826	.0209768
#3	22.77672	6.610651	.1015111	.0114489	6.288685	4.488337	.0228008

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2589-01 Acquired: 7/17/2025 17:51:29 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**1.654907**	**.0777759**	**.5463705**
Stddev	.007634	.0041943	.0013110
%RSD	.4612979	5.392799	.2399410
#1	1.651309	.0785311	.5456181
#2	1.649736	.0732554	.5456091
#3	1.663675	.0815414	.5478842

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5520.897**	**44038.70**	**3017.797**	**3756.003**	**4929.434**
Stddev	17.531	378.04	21.436	20.948	15.941
%RSD	.3175441	.8584159	.7103251	.5577263	.3233889
#1	5511.345	43917.76	2998.030	3736.324	4929.376
#2	5510.217	43735.92	3040.582	3753.662	4913.522
#3	5541.130	44462.40	3014.780	3778.024	4945.404

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2590-01RE Acquired: 7/17/2025 18:01:39 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0514989**	**-.038272**	**.4070859**	**.0643625**	**.0285658**	**100.1824**	**1.009110**
Stddev	.0058124	.002399	.0060827	.0120487	.0029843	.2937	.005046
%RSD	11.28647	6.269120	1.494194	18.72001	10.44705	.2931578	.5000818
#1	.0450680	-.037092	.4059459	.0644558	.0292475	100.4450	1.010963
#2	.0530509	-.036690	.4016539	.0522675	.0252997	100.2371	1.003399
#3	.0563778	-.041033	.4136579	.0763643	.0311503	99.8652	1.012968

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0089394**	**-.000323**	**63.48732**	**.3532121**	**.1410893**	**.8840340**	**247.5735**
Stddev	.0006012	.000770	.38944	.0084862	.0003757	.0691387	20.7956
%RSD	6.725637	238.7277	.6134067	2.402571	.2662950	7.820821	8.399765
#1	.0087706	-.000330	63.92411	.3615540	.1415219	.8529501	248.3947
#2	.0084406	.000451	63.17636	.3534936	.1409014	.8358932	226.3795
#3	.0096070	-.001090	63.36148	.3445887	.1408446	.9632588	267.9463

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.599130**	**70.83041**	**.2427453**	**.0007489**	**3.040576**	**.3449697**	**.6429009**
Stddev	.026933	.34676	.0016307	.0085358	.190341	.0089906	.0033350
%RSD	.5856128	.4895574	.6717903	1139.861	6.260017	2.606203	.5187384
#1	4.610911	71.16845	.2430339	-.001140	3.130478	.3423003	.6467516
#2	4.568314	70.47555	.2409894	-.006684	2.821937	.3376160	.6409470
#3	4.618165	70.84722	.2442124	.010071	3.169314	.3549927	.6410040

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**30.09264**	**8.410221**	**.0860055**	**.0124333**	**7.588239**	**4.073770**	**-.001160**
Stddev	1.68172	.099031	.0123982	.0004932	.096520	.289132	.001329
%RSD	5.588489	1.177510	14.41557	3.966976	1.271964	7.097402	114.5025
#1	30.68384	8.355665	.0866605	.0129212	7.540895	4.010761	-.001224
#2	28.19515	8.350465	.0732928	.0124437	7.524533	3.821339	-.002456
#3	31.39893	8.524533	.0980632	.0119349	7.699289	4.389211	.000199

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2590-01RE Acquired: 7/17/2025 18:01:39 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	7.393317	.2300758	.1535279
Stddev	.018034	.0025709	.0006358
%RSD	.2439277	1.117427	.4141312
#1	7.407616	.2325668	.1533919
#2	7.373057	.2274318	.1529712
#3	7.399278	.2302287	.1542208

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5543.801	43365.48	2828.656	3741.866	4992.918
Stddev	41.109	650.50	197.445	21.235	42.154
%RSD	.7415286	1.500030	6.980184	.5674852	.8442670
#1	5535.945	42614.86	2868.332	3755.072	4988.599
#2	5588.272	43764.72	3003.251	3753.155	5037.065
#3	5507.188	43716.86	2614.386	3717.372	4953.090

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2592-01 Acquired: 7/17/2025 18:06:47 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1000684**	**-.004506**	**2.620807**	**.1287299**	**.0867223**	**66.77517**
Stddev	.0042037	.004452	.040455	.0124570	.0052287	.46837
%RSD	4.200860	98.80577	1.543611	9.676838	6.029292	.7014140
#1	.0966662	.000598	2.576187	.1146343	.0806939	66.48745
#2	.0987711	-.007589	2.655093	.1332955	.0900249	66.52244
#3	.1047679	-.006527	2.631141	.1382599	.0894483	67.31562

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.019316**	**.0148345**	**.0222440**	**668.5217**	**.7319677**	**.1755545**
Stddev	.005737	.0007230	.0008635	6.0573	.0039285	.0015810
%RSD	.5628708	4.873729	3.881958	.9060687	.5367089	.9005926
#1	1.015523	.0140406	.0232095	661.7395	.7362186	.1740018
#2	1.016508	.0154549	.0219771	670.4321	.7312135	.1754993
#3	1.025916	.0150081	.0215455	673.3934	.7284709	.1771624

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.285043**	**662.2324**	**4.812437**	**346.8832**	**.5754650**	**-.073982**
Stddev	.125168	28.2217	.041787	3.7467	.0044603	.011144
%RSD	3.810231	4.261607	.8683064	1.080099	.7750715	15.06328
#1	3.140567	630.6850	4.766795	342.6008	.5703533	-.085968
#2	3.353815	670.9323	4.821700	348.4917	.5785655	-.072046
#3	3.360747	685.0798	4.848814	349.5570	.5774763	-.063933

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.509847**	**.5038908**	**15.79439**	**15.85428**	**9.973553**	**.0324110**
Stddev	.199919	.0144944	.05530	2.41993	.179231	.0109881
%RSD	4.432937	2.876501	.3501000	15.26361	1.797061	33.90228
#1	4.282244	.4873135	15.85145	13.95767	9.771755	.0336002
#2	4.657045	.5101837	15.79068	15.02544	10.11423	.0208767
#3	4.590251	.5141752	15.74104	18.57972	10.03468	.0427562

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2592-01 Acquired: 7/17/2025 18:06:47 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1387834	F 37.29590	7.553408	.2102757	3.992048	.0824227
Stddev	.0009691	.70824	.320742	.0013932	.022828	.0040368
%RSD	.6982781	1.898966	4.246319	.6625625	.5718455	4.897728
#1	.1379892	36.52290	7.183136	.2086952	3.968722	.0859257
#2	.1384979	37.91359	7.745600	.2113260	3.993079	.0833345
#3	.1398632	37.45123	7.731486	.2108058	4.014344	.0780080

Elem	Sr4077
Units	ppm
Avg	.7163115
Stddev	.0049162
%RSD	.6863216
#1	.7121699
#2	.7150201
#3	.7217445

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4842.717	39512.06	2792.035	3313.459	4316.892
Stddev	47.950	95.19	121.486	24.526	50.759
%RSD	.9901464	.2409215	4.351154	.7402033	1.175832
#1	4889.808	39475.09	2932.163	3285.143	4367.149
#2	4793.952	39440.89	2716.333	3327.176	4265.644
#3	4844.392	39620.19	2727.608	3328.058	4317.883

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2565-01DLX5 Acquired: 7/17/2025 18:12:06 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0076583**	**-.001586**	**.0423261**	**-.013941**	**.0078074**	**1.299034**
Stddev	.0030119	.001469	.0007957	.003643	.0026875	.005489
%RSD	39.32870	92.60342	1.880026	26.13301	34.42300	.4225434
#1	.0055663	-.001887	.0418871	-.012522	.0100853	1.295174
#2	.0062983	-.002881	.0418466	-.018080	.0048433	1.296610
#3	.0111104	.000010	.0432447	-.011221	.0084937	1.305317

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1117810**	**.0002945**	**-.000014**	**40.91379**	**.0064321**	**.0286960**
Stddev	.0005278	.0000455	.000138	.04015	.0005361	.0003658
%RSD	.4721716	15.43813	1009.247	.0981392	8.334338	1.274779
#1	.1114603	.0002458	.000118	40.87986	.0070062	.0290661
#2	.1123902	.0003359	-.000157	40.90339	.0059446	.0283346
#3	.1114926	.0003018	-.000001	40.95812	.0063455	.0286874

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0138449**	**5.542462**	**.4478027**	**7.073388**	**.0182596**	**-.001098**
Stddev	.0032952	.695605	.0021844	.016743	.0002796	.000613
%RSD	23.80100	12.55047	.4878118	.2367066	1.531093	55.81137
#1	.0118557	5.187820	.4453567	7.091726	.0179694	-.001701
#2	.0176486	6.343913	.4495590	7.069522	.0182822	-.000476
#3	.0120305	5.095653	.4484925	7.058915	.0185271	-.001116

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**94.04680**	**.0016723**	**.2534833**	**^ *****	**2.104915**	**.1478341**
Stddev	11.47699	.0021096	.0014386	-----	.042553	.0207667
%RSD	12.20349	126.1529	.5675178	-----	2.021609	14.04732
#1	88.41071	.0034225	.2548052	^ -----	2.089417	.1398688
#2	107.2522	.0022645	.2536935	^ -----	2.153045	.1714043
#3	86.4775	-.000670	.2519512	^ -----	2.072284	.1322292

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2565-01DLX5 Acquired: 7/17/2025 18:12:06 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0125740**	**10.49678**	F **14.94585**	**.0053995**	**.0243926**	**.0397033**
Stddev	.0000891	.29892	1.90917	.0012975	.0021483	.0131419
%RSD	.7088752	2.847726	12.77390	24.03066	8.807028	33.10018
#1	.0126002	10.37091	13.99980	.0068966	.0221480	.0294528
#2	.0124747	10.83805	17.14331	.0047021	.0264295	.0545189
#3	.0126471	10.28138	13.69444	.0045998	.0246004	.0351381

Elem	Sr4077
Units	ppm
Avg	**.3449884**
Stddev	.0009920
%RSD	.2875365
#1	.3451530
#2	.3439244
#3	.3458878

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4638.723**	**36947.35**	**2436.985**	**3241.742**	**4535.623**
Stddev	175.477	171.01	281.450	10.192	166.234
%RSD	3.782873	.4628426	11.54910	.3143871	3.665068
#1	4744.155	36786.17	2573.613	3233.146	4629.643
#2	4436.156	37126.73	2113.301	3239.079	4343.686
#3	4735.859	36929.16	2624.040	3253.000	4633.540

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2565-01DL2X10 Acquired: 7/17/2025 18:19:42 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0016623	.0003284	.0202703	-.007379	-.000211	.6379460	.0520461
Stddev	.0033971	.0003910	.0006159	.001761	.001093	.0274099	.0009482
%RSD	204.3532	119.0620	3.038578	23.86278	518.7172	4.296593	1.821862
#1	.0044645	.0004734	.0196003	-.008491	.001013	.6069986	.0514453
#2	-.002116	-.000114	.0208120	-.008297	-.000556	.6476754	.0515538
#3	.002638	.000626	.0203985	-.005349	-.001089	.6591641	.0531392

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000020	-.000046	19.21292	.0100976	.0160012	.0061339	2.460028
Stddev	.000076	.000065	.15490	.0004482	.0003284	.0006847	.021627
%RSD	377.3055	142.9320	.8062458	4.438933	2.052360	11.16178	.8791539
#1	.000013	-.000115	19.03485	.0095827	.0161358	.0065794	2.455861
#2	-.000106	-.000037	19.28738	.0103092	.0156268	.0053456	2.483436
#3	.000033	.000015	19.31653	.0104008	.0162408	.0064768	2.440787

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2105741	3.413005	.0128530	-.000897	42.69437	.0058361	.1213854
Stddev	.0024338	.116040	.0002815	.000787	.50109	.0035059	.0005064
%RSD	1.155795	3.399936	2.189953	87.76783	1.173658	60.07198	.4171960
#1	.2081166	3.361486	.0131522	-.001799	42.58485	.0096933	.1208458
#2	.2129834	3.545884	.0128134	-.000342	43.24116	.0049716	.1218503
#3	.2106224	3.331645	.0125934	-.000551	42.25710	.0028434	.1214601

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	^ *****	.9470681	.0611583	.0071346	4.683820	6.608318	.0030423
Stddev	-----	.0051588	.0010990	.0008596	.020089	.058227	.0006199
%RSD	-----	.5447138	1.797028	12.04881	.4289065	.8811193	20.37444
#1	^ -----	.9411370	.0604773	.0079851	4.671217	6.610068	.0032937
#2	^ -----	.9495538	.0605713	.0062661	4.673256	6.665651	.0023362
#3	^ -----	.9505134	.0624262	.0071526	4.706987	6.549236	.0034969

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2565-01DL2X10 Acquired: 7/17/2025 18:19:42 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0128841	.0165828	.1631306
Stddev	.0009904	.0021032	.0016263
%RSD	7.686900	12.68294	.9969410
#1	.0138298	.0141759	.1612593
#2	.0118544	.0180668	.1642034
#3	.0129681	.0175055	.1639289

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4730.883	37894.65	2648.843	3204.621	4820.110
Stddev	9.996	165.49	17.484	6.449	9.368
%RSD	.2112950	.4367171	.6600514	.2012555	.1943553
#1	4735.538	37944.84	2652.570	3211.840	4822.121
#2	4737.703	37709.87	2629.797	3199.427	4828.310
#3	4719.408	38029.23	2664.164	3202.595	4809.900

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2565-01DL3X20 Acquired: 7/17/2025 18:29:20 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.006576	-.000889	.0097648	-.005003	.0006198	.3130058	.0261531
Stddev	.002786	.000554	.0013857	.000732	.0019458	.0126752	.0006835
%RSD	42.37499	62.27562	14.19055	14.62688	313.9247	4.049504	2.613374
#1	-.009349	-.000605	.0082947	-.004522	.0012074	.3248980	.0261034
#2	-.006602	-.000535	.0099528	-.005845	-.001552	.3144483	.0268601
#3	-.003776	-.001527	.0110468	-.004642	.002204	.2996710	.0254958

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000930	-.000028	9.606189	.0048467	.0084443	.0032133	1.228141
Stddev	.0000319	.000051	.060616	.0006462	.0004500	.0004322	.011500
%RSD	34.29882	182.0341	.6310098	13.33260	5.329324	13.44940	.9363354
#1	.0000846	.000028	9.669980	.0048358	.0084403	.0034690	1.235856
#2	.0000661	-.000041	9.599239	.0042060	.0088963	.0027143	1.233642
#3	.0001283	-.000072	9.549347	.0054982	.0079962	.0034566	1.214924

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1041723	1.682562	.0064946	-.001116	21.49424	-.003234	.0599536
Stddev	.0005802	.056791	.0002863	.000524	.19342	.001945	.0006741
%RSD	.5569825	3.375279	4.408135	46.96364	.8998629	60.13708	1.124408
#1	.1047585	1.745242	.0067262	-.001643	21.62954	-.001052	.0605671
#2	.1041603	1.667917	.0065830	-.001110	21.58046	-.003865	.0600617
#3	.1035982	1.634528	.0061745	-.000595	21.27270	-.004784	.0592320

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	^ *****	.4547946	.0255431	.0036591	2.240236	3.313502	.0023201
Stddev	-----	.0049052	.0010832	.0001318	.017140	.033857	.0013574
%RSD	-----	1.078558	4.240787	3.600503	.7651083	1.021788	58.50450
#1	^ -----	.4502442	.0267933	.0036038	2.228505	3.329109	.0035029
#2	^ -----	.4599907	.0248830	.0038095	2.259906	3.336741	.0026194
#3	^ -----	.4541487	.0249531	.0035641	2.232297	3.274657	.0008381

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2565-01DL3X20 Acquired: 7/17/2025 18:29:20 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0054468	-.001987	.0805045
Stddev	.0008843	.006181	.0003789
%RSD	16.23592	311.0716	.4706264
#1	.0046980	-.005155	.0809320
#2	.0064225	.005136	.0803714
#3	.0052200	-.005942	.0802102

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4770.984	38846.15	2672.279	3260.315	5017.800
Stddev	28.976	67.06	20.342	9.026	35.541
%RSD	.6073464	.1726336	.7612200	.2768397	.7083056
#1	4776.916	38907.95	2653.785	3267.816	5025.566
#2	4739.501	38855.67	2668.985	3262.831	4979.017
#3	4796.536	38774.84	2694.067	3250.298	5048.816

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2565-01DL4X40 Acquired: 7/17/2025 18:35:20 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.002377**	**.0001350**	**.0042878**	**-.003806**	**-.001865**	**.1747677**	**.0121133**
Stddev	.002526	.0011472	.0010120	.001873	.004425	.0138751	.0000599
%RSD	106.2449	850.0322	23.60106	49.22659	237.3466	7.939139	.4947483
#1	.000533	-.001018	.0039090	-.005937	.001460	.1647265	.0121462
#2	-.003997	.001276	.0054345	-.002422	-.006888	.1689764	.0121495
#3	-.003668	.000147	.0035199	-.003058	-.000166	.1906003	.0120441

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000209**	**-.000047**	**4.449257**	**.0031676**	**.0040168**	**.0015081**	**.5801361**
Stddev	.000057	.000078	.016965	.0007693	.0000690	.0000512	.0038065
%RSD	27.44449	165.5345	.3813089	24.28688	1.717175	3.396564	.6561412
#1	-.000260	-.000021	4.454605	.0023843	.0040570	.0014526	.5815621
#2	-.000221	.000014	4.462904	.0039221	.0039372	.0015182	.5758224
#3	-.000147	-.000134	4.430262	.0031964	.0040563	.0015536	.5830237

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0488359**	**.7542528**	**.0028471**	**-.001414**	**10.10135**	**-.006551**	**.0287184**
Stddev	.0007470	.0726293	.0003166	.000381	.04991	.000830	.0005971
%RSD	1.529510	9.629307	11.11873	26.96649	.4940589	12.66631	2.079015
#1	.0490314	.7761232	.0029510	-.001003	10.13144	-.007022	.0294053
#2	.0494657	.6732014	.0024917	-.001482	10.04374	-.007037	.0283240
#3	.0480107	.8134338	.0030987	-.001757	10.12886	-.005593	.0284259

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**86.27454**	**.1957632**	**.0062063**	**.0019994**	**.9706870**	**1.554997**	**.0007326**
Stddev	.22111	.0060117	.0008978	.0007202	.0340105	.006544	.0002633
%RSD	.2562878	3.070920	14.46566	36.02113	3.503759	.4208323	35.94515
#1	86.26658	.1912260	.0053918	.0014203	.9544019	1.555666	.0007208
#2	86.49953	.1934818	.0060581	.0017721	.9478810	1.548144	.0004753
#3	86.05752	.2025817	.0071689	.0028059	1.009778	1.561181	.0010016

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2565-01DL4X40 Acquired: 7/17/2025 18:35:20 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0019208	-.013477	.0372935
Stddev	.0026975	.003558	.0002321
%RSD	140.4362	26.39815	.6222768
#1	.0034441	-.010499	.0373514
#2	.0035120	-.017417	.0370380
#3	-.001194	-.012516	.0374912

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4982.978	38834.08	2717.462	3232.554	5413.915
Stddev	147.912	273.53	5.093	32.068	155.620
%RSD	2.968336	.7043663	.1874310	.9920276	2.874447
#1	5060.982	38570.80	2714.588	3206.433	5491.406
#2	5075.560	39116.83	2723.342	3268.344	5515.576
#3	4812.392	38814.61	2714.454	3222.885	5234.763

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2590-01A Acquired: 7/17/2025 18:40:30 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8145226**	**1.885248**	**1.313069**	**1.735386**	**.7268515**	**96.18297**	**1.144445**
Stddev	.0019587	.005338	.006330	.010430	.0074081	.34421	.006447
%RSD	.2404680	.2831548	.4820677	.6010464	1.019201	.3578706	.5633565
#1	.8143676	1.891117	1.320035	1.747127	.7260250	96.20590	1.145505
#2	.8165542	1.880682	1.307668	1.727191	.7198914	96.51514	1.150297
#3	.8126461	1.883945	1.311504	1.731839	.7346382	95.82786	1.137533

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1833837**	**.1960397**	**49.83410**	**.6035183**	**.3361929**	**1.076122**	**214.9922**
Stddev	.0023164	.0004602	.16170	.0101485	.0017177	.010703	2.1064
%RSD	1.263149	.2347291	.3244714	1.681560	.5109240	.9946303	.9797714
#1	.1860465	.1965421	49.90306	.6129964	.3381722	1.088221	217.4239
#2	.1818328	.1959380	49.94988	.5928113	.3353132	1.067887	213.7299
#3	.1822720	.1956388	49.64935	.6047472	.3350932	1.072259	213.8229

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.937851**	**65.50333**	**.7125196**	**.0619635**	**4.671785**	**.5990642**	**.7908867**
Stddev	.019887	.18839	.0031342	.0002206	.071777	.0103282	.0115535
%RSD	.4027502	.2875973	.4398737	.3560416	1.536389	1.724054	1.460826
#1	4.954416	65.70589	.7161312	.0618657	4.749904	.6059109	.8035662
#2	4.943342	65.33337	.7105127	.0622161	4.608747	.6040973	.7809546
#3	4.915796	65.47074	.7109150	.0618088	4.656703	.5871842	.7881392

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**33.71545**	**12.84247**	**.3202211**	**.3685612**	**9.550345**	**5.489565**	**.7006435**
Stddev	.34165	.05429	.0022332	.0007510	.045026	.059282	.0033917
%RSD	1.013324	.4227143	.6973860	.2037530	.4714623	1.079906	.4840867
#1	34.09640	12.90418	.3226982	.3693291	9.602163	5.555412	.7007455
#2	33.61374	12.80209	.3183620	.3685260	9.528117	5.440439	.6972019
#3	33.43620	12.82114	.3196031	.3678284	9.520756	5.472845	.7039830

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2590-01A Acquired: 7/17/2025 18:40:30 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**7.276924**	**.4095835**	**.3161287**
Stddev	.045919	.0033494	.0013506
%RSD	.6310185	.8177529	.4272198
#1	7.297394	.4096389	.3167142
#2	7.309048	.4129049	.3170878
#3	7.224330	.4062069	.3145842

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5394.387**	**42910.90**	**3006.844**	**3591.986**	**5017.207**
Stddev	13.304	523.16	18.556	40.701	13.536
%RSD	.2466299	1.219187	.6171235	1.133104	.2697976
#1	5384.283	42381.61	2986.750	3549.115	5005.363
#2	5409.461	43427.71	3023.333	3630.099	5031.962
#3	5389.417	42923.36	3010.449	3596.744	5014.297

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: CCV04 Acquired: 7/17/2025 18:45:31 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi 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	**4.882181**	**4.993256**	**4.935409**	**4.946636**	**4.985422**	**9.997461**	**10.15049**
Stddev	.018585	.013076	.023009	.008185	.011186	.078556	.05887
%RSD	.3806625	.2618746	.4662035	.1654589	.2243659	.7857602	.5799746
#1	4.860819	4.978223	4.908953	4.938014	4.972542	9.907711	10.09629
#2	4.894634	5.001993	4.950749	4.954299	4.991028	10.03094	10.14207
#3	4.891090	4.999552	4.946527	4.947594	4.992696	10.05373	10.21312

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2462742**	**2.474376**	**24.98790**	**1.006935**	**2.476355**	**1.241195**	**4.992600**
Stddev	.0011277	.009580	.15383	.002378	.010344	.005807	.022706
%RSD	.4578926	.3871716	.6156205	.2361420	.4177069	.4678465	.4547838
#1	.2465116	2.463338	24.82706	1.009678	2.465039	1.236220	4.969377
#2	.2472643	2.480537	25.00303	1.005474	2.485323	1.247575	5.014750
#3	.2450467	2.479252	25.13361	1.005652	2.478704	1.239789	4.993671

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.447451**	**24.59787**	**2.488389**	**1.242872**	**23.99001**	**2.474499**	**2.490224**
Stddev	.022277	.11522	.012013	.002028	.07823	.020436	.006699
%RSD	.9102148	.4684188	.4827745	.1631919	.3261015	.8258626	.2689982
#1	2.430715	24.51219	2.474560	1.245179	23.90576	2.465162	2.497775
#2	2.438901	24.55257	2.496245	1.242065	24.06036	2.460400	2.484998
#3	2.472736	24.72886	2.494361	1.241371	24.00391	2.497936	2.487897

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**23.53155**	**4.923852**	**4.926592**	**4.994962**	**4.878805**	**5.046245**	**4.936911**
Stddev	.18571	.027845	.020361	.009685	.015172	.019126	.024263
%RSD	.7891936	.5655088	.4132911	.1939048	.3109874	.3790152	.4914623
#1	23.35435	4.892622	4.908811	4.983883	4.861738	5.025992	4.908900
#2	23.51555	4.946088	4.948803	4.999182	4.890765	5.063998	4.951391
#3	23.72474	4.932846	4.922161	5.001822	4.883912	5.048747	4.950444

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: CCV04 Acquired: 7/17/2025 18:45:31 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: CCV04 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	5.016750	5.045021	5.060238
Stddev	.028170	.029176	.028397
%RSD	.5615095	.5783055	.5611831
#1	4.985650	5.026567	5.034074
#2	5.024046	5.029838	5.056202
#3	5.040554	5.078657	5.090437

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4858.121	39765.44	2640.194	3301.616	5132.999
Stddev	8.667	302.82	17.803	20.177	5.837
%RSD	.1783968	.7615046	.6743116	.6111135	.1137195
#1	4850.101	39718.01	2654.660	3301.089	5135.517
#2	4867.315	40089.17	2645.611	3322.051	5137.155
#3	4856.948	39489.14	2620.312	3281.709	5126.326

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: CCB04 Acquired: 7/17/2025 18:50:22 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: CCB04 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.002389**	**-.000204**	**.0002197**	**-.000039**	**-.000919**	**.0274837**	**-.000969**
Stddev	.000357	.001679	.0009066	.001312	.003954	.0174208	.000268
%RSD	14.96091	824.0961	412.6692	3405.809	430.3723	63.38578	27.67279
#1	-.002135	.000048	-.000703	.000038	-.004538	.0337204	-.000929
#2	-.002797	-.001994	.001109	-.001387	-.001519	.0409277	-.000723
#3	-.002233	.001335	.000253	.001234	.003301	.0078030	-.001255

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000281**	**.0000234**	**.0426839**	**.0000766**	**-.000128**	**-.000067**	**-.000422**
Stddev	.0000509	.0000259	.0190845	.0007326	.000240	.000064	.002445
%RSD	180.7221	110.7622	44.71133	957.0247	187.0791	95.38608	579.5259
#1	.0000383	.0000481	.0289288	-.000753	.000072	-.000135	.001515
#2	-.000027	-.000004	.0346511	.000635	-.000063	-.000008	.000388
#3	.000073	.000026	.0644717	.000348	-.000394	-.000059	-.003169

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000721**	**-.030708**	**.0001527**	**-.000813**	**.0104709**	**-.013205**	**.0004025**
Stddev	.000724	.022589	.0002439	.001152	.0218092	.009349	.0001630
%RSD	100.4929	73.56003	159.7074	141.7088	208.2836	70.79956	40.49159
#1	-.000078	-.051104	-.000125	.000244	.0353677	-.023555	.0005733
#2	-.000579	-.006429	.000251	-.000642	.0013017	-.010686	.0003858
#3	-.001506	-.034591	.000332	-.002041	-.005257	-.005373	.0002486

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0145266**	**.0008815**	**.0020596**	**.0004915**	**-.000137**	**.0044639**	**.0007022**
Stddev	.0028040	.0011862	.0007647	.0003957	.000634	.0014541	.0001315
%RSD	19.30225	134.5716	37.12947	80.49910	462.8540	32.57566	18.72298
#1	.0139395	.0009656	.0023809	.0002073	.000127	.0059559	.0005961
#2	.0120627	-.000345	.0011866	.0009434	-.000860	.0030508	.0006612
#3	.0175777	.002023	.0026112	.0003239	.000322	.0043849	.0008493

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: CCB04 Acquired: 7/17/2025 18:50:22 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: CCB04 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.002520	-.010127	-.000222
Stddev	.002252	.009431	.000095
%RSD	89.35401	93.12686	43.00803
#1	-.002962	.000331	-.000123
#2	-.000080	-.017985	-.000228
#3	-.004518	-.012728	-.000314

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5048.143	42035.96	2684.746	3482.857	5883.756
Stddev	148.047	178.09	26.378	18.748	162.054
%RSD	2.932709	.4236530	.9824968	.5383011	2.754255
#1	5138.447	42204.95	2691.358	3504.503	5979.317
#2	5128.698	42052.95	2707.188	3472.299	5975.303
#3	4877.286	41849.99	2655.691	3471.768	5696.646

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: PB168846BL Acquired: 7/17/2025 18:58:42 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000416**	**-.000351**	**-.000188**	**-.003860**	**-.002330**	**.0422128**	**.0000944**
Stddev	.003052	.001491	.000779	.001218	.001231	.0233624	.0006540
%RSD	734.0401	424.6134	415.3179	31.56906	52.86066	55.34427	692.8333
#1	.001999	-.001657	-.001087	-.004714	-.003484	.0440717	.0008224
#2	-.003847	.001274	.000243	-.004401	-.001033	.0645901	-.000444
#3	.000601	-.000671	.000281	-.002464	-.002472	.0179765	-.000096

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000014**	**-.000009**	**-.026167**	**.0005322**	**-.000057**	**-.000251**	**-.000034**
Stddev	.000068	.000028	.005557	.0004285	.000230	.000290	.001141
%RSD	499.7063	300.9154	21.23703	80.52758	400.5590	115.6407	3341.953
#1	-.000048	.000020	-.025273	.0007881	.000152	-.000512	-.001340
#2	-.000058	-.000036	-.032117	.0000374	-.000304	.000061	.000768
#3	.000065	-.000011	-.021111	.0007710	-.000021	-.000301	.000469

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000255**	**-.096431**	**-.000180**	**.0001449**	**.0136986**	**-.004974**	**.0004909**
Stddev	.000609	.046764	.000315	.0004767	.0096859	.010133	.0002166
%RSD	238.7963	48.49458	175.3389	329.0475	70.70759	203.7179	44.13114
#1	-.000099	-.125316	-.000220	.0005527	.0241218	-.013837	.0006105
#2	.000261	-.121500	.000154	.0002613	.0119991	.006073	.0006214
#3	-.000927	-.042478	-.000473	-.000379	.0049749	-.007159	.0002408

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0114298**	**.0009381**	**-.004566**	**.0001224**	**-.004001**	**.0010796**	**-.000437**
Stddev	.0013056	.0022621	.000751	.0003183	.001975	.0004374	.000638
%RSD	11.42272	241.1388	16.44984	260.0286	49.35582	40.51918	145.8295
#1	.0099362	-.001623	-.003805	-.000240	-.003917	.0009688	.000191
#2	.0119989	.002664	-.004587	.000355	-.006016	.0007083	-.001084
#3	.0123542	.001773	-.005307	.000252	-.002070	.0015618	-.000419

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: PB168846BL Acquired: 7/17/2025 18:58:42 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.001416	-.017570	-.000058
Stddev	.002286	.006980	.000165
%RSD	161.3920	39.72628	284.8212
#1	-.000442	-.009515	-.000146
#2	-.004028	-.021823	-.000161
#3	.000221	-.021374	.000133

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5067.472	41613.61	2693.913	3404.409	5931.487
Stddev	15.892	472.62	33.925	44.563	13.342
%RSD	.3136050	1.135732	1.259305	1.308989	.2249309
#1	5054.104	41425.59	2724.012	3370.979	5918.964
#2	5085.043	42151.30	2700.576	3455.002	5945.520
#3	5063.269	41263.94	2657.151	3387.246	5929.978

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: PB168846BS Acquired: 7/17/2025 19:16:01 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7092703**	**1.976629**	**.9368310**	**1.943631**	**.8013242**	**2.020049**
Stddev	.0059169	.002501	.0013563	.005527	.0023206	.016066
%RSD	.8342173	.1265090	.1447798	.2843781	.2896012	.7953205
#1	.7035554	1.975640	.9382085	1.938763	.7987119	2.002620
#2	.7153703	1.979473	.9354969	1.949640	.8031475	2.034267
#3	.7088853	1.974774	.9367877	1.942490	.8021131	2.023261

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2035960**	**.2066968**	**.1869832**	**1.004195**	**.3918692**	**.1931565**
Stddev	.0013934	.0005984	.0003189	.022059	.0021817	.0008614
%RSD	.6844064	.2894909	.1705265	2.196693	.5567392	.4459371
#1	.2020161	.2073859	.1866303	.994785	.3896800	.1926995
#2	.2041222	.2063962	.1872506	.988402	.3940433	.1941501
#3	.2046497	.2063084	.1870687	1.029399	.3918842	.1926200

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3198119**	**3.231304**	**.1995174**	**2.013033**	**.4852123**	**.0735738**
Stddev	.0006367	.003143	.0018980	.028627	.0009629	.0008468
%RSD	.1991006	.0972587	.9513137	1.422093	.1984562	1.151005
#1	.3204714	3.234321	.1973398	1.996174	.4849720	.0725989
#2	.3197638	3.231542	.2003911	2.046086	.4862726	.0741267
#3	.3192006	3.228049	.2008212	1.996837	.4843923	.0739958

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.746945**	**.2927328**	**.2073169**	**10.14774**	**5.410435**	**.2932735**
Stddev	.022825	.0106882	.0011637	.04772	.015097	.0010489
%RSD	.8309068	3.651176	.5613109	.4702765	.2790343	.3576532
#1	2.724137	.2945200	.2059766	10.17493	5.398215	.2924453
#2	2.746913	.3024148	.2079042	10.09264	5.427312	.2929223
#3	2.769786	.2812637	.2080698	10.17565	5.405779	.2944529

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: PB168846BS Acquired: 7/17/2025 19:16:01 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4014697	F .0000772	.9367496	.6685448	.1953364	.1931505
Stddev	.0014335	.0032617	.0021469	.0016904	.0016996	.0032911
%RSD	.3570558	4223.323	.2291820	.2528465	.8700722	1.703927
#1	.4012509	-.001559	.9389377	.6690741	.1935109	.1928270
#2	.4030000	.003833	.9366646	.6699072	.1956255	.1965915
#3	.4001582	-.002042	.9346465	.6666531	.1968729	.1900331

Elem	Sr4077
Units	ppm
Avg	.2029108
Stddev	.0015884
%RSD	.7827812
#1	.2012307
#2	.2031140
#3	.2043878

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5022.838	41507.46	2669.274	3413.701	5687.171
Stddev	12.251	182.02	12.146	16.810	8.274
%RSD	.2439086	.4385126	.4550289	.4924384	.1454810
#1	5028.591	41618.56	2660.042	3422.870	5691.379
#2	5008.769	41297.40	2664.746	3394.300	5677.639
#3	5031.153	41606.41	2683.033	3423.933	5692.495

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: PB168859BS Acquired: 7/17/2025 19:25:54 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6935215**	**1.938280**	**.9195210**	**1.895934**	**.7830042**	**2.073735**	**.2073289**
Stddev	.0096871	.025997	.0108855	.025039	.0097352	.099536	.0079614
%RSD	1.396796	1.341263	1.183826	1.320676	1.243314	4.799830	3.839967
#1	.6971609	1.944898	.9234292	1.905712	.7868619	2.003658	.2013689
#2	.6825418	1.909614	.9072209	1.867481	.7719314	2.187668	.2163704
#3	.7008618	1.960330	.9279128	1.914609	.7902194	2.029881	.2042473

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2092745**	**.1832145**	**1.019254**	**.3796119**	**.1891631**	**.3227779**	**3.262356**
Stddev	.0080648	.0024393	.053658	.0029669	.0022649	.0133154	.130543
%RSD	3.853669	1.331408	5.264466	.7815564	1.197348	4.125265	4.001508
#1	.2056350	.1838253	.983798	.3826492	.1897831	.3173758	3.218067
#2	.2185176	.1805278	1.080986	.3767208	.1866527	.3379455	3.409282
#3	.2036709	.1852904	.992978	.3794656	.1910534	.3130125	3.159718

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2027740**	**2.065741**	**.4744602**	**.0711446**	**2.791448**	**.2972039**	**.2002151**
Stddev	.0095129	.137499	.0066683	.0005706	.131340	.0105226	.0021066
%RSD	4.691362	6.656148	1.405453	.8020293	4.705083	3.540523	1.052186
#1	.1951593	2.035055	.4772411	.0706201	2.740656	.2993076	.2025617
#2	.2134375	2.215990	.4668516	.0710613	2.940598	.3065158	.1984867
#3	.1997251	1.946178	.4792881	.0717522	2.693088	.2857884	.1995971

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.40869**	**5.299279**	**.2965924**	**.3916167**	F **-.000259**	**.9485412**	**.6531005**
Stddev	.43912	.074680	.0133453	.0048287	.001533	.0383195	.0089668
%RSD	4.218776	1.409246	4.499551	1.233013	590.7354	4.039831	1.372952
#1	10.22874	5.321173	.2907470	.3936430	-.000156	.9329150	.6549946
#2	10.90921	5.216100	.3118630	.3861050	.001219	.9922047	.6433380
#3	10.08814	5.360565	.2871671	.3951021	-.001841	.9205040	.6609688

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: PB168859BS Acquired: 7/17/2025 19:25:54 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.1942948	.1955303	.2059030
Stddev	.0101184	.0131099	.0089088
%RSD	5.207783	6.704792	4.326701
#1	.1888113	.1871425	.1997124
#2	.2059714	.2106377	.2161134
#3	.1881017	.1888108	.2018833

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5128.403	42618.94	2621.337	3509.472	5799.081
Stddev	64.205	287.56	110.889	24.375	75.667
%RSD	1.251943	.6747288	4.230227	.6945434	1.304804
#1	5107.298	42289.73	2665.479	3484.232	5781.312
#2	5200.503	42821.06	2495.176	3532.878	5882.051
#3	5077.407	42746.04	2703.358	3511.306	5733.881

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: PB168859BL Acquired: 7/17/2025 19:30:50 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.002643**	**.0001885**	**-.000909**	**.0008603**	**-.001111**	**.0427495**	**-.000634**
Stddev	.000679	.0019105	.001504	.0028831	.001490	.0240272	.000783
%RSD	25.69269	1013.567	165.4028	335.1201	134.1700	56.20464	123.5391
#1	-.003425	.0021186	.000726	-.000116	-.002273	.0645610	-.000855
#2	-.002305	-.001702	-.001221	-.001408	-.001629	.0466928	.000236
#3	-.002200	.000149	-.002234	.004105	.000570	.0169946	-.001282

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000002**	**-.000059**	**-.013343**	**.0007143**	**.0000238**	**.0001345**	**-.000939**
Stddev	.000064	.000036	.000121	.0002672	.0001011	.0000795	.000288
%RSD	2739.746	59.84481	.9102431	37.40749	425.1931	59.14866	30.63660
#1	.000069	-.000096	-.013340	.0007058	-.000070	.0000658	-.001271
#2	-.000054	-.000025	-.013466	.0009856	.000131	.0002216	-.000763
#3	-.000023	-.000058	-.013224	.0004514	.000010	.0001161	-.000784

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000841**	**.0696498**	**.0001638**	**-.000222**	**.0151192**	**.0004904**	**.0002460**
Stddev	.000591	.0421056	.0001554	.001539	.0107039	.0057935	.0001669
%RSD	70.20318	60.45329	94.87849	694.1143	70.79682	1181.275	67.86163
#1	-.000266	.0264477	.0000191	-.001535	.0029320	-.004682	.0000805
#2	-.000812	.1105657	.0001443	-.000601	.0194301	-.000597	.0004144
#3	-.001446	.0719359	.0003280	.001471	.0229954	.006751	.0002431

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0094559**	**.0004304**	**-.008445**	**.0001824**	**-.003202**	**-.001924**	**-.001750**
Stddev	.0008124	.0011157	.000820	.0002224	.004554	.000466	.000311
%RSD	8.591074	259.1838	9.709232	121.9532	142.2297	24.19650	17.77876
#1	.0096439	-.000850	-.009390	-.000035	.000023	-.001718	-.001819
#2	.0085661	.000951	-.008028	.000409	-.001217	-.001598	-.001410
#3	.0101579	.001191	-.007917	.000173	-.008411	-.002457	-.002021

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: PB168859BL Acquired: 7/17/2025 19:30:50 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.001400	-.015638	-.000043
Stddev	.001598	.001315	.000040
%RSD	114.1255	8.409357	92.80240
#1	-.001994	-.016334	.000003
#2	-.002616	-.016458	-.000069
#3	.000410	-.014121	-.000064

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5079.978	42173.46	2698.590	3463.456	5948.534
Stddev	29.580	33.62	10.704	3.895	37.917
%RSD	.5822950	.0797186	.3966401	.1124665	.6374203
#1	5064.808	42189.50	2689.651	3460.045	5926.925
#2	5114.065	42196.05	2710.452	3462.623	5992.316
#3	5061.059	42134.82	2695.667	3467.700	5926.363

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2590-01 Acquired: 7/17/2025 19:35:56 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0464782**	**-.043306**	**.3920110**	**.0567792**	**.0284327**	**103.3479**	**1.089890**
Stddev	.0038616	.001732	.0026610	.0041294	.0019182	.1825	.002110
%RSD	8.308310	3.998457	.6788213	7.272749	6.746466	.1765881	.1935846
#1	.0423372	-.044909	.3894751	.0551453	.0298072	103.4574	1.092319
#2	.0499807	-.043541	.3947817	.0537168	.0292496	103.4491	1.088516
#3	.0471167	-.041470	.3917761	.0614756	.0262412	103.1372	1.088834

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0082286**	**.0003461**	**63.30931**	**.3450011**	**.1425530**	**.8366997**	**230.2253**
Stddev	.0001992	.0002184	.10482	.0033038	.0007480	.0039106	.4901
%RSD	2.421463	63.09316	.1655749	.9576244	.5247233	.4673882	.2128700
#1	.0084409	.0001323	63.20352	.3487806	.1421395	.8410630	229.9641
#2	.0081992	.0005688	63.31127	.3435607	.1434164	.8355255	230.7906
#3	.0080457	.0003372	63.41315	.3426620	.1421030	.8335108	229.9211

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.577683**	**72.82445**	**.2452136**	**-.045594**	**2.644913**	**.3605730**	**.6427547**
Stddev	.013899	.26620	.0018462	.001121	.005548	.0087479	.0001536
%RSD	.3036146	.3655385	.7528823	2.457570	.2097651	2.426109	.0238919
#1	4.590153	72.71825	.2448515	-.045258	2.651147	.3505937	.6425817
#2	4.580198	73.12735	.2472140	-.044680	2.643073	.3669176	.6428749
#3	4.562699	72.62773	.2435753	-.046845	2.640518	.3642077	.6428076

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**29.06813**	**8.149607**	**.0825136**	**.0124711**	**7.325345**	**6.734757**	**-.003508**
Stddev	.13794	.049967	.0037743	.0006176	.035475	.045394	.000509
%RSD	.4745307	.6131215	4.574139	4.951932	.4842832	.6740226	14.51462
#1	29.21745	8.140106	.0783011	.0123683	7.309448	6.785737	-.003770
#2	28.94547	8.203642	.0855876	.0119114	7.365989	6.719819	-.002921
#3	29.04147	8.105072	.0836522	.0131336	7.300599	6.698715	-.003833

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2590-01 Acquired: 7/17/2025 19:35:56 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**8.322046**	**.2324247**	**.1540771**
Stddev	.004640	.0027930	.0002143
%RSD	.0557581	1.201693	.1391095
#1	8.320424	.2341043	.1541968
#2	8.327279	.2339692	.1538296
#3	8.318434	.2292005	.1542048

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5496.880**	**44347.40**	**3038.760**	**3715.020**	**4980.790**
Stddev	39.799	233.78	21.378	2.232	38.981
%RSD	.7240277	.5271477	.7034983	.0600820	.7826342
#1	5535.208	44108.33	3014.480	3713.996	5016.046
#2	5455.757	44358.39	3047.044	3713.484	4938.928
#3	5499.674	44575.49	3054.756	3717.581	4987.395

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2590-01DUP Acquired: 7/17/2025 19:41:04 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0479472**	**-.037725**	**.3942100**	**.0561113**	**.0289538**	**100.6325**	**1.019442**
Stddev	.0039686	.001849	.0024000	.0011002	.0030352	.7446	.008136
%RSD	8.277099	4.901226	.6087995	1.960797	10.48300	.7399419	.7980436
#1	.0434523	-.039806	.3969792	.0550141	.0302316	100.1586	1.015721
#2	.0509671	-.036271	.3927335	.0561053	.0311413	100.2481	1.013832
#3	.0494222	-.037099	.3929173	.0572145	.0254886	101.4907	1.028773

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0081693**	**.0003591**	**63.33293**	**.3388044**	**.1387058**	**.8453223**	**229.8262**
Stddev	.0001265	.0000358	.15088	.0035948	.0003325	.0045207	1.1899
%RSD	1.548949	9.956896	.2382299	1.061035	.2396928	.5347930	.5177501
#1	.0082690	.0003712	63.19257	.3424303	.1390889	.8502142	228.7402
#2	.0080269	.0003188	63.31373	.3352415	.1385364	.8412987	229.6403
#3	.0082119	.0003871	63.49249	.3387412	.1384922	.8444539	231.0981

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.549572**	**70.37964**	**.2391688**	**-.042249**	**2.655206**	**.3532667**	**.6362584**
Stddev	.013652	.23882	.0006860	.000847	.009886	.0087233	.0046489
%RSD	.3000773	.3393291	.2868276	2.005792	.3723207	2.469326	.7306699
#1	4.546283	70.17525	.2396302	-.042910	2.666438	.3630830	.6415981
#2	4.537864	70.32152	.2383804	-.042543	2.651356	.3464024	.6331111
#3	4.564568	70.64216	.2394956	-.041293	2.647825	.3503147	.6340659

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**26.51678**	**8.116014**	**.0799639**	**.0124513**	**7.319200**	**4.195394**	**-.001139**
Stddev	.14804	.032886	.0029835	.0002849	.030542	.021217	.000596
%RSD	.5582846	.4052018	3.731023	2.288207	.4172817	.5057273	52.28616
#1	26.68620	8.122901	.0769083	.0123607	7.319587	4.215991	-.000829
#2	26.41237	8.080229	.0801137	.0127705	7.288466	4.173606	-.000763
#3	26.45177	8.144911	.0828696	.0122227	7.349546	4.196584	-.001826

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2590-01DUP Acquired: 7/17/2025 19:41:04 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**7.462850**	**.2226377**	**.1537692**
Stddev	.054548	.0007330	.0013989
%RSD	.7309316	.3292217	.9097712
#1	7.435003	.2233834	.1525671
#2	7.427845	.2219182	.1534357
#3	7.525701	.2226116	.1553047

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5506.038**	**44441.42**	**3013.515**	**3720.799**	**4998.402**
Stddev	25.824	123.64	8.952	4.493	25.926
%RSD	.4690075	.2782109	.2970745	.1207454	.5186916
#1	5506.718	44405.44	3017.906	3715.658	4994.051
#2	5531.515	44579.05	3019.424	3722.770	5026.229
#3	5479.881	44339.75	3003.215	3723.969	4974.927

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2590-01MS Acquired: 7/17/2025 19:51:12 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8116132**	**1.938898**	**1.382412**	**1.641429**	**.3579122**	**108.1490**	**1.118825**
Stddev	.0024443	.001270	.001244	.005198	.0043465	.3286	.002991
%RSD	.3011674	.0654831	.0899838	.3166913	1.214416	.3038831	.2673298
#1	.8105588	1.940243	1.383555	1.647266	.3538941	108.1130	1.120298
#2	.8098731	1.937721	1.381087	1.639722	.3573168	108.4942	1.120794
#3	.8144078	1.938731	1.382593	1.637298	.3625258	107.8398	1.115383

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1929691**	**.2058076**	**43.46766**	**.6409323**	**.3373349**	**.7990372**	**221.3312**
Stddev	.0009463	.0002722	.14293	.0050611	.0002038	.0048627	2.3157
%RSD	.4904065	.1322818	.3288116	.7896533	.0604188	.6085752	1.046282
#1	.1920813	.2056286	43.60788	.6463491	.3374269	.7934226	223.8765
#2	.1939647	.2056734	43.47293	.6363242	.3374765	.8017886	220.7683
#3	.1928613	.2061209	43.32217	.6401237	.3371013	.8019005	219.3487

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.778429**	**63.20287**	**.7526685**	**.0301737**	**5.305462**	**.6016569**	**.8242737**
Stddev	.015999	.28392	.0011666	.0002486	.035360	.0080321	.0052414
%RSD	.3348240	.4492133	.1549968	.8237812	.6664790	1.334988	.6358862
#1	4.778074	63.38885	.7524571	.0302619	5.345209	.6107570	.8285881
#2	4.794603	63.34369	.7539264	.0303661	5.277500	.5955560	.8184406
#3	4.762610	62.87607	.7516221	.0298931	5.293677	.5986577	.8257924

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**33.60610**	**12.31465**	**.3393352**	**.3544136**	**4.878900**	**6.435165**	**.7866476**
Stddev	.83722	.00247	.0026073	.0004155	.004891	.017340	.0016253
%RSD	2.491281	.0200481	.7683393	.1172317	.1002399	.2694502	.2066130
#1	34.50638	12.31268	.3416519	.3539383	4.877782	6.416423	.7870985
#2	33.46100	12.31386	.3398420	.3547075	4.874665	6.438436	.7848445
#3	32.85091	12.31742	.3365118	.3545951	4.884252	6.450636	.7879999

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2590-01MS Acquired: 7/17/2025 19:51:12 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	7.330818	.4339139	.3256156
Stddev	.026451	.0031215	.0014567
%RSD	.3608166	.7193857	.4473751
#1	7.326250	.4359947	.3252687
#2	7.359256	.4354222	.3272145
#3	7.306949	.4303246	.3243637

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5549.881	44140.22	2920.524	3760.073	5038.511
Stddev	11.711	395.44	2.396	27.034	12.053
%RSD	.2110223	.8958765	.0820271	.7189729	.2392211
#1	5563.257	43709.88	2918.103	3730.848	5052.144
#2	5541.474	44487.61	2922.893	3784.185	5034.123
#3	5544.911	44223.17	2920.578	3765.188	5029.267

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2590-01MSD Acquired: 7/17/2025 19:56:12 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8075319**	**1.928732**	**1.357255**	**1.615842**	**.3446631**	**104.4680**	**1.096770**
Stddev	.0072641	.014352	.010452	.007859	.0044171	.9820	.009685
%RSD	.8995415	.7441363	.7700924	.4863547	1.281575	.9400423	.8830718
#1	.8126842	1.922923	1.352033	1.610902	.3459975	105.1597	1.104509
#2	.7992236	1.918195	1.350443	1.611719	.3397326	104.9004	1.099891
#3	.8106879	1.945079	1.369289	1.624904	.3482591	103.3440	1.085908

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1886706**	**.2045703**	**39.70484**	**.6203047**	**.3335492**	**.8502923**	**214.8093**
Stddev	.0003708	.0016623	.39545	.0114655	.0031088	.0022655	1.6915
%RSD	.1965544	.8125603	.9959727	1.848363	.9320376	.2664382	.7874222
#1	.1890559	.2040668	40.02561	.6107544	.3325991	.8528927	216.1881
#2	.1886398	.2032179	39.82592	.6330203	.3310263	.8487451	215.3180
#3	.1883161	.2064261	39.26301	.6171395	.3370221	.8492392	212.9219

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.547662**	**60.61838**	**.7403780**	**.0290897**	**5.138633**	**.5980787**	**.7975152**
Stddev	.037264	.41951	.0047170	.0005293	.019401	.0067489	.0126438
%RSD	.8194103	.6920560	.6371031	1.819561	.3775603	1.128435	1.585395
#1	4.571294	60.98209	.7398344	.0296470	5.116472	.6042045	.7863282
#2	4.566987	60.71361	.7359564	.0290285	5.152557	.5991876	.8112329
#3	4.504706	60.15944	.7453432	.0285938	5.146870	.5908440	.7949844

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**34.46336**	**12.64849**	**.3319344**	**.3501300**	**4.531002**	**6.320542**	**.7117534**
Stddev	.43006	.10433	.0009996	.0019089	.037080	.006574	.0054676
%RSD	1.247886	.8248565	.3011589	.5451896	.8183683	.1040048	.7681929
#1	34.65007	12.62308	.3329716	.3488559	4.523281	6.327982	.7138141
#2	34.76851	12.55921	.3309770	.3492094	4.498389	6.315518	.7055548
#3	33.97150	12.76318	.3318548	.3523247	4.571334	6.318127	.7158912

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2590-01MSD Acquired: 7/17/2025 19:56:12 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**7.570763**	**.4163604**	**.3113247**
Stddev	.080091	.0085295	.0034184
%RSD	1.057900	2.048594	1.098023
#1	7.634311	.4215019	.3137094
#2	7.597176	.4210647	.3128564
#3	7.480801	.4065146	.3074083

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5668.668**	**45116.26**	**2992.406**	**3843.010**	**5087.802**
Stddev	19.461	851.96	20.050	68.617	18.413
%RSD	.3433054	1.888373	.6700325	1.785504	.3619031
#1	5687.794	45657.93	2975.919	3874.300	5109.019
#2	5648.889	44134.24	2986.573	3764.325	5076.001
#3	5669.323	45556.61	3014.726	3890.404	5078.386

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2590-01LX5 Acquired: 7/17/2025 20:01:13 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0098611**	**-.008513**	**.0794585**	**.0108498**	**.0048265**	**21.69776**	**.2215555**
Stddev	.0030979	.000852	.0011588	.0011856	.0002336	.03974	.0001803
%RSD	31.41533	10.01263	1.458439	10.92783	4.839846	.1831517	.0813683
#1	.0118603	-.009493	.0782289	.0122004	.0050439	21.70215	.2213635
#2	.0062926	-.008102	.0805305	.0103686	.0048559	21.73512	.2215818
#3	.0114303	-.007943	.0796162	.0099804	.0045795	21.65600	.2217212

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0019130**	**-.000450**	**13.76180**	**.0731708**	**.0298683**	**.1910339**	**56.44748**
Stddev	.0001402	.000069	.06830	.0006204	.0003220	.0014345	.62711
%RSD	7.329121	15.24644	.4962687	.8478350	1.078239	.7508921	1.110967
#1	.0019182	-.000373	13.71722	.0738804	.0295082	.1902023	56.53331
#2	.0017703	-.000474	13.72775	.0727313	.0299682	.1902091	55.78187
#3	.0020505	-.000504	13.84043	.0729006	.0301286	.1926902	57.02725

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9860565**	**15.64452**	**.0456776**	**-.009035**	**.6016463**	**.0733338**	**.1384225**
Stddev	.0030800	.09193	.0006464	.000362	.0083876	.0049698	.0011486
%RSD	.3123529	.5876056	1.415195	4.011226	1.394107	6.776900	.8297663
#1	.9828138	15.69938	.0455731	-.009236	.5932936	.0789297	.1396253
#2	.9864130	15.69579	.0463699	-.009253	.6015769	.0694343	.1373371
#3	.9889427	15.53839	.0450898	-.008617	.6100684	.0716375	.1383049

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.250031**	**1.541401**	**.0179305**	**.0028896**	**1.375835**	**1.109876**	**-.000754**
Stddev	.035002	.006613	.0008690	.0006394	.008690	.007508	.000735
%RSD	.6667049	.4290171	4.846607	22.12695	.6316466	.6764926	97.50487
#1	5.245719	1.536010	.0175589	.0031453	1.368142	1.106878	-.000490
#2	5.217384	1.548780	.0189235	.0021620	1.385262	1.104331	-.000187
#3	5.286989	1.539411	.0173090	.0033616	1.374101	1.118421	-.001584

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2590-01LX5 Acquired: 7/17/2025 20:01:13 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**1.623547**	**.0287675**	**.0329607**
Stddev	.006816	.0043140	.0001667
%RSD	.4198277	14.99623	.5057771
#1	1.615740	.0274484	.0327809
#2	1.626587	.0335872	.0331101
#3	1.628314	.0252670	.0329910

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5293.493**	**42810.29**	**2765.798**	**3582.810**	**5603.176**
Stddev	23.940	333.18	17.585	33.593	23.174
%RSD	.4522572	.7782679	.6358101	.9376183	.4135808
#1	5317.719	42528.41	2776.591	3546.179	5629.335
#2	5292.911	43177.98	2775.297	3612.176	5594.973
#3	5269.850	42724.47	2745.506	3590.076	5585.219

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2557-02 Acquired: 7/17/2025 20:06:10 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4796791**	**1.201312**	**.6272447**	**1.189085**	**.5627177**	**7.396657**
Stddev	.0055759	.020222	.0097619	.021251	.0098992	.036191
%RSD	1.162426	1.683301	1.556317	1.787204	1.759176	.4892819
#1	.4778821	1.180767	.6178048	1.167765	.5538584	7.358383
#2	.4859320	1.221194	.6372996	1.210267	.5734027	7.430322
#3	.4752233	1.201976	.6266297	1.189223	.5608920	7.401266

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2409365**	**.1295044**	**.1281707**	**36.59074**	**.2641429**	**.1524006**
Stddev	.0009403	.0009252	.0021583	.34000	.0037642	.0028392
%RSD	.3902578	.7144455	1.683927	.9292018	1.425078	1.862972
#1	.2400227	.1301942	.1262767	36.20885	.2679498	.1498974
#2	.2419011	.1284530	.1305205	36.86054	.2640562	.1554856
#3	.2408856	.1298660	.1277149	36.70283	.2604228	.1518187

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2329998**	**22.06228**	**2.113022**	**14.42724**	**.3286677**	**.0410435**
Stddev	.0008027	.24673	.013892	.13743	.0052993	.0013400
%RSD	.3444831	1.118320	.6574661	.9525468	1.612355	3.264854
#1	.2334265	22.29469	2.096992	14.29100	.3241611	.0424762
#2	.2320739	21.80337	2.121554	14.42490	.3345057	.0398211
#3	.2334990	22.08879	2.120521	14.56582	.3273362	.0408332

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**143.2814**	**.1975628**	**.3088359**	**15.22883**	**3.985236**	**1.106893**
Stddev	2.8817	.0070744	.0011505	1.60311	.072616	.005429
%RSD	2.011244	3.580833	.3725144	10.52679	1.822137	.4904670
#1	145.8739	.2032328	.3085596	13.51177	3.929639	1.111858
#2	140.1786	.1998204	.3100994	16.68630	4.067393	1.101096
#3	143.7916	.1896351	.3078488	15.48843	3.958674	1.107726

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2557-02 Acquired: 7/17/2025 20:06:10 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3077580	F 42.15285	F 19.45276	.4784123	.3454493	.1009813
Stddev	.0041869	.80001	.14551	.0084487	.0073178	.0063148
%RSD	1.360452	1.897886	.7479925	1.765984	2.118357	6.253464
#1	.3041933	41.45050	19.59011	.4692828	.3371928	.0941501
#2	.3123687	43.02369	19.30028	.4859551	.3480209	.1066056
#3	.3067119	41.98437	19.46788	.4799990	.3511342	.1021880

Elem	Sr4077
Units	ppm
Avg	.3057607
Stddev	.0028437
%RSD	.9300365
#1	.3025149
#2	.3078137
#3	.3069536

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4904.938	39524.32	2575.083	3287.758	5176.896
Stddev	92.059	276.06	8.461	30.474	99.852
%RSD	1.876872	.6984553	.3285765	.9268998	1.928799
#1	4968.904	39606.37	2580.589	3317.861	5248.629
#2	4799.429	39216.53	2579.320	3256.926	5062.855
#3	4946.482	39750.04	2565.341	3288.486	5219.203

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: CCV05 Acquired: 7/17/2025 20:11:11 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: CCV05 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.997855**	**5.068620**	**5.070774**	**5.041694**	**4.993178**	**10.10549**	**10.26379**
Stddev	.038314	.016310	.033992	.038964	.022095	.02889	.03405
%RSD	.7666030	.3217807	.6703473	.7728454	.4425064	.2858982	.3317778
#1	5.022842	5.067886	5.068154	5.086377	5.018492	10.13792	10.26171
#2	5.016979	5.085284	5.106000	5.023915	4.977765	10.08251	10.23083
#3	4.953744	5.052689	5.038168	5.014790	4.983277	10.09603	10.29884

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2470557**	**2.553391**	**25.16821**	**1.011363**	**2.511891**	**1.238807**	**5.004133**
Stddev	.0037958	.019232	.01916	.018479	.009275	.015582	.099366
%RSD	1.536404	.7531979	.0761456	1.827118	.3692387	1.257797	1.985685
#1	.2502320	2.549498	25.18863	1.032277	2.504470	1.241882	5.098098
#2	.2428520	2.574272	25.15062	.997240	2.522289	1.221917	4.900128
#3	.2480832	2.536403	25.16537	1.004573	2.508914	1.252621	5.014174

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.469273**	**24.64538**	**2.523580**	**1.248148**	**25.47010**	**2.494707**	**2.498207**
Stddev	.007087	.12443	.009000	.007797	2.15737	.015282	.002090
%RSD	.2870034	.5048627	.3566545	.6247022	8.470214	.6125816	.0836680
#1	2.477347	24.78223	2.519211	1.256993	27.84270	2.506419	2.500589
#2	2.464081	24.53906	2.533931	1.242270	23.62627	2.477420	2.497356
#3	2.466391	24.61484	2.517598	1.245180	24.94134	2.500281	2.496677

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.13529**	**5.040060**	**4.941370**	**4.994338**	**5.027558**	**5.250950**	**5.069975**
Stddev	1.88035	.040366	.078208	.013235	.043872	.118858	.039231
%RSD	7.480914	.8009085	1.582718	.2649984	.8726326	2.263558	.7737847
#1	25.09742	5.061964	4.997528	5.006523	5.074931	5.357787	5.063736
#2	23.27417	5.064739	4.852044	4.980257	5.019414	5.122922	5.111951
#3	27.03429	4.993477	4.974537	4.996232	4.988328	5.272142	5.034237

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: CCV05 Acquired: 7/17/2025 20:11:11 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: CCV05 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**5.064573**	**5.082202**	**5.114112**
Stddev	.020683	.027435	.016062
%RSD	.4083917	.5398228	.3140649
#1	5.067192	5.063012	5.115871
#2	5.042706	5.069969	5.097243
#3	5.083823	5.113626	5.129221

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4952.728**	**39843.79**	**2652.043**	**3354.656**	**5194.596**
Stddev	55.308	841.76	60.741	53.160	46.042
%RSD	1.116713	2.112639	2.290349	1.584656	.8863470
#1	4888.975	38986.82	2581.905	3368.619	5143.252
#2	4987.865	39875.11	2687.252	3295.909	5208.320
#3	4981.343	40669.45	2686.971	3399.441	5232.215

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: CCB05 Acquired: 7/17/2025 20:16:01 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: CCB05 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.002530**	**-.000564**	**.0000822**	**-.000699**	**-.000389**	**.0195472**	**.0004038**
Stddev	.000074	.001830	.0004442	.001764	.001447	.0088361	.0003838
%RSD	2.927299	324.4373	540.5242	252.3340	371.7695	45.20401	95.03791
#1	-.002445	.001489	-.000334	-.001619	-.001607	.0296617	-.000036
#2	-.002568	-.002025	.000031	.001335	-.000771	.0156521	.000577
#3	-.002578	-.001156	.000550	-.001812	.001211	.0133279	.000671

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000029**	**-.000017**	**.0222268**	**.0003158**	**.0000094**	**-.000034**	**-.000418**
Stddev	.000086	.000031	.0185496	.0010091	.0002633	.000587	.001058
%RSD	293.7704	181.5978	83.45587	319.5560	2787.651	1746.940	252.9210
#1	.000019	-.000046	.0154224	.0010777	.0003073	-.000153	.000054
#2	-.000129	-.000021	.0080403	.0006983	-.000192	.000604	.000321
#3	.000022	.000016	.0432177	-.000829	-.000087	-.000551	-.001630

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001714**	**-.016349**	**-.000032**	**-.001037**	**.0120079**	**-.004406**	**.0008910**
Stddev	.000329	.105388	.000316	.000470	.0126367	.004489	.0003094
%RSD	19.17941	644.6046	980.6327	45.34614	105.2364	101.8749	34.72375
#1	-.001982	-.009961	-.000376	-.001243	.0228174	.000340	.0007726
#2	-.001347	.085699	.000245	-.000499	.0150917	-.004977	.0012421
#3	-.001813	-.124786	.000034	-.001369	-.001885	-.008583	.0006583

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0082448**	**-.000304**	**.0047078**	**.0003370**	**.0012629**	**.0022812**	**.0005068**
Stddev	.0015060	.000466	.0011361	.0002056	.0024878	.0010067	.0004386
%RSD	18.26580	153.2674	24.13163	60.99488	196.9943	44.12832	86.54021
#1	.0099678	-.000649	.0059714	.0001634	-.000500	.0013977	.0007312
#2	.0071803	.000226	.0043812	.0002836	.000180	.0033772	.0000014
#3	.0075861	-.000488	.0037708	.0005640	.004109	.0020690	.0007879

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: CCB05 Acquired: 7/17/2025 20:16:01 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: CCB05 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0027836	-.014229	-.000285
Stddev	.0034146	.003888	.000196
%RSD	122.6715	27.32611	68.61879
#1	-.001158	-.018719	-.000281
#2	.004849	-.012035	-.000092
#3	.004660	-.011934	-.000483

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5000.752	41836.17	2629.385	3439.381	5855.787
Stddev	176.947	664.82	25.093	51.001	214.307
%RSD	3.538416	1.589107	.9543175	1.482862	3.659752
#1	4885.764	41079.64	2606.100	3381.528	5713.116
#2	5204.512	42327.32	2626.094	3477.842	6102.226
#3	4911.980	42101.53	2655.961	3458.773	5752.019

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2557-02DUP Acquired: 7/17/2025 20:21:07 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.006511	.0010205	.0156439	-.001780	.0090217	4.297999
Stddev	.003348	.0004409	.0004112	.001834	.0014315	.014559
%RSD	51.42064	43.20820	2.628218	103.0505	15.86714	.3387462
#1	-.003184	.0006140	.0159276	-.003809	.0074287	4.297223
#2	-.009880	.0014892	.0158317	-.000241	.0094363	4.283843
#3	-.006469	.0009582	.0151723	-.001288	.0102002	4.312930

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1034280	.0005410	.0003954	35.65083	.0127110	.0244444
Stddev	.0019211	.0000694	.0000132	.21847	.0003064	.0005959
%RSD	1.857446	12.82772	3.338615	.6127983	2.410244	2.437595
#1	.1054987	.0005679	.0003895	35.90209	.0130357	.0246826
#2	.1017036	.0005929	.0003862	35.50577	.0126703	.0248843
#3	.1030817	.0004622	.0004105	35.54462	.0124270	.0237663

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0312127	19.71301	1.962207	13.00908	.0073675	-.003509
Stddev	.0012725	.67478	.011595	.15897	.0001025	.000975
%RSD	4.076936	3.422996	.5909230	1.221983	1.391759	27.79788
#1	.0325854	20.48419	1.975544	13.19190	.0074229	-.004271
#2	.0300724	19.42375	1.956558	12.90344	.0072492	-.003846
#3	.0309804	19.23109	1.954519	12.93190	.0074303	-.002410

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	142.6490	.0027193	.2132676	^ *****	.2678376	.9402402
Stddev	3.9843	.0030717	.0008151	-----	.0011959	.0330495
%RSD	2.793053	112.9590	.3822092	-----	.4465111	3.515001
#1	143.3386	.0013594	.2137992	6.160597	.2668265	.9783834
#2	146.2434	.0005622	.2136744	^ -----	.2675285	.9201242
#3	138.3649	.0062361	.2123291	6.032441	.2691577	.9222131

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2557-02DUP Acquired: 7/17/2025 20:21:07 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0048666	F 42.20351	F 16.47657	.0016063	.1764705	-.032919
Stddev	.0001010	.15631	.54887	.0009166	.0052687	.004689
%RSD	2.075937	.3703651	3.331226	57.06041	2.985622	14.24487
#1	.0047531	42.19081	17.10967	.0023919	.1709835	-.028720
#2	.0048997	42.36577	16.18538	.0018279	.1814898	-.032059
#3	.0049469	42.05393	16.13465	.0005993	.1769381	-.037979

Elem	Sr4077
Units	ppm
Avg	.1732853
Stddev	.0006354
%RSD	.3666485
#1	.1738330
#2	.1725887
#3	.1734341

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4910.427	39302.64	2566.442	3318.617	5196.682
Stddev	32.892	194.19	75.310	28.542	34.284
%RSD	.6698316	.4940774	2.934412	.8600425	.6597377
#1	4891.667	39328.55	2479.767	3329.761	5181.640
#2	4891.207	39096.81	2615.870	3339.905	5172.490
#3	4948.406	39482.58	2603.691	3286.184	5235.916

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2557-02LX5 Acquired: 7/17/2025 20:26:16 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1144567**	**.3266568**	**.1598409**	**.3137320**	**.1477354**	**1.750882**	**.0556640**
Stddev	.0047935	.0041560	.0013651	.0032871	.0011754	.015494	.0005465
%RSD	4.188003	1.272290	.8540504	1.047725	.7956192	.8849062	.9818264
#1	.1148541	.3242014	.1597724	.3145607	.1481512	1.762694	.0562600
#2	.1094769	.3243138	.1585114	.3101100	.1464086	1.756612	.0551863
#3	.1190390	.3314554	.1612390	.3165255	.1486465	1.733339	.0555457

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0347835**	**.0316541**	**7.285876**	**.0693576**	**.0386104**	**.0607825**	**4.701045**
Stddev	.0014757	.0004440	.095170	.0006751	.0003777	.0027650	.200456
%RSD	4.242572	1.402722	1.306225	.9733682	.9781425	4.549015	4.264071
#1	.0362608	.0315575	7.390654	.0700031	.0382890	.0634257	4.912806
#2	.0333094	.0312663	7.204791	.0686563	.0385159	.0579099	4.514230
#3	.0347802	.0321385	7.262182	.0694133	.0390264	.0610118	4.676098

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4272676**	**2.986091**	**.0825555**	**.0101160**	**29.69786**	**.0492908**	**.0706408**
Stddev	.0046502	.027456	.0016297	.0001342	1.71578	.0027074	.0001427
%RSD	1.088348	.9194667	1.974025	1.326482	5.777446	5.492685	.2019910
#1	.4316015	3.017751	.0817366	.0099972	31.59601	.0487841	.0707937
#2	.4223553	2.968825	.0814977	.0102615	28.25719	.0468726	.0705112
#3	.4278461	2.971697	.0844322	.0100892	29.24037	.0522157	.0706174

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.567987**	**.9826924**	**.2549363**	**.0787116**	**8.094259**	**4.627744**	**.1206479**
Stddev	.164574	.0097356	.0090984	.0012207	.084414	.186276	.0017382
%RSD	6.408689	.9907110	3.568879	1.550824	1.042887	4.025191	1.440710
#1	2.748329	.9831188	.2644404	.0784219	8.099574	4.826559	.1192766
#2	2.425930	.9727505	.2463068	.0776619	8.007313	4.457251	.1200644
#3	2.529701	.9922078	.2540616	.0800511	8.175890	4.599422	.1226028

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2557-02LX5 Acquired: 7/17/2025 20:26:16 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0751734	.0295653	.0682130
Stddev	.0022083	.0048533	.0005023
%RSD	2.937664	16.41541	.7363651
#1	.0777135	.0351693	.0687851
#2	.0737092	.0267476	.0678442
#3	.0740976	.0267788	.0680097

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5094.233	40875.23	2620.204	3389.827	5625.652
Stddev	56.712	177.73	79.706	30.864	64.442
%RSD	1.113258	.4347992	3.041958	.9105036	1.145495
#1	5095.074	41078.85	2534.815	3424.675	5640.306
#2	5150.519	40751.31	2692.639	3365.934	5681.504
#3	5037.105	40795.52	2633.158	3378.872	5555.145

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2557-02MS Acquired: 7/17/2025 20:31:08 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7782139**	**1.926757**	**.9941491**	**1.906729**	**.8014584**	**6.199650**
Stddev	.0062941	.003311	.0045556	.011562	.0013435	.035633
%RSD	.8087832	.1718479	.4582432	.6063608	.1676347	.5747566
#1	.7823539	1.926719	.9974321	1.914307	.8027069	6.185141
#2	.7709708	1.923465	.9889481	1.893421	.8000367	6.173559
#3	.7813169	1.930087	.9960672	1.912458	.8016316	6.240248

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3132026**	**.2082799**	**.2047216**	**35.62043**	**.4146950**	**.2286862**
Stddev	.0020592	.0076658	.0007185	.21122	.0038090	.0006880
%RSD	.6574592	3.680522	.3509835	.5929856	.9185170	.3008464
#1	.3115300	.2030418	.2052808	35.43861	.4184965	.2289981
#2	.3125754	.2170785	.2039112	35.57055	.4147101	.2278975
#3	.3155024	.2047196	.2049727	35.85213	.4108785	.2291630

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3492830**	**22.69207**	**2.117887**	**14.66862**	**.5207668**	**.0680073**
Stddev	.0120337	.99398	.016076	.08304	.0012588	.0006278
%RSD	3.445258	4.380292	.7590434	.5661372	.2417293	.9231009
#1	.3400037	21.92923	2.100764	14.60744	.5214246	.0673923
#2	.3628799	23.81615	2.120242	14.63527	.5193153	.0686471
#3	.3449656	22.33082	2.132656	14.76316	.5215604	.0679826

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**145.4775**	**.3227652**	**.3781414**	**17.72735**	**6.192493**	**1.207882**
Stddev	5.2379	.0096816	.0019320	.96610	.037944	.045394
%RSD	3.600505	2.999578	.5109312	5.449767	.6127450	3.758178
#1	142.1368	.3297069	.3798869	18.60423	6.222648	1.173326
#2	151.5143	.3117054	.3784720	17.88612	6.149888	1.259293
#3	142.7815	.3268834	.3760655	16.69170	6.204944	1.191027

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2557-02MS Acquired: 7/17/2025 20:31:08 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4185568**	F **41.48179**	F **16.79779**	**.7230895**	**.3755100**	**.1805954**
Stddev	.0004276	.19929	.64356	.0036480	.0022451	.0077357
%RSD	.1021499	.4804315	3.831209	.5044999	.5978663	4.283444
#1	.4184034	41.68942	16.32895	.7267476	.3729334	.1728445
#2	.4182271	41.29204	17.53152	.7194517	.3765510	.1806260
#3	.4190399	41.46390	16.53292	.7230693	.3770456	.1883158

Elem	Sr4077
Units	ppm
Avg	**.3736754**
Stddev	.0019436
%RSD	.5201194
#1	.3723796
#2	.3727366
#3	.3759102

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4869.178**	**39230.05**	**2539.100**	**3281.154**	**5142.754**
Stddev	5.308	278.89	110.533	4.444	11.230
%RSD	.1090064	.7109109	4.353218	.1354389	.2183590
#1	4865.282	39216.08	2627.620	3281.242	5129.807
#2	4867.029	38958.41	2415.212	3276.667	5148.595
#3	4875.223	39515.66	2574.468	3285.554	5149.859

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2557-02MSD Acquired: 7/17/2025 20:36:10 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7151538**	**1.767578**	**.9107339**	**1.755111**	**.7428433**	**6.266169**
Stddev	.0090621	.015971	.0079811	.008304	.0076892	.040737
%RSD	1.267158	.9035678	.8763428	.4731286	1.035108	.6501126
#1	.7155986	1.766183	.9102704	1.752714	.7408271	6.221405
#2	.7058774	1.752350	.9029947	1.748269	.7363631	6.301066
#3	.7239853	1.784201	.9189367	1.764349	.7513398	6.276037

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3004505**	**.1905246**	**.1880773**	**35.89332**	**.3845829**	**.2124631**
Stddev	.0014011	.0027893	.0015403	.14152	.0014872	.0019626
%RSD	.4663445	1.464016	.8189650	.3942655	.3867138	.9237343
#1	.3006332	.1923854	.1877261	35.79965	.3852560	.2121786
#2	.3017513	.1873175	.1867429	35.82421	.3856146	.2106583
#3	.2989669	.1918709	.1897628	36.05611	.3828781	.2145524

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3233596**	**22.37965**	**2.115785**	**14.61208**	**.4781627**	**.0613117**
Stddev	.0045993	.28267	.007744	.02984	.0038221	.0005789
%RSD	1.422341	1.263078	.3659882	.2042007	.7993199	.9442374
#1	.3263664	22.56871	2.107089	14.60492	.4778361	.0618809
#2	.3180651	22.05470	2.118332	14.58648	.4745144	.0613307
#3	.3256475	22.51556	2.121934	14.64485	.4821376	.0607235

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**145.0144**	**.2879585**	**.4196999**	**16.48863**	**5.685172**	**1.174252**
Stddev	3.1369	.0048319	.0017466	.34784	.049903	.014615
%RSD	2.163168	1.677972	.4161580	2.109566	.8777741	1.244581
#1	148.6303	.2923387	.4188860	16.84080	5.682064	1.185391
#2	143.3917	.2827755	.4185088	16.47979	5.636895	1.157704
#3	143.0213	.2887613	.4217050	16.14529	5.736555	1.179660

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2557-02MSD Acquired: 7/17/2025 20:36:10 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3893354	F 41.26803	F 17.26596	.6666030	.3665681	.1637675
Stddev	.0031859	.34066	.23803	.0077615	.0025539	.0030420
%RSD	.8182966	.8254912	1.378607	1.164341	.6967178	1.857495
#1	.3895456	41.23578	17.46114	.6673179	.3651671	.1604052
#2	.3860495	40.94463	17.00078	.6585088	.3650212	.1645683
#3	.3924110	41.62367	17.33596	.6739825	.3695159	.1663289

Elem	Sr4077
Units	ppm
Avg	.3606138
Stddev	.0017397
%RSD	.4824390
#1	.3589600
#2	.3604531
#3	.3624283

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4838.071	39300.36	2552.789	3303.408	5124.365
Stddev	27.561	138.34	27.619	22.196	31.930
%RSD	.5696717	.3520173	1.081904	.6719223	.6230974
#1	4849.046	39444.15	2539.026	3326.582	5135.900
#2	4858.454	39168.20	2584.585	3301.301	5148.926
#3	4806.713	39288.75	2534.756	3282.340	5088.271

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2557-02A Acquired: 7/17/2025 20:41:12 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8797500**	**2.173327**	**1.118332**	**2.160959**	**.9325038**	**7.235192**
Stddev	.0086542	.012199	.008960	.017146	.0067948	.050625
%RSD	.9837138	.5613046	.8011651	.7934456	.7286618	.6997110
#1	.8848408	2.174447	1.115391	2.153351	.9271170	7.268254
#2	.8697576	2.160607	1.111212	2.148933	.9302571	7.176910
#3	.8846516	2.184927	1.128392	2.180592	.9401375	7.260412

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3452268**	**.2297932**	**.2316901**	**36.56561**	**.4663092**	**.2563914**
Stddev	.0019412	.0045464	.0017114	.09722	.0071821	.0017878
%RSD	.5623055	1.978485	.7386646	.2658795	1.540204	.6973101
#1	.3458016	.2305441	.2314345	36.64755	.4722222	.2569674
#2	.3430631	.2249181	.2301208	36.45819	.4583168	.2543865
#3	.3468158	.2339174	.2335149	36.59110	.4683886	.2578202

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3852822**	**23.13076**	**2.202114**	**15.27376**	**.5874900**	**.0747779**
Stddev	.0057747	.36333	.008163	.12288	.0044902	.0016482
%RSD	1.498825	1.570750	.3707090	.8044927	.7642974	2.204096
#1	.3858793	23.18953	2.211526	15.13278	.5880560	.0758993
#2	.3792322	22.74163	2.196955	15.33041	.5827437	.0728856
#3	.3907352	23.46112	2.197861	15.35809	.5916704	.0755490

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**143.7866**	**.3631531**	**.4242185**	**18.69743**	**6.946151**	**1.232935**
Stddev	2.1016	.0016353	.0074144	.21506	.054245	.021915
%RSD	1.461595	.4503014	1.747769	1.150219	.7809317	1.777442
#1	141.9732	.3612923	.4324436	18.64947	6.944904	1.235936
#2	143.2966	.3643613	.4180485	18.51040	6.892541	1.209675
#3	146.0898	.3638057	.4221633	18.93242	7.001009	1.253195

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: Q2557-02A Acquired: 7/17/2025 20:41:12 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4920813	F 41.82997	F 17.69745	.8305081	.4259707	.2116861
Stddev	.0032887	.31700	.30247	.0072317	.0025794	.0056123
%RSD	.6683296	.7578244	1.709133	.8707506	.6055378	2.651215
#1	.4905873	41.78775	17.74590	.8289628	.4256267	.2155232
#2	.4898049	41.53620	17.37367	.8241741	.4235807	.2052448
#3	.4958519	42.16596	17.97277	.8383875	.4287049	.2142902

Elem	Sr4077
Units	ppm
Avg	.4081585
Stddev	.0007041
%RSD	.1725153
#1	.4089537
#2	.4079079
#3	.4076139

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4820.591	39125.80	2565.600	3284.671	5103.534
Stddev	15.532	351.99	41.203	27.778	16.404
%RSD	.3222009	.8996244	1.605973	.8456961	.3214185
#1	4832.360	38899.35	2574.094	3255.336	5109.249
#2	4826.427	39531.32	2601.894	3310.574	5116.317
#3	4802.987	38946.74	2520.813	3288.102	5085.038

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: CCV06 Acquired: 7/17/2025 20:46:14 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: CCV06 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.905145**	**5.020465**	**4.959662**	**4.963897**	**4.989327**	**10.29428**	**10.40306**
Stddev	.045755	.033193	.047792	.017719	.012133	.13309	.14171
%RSD	.9328046	.6611613	.9636114	.3569536	.2431855	1.292836	1.362176
#1	4.957187	5.057740	5.013991	4.983246	4.986939	10.23108	10.34075
#2	4.887014	5.009553	4.940884	4.959981	5.002476	10.44719	10.56524
#3	4.871233	4.994101	4.924111	4.948463	4.978565	10.20457	10.30318

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2520181**	**2.496215**	**25.31207**	**1.004458**	**2.484780**	**1.263050**	**5.145556**
Stddev	.0164578	.025360	.43487	.002541	.017362	.080254	.370968
%RSD	6.530408	1.015932	1.718050	.2529573	.6987146	6.353974	7.209480
#1	.2357644	2.525021	25.18267	1.004973	2.504652	1.183773	4.772245
#2	.2686728	2.486372	25.79695	1.006703	2.477128	1.344246	5.514135
#3	.2516172	2.477253	24.95658	1.001700	2.472558	1.261132	5.150288

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.486045**	**24.92553**	**2.492420**	**1.236531**	**25.86841**	**2.526789**	**2.506810**
Stddev	.034345	.37851	.018805	.014692	1.88465	.025301	.032959
%RSD	1.381496	1.518555	.7544816	1.188130	7.285544	1.001298	1.314773
#1	2.476126	24.68066	2.513392	1.253376	24.09441	2.503229	2.544828
#2	2.524257	25.36149	2.486809	1.229845	27.84702	2.553530	2.489303
#3	2.457751	24.73445	2.477059	1.226370	25.66378	2.523608	2.486300

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**26.75959**	**4.935191**	**5.065722**	**4.988879**	**4.934658**	**5.395492**	**4.950341**
Stddev	1.05506	.042305	.325173	.009286	.034895	.340376	.041875
%RSD	3.942735	.8572067	6.419075	.1861242	.7071477	6.308521	.8459109
#1	27.49344	4.983992	4.740679	4.997684	4.974849	5.065947	4.998374
#2	27.23482	4.912672	5.391023	4.989776	4.917039	5.745753	4.931138
#3	25.55049	4.908909	5.065465	4.979178	4.912084	5.374776	4.921511

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: CCV06 Acquired: 7/17/2025 20:46:14 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: CCV06 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**5.093609**	**5.174478**	**5.175585**
Stddev	.060089	.059621	.065015
%RSD	1.179693	1.152217	1.256177
#1	5.065912	5.135829	5.149919
#2	5.162551	5.243142	5.249515
#3	5.052364	5.144464	5.127321

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4901.636**	**39120.06**	**2539.182**	**3293.664**	**5162.175**
Stddev	6.460	2060.60	98.221	167.616	22.490
%RSD	.1317911	5.267375	3.868231	5.089034	.4356759
#1	4895.321	36756.27	2572.602	3100.954	5136.783
#2	4901.356	40066.47	2428.611	3374.458	5170.151
#3	4908.231	40537.44	2616.332	3405.579	5179.589

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: CCB06 Acquired: 7/17/2025 20:51:05 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi 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	**-.000450**	**-.001277**	**.0005517**	**-.001376**	**-.001185**	**.0125165**	**-.000047**
Stddev	.000892	.001633	.0008326	.000499	.002678	.0181379	.001152
%RSD	198.2829	127.8842	150.9140	36.26346	226.0050	144.9119	2455.362
#1	-.000128	-.001093	.0006424	-.001747	-.004029	.0330574	.001283
#2	.000236	-.002995	-.000323	-.000809	-.000812	-.001295	-.000719
#3	-.001458	.000256	.001335	-.001574	.001287	.005787	-.000705

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000029**	**-.000012**	**.0003295**	**.0002588**	**-.000142**	**.0004042**	**-.001018**
Stddev	.000034	.000048	.0277333	.0007962	.000280	.0004099	.002088
%RSD	117.9813	392.7696	8416.200	307.6424	197.3143	101.4019	205.0525
#1	-.000012	.000007	-.014254	-.000434	-.000310	.0001669	.000769
#2	-.000007	.000023	.032312	.000082	.000181	.0001683	-.003313
#3	-.000068	-.000067	-.017070	.001128	-.000297	.0008776	-.000510

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001174**	**-.074401**	**.0001834**	**-.000703**	**.0217518**	**-.006723**	**.0004208**
Stddev	.000442	.048130	.0002718	.000712	.0134690	.003736	.0005250
%RSD	37.66367	64.69019	148.1769	101.2790	61.92142	55.57312	124.7606
#1	-.001456	-.121116	.0002059	.000097	.0143356	-.009205	-.000169
#2	-.000665	-.077117	.0004432	-.000941	.0372991	-.008537	.000592
#3	-.001403	-.024970	-.000099	-.001265	.0136208	-.002426	.000839

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0063909**	**.0010547**	**.0069602**	**.0004101**	**.0037127**	**.0035141**	**-.000158**
Stddev	.0009504	.0006723	.0005317	.0001062	.0026319	.0008182	.000464
%RSD	14.87114	63.74898	7.638915	25.90382	70.88962	23.28184	292.9899
#1	.0074425	.0003601	.0068556	.0005300	.0044714	.0025698	-.000694
#2	.0055933	.0017024	.0075364	.0003721	.0058818	.0040114	.000132
#3	.0061370	.0011014	.0064886	.0003280	.0007847	.0039611	.000086

Reviewed By:MOHAN
On:7/18/2025 9:42:49 AM
Inst Id :P5
LB :LB136534

Sample Name: CCB06 Acquired: 7/17/2025 20:51:05 Type: Unk
Method: METHOD 6010D, 200.7 M(v51) Mode: CONC Corr. Factor: 1.000000
User: Janvi Custom ID1: CCB06 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0010657	.0014836	-.000060
Stddev	.0006598	.0042290	.000172
%RSD	61.91397	285.0521	285.1774
#1	.0017121	.0025851	-.000188
#2	.0003933	.0050529	.000135
#3	.0010916	-.003187	-.000128

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5156.065	42696.06	2670.598	3491.011	6025.264
Stddev	14.994	678.96	18.028	46.098	13.742
%RSD	.2908036	1.590208	.6750453	1.320463	.2280698
#1	5150.164	43468.26	2654.412	3543.820	6023.936
#2	5173.112	42427.24	2690.027	3470.382	6039.621
#3	5144.919	42192.68	2667.354	3458.831	6012.234

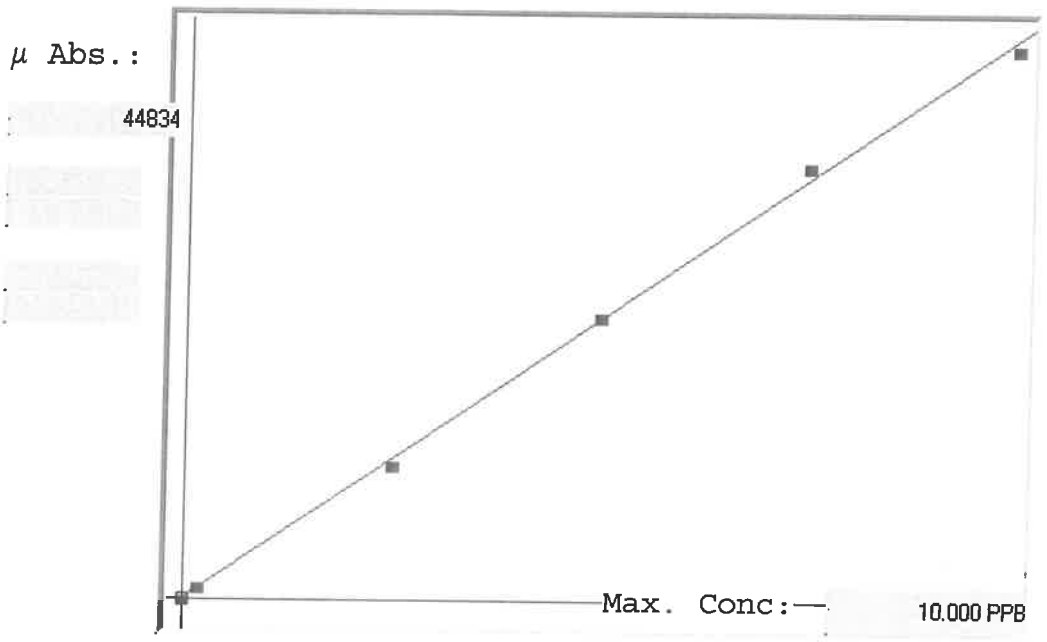
Reviewed By:jaswal
On:7/17/2025 10:49:54 PM
Inst Id :CV1
LB :LB136499

LB136499

7471B

INSTRUMENT ID: CV1

Linear



A= 0.0000e+000

B= 2.1944e-004

C= -1.0437e-002

Rho= 0.9994215

Accept=Accepted

Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	G/w))
0.0	0.000	0.007	0.007	79	0.000	79					-4
0.2	0.200	0.208	0.008	996	0.0 %	996					-5
2.5	2.500	2.386	-0.114	10922	0.0 %	10922					1
5.0	5.000	5.049	0.049	23055	0.0 %	23055					3
7.5	7.500	7.722	0.222	35239	0.0 %	35239					-2
10.0	10.000	9.828	-0.172	44834	0.0 %	44834					

Reviewed By:jaswal
On:7/17/2025 10:49:54 PM
Inst Id :CV1
LB :LB136499

LB136499 INSTRUMENT ID : CV1

Method: 7471B Operator: Admin Date of Analysis: 16 Jul 2025 11:33:48

Type	Sample ID	Extended ID	Conc.	µ Abs.	Units	Type	Stnd Conc	Method	Date
S	0.0 - 1	S0	-	79	PPB	Std	0.0000	7471B	16 Jul 2025 11:42:20
S	0.2 - 1	S0.2	-	996	PPB	Std	0.2000	7471B	16 Jul 2025 11:44:38
S	2.5 - 1	S2.5	-	10922	PPB	Std	2.5000	7471B	16 Jul 2025 11:46:55
S	5.0 - 1	S5	-	23055	PPB	Std	5.0000	7471B	16 Jul 2025 11:49:12
S	7.5 - 1	S7.5	-	35239	PPB	Std	7.5000	7471B	16 Jul 2025 11:51:30
S	10.0 - 1	S10	-	44834	PPB	Std	10.0000	7471B	16 Jul 2025 11:53:50
U	ICV29 - 1	ICV29	4.0739	18613	PPB	SMPL		-7471B	16 Jul 2025 11:56:51
U	ICB29 - 1	ICB29	-0.0690	-267	PPB	SMPL		-7471B	16 Jul 2025 11:59:08
U	CCV09 - 1	CCV09	5.3122	24256	PPB	SMPL		-7471B	16 Jul 2025 12:01:27
U	CCB09 - 1	CCB09	-0.0739	-289	PPB	SMPL		-7471B	16 Jul 2025 12:03:43
U	CRA - 1	CRA	0.2180	1041	PPB	SMPL		-7471B	16 Jul 2025 12:06:01
U	HighStd - 1	HighStd	10.0518	45855	PPB	SMPL		-7471B	16 Jul 2025 12:08:16
U	ChkStd - 1	ChkStd	7.3988	33765	PPB	SMPL		-7471B	16 Jul 2025 12:10:32
U	PB168891BL - 1	PBS	-0.0089	7	PPB	SMPL		-7471B	16 Jul 2025 12:12:59
U	PB168891BS - 1	LCSS	4.0630	18563	PPB	SMPL		-7471B	16 Jul 2025 12:19:46
U	Q2586-01 - 1	TP-16	0.4271	1994	PPB	SMPL		-7471B	16 Jul 2025 12:22:03
U	Q2589-01 - 1	AU-06-071125	0.5752	2669	PPB	SMPL		-7471B	16 Jul 2025 12:24:22
U	Q2590-01 - 1	NB-7-071125	0.4234	1977	PPB	SMPL		-7471B	16 Jul 2025 12:31:50
U	Q2590-01DUP - 1	NB-7-071125DUP	0.4032	1885	PPB	SMPL		-7471B	16 Jul 2025 12:34:07
U	Q2590-01MS - 1	NB-7-071125MS	2.8841	13191	PPB	SMPL		-7471B	16 Jul 2025 12:36:23
U	CCV10 - 1	CCV10	5.2690	24059	PPB	SMPL		-7471B	16 Jul 2025 12:38:39
U	CCB10 - 1	CCB10	-0.0065	18	PPB	SMPL		-7471B	16 Jul 2025 12:43:43
U	Q2590-01MSD - 1	NB-7-071125MSD	3.1606	14451	PPB	SMPL		-7471B	16 Jul 2025 12:45:58
U	Q2592-01 - 1	WC-SOIL-20250711	1.1947	5492	PPB	SMPL		-7471B	16 Jul 2025 12:48:15
U	Q2595-01 - 1	CHRT-24849	0.2426	1153	PPB	SMPL		-7471B	16 Jul 2025 12:50:34
U	Q2597-01 - 1	CHRT-26899	0.2698	1277	PPB	SMPL		-7471B	16 Jul 2025 12:52:53
U	Q2598-01 - 1	OK-01-071425	0.2489	1182	PPB	SMPL		-7471B	16 Jul 2025 12:55:10
U	Q2600-01 - 1	TRENCH	4.6015	21017	PPB	SMPL		-7471B	16 Jul 2025 12:57:28
U	Q2600-05 - 1	STOCK-PILE	1.0040	4623	PPB	SMPL		-7471B	16 Jul 2025 12:59:45
U	Q2600-09 - 1	END-OF-TRENCH	0.6321	2928	PPB	SMPL		-7471B	16 Jul 2025 13:02:14
U	PB168892BL - 1	PBS	-0.0616	-233	PPB	SMPL		-7471B	16 Jul 2025 13:04:34
U	PB168892BS - 1	LCSS	3.9805	18187	PPB	SMPL		-7471B	16 Jul 2025 13:09:47
U	CCV11 - 1	CCV11	5.2826	24121	PPB	SMPL		-7471B	16 Jul 2025 13:12:02
U	CCB11 - 1	CCB11	-0.0857	-343	PPB	SMPL		-7471B	16 Jul 2025 13:14:20
U	Q2487-09 - 1	G4(0-6)	4.4103	20146	PPB	SMPL		-7471B	16 Jul 2025 13:16:40
U	Q2487-10 - 1	G4(6-12)	2.9796	13626	PPB	SMPL		-7471B	16 Jul 2025 13:18:56
U	Q2487-11 - 1	G3(0-6)	3.4836	15923	PPB	SMPL		-7471B	16 Jul 2025 13:21:22
U	Q2487-12 - 1	G3(6-12)	1.1278	5187	PPB	SMPL		-7471B	16 Jul 2025 13:23:45
U	Q2487-13 - 1	G2(0-6)	5.0384	23008	PPB	SMPL		-7471B	16 Jul 2025 13:26:07
U	Q2487-14 - 1	G2(6-12)	2.8352	12968	PPB	SMPL		-7471B	16 Jul 2025 13:28:26
U	Q2487-15 - 1	G1(0-6)	3.3594	15357	PPB	SMPL		-7471B	16 Jul 2025 13:30:50
U	Q2487-16 - 1	G1(6-12)	3.5539	16243	PPB	SMPL		-7471B	16 Jul 2025 13:33:11
U	Q2487-16DUP - 1	G1(6-12)DUP	3.7773	17261	PPB	SMPL		-7471B	16 Jul 2025 13:35:32
U	Q2487-16MS - 1	G1(6-12)MS	7.5134	34287	PPB	SMPL		-7471B	16 Jul 2025 13:37:54
U	CCV12 - 1	CCV12	5.0875	23232	PPB	SMPL		-7471B	16 Jul 2025 13:40:17
U	CCB12 - 1	CCB12	-0.0793	-314	PPB	SMPL		-7471B	16 Jul 2025 13:42:40
U	Q2487-16MSD - 1	G1(6-12)MSD	7.2676	33167	PPB	SMPL		-7471B	16 Jul 2025 13:45:00
U	Q2514-01 - 1	TP-92	0.2889	1364	PPB	SMPL		-7471B	16 Jul 2025 13:47:15
U	Q2514-02 - 1	TP-93	0.3150	1483	PPB	SMPL		-7471B	16 Jul 2025 13:49:40
U	Q2514-03 - 1	TP-94	0.5134	2387	PPB	SMPL		-7471B	16 Jul 2025 13:51:57
U	Q2514-04 - 1	TP-96	0.6305	2921	PPB	SMPL		-7471B	16 Jul 2025 13:54:13
U	Q2514-05 - 1	TP-97	0.3931	1839	PPB	SMPL		-7471B	16 Jul 2025 13:56:32
U	Q2514-06 - 1	TP-103	1.0099	4650	PPB	SMPL		-7471B	16 Jul 2025 13:58:50
U	Q2514-07 - 1	TP-36	0.2544	1207	PPB	SMPL		-7471B	16 Jul 2025 14:01:09
U	Q2514-08 - 1	TP-78	0.4036	1887	PPB	SMPL		-7471B	16 Jul 2025 14:03:27
U	Q2514-09 - 1	TP-81	0.4462	2081	PPB	SMPL		-7471B	16 Jul 2025 14:05:43
U	CCV13 - 1	CCV13	5.1281	23417	PPB	SMPL		-7471B	16 Jul 2025 14:07:59
U	CCB13 - 1	CCB13	-0.0662	-254	PPB	SMPL		-7471B	16 Jul 2025 14:10:15
U	Q2514-10 - 1	TP-90	0.3009	1419	PPB	SMPL		-7471B	16 Jul 2025 14:12:35
U	Q2590-01LX5 - 1		0.0431	244	PPB	SMPL		-7471B	16 Jul 2025 14:14:51
U	Q2590-01A - 1		4.0867	18671	PPB	SMPL		-7471B	16 Jul 2025 14:17:08
U	Q2487-16LX5 - 1		0.8138	3756	PPB	SMPL		-7471B	16 Jul 2025 14:19:24
U	Q2487-16AA - 1		7.6102	34728	PPB	SMPL		-7471B	16 Jul 2025 14:21:43
U	CCV14 - 1	CCV14	5.0379	23006	PPB	SMPL		-7471B	16 Jul 2025 14:25:56
U	CCB14 - 1	CCB14	-0.0649	-248	PPB	SMPL		-7471B	16 Jul 2025 14:28:12

Alliance TECHNICAL GROUP

Soil/Sludge Metals Preparation Sheet

PB168846

SOP ID : M3050B-Digestion-20

SDG No : N/A

Matrix : SOIL

Pippete ID: ICP A

Balance ID : M SC-2

Filter paper ID : N/A

pH Strip ID : N/A

Hood ID : #3

Block ID: 1. HOT BLOCK #5 2. N/A

Start Digest Date: 07/14/2025 **Time :** 16:10 **Temp :** 96 °C

End Digest Date: 07/14/2025 **Time :** 18:12 **Temp :** 96 °C

Digestion tube ID: M6054

Block thermometer ID: MET-DIG. #5

Dig Technician Signature: SB.

Supervisor Signature: SO

Temp : 1. 96°C 2. N/A

Standared Name	MLS USED	STD REF. # FROM LOG
LFS-1	1.00	M6007
LFS-2	1.00	M6015
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Chemical Used	ML/SAMPLE USED	Lot Number
Conc. HNO3	5.00	M6158
1:1 HNO3	10.00	MP85156
30% H2O2	3.00	M6170
Conc. HCL	10.00	M6151
PTFE Boiling Stones	N/A	M5581
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Extraction Conformance/Non-Conformance Comments:

HOT BLOCK#5 CELL#35 96C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
07/15/25 08:10	SB.met.dig	SO (metals)
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

Soil/Sludge Metals Preparation Sheet

PB168846

Lab Sample ID	Client Sample ID	pH	Initial Weight (g)	Final Vol (ml)	Color Before	Color After	Texture	Artifact	Comment	Prep Pos
PB168846BL	PBS846	N/A	2.00	100	Colorless	Colorless	Fine	N/A	N/A	1
PB168846BS	LCS846	N/A	2.00	100	Colorless	Colorless	Fine	N/A	M6007,M6015	2
Q2580-02	WC-URBAN-FILL-B2	N/A	2.21	100	Brown	Yellow	Medium	N/A	N/A	3
Q2586-01	TP-16	N/A	2.17	100	Brown	Yellow	Medium	N/A	N/A	4
Q2589-01	AU-06-071125	N/A	2.25	100	Brown	Yellow	Medium	N/A	N/A	5
Q2590-01	NB-7-071125	N/A	2.48	100	Brown	Yellow	Medium	N/A	N/A	6
Q2590-01MS	NB-7-071125MS	N/A	2.18	100	Brown	Yellow	Medium	N/A	M6007,M6015	8
Q2590-01MSD	NB-7-071125MSD	N/A	2.16	100	Brown	Yellow	Medium	N/A	M6007,M6015	9
Q2590-01DUP	NB-7-071125DUP	N/A	2.30	100	Brown	Yellow	Medium	N/A	N/A	7
Q2592-01	WC-SOIL-20250711	N/A	2.23	100	Brown	Yellow	Medium	N/A	N/A	10
Q2595-01	CHRT-24849	N/A	2.28	100	Brown	Yellow	Medium	N/A	N/A	11
Q2597-01	CHRT-26899	N/A	2.23	100	Brown	Yellow	Medium	N/A	N/A	12
Q2598-01	OK-01-071425	N/A	2.31	100	Brown	Yellow	Medium	N/A	N/A	13
Q2600-01	TRENCH	N/A	2.13	100	Brown	Yellow	Medium	N/A	N/A	14
Q2600-05	STOCK-PILE	N/A	2.36	100	Brown	Yellow	Medium	N/A	N/A	15
Q2600-09	END-OF-TRENCH	N/A	2.37	100	Brown	Yellow	Medium	N/A	N/A	16

WORKLIST(Hardcopy Internal Chain)

WorkList Name : PB168846 **WorkList ID :** 190726 **Department :** Digestion **Date :** 07-15-2025 09:46:30

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2580-02	WC-URBAN-FILL-B2	Solid	Metals ICP-RCRA	Cool 4 deg C	ENTA05	D41	07/10/2025	6010D
Q2586-01	TP-16	Solid	Metals ICP-TAL	Cool 4 deg C	PSEG03	D41	07/11/2025	6010D
Q2589-01	AU-6-071125	Solid	Metals ICP-TAL	Cool 4 deg C	PSEG05	D31	07/11/2025	6010D
Q2590-01	NB-7-071125	Solid	Metals ICP-TAL	Cool 4 deg C	PSEG05	D51	07/11/2025	6010D
Q2592-01	WC-SOIL-20250711	Solid	Metals ICP-Group1	Cool 4 deg C	PARS02	D51	07/11/2025	6010D
Q2595-01	CHRT-24849	Solid	Metals ICP-TAL	Cool 4 deg C	PSEG03	D41	07/14/2025	6010D
Q2597-01	CHRT-26899	Solid	Metals ICP-TAL	Cool 4 deg C	PSEG03	D31	07/14/2025	6010D
Q2598-01	OK-01-071425	Solid	Metals ICP-TAL	Cool 4 deg C	PSEG05	D41	07/14/2025	6010D
Q2600-01	TRENCH	Solid	Metals ICP-TAL	Cool 4 deg C	TACO01	D41	07/14/2025	6010D
Q2600-05	STOCK-PILE	Solid	Metals ICP-TAL	Cool 4 deg C	TACO01	D41	07/14/2025	6010D
Q2600-09	END-OF-TRENCH	Solid	Metals ICP-TAL	Cool 4 deg C	TACO01	D41	07/14/2025	6010D

07/14/2025 16:00

Date/Time ~~07/15/2025~~ ~~16:10~~

Raw Sample Received by: SB. McCoy

Raw Sample Relinquished by: CR Sm

07/15/2025 09:30

Date/Time ~~07/14/2025~~ ~~18:30~~

Raw Sample Received by: CR Sm

Raw Sample Relinquished by: SB McCoy

Alliance TECHNICAL GROUP

Soil/Sludge Mercury Preparation Sheet

PB168891

SOP ID : M7471B-Mercury-19

SDG No : NA

Matrix : SOIL

Pippete ID: HG A

Balance ID : M SC-3

Filter paper ID : NA

pH Strip ID : NA

Hood ID : #1

Block ID: 1. HG HOT BLOCK#3 2. N/A

Start Digest Date: 07/15/2025 **Time :** 15:40 **Temp :** 95 °C

End Digest Date: 07/15/2025 **Time :** 16:10 **Temp :** 95 °C

Digestion tube ID: M5595

Block thermometer ID: HG-DIG#3

Dig Technician Signature: MB

Supervisor Signature: JV

Temp : 1. 95°C 2. N/A

Standared Name	MLS USED	STD REF. # FROM LOG
ICV	30mL	MP86378
CCV	30mL	MP86380
CRA	30mL	MP86382
Blank Spike	0.48mL	MP86371
Matrix Spike	0.48mL	MP86371

Chemical Used	ML/SAMPLE USED	Lot Number
AQUA REGIA	1.5mL	MP86385
KMnO4 (5%)	4.5mL	MP85893
Hydroxylamine HCL (12%)	2.0mL	MP85895
PTFE Boiling Stones	----------	M5582
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

LAB SAMPLE ID	CLIENT SAMPLE ID	Wt(g)/Vol(ml)	Comment
0.0 ppb	S0	30mL	MP86372
0.05 ppb	S0.05	N/A	N/A
0.2 ppb	S0.2	30mL	MP86373
2.5 ppb	S2.5	30mL	MP86374
5.0 ppb	S5.0	30mL	MP86375
7.5 ppb	S7.5	30mL	MP86376
10.0 ppb	S10.0	30mL	MP86377
ICV	ICV	30mL	MP86378
ICB	ICB	30mL	MP86379
CCV	CCV	30mL	MP86380
CCB	CCB	30mL	MP86381
CRI	CRI	30mL	MP86382
CHK STD	CHK STD	30mL	MP86383

Extraction Conformance/Non-Conformance Comments:

N/A

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
7/15/25 @ 16:40	MB - Dig. Lab	MB - Metal Lab
	Preparation Group	**Analysis Group**

Alliance TECHNICAL GROUP

Soil/Sludge Mercury Preparation Sheet

PB168891

Lab Sample ID	Client Sample ID	Initial Weight (g)	Final Vol (ml)	pH	Comment	Prep Pos
PB168891BL	PBS891	0.56	35	NA	N/A	3-1
PB168891BS	LCS891	0.59	35	NA	MP86371	2
Q2586-01	TP-16	0.56	35	NA	N/A	3
Q2589-01	AU-06-071125	0.57	35	NA	N/A	4
Q2590-01	NB-7-071125	0.56	35	NA	N/A	5
Q2590-01DUP	NB-7-071125DUP	0.57	35	NA	N/A	6
Q2590-01MS	NB-7-071125MS	0.58	35	NA	MP86371	7
Q2590-01MSD	NB-7-071125MSD	0.56	35	NA	MP86371	8
Q2592-01	WC-SOIL-20250711	0.57	35	NA	N/A	9
Q2595-01	CHRT-24849	0.56	35	NA	N/A	10
Q2597-01	CHRT-26899	0.53	35	NA	N/A	11
Q2598-01	OK-01-071425	0.52	35	NA	N/A	12
Q2600-01	TRENCH	0.55	35	NA	N/A	13
Q2600-05	STOCK-PILE	0.56	35	NA	N/A	14
Q2600-09	END-OF-TRENCH	0.52	35	NA	N/A	15

WORKLIST(Hardcopy Internal Chain)

WorkList Name : 071525_7471 **WorkList ID :** 190731 **Department :** Digestion **Date :** 07-15-2025 11:31:58

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2592-01	WC-SOIL-20250711	Solid	Mercury	Cool 4 deg C	PARS02	D51	07/11/2025	7471B
Q2600-01	TRENCH	Solid	Mercury	Cool 4 deg C	TACO01	D41	07/14/2025	7471B
Q2600-05	STOCK-PILE	Solid	Mercury	Cool 4 deg C	TACO01	D41	07/14/2025	7471B
Q2600-09	END-OF-TRENCH	Solid	Mercury	Cool 4 deg C	TACO01	D41	07/14/2025	7471B
Q2586-01	TP-16	Solid	Mercury	Cool 4 deg C	TACO01	D41	07/14/2025	7471B
Q2595-01	CHRT-24849	Solid	Mercury	Cool 4 deg C	PSEG03	D41	07/11/2025	7471B
Q2597-01	CHRT-26899	Solid	Mercury	Cool 4 deg C	PSEG03	D41	07/14/2025	7471B
Q2589-01	AU-06-071125	Solid	Mercury	Cool 4 deg C	PSEG03	D31	07/14/2025	7471B
Q2590-01	NB-7-071125	Solid	Mercury	Cool 4 deg C	PSEG05	D31	07/11/2025	7471B
Q2598-01	OK-01-071425	Solid	Mercury	Cool 4 deg C	PSEG05	D51	07/11/2025	7471B
					PSEG05	D41	07/14/2025	7471B

Date/Time 7/15/25 @ 15:15

Raw Sample Received by: MB - DIG. LAB

Raw Sample Relinquished by: MB - DIG. LAB

Date/Time 7/15/25 @ 15:30

Raw Sample Received by: MB - DIG. LAB

Raw Sample Relinquished by: MB - DIG. LAB

PERCENT SOLID

Supervisor: Iwona
Analyst: jignesh
Date: 7/15/2025

OVENTEMP IN Celsius(°C): 108
Time IN: 17:25
In Date: 07/14/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 104
Time OUT: 08:25
Out Date: 07/15/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % solids-oven

QC: LB136466

Lab ID	Client SampleID	Dish #	Dish Wt(g) (A)	Sample Wt(g)	Dish + Sample Wt(g) (B)	Dish+Dry Sample Wt(g) (C)	% Solid	Comments
Q2595-01	CHRT-24849	1	1.14	10.85	11.99	6.00	44.8	GEL Matrix
Q2595-02	CHRT-24849-E2	2	1.18	10.69	11.87	3.99	26.3	GEL Matrix
Q2597-01	CHRT-26899	3	1.18	10.21	11.39	11.25	98.6	
Q2597-02	CHRT-26899-E2	4	1.19	10.48	11.67	11.55	98.9	
Q2598-01	OK-01-071425	5	1.14	10.30	11.44	11.11	96.8	
Q2598-02	OK-01-071425-E2	6	1.17	10.23	11.4	11.02	96.3	
Q2599-01	A1	7	1.00	1.00	2.00	2.00	100.0	WIPE SAMPLE
Q2599-02	A2	8	1.00	1.00	2.00	2.00	100.0	WIPE SAMPLE
Q2599-03	B1	9	1.00	1.00	2.00	2.00	100.0	WIPE SAMPLE
Q2600-01	TRENCH	10	1.12	10.41	11.53	8.98	75.5	
Q2600-03	TRENCH	11	1.19	10.80	11.99	9.85	80.2	
Q2600-05	STOCK-PILE	12	1.13	10.53	11.66	9.78	82.1	
Q2600-07	STOCK-PILE	13	1.15	10.84	11.99	10.22	83.7	
Q2600-09	END-OF-TRENCH	14	1.15	10.49	11.64	10.09	85.2	
Q2600-11	END-OF-TRENCH	15	1.17	10.62	11.79	10.18	84.8	
Q2601-01	7-14-25-1	16	1.00	1.00	2.00	2.00	100.0	WIPE SAMPLE
Q2601-02	7-14-25-2	17	1.00	1.00	2.00	2.00	100.0	WIPE SAMPLE
Q2601-03	7-14-25-3	18	1.00	1.00	2.00	2.00	100.0	WIPE SAMPLE
Q2601-04	7-14-25-4	19	1.00	1.00	2.00	2.00	100.0	WIPE SAMPLE
Q2601-05	7-14-25-5	20	1.00	1.00	2.00	2.00	100.0	WIPE SAMPLE
Q2601-06	7-14-25-6	21	1.00	1.00	2.00	2.00	100.0	WIPE SAMPLE
Q2601-07	7-14-25-7	22	1.00	1.00	2.00	2.00	100.0	WIPE SAMPLE
Q2601-08	7-14-25-8	23	1.00	1.00	2.00	2.00	100.0	WIPE SAMPLE
Q2601-09	7-14-25-9	24	1.00	1.00	2.00	2.00	100.0	WIPE SAMPLE
Q2601-10	7-14-25-10	25	1.00	1.00	2.00	2.00	100.0	WIPE SAMPLE
Q2601-11	7-14-25-11	26	1.00	1.00	2.00	2.00	100.0	WIPE SAMPLE
Q2601-12	7-14-25-12	27	1.00	1.00	2.00	2.00	100.0	WIPE SAMPLE
Q2601-13	7-14-25-13	28	1.00	1.00	2.00	2.00	100.0	WIPE SAMPLE

PERCENT SOLID

Supervisor: Iwona
Analyst: jignesh
Date: 7/15/2025

OVENTEMP IN Celsius(°C): 108
Time IN: 17:25
In Date: 07/14/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 104
Time OUT: 08:25
Out Date: 07/15/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % solids-oven

QC: LB136466

Lab ID	Client SampleID	Dish #	Dish Wt(g) (A)	Sample Wt(g)	Dish + Sample Wt(g) (B)	Dish+Dry Sample Wt(g) (C)	% Solid	Comments
Q2601-14	7-14-25-14	29	1.00	1.00	2.00	2.00	100.0	WIPE SAMPLE
Q2601-15	7-14-25-15	30	1.00	1.00	2.00	2.00	100.0	WIPE SAMPLE

$$\% \text{ Solid} = \frac{(C-A) * 100}{(B-A)}$$

WORKLIST(Hardcopy Internal Chain)

136466

WorkList Name : %1-071425 **WorkList ID :** 190685 **Department :** Wet-Chemistry **Date :** 07-14-2025 07:38:22

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2600-01	TRENCH	Solid	Percent Solids	Cool 4 deg C	TACO01	D41	07/14/2025	Chemtech -SO
Q2600-03	TRENCH	Solid	Percent Solids	Cool 4 deg C	TACO01	D41	07/14/2025	Chemtech -SO
Q2600-05	STOCK-PILE	Solid	Percent Solids	Cool 4 deg C	TACO01	D41	07/14/2025	Chemtech -SO
Q2600-07	STOCK-PILE	Solid	Percent Solids	Cool 4 deg C	TACO01	D41	07/14/2025	Chemtech -SO
Q2600-09	END-OF-TRENCH	Solid	Percent Solids	Cool 4 deg C	TACO01	D41	07/14/2025	Chemtech -SO
Q2600-11	END-OF-TRENCH	Solid	Percent Solids	Cool 4 deg C	TACO01	D41	07/14/2025	Chemtech -SO
Q2595-01	CHRT-24849	Solid	Percent Solids	Cool 4 deg C	PSEG03	D41	07/14/2025	Chemtech -SO
Q2595-02	CHRT-24849-E2	Solid	Percent Solids	Cool 4 deg C	PSEG03	D41	07/14/2025	Chemtech -SO
Q2597-01	CHRT-26899	Solid	Percent Solids	Cool 4 deg C	PSEG03	D31	07/14/2025	Chemtech -SO
Q2597-02	CHRT-26899-E2	Solid	Percent Solids	Cool 4 deg C	PSEG03	D31	07/14/2025	Chemtech -SO
Q2599-01	A1	Solid	Percent Solids	Cool 4 deg C	PSEG03	D41	07/14/2025	Chemtech -SO
Q2599-02	A2	Solid	Percent Solids	Cool 4 deg C	PSEG03	D41	07/14/2025	Chemtech -SO
Q2601-12	7-14-25-12	Solid	Percent Solids	Cool 4 deg C	PSEG03	D31	07/14/2025	Chemtech -SO
Q2601-13	7-14-25-13	Solid	Percent Solids	Cool 4 deg C	PSEG03	D31	07/14/2025	Chemtech -SO
Q2601-14	7-14-25-14	Solid	Percent Solids	Cool 4 deg C	PSEG03	D31	07/14/2025	Chemtech -SO
Q2601-15	7-14-25-15	Solid	Percent Solids	Cool 4 deg C	PSEG03	D31	07/14/2025	Chemtech -SO
Q2601-06	7-14-25-6	Solid	Percent Solids	Cool 4 deg C	PSEG03	D31	07/14/2025	Chemtech -SO
Q2601-07	7-14-25-7	Solid	Percent Solids	Cool 4 deg C	PSEG03	D31	07/14/2025	Chemtech -SO
Q2601-08	7-14-25-8	Solid	Percent Solids	Cool 4 deg C	PSEG03	D31	07/14/2025	Chemtech -SO
Q2601-09	7-14-25-9	Solid	Percent Solids	Cool 4 deg C	PSEG03	D31	07/14/2025	Chemtech -SO
Q2601-10	7-14-25-10	Solid	Percent Solids	Cool 4 deg C	PSEG03	D31	07/14/2025	Chemtech -SO

Date/Time 07/14/25 15:15

Raw Sample Received by: JB (WC)

Raw Sample Relinquished by: CP

Date/Time 07/14/25 14:30

Raw Sample Received by: CP

Raw Sample Relinquished by: JB (WC)

WORKLIST(Hardcopy Internal Chain)

WR 136466

WorkList Name : %1-071425 **WorkList ID :** 190685 **Department :** Wet-Chemistry **Date :** 07-14-2025 07:38:22

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2601-11	7-14-25-11	Solid	Percent Solids	Cool 4 deg C	PSEG03	D31	07/14/2025	Chemtech -SO
Q2599-03	B1	Solid	Percent Solids	Cool 4 deg C	PSEG03	D41	07/14/2025	Chemtech -SO
Q2601-01	7-14-25-1	Solid	Percent Solids	Cool 4 deg C	PSEG03	D31	07/14/2025	Chemtech -SO
Q2601-02	7-14-25-2	Solid	Percent Solids	Cool 4 deg C	PSEG03	D31	07/14/2025	Chemtech -SO
Q2601-03	7-14-25-3	Solid	Percent Solids	Cool 4 deg C	PSEG03	D31	07/14/2025	Chemtech -SO
Q2601-04	7-14-25-4	Solid	Percent Solids	Cool 4 deg C	PSEG03	D31	07/14/2025	Chemtech -SO
Q2601-05	7-14-25-5	Solid	Percent Solids	Cool 4 deg C	PSEG03	D31	07/14/2025	Chemtech -SO
Q2598-01	OK-01-071425	Solid	Percent Solids	Cool 4 deg C	PSEG05	D41	07/14/2025	Chemtech -SO
Q2598-02	OK-01-071425-E2	Solid	Percent Solids	Cool 4 deg C	PSEG05	D41	07/14/2025	Chemtech -SO

Date/Time 07/14/25 15:15

Raw Sample Received by: JB WDC

Raw Sample Relinquished by:

Date/Time 07/14/25 17:30

Raw Sample Received by:

Raw Sample Relinquished by: JB WDC

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

Instrument ID: CV1

Daily Analysis Runlog For Sequence/QCBatch ID # LB136499

Review By	MOHAN	Review On	7/17/2025 1:41:11 PM
Supervise By	jaswal	Supervise On	7/17/2025 10:49:54 PM

STD. NAME	STD REF.#
ICAL Standard	MP86372,MP86373,MP86374,MP86375,MP86376,MP86377
ICV Standard	MP86378
CCV Standard	MP86380
ICSA Standard	
CRI Standard	MP86382
LCS Standard	
Chk Standard	MP86379,MP86381,MP86383,MP86401

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	07/16/25 11:42		MOHAN	OK
2	S0.2	S0.2	CAL2	07/16/25 11:44		MOHAN	OK
3	S2.5	S2.5	CAL3	07/16/25 11:46		MOHAN	OK
4	S5	S5	CAL4	07/16/25 11:49		MOHAN	OK
5	S7.5	S7.5	CAL5	07/16/25 11:51		MOHAN	OK
6	S10	S10	CAL6	07/16/25 11:53		MOHAN	OK
7	ICV29	ICV29	ICV	07/16/25 11:56		MOHAN	OK
8	ICB29	ICB29	ICB	07/16/25 11:59		MOHAN	OK
9	CCV09	CCV09	CCV	07/16/25 12:01		MOHAN	OK
10	CCB09	CCB09	CCB	07/16/25 12:03		MOHAN	OK
11	CRA	CRA	CRDL	07/16/25 12:06		MOHAN	OK
12	HighStd	HighStd	HIGH STD	07/16/25 12:08		MOHAN	OK
13	ChkStd	ChkStd	SAM	07/16/25 12:10		MOHAN	OK
14	PB168891BL	PB168891BL	MB	07/16/25 12:12		MOHAN	OK
15	PB168891BS	PB168891BS	LCS	07/16/25 12:19		MOHAN	OK
16	Q2586-01	TP-16	SAM	07/16/25 12:22		MOHAN	OK
17	Q2589-01	AU-06-071125	SAM	07/16/25 12:24		MOHAN	OK
18	Q2590-01	NB-07-071125	SAM	07/16/25 12:31		MOHAN	OK

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

Instrument ID: CV1

Daily Analysis Runlog For Sequence/QCBatch ID # LB136499

Review By	MOHAN	Review On	7/17/2025 1:41:11 PM
Supervise By	jaswal	Supervise On	7/17/2025 10:49:54 PM

STD. NAME	STD REF.#
ICAL Standard	MP86372,MP86373,MP86374,MP86375,MP86376,MP86377
ICV Standard	MP86378
CCV Standard	MP86380
ICSA Standard	
CRI Standard	MP86382
LCS Standard	
Chk Standard	MP86379,MP86381,MP86383,MP86401

19	Q2590-01DUP	NB-07-071125	DUP	07/16/25 12:34		MOHAN	OK
20	Q2590-01MS	NB-07-071125MS	MS	07/16/25 12:36		MOHAN	OK
21	CCV10	CCV10	CCV	07/16/25 12:38		MOHAN	OK
22	CCB10	CCB10	CCB	07/16/25 12:43		MOHAN	OK
23	Q2590-01MSD	NB-07-071125MSD	MSD	07/16/25 12:45		MOHAN	OK
24	Q2592-01	WC-SOIL-20250711	SAM	07/16/25 12:48		MOHAN	OK
25	Q2595-01	CHRT-24849	SAM	07/16/25 12:50		MOHAN	OK
26	Q2597-01	CHRT-26899	SAM	07/16/25 12:52		MOHAN	OK
27	Q2598-01	OK-01-071425	SAM	07/16/25 12:55		MOHAN	OK
28	Q2600-01	TRENCH	SAM	07/16/25 12:57		MOHAN	OK
29	Q2600-05	STOCK-PILE	SAM	07/16/25 12:59		MOHAN	OK
30	Q2600-09	END-OF-TRENCH	SAM	07/16/25 13:02		MOHAN	OK
31	PB168892BL	PB168892BL	MB	07/16/25 13:04		MOHAN	OK
32	PB168892BS	PB168892BS	LCS	07/16/25 13:09		MOHAN	OK
33	CCV11	CCV11	CCV	07/16/25 13:12		MOHAN	OK
34	CCB11	CCB11	CCB	07/16/25 13:14		MOHAN	OK
35	Q2487-09	G4(0-6)	SAM	07/16/25 13:16		MOHAN	OK
36	Q2487-10	G4(6-12)	SAM	07/16/25 13:18		MOHAN	OK
37	Q2487-11	G3(0-6)	SAM	07/16/25 13:21		MOHAN	OK
38	Q2487-12	G3(6-12)	SAM	07/16/25 13:23		MOHAN	OK

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Instrument ID: CV1

Daily Analysis Runlog For Sequence/QCBatch ID # LB136499

Review By	MOHAN	Review On	7/17/2025 1:41:11 PM
Supervise By	jaswal	Supervise On	7/17/2025 10:49:54 PM

STD. NAME	STD REF.#
ICAL Standard	MP86372,MP86373,MP86374,MP86375,MP86376,MP86377
ICV Standard	MP86378
CCV Standard	MP86380
ICSA Standard	
CRI Standard	MP86382
LCS Standard	
Chk Standard	MP86379,MP86381,MP86383,MP86401

39	Q2487-13	G2(0-6)	SAM	07/16/25 13:26		MOHAN	OK
40	Q2487-14	G2(6-12)	SAM	07/16/25 13:28		MOHAN	OK
41	Q2487-15	G1(0-6)	SAM	07/16/25 13:30		MOHAN	OK
42	Q2487-16	G1(6-12)	SAM	07/16/25 13:33		MOHAN	OK
43	Q2487-16DUP	G1(6-12)DUP	DUP	07/16/25 13:35		MOHAN	OK
44	Q2487-16MS	G1(6-12)MS	MS	07/16/25 13:37		MOHAN	OK
45	CCV12	CCV12	CCV	07/16/25 13:40		MOHAN	OK
46	CCB12	CCB12	CCB	07/16/25 13:42		MOHAN	OK
47	Q2487-16MSD	G1(6-12)MSD	MSD	07/16/25 13:45		MOHAN	OK
48	Q2514-01	TP-92	SAM	07/16/25 13:47		MOHAN	OK
49	Q2514-02	TP-93	SAM	07/16/25 13:49		MOHAN	OK
50	Q2514-03	TP-94	SAM	07/16/25 13:51		MOHAN	OK
51	Q2514-04	TP-96	SAM	07/16/25 13:54		MOHAN	OK
52	Q2514-05	TP-97	SAM	07/16/25 13:56		MOHAN	OK
53	Q2514-06	TP-103	SAM	07/16/25 13:58		MOHAN	OK
54	Q2514-07	TP-36	SAM	07/16/25 14:01		MOHAN	OK
55	Q2514-08	TP-78	SAM	07/16/25 14:03		MOHAN	OK
56	Q2514-09	TP-81	SAM	07/16/25 14:05		MOHAN	OK
57	CCV13	CCV13	CCV	07/16/25 14:07		MOHAN	OK
58	CCB13	CCB13	CCB	07/16/25 14:10		MOHAN	OK

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Instrument ID: CV1

Daily Analysis Runlog For Sequence/QCBatch ID # LB136499

Review By	MOHAN	Review On	7/17/2025 1:41:11 PM
Supervise By	jaswal	Supervise On	7/17/2025 10:49:54 PM

STD. NAME	STD REF.#
ICAL Standard	MP86372,MP86373,MP86374,MP86375,MP86376,MP86377
ICV Standard	MP86378
CCV Standard	MP86380
ICSA Standard	
CRI Standard	MP86382
LCS Standard	
Chk Standard	MP86379,MP86381,MP86383,MP86401

59	Q2514-10	TP-90	SAM	07/16/25 14:12		MOHAN	OK
60	Q2590-01L	NB-07-071125	SD	07/16/25 14:14		MOHAN	OK
61	Q2590-01A	NB-07-071125	PS	07/16/25 14:17		MOHAN	OK
62	Q2487-16L	G1(6-12)L	SD	07/16/25 14:19		MOHAN	OK
63	Q2487-16A	G1(6-12)A	PS	07/16/25 14:21		MOHAN	OK
64	CCV14	CCV14	CCV	07/16/25 14:25		MOHAN	OK
65	CCB14	CCB14	CCB	07/16/25 14:28		MOHAN	OK

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Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB136534

Review By	Janvi	Review On	7/18/2025 9:36:01 AM
Supervise By	MOHAN	Supervise On	7/18/2025 9:42:49 AM

STD. NAME	STD REF.#
ICAL Standard	MP86192,MP86193,MP86194,MP86195,MP86196,MP86212
ICV Standard	MP86219
CCV Standard	MP86216
ICSA Standard	MP86214,MP86220
CRI Standard	MP86212
LCS Standard	
Chk Standard	MP86217,MP86218

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	07/17/25 13:23		Janvi	OK
2	S1	S1	CAL2	07/17/25 13:28		Janvi	OK
3	S2	S2	CAL3	07/17/25 13:33		Janvi	OK
4	S3	S3	CAL4	07/17/25 13:38		Janvi	OK
5	S4	S4	CAL5	07/17/25 13:43		Janvi	OK
6	S5	S5	CAL6	07/17/25 13:48		Janvi	OK
7	ICV01	ICV01	ICV	07/17/25 14:14		Janvi	OK
8	LLICV01	LLICV01	LLICV	07/17/25 14:24		Janvi	OK
9	ICB01	ICB01	ICB	07/17/25 14:29		Janvi	OK
10	CRI01	CRI01	CRDL	07/17/25 14:39		Janvi	OK
11	ICSA01	ICSA01	ICSA	07/17/25 14:46		Janvi	OK
12	ICSAB01	ICSAB01	ICSAB	07/17/25 14:51		Janvi	OK
13	CCV01	CCV01	CCV	07/17/25 14:56		Janvi	OK
14	CCB01	CCB01	CCB	07/17/25 15:01		Janvi	OK
15	Q2515-01	WC-1	SAM	07/17/25 15:09		Janvi	OK
16	Q2515-01DUP	WC-1DUP	DUP	07/17/25 15:14		Janvi	OK
17	Q2515-01LRE	WC-1L	SD	07/17/25 15:19	NOT USE	Janvi	Not Ok
18	Q2515-01MS	WC-1MS	MS	07/17/25 15:24		Janvi	OK

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Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB136534

Review By	Janvi	Review On	7/18/2025 9:36:01 AM
Supervise By	MOHAN	Supervise On	7/18/2025 9:42:49 AM

STD. NAME	STD REF.#
ICAL Standard	MP86192,MP86193,MP86194,MP86195,MP86196,MP86212
ICV Standard	MP86219
CCV Standard	MP86216
ICSA Standard	MP86214,MP86220
CRI Standard	MP86212
LCS Standard	
Chk Standard	MP86217,MP86218

19	Q2515-01MSD	WC-1MSD	MSD	07/17/25 15:29		Janvi	OK
20	Q2515-01A	WC-1A	PS	07/17/25 15:34	0.1ml of M6004,M6013 in 10ml sample.	Janvi	OK
21	Q2515-01L	WC-1L	SD	07/17/25 15:39		Janvi	OK
22	CCV02	CCV02	CCV	07/17/25 15:44		Janvi	OK
23	CCB02	CCB02	CCB	07/17/25 15:49		Janvi	OK
24	Q2565-01	MOO-25-0192-0193	SAM	07/17/25 16:27	K Oversaturated	Janvi	Dilution
25	Q2598-01	OK-01-071425	SAM	07/17/25 16:32		Janvi	OK
26	Q2600-01	TRENCH	SAM	07/17/25 16:37		Janvi	OK
27	Q2600-05	STOCK-PILE	SAM	07/17/25 16:42		Janvi	OK
28	Q2600-09	END-OF-TRENCH	SAM	07/17/25 16:47		Janvi	OK
29	Q2602-01	FRAC-TANK-266380	SAM	07/17/25 16:52		Janvi	OK
30	Q2602-01DUP	FRAC-TANK-266380D	DUP	07/17/25 16:57		Janvi	OK
31	Q2602-01L	FRAC-TANK-266380L	SD	07/17/25 17:02		Janvi	OK
32	Q2602-01MS	FRAC-TANK-266380M	MS	07/17/25 17:08		Janvi	OK
33	Q2602-01MSD	FRAC-TANK-266380M	MSD	07/17/25 17:13		Janvi	OK
34	CCV03	CCV03	CCV	07/17/25 17:18		Janvi	OK
35	CCB03	CCB03	CCB	07/17/25 17:36		Janvi	OK
36	Q2602-01A	FRAC-TANK-266380A	PS	07/17/25 17:41	0.1ml of M6004,M6013 in 10ml sample.	Janvi	OK
37	Q2586-01	TP-16	SAM	07/17/25 17:46		Janvi	OK

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Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB136534

Review By	Janvi	Review On	7/18/2025 9:36:01 AM
Supervise By	MOHAN	Supervise On	7/18/2025 9:42:49 AM

STD. NAME	STD REF.#
ICAL Standard	MP86192,MP86193,MP86194,MP86195,MP86196,MP86212
ICV Standard	MP86219
CCV Standard	MP86216
ICSA Standard	MP86214,MP86220
CRI Standard	MP86212
LCS Standard	
Chk Standard	MP86217,MP86218

38	Q2589-01	AU-06-071125	SAM	07/17/25 17:51		Janvi	OK
39	Q2590-01RE	NB-07-071125RE	SAM	07/17/25 18:01	NOT USE	Janvi	Not Ok
40	Q2592-01	WC-SOIL-20250711	SAM	07/17/25 18:06		Janvi	OK
41	Q2565-01DL	MOO-25-0192-0193D	SAM	07/17/25 18:12	NOT USE	Janvi	Not Ok
42	Q2565-01DL2	MOO-25-0192-0193D	SAM	07/17/25 18:19	NOT USE	Janvi	Not Ok
43	Q2565-01DL3	MOO-25-0192-0193D	SAM	07/17/25 18:29	NOT USE	Janvi	Not Ok
44	Q2565-01DL4	MOO-25-0192-0193D	SAM	07/17/25 18:35	40x for K	Janvi	Confirms
45	Q2590-01A	NB-07-071125A	PS	07/17/25 18:40	0.1ml of M6004,M6013 in 10ml sample.	Janvi	OK
46	CCV04	CCV04	CCV	07/17/25 18:45		Janvi	OK
47	CCB04	CCB04	CCB	07/17/25 18:50		Janvi	OK
48	PB168846BL	PB168846BL	MB	07/17/25 18:58		Janvi	OK
49	PB168846BS	PB168846BS	LCS	07/17/25 19:16		Janvi	OK
50	PB168859BS	PB168859BS	LCS	07/17/25 19:25		Janvi	OK
51	PB168859BL	PB168859BL	MB	07/17/25 19:30		Janvi	OK
52	Q2590-01	NB-07-071125	SAM	07/17/25 19:35		Janvi	OK
53	Q2590-01DUP	NB-07-071125DUP	DUP	07/17/25 19:41		Janvi	OK
54	Q2590-01MS	NB-07-071125MS	MS	07/17/25 19:51		Janvi	OK
55	Q2590-01MSD	NB-07-071125MSD	MSD	07/17/25 19:56		Janvi	OK
56	Q2590-01L	NB-07-071125L	SD	07/17/25 20:01		Janvi	OK

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

Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB136534

Review By	Janvi	Review On	7/18/2025 9:36:01 AM
Supervise By	MOHAN	Supervise On	7/18/2025 9:42:49 AM

STD. NAME	STD REF.#
ICAL Standard	MP86192,MP86193,MP86194,MP86195,MP86196,MP86212
ICV Standard	MP86219
CCV Standard	MP86216
ICSA Standard	MP86214,MP86220
CRI Standard	MP86212
LCS Standard	
Chk Standard	MP86217,MP86218

57	Q2557-02	OILY WATER	SAM	07/17/25 20:06		Janvi	OK
58	CCV05	CCV05	CCV	07/17/25 20:11		Janvi	OK
59	CCB05	CCB05	CCB	07/17/25 20:16		Janvi	OK
60	Q2557-02DUP	OILY WATERDUP	DUP	07/17/25 20:21		Janvi	OK
61	Q2557-02L	OILY WATERL	SD	07/17/25 20:26		Janvi	OK
62	Q2557-02MS	OILY WATERMS	MS	07/17/25 20:31		Janvi	OK
63	Q2557-02MSD	OILY WATERMSD	MSD	07/17/25 20:36		Janvi	OK
64	Q2557-02A	OILY WATERA	PS	07/17/25 20:41		Janvi	OK
65	CCV06	CCV06	CCV	07/17/25 20:46		Janvi	OK
66	CCB06	CCB06	CCB	07/17/25 20:51		Janvi	OK

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

Prep Standard - Chemical Standard Summary

Order ID : Q2600

Test : Mercury,Metals ICP-TAL

Prepbatch ID : PB168846,PB168891,

Sequence ID/Qc Batch ID: LB136499,LB136534,LB136534,LB136534,

Standard ID :
MP85156,MP85893,MP85895,MP86192,MP86193,MP86194,MP86195,MP86196,MP86211,MP86212,MP86214,MP86216,MP86217,MP86218,MP86219,MP86220,MP86371,MP86372,MP86373,MP86374,MP86375,MP86376,MP86377,MP86378,MP86379,MP86380,MP86381,MP86382,MP86383,MP86385,MP86401,

Chemical ID :
M4371,M4916,M5062,M5467,M5470,M5471,M5499,M5581,M5582,M5658,M5747,M5748,M5751,M5798,M5799,M5800,M5801,M5811,M5814,M5816,M5820,M5882,M5884,M5942,M5962,M5970,M5984,M5985,M5996,M5997,M6007,M6015,M6021,M6023,M6028,M6030,M6032,M6058,M6076,M6127,M6128,M6137,M6142,M6144,M6145,M6146,M6151,M6152,M6155,M6158,M6159,M6161,M6162,M6163,M6164,M6165,M6170,W3112,

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
170	1:1HCL	MP85156	04/07/2025	08/18/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 04/07/2025

FROM 1250.00000ml of M6151 + 1250.00000ml of W3112 = Final Quantity: 2500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
65	POTASSIUM PERMANGANATE SOLUTION 5 %	MP85893	06/05/2025	12/05/2025	Mohan Bera	METALS_SCALE_3 (M SC-3)	None	Sarabjit Jaswal 06/14/2025

FROM 100.00000gram of M4916 + 2000.00000ml of W3112 = Final Quantity: 2000.000 ml

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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	MP85895	06/05/2025	08/08/2025	Mohan Bera	METALS_SCALE_3 (M SC-3)	None	Sarabjit Jaswal 06/14/2025

FROM 2000.00000ml of W3112 + 240.00000gram of M4371 + 240.00000gram of M5884 = Final Quantity: 2000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
902	ICP AES CAL BLK (SO/ICB/CCB)	MP86192	06/25/2025	07/18/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 07/03/2025

FROM 125.00000ml of M6151 + 2350.00000ml of W3112 + 25.00000ml of M6162 = Final Quantity: 2500.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
907	ICP AES STD S (S5)	MP86193	06/25/2025	07/18/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 07/03/2025

FROM 5.00000ml of M5467 + 5.00000ml of M5470 + 5.00000ml of M5816 + 5.00000ml of M5820 + 5.00000ml of M5970 + 5.00000ml of M5996 + 5.00000ml of M5997 + 5.00000ml of M6076 + 5.00000ml of M6146 + 455.00000ml of MP86192 = Final Quantity: 500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
910	ICP AES STD S4	MP86194	06/25/2025	07/18/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 07/03/2025

FROM 50.00000ml of MP86192 + 50.00000ml of MP86193 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
909	ICP AES STD S3	MP86195	06/25/2025	07/18/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 07/03/2025

FROM 25.00000ml of MP86193 + 75.00000ml of MP86192 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3913	ICP AES STD S2	MP86196	06/25/2025	07/18/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 07/03/2025

FROM 16.00000ml of MP86193 + 184.00000ml of MP86192 = Final Quantity: 200.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2950	ICP AES S1/CRI STOCK STD	MP86211	06/25/2025	07/18/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 07/03/2025

FROM 0.03000ml of M5798 + 0.03000ml of M6028 + 0.04000ml of M6137 + 0.05000ml of M5658 + 0.05000ml of M5811 + 0.05000ml of M6030 + 0.05000ml of M6159 + 0.06000ml of M5747 + 0.10000ml of M5471 + 0.10000ml of M5751 + 0.10000ml of M5801 + 0.10000ml of M5820 + 0.10000ml of M5962 + 0.10000ml of M5970 + 0.10000ml of M6128 + 0.15000ml of M5800 + 0.20000ml of M5748 + 0.20000ml of M5799 + 0.20000ml of M6021 + 0.20000ml of M6023 + 0.20000ml of M6145 + 0.25000ml of M5467 + 0.25000ml of M6146 + 0.50000ml of M5814 + 0.50000ml of M6032 + 1.00000ml of M5499 + 1.00000ml of M5942 + 1.00000ml of M6127 + 1.00000ml of M6142 + 1.00000ml of M6144 + 2.00000ml of M5816 + 89.29000ml of MP86192 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2951	ICP AES S1/CRI WORK STD	MP86212	06/25/2025	07/18/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 07/03/2025

FROM 2.00000ml of MP86211 + 98.00000ml of MP86192 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
904	ICP AES ICSA SOLN	MP86214	06/25/2025	07/18/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 07/03/2025

FROM 10.00000ml of M6152 + 80.00000ml of MP86192 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
911	ICP AES CCV SOLN	MP86216	06/25/2025	07/18/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 07/03/2025

FROM 50.00000ml of MP86192 + 50.00000ml of MP86193 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
919	ICP AES INTERNAL STD	MP86217	06/25/2025	07/18/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 07/03/2025

FROM 1.00000ml of M5984 + 10.00000ml of M5985 + 1969.00000ml of W3112 + 20.00000ml of M6162 = Final Quantity: 2000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
903	ICP AES RINSE SOLN	MP86218	06/25/2025	07/18/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 07/03/2025

FROM 200.00000ml of M6162 + 9800.00000ml of W3112 = Final Quantity: 10000.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
4163	NEW ICV-060925	MP86219	06/25/2025	07/18/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 07/03/2025

FROM 0.20000ml of M6058 + 0.20000ml of M6163 + 0.20000ml of M6164 + 0.20000ml of M6165 + 49.20000ml of MP86192 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3494	ICP AES ICSAB SOLN-1	MP86220	06/25/2025	07/18/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 07/03/2025

FROM 0.10000ml of M6076 + 10.00000ml of M6152 + 10.00000ml of M6155 + 79.90000ml of MP86192 = 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
871	MERCURY INTERMEDIATE B 250PPB WORKING STD.	MP86371	07/15/2025	07/16/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 07/16/2025

FROM 1.00000ml of M6162 + 2.50000ml of M5062 + 96.50000ml of W3112 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1340	Hg 0.00 PPB STD	MP86372	07/15/2025	07/16/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 07/16/2025

FROM 2.50000ml of M6162 + 247.50000ml of W3112 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1341	Hg 0.2 PPB STD	MP86373	07/15/2025	07/16/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 07/16/2025

FROM 2.50000ml of M6162 + 247.30000ml of W3112 + 0.20000ml of MP86371 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1342	Hg 2.5 PPB STD	MP86374	07/15/2025	07/16/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 07/16/2025

FROM 2.50000ml of M6162 + 245.00000ml of W3112 + 2.50000ml of MP86371 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1343	Hg 5.0 PPB STD	MP86375	07/15/2025	07/16/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 07/16/2025

FROM 2.50000ml of M6162 + 242.50000ml of W3112 + 5.00000ml of MP86371 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1344	Hg 7.5 PPB STD	MP86376	07/15/2025	07/16/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 07/16/2025

FROM 2.50000ml of M6162 + 240.00000ml of W3112 + 7.50000ml of MP86371 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1345	Hg 10.0 PPB STD	MP86377	07/15/2025	07/16/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 07/16/2025

FROM 2.50000ml of M6162 + 237.50000ml of W3112 + 10.00000ml of MP86371 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1346	Hg ICV SOLUTION	MP86378	07/15/2025	07/16/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 07/16/2025

FROM 2.50000ml of M6161 + 2.50000ml of M6162 + 245.00000ml of W3112 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1351	ICB (Hg 0.00 PPB SOLUTION)	MP86379	07/15/2025	07/16/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 07/16/2025

FROM 2.50000ml of M6162 + 247.50000ml of W3112 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1358	CCV (Hg 5.0 PPB SOLUTION)	MP86380	07/15/2025	07/16/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 07/16/2025

FROM 485.00000ml of W3112 + 5.00000ml of M6162 + 10.00000ml of MP86371 = Final Quantity: 500.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1352	CCB (Hg 0.00 PPB SOLUTION)	MP86381	07/15/2025	07/16/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 07/16/2025

FROM 495.00000ml of W3112 + 5.00000ml of M6162 = Final Quantity: 500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1349	CRA/CRI (Hg 0.2 PPB SOLUTION)	MP86382	07/15/2025	07/16/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 07/16/2025

FROM 2.50000ml of M6162 + 247.30000ml of W3112 + 0.20000ml of MP86371 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1350	CHK STD (Hg 7.0 PPB SOLUTION)	MP86383	07/15/2025	07/16/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 07/16/2025

FROM 2.50000ml of M6162 + 240.50000ml of W3112 + 7.00000ml of MP86371 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
68	STANNOUS CHLORIDE SOLUTION	MP86385	07/15/2025	07/16/2025	Mohan Bera	METALS_SCALE_3 (M SC-3)	None	Sarabjit Jaswal 07/16/2025

FROM 450.00000ml of W3112 + 50.00000gram of M5882 + 50.00000ml of M6151 = 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
68	STANNOUS CHLORIDE SOLUTION	MP86401	07/16/2025	07/17/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 07/16/2025

FROM 450.00000ml of W3112 + 50.00000gram of M5882 + 50.00000ml of M6151 = Final Quantity: 500.000 ml

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-2196-01 / Hydroxylamine Hydrochloride, Crystal (cs/4x500g)	0000215387	06/25/2025	07/01/2019 / RICHARD	06/07/2019 / RICHARD	M4371

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.	57038 / Sr, 1000 PPM, 125 ml	082922	08/29/2025	04/14/2025 / jaswal	03/16/2023 / jaswal	M5470

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57038 / Sr, 1000 PPM, 125 ml	082922	08/29/2025	04/14/2025 / jaswal	03/16/2023 / jaswal	M5471

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58120 / Ca, 10000 PPM, 500 ml	031523	03/15/2026	04/17/2025 / Janvi	03/17/2023 / bin	M5499

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	26397-103 / PTFE BOILING STONES	W126678	03/20/2026	03/20/2025 /	06/12/2023 / jaswal	M5581

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	26397-103 / PTFE BOILING STONES	W126678	12/31/2025	06/17/2023 / Al-Terek	06/12/2023 / jaswal	M5582

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58024 / Chromium, Cr, 500 ml, 1000 PPM	060523	06/05/2026	08/28/2023 / jaswal	08/25/2023 / jaswal	M5658

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	/ Lead (Pb) 1000PPM	100923	10/09/2026	05/20/2024 / Jaswal	12/20/2023 / jaswal	M5747

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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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58029 / Cu, 1000 PPM, 500 ml	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.	58126 / Fe, 10000 PPM, 500 ml	051523	05/15/2026	02/06/2025 / kareem	01/03/2024 / jaswal	M5811

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57005 / B, 1000 PPM, 125 ml	071123	07/11/2026	03/26/2024 / Sohil	01/03/2024 / jaswal	M5814

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57016 / S, 1000 PPM, 125 ml	122923	12/29/2026	05/20/2024 / Jaswal	02/09/2024 / jaswal	M5816

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57015 / P, 1000 PPM, 125 ml	091123	09/11/2026	05/01/2024 / jaswal	02/09/2024 / jaswal	M5820

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3980-01 / Stannous Chloride (cs/4x500g)	232820	08/31/2028	04/30/2024 / mohan	04/25/2024 / mohan	M5882

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3624-05 / Sodium Chloride, Crystal (cs/4x2.5kg)	0000281938	07/06/2026	04/30/2024 / mohan	04/25/2024 / mohan	M5884

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGTI1-1 / TITANIUM 125mL 1000ug/mL	T2-TI719972	06/17/2027	06/18/2024 / Jaswal	02/22/2024 / Jaswal	M5942

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57034 / Se, 1000 PPM, 125 ml	060624	06/06/2027	07/02/2024 / Jaswal	06/14/2024 / Jaswal	M5962

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57003 / Li, 1000 PPM, 125 ml	061224	06/21/2027	07/01/2024 / Jaswal	07/01/2024 / Jaswal	M5970

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGY10-1 / YTTRIUM 125mL 10,000ug/mL	V2-Y740548	02/20/2029	08/05/2024 / kareem	06/14/2024 / Jaswal	M5984

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-1 / CLP CAL SOLUTION #1, 125mL	T2-MEB714417	01/27/2027	05/07/2024 / JANVI	02/22/2024 / kareem	M5996

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CLPP-CAL-3 / CLP CAL SOLUTION #3, 125mL	T2-MEB727800	12/21/2027	02/03/2025 / JANVI	02/22/2024 / kareem	M5997

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	WW-LFS-1 / Laboratory Fortified Stock Solution 1, 125 ml	T2-MEB723367	05/27/2026	05/27/2025 / Janvi	05/14/2024 / Jaswal	M6007

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	WW-LFS-2 / Laboratory Fortified Stock Solution 2, 125 ml	U2-MEB731108	03/17/2028	06/19/2025 / MOHAN	05/14/2024 / Jaswal	M6015

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57023 / V, 1000 PPM, 125 ml	062424	06/24/2027	09/28/2024 / jaswal	08/05/2024 / Jaswal	M6021

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57081 / Tl, 1000 PPM, 125 ml	0624724	06/27/2027	08/05/2024 / kareem	08/05/2024 / Jaswal	M6023

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57048 / Cd, 1000 PPM, 125 ml	070124	07/01/2027	08/05/2024 / kareem	08/05/2024 / Jaswal	M6028

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57047 / Ag, 1000 PPM, 125 ml	122823	12/28/2026	08/05/2024 / kareem	08/05/2024 / Jaswal	M6030

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58112 / Mg, 10000 PPM, 500 ml	112124	11/21/2027	01/13/2025 / kareem	01/13/2025 / kareem	M6127

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58025 / Mn, 1000 PPM, 500 ml	101124	10/11/2027	01/13/2025 / kareem	01/13/2025 / kareem	M6128

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGSI1-1 / SILICON 125mL 1000ug/mL	V2-SI744713	07/10/2029	01/14/2025 / Jaswal	10/03/2024 / Jaswal	M6137

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58119 / K, 10000 PPM, 500 ml	103024	10/30/2027	05/06/2025 / JANVI	01/13/2025 / Jaswal	M6142

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58111 / Na, 10000 PPM, 500 ml	072424	07/24/2027	01/23/2025 / kareem	01/13/2025 / Jaswal	M6144

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58030 / Zinc, Zn, 500 ml, 1000 PPM	121724	12/17/2027	02/04/2025 /	01/13/2025 / Jaswal	M6145

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57051 / Sb, 1000 PPM, 125 ml	071724	07/17/2027	01/31/2025 / kareem	10/18/2024 / kareem	M6146

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9530-33 / Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L)	22G2862015	08/18/2025	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 #
EPA	PART A / ICSA (ICP) STOCK SOLN	ICSA-1211	08/24/2025	02/24/2025 / kareem	04/20/2021 / kareem	M6152

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	PART B / ICSAB (ICP) STOCK SOLN	ICSB-0710	06/30/2025	02/10/2025 / kareem	02/09/2024 / kareem	M6155

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	24D1062002	03/25/2029	03/10/2025 / Eman	02/02/2025 / Sagar	M6158

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58113 / Al, 10000 PPM, 500 ml	011325	03/18/2026	03/18/2025 / kareem	02/09/2025 / kareem	M6159

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	ICV-5 / ICV (HG) STOCK SOLN	ICV 5 0415	07/31/2025	05/01/2025 / mohan	03/30/2024 / mohan	M6161

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	24H0162012	11/27/2025	05/27/2025 / Sagar	04/27/2025 / Sagar	M6162

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	05/22/2029	06/09/2025 / jaswal	06/06/2025 / jaswal	M6163

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	QCP-CICV-2-125ML / EPA CLP ICP Verification Standard2	U2-MEB733713	06/01/2028	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	01/02/2030	06/09/2025 / jaswal	06/09/2025 / jaswal	M6165

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-2186-03 / Hydrogen Peroxide (cs/4x4L)	24D1961001	10/16/2025	06/25/2025 /	05/20/2025 / Sagar	M6170

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

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Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 fax

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120633

This is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Thermo Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Products are for research use or further manufacturing. Not for direct administration to humans or animals. It is the responsibility of the final formulator and end user to determine suitability based upon the intended use of the end product. Products are tested to meet the analytical requirements of the noted grade. The following information is the actual analytical results obtained.

Catalog Number	T142	Quality Test / Release Date	08/17/2023
Lot Number	232820		
Description	STANNOUS CHLORIDE, DIHYDRATE CERTIFIED ACS (Suitable for Mercury Determination)		
Country of Origin	United States	Suggested Retest Date	Aug/2028
Chemical Origin	Inorganic-non animal		
BSE/TSE Comment	No animal products are used as starting raw material ingredients, or used in processing, including lubricants, processing aids, or any other material that might migrate to the finished product.		

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	Clear crystals
ASSAY	%	Inclusive Between 98 - 103	100.65
CALCIUM	%	<= 0.005	0.0017
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
IRON (Fe)	%	<= 0.003	0.0011
LEAD (Pb)	%	<= 0.01	0.0006
MERCURY (Hg)	ppm	<= 0.05	<0.05
POTASSIUM (K)	%	<= 0.005	0.0001
SODIUM (Na)	%	<= 0.01	<0.01
SOLUBILITY IN HCL	PASS/FAIL	= PASS TEST	PASS TEST
SULFATE (SO4)	PASS/FAIL	= P.T. (ABOUT 0.003%)	P.T. (ABOUT 0.003%)

Harout Sahagian - Quality Control Supervisor - Fair Lawn

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
If there are any questions with this certificate, please call at (800) 227-6701.
*Based on suggested storage condition.

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M6032

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CERTIFIED WEIGHT REPORT:

Part Number:	**57056**		**Lot #**		
Lot Number:	**010924**	**Solvent:**	24002546	Nitric Acid	
Description:	**Barium (Ba)**				
		2%	40.0 (mL)	Nitric Acid	
Expiration Date:	010927				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

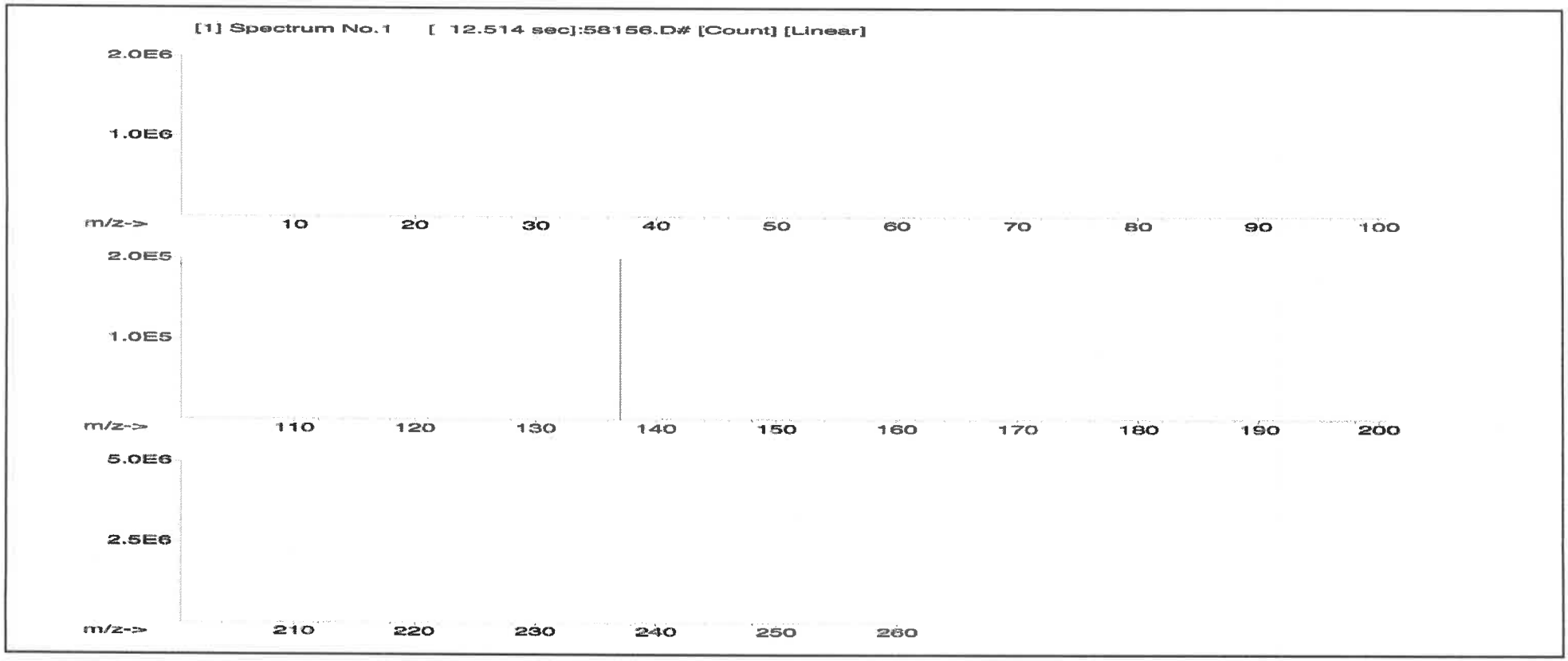
Giovanni Esposito

Formulated By:	Giovanni Esposito	010924

Pedro Rentas

Reviewed By:	Pedro L. Rentas	010924

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Barium nitrate (Ba)	IN023	BAD022019A1	1000	99.999	0.10	52.3	3.82417	3.82441	**1000.1**	**2.0**	10022-31-8	0.5 mg/m3	orl-rat 355 mg/kg	3104a



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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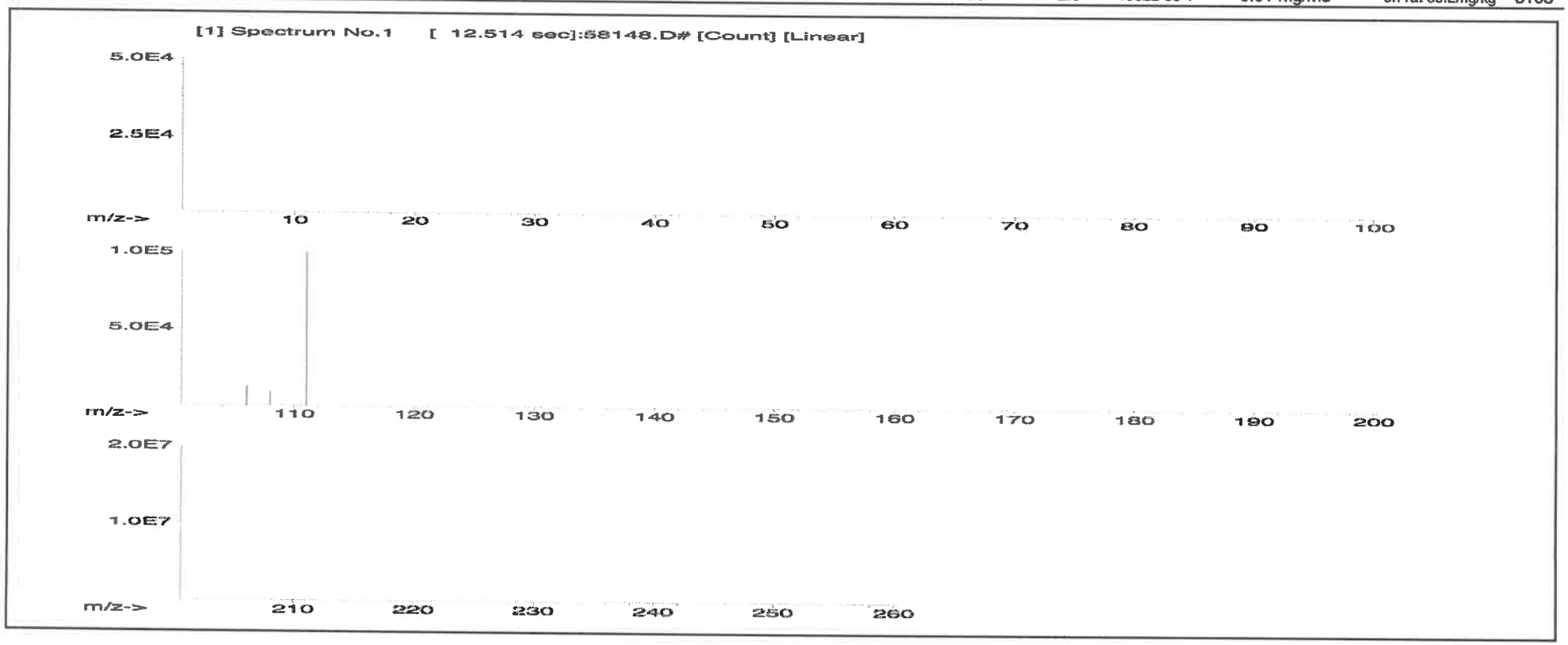
CERTIFIED WEIGHT REPORT:

Part Number:	**57048**		**Lot #**		
Lot Number:	**070124**	**Solvent:**	24002546	Nitric Acid	
Description:	**Cadmium (Cd)**	2%	40.0 (mL)	Nitric Acid	
Expiration Date:	070127				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.07	0.100	Flask Uncertainty		

Aleah O'Brady		
Formulated By:	Aleah O'Brady	070124
Pedro Rentas		
Reviewed By:	Pedro L. Rentas	070124

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Cadmium nitrate tetrahydrate (Cd)	IN024	CDM092021A1	1000	99.999	0.10	36.5	5.4797	5.4804	**1000.1**	**2.0**	10022-68-1	0.01 mg/m3	orl-rat 60.2mg/kg	3108



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 : 01/03/24. M5810, M5811

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CERTIFIED WEIGHT REPORT:

Part Number: 58126
Lot Number: 051523
Description: Iron (Fe)

Expiration Date: 051526
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 5000.1

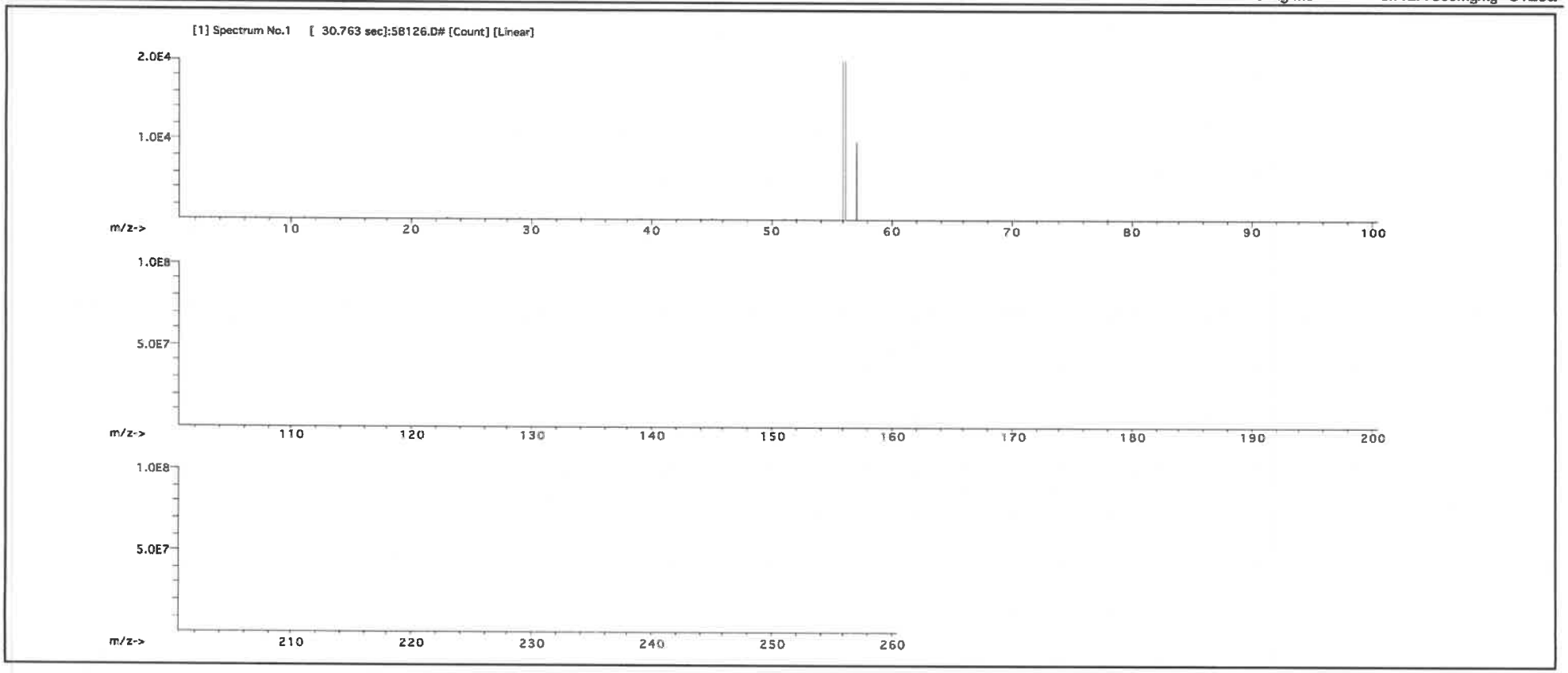
	Lot #		
Solvent:	21110221	Nitric Acid	
5.0%	250.0 (mL)	Nitric Acid	
5E-05	Balance Uncertainty		
0.12	Flask Uncertainty		

Giovanni Esposito

Formulated By: Giovanni Esposito 051523

Reviewed By: Pedro L. Rentas 051523

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Iron (Fe)	IN346	2302010-500	10000	99.995	0.10	100.0	50.0034	50.0111	**10001.5**	**20.0**	7439-89-6	5 mg/m3	orl-rat 7500mg/kg	3126a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.10	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.10	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.05	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.10	Ge	<0.10	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.10
B	<0.02	Cu	<0.10	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

INORGANIC VENTURES™

Refine your results. Redefine your industry.

Certificate of Analysis

RD:05/14/2024

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01

ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	WW-LFS-1
Lot Number:	T2-MEB723367
Matrix:	5% (v/v) HNO3

Value / Analyte(s):	1 000 µg/mL ea: Potassium,	
	600 µg/mL ea: Phosphorus,	
	300 µg/mL ea: Sodium,	Iron,
	200 µg/mL ea: Magnesium, Cerium, Thallium,	Aluminum, Selenium,
	100 µg/mL ea: Lead,	Calcium,
	80 µg/mL ea: Arsenic,	
	70 µg/mL ea: Mercury,	
	50 µg/mL ea: Nickel,	
	40 µg/mL ea: Chromium,	
	30 µg/mL ea: Copper, Vanadium,	Boron,
	20 µg/mL ea: Zinc, Barium, Cadmium, Manganese,	Strontium, Beryllium, Cobalt, Lithium,
	7.5 µg/mL ea: Silver	

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	200.0 ± 0.7 µg/mL	Arsenic, As	80.0 ± 0.7 µg/mL
Barium, Ba	20.00 ± 0.09 µg/mL	Beryllium, Be	20.00 ± 0.13 µg/mL
Boron, B	30.00 ± 0.18 µg/mL	Cadmium, Cd	20.00 ± 0.09 µg/mL
Calcium, Ca	100.0 ± 0.4 µg/mL	Cerium, Ce	200.0 ± 0.8 µg/mL
Chromium, Cr	40.00 ± 0.30 µg/mL	Cobalt, Co	20.00 ± 0.10 µg/mL
Copper, Cu	30.00 ± 0.13 µg/mL	Iron, Fe	300.0 ± 1.3 µg/mL
Lead, Pb	100.0 ± 0.4 µg/mL	Lithium, Li	20.00 ± 0.08 µg/mL
Magnesium, Mg	200.0 ± 0.8 µg/mL	Manganese, Mn	20.00 ± 0.08 µg/mL
Mercury, Hg	70.0 ± 0.3 µg/mL	Nickel, Ni	50.00 ± 0.22 µg/mL
Phosphorus, P	600.0 ± 2.7 µg/mL	Potassium, K	1 000 ± 4 µg/mL
Selenium, Se	200.0 ± 1.3 µg/mL	Silver, Ag	7.50 ± 0.03 µg/mL
Sodium, Na	300.0 ± 1.4 µg/mL	Strontium, Sr	20.01 ± 0.08 µg/mL
Thallium, Tl	200.0 ± 1.4 µg/mL	Vanadium, V	30.00 ± 0.13 µg/mL
Zinc, Zn	20.00 ± 0.09 µg/mL		

Density: 1.034 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Ag	Calculated		See Sec. 4.2
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
B	ICP Assay	3107	190605
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Ce	ICP Assay	3110	090504
Ce	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
Hg	ICP Assay	3133	160921
Hg	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Li	ICP Assay	3129a	100714
Li	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	Traceable to 3152A	S2-NA700842
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Sr	EDTA	928	928
Sr	ICP Assay	Traceable to 3153a	K2-SR650985
Tl	ICP Assay	3158	151215
V	IC Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 30, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **August 30, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certificate of Analysis

RD:05/14/2024

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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 863.01 ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	WW-LFS-2
Lot Number:	U2-MEB731108
Matrix:	5% (v/v) HNO3 tr. HF
Value / Analyte(s):	200 µg/mL ea: Silica, 80 µg/mL ea: Antimony, 70 µg/mL ea: Tin, 40 µg/mL ea: Molybdenum, 20 µg/mL ea: Titanium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	80.1 ± 0.6 µg/mL	Molybdenum, Mo	40.03 ± 0.18 µg/mL
Silica, SiO2	200.2 ± 1.3 µg/mL	Tin, Sn	70.0 ± 0.4 µg/mL
Titanium, Ti	20.01 ± 0.13 µg/mL		

Density: 1.025 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	ICP Assay	3134	130418
Mo	Calculated		See Sec. 4.2
Sb	ICP Assay	3102a	140911
SiO2	ICP Assay	3150	130912
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	3162a	130925
Ti	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 17, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- March 17, 2028

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

M4371

Hydroxylamine Hydrochloride, Crystal
BAKER ANALYZED® A.C.S. Reagent
Suitable for Mercury Determination
(hydroxylammonium chloride)

Rec – 06.07.19

J.T.Baker® | avantor™

Material No.: 2196-01
Batch No.: 0000215387
Manufactured Date: 2018/06/27
Retest Date: 2025/06/25
Revision No: 1

Certificate of Analysis

Meets ACS Reagent Chemical Requirements,

Test	Specification	Result
Assay ($NH_2OH \cdot HCl$) (by $KMnO_4$ titrn)	>= 96.0 %	99.1
Clarity of Alcohol Solution	Passes Test	PT
Residue after Ignition	<= 0.050 %	0.017
Titrable Free Acid (meq/g)	<= 0.25	0.19
Ammonium (NH_4)	Passes Test	PT
Sulfur Compounds (as SO_4)	<= 0.005 %	< 0.003
Trace Impurities - ACS - Heavy Metals (as Pb)	<= 5 ppm	4
Trace Impurities - Iron (Fe)	<= 5 ppm	< 3
Trace Impurities - Mercury (Hg)	<= 0.050 ppm	< 0.005

For Laboratory, Research or Manufacturing Use

Country of Origin: CN
Packaging Site: Paris Mfg Ctr & DC

ISO
Phillipsburg, NJ 9001:2015, FSSC22000
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Gliwice, Poland 9001:2015, 13485:2012
Selangor, Malaysia 9001:2008
Dehradun, India, 9001:2008, 14001:2004, 13485:2003
Mumbai, India, 9001:2015, 17025:2005
Panoli, India 9001:2015

James Ethier
Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

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.

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Certificate of Analysis

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Christiansburg, VA 24073 USA
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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.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5467 R: 03/01/23 (LA)

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 57058
Lot Number: 020623
Description: Cerium (Ce)

Expiration Date: 020626
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

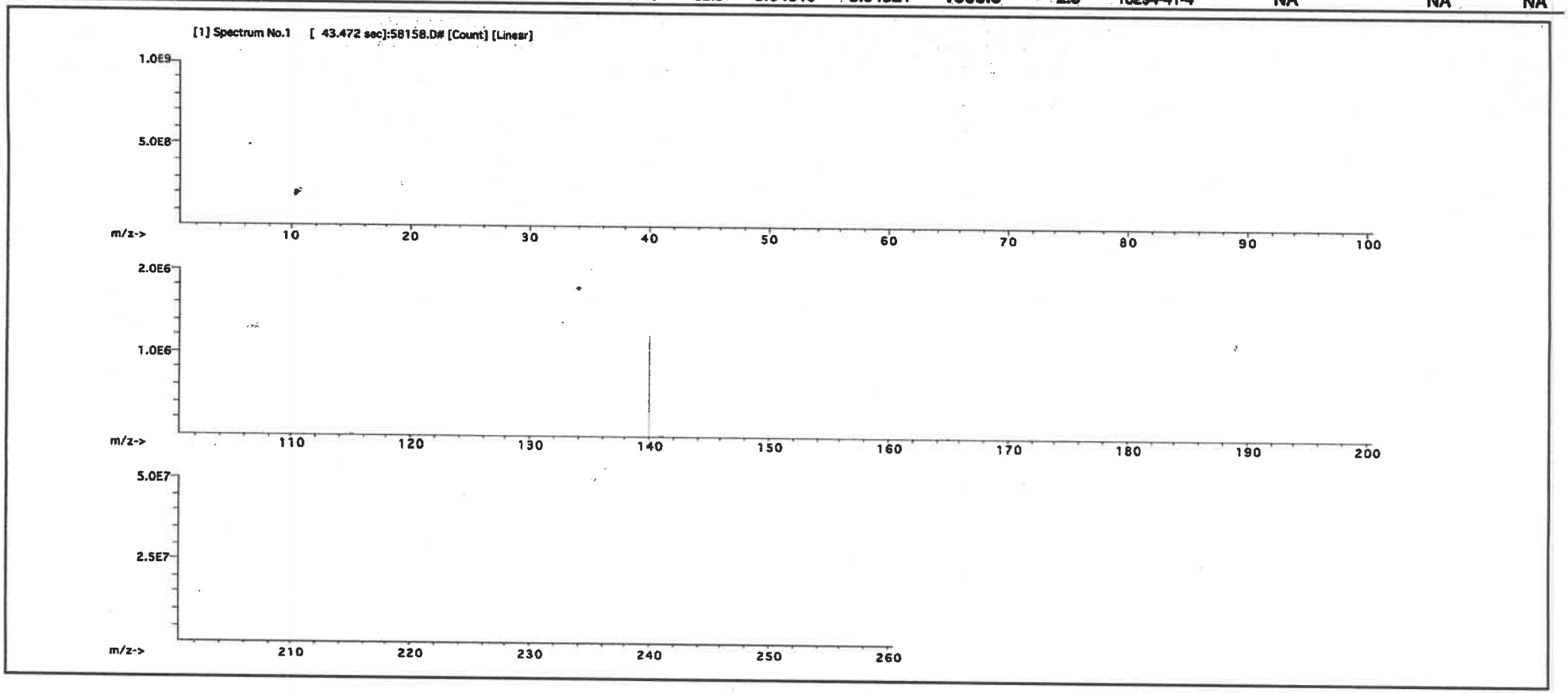
Weight shown below was diluted to (mL): 1000.12 0.058 Flask Uncertainty

		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).

Sodium Chloride, Crystal
BAKER ANALYZED® A.C.S. Reagent

M5493 - M5708
Rad on 4/14/23
JMG

avantor™ | J.T.Baker®

Material No.: 3624-01
Batch No.: 0000281938
Manufactured Date: 2021-06-07
Retest Date: 2026-06-07
Revision No.: 2

Certificate of Analysis

Test	Specification	Result
Assay (NaCl) (by Ag titrn)	≥ 99.0 %	100.0 %
pH of 5% Solution at 25°C	5.0 - 9.0	6.3
Insoluble Matter	≤ 0.005 %	0.003 %
Iodide (I)	≤ 0.002 %	< 0.002 %
Bromide (Br)	≤ 0.01 %	< 0.01 %
Chlorate and Nitrate (as NO_3)	≤ 0.003 %	< 0.001 %
ACS - Phosphate (PO_4)	≤ 5 ppm	< 5 ppm
Sulfate (SO_4)	≤ 0.004 %	< 0.004 %
Barium (Ba)	Passes Test	Passes Test
ACS - Heavy Metals (as Pb)	≤ 5 ppm	< 5 ppm
Iron (Fe)	≤ 2 ppm	< 1 ppm
Calcium (Ca)	≤ 0.002 %	< 0.001 %
Magnesium (Mg)	≤ 0.001 %	< 0.001 %
Potassium (K)	≤ 0.005 %	0.001 %

For Laboratory,Research,or Manufacturing Use
Meets Reagent Specifications for testing USP/NF monographs
Country of Origin: USA
Packaging Site: Paris Mfg Ctr & DC

James T Ethier
Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone 610.386.1700

RD: 06/12/2023, M5581, M5582, M5583, M5584, M5585

JENSEN INERT PRODUCTS

MATERIAL CERTIFICATE OF COMPLIANCE

DATE: JUNE 12, 2023

CUSTOMER:	PCI SCIENTIFIC SUPPLY, INC
PURCHASE ORDER NO.	6054931
CATALOG NO.	BOI5021-450L
PRODUCT DESCRIPTION:	BOILING STONES, TFE, 454GMS
QUANTITY:	10 EACH
LOT NO.	W126678
SPECIFICATION (S):	Made from Virgin PTFE Resin

We certify that we have complied with the terms and conditions of the above Purchase Order and the Part Specifications in the manufacturing of the above product.

Laura Valencia

Laura Valencia
Quality Assurance Inspector

F:U:J:CF:PCISCI:COC-68118-BOI5021-061223

3773 NW 126th Avenue • Coral Springs, Florida 33065 • Fax (954) 344-2008 • 1-800 446-3781
Email: jensen@jenseninert.com Visit our Web Site at www.jenseninert.com

RD: 06/12/2023, M5581, M5582, M5583, M5584, M5585

JENSEN INERT PRODUCTS

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Laura Valencia

Laura Valencia
Quality Assurance Inspector

F:U:J:CF:PCISCI:COC-68118-BOI5021-061223

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Certified Reference Material CRM

M5658 R! 8/25/23

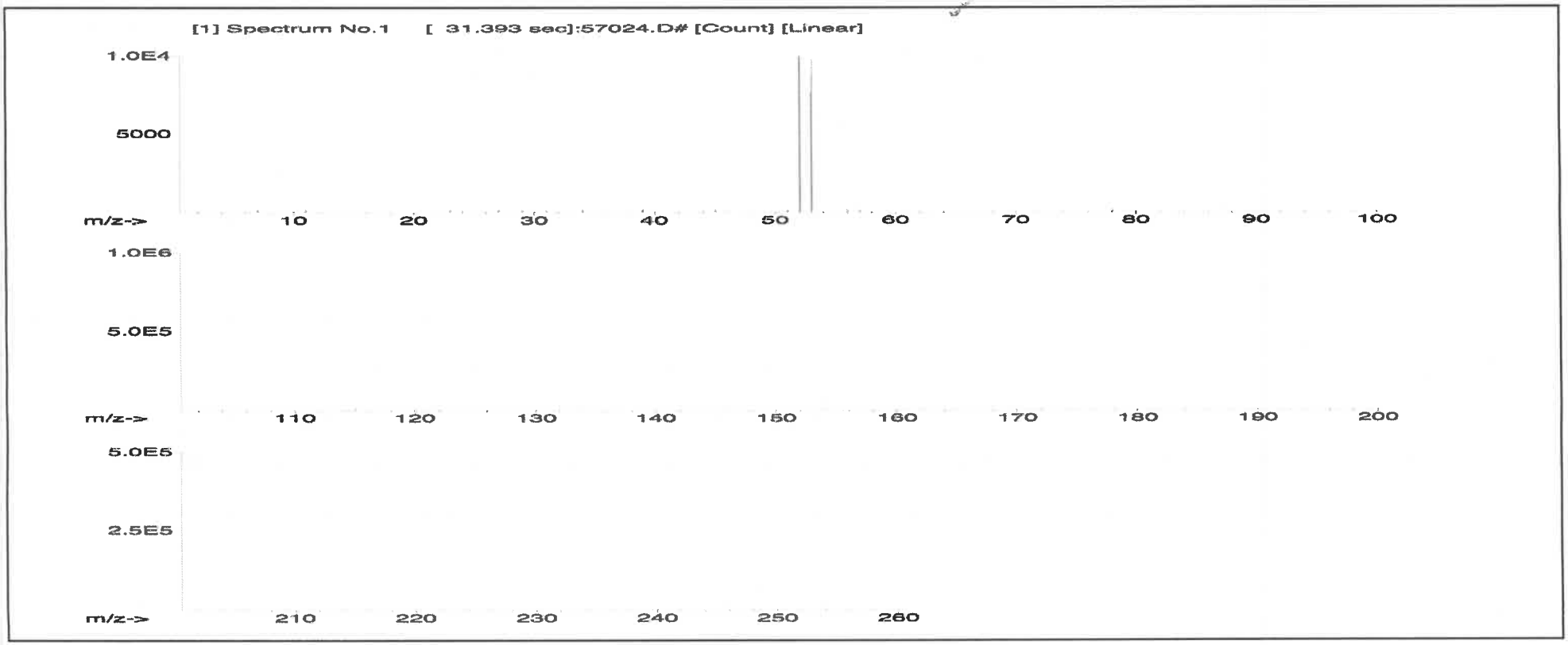
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**58024**	21110221	Nitric Acid	
Lot Number:	**060523**			
Description:	**Chromium (Cr)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	060526			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	060523
Reviewed By:	Pedro L. Rentas	060523

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Chromium(III) nitrate nonahydrate (Cr)	58124	071122	0.1000	200.0	0.084	1000	10000.1	**1000.0**	**2.2**	7789-02-8	0.5 mg(Cr)/m3	orl-rat 3250 mg/kg	3112a



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.
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* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

R: 12/20/23 M5747

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 57082
Lot Number: 100923
Description: Lead (Pb)

Expiration Date: 100926
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

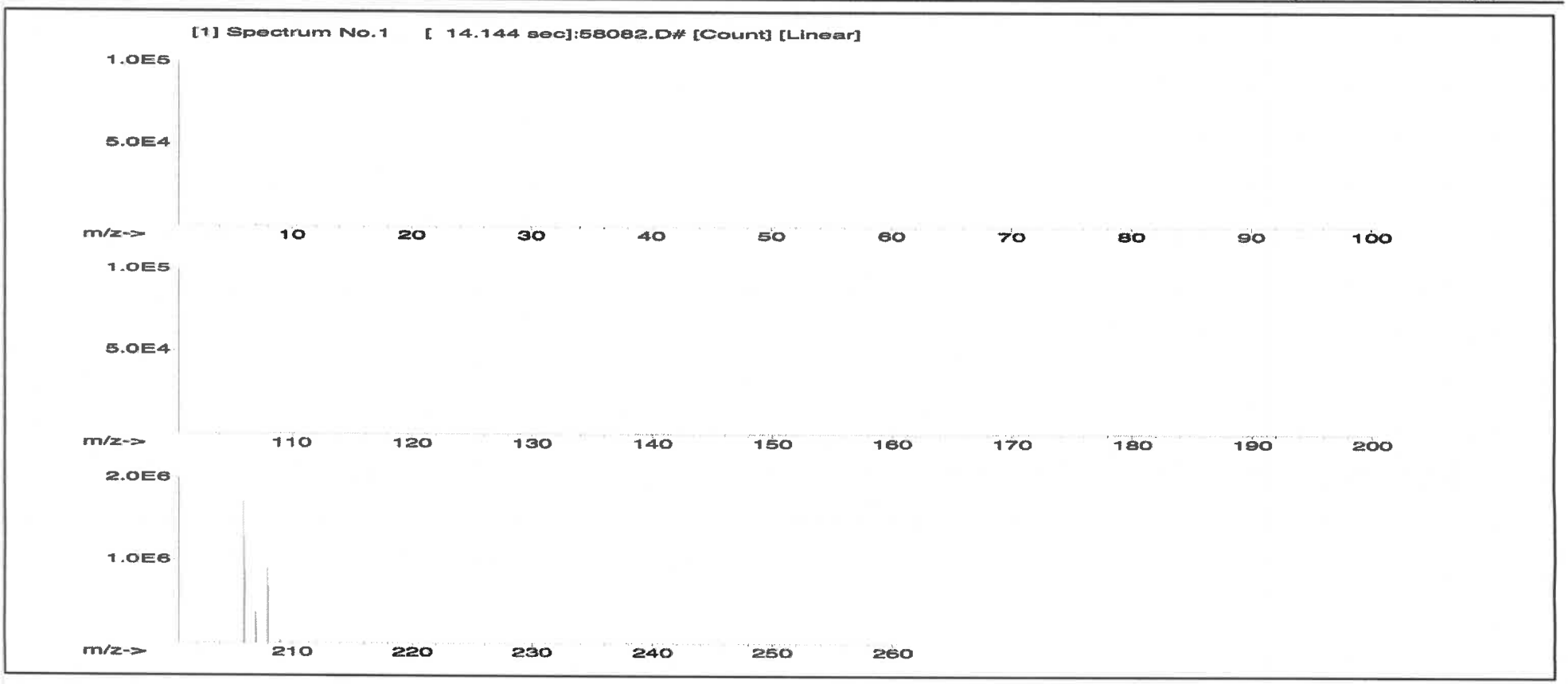
Weight shown below was diluted to (mL): 3000.41 ± 0.06 Flask Uncertainty

	Lot #		
Solvent:	24002546	Nitric Acid	
2%	60.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

Formulated By:	Lawrence Barry	100923
Reviewed By:	Pedro L. Rentas	100923

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lead(II) nitrate (Pb)	IN029	PBD122016A1	1000	99.999	0.10	62.5	4.80071	4.80077	**1000.0**	**2.0**	10099-74-8	0.05 mg/m3	intrvns-rat 93 mg/kg	3128



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
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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:

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.
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Certified Reference Material CRM

R: 12/20/23 M5748

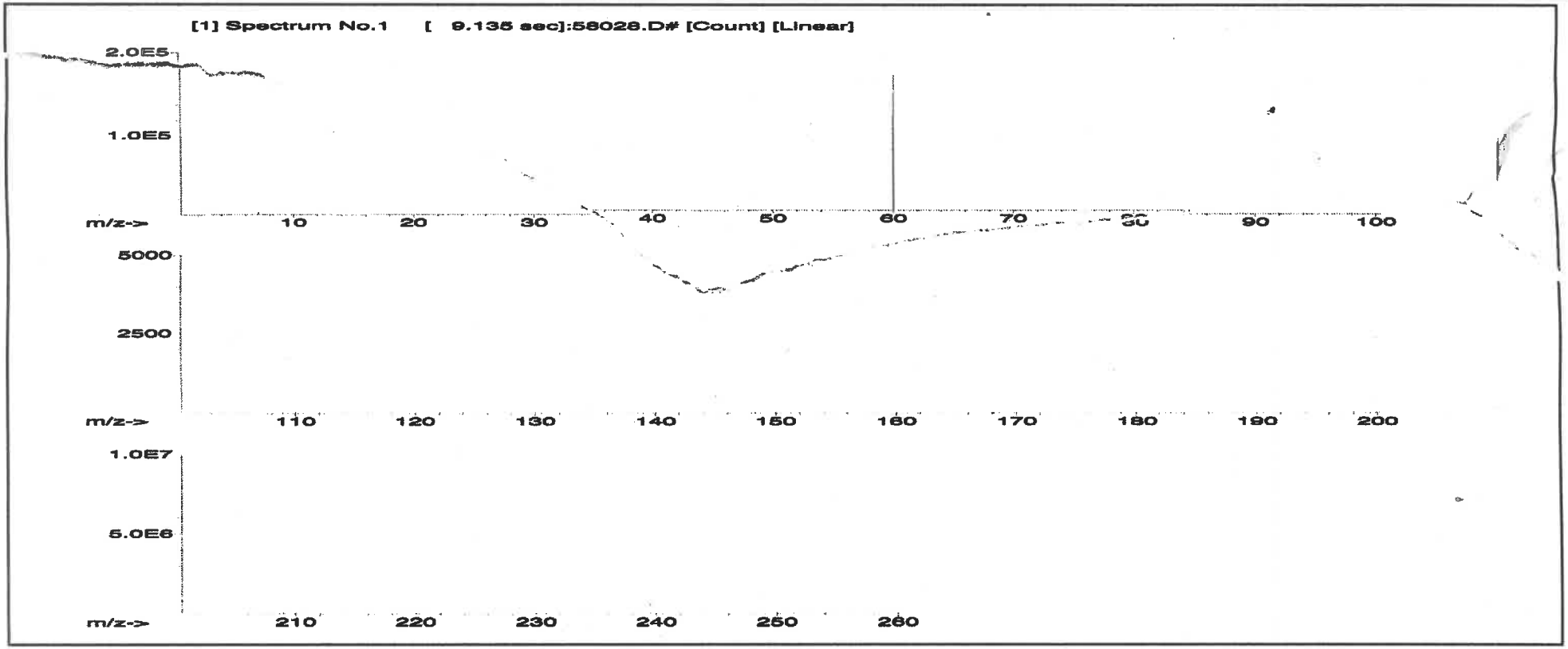
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57028**	24002546	Nitric Acid	
Lot Number:	**091223**			
Description:	**Nickel (Ni)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	091226			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	091223
Reviewed By:	Pedro L. Rentas	091223

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Nickel(II) nitrate hexahydrate (Ni)	58128	062023	0.1000	200.0	0.084	1000	10000.4	**1000.0**	2.2	13478-00-7	1 mg/m3	orl-rat 1620 mg/kg	3136



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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* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
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* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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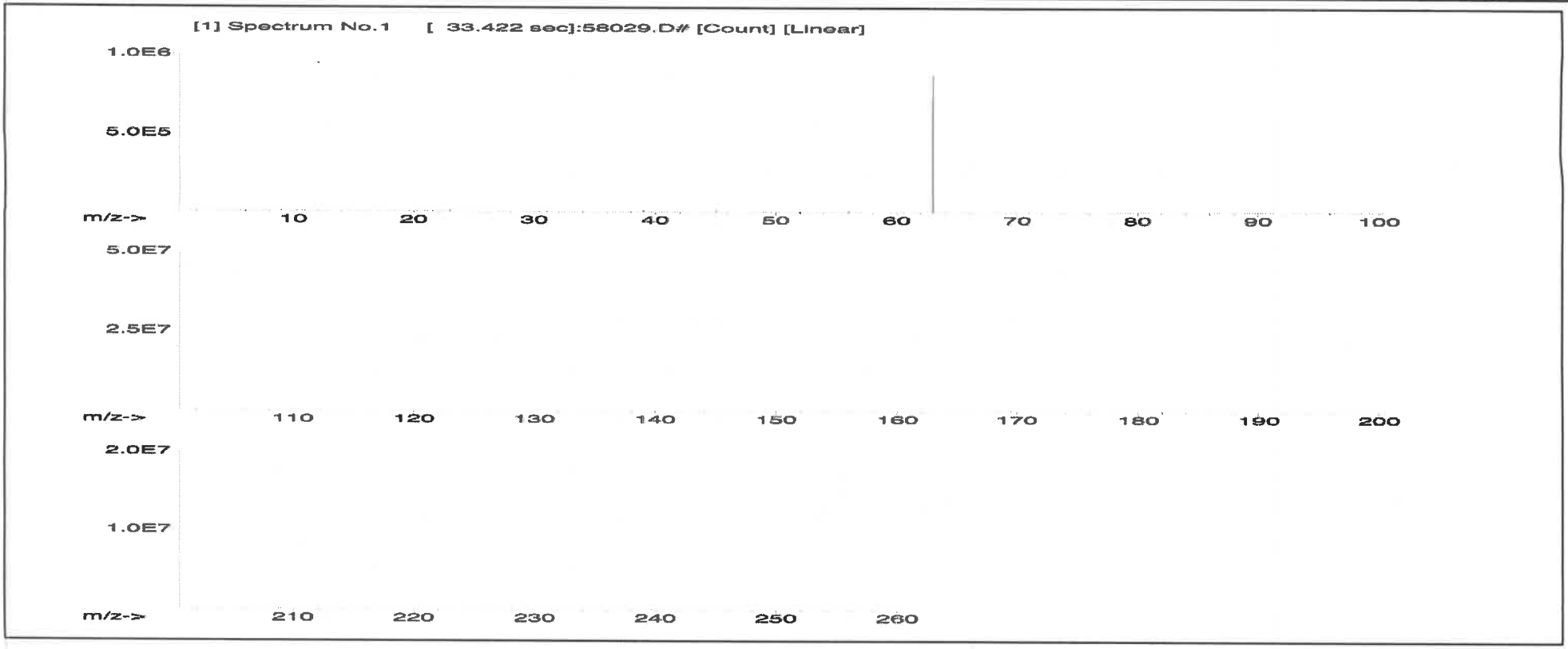
CERTIFIED WEIGHT REPORT:

		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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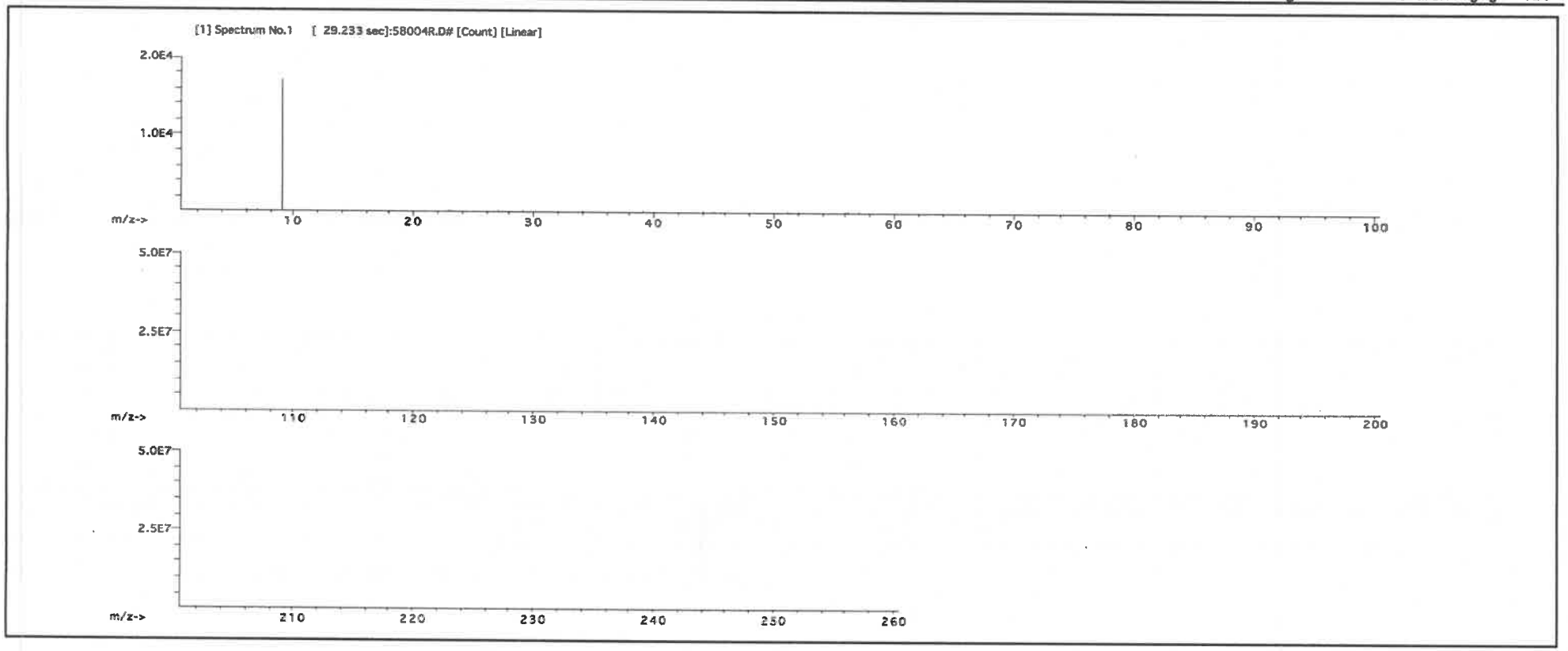
CERTIFIED WEIGHT REPORT:

		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)

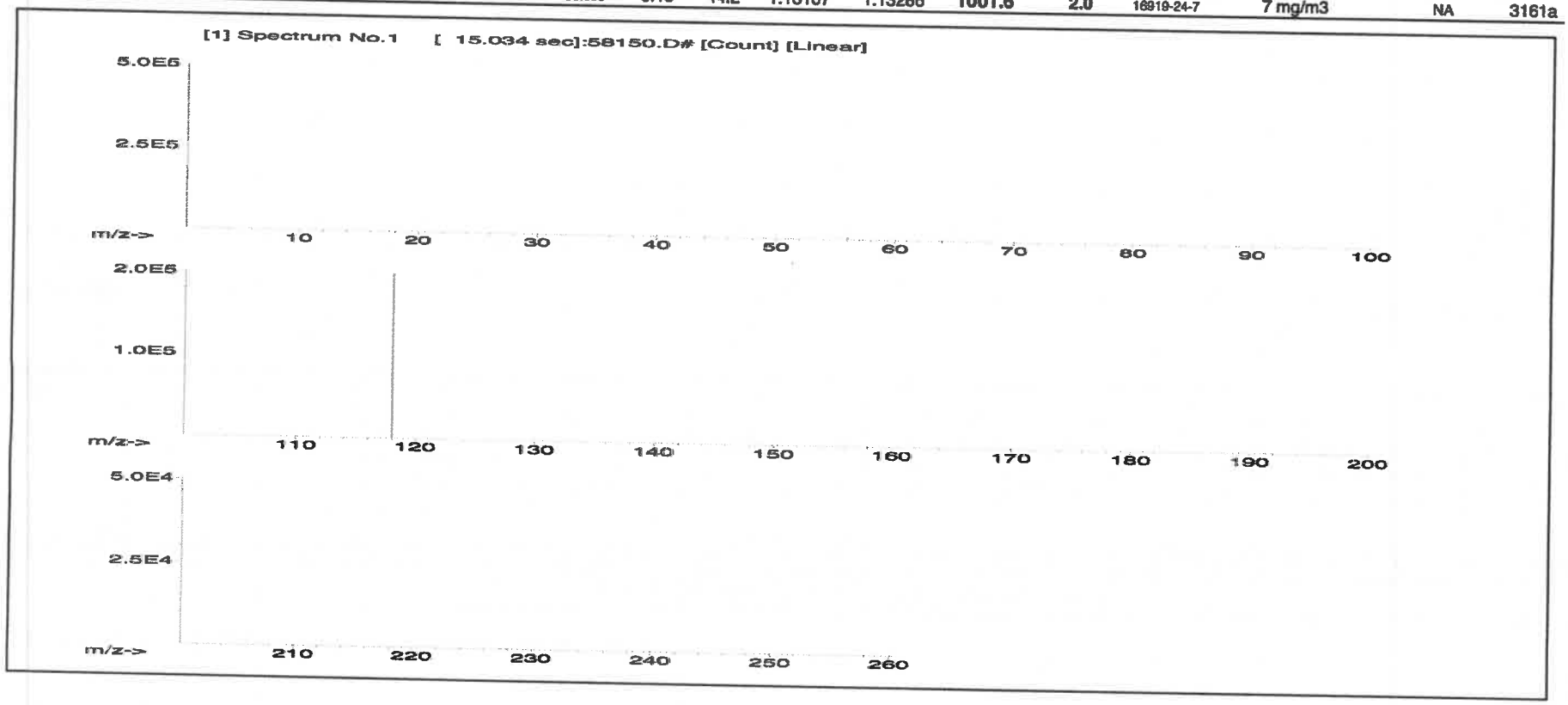
Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 499.93

	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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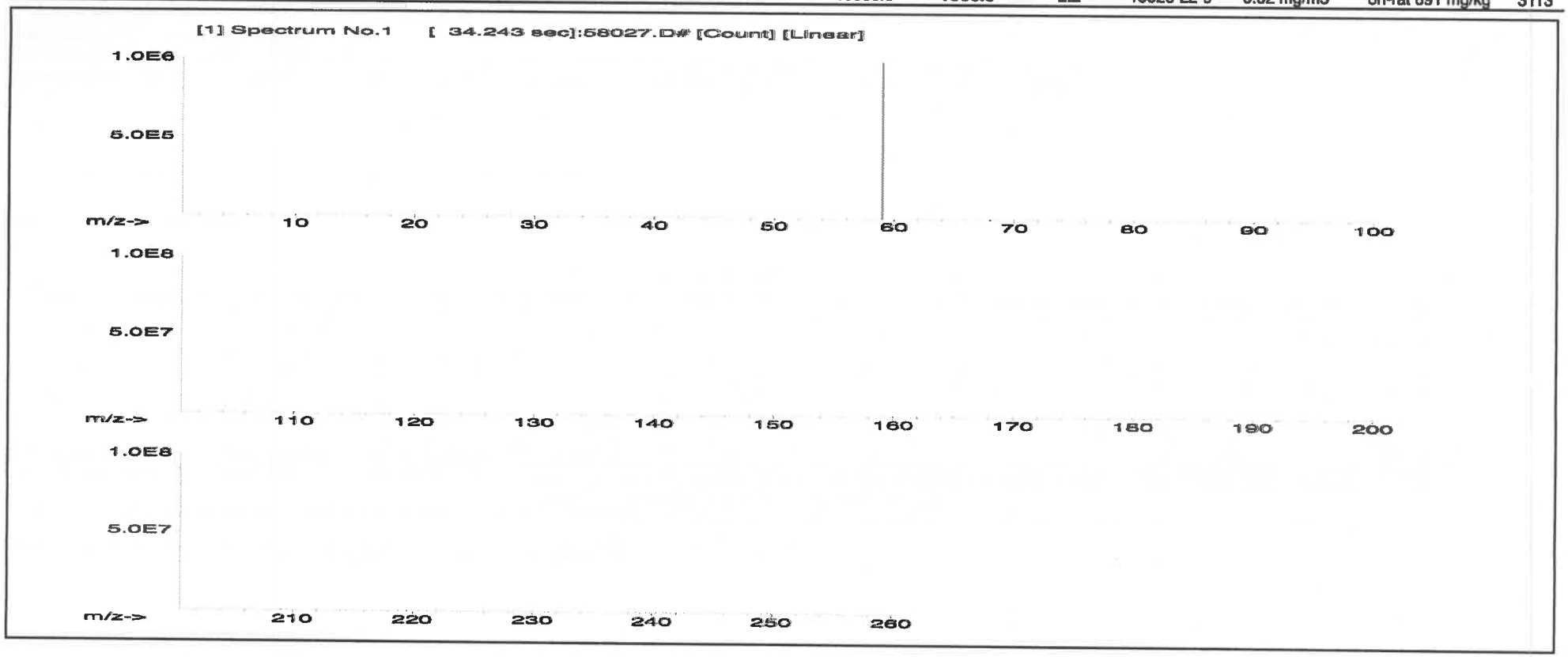
CERTIFIED WEIGHT REPORT:

		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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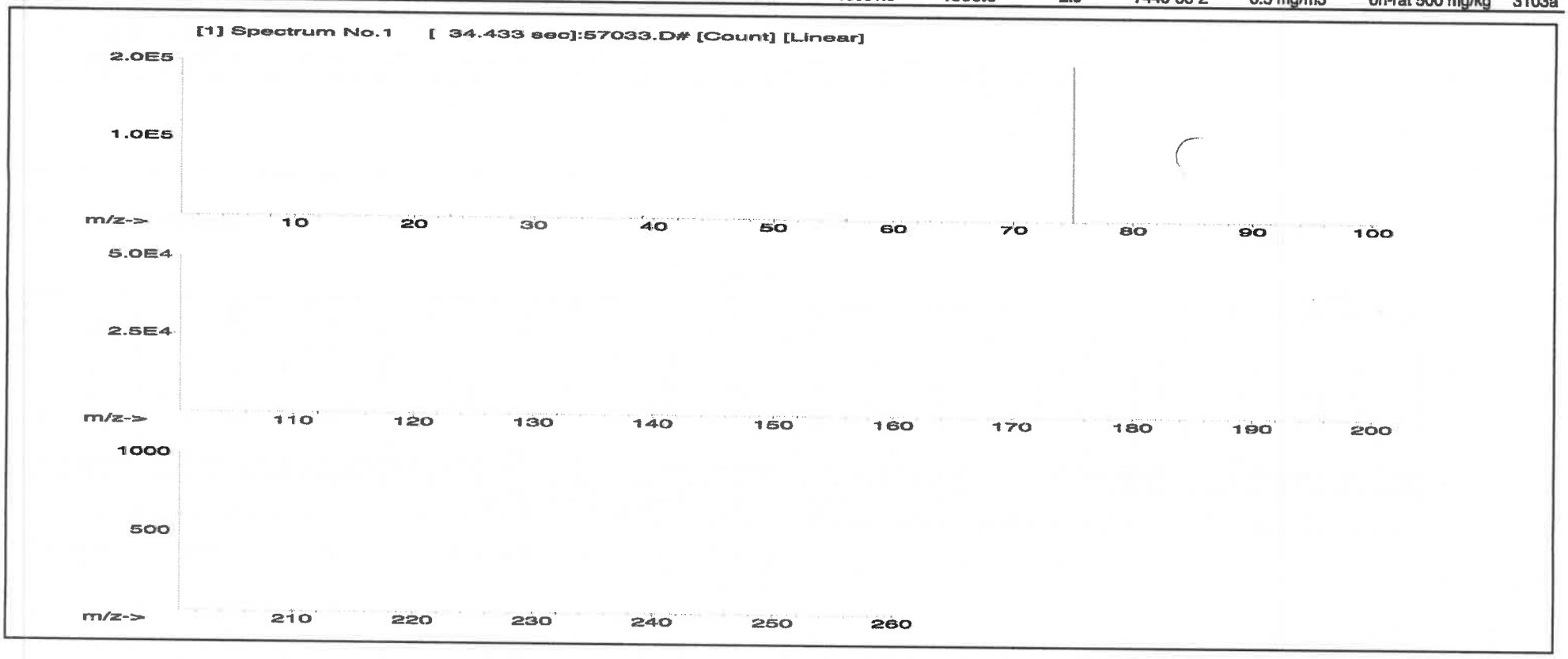
CERTIFIED **WEIGHT** REPORT:

		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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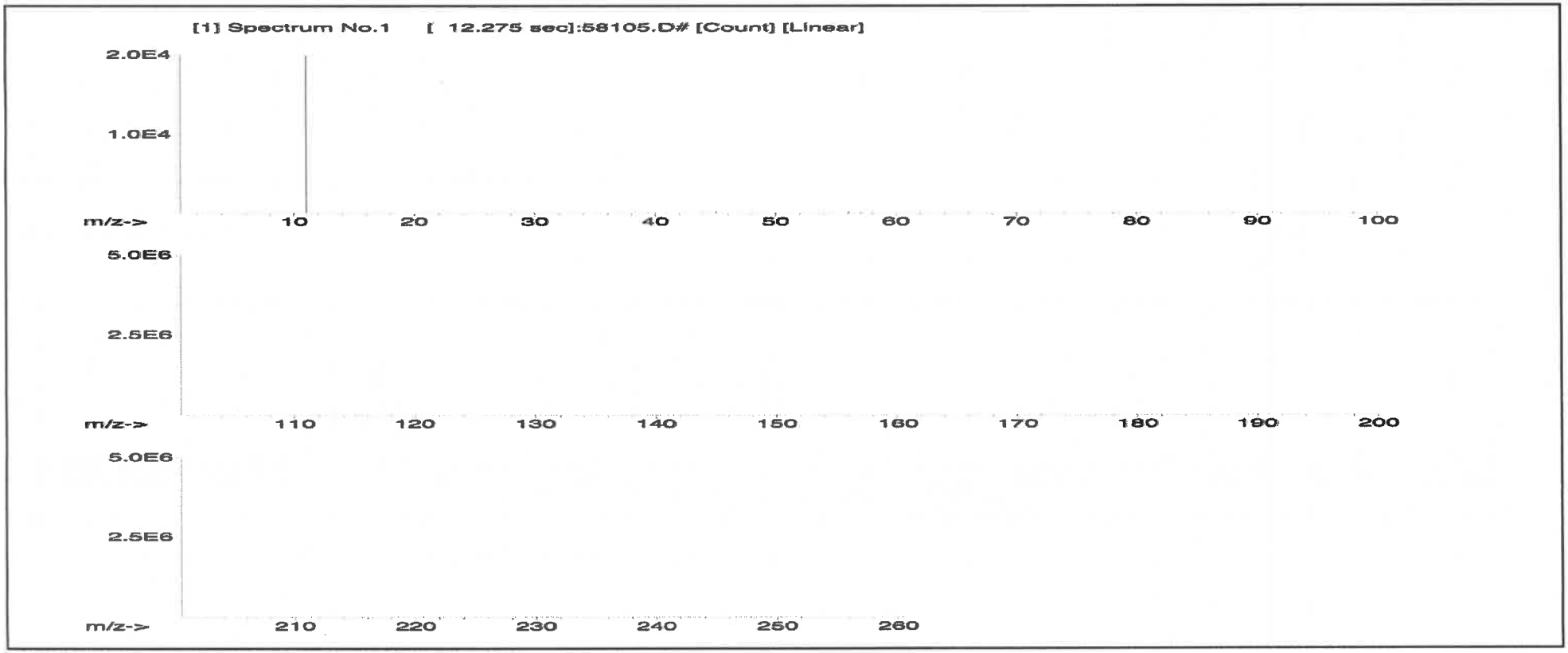
AR-1539 Certificate Number
https://Absolutestandards.com

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.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 02/09/24 M5816

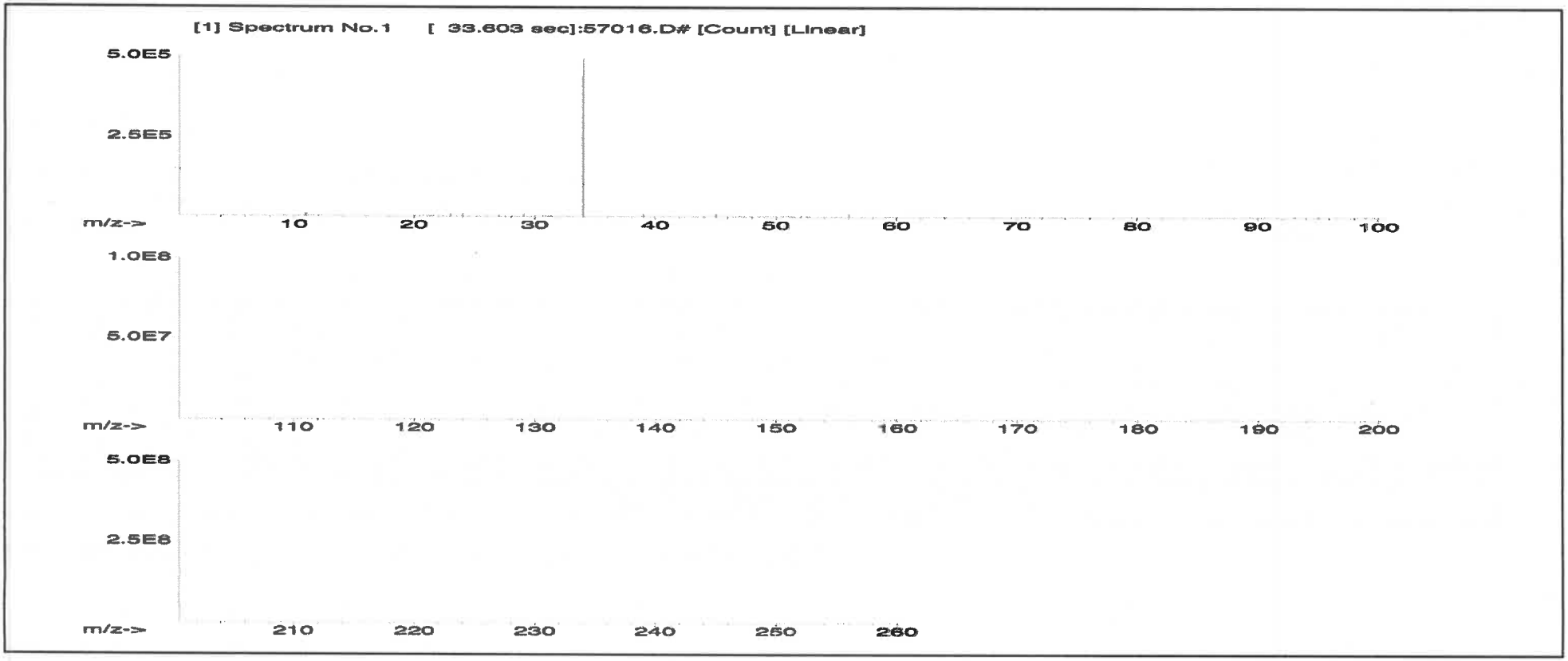
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number:	**57016**	**Solvent:**	**Lot #** 122923	ASTM Type 1 Water
Lot Number:	**122923**			
Description:	**Sulfur (S)**			
Expiration Date:	122926			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	4000.0	0.06	Flask Uncertainty	

Formulated By:	Benson Chan	122923
Reviewed By:	Pedro L. Rentas	122923

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium sulfate (S)	IN117	SLBR7225V	1000	99.9	0.10	24.3	16.4979	16.4980	**1000.0**	**2.0**	7783-20-2	NA	orl-rat 4250mg/kg	3181



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	T	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
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Certified Reference Material CRM

R: 02/09/24 M5820

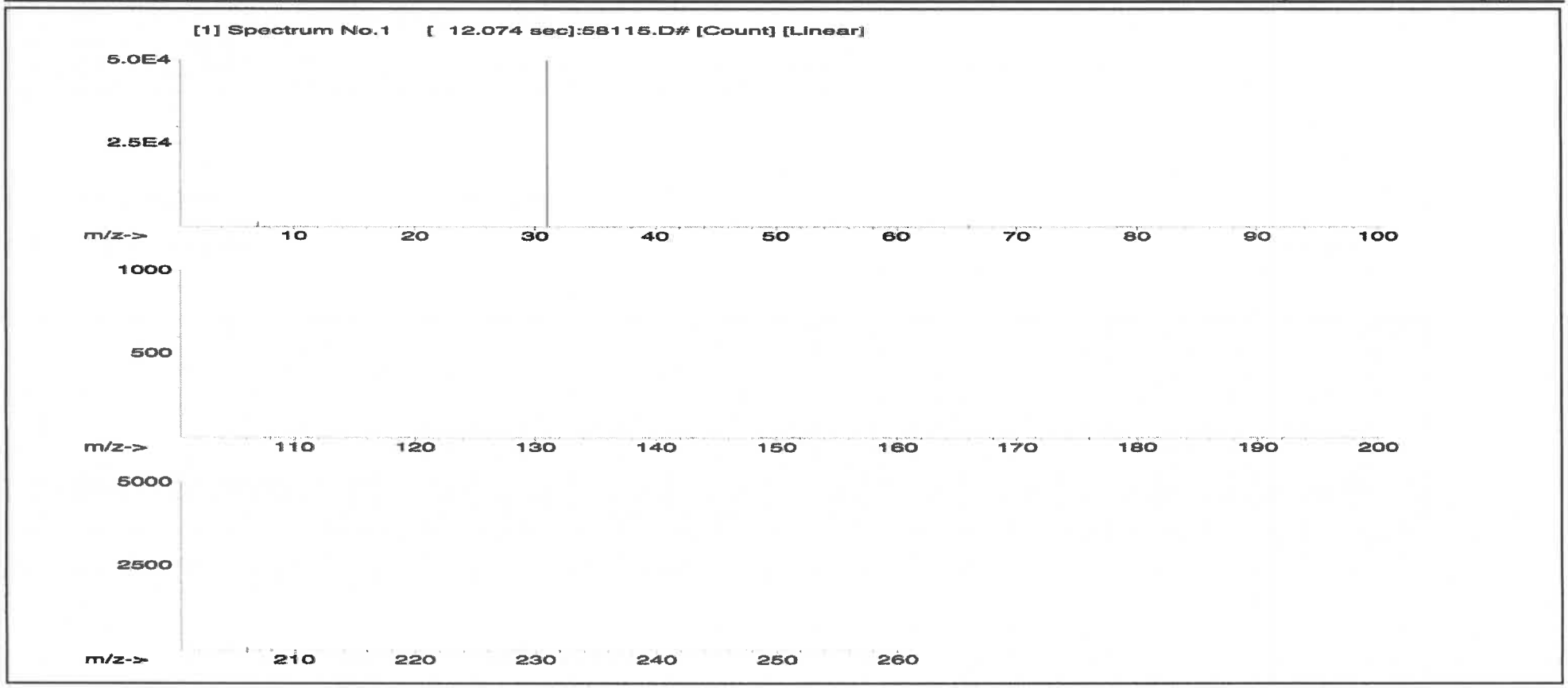
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number:	**57015**		**Lot #**		
Lot Number:	**091123**	**Solvent:**	24002546	Nitric Acid	
Description:	**Phosphorous (P)**	2%	40.0 (mL)	Nitric Acid	
Expiration Date:	091126				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Formulated By:	Lawrence Barry	091123
Reviewed By:	Pedro L. Rentas	091123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium dihydrogen phosphate (P)	IN008	PV082019A1	1000	99.999	0.10	27.5	7.2729	7.2730	**1000.0**	**2.0**	7722-76-1	5 mg/m3	orl-rat >2000mg/k	3186



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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Sodium Chloride, Crystal
BAKER ANALYZED® A.C.S. Reagent

MT884
MB

avantor™ | J.T.Baker®

Material No.: 3624-01
Batch No.: 0000281938
Manufactured Date: 2021-06-07
Retest Date: 2026-06-07
Revision No.: 1

Certificate of Analysis

Test	Specification	Result
Assay (NaCl) (by Ag titrn)	≥ 99.0 %	100.0 %
pH of 5% Solution at 25°C	5.0 - 9.0	6.3
Insoluble Matter	≤ 0.005 %	0.003 %
Iodide (I)	≤ 0.002 %	< 0.002 %
Bromide (Br)	≤ 0.01 %	< 0.01 %
Chlorate and Nitrate (as NO_3)	≤ 0.003 %	< 0.001 %
ACS - Phosphate (PO_4)	≤ 5 ppm	< 5 ppm
Sulfate (SO_4)	≤ 0.004 %	< 0.004 %
Barium (Ba)	Passes Test	Passes Test
ACS - Heavy Metals (as Pb)	≤ 5 ppm	< 5 ppm
Iron (Fe)	≤ 2 ppm	< 1 ppm
Calcium (Ca)	≤ 0.002 %	< 0.001 %
Magnesium (Mg)	≤ 0.001 %	< 0.001 %
Potassium (K)	≤ 0.005 %	0.001 %

For Laboratory,Research,or Manufacturing Use
Meets Reagent Specifications for testing USP/NF monographs
Country of Origin: USA
Packaging Site: Paris Mfg Ctr & DC

James T Ethier

Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Mansford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone 610.386.1700

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

R: 02/22/24 M5942

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGTI1
Lot Number:	T2-TI719972
Matrix:	2% (v/v) 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

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5962 R! 06/14/24.

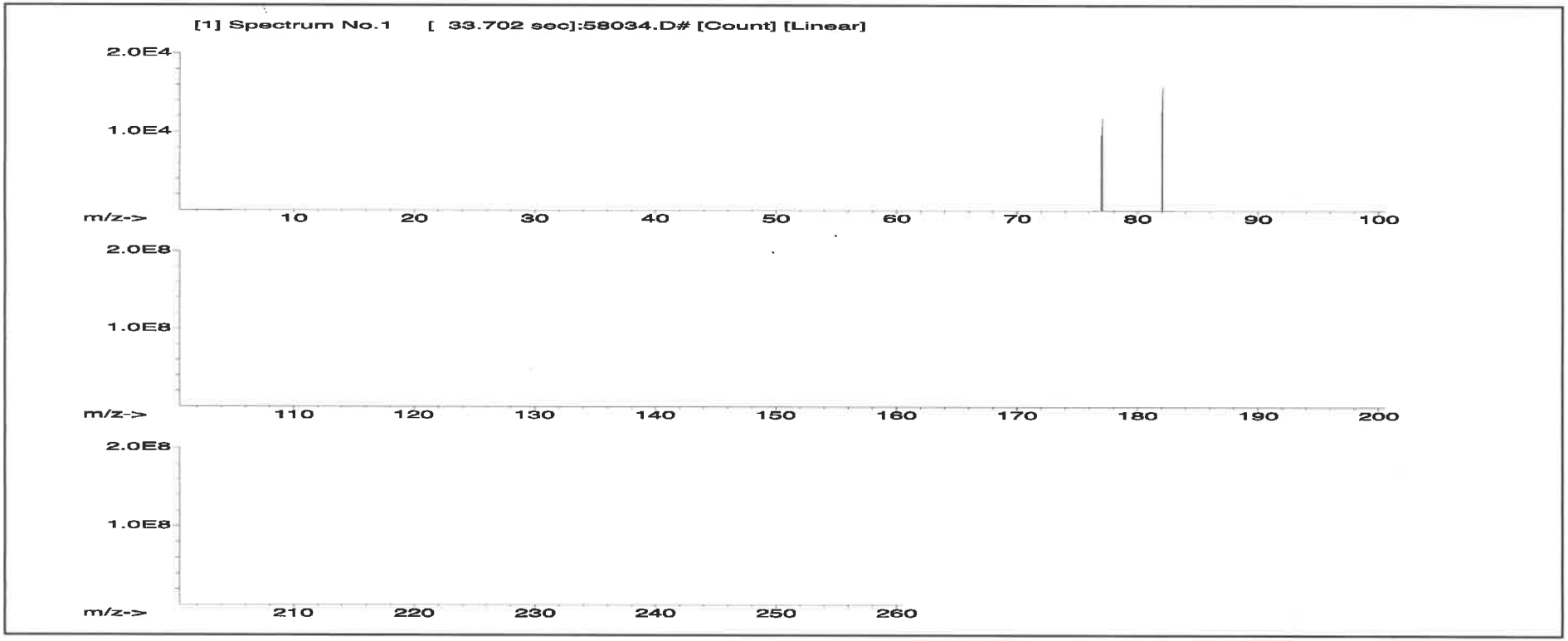
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57034**	24002546	Nitric Acid	
Lot Number:	**060624**			
Description:	**Selenium (Se)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	060627			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.07	0.100	Flask Uncertainty	

Formulated By:	Benson Chan	060624
Reviewed By:	Pedro L. Rentas	060624

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Selenium (Se)	58134	071223	0.1000	200.0	0.084	1000	10002.5	**1000.0**	**2.2**	7782-49-2	0.2 mg/m3	orl-rat 6700 mg/kg	3149



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																		
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	T	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5970, M5971 R: 7/01/24

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

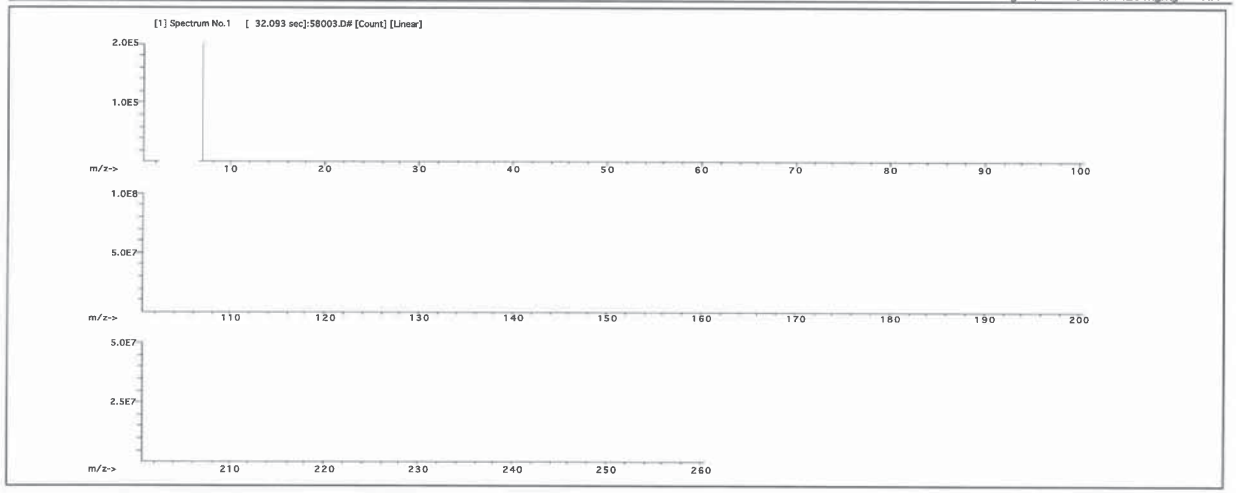
		Lot #	Solvent:
Part Number:	**57003**	24002546	Nitric Acid
Lot Number:	**062124**		
Description:	**Lithium (Li)**		
		2.0%	5.0 (mL) Nitric Acid
Expiration Date:	062127		
Recommended Storage:	Ambient (20 °C)		
Nominal Concentration (µg/mL):	**1000**		
NIST Test Number:	6UTB	5E-05 Balance Uncertainty	
Volume shown below was diluted to (mL):	250.11	0.016 Flask Uncertainty	

Giovanni Esposito

Formulated By: Giovanni Esposito 062124

Reviewed By: Pedro L. Rentas 062124

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lithium nitrate (Li)	58103	070622	0.1000	25.0	0.004	1000	10000.4	**1000.0**	**2.0**	7790-69-4	5 mg/m3	orl-rat 1426 mg/kg	NA



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	T	Ni	<0.02	Pr	<0.02	Sc	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
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MS984
R:6/14/24

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F: 540-585-3012
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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGY10
Lot Number:	V2-Y740548
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Yttrium
Starting Material:	Yttrium Oxide
Starting Material Lot#:	2661 and 06230520YL
Starting Material Purity:	99.9984%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10000 ± 30 µg/mL

Density: 1.032 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	**10011 ± 25 µg/mL** EDTA NIST SRM 928 Lot Number: 928
Assay Method #2	**9997 ± 50 µg/mL** ICP Assay NIST SRM 3167a Lot Number: 190730
Assay Method #3	**9984 ± 31 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.004600	M	Eu		0.009037	M	Na		0.086360	M	Se	<	0.005200	M	Zn		0.030125
M	Al		0.014862	O	Fe		0.002410	M	Nb	<	0.000570	O	Si		0.024100	O	Zr	<	0.002600
M	As	<	0.003500	M	Ga	<	0.000570	M	Nd		0.000923	M	Sm		0.000461				
M	Au	<	0.001700	M	Gd	<	0.003500	M	Ni	<	0.005700	M	Sn	<	0.002300				
O	B		0.002209	M	Ge	<	0.005200	M	Os	<	0.001200	M	Sr	<	0.004600				
O	Ba	<	0.002500	M	Hf	<	0.000570	n	P	<		M	Ta	<	0.000570				
O	Be	<	0.001400	M	Hg	<	0.000570	M	Pb		0.005020	M	Tb		0.001044				
M	Bi	<	0.003500	M	Ho		0.009037	M	Pd	<	0.005100	M	Te	<	0.002300				
O	Ca		0.009841	M	In	<	0.002300	M	Pr	<	0.002300	M	Th	<	0.000570				
M	Cd	<	0.000570	M	Ir	<	0.000570	M	Pt	<	0.000570	M	Ti	<	0.003500				
M	Ce	<	0.002300	O	K		0.018677	M	Rb	<	0.000570	M	Tl	<	0.000570				
M	Co	<	0.000570	M	La		0.000461	M	Re	<	0.000570	M	Tm	<	0.003500				
M	Cr	<	0.004000	O	Li	<	0.009300	M	Rh	<	0.008000	M	U	<	0.000570				
M	Cs	<	0.000570	M	Lu		0.000582	M	Ru	<	0.000570	M	V		0.001265				
M	Cu		0.002610	O	Mg		0.001486	n	S	<		M	W	<	0.002300				
M	Dy		0.003815	M	Mn		0.000582	M	Sb		0.005422	s	Y	<					
M	Er		0.003615	M	Mo	<	0.005700	M	Sc	<	0.001200	M	Yb		0.001827				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 88.91 +3 6 Y(OH)(H2O)x+2

Chemical Compatibility -Soluble in HCl, H2SO4 and HNO3. Avoid HF, H3PO4 and neutral to basic media. Stable with most metals and inorganic anions forming an insoluble carbonate, oxide, oxalate, and fluoride. Avoid mixing with elements / solutions containing moderate amounts of fluoride.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.

Y Containing Samples (Preparation and Solution) - Metal (Soluble in acids); Oxide (Dissolve by heating in H2O/ HNO3); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Dry ash and dissolve in 1:1 H2O / HCl or HNO3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 89 amu	0.8 ppt	N/A	73Ge16O, 178Hf+2
ICP-OES 360.073 nm	0.005 / 0.000036 µg/mL	1	Ce, Th
ICP-OES 371.030 nm	0.004 / 0.00007 µg/mL	1	Ce
ICP-OES 377.433 nm	0.005 / 0.0009 µg/mL	1	Ta, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 20, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- February 20, 2029

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Custom Processing Supervisor

Certificate Approved By:

Muzzammil Khan
Stock Laboratory Supervisor

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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MS985
R: 6/14/24

1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 863.01
ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGIN10
Lot Number:	U2-IN729349
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Indium
Starting Material:	Indium Metal
Starting Material Lot#:	2511
Starting Material Purity:	99.9995%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10022 ± 30 µg/mL

Density: 1.044 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	**10021 ± 56 µg/mL** ICP Assay NIST SRM 3124a Lot Number: 110516
Assay Method #2	**10035 ± 25 µg/mL** EDTA NIST SRM 928 Lot Number: 928
Assay Method #3	**10001 ± 33 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000760	M	Eu	<	0.000760	O	Na		0.012771	M	Se	<	0.023000	M	Zn	<	0.006100
M	Al		0.003385	O	Fe		0.004462	M	Nb	<	0.000760	O	Si		0.024619	M	Zr	<	0.000760
M	As	<	0.004600	M	Ga	<	0.000760	M	Nd	<	0.000760	M	Sm	<	0.000760				
M	Au	<	0.002300	M	Gd	<	0.000760	O	Ni	<	0.005100	M	Sn	<	0.000760				
O	B		0.003692	M	Ge	<	0.001600	M	Os	<	0.000760	O	Sr	<	0.000610				
M	Ba	<	0.001600	M	Hf	<	0.000760	n	P	<		M	Ta	<	0.000760				
O	Be	<	0.000130	M	Hg	<	0.003100	M	Pb		0.001400	M	Tb	<	0.000760				
M	Bi	<	0.000760	M	Ho	<	0.000760	M	Pd	<	0.001600	M	Te	<	0.000760				
O	Ca		0.004616	s	In	<		M	Pr	<	0.000760	M	Th	<	0.000760				
M	Cd	<	0.000760	M	Ir	<	0.000760	M	Pt	<	0.000760	O	Ti	<	0.001100				
M	Ce	<	0.000760	O	K		0.007078	M	Rb	<	0.000760	M	Tl	<	0.000760				
M	Co	<	0.000760	M	La	<	0.000760	M	Re	<	0.000760	M	Tm	<	0.000760				
O	Cr	<	0.001300	O	Li	<	0.000130	M	Rh	<	0.000760	M	U	<	0.000760				
M	Cs	<	0.000760	M	Lu	<	0.000760	M	Ru	<	0.000760	M	V	<	0.001600				
M	Cu	<	0.003800	O	Mg		0.000707	n	S	<		M	W	<	0.001600				
M	Dy	<	0.000760	O	Mn		0.000149	M	Sb	<	0.000760	M	Y	<	0.000760				
M	Er	<	0.000760	M	Mo	<	0.002300	M	Sc	<	0.000760	M	Yb	<	0.000760				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 114.82 +3 6 In(H2O)6+3

Chemical Compatibility -Soluble in HCl, HNO3, and H2SO4. Avoid neutral and basic media. Stable with most metals and inorganic anions. The oxalate, sulfide, carbonate, hydroxide and phosphate are insoluble in water.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.

In Containing Samples (Preparation and Solution) -Metal (Best dissolved in HCl / HNO3); Oxide (Soluble in mineral acids); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Sulfuric/peroxide digestion or dry ash and dissolution in dilute HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 115 amu	1 ppt	n/a	115Sn, 99Ru16O
ICP-OES 158.583 nm	0.05 / 0.002 µg/mL	1	
ICP-OES 230.606 nm	0.1 / 0.03 µg/mL	1	Ni, Os
ICP-OES 325.609 nm	0.2 / 0.05 µg/mL	1	Mn, Mo, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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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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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CLPP-CAL-1
Lot Number:	T2-MEB714417
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	5 000 µg/mL ea:
	Calcium, Potassium,
	Magnesium, Sodium,
	2 000 µg/mL ea:
	Aluminum, Barium,
	1 000 µg/mL ea:
	Iron,
	500 µg/mL ea:
	Nickel, Vanadium,
	Zinc, Cobalt,
	Manganese,
	250 µg/mL ea:
	Silver, Copper,
	200 µg/mL ea:
	Chromium,
	50 µg/mL ea:
	Beryllium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	2 000 ± 7 µg/mL	Barium, Ba	2 000 ± 9 µg/mL
Beryllium, Be	50.00 ± 0.26 µg/mL	Calcium, Ca	5 000 ± 22 µg/mL
Chromium, Cr	200.0 ± 1.0 µg/mL	Cobalt, Co	500.0 ± 2.4 µg/mL
Copper, Cu	250.0 ± 1.0 µg/mL	Iron, Fe	1 000 ± 4 µg/mL
Magnesium, Mg	5 000 ± 20 µg/mL	Manganese, Mn	500.0 ± 2.0 µg/mL
Nickel, Ni	500.0 ± 2.2 µg/mL	Potassium, K	5 000 ± 19 µg/mL
Silver, Ag	250.0 ± 1.1 µg/mL	Sodium, Na	5 000 ± 18 µg/mL
Vanadium, V	499.7 ± 2.2 µg/mL	Zinc, Zn	500.0 ± 2.2 µg/mL

Density: 1.118 g/mL (measured at 20 ± 4 °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
Be	Calculated		See Sec. 4.2
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cr	Calculated		See Sec. 4.2
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
V	IC Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

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

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Note: This solution contains Silver (Ag), please refer to our Sample Preparation Guide for more information.

https://www.inorganicventures.com/sample-preparation-guide/samples-containing-silver

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 27, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- January 27, 2027

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certificate of Analysis

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CLPP-CAL-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"

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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

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:

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Manager, Quality Control

Certifying Officer:

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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) HNO3 3% (v/v) HF
Value / Analyte(s):	1 000 µg/mL ea: Boron, Molybdenum, Silicon, Tin, Titanium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Boron, B	1 000 ± 5 µg/mL	Molybdenum, Mo	1 000 ± 5 µg/mL
Silicon, Si	1 000 ± 7 µg/mL	Tin, Sn	1 000 ± 5 µg/mL
Titanium, Ti	1 000 ± 6 µg/mL		

Density: 1.032 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
B	ICP Assay	3107	190605
B	Calculated		See Sec. 4.2
Mo	ICP Assay	traceable to 3134	U2-MO739068
Si	ICP Assay	Traceable to 3150	S2-SI702546
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	traceable to 3162a	T2-TI725816

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 12, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- August 12, 2029

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Joseph Burns
Custom VS Manager

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certificate of Analysis

M6074
M6075
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inorganicventures.com

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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 (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

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

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u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

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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

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- 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

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- QSR Certificate Number QSR-1034

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- 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

September 06, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- September 06, 2029

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

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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 → 1/13/25

M 6127

			Lot #	
Part Number:	**58112**	**Solvent:**	24012496	Nitric Acid
Lot Number:	**112124**			
Description:	**Magnesium (Mg)**	2%	40.0 (mL)	Nitric Acid
Expiration Date:	112127			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**10000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	2000.07	0.100	Flask Uncertainty	

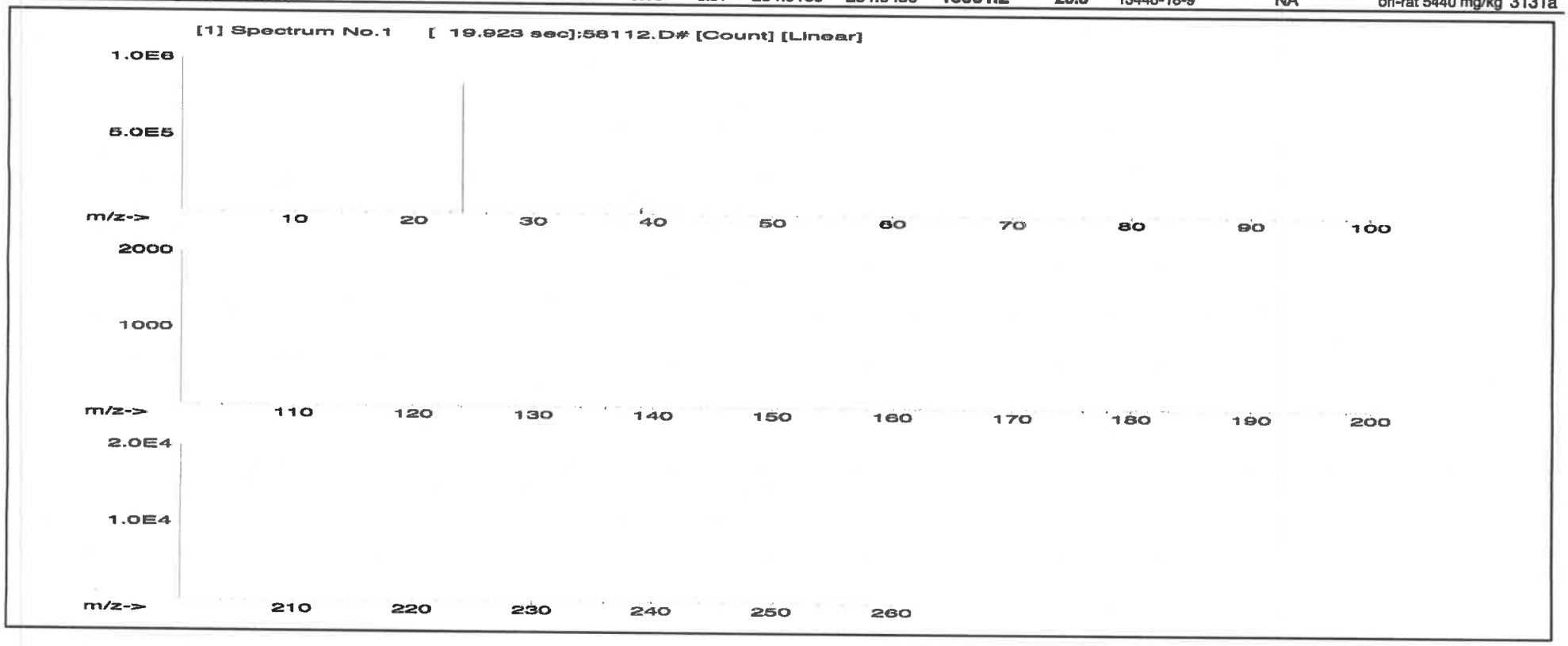
Giovanni Esposito

Formulated By:	Giovanni Esposito	112124

Pedro Rentas

Reviewed By:	Pedro L. Rentas	112124

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Magnesium nitrate hexahydrate (Mg)	IN030	MGD052023A1	10000	99.999	0.10	8.51	234.9183	234.9459	**10001.2**	**20.0**	13446-18-9	NA	orl-rat 5440 mg/kg	3131a



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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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	

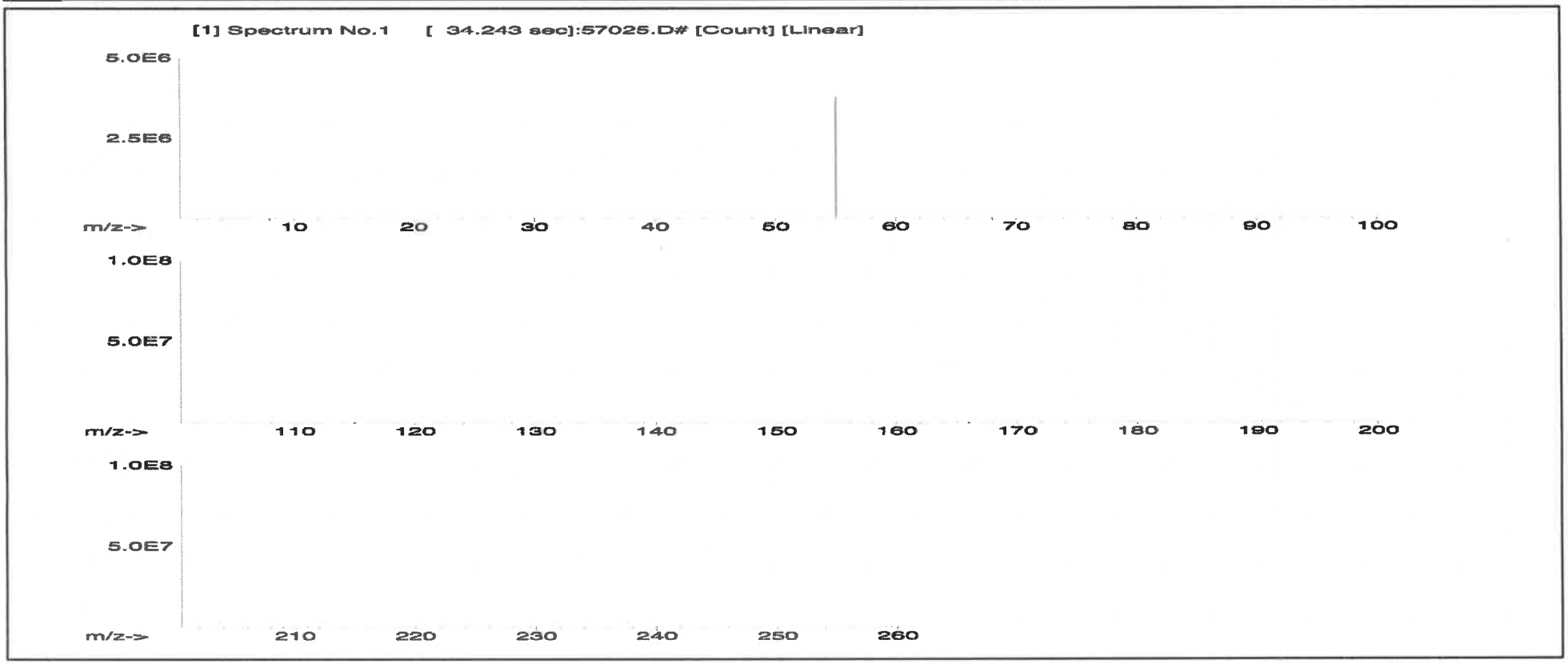
Giovanni Esposito

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).

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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

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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 (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

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u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000310	M	Eu	<	0.000310	O	Na		0.001656	M	Se	<	0.022000	M	Zn	<	0.002500
M	Al		0.010787	M	Fe	<	0.027000	M	Nb	<	0.001300	s	Si	<		O	Zr	<	0.001900
M	As	<	0.001900	M	Ga	<	0.001300	M	Nd	<	0.000310	M	Sm	<	0.000310				
M	Au	<	0.000910	M	Gd	<	0.000310	M	Ni	<	0.005500	M	Sn		0.000096				
M	B		0.016180	M	Ge	<	0.001900	M	Os	<	0.000610	O	Sr		0.000092				
M	Ba		0.000096	M	Hf		0.000423	i	P	<		M	Ta		0.002542				
O	Be	<	0.000570	M	Hg	<	0.000610	M	Pb	<	0.000310	M	Tb	<	0.000310				
M	Bi	<	0.000310	M	Ho	<	0.000610	M	Pd	<	0.000610	M	Te	<	0.000910				
O	Ca		0.011557	M	In	<	0.000310	M	Pr	<	0.000310	M	Th	<	0.001900				
M	Cd	<	0.000310	M	Ir	<	0.000310	M	Pt	<	0.000310	M	Ti		0.001078				
M	Ce	<	0.000610	O	K		0.000577	M	Rb	<	0.009100	M	Tl	<	0.000310				
M	Co	<	0.001600	M	La	<	0.000310	M	Re	<	0.000310	M	Tm	<	0.000310				
M	Cr	<	0.010000	O	Li	<	0.000460	M	Rh	<	0.000310	M	U	<	0.000310				
M	Cs	<	0.000310	M	Lu	<	0.000310	M	Ru	<	0.000310	O	V	<	0.001300				
M	Cu	<	0.002500	O	Mg		0.001348	O	S	<	0.570000	M	W	<	0.001900				
M	Dy	<	0.000310	M	Mn	<	0.002500	M	Sb	<	0.000310	M	Y	<	0.000310				
M	Er	<	0.000310	M	Mo	<	0.000310	O	Sc	<	0.000590	M	Yb	<	0.000310				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 28.09 +4 6 Si(OH)x(F)y2-

Chemical Compatibility -Soluble in HCl, HF, H3PO4 H2SO4 and HNO3 as the Si(OH)x(F)y2-. Avoid neutral to basic media. Unstable at ppm levels with metals that would pull F- away (i.e. Do not mix with Alkaline or Rare Earths, or high levels of transition elements unless they are fluorinated. Stable with most inorganic anions with a tendency to hydrolyze forming silicic acid (silicic acid is soluble up to ∼100 ppm in water) in all dilute acids except HF.

Stability - 2-100 ppb levels - stability unknown - (alone or mixed with all other metals) as the Si(OH)x(F)y2-. 1-10,000 ppm single element solutions as the Si(OH)x(F)y2- chemically stable for years in 2-5 % HNO3 / trace HF in a LDPE container.

Si Containing Samples (Preparation and Solution) -Metal (Soluble in 1:1:1 H2O / HF / HNO3); Oxide - SiO2, amorphic (dissolve by heating in 1:1:1 H2O / HF / HNO3); Oxide - quartz (fuse in Pt0 with Na2CO3); Geological Samples(fuse in Pt0with Na2CO3 followed by HCl solution of the fuseate); Organic Matrices containing silicates and non volatile silicon compounds (dry ash at 4500C in Pt0 and dissolve by gently warming with 1:1:1 H2O / HF / H2SO4 or fuse / ash with Na2CO3 and dissolve fuseate with HCl / H2O); Silicone Oils - dimethyl silicones depolymerize to form volatile monomer units when heated (Measure directly in alcoholic KOH / xylene mixture where sample is treated first with the KOH at 60-1000C to "unzip" the Si- O-Si polymeric structure or digest with conc. H2SO4 / H2O2 followed by cooling and dissolution of the dehydrated silica with HF.) Note that the direct analysis of silicone oils in an organic solvent will result in false high results due to high vapor pressure of volatile monomer units like hexamethylcyclotrisiloxane. The KOH forms the K2+Si(CH3)2O= salt which is not volatile at room temperature.

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 28 amu	4000 - 8000 ppt	N/A	N2, 12C16O
ICP-OES 212.412 nm	0.02/0.01 µg/mL	1	Hf, Os, Mo, Ta
ICP-OES 251.611 nm	0.012/0.003 µg/mL	1	Ta, U, Zn, Th
ICP-OES 288.158 nm	0.03/0.004 µg/mL	1	Ta, Ce, Cr, Cd, Th

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 10, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **July 10, 2029**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Custom Processing Supervisor

Certificate Approved By:

Muzzammil Khan
Stock Laboratory Supervisor

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

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AR-1539 Certificate Number
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CERTIFIED WEIGHT REPORT:

R-> 1/13/25

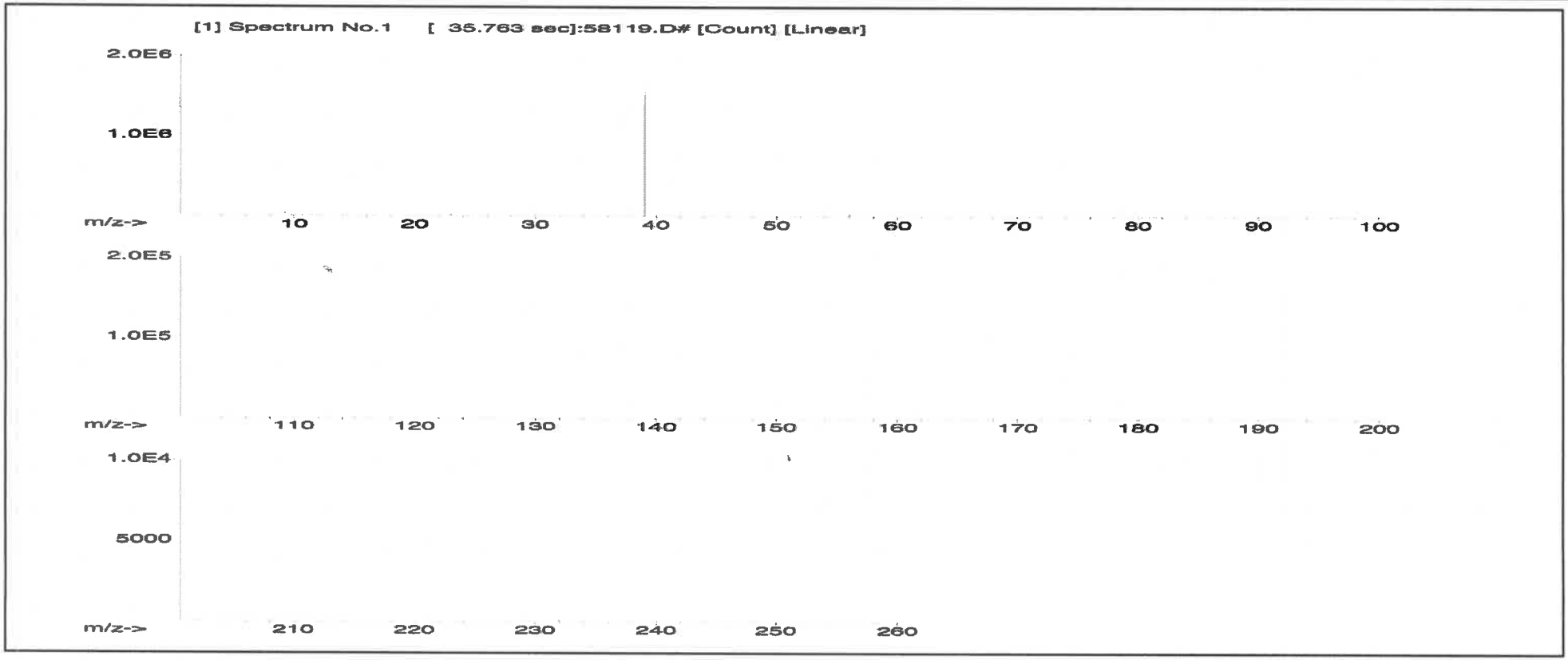
Part Number:	**57119**		**Lot #**		
Lot Number:	**103024**	**Solvent:**	24002546	Nitric Acid	
Description:	**Potassium (K)**	2%	80.0 (mL)	Nitric Acid	
Expiration Date:	103027				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**10000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	4000.1	0.15	Flask Uncertainty		

M6141
M6142
M6143

Giovanni Esposito

Formulated By:	Giovanni Esposito	103024
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).

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www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

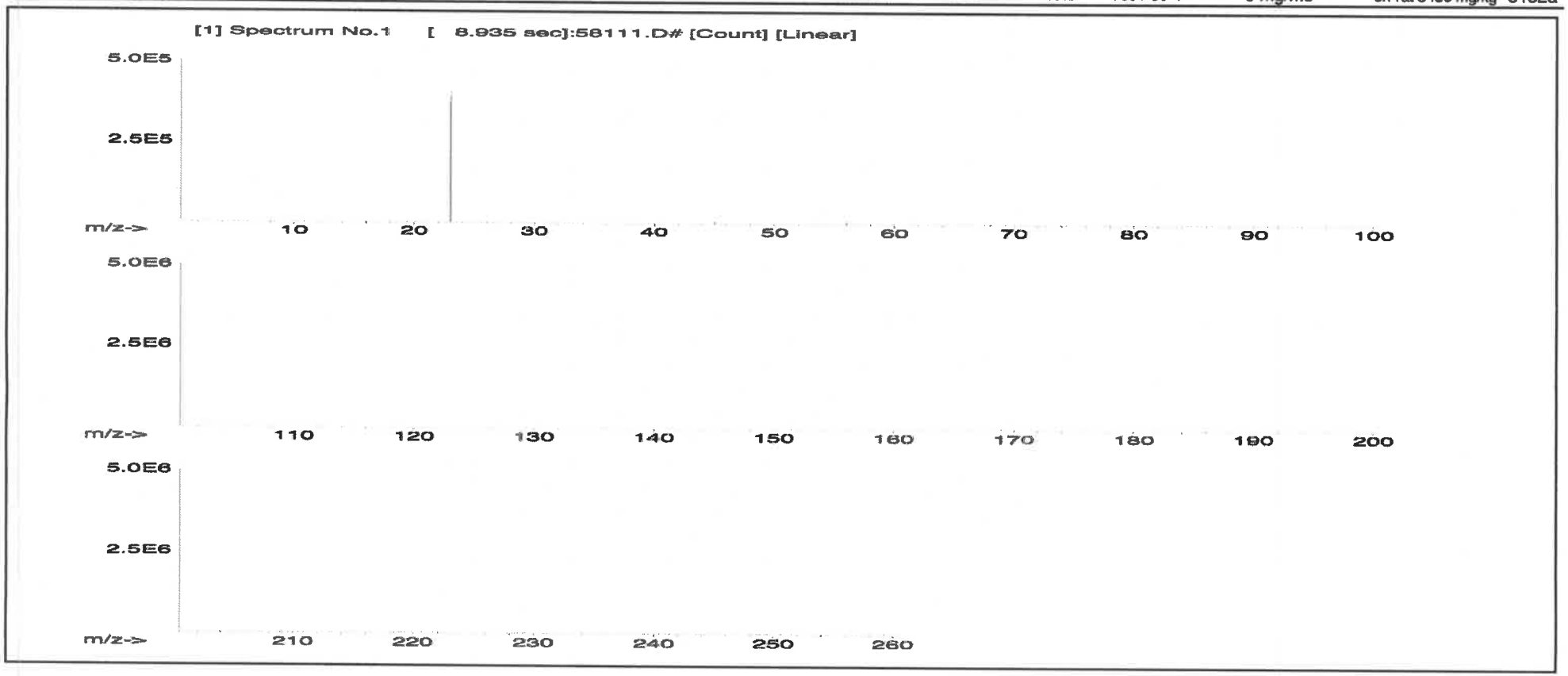
R->1/13/25

M6144

			Lot #	
Part Number:	**58111**	**Solvent:**	24002546	Nitric Acid
Lot Number:	**072424**			
Description:	**Sodium (Na)**	2%	80.0 (mL)	Nitric Acid
Expiration Date:	072427			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**10000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	4000.2	0.10	Flask Uncertainty	

Formulated By:	Benson Chan	072424
Reviewed By:	Pedro L. Rentas	072424

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Sodium nitrate (Na)	IN036	NAV012015I1	10000	99.999	0.10	26.9	148.7096	######	**10000.0**	**20.0**	7631-99-4	5 mg/m3	orl-rat 3430 mg/kg	3152a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Sc	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	T	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

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CERTIFIED WEIGHT REPORT:

Part Number: 58030
Lot Number: 121724
Description: Zinc (Zn)

R → 1/13/25

M6145

Expiration Date: 121727
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

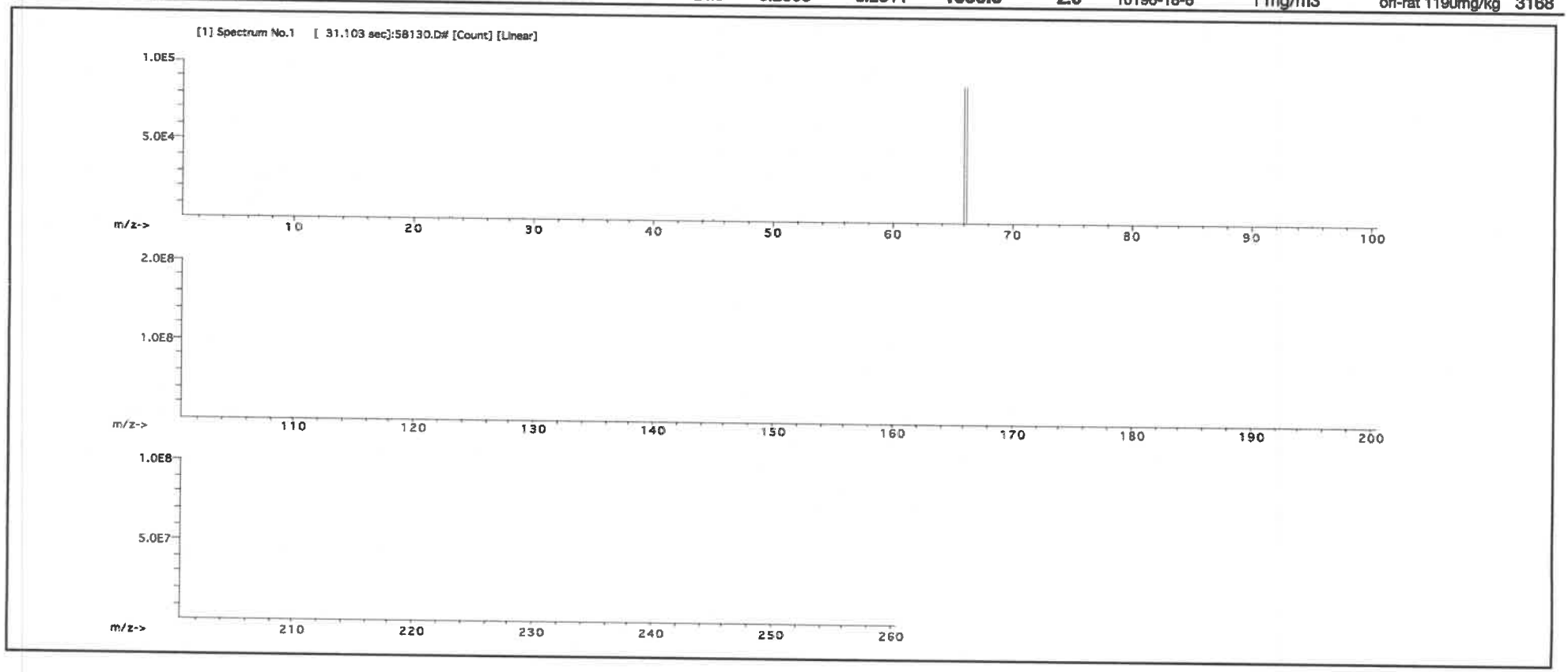
		Lot #	
Solvent:	24012496	Nitric Acid	
	2%	40.0 (mL)	Nitric Acid

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	ori-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.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
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* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

M6151

R→ 1/15/25

Material No.: 9530-33
Batch No.: 22G2862015
Manufactured Date: 2022-06-15
Retest Date: 2027-06-14
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
ACS – Assay (as HCl) (by acid-base titrn)	36.5 – 38.0 %	37.9 %
ACS – Color (APHA)	≤ 10	5
ACS – Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS – Specific Gravity at 60°/60°F	1.185 – 1.192	1.191
ACS – Bromide (Br)	≤ 0.005 %	< 0.005 %
ACS – Extractable Organic Substances	≤ 5 ppm	< 1 ppm
ACS – Free Chlorine (as Cl_2)	≤ 0.5 ppm	< 0.5 ppm
Phosphate (PO_4)	≤ 0.05 ppm	< 0.03 ppm
Sulfate (SO_4)	≤ 0.5 ppm	< 0.3 ppm
Sulfite (SO_3)	≤ 0.8 ppm	0.3 ppm
Ammonium (NH_4)	≤ 3 ppm	< 1 ppm
Trace Impurities – Arsenic (As)	≤ 0.010 ppm	< 0.003 ppm
Trace Impurities – Aluminum (Al)	≤ 10.0 ppb	1.3 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 3.0 ppb
Trace Impurities – Barium (Ba)	≤ 1.0 ppb	0.2 ppb
Trace Impurities – Beryllium (Be)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Bismuth (Bi)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Boron (B)	≤ 20.0 ppb	< 5.0 ppb
Trace Impurities – Cadmium (Cd)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities – Calcium (Ca)	≤ 50.0 ppb	163.0 ppb
Trace Impurities – Chromium (Cr)	≤ 1.0 ppb	0.7 ppb
Trace Impurities – Cobalt (Co)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities – Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities – Gallium (Ga)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Germanium (Ge)	≤ 3.0 ppb	< 2.0 ppb
Trace Impurities – Gold (Au)	≤ 4.0 ppb	0.6 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities – Iron (Fe)	≤ 15 ppb	6 ppb

>>> Continued on page 2 >>>

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

Material No.: 9530-33
Batch No.: 22G2862015

Test	Specification	Result
Trace Impurities - Lead (Pb)	≤ 1.0 ppb	< 0.5 ppb
Trace Impurities - Lithium (Li)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Magnesium (Mg)	≤ 10.0 ppb	2.9 ppb
Trace Impurities - Manganese (Mn)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities - Mercury (Hg)	≤ 0.5 ppb	0.1 ppb
Trace Impurities - Molybdenum (Mo)	≤ 10.0 ppb	< 3.0 ppb
Trace Impurities - Nickel (Ni)	≤ 4.0 ppb	< 0.3 ppb
Trace Impurities - Niobium (Nb)	≤ 1.0 ppb	0.8 ppb
Trace Impurities - Potassium (K)	≤ 9.0 ppb	< 2.0 ppb
Trace Impurities - Selenium (Se), For Information Only		< 1.0 ppb
Trace Impurities - Silicon (Si)	≤ 100.0 ppb	< 10.0 ppb
Trace Impurities - Silver (Ag)	≤ 1.0 ppb	0.5 ppb
Trace Impurities - Sodium (Na)	≤ 100.0 ppb	2.3 ppb
Trace Impurities - Strontium (Sr)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Tantalum (Ta)	≤ 1.0 ppb	1.6 ppb
Trace Impurities - Thallium (Tl)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities - Tin (Sn)	≤ 5.0 ppb	4.0 ppb
Trace Impurities - Titanium (Ti)	≤ 1.0 ppb	1.5 ppb
Trace Impurities - Vanadium (V)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Zinc (Zn)	≤ 5.0 ppb	0.8 ppb
Trace Impurities - Zirconium (Zr)	≤ 1.0 ppb	0.3 ppb

>>> Continued on page 3 >>>

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

Material No.: 9530-33
Batch No.: 22G2862015

Test	Specification	Result

For Laboratory,Research,or Manufacturing Use
Product Information (not specifications):
Appearance (clear, fuming liquid)
Meets ACS Specifications
Storage Condition: Store below 25 °C.

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

James T Ethier

Jamie Ethier
Vice President Global Quality

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

R-02102/2025

M-6158

Material No.: 9606-03
Batch No.: 24D1062002
Manufactured Date: 2024-03-26
Retest Date: 2029-03-25
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (HNO_3)	69.0 - 70.0 %	69.7 %
Appearance	Passes Test	Passes Test
Color (APHA)	≤ 10	5
Residue after Ignition	≤ 2 ppm	1 ppm
Chloride (Cl)	≤ 0.08 ppm	< 0.03 ppm
Phosphate (PO_4)	≤ 0.10 ppm	< 0.03 ppm
Sulfate (SO_4)	≤ 0.2 ppm	< 0.2 ppm
Trace Impurities - Aluminum (Al)	≤ 40.0 ppb	< 1.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities - Barium (Ba)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Beryllium (Be)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Bismuth (Bi)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Boron (B)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities - Cadmium (Cd)	≤ 50 ppb	< 1 ppb
Trace Impurities - Calcium (Ca)	≤ 50.0 ppb	2.3 ppb
Trace Impurities - Chromium (Cr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities - Cobalt (Co)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Copper (Cu)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Gallium (Ga)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Germanium (Ge)	≤ 20 ppb	< 10 ppb
Trace Impurities - Gold (Au)	≤ 20 ppb	< 5 ppb
Heavy Metals (as Pb)	≤ 100 ppb	100 ppb
Trace Impurities - Iron (Fe)	≤ 40.0 ppb	< 1.0 ppb
Trace Impurities - Lead (Pb)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Lithium (Li)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Magnesium (Mg)	≤ 20 ppb	< 1 ppb
Trace Impurities - Manganese (Mn)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Nickel (Ni)	≤ 20.0 ppb	< 5.0 ppb

>>> Continued on page 2 >>>

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24D1062002

Test	Specification	Result
Trace Impurities - Niobium (Nb)	≤ 50.0 ppb	< 1.0 ppb
Trace Impurities - Potassium (K)	≤ 50 ppb	16 ppb
Trace Impurities - Silicon (Si)	≤ 50 ppb	< 10 ppb
Trace Impurities - Silver (Ag)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities - Sodium (Na)	≤ 150.0 ppb	< 5.0 ppb
Trace Impurities - Strontium (Sr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities - Tantalum (Ta)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities - Thallium (Tl)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities - Tin (Sn)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Titanium (Ti)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Vanadium (V)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Zinc (Zn)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities - Zirconium (Zr)	≤ 10.0 ppb	< 1.0 ppb
Particle Count - 0.5 µm and greater	≤ 60 par/ml	10 par/ml
Particle Count - 1.0 µm and greater	≤ 10 par/ml	3 par/ml

>>> Continued on page 3 >>>

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24D1062002

Test	Specification	Result

For Microelectronic Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Jamie Croak
Director Quality Operations, Bioscience Production

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

m-6162

R. Date :- 04/27/2025

Material No.: 9606-03
Batch No.: 24H0162012
Manufactured Date: 2024-06-28
Retest Date: 2029-06-27
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (HNO_3)	69.0 – 70.0 %	69.7 %
Appearance	Passes Test	Passes Test
Color (APHA)	≤ 10	5
Residue after Ignition	≤ 2 ppm	< 1 ppm
Chloride (Cl)	≤ 0.08 ppm	0.03 ppm
Phosphate (PO_4)	≤ 0.10 ppm	< 0.03 ppm
Sulfate (SO_4)	≤ 0.2 ppm	< 0.2 ppm
Trace Impurities – Aluminum (Al)	≤ 40.0 ppb	< 1.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities – Barium (Ba)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Beryllium (Be)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Bismuth (Bi)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Boron (B)	≤ 10.0 ppb	0.1 ppb
Trace Impurities – Cadmium (Cd)	≤ 50 ppb	< 1 ppb
Trace Impurities – Calcium (Ca)	≤ 50.0 ppb	0.3 ppb
Trace Impurities – Chromium (Cr)	≤ 30.0 ppb	0.1 ppb
Trace Impurities – Cobalt (Co)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Copper (Cu)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Gallium (Ga)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Germanium (Ge)	≤ 20 ppb	< 1 ppb
Trace Impurities – Gold (Au)	≤ 20 ppb	< 1 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities – Iron (Fe)	≤ 40.0 ppb	< 1.0 ppb
Trace Impurities – Lead (Pb)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Lithium (Li)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Magnesium (Mg)	≤ 20 ppb	< 1 ppb
Trace Impurities – Manganese (Mn)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Nickel (Ni)	≤ 20.0 ppb	< 1.0 ppb

>>> Continued on page 2 >>>

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

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	QCP-CICV-1
Lot Number:	V2-MEB744107
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	2 500 µg/mL ea: Calcium, Potassium, Magnesium, Sodium, 1 000 µg/mL ea: Aluminum, Barium, 500 µg/mL ea: Iron, 250 µg/mL ea: Nickel, Vanadium, Zinc, Cobalt, Manganese, 125 µg/mL ea: Silver, Copper, 100 µg/mL ea: Chromium, 25 µg/mL ea: Beryllium

Second Source: Whenever possible, this solution was manufactured from a second set of concentrates in our manufacturing facility.

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	**1 000 ± 4 µg/mL**	**Barium, Ba**	**1 000 ± 6 µg/mL**
Beryllium, Be	**24.98 ± 0.12 µg/mL**	**Calcium, Ca**	**2 500 ± 8 µg/mL**
Chromium, Cr	**99.9 ± 0.6 µg/mL**	**Cobalt, Co**	**250.2 ± 1.2 µg/mL**
Copper, Cu	**125.0 ± 0.5 µg/mL**	**Iron, Fe**	**500.0 ± 2.2 µg/mL**
Magnesium, Mg	**2 500 ± 11 µg/mL**	**Manganese, Mn**	**249.9 ± 1.1 µg/mL**
Nickel, Ni	**250.0 ± 1.2 µg/mL**	**Potassium, K**	**2 500 ± 11 µg/mL**
Silver, Ag	**125.0 ± 0.6 µg/mL**	**Sodium, Na**	**2 500 ± 11 µg/mL**
Vanadium, V	**250.0 ± 1.1 µg/mL**	**Zinc, Zn**	**249.9 ± 1.1 µg/mL**

Density: 1.081 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	120618
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	3152a	200413
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
V	ICP Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Note: This solution contains Silver (Ag), please refer to our Sample Preparation Guide for more information (https://www.inorganicventures.com/sample-preparation-guide/samples-containing-silver)

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

May 22, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **May 22, 2029**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

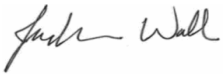
12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Justin Dirico
Stock Processing Supervisor

Certificate Approved By:

Jodie Wall
Stock VSM Coordinator



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	QCP-CICV-2
Lot Number:	U2-MEB733713
Matrix:	3% (w/v) Tartaric acid 1% (v/v) HNO3
Value / Analyte(s):	500 µg/mL ea: Antimony

Second Source: Whenever possible, this solution was manufactured from a second set of concentrates in our manufacturing facility.

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	**500.0 ± 2.8 µg/mL**		

Density: 1.017 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Sb	ICP Assay	3102a	140911

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$
w_i = the weighting factors for each method calculated using the inverse square of the variance:
$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2
$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method
u_{bb} = bottle to bottle homogeneity standard uncertainty
u_{lts} = long term stability standard uncertainty (storage)
u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with
$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2
$u_{char\ a}$ = the errors from characterization
u_{bb} = bottle to bottle homogeneity standard uncertainty
u_{lts} = long term stability standard uncertainty (storage)
u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 01, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **June 01, 2028**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

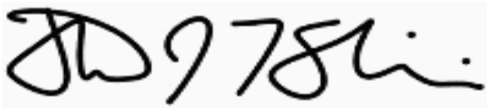
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	QCP-CICV-3
Lot Number:	V2-MEB749572
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	500 µg/mL ea: Arsenic, Lead, Selenium, Thallium, 250 µg/mL ea: Cadmium

Second Source: Whenever possible, this solution was manufactured from a second set of concentrates in our manufacturing facility.

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Arsenic, As	**500.0 ± 3.1 µg/mL**	**Cadmium, Cd**	**250.1 ± 1.1 µg/mL**
Lead, Pb	**500.0 ± 2.3 µg/mL**	**Selenium, Se**	**500.0 ± 3.2 µg/mL**
Thallium, Tl	**500.0 ± 3.0 µg/mL**		

Density: 1.040 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
As	ICP Assay	3103a	100818
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Tl	ICP Assay	3158	151215

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 02, 2025

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 02, 2030**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

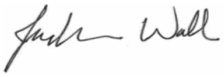
12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Justin Dirico
Stock Processing Supervisor

Certificate Approved By:

Jodie Wall
Stock VSM Coordinator



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Hydrogen Peroxide, 30%
CMOS
(Stabilized)

M-6170

R.Date . 8-05/20/2025

avantor™ | J.T.Baker®

Material No.: 2190-03
Batch No.: 24D1961001

Test	Specification	Result
Trace Impurities – Manganese (Mn)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Molybdenum (Mo)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Nickel (Ni)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Niobium (Nb)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Potassium (K)	≤ 600.0 ppb	176.7 ppb
Trace Impurities – Silicon (Si)	≤ 100.0 ppb	< 10.0 ppb
Trace Impurities – Silver (Ag)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Sodium (Na)	≤ 100.0 ppb	< 5.0 ppb
Trace Impurities – Strontium (Sr)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Tantalum (Ta)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Thallium (Tl)	≤ 50.0 ppb	< 5.0 ppb
Trace Impurities – Tin (Sn)	190.0 – 500.0 ppb	272.3 ppb
Trace Impurities – Titanium (Ti)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Vanadium (V)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Zinc (Zn)	≤ 50 ppb	< 1 ppb
Trace Impurities – Zirconium (Zr)	≤ 10.0 ppb	< 1.0 ppb
Particle Count – 0.2 µm and greater	≤ 1175 par/ml	202 par/ml
Particle Count – 0.5 µm and greater	≤ 100 par/ml	33 par/ml

>>> Continued on page 3 >>>

Hydrogen Peroxide, 30%
CMOS
(Stabilized)

avantor™ | J.T.Baker®

Material No.: 2190-03
Batch No.: 24D1961001

Test	Specification	Result

For Microelectronic Use

Country of Origin: USA
Packaging Site: Paris Mfg Ctr & DC

Michelle Bales
Sr. Manager, Quality Assurance

Hydrogen Peroxide, 30%
CMOS
(Stabilized)

avantor™ | J.T.Baker®

Material No.: 2190-03
Batch No.: 24D1961001
Manufactured Date: 2024-04-17
Expiration Date: 2025-10-16
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (H_2O_2)	30.0 - 32.0 %	31.6 %
Color (APHA)	≤ 10	< 5
Free Acid (µeq/g)	≤ 0.2	0.1
Residue after Evaporation	≤ 10 ppm	2 ppm
Ammonium (NH_4)	≤ 3 ppm	< 3 ppm
Chloride (Cl)	≤ 0.2 ppm	< 0.2 ppm
Nitrate (NO_3)	≤ 2 ppm	< 2 ppm
Phosphate (PO_4)	≤ 1 ppm	1 ppm
Sulfate (SO_4)	≤ 3 ppm	< 3 ppm
Trace Impurities - Aluminum (Al)	≤ 70.0 ppb	< 5.0 ppb
Arsenic and Antimony (as As)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities - Barium (Ba)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities - Beryllium (Be)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Bismuth (Bi)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Boron (B)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities - Cadmium (Cd)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Calcium (Ca)	≤ 50.0 ppb	< 1.0 ppb
Trace Impurities - Chromium (Cr)	≤ 20.0 ppb	1.5 ppb
Trace Impurities - Cobalt (Co)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Copper (Cu)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Gallium (Ga)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities - Germanium (Ge)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities - Gold (Au)	≤ 10.0 ppb	< 5.0 ppb
Heavy Metals (as Pb)	≤ 500.0 ppb	< 250.0 ppb
Trace Impurities - Iron (Fe)	≤ 50.0 ppb	4.6 ppb
Trace Impurities - Lead (Pb)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities - Lithium (Li)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Magnesium (Mg)	≤ 10.0 ppb	< 1.0 ppb

>>> Continued on page 2 >>>

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M6030

R: 8/5/24

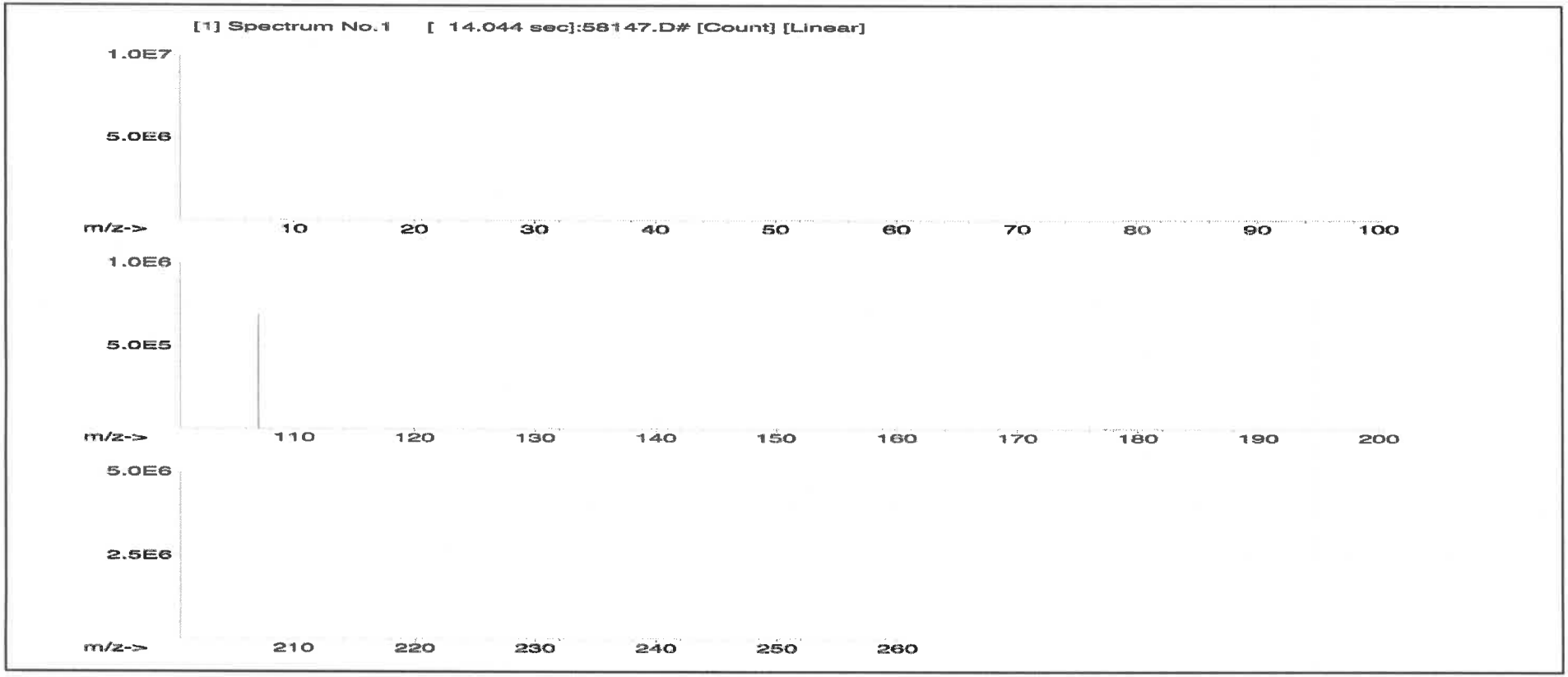
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number:	**57047**			**Lot #**	
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:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 10/18/24

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

MG146

		Lot #	Solvent:		
Part Number:	**57051**	24002546	Nitric Acid		
Lot Number:	**071724**				
Description:	**Antimony (Sb)**	2.0%	40.0 (mL)	Nitric Acid	
Expiration Date:	071727				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	2000.26	0.058	Flask Uncertainty		

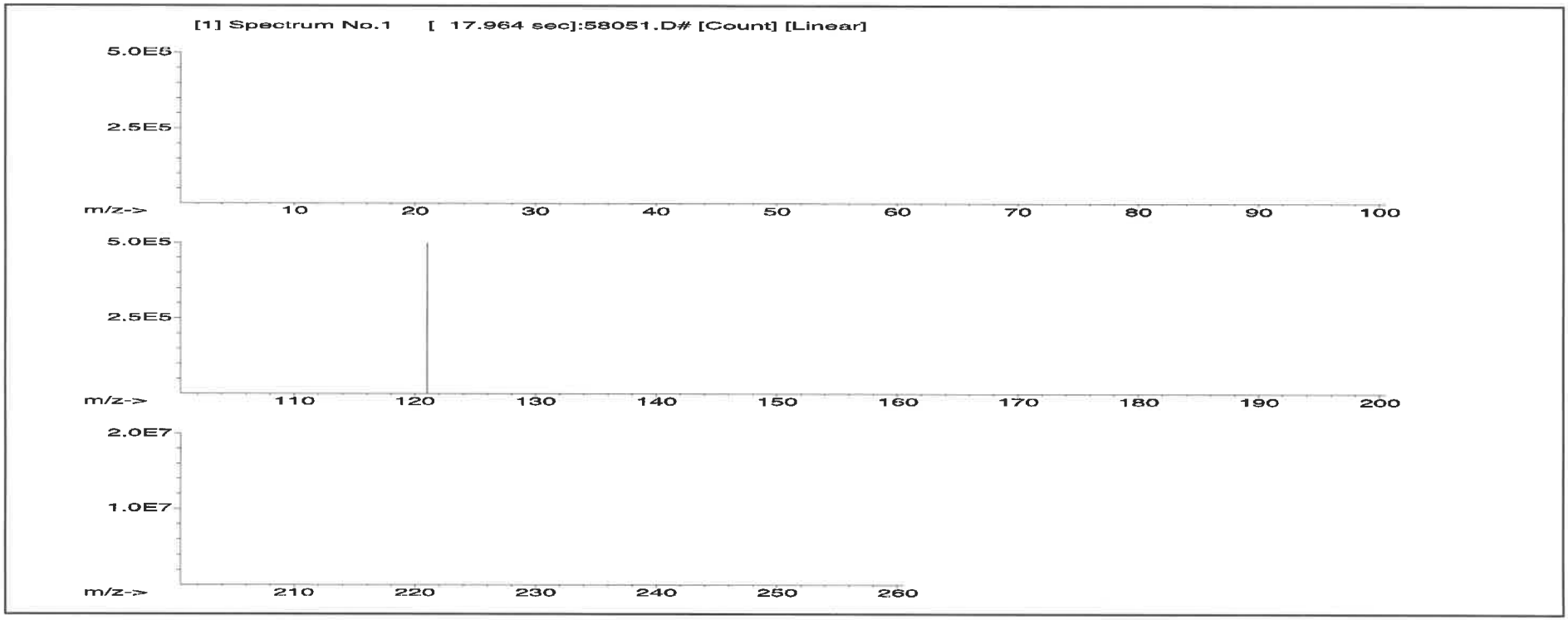
Giovanni Esposito

Formulated By:	Giovanni Esposito	071724

Pedro Rentas

Reviewed By:	Pedro L. Rentas	071724

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	**Final Conc. (µg/mL)**	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Antimony (Sb)	58151	060324	0.1000	200.0	0.084	1000	10001.4	**1000.0**	**2.2**	7440-36-0	0.5 mg/m3	orl-rat 7000 mg/kg	3102a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	T	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

APTIM

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
"An ISO 9001:2015 Certified Program"

Instructions for QATS Reference Material: *ICP-AES ICS*

QATS LABORATORY INORGANIC REFERENCE MATERIAL INTERFERENCE CHECK SAMPLE SET FOR ICP-AES (ICSA WITH ICSB)

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocol or your contract, disregard these instructions.

APPLICATION: For use with the CLP SFAM01.0 SOW and revisions.

CAUTION: Read instructions carefully before opening bottle(s) and proceeding with the analyses.

M6152

Contains Heavy Metals
HAZARDOUS MATERIAL

Safety Data Sheets
Available Upon Request

(A) *SAMPLE DESCRIPTION*

Enclosed is a set of one (1) or more bottles of Aqueous Reference Material, each composed of metals at various concentrations and prepared with nitrate salts and oxy-acids of the respective elements in a 5% nitric acid matrix. **For the reference material source in reporting ICSA and ICSAB mixture use "USEPA". For the reference material lot number for the ICSA use "ICSA-1211" and for the ICSAB mixture use "ICSA-1211+ICSB-0710".**

CAUTION: The bottle(s) should be protected from light during storage to ensure the stability of silver which is contained in the ICSB solution. The bottle(s) should be stored at room temperature. **Do not allow the solution(s) to freeze.**

(B) *BREAKAGE OR MISSING ITEMS*

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain of custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120

(C) *ANALYSIS OF SAMPLES*

The interference check sample set is to be used to verify inter-element and background correction factors of inductively-coupled plasma (ICP) spectrometers. This reference material set consists of two (2) concentrated solutions. The ICSA solution contains the four (4) interferent elements: Al, Ca, Fe, and Mg. The ICSB solution contains the analytes: Ag, As, Sb, Ba, Be,

The Quality Assurance Technical Support (QATS) contract is operated by APTIM Federal Services, LLC.

Cd, Co, Cr, Cu, Mn, Ni, Pb, Tl, Se, V, and Zn. This instruction sheet provides the nominal values for ICP-AES Part A and Part B target analytes when diluted as directed.

Using Class "A" glassware, preparation and analysis must be performed according to the following instructions:

ICSA-1211, Interferents: Pipet 10 mL of the ICSA solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this ICSA solution by ICP-AES.

ICSB-0710, Analytes, mixed with ICSA-1211, Interferents: Pipet 10 mL of the ICSA solution and 10 mL of the ICSB solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this ICSAB solution by ICP-AES.

(D) *"CERTIFIED VALUE" CONCENTRATIONS OF QATS ICP-AES ICS SOLUTION(S)*

The "Certified Value" concentrations of the elements, listed in Table 1 below, were derived from statistically pooled analysis results from the following sources, if available: QATS Laboratory, CLP laboratories, Quarterly Blind (QB)/Proficiency Testing (PT) events, CLP pre-award events, and external referee laboratories.

Table 1. "CERTIFIED VALUES" FOR INTERFERENCE CHECK SAMPLE ICP-AES ICSA-1211, AND ICSA-1211 MIXED WITH ICSB-0710

Element	CRQL	Part A (µg/L)	Low Limit (µg/L)	High Limit (µg/L)	Part A +Part B (µg/L)	Low Limit (µg/L)	High Limit (µg/L)
Al	200	255000	216000	294000	247000	209000	285000
Sb	60	(0.0)	-60.0	60.0	618	525	711
As	10	(0.0)	-10.0	10.0	104	88.4	120
Ba	200	(6.0)	-194	206	(537)	337	737
Be	5.0	(0.0)	-5.0	5.0	495	420	570
Cd	5.0	(1.0)	-4.0	6.0	972	826	1120
Ca	5000	245000	208000	282000	235000	199000	271000
Cr	10	(52.0)	42.0	62.0	542	460	624
Co	50	(0.0)	-50.0	50.0	476	404	548
Cu	25	(2.0)	-23.0	27.0	511	434	588
Fe	100	101000	85600	116500	99300	84400	114500
Pb	10	(0.0)	-10.0	10.0	(49.0)	39.0	59.0
Mg	5000	255000	216000	294000	248000	210000	286000
Mn	15	(7.0)	-8.0	22.0	507	430	584
Ni	40	(2.0)	-38.0	42.0	954	810	1100
Se	35	(0.0)	-35.0	35.0	(46.0)	11.0	81.0
Ag	10	(0.0)	-10.0	10.0	201	170	232
Tl	25	(0.0)	-25.0	25.0	(108)	83.0	133
V	50	(0.0)	-50.0	50.0	491	417	565
Zn	60	(0.0)	-60.0	60.0	952	809	1095

The acceptance ranges for all analytes in parentheses in the above table were determined using the listed certified value ± 1 times the associated CLP SOW CRQL. The acceptance ranges for all other analytes were determined using the certified value ± 15 percent of the listed certified value.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
"An ISO 9001:2015 Certified Program"

APTIM

Instructions for QATS Reference Material: *ICP-AES ICS*

QATS LABORATORY INORGANIC REFERENCE MATERIAL INTERFERENCE CHECK SAMPLE SET FOR ICP-AES (ICSA WITH ICSB)

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocol or your contract, disregard these instructions.

APPLICATION: For use with the CLP SFAM01.0 SOW and revisions.

CAUTION: Read instructions carefully before opening bottle(s) and proceeding with the analyses.

M6155

Contains Heavy Metals
HAZARDOUS MATERIAL

Safety Data Sheets
Available Upon Request

(A) *SAMPLE DESCRIPTION*

Enclosed is a set of one (1) or more bottles of Aqueous Reference Material, each composed of metals at various concentrations and prepared with nitrate salts and oxy-acids of the respective elements in a 5% nitric acid matrix. **For the reference material source in reporting ICSA and ICSAB mixture use "USEPA". For the reference material lot number for the ICSA use "ICSA-1211" and for the ICSAB mixture use "ICSA-1211+ICSB-0710".**

CAUTION: The bottle(s) should be protected from light during storage to ensure the stability of silver which is contained in the ICSB solution. The bottle(s) should be stored at room temperature. **Do not allow the solution(s) to freeze.**

(B) *BREAKAGE OR MISSING ITEMS*

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain of custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120

(C) *ANALYSIS OF SAMPLES*

The interference check sample set is to be used to verify inter-element and background correction factors of inductively-coupled plasma (ICP) spectrometers. This reference material set consists of two (2) concentrated solutions. The ICSA solution contains the four (4) interferent elements: Al, Ca, Fe, and Mg. The ICSB solution contains the analytes: Ag, As, Sb, Ba, Be,

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
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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.

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inorganicventures.com

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F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 888.01 ACCREDITED Reference Material Producer Certificate 888.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSR1
Lot Number:	U2-SR730227
Matrix:	0.1% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Strontium
Starting Material:	SrCO3
Starting Material Lot#:	M2-2192
Starting Material Purity:	99.9993%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1001 ± 3 µg/mL

Density: 1.000 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **998 ± 4 µg/mL**
ICP Assay NIST SRM Traceable to 3153a Lot Number: K2-SR650985

Assay Method #2 **1001 ± 3 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **1001 ± 2 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001980	M	Eu	<	0.000495	O	Na		0.000200	M	Se	<	0.013862	O	Zn		0.000143
O	Al		0.000370	O	Fe		0.000410	M	Nb	<	0.000495	i	Si	<		M	Zr	<	0.000495
M	As	<	0.000495	M	Ga	<	0.000495	M	Nd	<	0.000495	M	Sm	<	0.000495				
M	Au	<	0.000989	M	Gd	<	0.000495	O	Ni	<	0.007631	M	Sn	<	0.000990				
M	B	<	0.039606	M	Ge	<	0.000495	M	Os	<	0.000494	s	Sr	<					
M	Ba		0.006486	M	Hf	<	0.000495	i	P	<		M	Ta	<	0.000495				
M	Be	<	0.000990	M	Hg	<	0.000989	M	Pb	<	0.002970	M	Tb	<	0.000495				
M	Bi	<	0.000495	M	Ho	<	0.000495	M	Pd	<	0.003957	M	Te	<	0.027724				
O	Ca		0.004255	M	In	<	0.000495	M	Pr	<	0.000495	M	Th	<	0.000990				
M	Cd		0.001339	M	Ir	<	0.000494	M	Pt	<	0.002970	M	Ti	<	0.005940				
M	Ce	<	0.004950	O	K	<	0.008184	M	Rb	<	0.002970	M	Tl	<	0.000495				
M	Co	<	0.000495	M	La	<	0.000495	M	Re	<	0.000495	M	Tm	<	0.000495				
O	Cr	<	0.003207	O	Li	<	0.000884	O	Rh	<	0.012829	M	U	<	0.001485				
M	Cs	<	0.000990	M	Lu	<	0.002970	M	Ru	<	0.000989	M	V	<	0.001980				
M	Cu		0.000099	O	Mg		0.000064	i	S	<		M	W	<	0.003960				
M	Dy	<	0.000495	O	Mn		0.000066	M	Sb	<	0.014852	O	Y	<	0.000995				
M	Er	<	0.000495	M	Mo	<	0.001980	M	Sc	<	0.001980	M	Yb	<	0.000495				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 87.62 +2 6 $Sr(H_2O)_6^{+2}$

Chemical Compatibility - Soluble in HCl, and HNO_3. Avoid H_2SO_4, HF and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicate, carbonate, hydroxide, oxide, fluoride, sulfate, oxalate, chromate, arsenate and tungstate in neutral aqueous media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1 - 3.5% HNO_3 / LDPE container.

Sr Containing Samples (Preparation and Solution) -Metal (Best dissolved in diluted HNO_3); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Dry ash and dissolution in dilute HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 88 amu	1200 ppt	N/A	72Ge16O, 176Yb+2, 176Lu+2 , 176Hf+2
ICP-OES 407.771 nm	0.0004 / 0.00006 µg/mL	1	U, Ce
ICP-OES 421.552 nm	0.0008 / 0.00004 µg/mL	1	Rb
ICP-OES 460.733 nm	0.07 / 0.003 µg/mL	1	Ce

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 03, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **March 03, 2028**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 888.01 ACCREDITED Reference Material Producer Certificate 888.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSR1
Lot Number:	U2-SR730227
Matrix:	0.1% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Strontium
Starting Material:	SrCO3
Starting Material Lot#:	M2-2192
Starting Material Purity:	99.9993%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1001 ± 3 µg/mL

Density: 1.000 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **998 ± 4 µg/mL**
ICP Assay NIST SRM Traceable to 3153a Lot Number: K2-SR650985

Assay Method #2 **1001 ± 3 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **1001 ± 2 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

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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 (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

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$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001980	M	Eu	<	0.000495	O	Na		0.000200	M	Se	<	0.013862	O	Zn		0.000143
O	Al		0.000370	O	Fe		0.000410	M	Nb	<	0.000495	i	Si	<		M	Zr	<	0.000495
M	As	<	0.000495	M	Ga	<	0.000495	M	Nd	<	0.000495	M	Sm	<	0.000495				
M	Au	<	0.000989	M	Gd	<	0.000495	O	Ni	<	0.007631	M	Sn	<	0.000990				
M	B	<	0.039606	M	Ge	<	0.000495	M	Os	<	0.000494	s	Sr	<					
M	Ba		0.006486	M	Hf	<	0.000495	i	P	<		M	Ta	<	0.000495				
M	Be	<	0.000990	M	Hg	<	0.000989	M	Pb	<	0.002970	M	Tb	<	0.000495				
M	Bi	<	0.000495	M	Ho	<	0.000495	M	Pd	<	0.003957	M	Te	<	0.027724				
O	Ca		0.004255	M	In	<	0.000495	M	Pr	<	0.000495	M	Th	<	0.000990				
M	Cd		0.001339	M	Ir	<	0.000494	M	Pt	<	0.002970	M	Ti	<	0.005940				
M	Ce	<	0.004950	O	K	<	0.008184	M	Rb	<	0.002970	M	Tl	<	0.000495				
M	Co	<	0.000495	M	La	<	0.000495	M	Re	<	0.000495	M	Tm	<	0.000495				
O	Cr	<	0.003207	O	Li	<	0.000884	O	Rh	<	0.012829	M	U	<	0.001485				
M	Cs	<	0.000990	M	Lu	<	0.002970	M	Ru	<	0.000989	M	V	<	0.001980				
M	Cu		0.000099	O	Mg		0.000064	i	S	<		M	W	<	0.003960				
M	Dy	<	0.000495	O	Mn		0.000066	M	Sb	<	0.014852	O	Y	<	0.000995				
M	Er	<	0.000495	M	Mo	<	0.001980	M	Sc	<	0.001980	M	Yb	<	0.000495				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 87.62 +2 6 $Sr(H_2O)_6^{+2}$

Chemical Compatibility - Soluble in HCl, and HNO_3. Avoid H_2SO_4, HF and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicate, carbonate, hydroxide, oxide, fluoride, sulfate, oxalate, chromate, arsenate and tungstate in neutral aqueous media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1 - 3.5% HNO_3 / LDPE container.

Sr Containing Samples (Preparation and Solution) -Metal (Best dissolved in diluted HNO_3); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Dry ash and dissolution in dilute HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 88 amu	1200 ppt	N/A	72Ge16O, 176Yb+2, 176Lu+2 , 176Hf+2
ICP-OES 407.771 nm	0.0004 / 0.00006 µg/mL	1	U, Ce
ICP-OES 421.552 nm	0.0008 / 0.00004 µg/mL	1	Rb
ICP-OES 460.733 nm	0.07 / 0.003 µg/mL	1	Ce

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 03, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **March 03, 2028**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M6023

R ! 8/5/24

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number:	**57081**		**Lot #**		
Lot Number:	**062724**	**Solvent:**	24002546	Nitric Acid	
Description:	**Thallium (Tl)**	2%	40.0 (mL)	Nitric Acid	
Expiration Date:	062727				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.1	0.10	Flask Uncertainty		

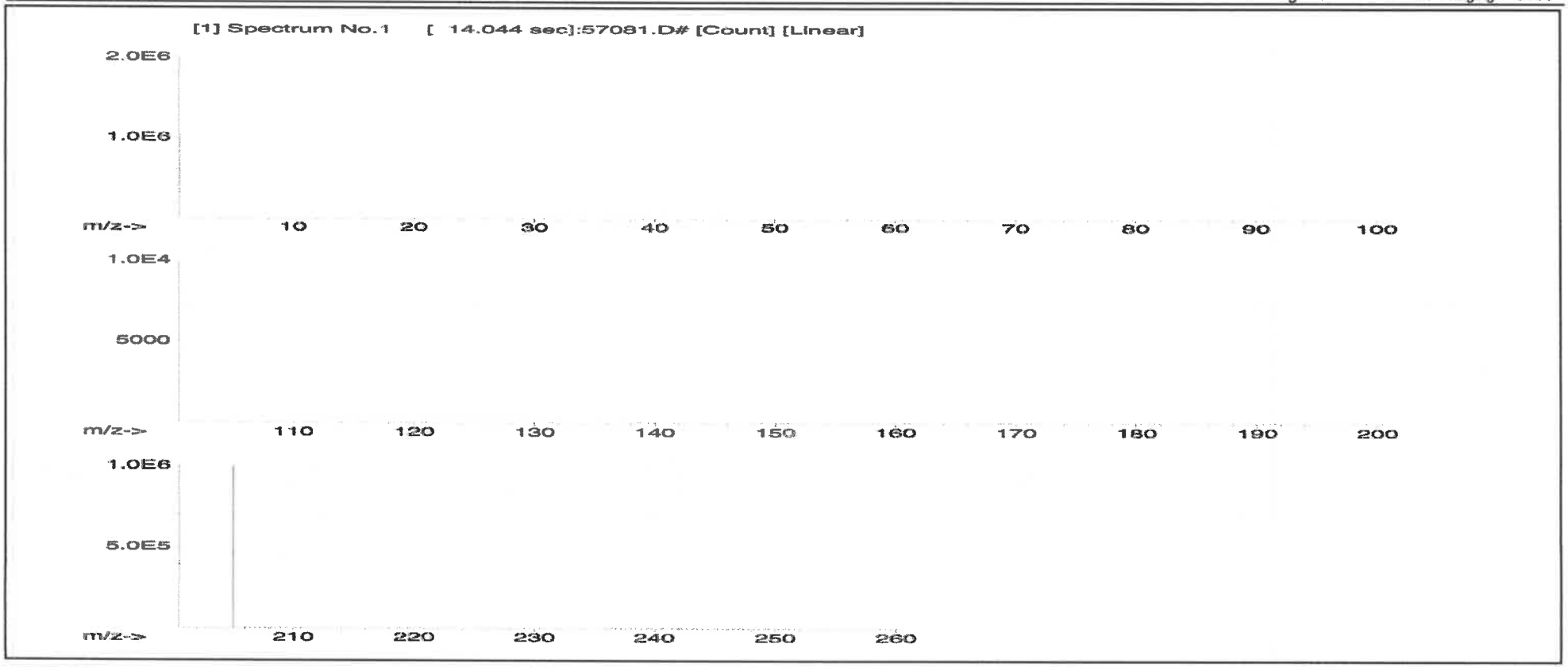
Aleah O'Brady

Formulated By:	Aleah O'Brady	062724

Pedro Rentas

Reviewed By:	Pedro L. Rentas	062724

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Thallium nitrate (Tl)	IN037	BCCF4399	1000	99.999	0.10	77.0	2.5975	2.5977	**1000.1**	**2.0**	10102-45-1	0.1 mg/m3	orl-mus 15mg/kg	3158



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	T	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M6021

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Rc. 8/5/24

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57023**			
Lot Number:	**062424**			
Description:	**Vanadium (V)**	24002546	Nitric Acid	
		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	

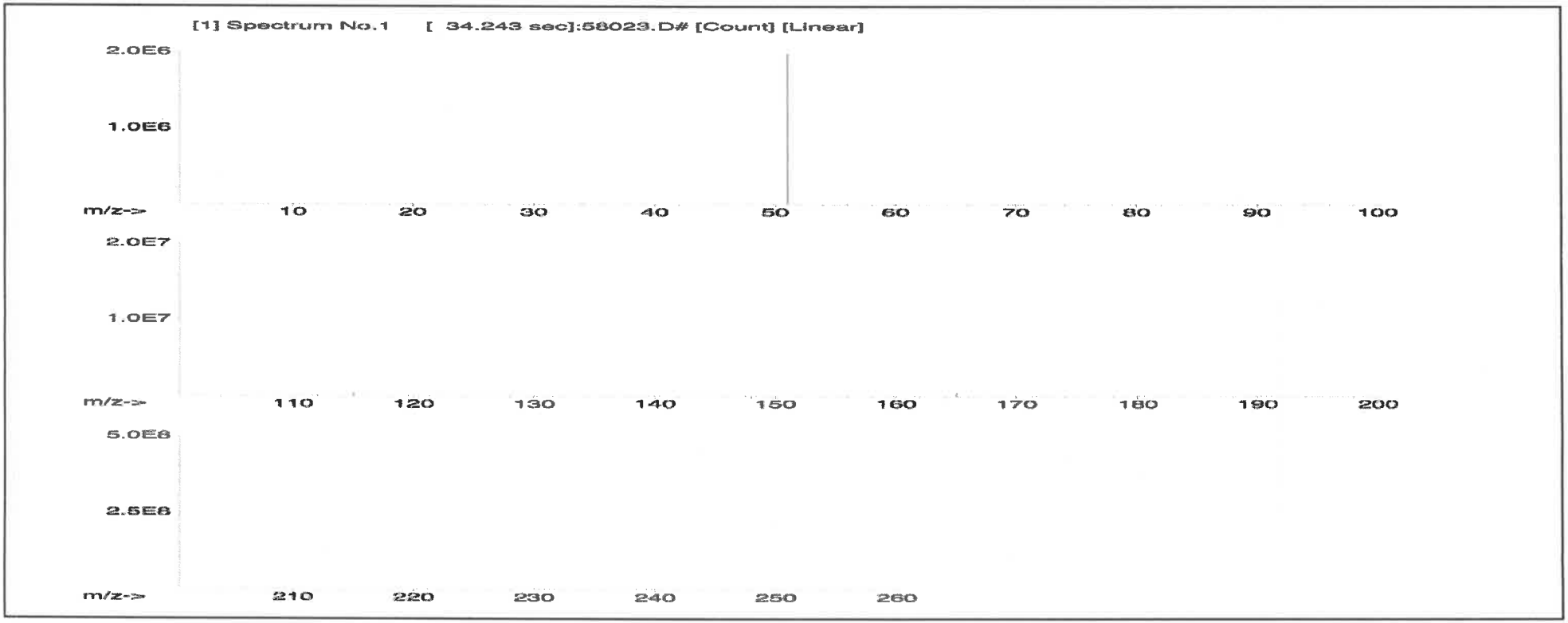
Aleah O'Brady

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:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
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* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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. Q2600
COC Number 2047474

CLIENT INFORMATION

REPORT TO BE SENT TO:
COMPANY: T&A CONSTRUCTION INC.
ADDRESS: Tarrytown Light - Kingsland Point Path
CITY Sleepy Hollow STATE: NY ZIP: 10591
ATTENTION: Garret Johnson
PHONE: (862) 298-0150 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: Kingsland Point Path water main
PROJECT NO.: LOCATION:
PROJECT MANAGER:
e-mail:
PHONE: FAX:

CLIENT BILLING INFORMATION

BILL TO: PO#:
ADDRESS:
CITY STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX (RUSH) _____ DAYS*
HARDCOPY (DATA PACKAGE): _____ DAYS*
EDD: _____ DAYS*
*TO BE APPROVED BY CHEMTECH
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS

DATA DELIVERABLE INFORMATION

- ☐ Level 1 (Results Only)
- ☐ Level 2 (Results + QC)
- ☐ Level 3 (Results + QC + Raw Data)
- ☐ Level 4 (QC + Full Raw Data)
- ☐ NJ Reduced
- ☐ NYS ASP A
- ☐ NYS ASP B
- ☐ US EPA CLP
- ☐ Other
- ☐ EDD FORMAT

ANALYSIS

1: VOCs
2: TCLP VOA
3: EPH, Hex Chro, PH
4: Ignitability, % Solid
5: 6020
6: Full TCLP
7: Cyp, Aroclor, Hot TCLP Pb
8: PCB, Pest, SVOC
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
1.	Trench	S.	X		7-14	1300	6			X	X	X	X	X	X		
2.	Trench			X		1305	5	X	X								PPM - 65.5
3.	Stock Pile		X			1310	6			X	X	X	X	X	X		
4.	Stock Pile			X		1315	5	X	X								PPM - 82.9
5.	End of Trench		X			1320	6			X	X	X	X	X	X		
6.	End of Trench			X		1325	5	X	X								PPM - 644.3
7.																	
8.																	
9.																	
10.																	

Specify Preservatives: A-HCl, B-HN03, C-H2SO4, D-NaOH, E-ICE, F-OTHER

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:
1.	7/14/25 1335	1.
2.		2.
3.	7/14/25 1505	3.

Conditions of bottles or coolers at receipt: ☐ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP 4.9°C °C
Comments:

Page 1 of 1

CLIENT: ☐ Hand Delivered ☐ Other

Shipment Complete ☐ YES ☐ NO

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WHITE - ALLIANCE COPY FOR RETURN TO CLIENT YELLOW - ALLIANCE COPY PINK - SAMPLER COPY

CHEMTECH

Environmental Laboratory

www.chemtech.net | EMAIL: PM@chemtech.net

Project Name: Kingsland Point Park Water Main

Service Order #: —

Work Order #: —

Labor WBS #: —

Facility/Site: —

Site Address: Teeny town Light - Kingsland Point Park, Sleepy Hollow NY 10591

Chemtech Order ID: _____

Sampler Name: Jorge Negron

Client Project Coordinator & Phone: Garret Johnson (862) 298-0150

Page #: 1 of 1

Date: 7-14-25

Arrive Time: 1230

Depart Time: 1335

Waste Stream (circle one): drum / roll-off / soil pile / in-situ / linear construction / frac-tank

Sample Matrices (circle all that apply): Water / Solid / NAPL / Concrete / Wipe

Collection Depths: _____ **Dimensions/CY**: _____

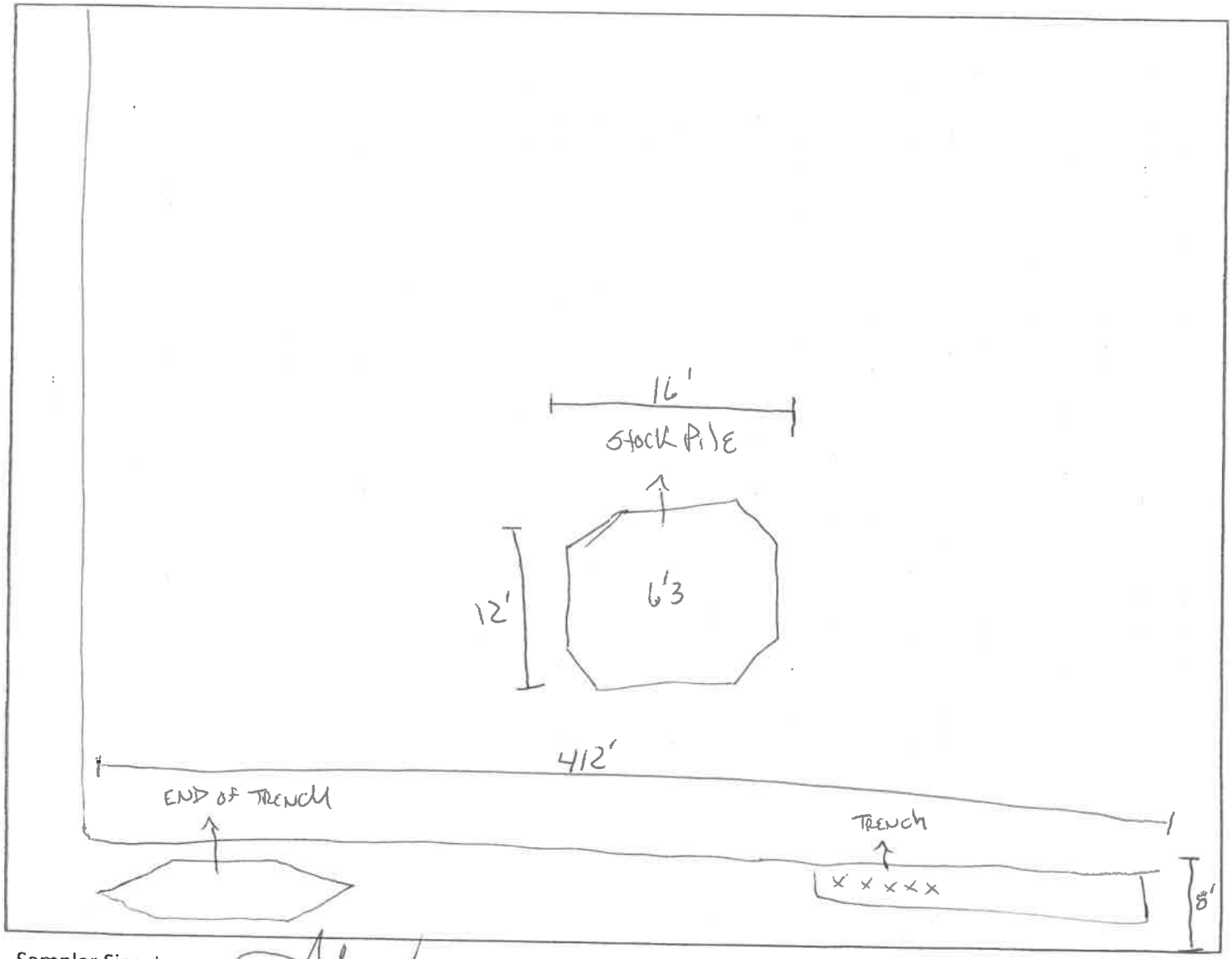
Temp (range): _____ °C **PID Readings (range)**: _____ PPM **Odor**: (Y) / N **Color**: (Y) / N

Sample Description: BLACK Oily Soil (ROCKS PRESENT) VERY STRONG SMELL

Field Observations: SAMPLE ALONG THE TRENCH + STOCK PILE

Grid/Area Composite Map:

QA Control # A3041134



Sampler Signature: _____

Client Signature: _____

Supervisor Review/Date: _____

Date/Time Arrived at Lab: _____

284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Laboratory Certification

Certified By	License No.
CAS EPA CLP Contract	68HERH20D0011
Connecticut	PH-0830
DOD ELAP (ANAB)	L2219
Maine	2024021
Maryland	296
New Hampshire	255424 Rev 1
New Jersey	20012
New York	11376
Pennsylvania	68-00548
Soil Permit	525-24-234-08441
Texas	T104704488

QA Control Code: A2070148

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

LOGIN REPORT/SAMPLE TRANSFER

Order ID : Q2600 TACO01
Client Name : T&A Construction Inc
Client Contact : Garrett Johnson
Invoice Name : T&A Construction Inc
Invoice Contact : Garrett Johnson

Order Date : 7/14/2025 2:21:01 PM
Project Name : Kingsland Point Park Water
Receive DateTime : 7/14/2025 ~~12:00:00 AM~~ 15:05 Pm
Purchase Order :

Project Mgr :
Report Type : Analytical Summary 1
EDD Type : Excel NY
Hard Copy Date :
Date Signoff :

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
Q2600-03	TRENCH	Solid	07/14/2025	13:05					
					VOC-TCLVOA-10		8260D		3 Bus. Days
Q2600-07	STOCK-PILE	Solid	07/14/2025	13:15					
					VOC-TCLVOA-10		8260D		3 Bus. Days
Q2600-11	END-OF-TRENCH	Solid	07/14/2025	13:25					
					VOC-TCLVOA-10		8260D		3 Bus. Days

Relinguished By : [signature]
Date / Time : 7/14/25 1540

Received By : JC
Date / Time : 7/14/25 1540

Storage Area : VOA Refridgerator Room