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Cover Page

Order ID : Q2743

Project ID : Capra

Client : G Environmental

Lab Sample Number	Client Sample Number
Q2743-01	WC1
Q2743-02	WC1

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

Signature : _____

Date: 8/7/2025

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

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Tel. 908-789-8900 Fax: 908-789-8922

DATA REPORTING QUALIFIERS- INORGANIC

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

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

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APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: **Q2743**

	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: **PRATIK PATEL** **Date:** **08/07/2025**

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LAB CHRONICLE

OrderID:	Q2743	**OrderDate:**	7/31/2025 4:05:00 PM
Client:	G Environmental	**Project:**	Capra
Contact:	Gary Landis	**Location:**	O13,VOA Lab

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q2743-01	**WC1**	**SOIL**			**07/31/25**			**07/31/25**
			Mercury	7471B		07/31/25	08/01/25	
			Metals ICP-TAL	6010D		08/04/25	08/04/25	
Q2743-02	**WC1**	**TCLP**			**07/31/25**			**07/31/25**
			TCLP ICP Metals	6010D		08/04/25	08/04/25	
			TCLP Mercury	7470A		08/05/25	08/06/25	

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Hit Summary Sheet
SW-846

SDG No.: Q2743 **Order ID:** Q2743

Client: G Environmental **Project ID:** Capra

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Client ID : WC1								
Q2743-02	WC1	TCLP	Barium	2320		72.8	500	ug/L
Q2743-02	WC1	TCLP	Cadmium	7.09	J	2.50	30.0	ug/L
Q2743-02	WC1	TCLP	Lead	1250		11.5	60.0	ug/L
Q2743-02	WC1	TCLP	Mercury	1.32	J	0.76	2.00	ug/L

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SAMPLE DATA

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Report of Analysis

Client:	G Environmental	Date Collected:	07/31/25
Project:	Capra	Date Received:	07/31/25
Client Sample ID:	WC1	SDG No.:	Q2743
Lab Sample ID:	Q2743-02	Matrix:	TCLP
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7440-38-2	Arsenic	25.6	U	1	25.6	100	ug/L	08/04/25 12:30	08/04/25 16:16	6010D	SW3050
7440-39-3	Barium	2320	N	1	72.8	500	ug/L	08/04/25 12:30	08/04/25 16:16	6010D	SW3050
7440-43-9	Cadmium	7.09	J	1	2.50	30.0	ug/L	08/04/25 12:30	08/04/25 16:16	6010D	SW3050
7440-47-3	Chromium	10.6	U	1	10.6	50.0	ug/L	08/04/25 12:30	08/04/25 16:16	6010D	SW3050
7439-92-1	Lead	1250		1	11.5	60.0	ug/L	08/04/25 12:30	08/04/25 16:16	6010D	SW3050
7439-97-6	Mercury	1.32	J	1	0.76	2.00	ug/L	08/05/25 12:33	08/06/25 09:35	7470A	
7782-49-2	Selenium	48.2	U	1	48.2	100	ug/L	08/04/25 12:30	08/04/25 16:16	6010D	SW3050
7440-22-4	Silver	8.10	U	1	8.10	50.0	ug/L	08/04/25 12:30	08/04/25 16:16	6010D	SW3050

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

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

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

METAL CALIBRATION DATA

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: G Environmental **SDG No.:** Q2743

Contract: GENV01 **Lab Code:** ACE

Initial Calibration Source: EPA

Continuing Calibration Source: PLASMA-PURE

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
ICV54	Mercury	4.09	4.0	102	90 - 110	CV	08/06/2025	09:10	LB136721

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: G Environmental **SDG No.:** Q2743

Contract: GENV01 **Lab Code:** ACE

Initial Calibration Source: EPA

Continuing Calibration Source: PLASMA-PURE

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV89	Mercury	4.83	5.0	97	90 - 110	CV	08/06/2025	09:14	LB136721
CCV90	Mercury	4.82	5.0	96	90 - 110	CV	08/06/2025	09:49	LB136721
CCV91	Mercury	4.78	5.0	96	90 - 110	CV	08/06/2025	10:02	LB136721

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: G Environmental **SDG No.:** Q2743

Contract: GENV01 **Lab Code:** ACE

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
ICV01	Arsenic	3970	4000	99	90 - 110	P	08/04/2025	11:41	LB136697
	Barium	7810	8000	98	90 - 110	P	08/04/2025	11:41	LB136697
	Cadmium	1980	2000	99	90 - 110	P	08/04/2025	11:41	LB136697
	Chromium	812	800	102	90 - 110	P	08/04/2025	11:41	LB136697
	Lead	4080	4000	102	90 - 110	P	08/04/2025	11:41	LB136697
	Selenium	4000	4000	100	90 - 110	P	08/04/2025	11:41	LB136697
	Silver	982	1000	98	90 - 110	P	08/04/2025	11:41	LB136697

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: G Environmental **SDG No.:** Q2743

Contract: GENV01 **Lab Code:** ACE

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
LLICV01	Arsenic	21.5	20.0	108	80 - 120	P	08/04/2025	11:45	LB136697
	Barium	106	100	106	80 - 120	P	08/04/2025	11:45	LB136697
	Cadmium	6.26	6.0	104	80 - 120	P	08/04/2025	11:45	LB136697
	Chromium	8.92	10.0	89	80 - 120	P	08/04/2025	11:45	LB136697
	Lead	12.4	12.0	103	80 - 120	P	08/04/2025	11:45	LB136697
	Selenium	20.1	20.0	101	80 - 120	P	08/04/2025	11:45	LB136697
	Silver	10.7	10.0	106	80 - 120	P	08/04/2025	11:45	LB136697

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: G Environmental **SDG No.:** Q2743

Contract: GENV01 **Lab Code:** ACE

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV01	Arsenic	5060	5000	101	90 - 110	P	08/04/2025	12:25	LB136697
	Barium	9830	10000	98	90 - 110	P	08/04/2025	12:25	LB136697
	Cadmium	2530	2500	101	90 - 110	P	08/04/2025	12:25	LB136697
	Chromium	969	1000	97	90 - 110	P	08/04/2025	12:25	LB136697
	Lead	5010	5000	100	90 - 110	P	08/04/2025	12:25	LB136697
	Selenium	5080	5000	102	90 - 110	P	08/04/2025	12:25	LB136697
	Silver	1220	1250	98	90 - 110	P	08/04/2025	12:25	LB136697
CCV02	Arsenic	5040	5000	101	90 - 110	P	08/04/2025	13:37	LB136697
	Barium	10100	10000	101	90 - 110	P	08/04/2025	13:37	LB136697
	Cadmium	2530	2500	101	90 - 110	P	08/04/2025	13:37	LB136697
	Chromium	1000	1000	100	90 - 110	P	08/04/2025	13:37	LB136697
	Lead	5020	5000	100	90 - 110	P	08/04/2025	13:37	LB136697
	Selenium	5050	5000	101	90 - 110	P	08/04/2025	13:37	LB136697
	Silver	1250	1250	100	90 - 110	P	08/04/2025	13:37	LB136697
CCV03	Arsenic	4890	5000	98	90 - 110	P	08/04/2025	14:43	LB136697
	Barium	9740	10000	97	90 - 110	P	08/04/2025	14:43	LB136697
	Cadmium	2310	2500	92	90 - 110	P	08/04/2025	14:43	LB136697
	Chromium	907	1000	91	90 - 110	P	08/04/2025	14:43	LB136697
	Lead	4640	5000	93	90 - 110	P	08/04/2025	14:43	LB136697
	Selenium	5050	5000	101	90 - 110	P	08/04/2025	14:43	LB136697
	Silver	1210	1250	97	90 - 110	P	08/04/2025	14:43	LB136697
CCV04	Arsenic	4930	5000	99	90 - 110	P	08/04/2025	15:48	LB136697
	Barium	10100	10000	101	90 - 110	P	08/04/2025	15:48	LB136697
	Cadmium	2340	2500	94	90 - 110	P	08/04/2025	15:48	LB136697
	Chromium	916	1000	92	90 - 110	P	08/04/2025	15:48	LB136697
	Lead	4720	5000	94	90 - 110	P	08/04/2025	15:48	LB136697
	Selenium	5070	5000	101	90 - 110	P	08/04/2025	15:48	LB136697
	Silver	1230	1250	98	90 - 110	P	08/04/2025	15:48	LB136697
CCV05	Arsenic	5050	5000	101	90 - 110	P	08/04/2025	16:51	LB136697
	Barium	10200	10000	102	90 - 110	P	08/04/2025	16:51	LB136697
	Cadmium	2360	2500	94	90 - 110	P	08/04/2025	16:51	LB136697
	Chromium	925	1000	92	90 - 110	P	08/04/2025	16:51	LB136697
	Lead	4760	5000	95	90 - 110	P	08/04/2025	16:51	LB136697
	Selenium	5200	5000	104	90 - 110	P	08/04/2025	16:51	LB136697

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: G Environmental **SDG No.:** Q2743

Contract: GENV01 **Lab Code:** ACE

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV05	Silver	1250	1250	100	90 - 110	P	08/04/2025	16:51	LB136697
CCV06	Arsenic	5210	5000	104	90 - 110	P	08/04/2025	17:41	LB136697
	Barium	10500	10000	105	90 - 110	P	08/04/2025	17:41	LB136697
	Cadmium	2460	2500	98	90 - 110	P	08/04/2025	17:41	LB136697
	Chromium	982	1000	98	90 - 110	P	08/04/2025	17:41	LB136697
	Lead	4950	5000	99	90 - 110	P	08/04/2025	17:41	LB136697
	Selenium	5380	5000	108	90 - 110	P	08/04/2025	17:41	LB136697
	Silver	1300	1250	104	90 - 110	P	08/04/2025	17:41	LB136697
CCV07	Arsenic	5180	5000	104	90 - 110	P	08/04/2025	17:58	LB136697
	Barium	10500	10000	105	90 - 110	P	08/04/2025	17:58	LB136697
	Cadmium	2460	2500	98	90 - 110	P	08/04/2025	17:58	LB136697
	Chromium	966	1000	97	90 - 110	P	08/04/2025	17:58	LB136697
	Lead	4950	5000	99	90 - 110	P	08/04/2025	17:58	LB136697
	Selenium	5300	5000	106	90 - 110	P	08/04/2025	17:58	LB136697
	Silver	1280	1250	103	90 - 110	P	08/04/2025	17:58	LB136697

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Metals

- 2b -
CRDL STANDARD FOR AA & ICP

Client: G Environmental **SDG No.:** Q2743

Contract: GENV01 **Lab Code:** ACE

Initial Calibration Source:

Continuing Calibration Source:

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CRI01	Arsenic	20.1	20.0	101	65 - 135	P	08/04/2025	11:57	LB136697
	Barium	103	100	103	65 - 135	P	08/04/2025	11:57	LB136697
	Cadmium	6.14	6.0	102	65 - 135	P	08/04/2025	11:57	LB136697
	Chromium	9.85	10.0	98	65 - 135	P	08/04/2025	11:57	LB136697
	Lead	11.2	12.0	93	65 - 135	P	08/04/2025	11:57	LB136697
	Selenium	22.0	20.0	110	65 - 135	P	08/04/2025	11:57	LB136697
	Silver	11.1	10.0	110	65 - 135	P	08/04/2025	11:57	LB136697
CRA	Mercury	0.24	0.2	119	70 - 130	CV	08/06/2025	09:19	LB136721

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Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: G Environmental **SDG No.:** Q2743

Contract: GENV01 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB54	Mercury	0.076	+/-0.2	U	0.20	CV	08/06/2025	09:12	LB136721

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Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: G Environmental **SDG No.:** Q2743

Contract: GENV01 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB89	Mercury	0.076	+/-0.2	U	0.20	CV	08/06/2025	09:17	LB136721
CCB90	Mercury	0.076	+/-0.2	U	0.20	CV	08/06/2025	09:51	LB136721
CCB91	Mercury	0.076	+/-0.2	U	0.20	CV	08/06/2025	10:04	LB136721

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Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: G Environmental **SDG No.:** Q2743

Contract: GENV01 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB01	Arsenic	5.12	+/-10	U	20.0	P	08/04/2025	11:52	LB136697
	Barium	14.6	+/-50	U	100	P	08/04/2025	11:52	LB136697
	Cadmium	0.50	+/-3	U	6.00	P	08/04/2025	11:52	LB136697
	Chromium	2.12	+/-5	U	10.0	P	08/04/2025	11:52	LB136697
	Lead	2.30	+/-6	U	12.0	P	08/04/2025	11:52	LB136697
	Selenium	9.64	+/-10	U	20.0	P	08/04/2025	11:52	LB136697
	Silver	1.62	+/-5	U	10.0	P	08/04/2025	11:52	LB136697

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Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: G Environmental **SDG No.:** Q2743

Contract: GENV01 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB01	Arsenic	5.12	+/-10	U	20.0	P	08/04/2025	12:29	LB136697
	Barium	14.6	+/-50	U	100	P	08/04/2025	12:29	LB136697
	Cadmium	0.50	+/-3	U	6.00	P	08/04/2025	12:29	LB136697
	Chromium	2.12	+/-5	U	10.0	P	08/04/2025	12:29	LB136697
	Lead	2.30	+/-6	U	12.0	P	08/04/2025	12:29	LB136697
	Selenium	9.64	+/-10	U	20.0	P	08/04/2025	12:29	LB136697
	Silver	1.62	+/-5	U	10.0	P	08/04/2025	12:29	LB136697
CCB02	Arsenic	5.12	+/-10	U	20.0	P	08/04/2025	13:41	LB136697
	Barium	14.6	+/-50	U	100	P	08/04/2025	13:41	LB136697
	Cadmium	0.50	+/-3	U	6.00	P	08/04/2025	13:41	LB136697
	Chromium	2.12	+/-5	U	10.0	P	08/04/2025	13:41	LB136697
	Lead	2.30	+/-6	U	12.0	P	08/04/2025	13:41	LB136697
	Selenium	9.64	+/-10	U	20.0	P	08/04/2025	13:41	LB136697
	Silver	1.62	+/-5	U	10.0	P	08/04/2025	13:41	LB136697
CCB03	Arsenic	5.12	+/-10	U	20.0	P	08/04/2025	14:54	LB136697
	Barium	14.6	+/-50	U	100	P	08/04/2025	14:54	LB136697
	Cadmium	0.50	+/-3	U	6.00	P	08/04/2025	14:54	LB136697
	Chromium	2.12	+/-5	U	10.0	P	08/04/2025	14:54	LB136697
	Lead	2.30	+/-6	U	12.0	P	08/04/2025	14:54	LB136697
	Selenium	9.64	+/-10	U	20.0	P	08/04/2025	14:54	LB136697
	Silver	1.62	+/-5	U	10.0	P	08/04/2025	14:54	LB136697
CCB04	Arsenic	5.12	+/-10	U	20.0	P	08/04/2025	15:53	LB136697
	Barium	14.6	+/-50	U	100	P	08/04/2025	15:53	LB136697
	Cadmium	0.50	+/-3	U	6.00	P	08/04/2025	15:53	LB136697
	Chromium	2.12	+/-5	U	10.0	P	08/04/2025	15:53	LB136697
	Lead	2.30	+/-6	U	12.0	P	08/04/2025	15:53	LB136697
	Selenium	9.64	+/-10	U	20.0	P	08/04/2025	15:53	LB136697
	Silver	1.62	+/-5	U	10.0	P	08/04/2025	15:53	LB136697
CCB05	Arsenic	5.12	+/-10	U	20.0	P	08/04/2025	16:55	LB136697
	Barium	14.6	+/-50	U	100	P	08/04/2025	16:55	LB136697
	Cadmium	0.50	+/-3	U	6.00	P	08/04/2025	16:55	LB136697
	Chromium	2.12	+/-5	U	10.0	P	08/04/2025	16:55	LB136697
	Lead	2.30	+/-6	U	12.0	P	08/04/2025	16:55	LB136697
	Selenium	9.64	+/-10	U	20.0	P	08/04/2025	16:55	LB136697
	Silver	1.62	+/-5	U	10.0	P	08/04/2025	16:55	LB136697
CCB06	Arsenic	5.12	+/-10	U	20.0	P	08/04/2025	17:45	LB136697
	Barium	14.6	+/-50	U	100	P	08/04/2025	17:45	LB136697
	Cadmium	0.50	+/-3	U	6.00	P	08/04/2025	17:45	LB136697
	Chromium	2.12	+/-5	U	10.0	P	08/04/2025	17:45	LB136697

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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: G Environmental **SDG No.:** Q2743

Contract: GENV01 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB06	Lead	2.30	+/-6	U	12.0	P	08/04/2025	17:45	LB136697
	Selenium	9.64	+/-10	U	20.0	P	08/04/2025	17:45	LB136697
	Silver	1.62	+/-5	U	10.0	P	08/04/2025	17:45	LB136697
CCB07	Arsenic	5.12	+/-10	U	20.0	P	08/04/2025	18:02	LB136697
	Barium	14.6	+/-50	U	100	P	08/04/2025	18:02	LB136697
	Cadmium	0.50	+/-3	U	6.00	P	08/04/2025	18:02	LB136697
	Chromium	2.12	+/-5	U	10.0	P	08/04/2025	18:02	LB136697
	Lead	2.30	+/-6	U	12.0	P	08/04/2025	18:02	LB136697
	Selenium	9.64	+/-10	U	20.0	P	08/04/2025	18:02	LB136697
	Silver	1.62	+/-5	U	10.0	P	08/04/2025	18:02	LB136697

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Metals
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PREPARATION BLANK SUMMARY

Client: G Environmental **SDG No.:** Q2743

Instrument: CV1

Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB169079TB		**WATER**		**Batch Number:**	**PB169140**		**Prep Date:**	**08/05/2025**	
	Mercury	0.76	<2	U	2.00	CV	08/06/2025	09:55	LB136721

Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB169140BL		**WATER**		**Batch Number:**	**PB169140**		**Prep Date:**	**08/05/2025**	
	Mercury	0.076	<0.2	U	0.20	CV	08/06/2025	09:28	LB136721

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Metals
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PREPARATION BLANK SUMMARY

Client: G Environmental **SDG No.:** Q2743

Instrument: P4

Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB169079TB		**WATER**		**Batch Number:**	**PB169101**		**Prep Date:**	**08/04/2025**	
	Arsenic	25.6	<50	U	100	P	08/04/2025	16:46	LB136697
	Barium	72.8	<250	U	500	P	08/04/2025	16:46	LB136697
	Cadmium	2.50	<15	U	30.0	P	08/04/2025	16:46	LB136697
	Chromium	10.6	<25	U	50.0	P	08/04/2025	16:46	LB136697
	Lead	11.5	<30	U	60.0	P	08/04/2025	16:46	LB136697
	Selenium	48.2	<50	U	100	P	08/04/2025	16:46	LB136697
	Silver	8.10	<25	U	50.0	P	08/04/2025	16:46	LB136697

Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB169101BL		**WATER**		**Batch Number:**	**PB169101**		**Prep Date:**	**08/04/2025**	
	Arsenic	25.6	<50	U	100	P	08/04/2025	16:59	LB136697
	Barium	72.8	<250	U	500	P	08/04/2025	16:59	LB136697
	Cadmium	2.50	<15	U	30.0	P	08/04/2025	16:59	LB136697
	Chromium	10.6	<25	U	50.0	P	08/04/2025	16:59	LB136697
	Lead	11.5	<30	U	60.0	P	08/04/2025	16:59	LB136697
	Selenium	48.2	<50	U	100	P	08/04/2025	16:59	LB136697
	Silver	8.10	<25	U	50.0	P	08/04/2025	16:59	LB136697

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INTERFERENCE CHECK SAMPLE

Client: G Environmental **SDG No.:** Q2743

Contract: GENV01 **Lab Code:** ACE

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

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Low Limit (ug/L)	High Limit (ug/L)	Analysis Date	Analysis Time	Run Number
ICSA01	Arsenic	9.45			-20	20	08/04/2025	12:01	LB136697
	Barium	6.24	6.0	104	-94	106	08/04/2025	12:01	LB136697
	Cadmium	-0.56	1.0	56	-5	7	08/04/2025	12:01	LB136697
	Chromium	56.1	52.0	108	42	62	08/04/2025	12:01	LB136697
	Lead	-8.46			-12	12	08/04/2025	12:01	LB136697
	Selenium	0.23			-20	20	08/04/2025	12:01	LB136697
	Silver	2.22			-10	10	08/04/2025	12:01	LB136697
ICSAB01	Arsenic	106	104	102	88.4	120	08/04/2025	12:05	LB136697
	Barium	510	537	95	437	637	08/04/2025	12:05	LB136697
	Cadmium	983	972	101	826	1120	08/04/2025	12:05	LB136697
	Chromium	553	542	102	460	624	08/04/2025	12:05	LB136697
	Lead	37.5	49.0	76	37	61	08/04/2025	12:05	LB136697
	Selenium	42.1	46.0	92	26	66	08/04/2025	12:05	LB136697
	Silver	214	201	106	170	232	08/04/2025	12:05	LB136697

METAL QC DATA

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metals
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MATRIX SPIKE SUMMARY

client: G Environmental **level:** low **sdg no.:** Q2743

contract: GENV01 **lab code:** ACE

matrix: Water **sample id:** Q2753-02 **client id:** 289MS

Percent Solids for Sample: NA **Spiked ID:** Q2753-02MS **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	ug/L	75 - 125	4200		100	U	4000	105		P
Barium	ug/L	75 - 125	1610		348	J	1000	126	N	P
Cadmium	ug/L	75 - 125	954		30.0	U	1000	95		P
Chromium	ug/L	75 - 125	1970		37.4	J	2000	97		P
Lead	ug/L	75 - 125	4560		60.0	U	5000	91		P
Mercury	ug/L	75 - 125	39.9		2.00	U	40.0	100		CV
Selenium	ug/L	75 - 125	10800		100	U	10000	108		P
Silver	ug/L	75 - 125	385		50.0	U	380	101		P

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metals
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MATRIX SPIKE DUPLICATE SUMMARY

client: G Environmental **level:** low **sdg no.:** Q2743

contract: GENV01 **lab code:** ACE

matrix: Water **sample id:** Q2753-02 **client id:** 289MSD

Percent Solids for Sample: NA **Spiked ID:** Q2753-02MSD **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	ug/L	75 - 125	3790		100	U	4000	95		P
Barium	ug/L	75 - 125	1420		348	J	1000	107		P
Cadmium	ug/L	75 - 125	864		30.0	U	1000	86		P
Chromium	ug/L	75 - 125	1820		37.4	J	2000	89		P
Lead	ug/L	75 - 125	4100		60.0	U	5000	82		P
Mercury	ug/L	75 - 125	38.3		2.00	U	40.0	96		CV
Selenium	ug/L	75 - 125	9710		100	U	10000	97		P
Silver	ug/L	75 - 125	337		50.0	U	380	89		P

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Metals
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POST DIGEST SPIKE SUMMARY

Client: G Environmental **SDG No.:** Q2743

Contract: GENV01 **Lab Code:** ACE

Matrix: Water **Level:** LOW **Client ID:** 289A

Sample ID: Q2753-02 **Spiked ID:** Q2753-02A

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Barium	ug/L	75 - 125	1520		348	J	1000	117		P

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Metals

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DUPLICATE SAMPLE SUMMARY

Client: G Environmental **Level:** LOW **SDG No.:** Q2743

Contract: GENV01 **Lab Code:** ACE

Matrix: Water **Sample ID:** Q2753-02 **Client ID:** 289DUP

Percent Solids for Sample: NA **Duplicate ID** Q2753-02DUP **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	ug/L	20	100	U	100	U			P
Barium	ug/L	20	348	J	587		51		P
Cadmium	ug/L	20	30.0	U	30.0	U			P
Chromium	ug/L	20	37.4	J	67.2		57		P
Lead	ug/L	20	60.0	U	60.0	U			P
Mercury	ug/L	20	2.00	U	2.00	U			CV
Selenium	ug/L	20	100	U	100	U			P
Silver	ug/L	20	50.0	U	50.0	U			P

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

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Metals

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DUPLICATE SAMPLE SUMMARY

Client: G Environmental **Level:** LOW **SDG No.:** Q2743

Contract: GENV01 **Lab Code:** ACE

Matrix: Water **Sample ID:** Q2753-02MS **Client ID:** 289MSD

Percent Solids for Sample: NA **Duplicate ID** Q2753-02MSD **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	ug/L	20	4200		3790		10		P
Barium	ug/L	20	1610		1420		13		P
Cadmium	ug/L	20	954		864		10		P
Chromium	ug/L	20	1970		1820		8		P
Lead	ug/L	20	4560		4100		11		P
Mercury	ug/L	20	39.9		38.3		4		CV
Selenium	ug/L	20	10800		9710		11		P
Silver	ug/L	20	385		337		13		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: G Environmental **SDG No.:** Q2743

Contract: GENV01 **Lab Code:** ACE

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB169101BS							
Arsenic	ug/L	4000	4170		104	80 - 120	P
Barium	ug/L	1000	1100		110	80 - 120	P
Cadmium	ug/L	1000	965		96	80 - 120	P
Chromium	ug/L	2000	1970		98	80 - 120	P
Lead	ug/L	5000	4900		98	80 - 120	P
Selenium	ug/L	10000	10800		108	80 - 120	P
Silver	ug/L	380	405		107	80 - 120	P

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LABORATORY CONTROL SAMPLE SUMMARY

Client: G Environmental **SDG No.:** Q2743

Contract: GENV01 **Lab Code:** ACE

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB169140BS							
Mercury	ug/L	4.0	4.08		102	80 - 120	CV

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Metals

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ICP SERIAL DILUTIONS

SAMPLE NO.

289L

Lab Name: Alliance **Contract:** GENV01

Lab Code: ACE **Lb No.:** lb136697 **Lab Sample ID :** Q2753-02L **SDG No.:** Q2743

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

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Arsenic	100	U	500	U			P
Barium	348	J	2500	U	100.0		P
Cadmium	30.0	U	150	U			P
Chromium	37.4	J	250	U	100.0		P
Lead	60.0	U	300	U			P
Mercury	2.00	U	10.0	U			CV
Selenium	100	U	500	U			P
Silver	50.0	U	250	U			P

METAL PREPARATION & INSTRUMENT DATA

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Metals
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ICP INTERELEMENT CORRECTION FACTORS

Client: G Environmental **SDG No.:** Q2743

Contract: GENV01 **Lab Code:** ACE

Instrument ID: **Date:**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave-Length (nm)	ICP Interelement Correction Factors For: Al	Ca	Fe	Mg	Ag
Arsenic	193.759	0.0000000	0.0000000	-0.0000440	0.0000000	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000000	0.0000930	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	-0.0000920	0.0000000	0.0000380	0.0000000	0.0000000
Selenium	196.090	0.0000000	0.0000000	-0.0001440	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	-0.0001490	0.0000000	0.0000000

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Metals
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ICP INTERELEMENT CORRECTION FACTORS

Client: G Environmental **SDG No.:** Q2743

Contract: GENV01 **Lab Code:** ACE

Instrument ID: **Date:**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave-Length (nm)	ICP Interelement Correction Factors For: As	Ba	Be	Cd	Co
Arsenic	193.759	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000000	0.0000000	0.0000000	0.0002870
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0000000	0.0003170	0.0000000	0.0000000	0.0000000
Selenium	196.090	0.0000000	0.0000000	0.0000000	0.0000000	-0.0003570
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

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Metals
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ICP INTERELEMENT CORRECTION FACTORS

Client: G Environmental **SDG No.:** Q2743

Contract: GENV01 **Lab Code:** ACE

Instrument ID: **Date:**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave-Length (nm)	ICP Interelement Correction Factors For: Cr	Cu	K	Mn	Mo
Arsenic	193.759	-0.0029000	0.0000000	0.0000000	0.0000000	0.0004900
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000070	0.0002200	0.0000000
Lead	220.353	0.0000000	0.0000000	0.0000000	0.0001400	-0.0008600
Selenium	196.090	0.0000000	0.0000000	0.0000000	0.0007460	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	-0.0000120

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Metals
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ICP INTERELEMENT CORRECTION FACTORS

Client: G Environmental **SDG No.:** Q2743

Contract: GENV01 **Lab Code:** ACE

Instrument ID: **Date:**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave-Length (nm)	ICP Interelement Correction Factors For: Na	Ni	Pb	Sb	Se
Arsenic	193.759	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0000000	0.0006580	0.0000000	0.0000000	0.0001290
Selenium	196.090	0.0000000	0.0000000	0.0003330	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

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Metals
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ICP INTERELEMENT CORRECTION FACTORS

Client: G Environmental **SDG No.:** Q2743

Contract: GENV01 **Lab Code:** ACE

Instrument ID: **Date:**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave-Length (nm)	ICP Interelement Correction Factors For: Sn	Ti	Tl	V	Zn
Arsenic	193.759	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000630	0.0001280	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0001110	0.0000000
Lead	220.353	0.0000000	-0.0003610	0.0000000	0.0000000	0.0000000
Selenium	196.090	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0000000	-0.0007420	0.0000000	0.0000000	0.0000000

METAL PREPARATION & ANALYICAL SUMMARY

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SAMPLE PREPARATION SUMMARY

Client: G Environmental **SDG No.:** Q2743

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

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(mL)	Final Sample Volume (mL)	Percent Solids
Batch Number:	**PB169101**						
PB169079TB	PB169079TB	MB	WATER	08/04/2025	5.0	25.0	
PB169101BL	PB169101BL	MB	WATER	08/04/2025	5.0	25.0	
PB169101BS	PB169101BS	LCS	WATER	08/04/2025	5.0	25.0	
Q2743-02	WC1	SAM	WATER	08/04/2025	5.0	25.0	
Q2753-02DUP	289DUP	DUP	WATER	08/04/2025	5.0	25.0	
Q2753-02MS	289MS	MS	WATER	08/04/2025	5.0	25.0	
Q2753-02MSD	289MSD	MSD	WATER	08/04/2025	5.0	25.0	

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Metals
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SAMPLE PREPARATION SUMMARY

Client: G Environmental **SDG No.:** Q2743

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

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(mL)	Final Sample Volume (mL)	Percent Solids
Batch Number:	**PB169140**						
PB169079TB	PB169079TB	MB	WATER	08/05/2025	3.0	30.0	
PB169140BL	PB169140BL	MB	WATER	08/05/2025	30.0	30.0	
PB169140BS	PB169140BS	LCS	WATER	08/05/2025	30.0	30.0	
Q2743-02	WC1	SAM	WATER	08/05/2025	3.0	30.0	
Q2753-02DUP	289DUP	DUP	WATER	08/05/2025	3.0	30.0	
Q2753-02MS	289MS	MS	WATER	08/05/2025	3.0	30.0	
Q2753-02MSD	289MSD	MSD	WATER	08/05/2025	3.0	30.0	

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ANALYSIS RUN LOG

Client: G Environmental **Contract:** GENV01

Lab code: ACE **Sdg no.:** Q2743

Instrument id number: **Method:** **Run number:** LB136697

Start date: 08/04/2025 **End date:** 08/04/2025

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1115	Ag,As,Ba,Cd,Cr,Pb,Se
S1	S1	1	1120	Ag,As,Ba,Cd,Cr,Pb,Se
S2	S2	1	1124	Ag,As,Ba,Cd,Cr,Pb,Se
S3	S3	1	1128	Ag,As,Ba,Cd,Cr,Pb,Se
S4	S4	1	1132	Ag,As,Ba,Cd,Cr,Pb,Se
S5	S5	1	1136	Ag,As,Ba,Cd,Cr,Pb,Se
ICV01	ICV01	1	1141	Ag,As,Ba,Cd,Cr,Pb,Se
LLICV01	LLICV01	1	1145	Ag,As,Ba,Cd,Cr,Pb,Se
ICB01	ICB01	1	1152	Ag,As,Ba,Cd,Cr,Pb,Se
CRI01	CRI01	1	1157	Ag,As,Ba,Cd,Cr,Pb,Se
ICSA01	ICSA01	1	1201	Ag,As,Ba,Cd,Cr,Pb,Se
ICSAB01	ICSAB01	1	1205	Ag,As,Ba,Cd,Cr,Pb,Se
CCV01	CCV01	1	1225	Ag,As,Ba,Cd,Cr,Pb,Se
CCB01	CCB01	1	1229	Ag,As,Ba,Cd,Cr,Pb,Se
CCV02	CCV02	1	1337	Ag,As,Ba,Cd,Cr,Pb,Se
CCB02	CCB02	1	1341	Ag,As,Ba,Cd,Cr,Pb,Se
CCV03	CCV03	1	1443	Ag,As,Ba,Cd,Cr,Pb,Se
CCB03	CCB03	1	1454	Ag,As,Ba,Cd,Cr,Pb,Se
CCV04	CCV04	1	1548	Ag,As,Ba,Cd,Cr,Pb,Se
CCB04	CCB04	1	1553	Ag,As,Ba,Cd,Cr,Pb,Se
Q2743-02	WC1	1	1616	Ag,As,Ba,Cd,Cr,Pb,Se
Q2753-02DUP	289DUP	1	1625	Ag,As,Ba,Cd,Cr,Pb,Se
Q2753-02L	289L	5	1630	Ag,As,Ba,Cd,Cr,Pb,Se
Q2753-02MS	289MS	1	1634	Ag,As,Ba,Cd,Cr,Pb,Se
Q2753-02MSD	289MSD	1	1638	Ag,As,Ba,Cd,Cr,Pb,Se
Q2753-02A	289A	1	1642	Ba
PB169079TB	PB169079TB	1	1646	Ag,As,Ba,Cd,Cr,Pb,Se
CCV05	CCV05	1	1651	Ag,As,Ba,Cd,Cr,Pb,Se
CCB05	CCB05	1	1655	Ag,As,Ba,Cd,Cr,Pb,Se
PB169101BL	PB169101BL	1	1659	Ag,As,Ba,Cd,Cr,Pb,Se
PB169101BS	PB169101BS	1	1704	Ag,As,Ba,Cd,Cr,Pb,Se
CCV06	CCV06	1	1741	Ag,As,Ba,Cd,Cr,Pb,Se
CCB06	CCB06	1	1745	Ag,As,Ba,Cd,Cr,Pb,Se
CCV07	CCV07	1	1758	Ag,As,Ba,Cd,Cr,Pb,Se
CCB07	CCB07	1	1802	Ag,As,Ba,Cd,Cr,Pb,Se

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

metals
- 14 -
ANALYSIS RUN LOG

Client: G Environmental **Contract:** GENV01

Lab code: ACE **Sdg no.:** Q2743

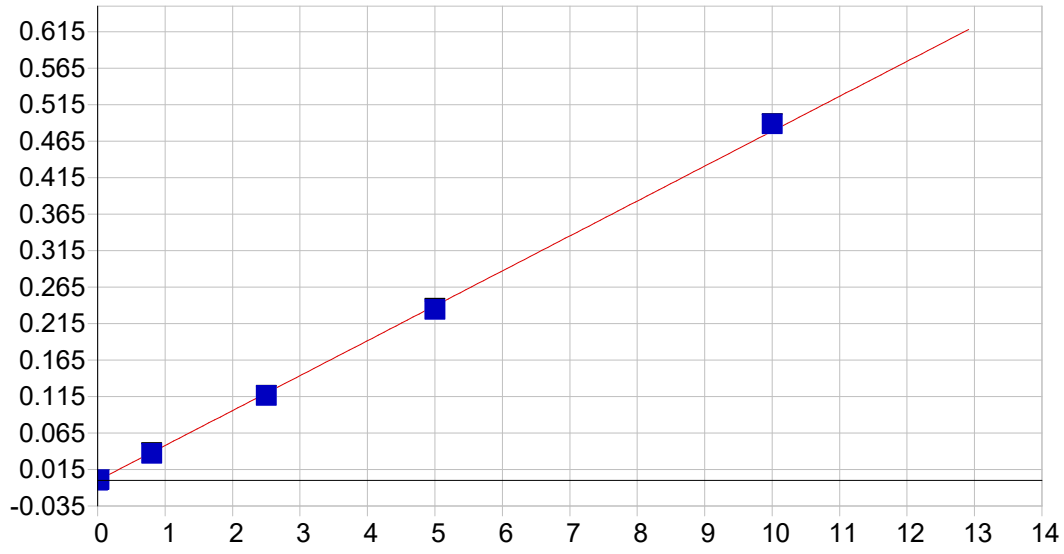
Instrument id number: **Method:** **Run number:** LB136721

Start date: 08/06/2025 **End date:** 08/06/2025

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	0855	HG
S0.2	S0.2	1	0858	HG
S2.5	S2.5	1	0900	HG
S5	S5	1	0902	HG
S7.5	S7.5	1	0905	HG
S10	S10	1	0907	HG
ICV54	ICV54	1	0910	HG
ICB54	ICB54	1	0912	HG
CCV89	CCV89	1	0914	HG
CCB89	CCB89	1	0917	HG
CRA	CRA	1	0919	HG
PB169140BL	PB169140BL	1	0928	HG
PB169140BS	PB169140BS	1	0931	HG
Q2743-02	WC1	1	0935	HG
Q2753-02DUP	289DUP	1	0940	HG
Q2753-02MS	289MS	1	0945	HG
CCV90	CCV90	1	0949	HG
CCB90	CCB90	1	0951	HG
Q2753-02MSD	289MSD	1	0953	HG
PB169079TB	PB169079TB	1	0955	HG
Q2753-02L	289L	5	0958	HG
CCV91	CCV91	1	1002	HG
CCB91	CCB91	1	1004	HG

METAL
RAW DATA

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697



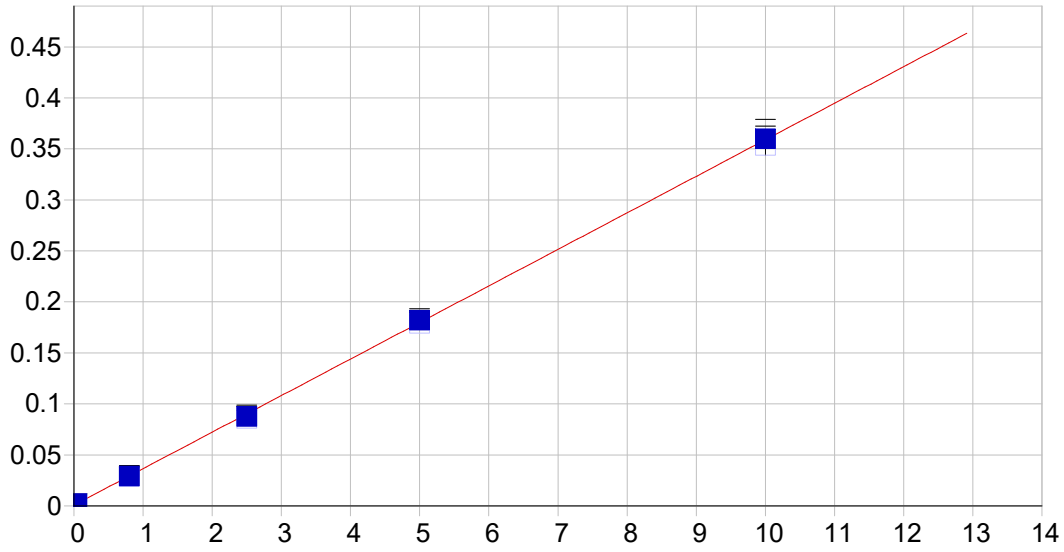
As 189.042 {479}

Date of Fit:	8/4/2025 14:58:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000019	Re-Slope:	1.000000
A1 (Gain):	0.047860	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999726	Status:	OK.
Std Error of Est:	0.000026		
Predicted MDL:	0.002523		
Predicted MQL:	0.008410		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00002	.000	1
S1	.02000	.02243	.002	12.2	.00109	.000	1
S3	2.5000	2.4254	-.075	-2.99	.11597	.000	1
S4	5.0000	4.8916	-.108	-2.17	.23387	.002	1
S5	10.000	10.207	.207	2.07	.48801	.000	1
S2	.80000	.77352	-.026	-3.31	.03700	.001	1

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697



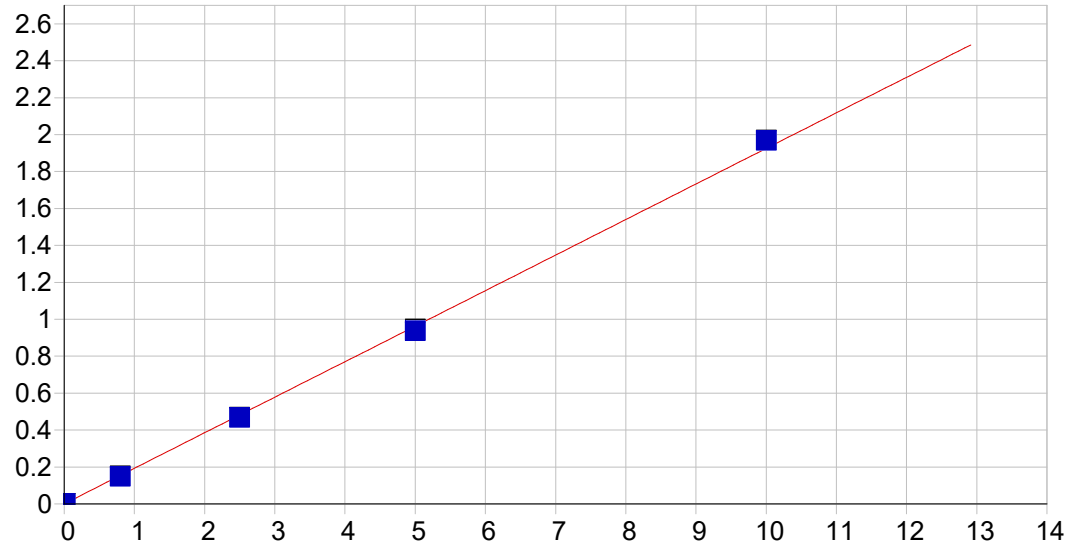
Tl 190.856 {477}

Date of Fit:	8/4/2025 14:58:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000682	Re-Slope:	1.000000
A1 (Gain):	0.035823	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999899	Status:	OK.
Std Error of Est:	0.000017		
Predicted MDL:	0.002419		
Predicted MQL:	0.008062		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00068	.000	1
S1	.04000	.04277	.003	6.93	.00212	.000	1
S3	2.5000	2.4203	-.080	-3.19	.08575	.002	1
S4	5.0000	5.0609	.061	1.22	.17871	.002	1
S5	10.000	10.021	.021	.213	.35314	.010	1
S2	.80000	.79495	-.005	-.632	.02864	.001	1

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697



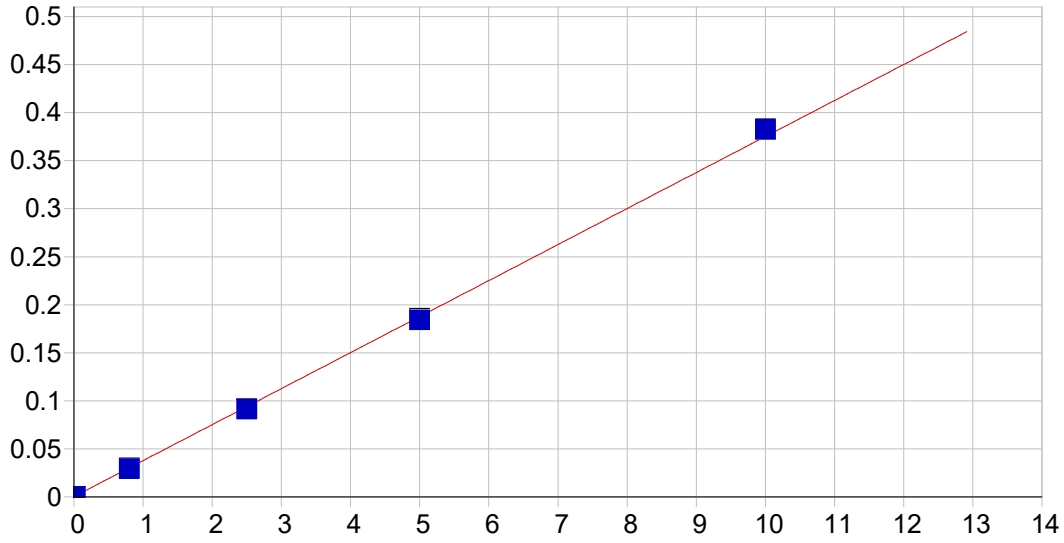
Pb 220.353 {453}

Date of Fit:	8/4/2025 14:58:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000221	Re-Slope:	1.000000
A1 (Gain):	0.192481	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999688	Status:	OK.
Std Error of Est:	0.000087		
Predicted MDL:	0.001464		
Predicted MQL:	0.004879		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00022	.000	1
S1	.01200	.01119	-.001	-6.74	.00233	.000	1
S3	2.5000	2.4309	-.069	-2.76	.46763	.001	1
S4	5.0000	4.8716	-.128	-2.57	.93691	.009	1
S5	10.000	10.227	.227	2.27	1.9667	.002	1
S2	.80000	.77157	-.028	-3.55	.14857	.003	1

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697



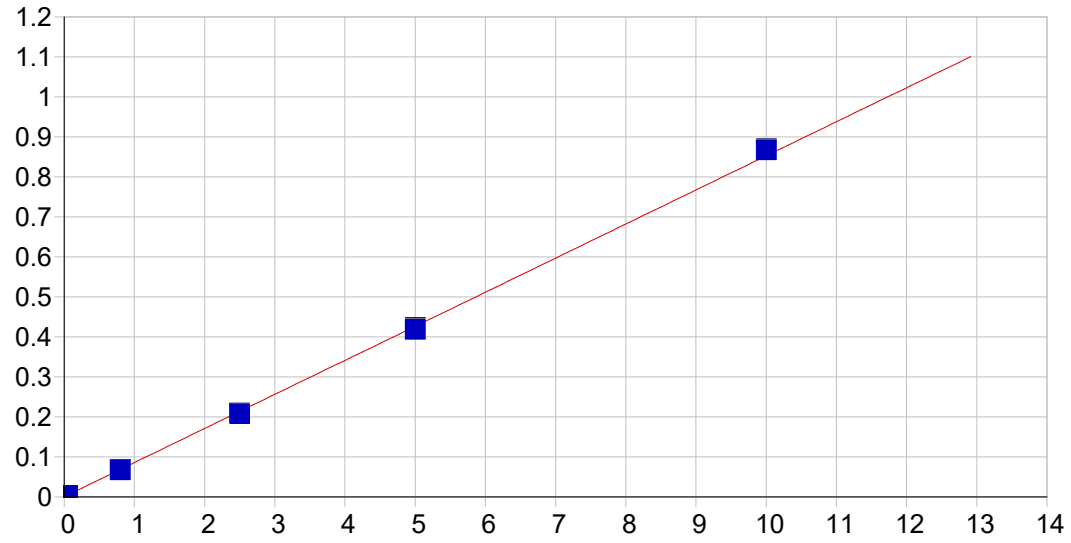
Se 196.090 {472}

Date of Fit:	8/4/2025 14:58:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000269	Re-Slope:	1.000000
A1 (Gain):	0.037485	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999771	Status:	OK.
Std Error of Est:	0.000019		
Predicted MDL:	0.003882		
Predicted MQL:	0.012940		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00027	.000	1
S1	.02000	.02062	.001	3.09	.00104	.000	1
S3	2.5000	2.4287	-.071	-2.85	.09128	.000	1
S4	5.0000	4.9049	-.095	-1.90	.18408	.002	1
S5	10.000	10.192	.192	1.92	.38220	.001	1
S2	.80000	.77396	-.026	-3.25	.02927	.001	1

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697



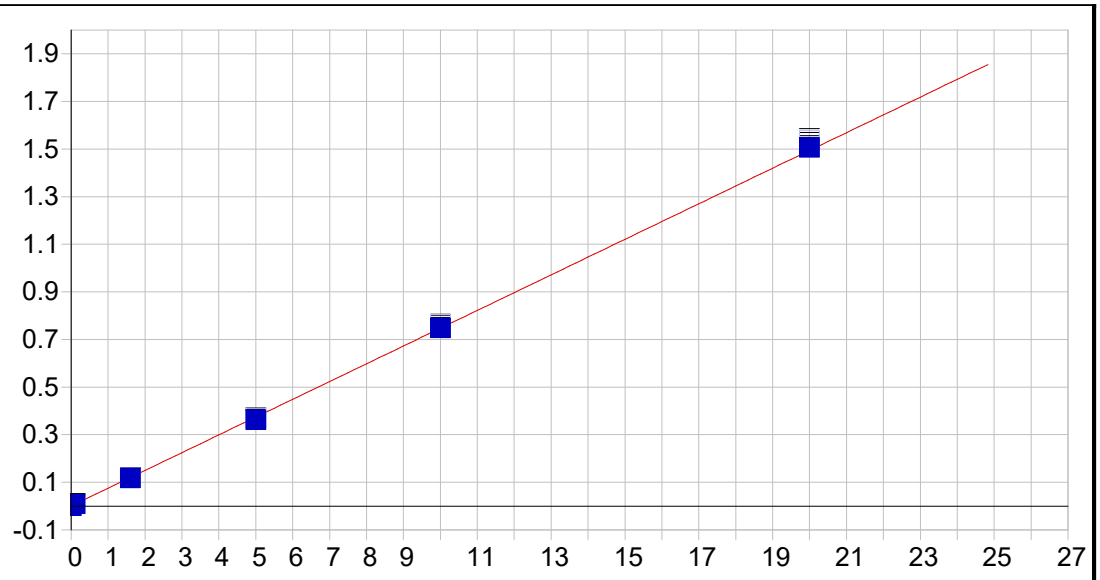
Sb 206.833 {463}

Date of Fit:	8/4/2025 14:58:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000633	Re-Slope:	1.000000
A1 (Gain):	0.085194	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999809	Status:	OK.
Std Error of Est:	0.000062		
Predicted MDL:	0.002277		
Predicted MQL:	0.007588		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00063	.000	1
S1	.05000	.05178	.002	3.56	.00505	.000	1
S3	2.5000	2.4371	-.063	-2.51	.20884	.001	1
S4	5.0000	4.9064	-.094	-1.87	.41979	.003	1
S5	10.000	10.176	.176	1.76	.86987	.000	1
S2	.80000	.77880	-.021	-2.65	.06717	.001	1

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697



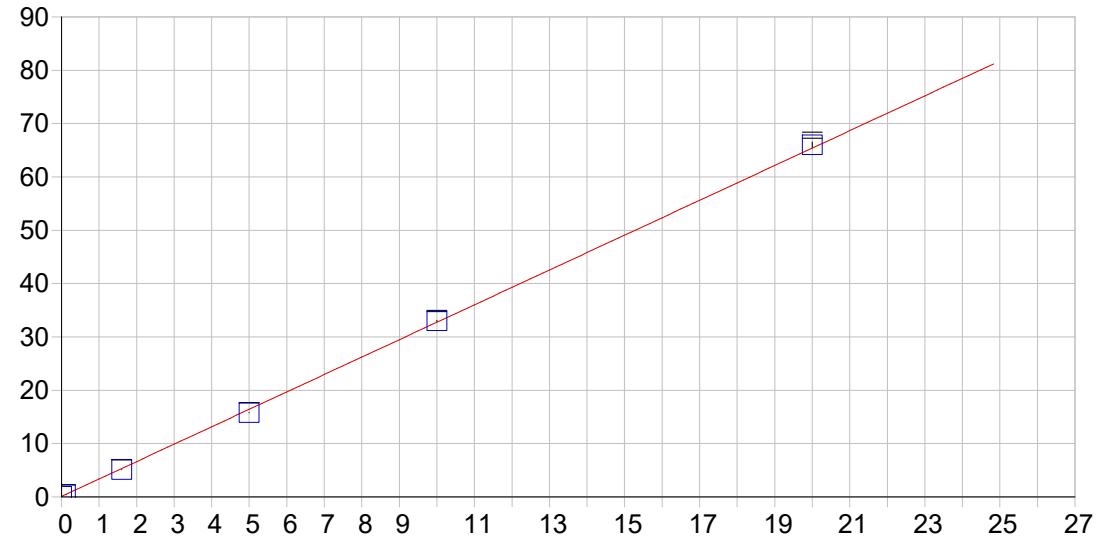
Al 396.152 { 85}

Date of Fit:	8/4/2025 14:58:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000528	Re-Slope:	1.000000
A1 (Gain):	0.074687	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999896	Status:	OK.
Std Error of Est:	0.000081		
Predicted MDL:	0.014039		
Predicted MQL:	0.046797		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00053	.001	1
S1	.10000	.10899	.009	8.99	.00925	.001	1
S3	5.0000	4.8444	-.156	-3.11	.36959	.001	1
S4	10.000	10.015	.015	.153	.76303	.002	1
S5	20.000	20.168	.168	.839	1.5358	.008	1
S2	1.6000	1.5630	-.037	-2.31	.11958	.000	1

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697



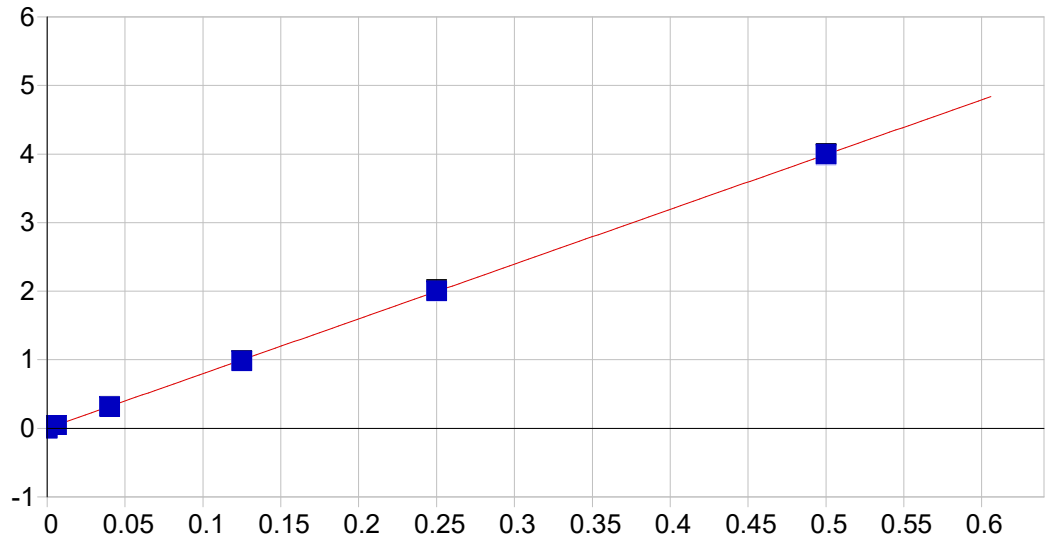
Ba 493.409 { 68}

Date of Fit:	8/4/2025 14:58:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.092638	Re-Slope:	1.000000
A1 (Gain):	3.265758	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999841	Status:	OK.
Std Error of Est:	0.004320		
Predicted MDL:	0.000859		
Predicted MQL:	0.002862		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.09266	.002	1
S1	.10000	.10055	.001	.545	.42099	.004	1
S3	5.0000	4.8065	-.193	-3.87	15.790	.038	1
S4	10.000	10.077	.077	.769	33.001	.109	1
S5	20.000	20.174	.174	.869	65.975	.570	1
S2	1.6000	1.5422	-.058	-3.61	5.1292	.033	1

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697



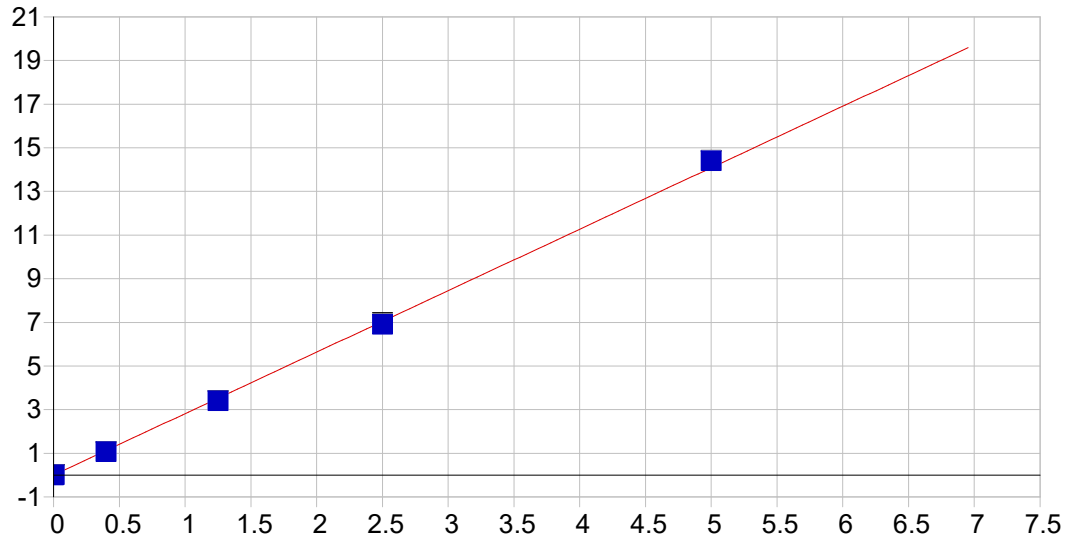
Be 234.861 {144}

Date of Fit:	8/4/2025 14:58:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000575	Re-Slope:	1.000000
A1 (Gain):	7.984463	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999977	Status:	OK.
Std Error of Est:	0.000154		
Predicted MDL:	0.000077		
Predicted MQL:	0.000258		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00058	.000	1
S1	.00600	.00618	.000	3.07	.04844	.002	1
S3	.12500	.12317	-.002	-1.46	.97841	.006	1
S4	.25000	.25108	.001	.430	1.9952	.018	1
S5	.50000	.50090	.001	.180	3.9810	.006	1
S2	.04000	.03967	-.000	-.831	.31472	.004	1

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697



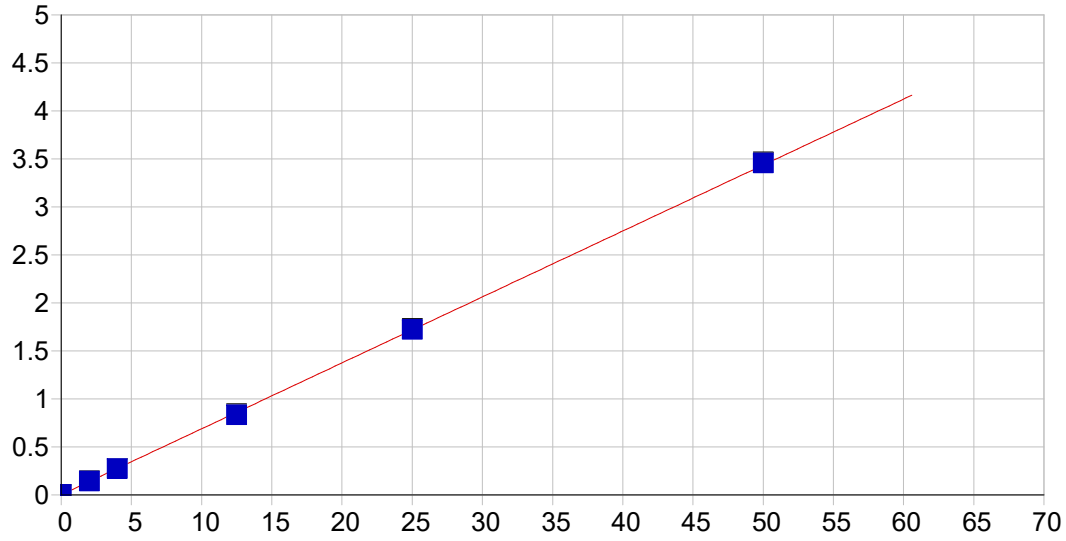
Cd 226.502 {449}

Date of Fit:	8/4/2025 14:58:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000366	Re-Slope:	1.000000
A1 (Gain):	2.817559	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999666	Status:	OK.
Std Error of Est:	0.000662		
Predicted MDL:	0.000084		
Predicted MQL:	0.000280		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00036	.000	1
S1	.00600	.00590	-.000	-1.61	.01632	.000	1
S3	1.2500	1.2066	-.043	-3.47	3.4017	.008	1
S4	2.5000	2.4528	-.047	-1.89	6.9153	.065	1
S5	5.0000	5.1126	.113	2.25	14.414	.012	1
S2	.40000	.37808	-.022	-5.48	1.0656	.022	1

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697



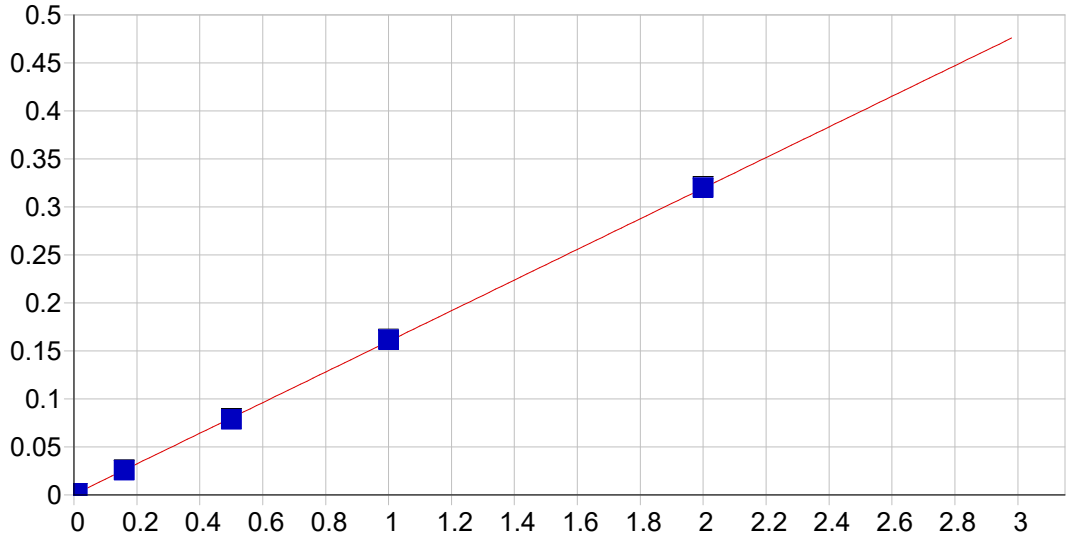
Ca 373.690 { 90}

Date of Fit:	8/4/2025 14:58:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001986	Re-Slope:	1.000000
A1 (Gain):	0.068677	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999913	Status:	OK.
Std Error of Est:	0.000480		
Predicted MDL:	0.012789		
Predicted MQL:	0.042631		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00002	.000	.000	.00199	.002	1
S2	4.0000	3.9327	-.067	-1.68	.27207	.002	1
S3	12.500	12.123	-.377	-3.02	.83456	.008	1
S4	25.000	25.075	.075	.300	1.7241	.006	1
S5	50.000	50.311	.311	.623	3.4572	.011	1
S1	2.0000	2.0579	.058	2.90	.14332	.001	1

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697



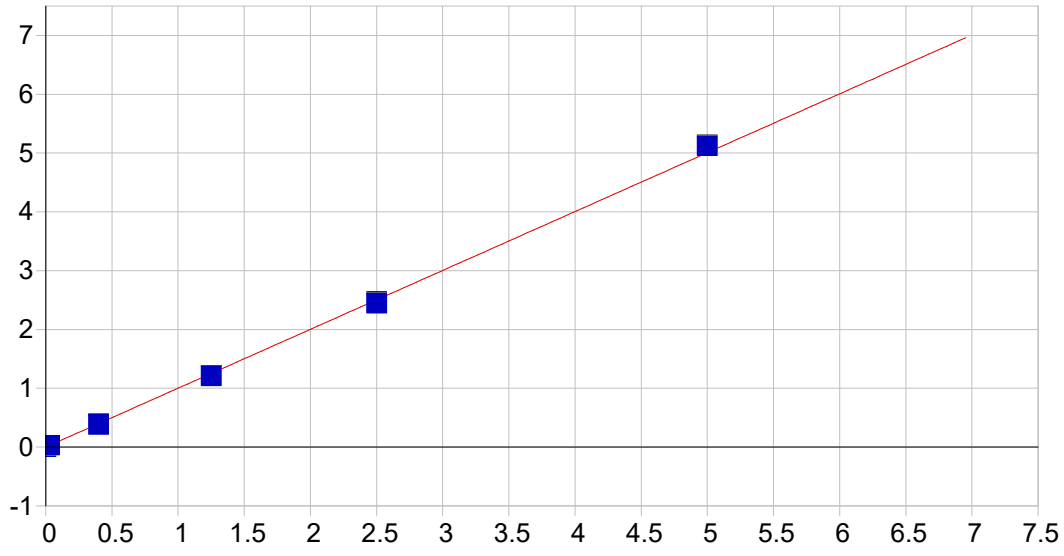
Cr 267.716 {126}

Date of Fit:	8/4/2025 14:58:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000416	Re-Slope:	1.000000
A1 (Gain):	0.159550	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999946	Status:	OK.
Std Error of Est:	0.000012		
Predicted MDL:	0.000430		
Predicted MQL:	0.001432		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00042	.000	1
S1	.01000	.00922	-.001	-7.83	.00189	.000	1
S3	.50000	.49002	-.010	-2.00	.07863	.001	1
S4	1.0000	1.0097	.010	.972	.16158	.001	1
S5	2.0000	2.0034	.003	.168	.32018	.001	1
S2	.16000	.15768	-.002	-1.45	.02558	.000	1

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697



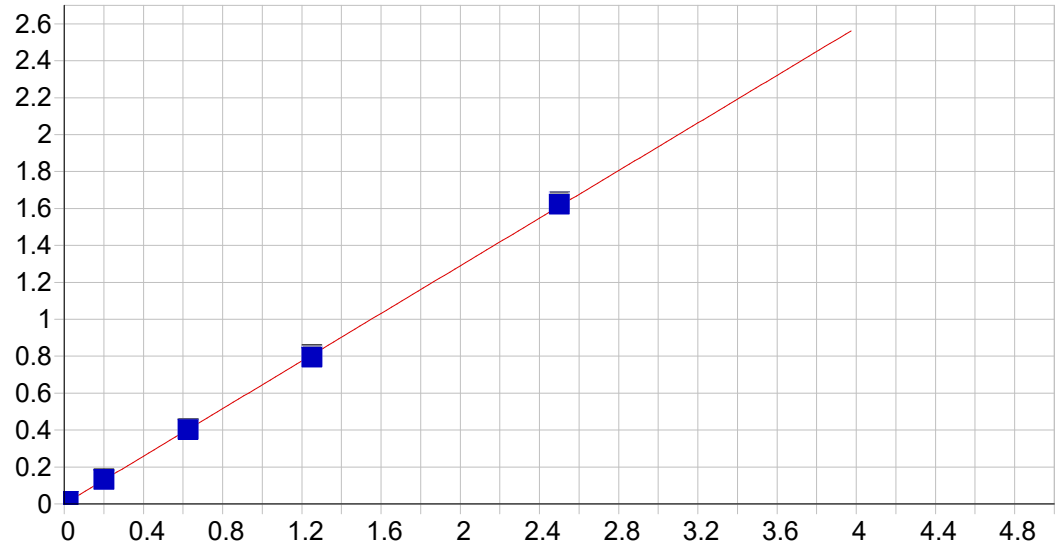
Co 228.616 {448}

Date of Fit:	8/4/2025 14:58:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000123	Re-Slope:	1.000000
A1 (Gain):	1.001307	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999675	Status:	OK.
Std Error of Est:	0.000520		
Predicted MDL:	0.000214		
Predicted MQL:	0.000715		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00012	.000	1
S1	.03000	.03105	.001	3.49	.03108	.000	1
S3	1.2500	1.2080	-.042	-3.36	1.2118	.002	1
S4	2.5000	2.4433	-.057	-2.27	2.4509	.022	1
S5	5.0000	5.1139	.114	2.28	5.1292	.007	1
S2	.40000	.38375	-.016	-4.06	.38505	.008	1

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697



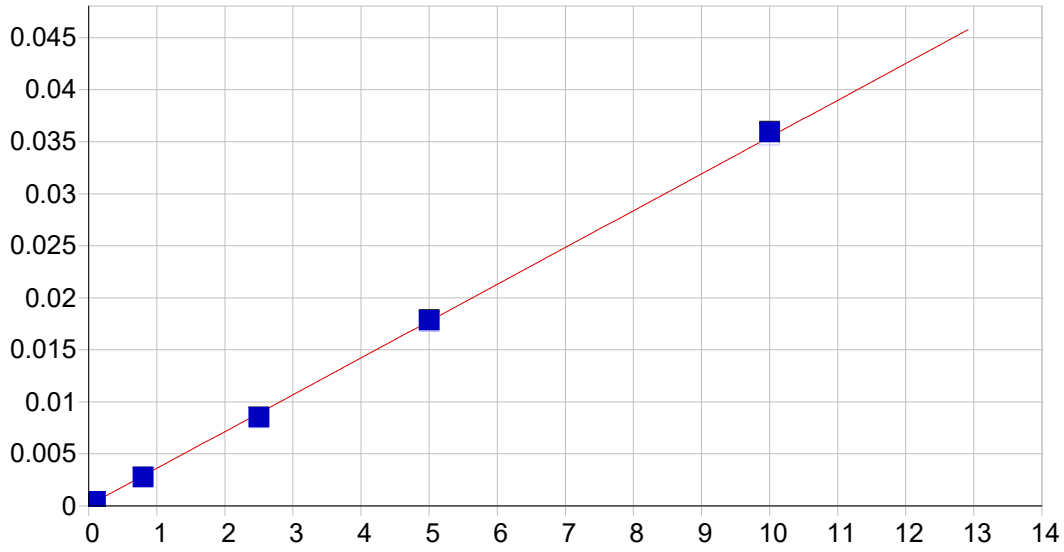
Cu 224.700 {450}

Date of Fit:	8/4/2025 14:58:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000584	Re-Slope:	1.000000
A1 (Gain):	0.644569	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999930	Status:	OK.
Std Error of Est:	0.000090		
Predicted MDL:	0.000463		
Predicted MQL:	0.001542		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00058	.000	1
S1	.02000	.02225	.002	11.2	.01507	.000	1
S3	.62500	.62380	-.001	-.192	.40602	.001	1
S4	1.2500	1.2314	-.019	-1.49	.80099	.006	1
S5	2.5000	2.5152	.015	.609	1.6352	.002	1
S2	.20000	.20236	.002	1.18	.13210	.002	1

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697



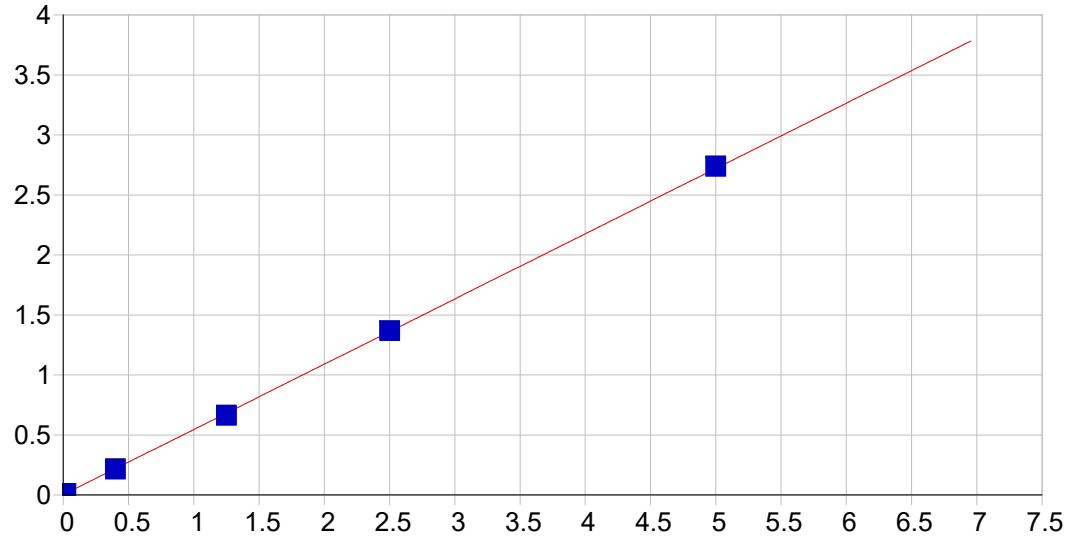
Fe 240.488 {140}

Date of Fit:	8/4/2025 14:58:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000065	Re-Slope:	1.000000
A1 (Gain):	0.003538	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999749	Status:	OK.
Std Error of Est:	0.000004		
Predicted MDL:	0.007011		
Predicted MQL:	0.023370		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00006	.000	1
S1	.10000	.10016	.000	.160	.00041	.000	1
S3	2.5000	2.3857	-.114	-4.57	.00843	.000	1
S4	5.0000	5.0237	.024	.474	.01769	.000	1
S5	10.000	10.131	.131	1.31	.03561	.000	1
S2	.80000	.75966	-.040	-5.04	.00273	.000	1

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697



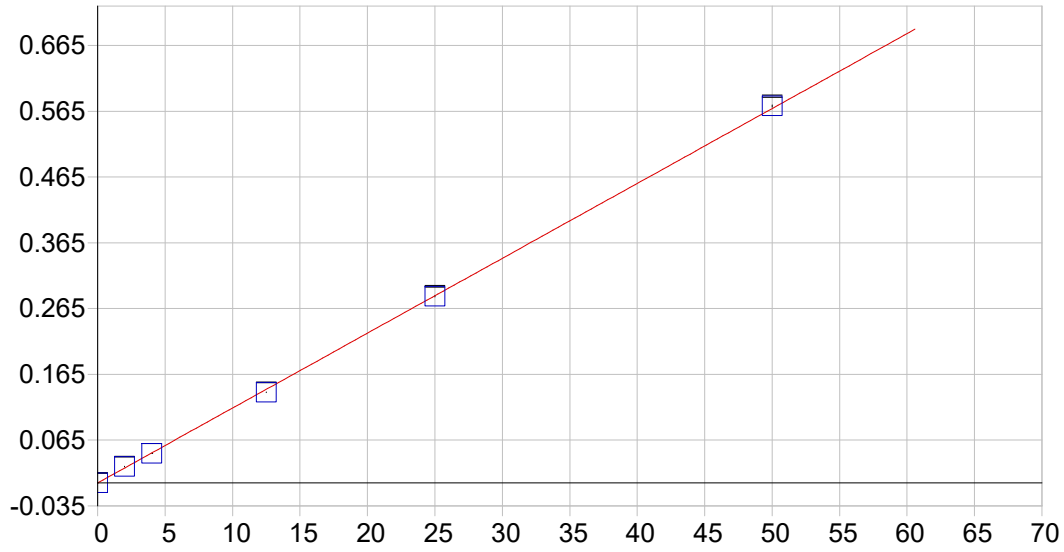
Mn 257.610 {131}

Date of Fit:	8/4/2025 14:58:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001340	Re-Slope:	1.000000
A1 (Gain):	0.543743	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999918	Status:	OK.
Std Error of Est:	0.000115		
Predicted MDL:	0.000599		
Predicted MQL:	0.001997		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00134	.000	1
S1	.02000	.02048	.000	2.40	.01248	.000	1
S3	1.2500	1.2137	-.036	-2.90	.66142	.002	1
S4	2.5000	2.5127	.013	.509	1.3679	.000	1
S5	5.0000	5.0314	.031	.628	2.7377	.003	1
S2	.40000	.39164	-.008	-2.09	.21434	.001	1

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697



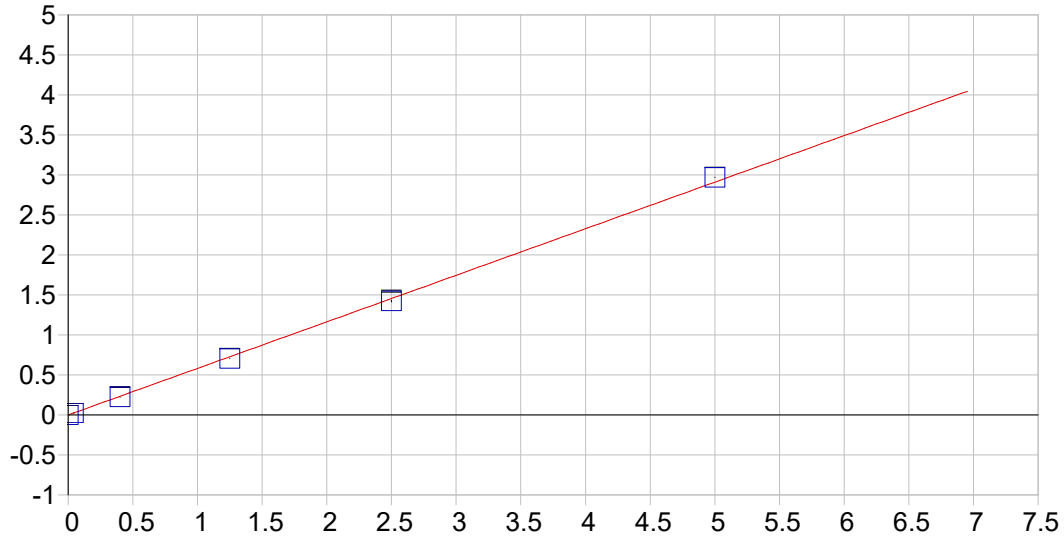
Mg 279.079 {121}

Date of Fit:	8/4/2025 14:58:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000071	Re-Slope:	1.000000
A1 (Gain):	0.011385	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999807	Status:	OK.
Std Error of Est:	0.000118		
Predicted MDL:	0.032467		
Predicted MQL:	0.108222		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00011	-.000	.000	-.00007	.000	1
S2	4.0000	3.9351	-.065	-1.62	.04473	.000	1
S3	12.500	12.093	-.407	-3.25	.13761	.001	1
S4	25.000	24.940	-.060	-.240	.28387	.001	1
S5	50.000	50.335	.335	.670	.57300	.002	1
S1	2.0000	2.1967	.197	9.83	.02494	.001	1

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697



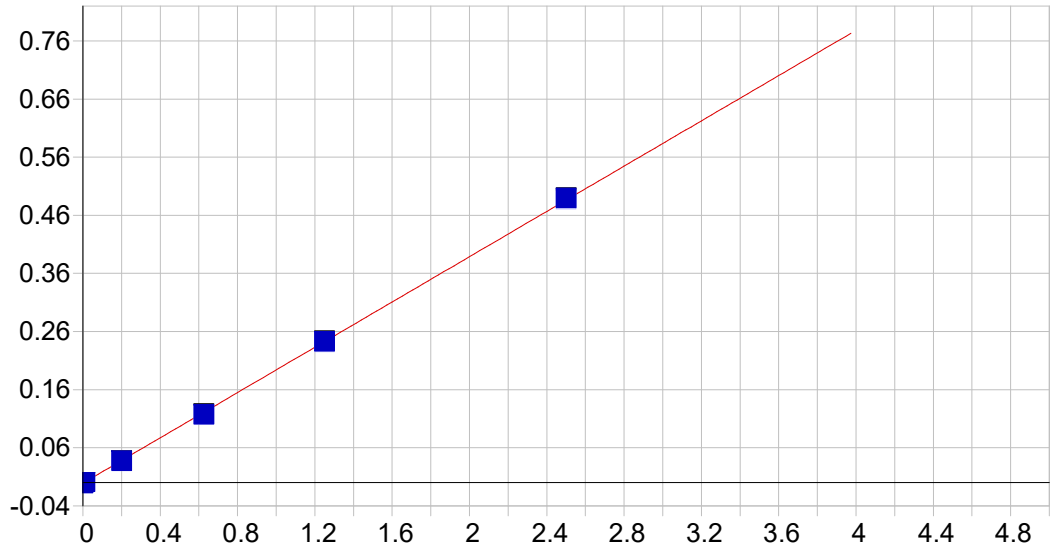
Ni 231.604 {446}

Date of Fit:	8/4/2025 14:58:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000426	Re-Slope:	1.000000
A1 (Gain):	0.581937	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999738	Status:	OK.
Std Error of Est:	0.000313		
Predicted MDL:	0.000391		
Predicted MQL:	0.001304		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00043	.000	1
S1	.04000	.04143	.001	3.59	.02369	.000	1
S3	1.2500	1.2137	-.036	-2.90	.70587	.002	1
S4	2.5000	2.4470	-.053	-2.12	1.4236	.012	1
S5	5.0000	5.1021	.102	2.04	2.9687	.002	1
S2	.40000	.38573	-.014	-3.57	.22405	.005	1

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697



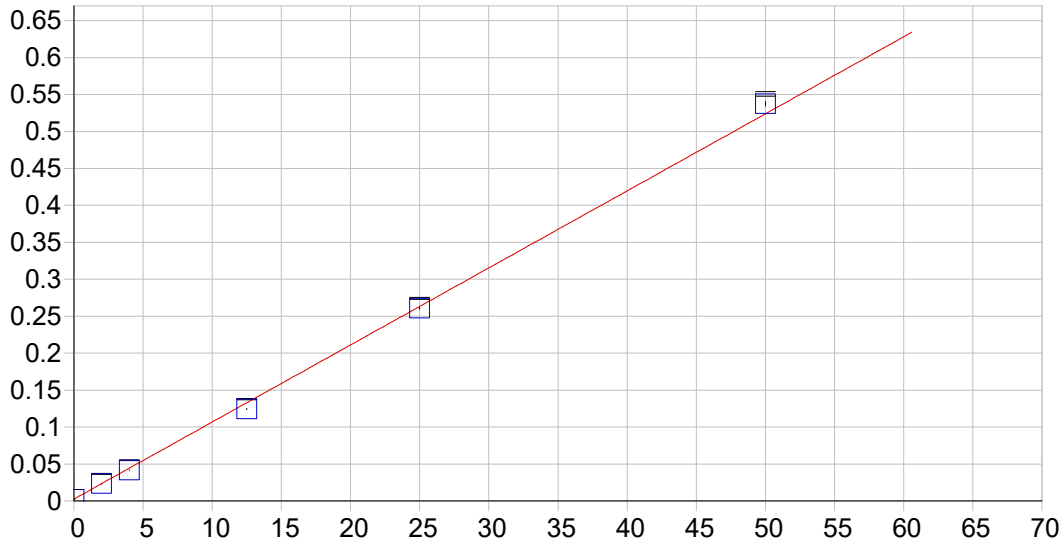
Ag 328.068 {103}

Date of Fit:	8/4/2025 14:58:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000803	Re-Slope:	1.000000
A1 (Gain):	0.194782	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999922	Status:	OK.
Std Error of Est:	0.000020		
Predicted MDL:	0.000612		
Predicted MQL:	0.002040		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00080	.000	1
S1	.01000	.01051	.001	5.06	.00123	.000	1
S3	.62500	.60738	-.018	-2.82	.11691	.001	1
S4	1.2500	1.2530	.003	.236	.24207	.001	1
S5	2.5000	2.5174	.017	.698	.48719	.001	1
S2	.20000	.19672	-.003	-1.64	.03733	.000	1

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697



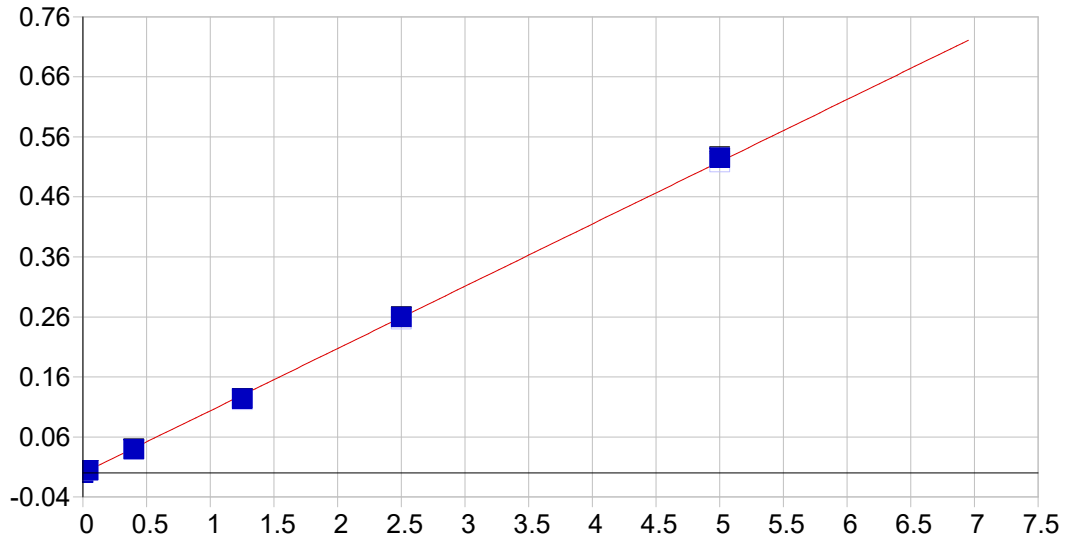
Na 589.592 { 57}

Date of Fit:	8/4/2025 14:58:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002534	Re-Slope:	1.000000
A1 (Gain):	0.010426	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999439	Status:	OK.
Std Error of Est:	0.000185		
Predicted MDL:	0.015157		
Predicted MQL:	0.050524		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00023	.000	.000	.00254	.000	1
S2	4.0000	3.7564	-.244	-6.09	.04170	.000	1
S3	12.500	11.679	-.821	-6.57	.12430	.001	1
S4	25.000	24.771	-.229	-.916	.26080	.001	1
S5	50.000	51.304	1.30	2.61	.53745	.003	1
S1	2.0000	1.9895	-.010	-.523	.02328	.001	1

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697



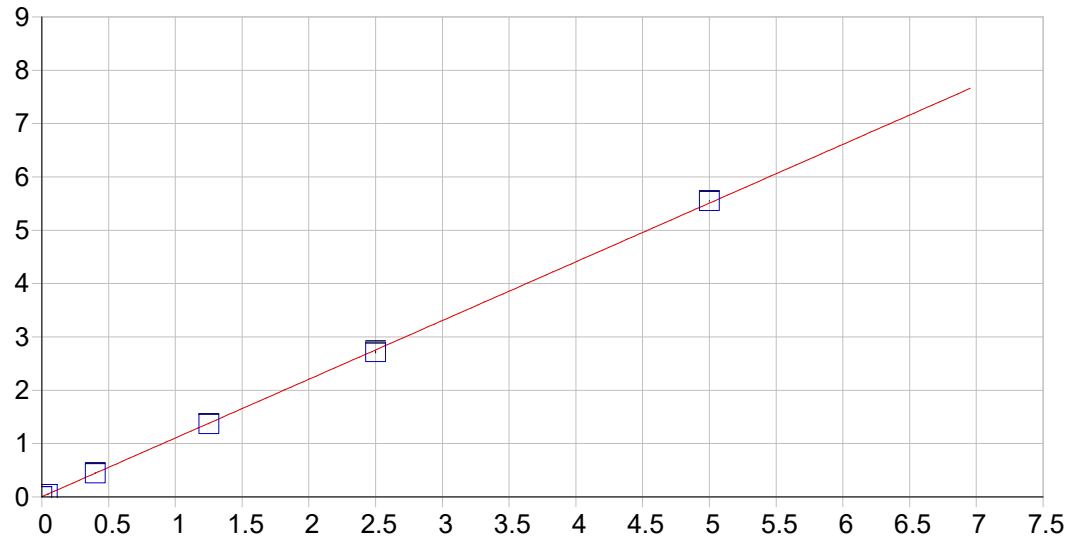
V 292.402 {115}

Date of Fit:	8/4/2025 14:58:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000187	Re-Slope:	1.000000
A1 (Gain):	0.103759	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999750	Status:	OK.
Std Error of Est:	0.000054		
Predicted MDL:	0.003895		
Predicted MQL:	0.012982		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00019	.000	1
S1	.04000	.04231	.002	5.77	.00405	.000	1
S3	1.2500	1.1925	-.058	-4.60	.12165	.000	1
S4	2.5000	2.5074	.007	.297	.25620	.001	1
S5	5.0000	5.0657	.066	1.31	.51787	.001	1
S2	.40000	.38211	-.018	-4.47	.03885	.001	1

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697



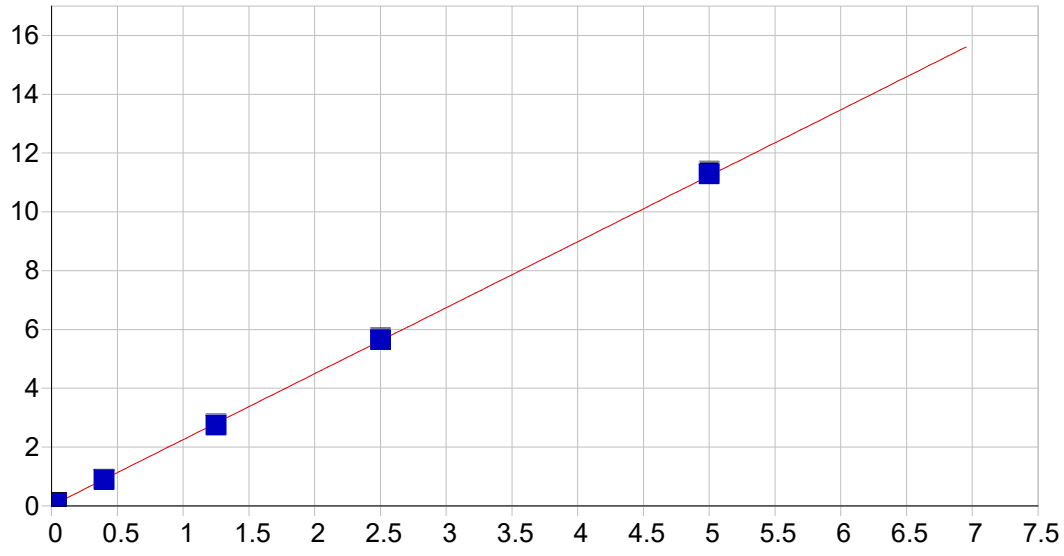
Zn 206.200 {464}

Date of Fit:	8/4/2025 14:58:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.003780	Re-Slope:	1.000000
A1 (Gain):	1.100957	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999950	Status:	OK.
Std Error of Est:	0.000258		
Predicted MDL:	0.000160		
Predicted MQL:	0.000533		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00378	.000	1
S1	.04000	.04205	.002	5.12	.05007	.000	1
S3	1.2500	1.2414	-.009	-.689	1.3705	.001	1
S4	2.5000	2.4665	-.034	-1.34	2.7193	.022	1
S5	5.0000	5.0386	.039	.773	5.5511	.006	1
S2	.40000	.40145	.001	.363	.44576	.009	1

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697



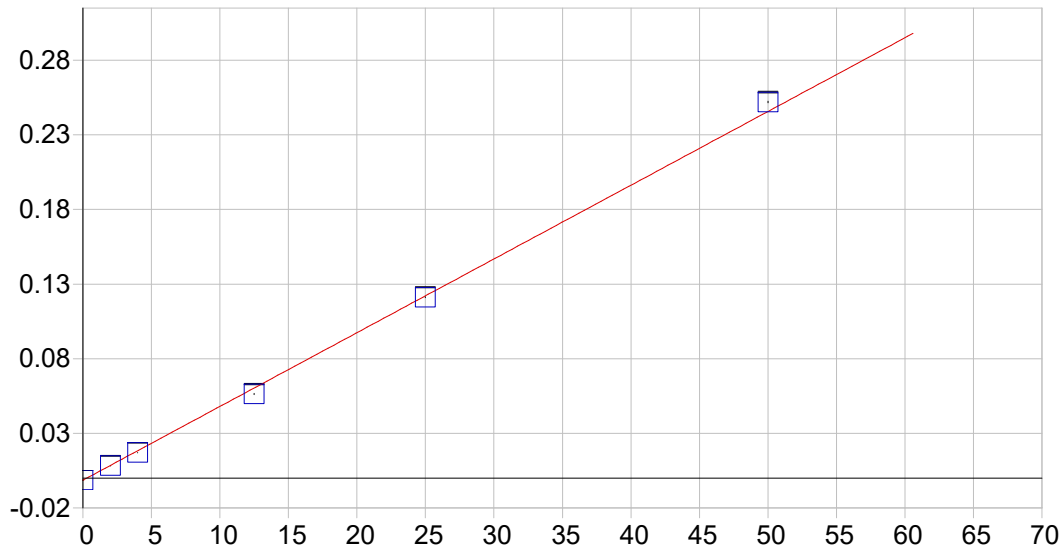
Zn 213.856 {158}

Date of Fit:	8/4/2025 14:58:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.008735	Re-Slope:	1.000000
A1 (Gain):	2.243877	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999939	Status:	OK.
Std Error of Est:	0.000587		
Predicted MDL:	0.000263		
Predicted MQL:	0.000876		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00874	.001	1
S1	.04000	.04078	.001	1.96	.10088	.004	1
S3	1.2500	1.2174	-.033	-2.61	2.7599	.024	1
S4	2.5000	2.5119	.012	.474	5.6841	.034	1
S5	5.0000	5.0259	.026	.518	11.364	.019	1
S2	.40000	.39409	-.006	-1.48	.89927	.001	1

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697



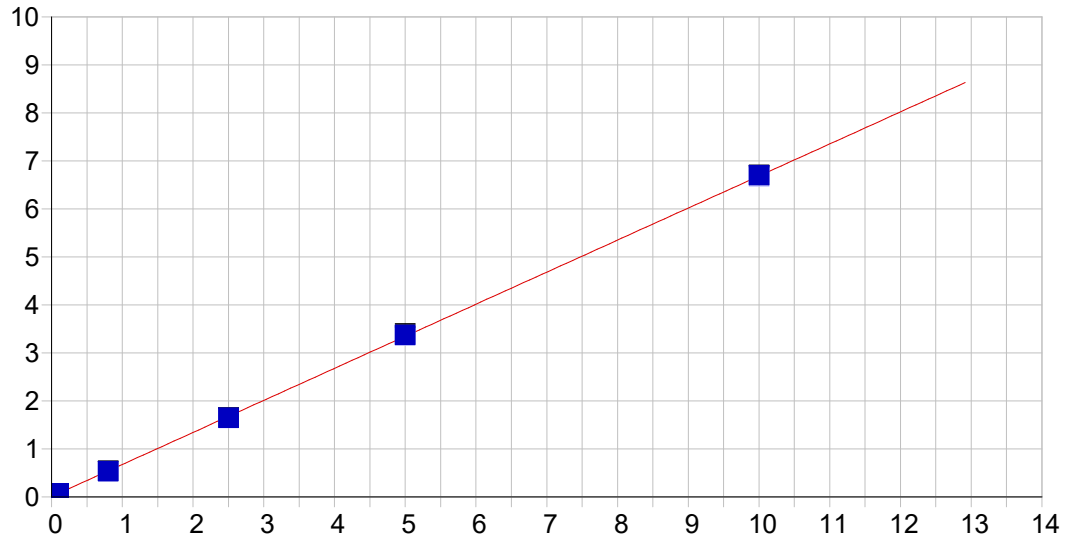
K 766.490 { 44}

Date of Fit:	8/4/2025 14:58:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001430	Re-Slope:	1.000000
A1 (Gain):	0.004942	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999450	Status:	OK.
Std Error of Est:	0.000087		
Predicted MDL:	0.041652		
Predicted MQL:	0.138841		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00025	.000	.000	-.00143	.000	1
S2	4.0000	3.7422	-.258	-6.45	.01706	.000	1
S3	12.500	11.701	-.799	-6.39	.05640	.000	1
S4	25.000	24.800	-.200	-.799	.12114	.000	1
S5	50.000	51.287	1.29	2.57	.25205	.001	1
S1	2.0000	1.9699	-.030	-1.50	.00831	.000	1

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697



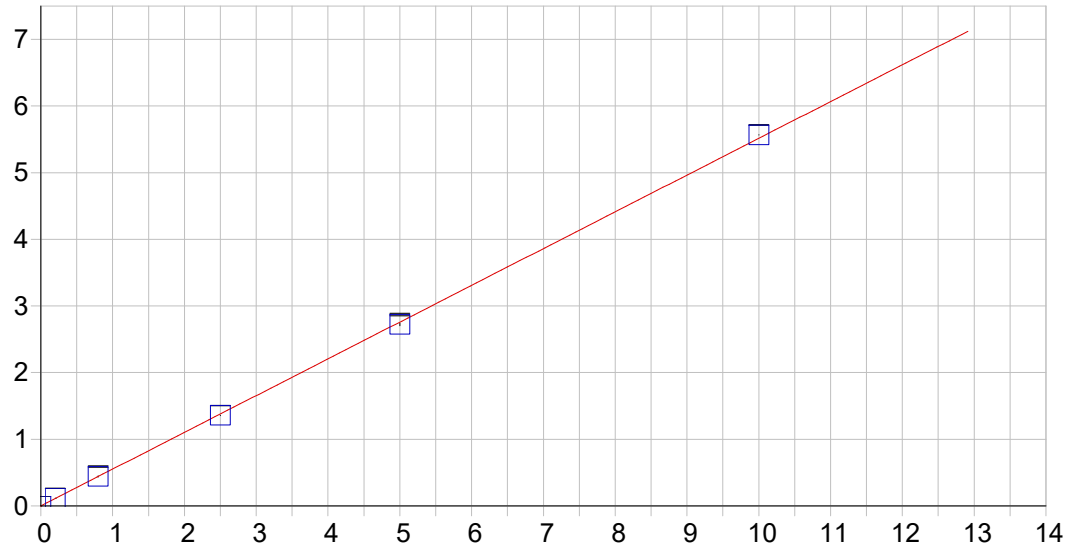
B 249.678 {135}

Date of Fit:	8/4/2025 14:58:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.007510	Re-Slope:	1.000000
A1 (Gain):	0.667828	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999963	Status:	OK.
Std Error of Est:	0.000301		
Predicted MDL:	0.000982		
Predicted MQL:	0.003274		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00751	.000	1
S1	.10000	.10009	.000	.088	.07396	.001	1
S3	2.5000	2.4529	-.047	-1.88	1.6396	.011	1
S4	5.0000	5.0369	.037	.738	3.3593	.031	1
S5	10.000	10.021	.021	.210	6.6757	.007	1
S2	.80000	.78914	-.011	-1.36	.53259	.005	1

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697



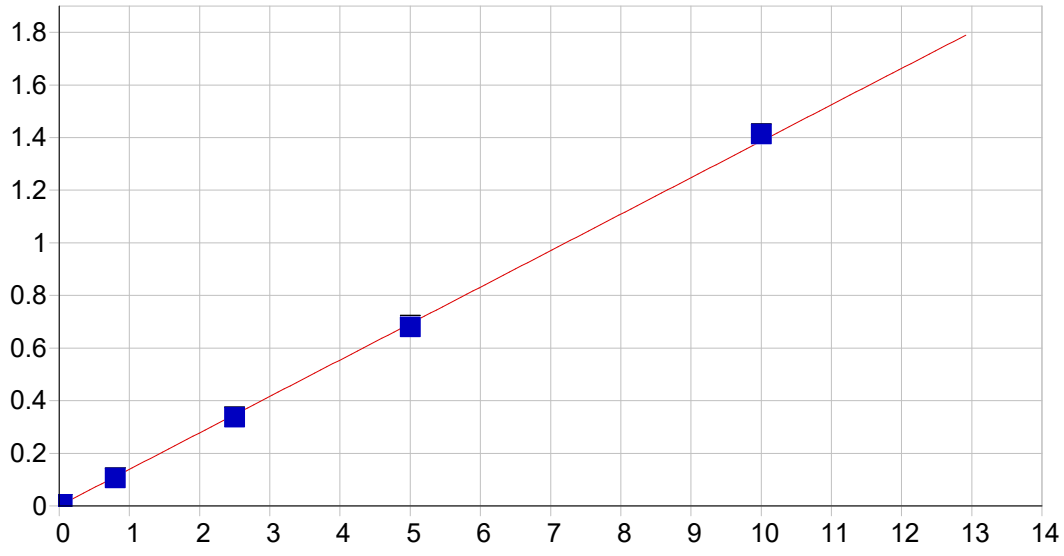
Mo 202.030 {467}

Date of Fit:	8/4/2025 14:58:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000483	Re-Slope:	1.000000
A1 (Gain):	0.551490	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999921	Status:	OK.
Std Error of Est:	0.000517		
Predicted MDL:	0.000323		
Predicted MQL:	0.001076		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00048	.000	1
S1	.20000	.21086	.011	5.43	.11677	.000	1
S3	2.5000	2.4598	-.040	-1.61	1.3570	.003	1
S4	5.0000	4.9365	-.063	-1.27	2.7229	.019	1
S5	10.000	10.094	.094	.941	5.5673	.000	1
S2	.80000	.79872	-.001	-.160	.44097	.008	1

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697



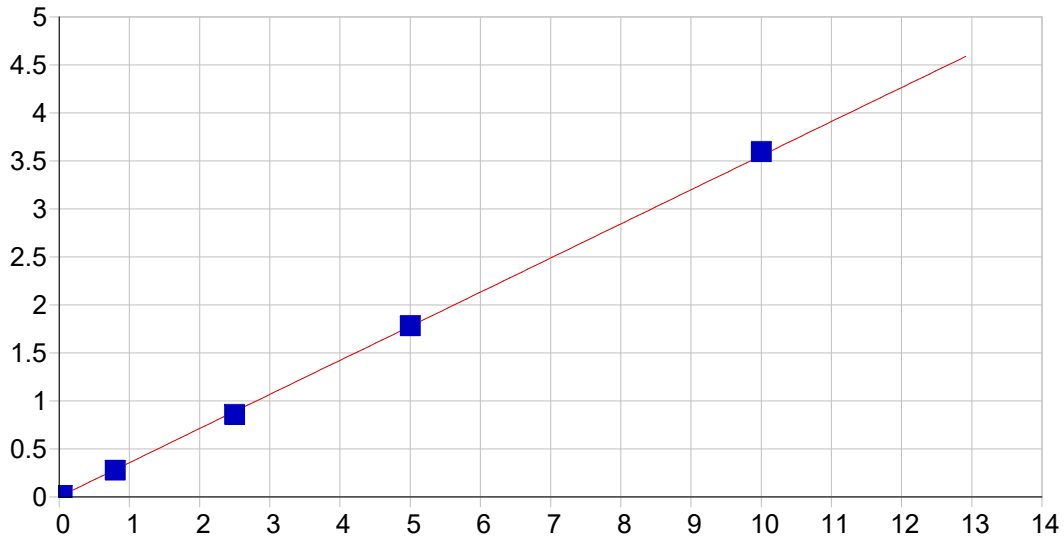
Sn 189.989 {478}

Date of Fit:	8/4/2025 14:58:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000436	Re-Slope:	1.000000
A1 (Gain):	0.138550	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999754	Status:	OK.
Std Error of Est:	0.000102		
Predicted MDL:	0.000721		
Predicted MQL:	0.002404		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00044	.000	1
S1	.04000	.03934	-.001	-1.66	.00588	.000	1
S3	2.5000	2.4324	-.068	-2.70	.33709	.001	1
S4	5.0000	4.9080	-.092	-1.84	.67973	.007	1
S5	10.000	10.196	.196	1.96	1.4117	.001	1
S2	.80000	.76386	-.036	-4.52	.10616	.002	1

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697



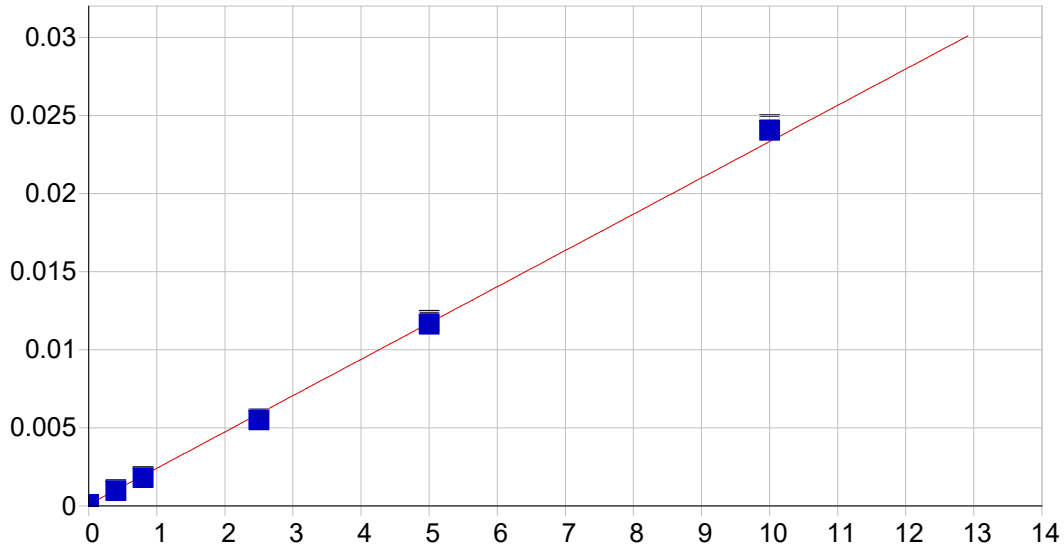
Ti 336.121 {100}

Date of Fit:	8/4/2025 14:58:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001367	Re-Slope:	1.000000
A1 (Gain):	0.355269	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999844	Status:	OK.
Std Error of Est:	0.000208		
Predicted MDL:	0.001783		
Predicted MQL:	0.005942		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00137	.000	1
S1	.04000	.03944	-.001	-1.39	.01537	.001	1
S3	2.5000	2.4075	-.093	-3.70	.85635	.004	1
S4	5.0000	5.0101	.010	.203	1.7807	.005	1
S5	10.000	10.112	.112	1.12	3.5924	.006	1
S2	.80000	.77142	-.029	-3.57	.27533	.003	1

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697



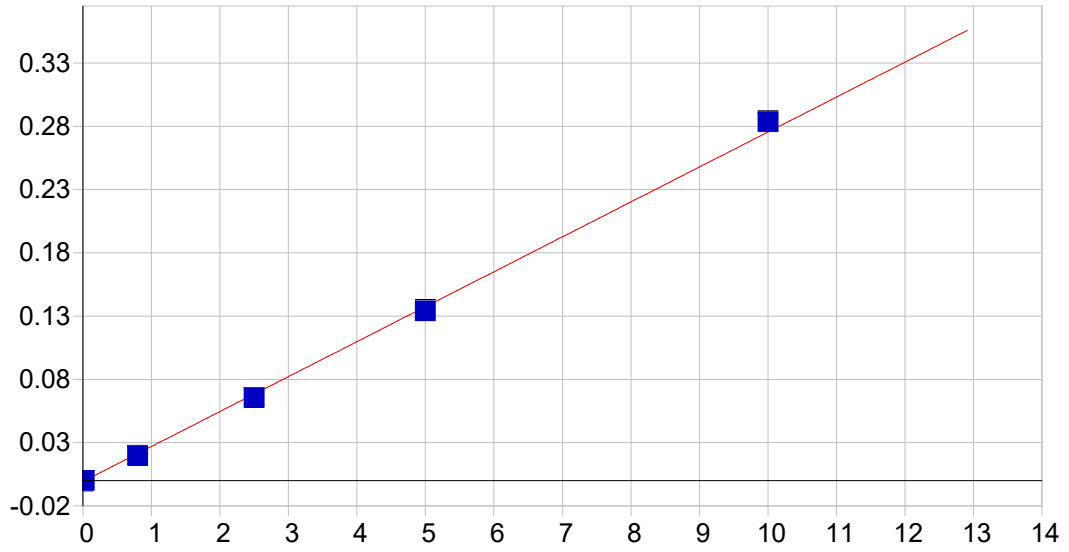
Si 288.158 {117}

Date of Fit:	8/4/2025 14:58:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000089	Re-Slope:	1.000000
A1 (Gain):	0.002323	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999257	Status:	OK.
Std Error of Est:	0.000010		
Predicted MDL:	0.016561		
Predicted MQL:	0.055204		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00008	.000	.000	.00009	.000	1
S1	.40000	.37508	-.025	-6.23	.00096	.000	1
S3	2.5000	2.3215	-.179	-7.14	.00557	.000	1
S4	5.0000	4.9642	-.036	-.716	.01180	.000	1
S5	10.000	10.302	.302	3.02	.02437	.000	1
S2	.80000	.73708	-.063	-7.87	.00183	.000	1

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697



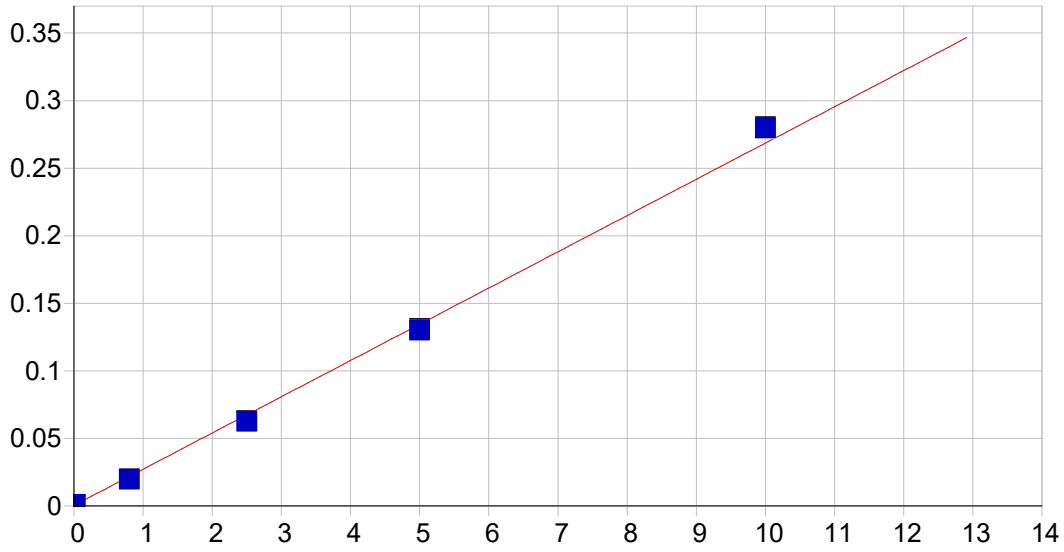
P 177.495 {490}

Date of Fit:	8/4/2025 14:58:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000639	Re-Slope:	1.000000
A1 (Gain):	0.027609	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999418	Status:	OK.
Std Error of Est:	0.000022		
Predicted MDL:	0.002703		
Predicted MQL:	0.009009		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00064	.000	1
S1	.02000	.02075	.001	3.73	-.00007	.000	1
S3	2.5000	2.3921	-.108	-4.31	.06540	.000	1
S4	5.0000	4.8798	-.120	-2.40	.13407	.001	1
S5	10.000	10.292	.292	2.92	.28348	.001	1
S2	.80000	.73518	-.065	-8.10	.01966	.000	1

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697



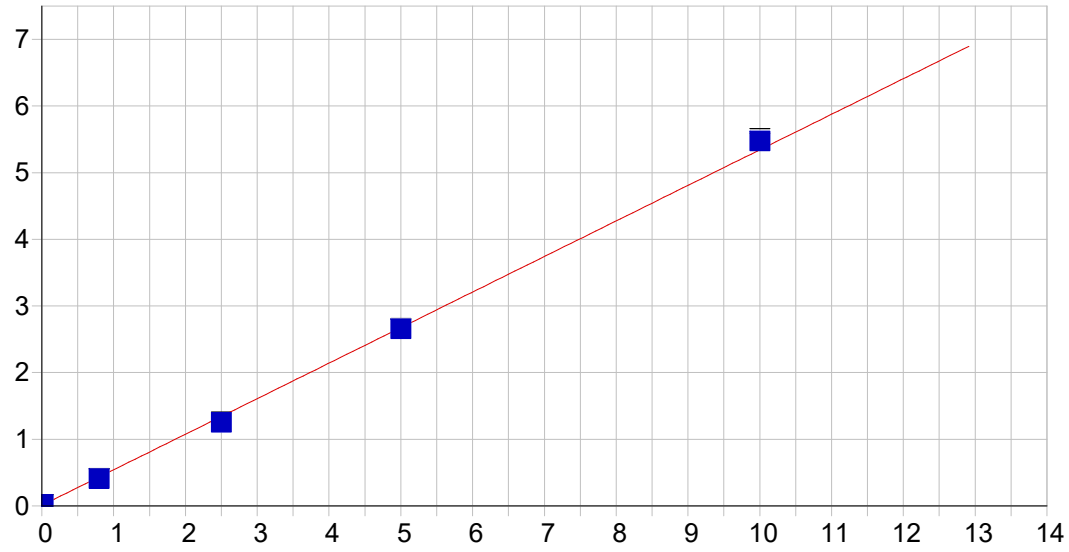
S 182.034 {485}

Date of Fit:	8/4/2025 14:58:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000338	Re-Slope:	1.000000
A1 (Gain):	0.026823	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998806	Status:	OK.
Std Error of Est:	0.000031		
Predicted MDL:	0.003334		
Predicted MQL:	0.011113		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00034	.000	1
S1	.02000	.02119	.001	5.96	.00088	.000	1
S3	2.5000	2.3223	-.178	-7.11	.06245	.000	1
S4	5.0000	4.8393	-.161	-3.21	.12979	.001	1
S5	10.000	10.418	.418	4.18	.27909	.001	1
S2	.80000	.71887	-.081	-10.1	.01956	.000	1

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697



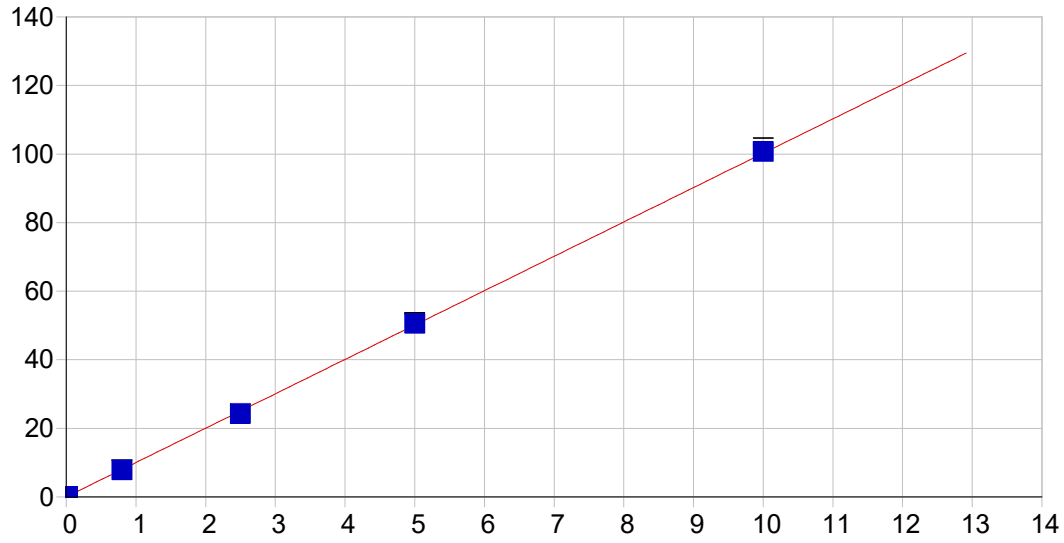
Li 670.784 { 50}

Date of Fit:	8/4/2025 14:58:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.008499	Re-Slope:	1.000000
A1 (Gain):	0.533450	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999438	Status:	OK.
Std Error of Est:	0.000420		
Predicted MDL:	0.004088		
Predicted MQL:	0.013626		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00850	.000	1
S5	10.000	10.248	.248	2.48	5.4795	.035	1
S4	5.0000	4.9651	-.035	-.697	2.6593	.005	1
S3	2.5000	2.3331	-.167	-6.68	1.2542	.003	1
S1	.02000	.02207	.002	10.4	.02046	.001	1
S2	.80000	.75180	-.048	-6.03	.40989	.004	1

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697



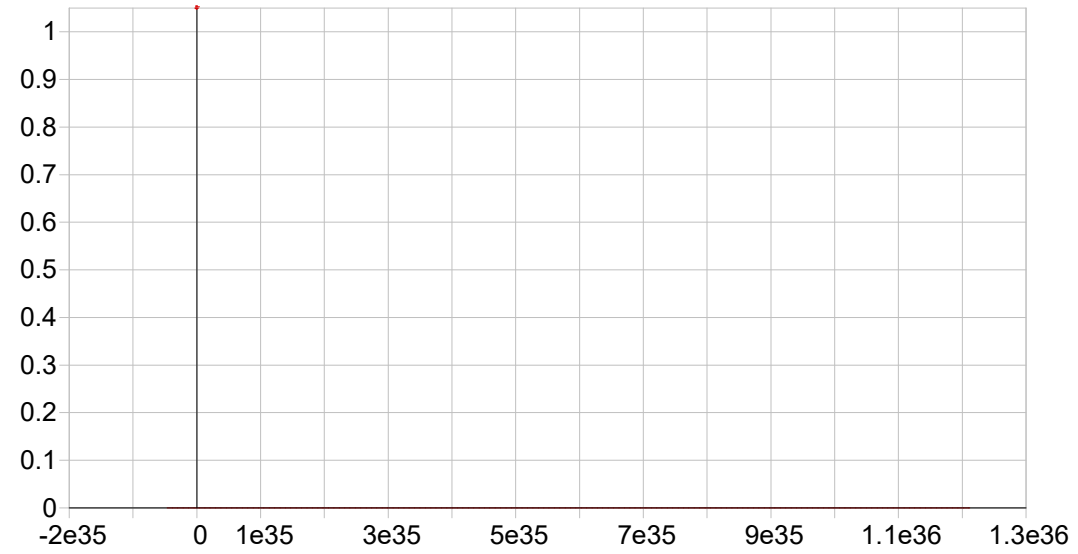
Sr 407.771 { 83}

Date of Fit:	8/4/2025 14:58:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002780	Re-Slope:	1.000000
A1 (Gain):	10.023203	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999910	Status:	OK.
Std Error of Est:	0.003149		
Predicted MDL:	0.000111		
Predicted MQL:	0.000371		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00278	.000	1
S1	.02000	.02037	.000	1.85	.20791	.003	1
S3	2.5000	2.4231	-.077	-3.08	24.314	.056	1
S4	5.0000	5.0451	.045	.902	50.619	.272	1
S5	10.000	10.047	.047	.468	100.80	1.00	1
S2	.80000	.78463	-.015	-1.92	7.8750	.050	1

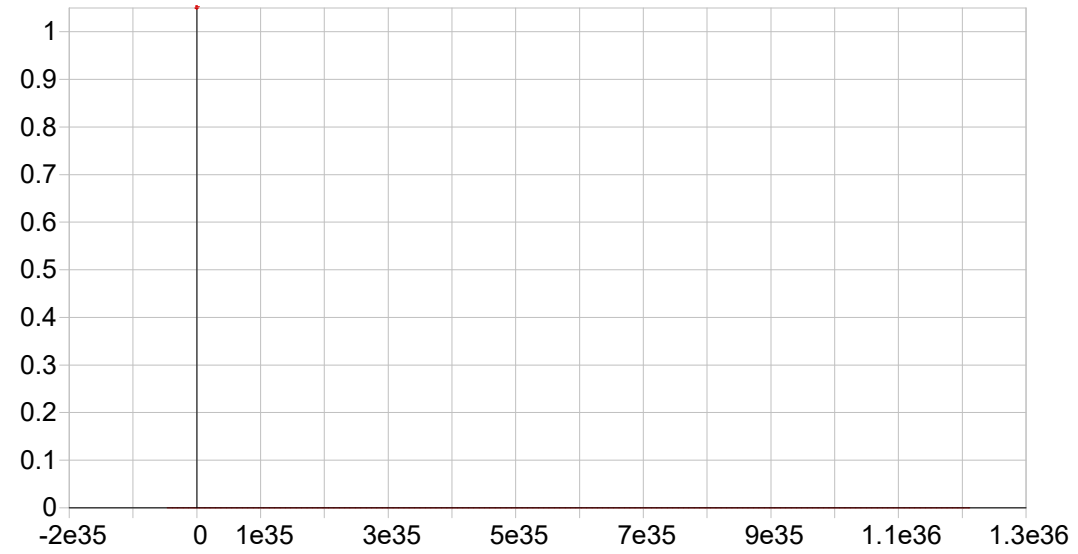
Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697



Y 224.306 {450}*

Date of Fit:	8/4/2025 14:58:15	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



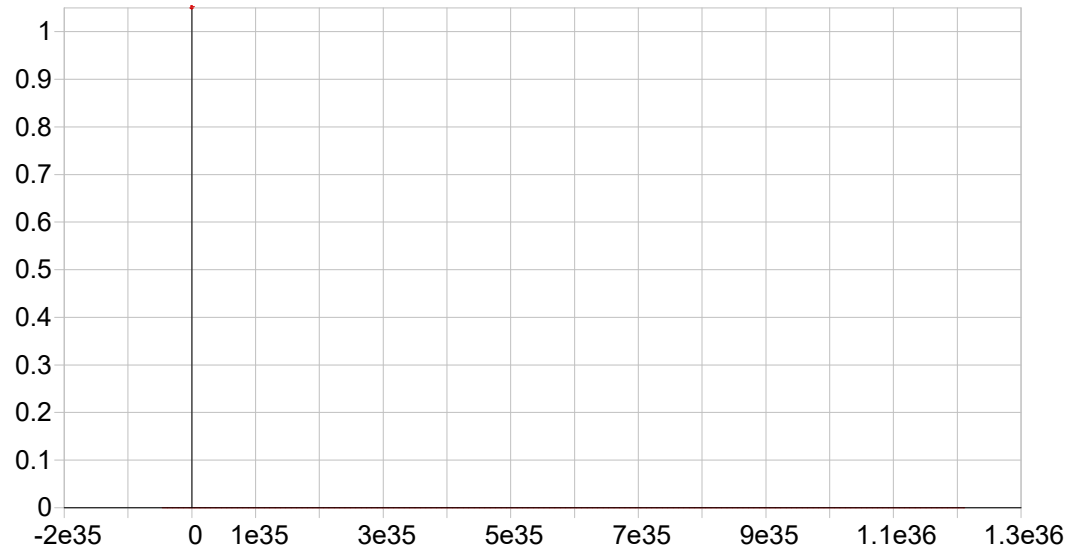
Y 360.073 { 94}*

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:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

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

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



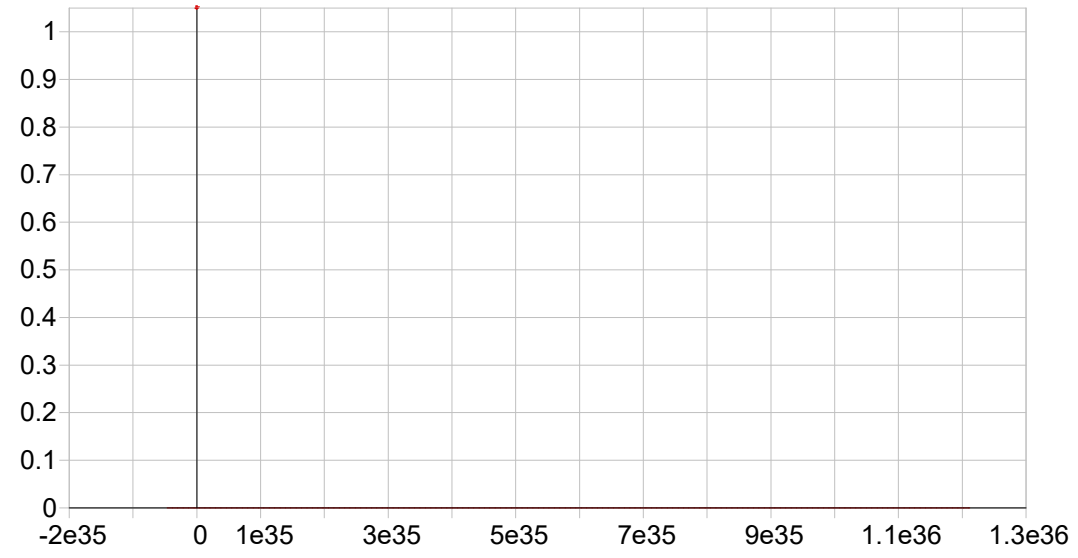
Y 371.030 { 91}*

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

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

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

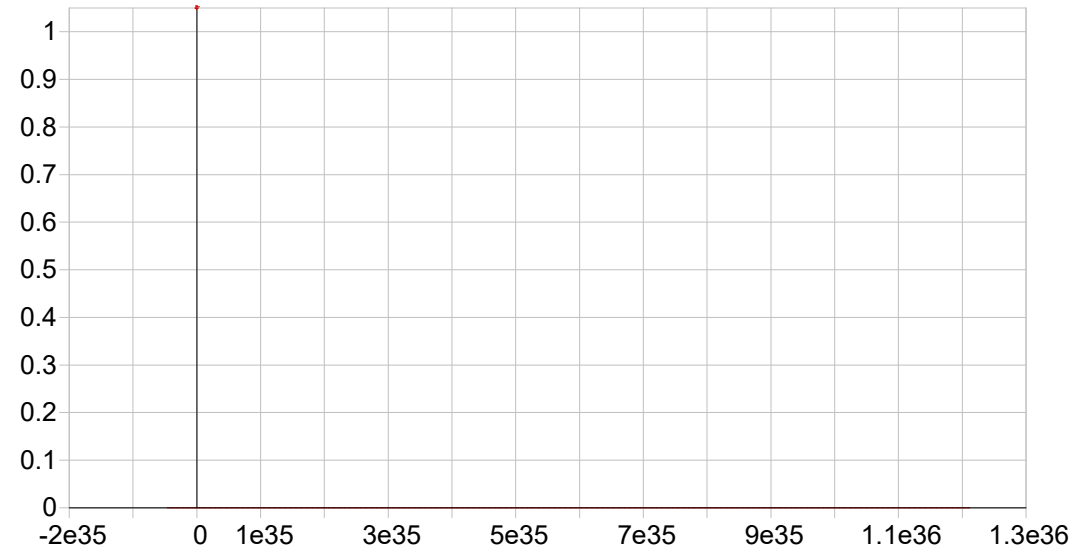
Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697



Y 224.306 {150}*

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

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



In 230.606 {446}*

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

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

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

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: S0 Acquired: 8/4/2025 11:15:54 Type: Cal
Method: 6010-200.7 NEW(v81) Mode: IR Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00002**	**.00068**	**.00022**	**.00027**	**.00063**	**.00053**	**.09266**	**-.00058**
Stddev	.00011	.00005	.00015	.00009	.00010	.00065	.00155	.00043
%RSD	586.32	6.6741	66.618	31.827	16.276	123.72	1.6679	74.200
#1	.00004	.00073	.00038	.00025	.00052	.00009	.09441	-.00093
#2	-.00010	.00065	.00008	.00019	.00065	.00128	.09150	-.00069
#3	.00012	.00066	.00020	.00036	.00073	.00021	.09205	-.00010

Elem	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.00036**	**.00199**	**.00042**	**.00012**	**.00058**	**.00006**	**.00134**	**-.00007**
Stddev	.00010	.00184	.00004	.00022	.00016	.00002	.00015	.00040
%RSD	27.194	92.803	10.559	174.49	27.025	25.139	11.024	550.11
#1	-.00047	-.00001	.00037	.00038	.00061	.00005	.00141	.00027
#2	-.00036	.00363	.00046	.00000	.00041	.00008	.00117	-.00051
#3	-.00027	.00233	.00042	-.00000	.00072	.00006	.00144	.00002

Elem	Ni2316	Ag3280	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.00043**	**-.00080**	**.00254**	**-.00019**	**.00874**	**-.00143**	**.00751**	**.00048**
Stddev	.00002	.00002	.00013	.00025	.00053	.00004	.00025	.00010
%RSD	4.3818	2.4894	4.9740	133.47	6.0983	3.0357	3.3123	19.906
#1	-.00041	-.00083	.00266	-.00037	.00820	-.00138	.00735	.00037
#2	-.00045	-.00079	.00241	.00010	.00927	-.00145	.00780	.00055
#3	-.00042	-.00079	.00253	-.00029	.00874	-.00146	.00738	.00052

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00044**	**.00137**	**.00009**	**-.00064**	**.00034**	**.00850**	**.00278**
Stddev	.00006	.00042	.00002	.00009	.00005	.00021	.00042
%RSD	12.803	30.487	22.622	13.529	13.926	2.4895	15.217
#1	.00038	.00151	.00007	-.00071	.00029	.00843	.00239
#2	.00049	.00169	.00010	-.00067	.00034	.00874	.00323
#3	.00045	.00090	.00010	-.00054	.00039	.00833	.00273

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: S0 Acquired: 8/4/2025 11:15:54 Type: Cal
Method: 6010-200.7 NEW(v81) Mode: IR Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5554.9	94078.	7815.4	4760.9	7044.2
Stddev	10.2	2956.	1.6	140.5	9.1
%RSD	.18365	3.1425	.02032	2.9504	.12979
#1	5550.1	96870.	7817.1	4892.2	7036.8
#2	5566.6	90981.	7814.1	4612.8	7054.4
#3	5548.0	94382.	7814.9	4777.7	7041.3

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: S1 Acquired: 8/4/2025 11:20:17 Type: Cal
Method: 6010-200.7 NEW(v81) Mode: IR Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00109**	**.00212**	**.00233**	**.00104**	**.00505**	**.00925**	**.42099**	**.04844**
Stddev	.00017	.00010	.00003	.00002	.00007	.00116	.00446	.00151
%RSD	15.857	4.8558	1.4303	1.9170	1.4048	12.585	1.0587	3.1268
#1	.00090	.00217	.00234	.00103	.00513	.00837	.41602	.04698
#2	.00123	.00200	.00229	.00107	.00500	.00880	.42233	.04835
#3	.00114	.00219	.00236	.00103	.00503	.01057	.42463	.05000

Elem	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.01632**	**.14332**	**.00189**	**.03108**	**.01507**	**.00041**	**.01248**	**.02494**
Stddev	.00039	.00077	.00006	.00021	.00019	.00001	.00028	.00051
%RSD	2.3943	.53674	3.2371	.66045	1.2552	2.2572	2.2642	2.0426
#1	.01677	.14314	.00188	.03129	.01485	.00040	.01227	.02463
#2	.01608	.14265	.00183	.03108	.01515	.00042	.01237	.02466
#3	.01611	.14416	.00195	.03088	.01520	.00042	.01280	.02553

Elem	Ni2316	Ag3280	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.02369**	**.00123**	**.02328**	**.00405**	**.10088**	**.00831**	**.07396**	**.11677**
Stddev	.00037	.00023	.00055	.00016	.00363	.00031	.00135	.00021
%RSD	1.5606	18.792	2.3519	3.9906	3.5962	3.6866	1.8227	.17904
#1	.02378	.00125	.02311	.00415	.09980	.00823	.07307	.11701
#2	.02400	.00098	.02283	.00386	.09791	.00805	.07329	.11668
#3	.02328	.00144	.02389	.00413	.10492	.00864	.07551	.11663

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00588**	**.01537**	**.00096**	**-.00007**	**.00088**	**.02046**	**.20791**
Stddev	.00003	.00064	.00006	.00003	.00003	.00096	.00264
%RSD	.45088	4.1696	5.9547	42.941	3.0380	4.7012	1.2675
#1	.00586	.01518	.00095	-.00006	.00089	.01984	.20518
#2	.00591	.01608	.00091	-.00009	.00091	.02157	.20810
#3	.00586	.01484	.00103	-.00004	.00086	.01997	.21044

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: S1 Acquired: 8/4/2025 11:20:17 Type: Cal
Method: 6010-200.7 NEW(v81) Mode: IR Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5506.9	94154.	7855.6	4799.4	6855.9
Stddev	34.3	2698.	110.4	153.5	38.7
%RSD	.62341	2.8658	1.4053	3.1981	.56435
#1	5479.4	94605.	7941.3	4844.1	6829.3
#2	5495.9	96599.	7894.6	4925.5	6838.2
#3	5545.4	91259.	7731.0	4628.5	6900.3

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: S2 Acquired: 8/4/2025 11:24:37 Type: Cal
Method: 6010-200.7 NEW(v81) Mode: IR Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348	Cd2265
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.03700	.02864	.14857	.02927	.06717	.11958	5.1292	.31472	1.0656
Stddev	.00063	.00057	.00280	.00064	.00118	.00045	.0326	.00353	.0219
%RSD	1.7047	1.9818	1.8869	2.1942	1.7598	.38006	.63615	1.1214	2.0520
#1	.03627	.02830	.14536	.02854	.06580	.11906	5.1329	.31081	1.0406
#2	.03733	.02929	.14983	.02972	.06778	.11976	5.0949	.31567	1.0749
#3	.03739	.02832	.15053	.02956	.06792	.11991	5.1598	.31767	1.0813

Elem	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.27207	.02558	.38505	.13210	.00273	.21434	.04473	.22405	.03733
Stddev	.00245	.00028	.00764	.00238	.00002	.00094	.00014	.00452	.00009
%RSD	.90037	1.1070	1.9848	1.7982	.55472	.43865	.31145	2.0159	.22999
#1	.27114	.02591	.37630	.12939	.00274	.21424	.04464	.21892	.03740
#2	.27022	.02546	.38846	.13304	.00273	.21345	.04466	.22578	.03734
#3	.27485	.02539	.39040	.13385	.00271	.21532	.04489	.22744	.03723

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.04170	.03885	.89927	.01706	.53259	.44097	.10616	.27533	.00183
Stddev	.00047	.00076	.00097	.00014	.00528	.00814	.00193	.00267	.00004
%RSD	1.1339	1.9685	.10821	.81197	.99203	1.8470	1.8181	.97071	2.1104
#1	.04220	.03928	.89843	.01722	.52724	.43157	.10394	.27449	.00186
#2	.04126	.03797	.90034	.01703	.53274	.44538	.10702	.27318	.00179
#3	.04164	.03931	.89904	.01695	.53780	.44595	.10750	.27832	.00184

Elem	P_1774	S_1820	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.01966	.01956	.40989	7.8750
Stddev	.00039	.00028	.00395	.0499
%RSD	1.9926	1.4276	.96409	.63402
#1	.01921	.01930	.41258	7.8787
#2	.01992	.01986	.40535	7.8232
#3	.01984	.01953	.41173	7.9229

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: S2 Acquired: 8/4/2025 11:24:37 Type: Cal
Method: 6010-200.7 NEW(v81) Mode: IR Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5469.2	92158.	7662.4	4715.1	6716.4
Stddev	94.5	365.	61.9	15.1	127.8
%RSD	1.7285	.39620	.80719	.32021	1.9024
#1	5571.6	91740.	7719.3	4731.9	6852.9
#2	5450.5	92319.	7671.5	4710.9	6696.7
#3	5385.3	92416.	7596.6	4702.6	6599.6

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: S3 Acquired: 8/4/2025 11:28:41 Type: Cal
Method: 6010-200.7 NEW(v81) Mode: IR Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348	Cd2265
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.11597**	**.08575**	**.46763**	**.09128**	**.20884**	**.36959**	**15.790**	**.97841**	**3.4017**
Stddev	.00048	.00182	.00114	.00031	.00089	.00100	.038	.00605	.0081
%RSD	.41461	2.1269	.24332	.33846	.42441	.27141	.24071	.61788	.23720
#1	.11596	.08612	.46665	.09147	.20950	.37024	15.747	.97143	3.3941
#2	.11549	.08377	.46736	.09092	.20783	.37009	15.801	.98215	3.4007
#3	.11645	.08736	.46888	.09145	.20919	.36843	15.821	.98164	3.4102

Elem	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.83456**	**.07863**	**1.2118**	**.40602**	**.00843**	**.66142**	**.13761**	**.70587**	**.11691**
Stddev	.00757	.00092	.0018	.00105	.00005	.00212	.00058	.00181	.00091
%RSD	.90699	1.1676	.14471	.25741	.55376	.32012	.42025	.25624	.77807
#1	.82674	.07880	1.2100	.40563	.00839	.65904	.13798	.70407	.11645
#2	.83508	.07764	1.2118	.40523	.00841	.66215	.13792	.70585	.11633
#3	.84185	.07945	1.2135	.40721	.00848	.66308	.13695	.70768	.11796

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.12430**	**.12165**	**2.7599**	**.05640**	**1.6396**	**1.3570**	**.33709**	**.85635**	**.00557**
Stddev	.00068	.00028	.0243	.00048	.0107	.0031	.00073	.00450	.00001
%RSD	.54475	.22902	.88100	.85123	.65115	.22777	.21682	.52528	.17655
#1	.12458	.12194	2.7502	.05621	1.6284	1.3576	.33700	.85186	.00557
#2	.12353	.12164	2.7419	.05604	1.6407	1.3537	.33641	.85633	.00556
#3	.12479	.12138	2.7876	.05695	1.6497	1.3598	.33786	.86086	.00558

Elem	P_1774	S_1820	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.06540**	**.06245**	**1.2542**	**24.314**
Stddev	.00026	.00034	.0034	.056
%RSD	.40330	.54971	.27431	.23107
#1	.06537	.06270	1.2572	24.367
#2	.06514	.06206	1.2549	24.320
#3	.06567	.06260	1.2504	24.255

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: S3 Acquired: 8/4/2025 11:28:41 Type: Cal
Method: 6010-200.7 NEW(v81) Mode: IR Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5363.0	90097.	7577.3	4631.0	6409.1
Stddev	6.2	681.	8.6	31.1	5.4
%RSD	.11509	.75631	.11370	.67202	.08368
#1	5357.4	89975.	7585.1	4641.1	6413.0
#2	5361.9	90831.	7578.8	4655.9	6403.0
#3	5369.6	89485.	7568.0	4596.1	6411.2

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: S4 Acquired: 8/4/2025 11:32:45 Type: Cal
Method: 6010-200.7 NEW(v81) Mode: IR Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348	Cd2265
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.23387	.17871	.93691	.18408	.41979	.76303	33.001	1.9952	6.9153
Stddev	.00180	.00156	.00864	.00167	.00314	.00204	.109	.0184	.0650
%RSD	.77129	.87031	.92175	.90926	.74706	.26797	.33063	.92254	.94032
#1	.23595	.18047	.94639	.18601	.42326	.76460	33.092	1.9837	6.9878
#2	.23267	.17813	.92948	.18307	.41715	.76378	33.032	1.9854	6.8620
#3	.23300	.17752	.93487	.18315	.41896	.76072	32.880	2.0164	6.8962

Elem	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1.7241	.16158	2.4509	.80099	.01769	1.3679	.28387	1.4236	.24207
Stddev	.0064	.00060	.0221	.00574	.00005	.0004	.00110	.0124	.00103
%RSD	.37255	.36879	.89953	.71697	.28366	.02876	.38732	.87302	.42509
#1	1.7221	.16123	2.4758	.80758	.01763	1.3681	.28467	1.4377	.24121
#2	1.7189	.16124	2.4339	.79704	.01773	1.3674	.28432	1.4142	.24179
#3	1.7312	.16227	2.4430	.79837	.01770	1.3681	.28262	1.4189	.24321

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.26080	.25620	5.6841	.12114	3.3593	2.7229	.67973	1.7807	.01180
Stddev	.00143	.00053	.0337	.00033	.0310	.0194	.00684	.0047	.00009
%RSD	.54988	.20834	.59326	.27048	.92379	.71425	1.0062	.26198	.74000
#1	.26094	.25681	5.6558	.12103	3.3399	2.7451	.68738	1.7764	.01178
#2	.26217	.25592	5.6750	.12151	3.3428	2.7087	.67422	1.7799	.01189
#3	.25931	.25586	5.7214	.12089	3.3951	2.7150	.67757	1.7857	.01172

Elem	P_1774	S_1820	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.13407	.12979	2.6593	50.619
Stddev	.00106	.00116	.0052	.272
%RSD	.79090	.89617	.19434	.53761
#1	.13529	.13113	2.6577	50.876
#2	.13344	.12906	2.6651	50.334
#3	.13348	.12918	2.6551	50.647

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: S4 Acquired: 8/4/2025 11:32:45 Type: Cal
Method: 6010-200.7 NEW(v81) Mode: IR Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5474.9	89848.	7646.1	4601.7	6412.0
Stddev	32.1	291.	46.8	14.5	50.5
%RSD	.58716	.32397	.61167	.31407	.78711
#1	5437.9	89579.	7636.0	4603.1	6355.3
#2	5495.8	90157.	7697.1	4615.5	6452.0
#3	5491.0	89808.	7605.3	4586.7	6428.8

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: S5 Acquired: 8/4/2025 11:36:56 Type: Cal
Method: 6010-200.7 NEW(v81) Mode: IR Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348	Cd2265
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.48801	.35314	1.9667	.38220	.86987	1.5358	65.975	3.9810	14.414
Stddev	.00049	.00951	.0022	.00061	.00024	.0082	.570	.0063	.012
%RSD	.09959	2.6936	.11103	.16048	.02762	.53449	.86420	.15925	.08471
#1	.48833	.34309	1.9690	.38155	.87001	1.5445	65.414	3.9737	14.420
#2	.48745	.35432	1.9647	.38229	.86959	1.5282	65.958	3.9841	14.400
#3	.48825	.36200	1.9664	.38277	.87000	1.5347	66.554	3.9851	14.422

Elem	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3.4572	.32018	5.1292	1.6352	.03561	2.7377	.57300	2.9687	.48719
Stddev	.0107	.00107	.0065	.0016	.00012	.0027	.00152	.0021	.00091
%RSD	.30808	.33467	.12675	.09931	.33803	.09893	.26581	.07093	.18608
#1	3.4529	.32082	5.1327	1.6367	.03566	2.7408	.57475	2.9709	.48818
#2	3.4693	.32078	5.1217	1.6335	.03570	2.7363	.57197	2.9667	.48640
#3	3.4493	.31894	5.1332	1.6355	.03547	2.7360	.57227	2.9685	.48698

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.53745	.51787	11.364	.25205	6.6757	5.5673	1.4117	3.5924	.02437
Stddev	.00288	.00139	.019	.00062	.0066	.0003	.0012	.0057	.00005
%RSD	.53515	.26899	.16335	.24411	.09887	.00504	.08737	.15940	.21992
#1	.54060	.51836	11.385	.25276	6.6831	5.5676	1.4119	3.5923	.02443
#2	.53497	.51629	11.351	.25170	6.6703	5.5673	1.4104	3.5982	.02432
#3	.53677	.51894	11.357	.25169	6.6738	5.5670	1.4129	3.5867	.02437

Elem	P_1774	S_1820	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.28348	.27909	5.4795	100.80
Stddev	.00064	.00097	.0348	1.00
%RSD	.22428	.34630	.63475	.99341
#1	.28398	.27811	5.5119	99.750
#2	.28276	.27913	5.4427	100.91
#3	.28369	.28004	5.4838	101.74

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: S5 Acquired: 8/4/2025 11:36:56 Type: Cal
Method: 6010-200.7 NEW(v81) Mode: IR Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5294.8	89133.	7622.3	4530.1	6056.4
Stddev	9.8	85.	4.5	11.0	9.8
%RSD	.18581	.09551	.05905	.24390	.16253
#1	5283.5	89036.	7626.7	4530.9	6046.9
#2	5301.6	89196.	7622.4	4540.8	6066.6
#3	5299.4	89167.	7617.7	4518.7	6055.7

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: ICV01 Acquired: 8/4/2025 11:41:07 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICV01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.970826**	**3.972482**	**4.075526**	**4.002757**	**4.138520**	**7.865382**
Stddev	.010276	.033433	.008147	.005625	.008330	.017771
%RSD	.2587869	.8416129	.1999045	.1405263	.2012724	.2259428
#1	3.976634	4.011034	4.066245	3.996747	4.135534	7.879640
#2	3.958961	3.951461	4.078834	4.007896	4.132096	7.871034
#3	3.976883	3.954950	4.081498	4.003627	4.147932	7.845472

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.810448**	**.2018685**	**1.977440**	**19.66004**	**.8120606**	**2.014839**
Stddev	.105028	.0013510	.004753	.22994	.0165251	.004210
%RSD	1.344716	.6692455	.2403500	1.169594	2.034955	.2089527
#1	7.691678	.2003867	1.972245	19.39487	.8006967	2.011623
#2	7.891073	.2030318	1.978506	19.80441	.8310175	2.013291
#3	7.848595	.2021871	1.981570	19.78083	.8044677	2.019605

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.030504**	**3.983941**	**1.975045**	**19.70113**	**2.009473**	**.9823004**
Stddev	.002369	.063284	.004191	.00964	.004961	.0169513
%RSD	.2298636	1.588477	.2121916	.0489146	.2468889	1.725670
#1	1.028782	3.963842	1.970752	19.70024	2.005527	.9684612
#2	1.029526	4.054833	1.979125	19.71118	2.007850	1.001208
#3	1.033206	3.933147	1.975259	19.69197	2.015043	.977232

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**19.51425**	**2.004055**	**2.006169**	**19.63089**	F **.0126930**	F **.0015014**
Stddev	.23255	.002291	.036770	.33004	.0004605	.0007056
%RSD	1.191668	.1143403	1.832861	1.681218	3.627858	46.99724
#1	19.37367	2.006369	1.972589	19.31068	.0131619	.0023033
#2	19.78267	2.001786	2.045461	19.96994	.0126758	.0012254
#3	19.38642	2.004011	2.000457	19.61205	.0122414	.0009755

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: ICV01 Acquired: 8/4/2025 11:41:07 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICV01 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F -.000778	F -.003790	F -.039857	F .0075561	F .0194793	F -.002126
Stddev	.000862	.001678	.002427	.0027049	.0016459	.003895
%RSD	110.8294	44.26866	6.089980	35.79813	8.449688	183.1908
#1	.000205	-.003315	-.039510	.0093531	.0212499	-.003567
#2	-.001408	-.002400	-.042439	.0088700	.0191923	.002284
#3	-.001131	-.005653	-.037622	.0044452	.0179958	-.005096

Elem	Sr4077
Units	ppm
Avg	F -.003295
Stddev	.000047
%RSD	1.414195
#1	-.003299
#2	-.003339
#3	-.003246

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5464.930	91550.36	7903.256	4690.455	6496.263
Stddev	8.325	1317.39	24.544	59.169	7.396
%RSD	.1523266	1.438974	.3105547	1.261476	.1138559
#1	5465.339	92531.58	7922.220	4747.262	6503.233
#2	5473.043	90053.06	7875.534	4629.177	6497.051
#3	5456.409	92066.42	7912.014	4694.926	6488.504

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: LLICV01 Acquired: 8/4/2025 11:45:17 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: LLICV01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0215443**	**.0449848**	**.0123908**	**.0201424**	**.0525370**	**.1139109**
Stddev	.0010647	.0003750	.0005710	.0050069	.0012762	.0096646
%RSD	4.941712	.8336628	4.608431	24.85752	2.429079	8.484354
#1	.0218187	.0446213	.0129070	.0196526	.0510684	.1027756
#2	.0203693	.0453703	.0124880	.0253761	.0533757	.1188404
#3	.0224449	.0449628	.0117774	.0153983	.0531670	.1201168

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1061102**	**.0066805**	**.0062637**	**2.153539**	**.0089209**	**.0313337**
Stddev	.0006088	.0000825	.0000374	.007678	.0001885	.0001097
%RSD	.5737107	1.235013	.5970980	.3565373	2.113002	.3500663
#1	.1062864	.0065897	.0062759	2.147237	.0089147	.0312807
#2	.1054328	.0067509	.0062217	2.162091	.0087356	.0312606
#3	.1066115	.0067009	.0062935	2.151291	.0091125	.0314598

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0227216**	**.1019264**	**.0212719**	**2.305166**	**.0419151**	**.0106542**
Stddev	.0001537	.0029504	.0004318	.014357	.0000954	.0001644
%RSD	.6765221	2.894598	2.029958	.6228122	.2276590	1.542671
#1	.0227267	.0986772	.0216937	2.314633	.0419210	.0107897
#2	.0228727	.1026641	.0208308	2.288647	.0420074	.0107016
#3	.0225654	.1044379	.0212912	2.312219	.0418169	.0104714

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.994837**	**.0413055**	**.0424445**	**1.961085**	**.1165120**	**.2105705**
Stddev	.037751	.0016782	.0000529	.045861	.0022036	.0007520
%RSD	1.892423	4.062905	.1245760	2.338576	1.891322	.3571301
#1	2.037751	.0422522	.0425029	1.995719	.1139679	.2101909
#2	1.980006	.0393678	.0424307	1.909075	.1177419	.2100840
#3	1.966753	.0422964	.0423999	1.978463	.1178261	.2114367

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: LLICV01 Acquired: 8/4/2025 11:45:17 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: LLICV01 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0402276	.0417660	.3642282	F .0244153	.0200131	.0168092
Stddev	.0001070	.0014874	.0137037	.0010485	.0012053	.0006968
%RSD	.2658645	3.561237	3.762399	4.294445	6.022509	4.145121
#1	.0401808	.0404559	.3751618	.0232413	.0196694	.0166688
#2	.0401520	.0433828	.3488551	.0247462	.0213529	.0175655
#3	.0403500	.0414592	.3686677	.0252585	.0190169	.0161934

Elem	Sr4077
Units	ppm
Avg	.0217058
Stddev	.0000447
%RSD	.2060711
#1	.0217105
#2	.0217480
#3	.0216589

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5574.351	94111.95	7788.779	4786.518	6965.481
Stddev	16.409	178.39	65.770	15.762	32.394
%RSD	.2943588	.1895476	.8444240	.3292988	.4650647
#1	5587.607	93920.21	7860.293	4779.400	6999.983
#2	5579.447	94273.01	7775.159	4775.571	6960.741
#3	5555.999	94142.62	7730.885	4804.584	6935.718

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: ICB01 Acquired: 8/4/2025 11:52:59 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICB01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0019492**	**.0010461**	**.0000104**	**-.000021**	**.0001429**	**.0104415**	**.0001923**
Stddev	.0010364	.0023794	.0013042	.001345	.0026243	.0170816	.0006568
%RSD	53.16981	227.4646	12566.81	6458.937	1836.976	163.5931	341.5063
#1	.0029830	-.001592	.0002588	-.000643	.0027759	.0176128	.0005024
#2	.0009102	.003030	.0011725	-.000942	-.002473	-.009057	.0006366
#3	.0019546	.001700	-.001400	.001522	.000125	.022768	-.000562

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000074**	**.0000541**	**-.021076**	**-.001376**	**.0002093**	**-.000325**	**-.005593**
Stddev	.000034	.0000518	.006313	.000343	.0000711	.000320	.001678
%RSD	46.28627	95.69635	29.95117	24.89533	33.99225	98.49070	30.00975
#1	-.000036	.0000885	-.022099	-.001366	.0001733	-.000199	-.007254
#2	-.000102	-.000005	-.014315	-.001039	.0001633	-.000088	-.005627
#3	-.000085	.000079	-.026815	-.001724	.0002912	-.000689	-.003898

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001494**	**.0342257**	**-.000244**	**.0002548**	**-.041003**	**.0002989**	**-.001059**
Stddev	.000355	.0190104	.000364	.0002992	.013170	.0033880	.000079
%RSD	23.79159	55.54426	149.1971	117.4257	32.12063	1133.494	7.509143
#1	-.001898	.0468311	-.000657	.0002936	-.025828	-.003516	-.001032
#2	-.001356	.0434865	-.000107	-.000062	-.047720	.002958	-.000996
#3	-.001228	.0123594	.000032	.000533	-.049461	.001454	-.001148

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.015639**	**.0013176**	**-.000035**	**-.000283**	**.0011092**	**.0050955**	**.0030152**
Stddev	.025424	.0006872	.000129	.000196	.0011624	.0056406	.0007751
%RSD	162.5619	52.15735	366.2804	69.27489	104.7960	110.6995	25.70809
#1	-.008371	.0005813	-.000184	-.000060	.0008887	.0001006	.0036947
#2	.005358	.0019421	.000049	-.000362	.0023661	.0039727	.0031799
#3	-.043906	.0014295	.000029	-.000426	.0000728	.0112131	.0021709

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: ICB01 Acquired: 8/4/2025 11:52:59 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICB01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.002900	-.001802	.0000217
Stddev	.001764	.004766	.0000934
%RSD	60.83250	264.4492	430.8285
#1	-.001648	.002704	.0001174
#2	-.002134	-.001320	-.000069
#3	-.004918	-.006790	.000017

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5636.625	94626.86	7891.266	4824.616	7147.156
Stddev	3.625	265.87	57.854	20.499	4.647
%RSD	.0643172	.2809627	.7331387	.4248843	.0650176
#1	5640.466	94728.29	7934.641	4828.397	7150.980
#2	5636.146	94827.08	7825.578	4842.961	7148.505
#3	5633.263	94325.21	7913.579	4802.489	7141.984

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: CRI01 Acquired: 8/4/2025 11:57:19 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CRI01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0201108**	**.0463621**	**.0111678**	**.0219563**	**.0526086**	**.1114632**	**.1029082**
Stddev	.0017145	.0020333	.0019569	.0046384	.0022556	.0189786	.0002840
%RSD	8.525444	4.385744	17.52301	21.12565	4.287495	17.02681	.2759654
#1	.0193755	.0479002	.0091212	.0170184	.0550829	.1090829	.1032045
#2	.0220704	.0440568	.0130207	.0262218	.0506671	.0937870	.1028819
#3	.0188866	.0471294	.0113614	.0226287	.0520758	.1315197	.1026383

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0064109**	**.0061367**	**2.082241**	**.0098539**	**.0312075**	**.0229449**	**.1108585**
Stddev	.0000437	.0000390	.006844	.0002566	.0002312	.0003483	.0099969
%RSD	.6818832	.6351684	.3286947	2.604037	.7406770	1.518058	9.017698
#1	.0064277	.0061490	2.076250	.0097082	.0311320	.0230239	.0996249
#2	.0064438	.0060931	2.080772	.0101501	.0310235	.0225639	.1187757
#3	.0063613	.0061680	2.089700	.0097032	.0314669	.0232470	.1141750

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0205362**	**2.208710**	**.0418287**	**.0110505**	**2.034302**	**.0432490**	**.0447602**
Stddev	.0004428	.032576	.0004196	.0002847	.041786	.0005332	.0018730
%RSD	2.155936	1.474866	1.003039	2.576742	2.054084	1.232872	4.184482
#1	.0202349	2.228961	.0418262	.0111232	1.992989	.0426442	.0432673
#2	.0210445	2.171133	.0414104	.0112919	2.076546	.0436513	.0468618
#3	.0203292	2.226037	.0422495	.0107365	2.033371	.0434516	.0441515

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.028348**	**.1027240**	**.2096478**	**.0400882**	**.0391410**	**.3756268**	**.0229598**
Stddev	.081914	.0006753	.0003572	.0004069	.0018974	.0134698	.0026640
%RSD	4.038444	.6573764	.1703893	1.014922	4.847603	3.585956	11.60295
#1	1.957896	.1034454	.2100049	.0402590	.0412878	.3609635	.0256594
#2	2.118230	.1026197	.2092904	.0396238	.0376886	.3784665	.0203329
#3	2.008920	.1021069	.2096482	.0403819	.0384466	.3874503	.0228871

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: CRI01 Acquired: 8/4/2025 11:57:19 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CRI01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0211588	.0198792	.0208125
Stddev	.0007094	.0007344	.0001794
%RSD	3.352772	3.694288	.8617556
#1	.0206568	.0198395	.0209567
#2	.0219703	.0206326	.0206117
#3	.0208492	.0191654	.0208693

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5526.401	91443.93	7981.003	4657.235	6896.418
Stddev	4.736	2459.20	16.482	145.597	6.918
%RSD	.0857000	2.689294	.2065181	3.126246	.1003105
#1	5530.020	93936.58	7999.172	4801.966	6892.006
#2	5528.143	89019.62	7976.827	4510.787	6904.391
#3	5521.041	91375.60	7967.011	4658.953	6892.857

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: ICSA01 Acquired: 8/4/2025 12:01:34 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICSA01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0094505**	**.0146292**	**-.008462**	**.0002255**	**-.004941**	**249.4825**
Stddev	.0009085	.0005499	.002572	.0022830	.000897	.1950
%RSD	9.613245	3.759169	30.39994	1012.384	18.14908	.0781541
#1	.0092813	.0147063	-.011155	-.002069	-.004632	249.3236
#2	.0086384	.0140448	-.008202	.000248	-.004240	249.4240
#3	.0104316	.0151366	-.006029	.002497	-.005952	249.7001

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0062431**	**.0017363**	**-.000556**	**237.6221**	**.0560673**	**.0022170**
Stddev	.0003580	.0000712	.000212	1.1982	.0007463	.0000723
%RSD	5.734137	4.101786	38.16431	.5042258	1.331088	3.261531
#1	.0059169	.0016923	-.000801	236.4535	.0559100	.0021340
#2	.0061863	.0018185	-.000431	238.8478	.0554122	.0022669
#3	.0066261	.0016981	-.000436	237.5648	.0568797	.0022500

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0104863**	**98.44583**	**.0065898**	**249.0685**	**.0049211**	**.0022201**
Stddev	.0009754	.40846	.0007865	.5518	.0001826	.0002445
%RSD	9.301367	.4149044	11.93568	.2215269	3.710853	11.01391
#1	.0093775	98.90054	.0074981	248.8291	.0050938	.0024270
#2	.0112117	98.32697	.0061327	248.6768	.0047300	.0019502
#3	.0108697	98.11000	.0061387	249.6995	.0049395	.0022830

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1153356**	**.0029899**	**.0003306**	**.1145506**	**.0267066**	**.0008150**
Stddev	.0128468	.0014385	.0004329	.0483303	.0026558	.0004895
%RSD	11.13863	48.11315	130.9548	42.19127	9.944458	60.05658
#1	.1007169	.0046227	.0005905	.0833859	.0297726	.0006901
#2	.1248268	.0024377	-.000169	.1702252	.0251136	.0013548
#3	.1204630	.0019093	.000570	.0900406	.0252337	.0004001

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: ICSA01 Acquired: 8/4/2025 12:01:34 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICSA01 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.003988	-.005183	.0148946	.0045160	-.000491	F .0204200
Stddev	.000754	.000799	.0163778	.0037236	.003231	.0034843
%RSD	18.91182	15.42124	109.9584	82.45265	657.8403	17.06309
#1	-.003872	-.006081	.0227744	.0045645	-.000393	.0171142
#2	-.004793	-.004549	-.003934	.0082150	.002690	.0240589
#3	-.003298	-.004919	.025843	.0007684	-.003770	.0200870

Elem	Sr4077
Units	ppm
Avg	.0038664
Stddev	.0006026
%RSD	15.58622
#1	.0031722
#2	.0042547
#3	.0041723

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5022.703	83394.11	7478.325	4281.521	5679.793
Stddev	18.319	26.84	43.556	14.591	16.534
%RSD	.3647218	.0321830	.5824250	.3407980	.2911020
#1	5016.031	83363.60	7528.248	4264.677	5676.234
#2	5008.654	83404.66	7448.083	4290.293	5665.329
#3	5043.422	83414.07	7458.644	4289.593	5697.817

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: ICSAB01 Acquired: 8/4/2025 12:05:46 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICSAB01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1059510**	**.1057156**	**.0374783**	**.0420910**	**.5985184**	**256.8488**
Stddev	.0016232	.0005604	.0011931	.0043622	.0080785	2.0178
%RSD	1.532001	.5300888	3.183542	10.36383	1.349756	.7856041
#1	.1041548	.1061228	.0362000	.0371300	.5981712	259.0388
#2	.1063856	.1050765	.0385624	.0438166	.5906190	256.4427
#3	.1073127	.1059476	.0376726	.0453265	.6067649	255.0650

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5095980**	**.5079346**	**.9832673**	**244.1377**	**.5525148**	**.4982504**
Stddev	.0057795	.0016416	.0001626	2.1142	.0030516	.0008751
%RSD	1.134129	.3231932	.0165373	.8659665	.5523107	.1756327
#1	.5157912	.5072718	.9834029	246.4598	.5534541	.4981954
#2	.5086544	.5098040	.9833119	243.6293	.5491040	.4974041
#3	.5043483	.5067280	.9830870	242.3242	.5549863	.4991517

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4901521**	**101.0005**	**.4993994**	**256.6415**	**.9884317**	**.2140074**
Stddev	.0010649	1.0523	.0034560	1.8832	.0011960	.0010139
%RSD	.2172589	1.041903	.6920216	.7337830	.1209988	.4737656
#1	.4889872	102.2155	.5028579	258.2681	.9873392	.2147418
#2	.4903935	100.3767	.4993945	257.0780	.9882465	.2128506
#3	.4910756	100.4094	.4959460	254.5784	.9897095	.2144298

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0942303**	**.4904849**	**1.023926**	**.0138259**	F **.0255963**	F **.0002879**
Stddev	.0099415	.0057096	.004101	.0261530	.0035793	.0002259
%RSD	10.55019	1.164079	.4005449	189.1598	13.98383	78.47210
#1	.0868874	.4954313	1.025835	.0400557	.0297188	.0000290
#2	.0902602	.4842368	1.026726	-.012250	.0237901	.0003896
#3	.1055434	.4917867	1.019219	.013671	.0232799	.0004450

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: ICSAB01 Acquired: 8/4/2025 12:05:46 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICSAB01 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F -.003632	F -.005898	F .0227982	F .0100404	F -.004046	F .0221497
Stddev	.000654	.001074	.0126949	.0043741	.004619	.0071902
%RSD	18.01061	18.20445	55.68345	43.56515	114.1593	32.46196
#1	-.003202	-.006563	.0104336	.0148436	-.002476	.0221809
#2	-.004385	-.006472	.0221618	.0062860	-.009246	.0293243
#3	-.003309	-.004660	.0357994	.0089917	-.000417	.0149440

Elem	Sr4077
Units	ppm
Avg	F .0044242
Stddev	.0001486
%RSD	3.359650
#1	.0045082
#2	.0045119
#3	.0042526

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5017.741	82562.15	7381.396	4258.237	5672.480
Stddev	4.190	346.05	25.542	26.068	12.664
%RSD	.0834966	.4191345	.3460323	.6121797	.2232513
#1	5013.454	82165.62	7373.391	4242.097	5659.560
#2	5017.941	82803.08	7360.816	4244.303	5673.008
#3	5021.826	82717.77	7409.982	4288.311	5684.871

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: ICSADLX20 Acquired: 8/4/2025 12:09:51 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICSA01DLX20 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000411**	**-.000150**	**-.000862**	**-.001057**	**-.001762**	**11.96915**	**.0007584**
Stddev	.0020148	.002385	.001304	.002472	.001477	.05001	.0009972
%RSD	4898.590	1588.238	151.2342	233.9579	83.82112	.4178602	131.4925
#1	-.001962	.002399	.000448	-.003251	-.003450	11.91293	.0006927
#2	.000019	-.002327	-.000874	.001621	-.000704	12.00871	-.000204
#3	.002067	-.000522	-.002160	-.001540	-.001133	11.98580	.001787

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001030**	**.0000321**	**12.00350**	**.0011385**	**.0002790**	**.0007556**	**4.601203**
Stddev	.0000864	.0000606	.06636	.0005551	.0000961	.0003687	.016397
%RSD	83.85765	189.1784	.5528390	48.75699	34.43782	48.78962	.3563545
#1	.0000110	.0000952	11.93982	.0016361	.0002938	.0003383	4.589105
#2	.0001823	.0000266	11.99843	.0005398	.0001764	.0010369	4.594640
#3	.0001158	-.000026	12.07225	.0012396	.0003669	.0008918	4.619865

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001502**	**12.35236**	**.0002199**	**.0000335**	**-.002984**	**.0016155**	**-.001160**
Stddev	.000426	.07626	.0002572	.0006955	.009713	.0014306	.000425
%RSD	28.35351	.6173611	116.9457	2077.248	325.5241	88.55372	36.66940
#1	-.001011	12.26805	.0000711	-.000335	-.012527	.0019601	-.001612
#2	-.001731	12.41653	.0005169	.000836	.006891	.0000441	-.000767
#3	-.001765	12.37250	.0000717	-.000400	-.003316	.0028423	-.001101

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.048035**	**-.003381**	**.0001425**	**-.001507**	**.0007646**	**.0044678**	**.0012109**
Stddev	.031795	.000962	.0002850	.000495	.0018849	.0089077	.0015550
%RSD	66.19247	28.44744	200.0176	32.86014	246.5084	199.3739	128.4154
#1	-.012020	-.004269	.0004616	-.000944	.0009426	-.003756	.0025417
#2	-.059868	-.003515	-.000087	-.001704	.0025543	.003230	.0015893
#3	-.072217	-.002360	.000053	-.001874	-.001203	.013930	-.000498

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: ICSADLX20 Acquired: 8/4/2025 12:09:51 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICSA01DLX20 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.000741	-.003260	.0006088
Stddev	.004562	.001304	.0001208
%RSD	615.3321	40.00911	19.83496
#1	-.005715	-.004194	.0007471
#2	.000243	-.001770	.0005552
#3	.003248	-.003817	.0005242

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5639.484	94954.14	7791.799	4814.573	6933.823
Stddev	16.975	212.62	26.923	17.412	17.595
%RSD	.3010000	.2239215	.3455248	.3616455	.2537622
#1	5658.811	95010.49	7812.292	4799.133	6954.026
#2	5626.991	94719.02	7761.308	4811.140	6925.590
#3	5632.650	95132.91	7801.797	4833.445	6921.854

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: ICSABDLX20 Acquired: 8/4/2025 12:14:08 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICSAB01DLX20 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0047066**	**.0073572**	**.0016688**	**.0041451**	**.0274458**	**12.29528**	**.0242850**
Stddev	.0010737	.0005617	.0010951	.0023667	.0017801	.03554	.0010828
%RSD	22.81316	7.634363	65.62197	57.09668	6.485903	.2890702	4.458788
#1	.0039793	.0067443	.0005526	.0058860	.0291689	12.27160	.0252178
#2	.0059398	.0078473	.0027416	.0014503	.0275547	12.27808	.0230975
#3	.0042007	.0074799	.0017123	.0050990	.0256137	12.33615	.0245396

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0254067**	**.0464320**	**12.31758**	**.0256734**	**.0239283**	**.0250344**	**4.733396**
Stddev	.0001447	.0000544	.05969	.0002870	.0000150	.0002639	.016044
%RSD	.5696287	.1172303	.4846219	1.117918	.0628753	1.054109	.3389438
#1	.0254327	.0463827	12.27520	.0254706	.0239290	.0250646	4.750778
#2	.0252507	.0464904	12.29169	.0255479	.0239430	.0247567	4.730253
#3	.0255366	.0464227	12.38585	.0260018	.0239129	.0252818	4.719155

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0236964**	**12.72179**	**.0473704**	**.0098069**	**-.005726**	**.0260998**	**.0477226**
Stddev	.0003407	.04182	.0002204	.0004380	.000333	.0013106	.0003675
%RSD	1.437679	.3287247	.4652030	4.466451	5.807543	5.021657	.7700631
#1	.0238140	12.71251	.0474467	.0093068	-.005682	.0245906	.0477906
#2	.0233124	12.68539	.0471220	.0099917	-.006079	.0269518	.0480514
#3	.0239626	12.76747	.0475424	.0101222	-.005418	.0267570	.0473259

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.056592**	**-.004341**	**-.000214**	**-.002296**	**-.000625**	**.0103056**	**.0022319**
Stddev	.045157	.000659	.000103	.000209	.000982	.0036413	.0016198
%RSD	79.79430	15.19118	48.39817	9.079775	157.1129	35.33363	72.57120
#1	-.071132	-.003580	-.000095	-.002487	-.001745	.0062061	.0006624
#2	-.005956	-.004705	-.000265	-.002328	-.000219	.0131647	.0038976
#3	-.092689	-.004738	-.000281	-.002074	.000089	.0115459	.0021359

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: ICSABDLX20 Acquired: 8/4/2025 12:14:08 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICSAB01DLX20 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.003040	-.000786	.0004173
Stddev	.001012	.002089	.0000915
%RSD	33.28923	265.6700	21.92607
#1	-.002974	.000127	.0004656
#2	-.002063	-.003176	.0003118
#3	-.004084	.000690	.0004744

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5598.930	93714.16	7718.210	4764.623	6872.137
Stddev	10.977	152.21	25.937	36.269	15.070
%RSD	.1960569	.1624143	.3360509	.7612096	.2192879
#1	5591.100	93544.10	7748.135	4736.149	6857.187
#2	5611.477	93760.75	7704.292	4752.264	6887.323
#3	5594.212	93837.62	7702.203	4805.456	6871.902

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: CCV01 Acquired: 8/4/2025 12:25:48 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.060849**	**5.083540**	**5.012367**	**5.077162**	**5.067103**	**9.768089**	**9.827098**
Stddev	.014770	.041769	.006566	.014536	.022948	.021779	.079086
%RSD	.2918492	.8216471	.1309955	.2862975	.4528747	.2229629	.8047704
#1	5.049845	5.070537	5.011392	5.061837	5.049106	9.792027	9.874738
#2	5.055066	5.130263	5.006343	5.078895	5.059259	9.749444	9.870749
#3	5.077635	5.049819	5.019366	5.090753	5.092944	9.762795	9.735807

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2485301**	**2.527172**	**24.75087**	**.9689963**	**2.519516**	**1.269896**	**4.855037**
Stddev	.0013406	.003280	.10041	.0032563	.004636	.004485	.014489
%RSD	.5394121	.1297896	.4056759	.3360493	.1840140	.3532102	.2984289
#1	.2482308	2.523738	24.84373	.9699514	2.517342	1.267124	4.847359
#2	.2499951	2.527504	24.76457	.9653692	2.516367	1.267492	4.846003
#3	.2473644	2.530273	24.64432	.9716682	2.524840	1.275071	4.871749

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.456087**	**24.32707**	**2.526155**	**1.220470**	**23.88739**	**2.443236**	**2.460782**
Stddev	.002350	.08892	.005830	.001278	.07121	.007247	.006857
%RSD	.0956762	.3655277	.2307665	.1047226	.2981243	.2966079	.2786600
#1	2.458771	24.22787	2.524714	1.220360	23.88528	2.434895	2.456262
#2	2.454401	24.35372	2.521181	1.221800	23.81725	2.446821	2.468672
#3	2.455088	24.39962	2.532570	1.219251	23.95963	2.447991	2.457412

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.21192**	**4.945154**	**5.112872**	**5.053609**	**4.926107**	**4.766929**	**5.069554**
Stddev	.12554	.024876	.014280	.007898	.018219	.040967	.003987
%RSD	.5185053	.5030332	.2792920	.1562884	.3698392	.8593907	.0786445
#1	24.28033	4.939430	5.103329	5.044510	4.947122	4.757303	5.070331
#2	24.06704	4.972392	5.105998	5.057627	4.914761	4.731634	5.073095
#3	24.28840	4.923639	5.129289	5.058691	4.916439	4.811852	5.065236

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: CCV01 Acquired: 8/4/2025 12:25:48 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**4.984252**	**4.857331**	**5.021200**
Stddev	.003939	.012003	.075191
%RSD	.0790202	.2471188	1.497473
#1	4.981016	4.855018	4.934381
#2	4.983103	4.846652	5.063918
#3	4.988638	4.870323	5.065302

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5338.003**	**91544.27**	**7710.983**	**4639.815**	**6251.902**
Stddev	12.219	214.48	27.657	24.264	11.703
%RSD	.2288988	.2342944	.3586714	.5229611	.1871869
#1	5326.259	91781.10	7728.239	4661.006	6238.577
#2	5350.646	91363.11	7679.083	4613.346	6256.622
#3	5337.103	91488.61	7725.627	4645.093	6260.508

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: CCB01 Acquired: 8/4/2025 12:29:59 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000409**	**.0000547**	**.0004553**	**-.003658**	**-.001511**	**.0041848**	**.0002834**
Stddev	.001300	.0014591	.0004570	.002004	.000643	.0034877	.0002338
%RSD	317.8230	2665.657	100.3658	54.78674	42.56449	83.34290	82.51076
#1	.000635	-.001083	.0009792	-.004356	-.000880	.0009894	.0000166
#2	-.001866	.001700	.0001384	-.001398	-.001487	.0036597	.0004525
#3	.000004	-.000452	.0002484	-.005219	-.002166	.0079053	.0003811

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000158**	**.0001915**	**-.018062**	**-.001615**	**.0003681**	**-.000215**	**-.005396**
Stddev	.0000621	.0000567	.000465	.000084	.0000889	.000153	.006371
%RSD	394.1836	29.58791	2.572537	5.209032	24.14135	70.89249	118.0733
#1	.0000875	.0001946	-.018053	-.001679	.0003062	-.000061	-.002523
#2	-.000018	.0001334	-.018532	-.001646	.0003281	-.000366	-.000967
#3	-.000022	.0002466	-.017602	-.001519	.0004699	-.000220	-.012697

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001577**	**.0192606**	**.0002638**	**.0006259**	**-.073059**	**.0017648**	**-.001158**
Stddev	.000647	.0248650	.0000667	.0004927	.002280	.0026545	.000324
%RSD	41.01429	129.0976	25.28046	78.72757	3.121304	150.4129	27.98762
#1	-.001030	.0395489	.0002981	.0010652	-.074559	.0028729	-.001180
#2	-.002290	.0267107	.0003064	.0000931	-.070435	.0036858	-.001470
#3	-.001410	-.008478	.0001869	.0007193	-.074184	-.001264	-.000823

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.051084**	**-.000389**	**.0007631**	**-.000790**	**.0001017**	**.0035501**	**.0029787**
Stddev	.020648	.000647	.0002094	.000546	.0004064	.0067710	.0016884
%RSD	40.41920	166.1551	27.43555	69.08735	399.6282	190.7258	56.68295
#1	-.039359	-.000382	.0005987	-.001163	.0005111	.0000599	.0019517
#2	-.074925	-.001040	.0009988	-.000164	.0000957	.0113541	.0020571
#3	-.038968	.000254	.0006919	-.001044	-.000302	-.000764	.0049274

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: CCB01 Acquired: 8/4/2025 12:29:59 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.003612	-.004832	.0002893
Stddev	.002491	.003301	.0000394
%RSD	68.96672	68.31611	13.60488
#1	-.000756	-.001351	.0002923
#2	-.004742	-.007917	.0003272
#3	-.005337	-.005229	.0002486

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5763.665	97910.48	7934.030	4911.567	7371.574
Stddev	22.605	371.30	46.630	19.423	20.675
%RSD	.3921927	.3792279	.5877160	.3954573	.2804683
#1	5786.343	98105.92	7976.053	4907.403	7391.280
#2	5763.515	97482.28	7942.171	4894.563	7373.394
#3	5741.135	98143.24	7883.866	4932.734	7350.050

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: PB169076BL Acquired: 8/4/2025 12:55:46 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000409**	**.0005247**	**-.001466**	**-.003589**	**-.000037**	**.0010573**	**-.000780**
Stddev	.001066	.0010454	.000692	.000316	.001298	.0105593	.000297
%RSD	260.7675	199.2265	47.21850	8.794613	3513.371	998.6993	38.12975
#1	-.001593	.0016235	-.001286	-.003341	-.000692	-.004782	-.000697
#2	.000474	-.000457	-.000881	-.003944	.001458	.013247	-.001110
#3	-.000107	.000408	-.002230	-.003480	-.000876	-.005293	-.000533

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000095**	**-.000080**	**-.014105**	**-.001374**	**.0001256**	**-.000318**	**-.005026**
Stddev	.000050	.000063	.013836	.000355	.0000958	.000163	.003263
%RSD	52.74016	78.59852	98.08897	25.80458	76.25648	51.08528	64.92518
#1	-.000057	-.000113	-.005104	-.001112	.0002250	-.000490	-.002412
#2	-.000152	-.000120	-.030037	-.001778	.0000338	-.000167	-.003983
#3	-.000077	-.000008	-.007176	-.001232	.0001181	-.000298	-.008683

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001803**	**.0446813**	**-.000013**	**.0007303**	**.0516572**	**.0015263**	**-.001257**
Stddev	.000139	.0120106	.000130	.0004620	.0042265	.0027391	.000263
%RSD	7.710235	26.88055	1023.774	63.25470	8.181821	179.4656	20.94861
#1	-.001769	.0314383	.000098	.0010906	.0468779	.0045755	-.000955
#2	-.001956	.0477363	.000020	.0008908	.0549023	-.000726	-.001377
#3	-.001684	.0548694	-.000156	.0002095	.0531915	.000729	-.001440

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0288158**	**-.005820**	**-.000228**	**-.000400**	**.0008543**	**.0062952**	**.0029287**
Stddev	.0428773	.000925	.000287	.000281	.0015536	.0055663	.0029491
%RSD	148.7978	15.89259	125.8975	70.08666	181.8595	88.42115	100.6975
#1	.0715075	-.005074	-.000360	-.000185	.0015424	.0003869	.0059330
#2	.0291846	-.005532	-.000426	-.000298	.0019450	.0070579	.0028151
#3	-.014245	-.006855	.000101	-.000718	-.000925	.0114409	.0000380

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: PB169076BL Acquired: 8/4/2025 12:55:46 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.000591	-.001200	-.000051
Stddev	.003267	.001409	.000066
%RSD	552.8025	117.4049	129.2372
#1	-.001249	-.002489	.000011
#2	.002955	.000304	-.000043
#3	-.003478	-.001415	-.000120

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5563.683	94505.53	7711.596	4738.546	7083.163
Stddev	8.483	490.37	53.956	7.459	24.423
%RSD	.1524665	.5188759	.6996763	.1574184	.3448104
#1	5553.903	93943.46	7654.304	4730.001	7065.142
#2	5568.111	94727.29	7761.444	4743.757	7073.388
#3	5569.036	94845.85	7719.040	4741.880	7110.960

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: PB169076BS Acquired: 8/4/2025 13:00:05 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8210445**	**2.097352**	**1.002583**	**2.096728**	**.8516797**	**2.084883**	**.2094819**
Stddev	.0064652	.020564	.001670	.006575	.0029313	.017008	.0016250
%RSD	.7874409	.9804669	.1665861	.3135684	.3441838	.8157707	.7757363
#1	.8179566	2.081959	1.003010	2.092707	.8508014	2.104328	.2084117
#2	.8167022	2.120706	1.000741	2.093161	.8492879	2.077542	.2113518
#3	.8284748	2.089391	1.003998	2.104315	.8549497	2.072778	.2086822

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2142352**	**.1997192**	**1.060671**	**.4124050**	**.2051471**	**.3253058**	**3.068103**
Stddev	.0029010	.0006467	.008311	.0008419	.0009927	.0007235	.019612
%RSD	1.354103	.3238219	.7835938	.2041448	.4839109	.2224139	.6392068
#1	.2109402	.1993756	1.054479	.4114712	.2047071	.3247286	3.090682
#2	.2164049	.1993168	1.070117	.4131062	.2044504	.3250713	3.058311
#3	.2153606	.2004652	1.057417	.4126375	.2062837	.3261175	3.055316

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2102447**	**2.070620**	**.5165034**	**.0791097**	**2.920803**	**.3124155**	**.2160298**
Stddev	.0011466	.011929	.0014262	.0005826	.025933	.0003840	.0036713
%RSD	.5453515	.5761172	.2761239	.7364727	.8878611	.1229258	1.699463
#1	.2094308	2.076594	.5153709	.0784372	2.941809	.3120259	.2118050
#2	.2115559	2.078382	.5160341	.0794302	2.928782	.3124267	.2184455
#3	.2097473	2.056884	.5181051	.0794616	2.891819	.3127937	.2178389

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.926115**	**.3077650**	**.4268291**	**.7053696**	**.2035969**	**.8606385**	**5.752698**
Stddev	.039639	.0036494	.0004448	.0005758	.0015335	.0170843	.020590
%RSD	.3993408	1.185791	.1042118	.0816369	.7532062	1.985077	.3579213
#1	9.961113	.3035790	.4263367	.7050071	.2027919	.8476031	5.746800
#2	9.934164	.3094378	.4272020	.7050681	.2053653	.8799794	5.735700
#3	9.883070	.3102781	.4269485	.7060336	.2026336	.8543330	5.775593

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: PB169076BS Acquired: 8/4/2025 13:00:05 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	F -.005772	.2001170	.2059167
Stddev	.004027	.0042521	.0014094
%RSD	69.77378	2.124821	.6844553
#1	-.006748	.1997889	.2056758
#2	-.001346	.2045236	.2074310
#3	-.009221	.1960384	.2046433

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5721.629	97761.94	8133.054	4897.082	7111.302
Stddev	12.096	360.51	66.429	55.978	12.517
%RSD	.2114158	.3687626	.8167835	1.143085	.1760141
#1	5735.323	98105.68	8203.302	4959.487	7125.438
#2	5712.401	97386.72	8071.251	4851.295	7106.843
#3	5717.162	97793.42	8124.608	4880.463	7101.625

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2725-02DLX5 Acquired: 8/4/2025 13:04:05 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000408**	**.0000579**	**.0171130**	**.0024134**	**.0115317**	**.7184436**	**.0469131**
Stddev	.000770	.0016373	.0008444	.0019593	.0005027	.0125916	.0012633
%RSD	188.6331	2827.404	4.934209	81.18613	4.359531	1.752621	2.692788
#1	.000338	.0006812	.0180879	.0046054	.0120650	.7326550	.0469080
#2	-.000363	.0012920	.0166390	.0018027	.0110664	.7139977	.0481789
#3	-.001200	-.001800	.0166121	.0008321	.0114636	.7086781	.0456524

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000175**	**.0005470**	**5.365103**	**.0091479**	**.0010586**	**.0788294**	**3.911829**
Stddev	.0000229	.0001034	.021801	.0007839	.0002017	.0001229	.027888
%RSD	130.5335	18.91126	.4063416	8.569054	19.05223	.1559208	.7129035
#1	-.000002	.0005153	5.382149	.0083969	.0012881	.0788949	3.882702
#2	.000043	.0004631	5.372622	.0090858	.0009097	.0786876	3.938285
#3	.000013	.0006625	5.340538	.0099610	.0009779	.0789057	3.914498

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0389943**	**1.293794**	**.0100052**	**.0013359**	**79.27096**	**.0035159**	**.2925311**
Stddev	.0002570	.032451	.0003092	.0001167	.43768	.0029227	.0018113
%RSD	.6590386	2.508195	3.090784	8.735068	.5521352	83.12743	.6191826
#1	.0387573	1.272026	.0097432	.0014482	78.77319	.0066896	.2926961
#2	.0392675	1.278265	.0099261	.0012153	79.44413	.0009352	.2906429
#3	.0389582	1.331092	.0103463	.0013442	79.59557	.0029228	.2942542

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.817396**	**.0223412**	**.0038925**	**.0056174**	**.0270565**	**7.055822**	**1.754923**
Stddev	.037011	.0002676	.0001857	.0001098	.0007261	.079226	.005162
%RSD	.9695413	1.197727	4.769989	1.954491	2.683735	1.122852	.2941437
#1	3.778451	.0224396	.0040424	.0057290	.0264052	6.964618	1.759994
#2	3.821627	.0225457	.0036848	.0055095	.0278395	7.107601	1.749675
#3	3.852110	.0220384	.0039503	.0056137	.0269250	7.095247	1.755099

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2725-02DLX5 Acquired: 8/4/2025 13:04:05 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**5.635555**	**.0013569**	**.0404925**
Stddev	.018877	.0034252	.0000800
%RSD	.3349699	252.4231	.1976398
#1	5.630903	.0039190	.0405669
#2	5.619439	.0026851	.0405028
#3	5.656324	-.002533	.0404078

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5553.216**	**95377.92**	**8320.393**	**4740.175**	**6738.415**
Stddev	16.466	342.36	46.420	12.240	24.324
%RSD	.2965155	.3589534	.5579118	.2582144	.3609703
#1	5542.508	95772.04	8275.518	4753.684	6724.597
#2	5572.177	95154.17	8317.443	4729.824	6766.500
#3	5544.965	95207.55	8368.218	4737.016	6724.147

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2725-02DUPDLX5 Acquired: 8/4/2025 13:08:17 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001039	.0003502	.0162352	-.001134	.0088812	.6975950	.0441233
Stddev	.003279	.0030691	.0003032	.003691	.0013498	.0084167	.0003029
%RSD	315.7255	876.4420	1.867354	325.6496	15.19795	1.206535	.6865832
#1	-.000888	.0030013	.0165846	-.003361	.0086164	.7028953	.0444625
#2	-.004391	-.003012	.0160797	-.003166	.0103437	.7019998	.0440278
#3	.002163	.001061	.0160414	.003127	.0076834	.6878900	.0438796

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000200	.0004991	5.188263	.0088772	.0009593	.0748616	3.813133
Stddev	.0000669	.0000597	.035759	.0004561	.0002116	.0002830	.025953
%RSD	334.4127	11.95447	.6892300	5.137633	22.06104	.3779586	.6806294
#1	-.000051	.0004618	5.210333	.0086192	.0008035	.0751882	3.828788
#2	.000030	.0004676	5.207451	.0086086	.0012003	.0746900	3.827435
#3	.000081	.0005679	5.147006	.0094038	.0008742	.0747067	3.783174

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0377642	1.246638	.0093495	.0009651	77.18316	.0023315	.2819026
Stddev	.0006331	.004516	.0001949	.0001663	.59993	.0026497	.0010657
%RSD	1.676540	.3622636	2.084770	17.22782	.7772848	113.6478	.3780337
#1	.0375062	1.243478	.0095023	.0007971	77.71780	.0042617	.2807312
#2	.0384855	1.251811	.0091300	.0009685	77.29733	-.000689	.2821617
#3	.0373007	1.244625	.0094163	.0011296	76.53434	.003422	.2828148

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.726659	.0212183	.0035555	.0061605	.0275202	6.870395	1.660225
Stddev	.028397	.0002230	.0003107	.0004625	.0009376	.083940	.002130
%RSD	.7619992	1.050949	8.738445	7.507701	3.406936	1.221761	.1283133
#1	3.716678	.0212166	.0038862	.0056946	.0284418	6.930978	1.662634
#2	3.758699	.0214421	.0035105	.0061673	.0275516	6.905626	1.659447
#3	3.704600	.0209961	.0032697	.0066196	.0265674	6.774581	1.658592

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2725-02DUPDLX5 Acquired: 8/4/2025 13:08:17 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**5.337970**	**.0025065**	**.0393549**
Stddev	.062098	.0016524	.0003729
%RSD	1.163324	65.92316	.9475951
#1	5.407110	.0014452	.0396478
#2	5.286943	.0044103	.0394818
#3	5.319856	.0016640	.0389350

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5624.068**	**96301.52**	**8443.704**	**4767.884**	**6840.820**
Stddev	7.243	287.40	36.558	10.518	10.977
%RSD	.1287824	.2984368	.4329674	.2205927	.1604620
#1	5629.175	95970.97	8405.360	4770.769	6843.415
#2	5615.779	96492.31	8478.168	4776.659	6828.778
#3	5627.250	96441.28	8447.583	4756.225	6850.267

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2725-02LDLX25 Acquired: 8/4/2025 13:12:28 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000781**	**-.000613**	**.0030800**	**-.002453**	**.0016432**	**.1366319**	**.0076965**
Stddev	.001975	.000955	.0007305	.003908	.0013836	.0041494	.0013348
%RSD	252.9188	155.6487	23.71794	159.3315	84.20359	3.036915	17.34318
#1	-.002781	.000210	.0029226	-.001279	.0007591	.1364899	.0085459
#2	-.000732	-.000390	.0024410	-.006813	.0009327	.1325554	.0061580
#3	.001169	-.001660	.0038764	.000734	.0032377	.1408505	.0083857

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000153**	**.0000682**	**1.066512**	**.0005759**	**.0002815**	**.0154604**	**.7444685**
Stddev	.0000270	.0000300	.018524	.0001090	.0001709	.0002678	.0079418
%RSD	176.7438	44.02049	1.736909	18.92322	60.70417	1.732004	1.066775
#1	.0000443	.0000444	1.086749	.0005711	.0003769	.0155529	.7532255
#2	.0000105	.0001019	1.062393	.0006872	.0003833	.0156696	.7424475
#3	-.000009	.0000583	1.050394	.0004694	.0000842	.0151586	.7377324

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0060295**	**.2737440**	**.0016441**	**.0003185**	**14.84163**	**-.000791**	**.0554773**
Stddev	.0005690	.0559883	.0002124	.0005505	.11690	.000325	.0005257
%RSD	9.436529	20.45279	12.92176	172.8456	.7876727	41.09349	.9476390
#1	.0063930	.3247301	.0017302	-.000265	14.72798	-.000419	.0559704
#2	.0053738	.2826747	.0014021	.000828	14.96153	-.000936	.0549241
#3	.0063216	.2138271	.0018000	.000393	14.83539	-.001019	.0555373

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7624236**	**-.001289**	**.0007368**	**.0001037**	**.0047915**	**1.335417**	**.3274656**
Stddev	.0163112	.000827	.0001176	.0005000	.0011692	.027812	.0014433
%RSD	2.139384	64.14542	15.95696	482.2495	24.40096	2.082648	.4407513
#1	.7791126	-.000360	.0007549	-.000305	.0039928	1.320806	.3289051
#2	.7616397	-.001945	.0006112	-.000045	.0061335	1.367489	.3274733
#3	.7465185	-.001563	.0008442	.000661	.0042483	1.317954	.3260185

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2725-02LDLX25 Acquired: 8/4/2025 13:12:28 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.043788	-.000572	.0080509
Stddev	.004554	.004298	.0001158
%RSD	.4362621	751.0788	1.438241
#1	1.044131	-.001633	.0081782
#2	1.048161	.004157	.0080228
#3	1.039073	-.004241	.0079518

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5697.078	98085.33	8287.380	4815.789	7145.674
Stddev	12.015	270.52	23.024	10.759	24.667
%RSD	.2108944	.2758045	.2778255	.2234198	.3452003
#1	5683.818	98374.40	8260.892	4820.268	7119.317
#2	5700.176	97838.27	8302.598	4803.514	7149.500
#3	5707.241	98043.32	8298.651	4823.586	7168.204

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2725-02MSDLX5 Acquired: 8/4/2025 13:16:46 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1617189**	**.3805913**	**.2082561**	**.4092892**	**.1763906**	**1.127036**	**.0873424**
Stddev	.0010451	.0005770	.0023999	.0003349	.0015702	.005861	.0010178
%RSD	.6462768	.1515926	1.152368	.0818306	.8901598	.5200614	1.165333
#1	.1605241	.3812426	.2096825	.4090738	.1770268	1.121307	.0865536
#2	.1624636	.3801443	.2096005	.4091187	.1746022	1.133021	.0869824
#3	.1621691	.3803870	.2054854	.4096751	.1775429	1.126778	.0884913

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0401697**	**.0392473**	**5.527545**	**.0898661**	**.0411943**	**.1387488**	**4.477504**
Stddev	.0003570	.0001600	.017982	.0002518	.0000112	.0002907	.027969
%RSD	.8887602	.4076633	.3253152	.2801940	.0271687	.2094834	.6246641
#1	.0401175	.0393093	5.506935	.0899007	.0411815	.1389203	4.472015
#2	.0398416	.0393670	5.535666	.0900988	.0412021	.1389128	4.507810
#3	.0405499	.0390656	5.540035	.0895988	.0411994	.1384132	4.452685

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0795049**	**1.710341**	**.1096310**	**.0115984**	**80.06507**	**.0621022**	**.3297506**
Stddev	.0004935	.035634	.0002933	.0005009	.77976	.0041014	.0013899
%RSD	.6206666	2.083429	.2675508	4.318637	.9739110	6.604243	.4214958
#1	.0792977	1.682720	.1094377	.0121668	80.11990	.0607236	.3310101
#2	.0791488	1.750563	.1094868	.0114072	80.81598	.0588678	.3299823
#3	.0800682	1.697741	.1099685	.0112213	79.25935	.0667153	.3282594

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.910485**	**.0807295**	**.0845407**	**.1165250**	**.0644637**	**7.149679**	**2.850533**
Stddev	.077162	.0007739	.0002693	.0002441	.0001217	.080596	.017309
%RSD	1.305519	.9586829	.3185812	.2094770	.1887469	1.127274	.6072217
#1	5.919758	.0800851	.0842343	.1165692	.0646042	7.146976	2.865420
#2	5.982592	.0805153	.0847399	.1167440	.0643903	7.231592	2.854638
#3	5.829105	.0815879	.0846480	.1162618	.0643967	7.070467	2.831540

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2725-02MSDLX5 Acquired: 8/4/2025 13:16:46 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**5.501836**	**.0459916**	**.0808216**
Stddev	.021138	.0007976	.0000926
%RSD	.3842030	1.734166	.1146243
#1	5.521174	.0455773	.0808768
#2	5.505065	.0454866	.0808735
#3	5.479269	.0469111	.0807147

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5603.381**	**95625.90**	**8349.345**	**4757.715**	**6796.952**
Stddev	13.384	386.58	60.273	16.064	22.696
%RSD	.2388568	.4042579	.7218892	.3376428	.3339204
#1	5588.015	95661.01	8354.036	4739.199	6771.208
#2	5612.497	95222.97	8407.135	4766.011	6805.576
#3	5609.631	95993.73	8286.863	4767.934	6814.073

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2725-02MSDDLX5 Acquired: 8/4/2025 13:20:51 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1535992	.3880999	.2009885	.3975718	.1713148	1.065223	.0839314
Stddev	.0006311	.0019015	.0007486	.0013917	.0004811	.009209	.0002948
%RSD	.4108984	.4899646	.3724529	.3500397	.2808052	.8644930	.3511992
#1	.1540625	.3859263	.2018413	.3969217	.1714682	1.070567	.0842220
#2	.1538547	.3889177	.2004395	.3966241	.1717004	1.054589	.0836326
#3	.1528804	.3894557	.2006848	.3991695	.1707757	1.070511	.0839397

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0383722	.0378578	5.313604	.0859640	.0395382	.1334486	4.416835
Stddev	.0003032	.0001255	.015888	.0008436	.0002220	.0007346	.024513
%RSD	.7900788	.3316142	.2990045	.9813150	.5613992	.5504368	.5549936
#1	.0386034	.0378669	5.321221	.0864831	.0396311	.1338250	4.406897
#2	.0380289	.0377280	5.295342	.0864183	.0392849	.1326021	4.444757
#3	.0384842	.0379786	5.324250	.0849906	.0396986	.1339186	4.398852

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0771972	1.617161	.1056566	.0124863	77.52059	.0620778	.3198760
Stddev	.0008044	.019295	.0005948	.0003665	.30963	.0011379	.0007719
%RSD	1.042075	1.193144	.5629216	2.935036	.3994158	1.833050	.2413118
#1	.0778496	1.604254	.1056239	.0122672	77.45494	.0612365	.3191009
#2	.0762984	1.639342	.1050789	.0129094	77.85779	.0616244	.3198823
#3	.0774436	1.607886	.1062671	.0122823	77.24906	.0633725	.3206447

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.755188	.0771970	.0823235	.1103027	.0583993	6.978444	2.747304
Stddev	.031089	.0012084	.0002544	.0005989	.0011678	.051394	.013493
%RSD	.5401992	1.565367	.3089711	.5429245	1.999627	.7364660	.4911303
#1	5.779785	.0782402	.0825630	.1097042	.0586862	6.984822	2.746761
#2	5.765534	.0758729	.0820566	.1109019	.0571148	7.026352	2.734091
#3	5.720244	.0774779	.0823509	.1103022	.0593969	6.924160	2.761060

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2725-02MSDDLX5 Acquired: 8/4/2025 13:20:51 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**5.324639**	**.0426092**	**.0781949**
Stddev	.013067	.0024975	.0005168
%RSD	.2454021	5.861288	.6609009
#1	5.331626	.0453181	.0787274
#2	5.309564	.0421115	.0776954
#3	5.332727	.0403981	.0781618

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5633.755**	**95823.62**	**8522.271**	**4726.013**	**6840.648**
Stddev	12.347	322.70	39.876	20.450	21.474
%RSD	.2191609	.3367657	.4679054	.4327038	.3139120
#1	5633.601	95967.15	8490.777	4744.327	6841.109
#2	5646.178	95454.05	8567.107	4703.947	6861.887
#3	5621.485	96049.65	8508.928	4729.765	6818.947

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2725-02ADLX5 Acquired: 8/4/2025 13:24:57 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1621476	.3954910	.2062012	.4132871	.1709934	1.058836	.0827141
Stddev	.0009447	.0077539	.0015875	.0037807	.0009570	.010641	.0004587
%RSD	.5825912	1.960581	.7698574	.9147762	.5596980	1.004969	.5545064
#1	.1624879	.3973666	.2073636	.4091412	.1713485	1.070039	.0832308
#2	.1628750	.4021350	.2043926	.4165441	.1699095	1.057605	.0823548
#3	.1610800	.3869712	.2068475	.4141760	.1717221	1.048864	.0825568

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0386796	.0386140	5.202346	.0869981	.0405302	.1349367	4.382522
Stddev	.0000638	.0001274	.015174	.0003158	.0000809	.0008297	.030776
%RSD	.1648174	.3299212	.2916773	.3630009	.1995043	.6148631	.7022374
#1	.0387135	.0385183	5.218714	.0866364	.0406069	.1340895	4.359763
#2	.0387192	.0385650	5.199579	.0871394	.0405378	.1349730	4.417538
#3	.0386061	.0387586	5.188747	.0872187	.0404458	.1357476	4.370266

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0764622	1.579015	.1078320	.0164799	77.08034	.0636767	.3217365
Stddev	.0003364	.011778	.0002604	.0006029	.25934	.0016797	.0007330
%RSD	.4399629	.7459317	.2414749	3.658662	.3364579	2.637917	.2278210
#1	.0760843	1.569210	.1080131	.0167806	76.78487	.0654882	.3218665
#2	.0767290	1.575754	.1075336	.0168734	77.27026	.0621707	.3223957
#3	.0765732	1.592080	.1079494	.0157858	77.18590	.0633712	.3209472

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.796109	.0769958	.0835833	.1362182	.0604222	6.916811	2.761693
Stddev	.008070	.0005454	.0001198	.0009798	.0006999	.043074	.016270
%RSD	.1392388	.7083019	.1433004	.7192927	1.158345	.6227364	.5891159
#1	5.799826	.0764487	.0835673	.1372833	.0601714	6.876837	2.747820
#2	5.786849	.0769994	.0837103	.1353552	.0612130	6.911169	2.757658
#3	5.801650	.0775394	.0834723	.1360162	.0598823	6.962428	2.779600

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2725-02ADLX5 Acquired: 8/4/2025 13:24:57 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**5.316886**	**.0409967**	**.0771801**
Stddev	.015151	.0018513	.0000916
%RSD	.2849527	4.515683	.1186321
#1	5.328753	.0390373	.0771429
#2	5.322083	.0427165	.0772844
#3	5.299820	.0412364	.0771130

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5509.112**	**94112.83**	**8516.440**	**4633.057**	**6710.146**
Stddev	12.597	164.15	15.051	10.550	18.998
%RSD	.2286520	.1744206	.1767231	.2277112	.2831260
#1	5512.823	94198.65	8508.059	4645.236	6716.991
#2	5519.437	93923.56	8507.446	4626.739	6724.774
#3	5495.077	94216.29	8533.815	4627.195	6688.674

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: PB169078BL Acquired: 8/4/2025 13:29:01 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001134**	**.0004508**	**.0000626**	**.0000079**	**.0000082**	**.0087174**	**.0009443**
Stddev	.001530	.0007580	.0005016	.0024140	.0015357	.0142036	.0004743
%RSD	135.0056	168.1436	801.9796	30712.35	18726.46	162.9344	50.22967
#1	-.000063	.0001392	-.000145	.0013919	.0006295	.0231804	.0009867
#2	-.002886	-.000102	.000635	-.002780	.0011359	-.005212	.0004502
#3	-.000451	.001315	-.000302	.001411	-.001741	.008183	.0013959

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000040**	**-.000001**	**-.013577**	**-.001298**	**.0001991**	**-.000208**	**-.006013**
Stddev	.000048	.000021	.004473	.000450	.0002012	.000484	.004413
%RSD	119.5796	3023.864	32.94359	34.65691	101.0192	233.1166	73.39418
#1	-.000091	.000014	-.015494	-.000866	-.000003	.000085	-.005373
#2	-.000035	-.000025	-.008465	-.001263	.000201	-.000767	-.001955
#3	.000005	.000008	-.016772	-.001764	.000400	.000058	-.010712

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000535**	**.0365046**	**.0000460**	**.0005997**	**.0000296**	**-.000023**	**-.001304**
Stddev	.000499	.0292906	.0000751	.0002579	.0181865	.001338	.000197
%RSD	93.30766	80.23807	163.1660	42.99936	61423.36	5709.242	15.14149
#1	.000031	.0312048	-.000009	.0008775	.0206821	-.001305	-.001532
#2	-.000724	.0680832	.000016	.0003679	-.007002	-.000130	-.001198
#3	-.000911	.0102258	.000131	.0005537	-.013591	.001365	-.001182

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0046945**	**-.007204**	**.0000659**	**-.000739**	**.0004511**	**-.003438**	**.0027656**
Stddev	.0114187	.000322	.0001144	.000101	.0005983	.007361	.0008597
%RSD	243.2377	4.468080	173.6963	13.61378	132.6261	214.0879	31.08687
#1	.0125971	-.006934	.0000617	-.000849	.0011072	.004132	.0026247
#2	.0098836	-.007560	-.000046	-.000651	-.000065	-.010571	.0019850
#3	-.008397	-.007118	.000182	-.000718	.000311	-.003876	.0036871

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: PB169078BL Acquired: 8/4/2025 13:29:01 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.000883	-.002052	-.000025
Stddev	.003037	.000596	.000021
%RSD	343.8447	29.03334	84.71714
#1	.000902	-.002740	-.000005
#2	.000838	-.001732	-.000047
#3	-.004390	-.001685	-.000022

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5660.613	96393.91	7828.447	4858.169	7156.092
Stddev	30.907	203.60	84.874	19.385	44.865
%RSD	.5459923	.2112154	1.084177	.3990223	.6269510
#1	5686.604	96570.75	7901.558	4868.062	7187.020
#2	5668.797	96171.33	7848.415	4835.833	7176.622
#3	5626.438	96439.63	7735.370	4870.611	7104.635

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: PB169078BS Acquired: 8/4/2025 13:33:20 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8019180**	**2.029820**	**.9920813**	**2.040115**	**.8348023**	**2.102406**
Stddev	.0015482	.081919	.0030705	.008419	.0033015	.002536
%RSD	.1930688	4.035760	.3094983	.4126965	.3954891	.1206247
#1	.8018540	1.995408	.9950855	2.034936	.8353591	2.105132
#2	.8034973	2.123332	.9922099	2.049830	.8377900	2.101972
#3	.8004028	1.970721	.9889486	2.035579	.8312578	2.100116

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2108946**	**.2198643**	**.1991054**	**1.073372**	**.4107877**	**.2036875**
Stddev	.0010175	.0006639	.0005323	.004775	.0018201	.0005838
%RSD	.4824836	.3019752	.2673551	.4448923	.4430802	.2866128
#1	.2098281	.2197093	.1996665	1.076623	.4127436	.2042757
#2	.2110011	.2192916	.1990421	1.067889	.4091437	.2036784
#3	.2118548	.2205920	.1986075	1.075604	.4104758	.2031082

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3209897**	**3.048395**	**.2125575**	**2.136002**	**.5125507**	**.0779420**
Stddev	.0004500	.012033	.0009994	.016851	.0013692	.0005343
%RSD	.1402007	.3947472	.4701820	.7888943	.2671412	.6855063
#1	.3211329	3.036638	.2122234	2.121266	.5140298	.0773479
#2	.3204855	3.060687	.2117679	2.154374	.5122948	.0780950
#3	.3213507	3.047861	.2136811	2.132366	.5113274	.0783831

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.867985**	**.3118284**	**.2140110**	**9.826666**	**.3116487**	**.4211933**
Stddev	.014327	.0060699	.0005417	.020704	.0007152	.0008390
%RSD	.4995389	1.946548	.2530972	.2106882	.2294985	.1991967
#1	2.871064	.3112754	.2136056	9.803894	.3111618	.4207920
#2	2.880522	.3060540	.2146262	9.844354	.3124699	.4221576
#3	2.852369	.3181559	.2138012	9.831748	.3113145	.4206303

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: PB169078BS Acquired: 8/4/2025 13:33:20 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7084975	.2068019	.8516927	5.778570	F .0002977	.2026280
Stddev	.0028777	.0021494	.0102564	.012708	.0026228	.0008799
%RSD	.4061753	1.039370	1.204234	.2199199	881.1444	.4342426
#1	.7106882	.2068354	.8486199	5.774224	.0005048	.2025822
#2	.7095659	.2046359	.8433240	5.792881	-.002423	.2017720
#3	.7052383	.2089344	.8631342	5.768605	.002811	.2035299

Elem	Sr4077
Units	ppm
Avg	.2055891
Stddev	.0005788
%RSD	.2815516
#1	.2059433
#2	.2049211
#3	.2059028

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5622.161	93897.14	7621.201	4776.281	6928.086
Stddev	13.243	442.52	41.815	30.611	29.101
%RSD	.2355473	.4712783	.5486679	.6408995	.4200452
#1	5607.455	94398.91	7663.462	4811.069	6898.408
#2	5625.885	93729.88	7620.293	4753.465	6929.277
#3	5633.143	93562.64	7579.847	4764.309	6956.574

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: CCV02 Acquired: 8/4/2025 13:37:21 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV02 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.044256**	**5.116285**	**5.020518**	**5.052884**	**5.066582**	**10.18681**	**10.11519**
Stddev	.015592	.067535	.013133	.016314	.014483	.01377	.11640
%RSD	.3091018	1.320009	.2615951	.3228559	.2858457	.1351766	1.150732
#1	5.061910	5.135108	5.005984	5.060335	5.079719	10.17451	10.19295
#2	5.038488	5.172412	5.024037	5.064142	5.068976	10.20169	10.17127
#3	5.032369	5.041335	5.031534	5.034175	5.051052	10.18425	9.98137

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2610663**	**2.531869**	**25.72237**	**1.002143**	**2.522469**	**1.267525**	**4.934868**
Stddev	.0013740	.004405	.16692	.003233	.003079	.000571	.000966
%RSD	.5263218	.1739712	.6489383	.3226279	.1220718	.0450865	.0195720
#1	.2600335	2.527661	25.65848	1.005869	2.519702	1.267888	4.935685
#2	.2626257	2.531499	25.91180	1.000482	2.521917	1.267822	4.935116
#3	.2605396	2.536447	25.59683	1.000078	2.525786	1.266867	4.933802

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.548653**	**25.24492**	**2.527188**	**1.251122**	**24.46183**	**2.539086**	**2.533969**
Stddev	.007732	.05303	.004615	.000631	.06389	.002570	.001798
%RSD	.3033785	.2100778	.1826075	.0504639	.2611892	.1012337	.0709660
#1	2.543944	25.19375	2.522521	1.250645	24.51590	2.536541	2.535326
#2	2.557576	25.29964	2.527296	1.251838	24.39133	2.541681	2.531930
#3	2.544438	25.24137	2.531749	1.250883	24.47826	2.539035	2.534652

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.66047**	**5.186282**	**5.146561**	**5.070777**	**5.124191**	**4.849548**	**4.993434**
Stddev	.15460	.020820	.007772	.005410	.024999	.003283	.027321
%RSD	.6269007	.4014352	.1510178	.1066990	.4878598	.0676991	.5471342
#1	24.71121	5.165666	5.155312	5.065078	5.118278	4.853104	4.963558
#2	24.78331	5.207299	5.143909	5.071411	5.151616	4.846633	4.999599
#3	24.48688	5.185882	5.140461	5.075843	5.102678	4.848907	5.017146

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: CCV02 Acquired: 8/4/2025 13:37:21 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV02 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**4.954045**	**5.101930**	**5.122174**
Stddev	.011737	.007386	.063459
%RSD	.2369103	.1447663	1.238900
#1	4.955895	5.107153	5.158537
#2	4.964747	5.105158	5.159086
#3	4.941494	5.093480	5.048899

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5387.498**	**90494.32**	**7442.399**	**4583.475**	**6298.303**
Stddev	17.251	597.42	51.959	20.070	23.401
%RSD	.3202043	.6601767	.6981457	.4378860	.3715367
#1	5389.062	90216.92	7444.472	4589.140	6313.019
#2	5403.914	90086.04	7389.435	4561.181	6310.570
#3	5369.519	91180.02	7493.291	4600.105	6271.319

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: CCB02 Acquired: 8/4/2025 13:41:33 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB02 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002426**	**.0020982**	**.0005508**	**-.002520**	**-.001671**	**.0129371**	**.0084268**
Stddev	.0013719	.0011029	.0005188	.001213	.001792	.0071782	.0006792
%RSD	565.3981	52.56566	94.20750	48.11683	107.2375	55.48526	8.060348
#1	.0015292	.0031689	.0011403	-.002599	-.000290	.0160412	.0076773
#2	-.001201	.0009656	.0001634	-.003692	-.001027	.0047293	.0086015
#3	.000400	.0021602	.0003486	-.001270	-.003696	.0180410	.0090017

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000489**	**.0003023**	**-.003923**	**-.001155**	**.0005064**	**.0001650**	**-.004090**
Stddev	.0000609	.0000408	.014030	.000219	.0001129	.0004479	.008587
%RSD	124.5203	13.50904	357.6350	18.91904	22.30169	271.4352	209.9306
#1	.0000687	.0003453	-.017812	-.001396	.0003809	.0004576	-.013673
#2	.0000974	.0002640	.010245	-.001101	.0005385	.0003881	-.001505
#3	-.000019	.0002975	-.004202	-.000969	.0005998	-.000351	.002907

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000795**	**.0053208**	**.0003540**	**.0009359**	**-.056320**	**.0018674**	**-.000068**
Stddev	.000199	.0150894	.0001507	.0003429	.005396	.0025282	.000182
%RSD	25.08085	283.5952	42.57371	36.63661	9.580137	135.3900	269.3029
#1	-.001025	.0222368	.0005273	.0007602	-.050092	.0008349	.000088
#2	-.000696	-.006753	.0002531	.0013310	-.059597	.0000187	-.000023
#3	-.000665	.000479	.0002816	.0007164	-.059269	.0047484	-.000268

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.020369**	**-.002453**	**.0009143**	**.0002569**	**.0010473**	**.0082199**	**.0045763**
Stddev	.022860	.000136	.0003159	.0001483	.0004029	.0146711	.0024293
%RSD	112.2297	5.528355	34.54728	57.72210	38.46808	178.4831	53.08479
#1	-.020269	-.002302	.0012367	.0003235	.0006015	-.008029	.0028336
#2	-.043278	-.002564	.0009007	.0000870	.0011550	.012193	.0035440
#3	.002441	-.002493	.0006054	.0003601	.0013853	.020495	.0073513

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: CCB02 Acquired: 8/4/2025 13:41:33 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB02 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0010369	-.001870	.0010538
Stddev	.0012580	.000583	.0000989
%RSD	121.3245	31.17455	9.385509
#1	.0020038	-.001917	.0009588
#2	.0014921	-.002427	.0010466
#3	-.000385	-.001264	.0011562

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5591.497	94016.26	7607.926	4723.208	7099.461
Stddev	11.664	588.89	60.180	32.875	22.858
%RSD	.2086103	.6263738	.7910218	.6960263	.3219640
#1	5578.862	93347.24	7676.802	4687.457	7073.440
#2	5601.855	94456.13	7565.505	4730.029	7116.299
#3	5593.773	94245.42	7581.471	4752.137	7108.644

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2733-01 Acquired: 8/4/2025 13:45:52 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.003354	.0062572	.0012926	-.009477	.0036121	1.456116
Stddev	.001311	.0017782	.0009404	.002794	.0012204	.004646
%RSD	39.10213	28.41864	72.75187	29.47767	33.78490	.3190758
#1	-.001930	.0052085	.0004814	-.006874	.0048623	1.459817
#2	-.003619	.0052527	.0023234	-.012429	.0024240	1.457630
#3	-.004512	.0083103	.0010731	-.009129	.0035500	1.450902

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4464486	-.000116	-.000200	452.0804	.0035857	.0008364
Stddev	.0011567	.000074	.000155	3.3236	.0002735	.0001942
%RSD	.2590902	63.66906	77.48631	.7351697	7.628440	23.22502
#1	.4451812	-.000143	-.000265	455.5547	.0036259	.0009974
#2	.4467172	-.000032	-.000023	451.7548	.0032943	.0006206
#3	.4474473	-.000172	-.000313	448.9315	.0038369	.0008910

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0038320	3.534552	-.001213	.0502651	.0048347	-.000298
Stddev	.0002531	.035492	.000326	.0245856	.0003133	.000610
%RSD	6.603955	1.004141	26.87485	48.91183	6.479904	204.7548
#1	.0036149	3.498232	-.001523	.0281763	.0049904	-.000825
#2	.0041099	3.536270	-.000873	.0767534	.0044741	.000371
#3	.0037712	3.569153	-.001243	.0458656	.0050396	-.000439

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	147.5353	.0056354	.0080425	337.7085	.0715547	.2244317
Stddev	1.5762	.0019054	.0003389	3.9290	.0010680	.0005527
%RSD	1.068382	33.81109	4.213595	1.163443	1.492516	.2462769
#1	146.2158	.0064799	.0084331	334.1859	.0723905	.2240974
#2	147.1092	.0069725	.0078681	336.9938	.0719221	.2241280
#3	149.2807	.0034537	.0078264	341.9458	.0703515	.2250697

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2733-01 Acquired: 8/4/2025 13:45:52 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.003759	-.015937	9.131645	.0399664	F 245.8212	.2349308
Stddev	.000297	.000446	.070439	.0026525	.2345	.0030963
%RSD	7.903512	2.796297	.7713712	6.636730	.0954004	1.317943
#1	-.003435	-.015968	9.052704	.0385854	245.8674	.2376008
#2	-.003825	-.015476	9.154150	.0430244	246.0293	.2315366
#3	-.004018	-.016366	9.188081	.0382893	245.5671	.2356549

Elem	Sr4077
Units	ppm
Avg	8.288325
Stddev	.111880
%RSD	1.349850
#1	8.389282
#2	8.307652
#3	8.168040

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4941.670	82453.68	7532.294	4153.293	5654.118
Stddev	4.095	425.47	49.076	7.557	8.955
%RSD	.0828570	.5160156	.6515460	.1819494	.1583845
#1	4942.911	82940.56	7508.143	4159.003	5650.436
#2	4937.099	82267.15	7499.973	4144.724	5647.589
#3	4945.001	82153.33	7588.766	4156.152	5664.327

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2733-01DUP Acquired: 8/4/2025 13:50:22 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001843	.0057335	.0021715	-.008432	.0053262	1.567064
Stddev	.003432	.0013391	.0018827	.002082	.0007475	.013838
%RSD	186.2437	23.35645	86.69866	24.69685	14.03384	.8830547
#1	-.003659	.0041985	.0025383	-.006123	.0045949	1.577483
#2	-.003986	.0066626	.0001324	-.010167	.0052949	1.551363
#3	.002116	.0063394	.0038439	-.009006	.0060888	1.572346

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4796693	-.000175	-.000259	486.0359	.0041227	.0007953
Stddev	.0028301	.000018	.000115	2.6763	.0004762	.0000700
%RSD	.5900036	10.44682	44.23033	.5506436	11.55137	8.803609
#1	.4822736	-.000175	-.000243	489.0781	.0036400	.0007715
#2	.4766576	-.000193	-.000153	484.9854	.0045922	.0008741
#3	.4800767	-.000156	-.000381	484.0442	.0041360	.0007402

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0043151	3.679424	-.000800	.0662786	.0052987	-.000166
Stddev	.0002033	.041804	.000377	.0243873	.0003409	.000205
%RSD	4.710226	1.136164	47.15484	36.79517	6.434068	123.4662
#1	.0043576	3.632057	-.001232	.0636478	.0051818	-.000315
#2	.0040940	3.695056	-.000542	.0918748	.0056827	.000068
#3	.0044938	3.711160	-.000625	.0433134	.0050316	-.000251

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	154.4201	.0066777	.0069822	354.0719	.0740135	.2433133
Stddev	1.6312	.0022608	.0003415	3.1336	.0012054	.0007926
%RSD	1.056313	33.85549	4.890367	.8850084	1.628580	.3257470
#1	152.8955	.0085875	.0066720	351.7314	.0754047	.2424742
#2	154.2245	.0072640	.0069266	352.8524	.0733537	.2434164
#3	156.1402	.0041815	.0073481	357.6318	.0732821	.2440493

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2733-01DUP Acquired: 8/4/2025 13:50:22 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.003094	-.016084	9.505135	.0435500	F 258.4034	.2590912
Stddev	.000352	.001856	.093528	.0026054	1.3545	.0001554
%RSD	11.36362	11.53780	.9839730	5.982615	.5241983	.0599753
#1	-.002833	-.018224	9.400245	.0406831	258.8708	.2591358
#2	-.003494	-.014921	9.535307	.0441935	259.4624	.2592194
#3	-.002956	-.015107	9.579852	.0457733	256.8771	.2589184

Elem	Sr4077
Units	ppm
Avg	8.988087
Stddev	.127799
%RSD	1.421872
#1	9.100253
#2	9.015050
#3	8.848958

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4961.185	83071.71	7350.325	4187.698	5680.189
Stddev	21.099	95.64	97.682	17.908	27.213
%RSD	.4252829	.1151269	1.328946	.4276454	.4790878
#1	4944.208	83090.30	7250.196	4187.366	5655.741
#2	4954.539	82968.15	7355.419	4205.770	5675.318
#3	4984.806	83156.69	7445.361	4169.958	5709.509

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2733-01LX5 Acquired: 8/4/2025 13:54:52 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.004085	.0000081	-.001333	-.005440	-.000228	.3574689
Stddev	.002268	.0007315	.001786	.004246	.001135	.0043926
%RSD	55.51791	9031.232	134.0661	78.06237	498.4973	1.228803
#1	-.005200	-.000272	-.000471	-.001380	-.000517	.3538035
#2	-.001475	-.000542	-.003387	-.009851	.001024	.3623378
#3	-.005580	.000838	-.000140	-.005088	-.001190	.3562653

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0928724	-.000035	-.000053	95.24700	-.000519	.0002308
Stddev	.0003646	.000044	.000024	.13345	.000318	.0001447
%RSD	.3926140	128.1297	45.06020	.1401070	61.28591	62.70013
#1	.0929966	.000016	-.000070	95.39968	-.000833	.0000898
#2	.0924620	-.000067	-.000062	95.15263	-.000197	.0002236
#3	.0931588	-.000052	-.000026	95.18869	-.000527	.0003789

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003638	.6867678	-.001425	.0251396	.0009051	.0000407
Stddev	.0004832	.0049870	.000467	.0249113	.0001405	.0001969
%RSD	132.8166	.7261573	32.78794	99.09191	15.51942	483.4069
#1	.0009060	.6906625	-.001122	.0250226	.0007612	.0000406
#2	-.000022	.6811470	-.001963	.0002870	.0010419	-.000156
#3	.000207	.6884937	-.001191	.0501091	.0009120	.000238

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	26.64293	.0031919	.0003934	63.18962	.0113836	.0446201
Stddev	.25586	.0025054	.0001122	.62037	.0003852	.0002108
%RSD	.9603285	78.49051	28.50963	.9817596	3.383652	.4723272
#1	26.92184	.0004079	.0003598	63.87420	.0113909	.0447174
#2	26.58786	.0039029	.0005185	63.02998	.0117651	.0443783
#3	26.41908	.0052650	.0003019	62.66466	.0109948	.0447646

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2733-01LX5 Acquired: 8/4/2025 13:54:52 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.003008	-.004089	1.724927	.0051540	F 49.06202	.0605171
Stddev	.000160	.001386	.019956	.0009764	.09234	.0006106
%RSD	5.326751	33.88517	1.156947	18.94477	.1882017	1.008980
#1	-.002963	-.002856	1.747661	.0048940	49.08889	.0606884
#2	-.003186	-.003823	1.716821	.0062341	49.13794	.0598391
#3	-.002875	-.005589	1.710299	.0043339	48.95923	.0610237

Elem	Sr4077
Units	ppm
Avg	1.749234
Stddev	.005718
%RSD	.3269134
#1	1.755347
#2	1.748339
#3	1.744015

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5441.609	91856.81	7768.481	4584.876	6440.260
Stddev	13.466	396.22	58.328	21.859	10.191
%RSD	.2474637	.4313440	.7508293	.4767607	.1582413
#1	5426.062	91730.27	7830.154	4572.466	6428.893
#2	5449.153	91539.32	7714.203	4572.048	6443.305
#3	5449.612	92300.84	7761.087	4610.116	6448.581

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2733-01MS Acquired: 8/4/2025 13:59:08 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8564153	2.108251	.9632904	2.141653	.8563121	3.597349
Stddev	.0023778	.040875	.0033284	.006793	.0008963	.026710
%RSD	.2776512	1.938820	.3455244	.3171914	.1046637	.7424998
#1	.8536704	2.124423	.9640401	2.133966	.8571967	3.566515
#2	.8577316	2.138567	.9661800	2.146848	.8554046	3.613380
#3	.8578440	2.061765	.9596510	2.144145	.8563350	3.612152

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6716131	.2064881	.2006994	476.2364	.4004350	.2064075
Stddev	.0016544	.0006330	.0008237	8.5526	.0021255	.0005892
%RSD	.2463305	.3065603	.4104303	1.795869	.5308030	.2854596
#1	.6701206	.2071988	.2011911	466.8489	.4010347	.2066855
#2	.6713268	.2062805	.2011586	483.5860	.4021962	.2068063
#3	.6733920	.2059850	.1997484	478.2742	.3980740	.2057307

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3059002	6.667381	.2036410	1.978585	.5174045	.0102513
Stddev	.0007383	.046743	.0007564	.035361	.0016468	.0006481
%RSD	.2413571	.7010628	.3714464	1.787204	.3182735	6.322153
#1	.3065278	6.613413	.2029172	2.014077	.5184943	.0096705
#2	.3060860	6.695017	.2035795	1.943356	.5182091	.0101331
#3	.3050867	6.693714	.2044263	1.978323	.5155101	.0109504

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	151.5442	.3109395	.2275575	351.1976	.3504029	.6609548
Stddev	.6645	.0056745	.0003052	1.6428	.0015488	.0006142
%RSD	.4384565	1.824945	.1341089	.4677581	.4420178	.0929246
#1	150.8252	.3052810	.2272383	349.3354	.3519073	.6612785
#2	151.6717	.3109076	.2275878	351.8160	.3504883	.6602465
#3	152.1356	.3166298	.2278464	352.4414	.3488131	.6613395

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2733-01MS Acquired: 8/4/2025 13:59:08 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7157296	.1843642	10.04689	6.260155	F 252.1203	.4550409
Stddev	.0016945	.0016600	.07519	.028497	1.1683	.0010896
%RSD	.2367543	.9003820	.7483638	.4552176	.4633705	.2394440
#1	.7172106	.1825817	9.97325	6.290771	252.9685	.4562947
#2	.7160965	.1858657	10.04387	6.255292	252.6045	.4545042
#3	.7138817	.1846453	10.12354	6.234402	250.7878	.4543238

Elem	Sr4077
Units	ppm
Avg	8.858492
Stddev	.049109
%RSD	.5543757
#1	8.848937
#2	8.911676
#3	8.814862

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5043.301	84952.75	7461.725	4244.126	5777.780
Stddev	8.497	190.76	9.669	8.294	10.902
%RSD	.1684871	.2245430	.1295820	.1954213	.1886869
#1	5035.473	85140.82	7451.089	4237.742	5773.831
#2	5042.092	84759.41	7464.100	4241.136	5769.403
#3	5052.338	84958.01	7469.985	4253.501	5790.106

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2733-01MSD Acquired: 8/4/2025 14:03:23 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8680847	2.181309	.9674129	2.184958	.8768451	3.520964
Stddev	.0052299	.013068	.0046492	.006835	.0004627	.011149
%RSD	.6024704	.5990771	.4805778	.3128251	.0527625	.3166446
#1	.8740424	2.181730	.9727526	2.190869	.8765831	3.513891
#2	.8642501	2.194160	.9652234	2.186531	.8773793	3.515185
#3	.8659618	2.168035	.9642627	2.177474	.8765729	3.533816

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6501589	.2046529	.2022542	447.7161	.4061083	.2082404
Stddev	.0013707	.0018228	.0008302	1.4943	.0006046	.0006613
%RSD	.2108291	.8906700	.4104842	.3337513	.1488776	.3175818
#1	.6493103	.2066866	.2032072	449.4062	.4056820	.2088904
#2	.6494262	.2041059	.2016880	447.1721	.4058427	.2082626
#3	.6517403	.2031662	.2018674	446.5701	.4068002	.2075683

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3079170	6.615606	.2072884	2.002357	.5213830	.0153682
Stddev	.0012131	.060099	.0006500	.022356	.0026973	.0006088
%RSD	.3939559	.9084357	.3135694	1.116501	.5173440	3.961756
#1	.3093079	6.565363	.2079968	2.028171	.5242844	.0150812
#2	.3070777	6.599272	.2067195	1.989651	.5189514	.0160675
#3	.3073655	6.682183	.2071488	1.989250	.5209134	.0149559

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	143.1260	.3203813	.2280418	332.1506	.3439351	.6637899
Stddev	1.3279	.0020540	.0005057	2.5109	.0041643	.0025473
%RSD	.9278139	.6411220	.2217712	.7559423	1.210789	.3837529
#1	141.7753	.3184713	.2276957	329.8573	.3485378	.6665756
#2	143.1726	.3225541	.2278075	331.7610	.3428389	.6632147
#3	144.4300	.3201186	.2286222	334.8335	.3404284	.6615793

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2733-01MSD Acquired: 8/4/2025 14:03:23 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7269146	.1906587	9.607449	6.218804	F 236.2907	.4423169
Stddev	.0019167	.0010143	.097809	.034505	.7981	.0006849
%RSD	.2636784	.5320057	1.018053	.5548521	.3377423	.1548379
#1	.7288957	.1908785	9.501292	6.245637	237.0607	.4425596
#2	.7267786	.1915452	9.627142	6.230895	236.3441	.4415438
#3	.7250695	.1895526	9.693913	6.179881	235.4673	.4428474

Elem	Sr4077
Units	ppm
Avg	8.346451
Stddev	.072954
%RSD	.8740726
#1	8.420483
#2	8.344247
#3	8.274625

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5092.954	86154.27	7639.410	4283.724	5855.309
Stddev	18.370	29.80	63.609	14.359	15.955
%RSD	.3606903	.0345838	.8326461	.3352079	.2724910
#1	5072.428	86121.64	7572.473	4300.300	5836.890
#2	5098.583	86161.16	7646.692	4275.088	5864.142
#3	5107.850	86180.03	7699.065	4275.784	5864.894

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2733-01A Acquired: 8/4/2025 14:07:39 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8762060**	**2.147820**	**.9786462**	**2.212129**	**.8671257**	**3.572830**
Stddev	.0040190	.036001	.0035518	.004924	.0010622	.020453
%RSD	.4586804	1.676163	.3629323	.2225901	.1224936	.5724569
#1	.8716634	2.189382	.9749349	2.216230	.8659476	3.596424
#2	.8792993	2.126353	.9820136	2.206668	.8680103	3.560130
#3	.8776553	2.127723	.9789902	2.213489	.8674192	3.561936

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6689524**	**.2026647**	**.2036042**	**465.2209**	**.4031477**	**.2097631**
Stddev	.0021044	.0021250	.0005351	1.4823	.0021154	.0006080
%RSD	.3145775	1.048552	.2627904	.3186140	.5247160	.2898395
#1	.6707758	.2048528	.2030241	466.9232	.4013899	.2095729
#2	.6666497	.2006089	.2037103	464.5239	.4054954	.2092730
#3	.6694316	.2025326	.2040783	464.2157	.4025576	.2104435

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3102882**	**6.779218**	**.2052690**	**1.963455**	**.5261953**	**.0738947**
Stddev	.0007535	.101382	.0000601	.012236	.0017509	.0017750
%RSD	.2428501	1.495486	.0292690	.6231807	.3327508	2.402076
#1	.3095786	6.662917	.2052348	1.955462	.5242181	.0731323
#2	.3110791	6.848942	.2052337	1.977541	.5268185	.0759235
#3	.3102068	6.825795	.2053383	1.957361	.5275494	.0726283

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**150.8594**	**.3168698**	**.2311539**	**349.1856**	**.3447544**	**.6697015**
Stddev	2.0656	.0015168	.0011646	4.2646	.0040095	.0002285
%RSD	1.369247	.4786883	.5038328	1.221289	1.163010	.0341222
#1	148.4784	.3179352	.2298338	344.2987	.3489879	.6695170
#2	152.1724	.3151332	.2315918	352.1539	.3410145	.6696304
#3	151.9274	.3175410	.2320362	351.1041	.3442608	.6699571

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2733-01A Acquired: 8/4/2025 14:07:39 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7231939**	**.1864815**	**10.18114**	**6.261934**	F **248.5081**	**.4494269**
Stddev	.0024484	.0011467	.13842	.015678	.6945	.0035911
%RSD	.3385522	.6149224	1.359583	.2503705	.2794588	.7990493
#1	.7204144	.1854002	10.02132	6.254948	249.1370	.4526657
#2	.7241362	.1863603	10.26283	6.279891	247.7627	.4455650
#3	.7250312	.1876840	10.25927	6.250964	248.6245	.4500500

Elem	Sr4077
Units	ppm
Avg	**8.733306**
Stddev	.083482
%RSD	.9559086
#1	8.761565
#2	8.639362
#3	8.798992

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5042.311**	**86020.00**	**7689.699**	**4262.086**	**5782.448**
Stddev	8.280	600.52	62.126	28.873	12.888
%RSD	.1642190	.6981174	.8079167	.6774437	.2228870
#1	5050.592	86713.04	7621.794	4294.832	5797.199
#2	5034.031	85653.55	7743.685	4240.286	5773.366
#3	5042.310	85693.40	7703.619	4251.141	5776.779

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2742-01 Acquired: 8/4/2025 14:12:42 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.003829**	**.0027149**	**.0005902**	**-.005823**	**.0012084**	**.1569377**
Stddev	.001987	.0013993	.0003238	.001565	.0014805	.0086528
%RSD	51.90592	51.53909	54.87340	26.87025	122.5180	5.513504
#1	-.006018	.0042039	.0009597	-.007024	.0010737	.1595328
#2	-.002139	.0014272	.0003561	-.004054	-.000200	.1472844
#3	-.003330	.0025136	.0004546	-.006390	.002752	.1639960

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1501213**	**-.000146**	**-.000094**	**234.5109**	**-.000005**	**.0001961**
Stddev	.0004076	.000018	.000052	1.3696	.000140	.0001436
%RSD	.2715000	12.07184	55.47557	.5840102	2893.416	73.23041
#1	.1502720	-.000166	-.000102	233.0837	-.000066	.0002865
#2	.1496599	-.000138	-.000142	235.8144	.000156	.0000305
#3	.1504322	-.000134	-.000039	234.6346	-.000104	.0002712

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0086836**	**1.198664**	**.0277668**	**74.44869**	**.0040542**	**.0003586**
Stddev	.0002244	.006182	.0003534	.20318	.0005060	.0001538
%RSD	2.583661	.5157244	1.272730	.2729063	12.47987	42.88272
#1	.0086776	1.203960	.0281748	74.31527	.0042858	.0005358
#2	.0089109	1.200161	.0275701	74.68252	.0044028	.0002802
#3	.0084623	1.191871	.0275555	74.34829	.0034739	.0002598

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**541.9473**	**.0026669**	**.0599476**	**12.06578**	**.0551459**	**.0039661**
Stddev	1.9249	.0022906	.0000886	.03969	.0005449	.0002668
%RSD	.3551783	85.89037	.1477246	.3289421	.9881114	6.726100
#1	540.4299	.0004569	.0600273	12.03494	.0546895	.0042730
#2	541.2995	.0050304	.0598523	12.05184	.0549990	.0038365
#3	544.1125	.0025135	.0599632	12.11056	.0557491	.0037890

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2742-01 Acquired: 8/4/2025 14:12:42 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0247877	-.009017	F 16.53599	.0145435	19.60802	.0176859
Stddev	.0012398	.000867	.05885	.0027977	.10226	.0019158
%RSD	5.001820	9.617379	.3558782	19.23713	.5215424	10.83229
#1	.0241425	-.009688	16.60386	.0127847	19.55489	.0166961
#2	.0240034	-.008038	16.49929	.0130761	19.54325	.0198941
#3	.0262171	-.009325	16.50480	.0177697	19.72591	.0164675

Elem	Sr4077
Units	ppm
Avg	.4803802
Stddev	.0011252
%RSD	.2342226
#1	.4790810
#2	.4810354
#3	.4810241

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5035.314	85379.42	7813.944	4273.637	5753.955
Stddev	17.362	277.87	42.923	26.623	20.518
%RSD	.3448139	.3254498	.5493175	.6229493	.3565844
#1	5055.113	85379.82	7853.037	4242.905	5777.331
#2	5022.682	85101.35	7768.012	4289.653	5738.929
#3	5028.147	85657.08	7820.785	4288.353	5745.606

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2734-01 Acquired: 8/4/2025 14:17:05 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0798964**	**-.027845**	**1.132288**	**-.003430**	**-.013693**	**131.6035**	**.9531233**
Stddev	.0001153	.001210	.002794	.000649	.001298	.2110	.0014280
%RSD	.1442630	4.345557	.2467501	18.92314	9.481033	.1603088	.1498221
#1	.0798586	-.028193	1.135501	-.003509	-.012504	131.4614	.9530721
#2	.0800258	-.026499	1.130935	-.004036	-.015078	131.5032	.9517216
#3	.0798048	-.028843	1.130428	-.002745	-.013497	131.8459	.9545762

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0106720**	**.0079528**	**80.41663**	**.1867926**	**.1394471**	**1.276279**	**229.1042**
Stddev	.0000693	.0002242	.36337	.0012317	.0002315	.001499	1.8749
%RSD	.6490685	2.819126	.4518574	.6593887	.1659826	.1174764	.8183584
#1	.0107312	.0079497	80.28163	.1854160	.1396941	1.275690	230.2377
#2	.0105958	.0077302	80.14008	.1877905	.1394120	1.277983	230.1348
#3	.0106890	.0081786	80.82818	.1871714	.1392352	1.275163	226.9401

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.755149**	**63.09698**	**.3488094**	**.0056684**	**6.748539**	**.3631217**	**1.206606**
Stddev	.011912	.09068	.0001957	.0008064	.087090	.0044570	.001747
%RSD	.2069856	.1437118	.0560898	14.22674	1.290508	1.227418	.1447646
#1	5.753457	63.17454	.3487963	.0064049	6.812409	.3675342	1.205373
#2	5.744174	63.11911	.3490113	.0057937	6.783875	.3586214	1.205840
#3	5.767817	62.99728	.3486206	.0048067	6.649335	.3632095	1.208605

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.23257**	**.3168342**	**.0051675**	**.0979991**	**3.559032**	**6.254461**	**6.082272**
Stddev	.04288	.0069504	.0003498	.0009031	.018048	.056001	.035547
%RSD	.4190099	2.193698	6.768614	.9215328	.5071159	.8953772	.5844287
#1	10.27732	.3219722	.0050273	.0970356	3.561573	6.227250	6.049154
#2	10.22854	.3196046	.0049096	.0988263	3.539848	6.318868	6.119830
#3	10.19185	.3089259	.0055656	.0981352	3.575676	6.217265	6.077833

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2734-01 Acquired: 8/4/2025 14:17:05 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**2.557539**	**.2133904**	**.1112267**
Stddev	.012578	.0031538	.0024963
%RSD	.4917957	1.477956	2.244336
#1	2.544371	.2159074	.1104723
#2	2.558819	.2098526	.1091946
#3	2.569428	.2144111	.1140132

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6211.726**	**106302.4**	**8968.099**	**5286.772**	**6202.215**
Stddev	13.513	181.0	91.082	18.882	13.533
%RSD	.2175479	.1702361	1.015619	.3571638	.2181926
#1	6209.704	106507.8	9037.396	5272.379	6208.692
#2	6199.337	106166.4	9001.964	5308.152	6186.661
#3	6226.137	106233.0	8864.935	5279.785	6211.292

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2741-01 Acquired: 8/4/2025 14:21:05 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0681009**	**-.025500**	**.1910103**	**-.000839**	**-.011622**	**75.61708**	**.5076491**
Stddev	.0008846	.001116	.0029728	.001295	.002947	.07632	.0007040
%RSD	1.298917	4.376894	1.556375	154.3512	25.35986	.1009300	.1386740
#1	.0686174	-.024476	.1944256	.000239	-.014637	75.58746	.5083488
#2	.0670795	-.025336	.1890033	-.000481	-.008748	75.70377	.5069409
#3	.0686057	-.026690	.1896019	-.002276	-.011481	75.56001	.5076575

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0075302**	**.0002605**	**138.8727**	**.1538403**	**.0807967**	**.2194822**	**171.3996**
Stddev	.0000995	.0002223	.2685	.0005700	.0002093	.0015022	1.7433
%RSD	1.321734	85.33349	.1933536	.3705323	.2590934	.6844265	1.017111
#1	.0074267	.0002284	139.1740	.1531951	.0810316	.2210594	171.3749
#2	.0076252	.0004971	138.7851	.1540502	.0806298	.2180684	169.6687
#3	.0075389	.0000560	138.6589	.1542757	.0807289	.2193189	173.1551

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.814079**	**53.13684**	**.1529534**	**.0031652**	**3.263760**	**.2653356**	**.5830677**
Stddev	.002249	.16583	.0006261	.0003081	.057617	.0024855	.0013303
%RSD	.0589751	.3120809	.4093256	9.735655	1.765362	.9367543	.2281466
#1	3.816606	52.99501	.1531781	.0031532	3.256819	.2625192	.5844327
#2	3.812294	53.31917	.1522460	.0028632	3.209928	.2662653	.5829952
#3	3.813338	53.09635	.1534361	.0034791	3.324534	.2672223	.5817752

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**12.09051**	**.0416428**	**.0111158**	**.0146932**	**2.051517**	**7.318589**	**3.421180**
Stddev	.11521	.0128555	.0000792	.0003642	.018389	.298794	.016390
%RSD	.9529128	30.87093	.7126885	2.478832	.8963554	4.082670	.4790820
#1	12.08541	.0408347	.0111777	.0151049	2.048292	7.051662	3.439776
#2	11.97793	.0292104	.0110265	.0144130	2.071305	7.262739	3.414929
#3	12.20819	.0548833	.0111432	.0145615	2.034954	7.641368	3.408835

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2741-01 Acquired: 8/4/2025 14:21:05 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**6.220330**	**.1361378**	**.7797567**
Stddev	.021679	.0005093	.0028634
%RSD	.3485178	.3741157	.3672229
#1	6.239478	.1355558	.7816136
#2	6.196792	.1363550	.7811976
#3	6.224720	.1365024	.7764590

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5778.546**	**98620.54**	**8318.733**	**4880.539**	**6206.342**
Stddev	18.266	152.21	82.825	2.546	9.745
%RSD	.3161088	.1543383	.9956419	.0521643	.1570197
#1	5763.928	98739.45	8321.042	4878.419	6195.188
#2	5799.023	98673.17	8234.777	4879.835	6213.208
#3	5772.687	98449.00	8400.379	4883.362	6210.630

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2743-01 Acquired: 8/4/2025 14:25:08 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2026312	-.021863	11.05358	.0012240	.0029486	114.5813
Stddev	.0008695	.002633	.03623	.0033835	.0012670	.3464
%RSD	.4291005	12.04550	.3277347	276.4349	42.96997	.3023451
#1	.2031049	-.023499	11.02609	.0041927	.0028075	114.9373
#2	.2031609	-.023264	11.04002	-.002460	.0042802	114.5611
#3	.2016277	-.018825	11.09463	.001939	.0017580	114.2453

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.051799	.0106260	.0135543	325.8345	.2291957	.1074341
Stddev	.009883	.0001460	.0000165	1.0513	.0011899	.0002892
%RSD	.2439204	1.374040	.1219515	.3226369	.5191796	.2692226
#1	4.061074	.0106950	.0135724	326.9974	.2305177	.1074033
#2	4.052921	.0107247	.0135401	324.9514	.2288590	.1071615
#3	4.041403	.0104583	.0135503	325.5548	.2282103	.1077375

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.634524	193.1793	2.645489	71.86863	.2834584	.0153154
Stddev	.009388	1.6399	.007431	.32162	.0014029	.0008697
%RSD	.3563613	.8488790	.2808901	.4475139	.4949043	5.678928
#1	2.628278	192.1179	2.653839	72.22737	.2826532	.0143156
#2	2.629973	192.3520	2.643028	71.77246	.2826437	.0157329
#3	2.645320	195.0680	2.639601	71.60607	.2850782	.0158976

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.580323	.3506352	4.457690	11.73480	.0833784	.0166948
Stddev	.029356	.0021633	.008676	.11019	.0110878	.0000413
%RSD	.6409177	.6169667	.1946347	.9390061	13.29818	.2474628
#1	4.584635	.3483125	4.463668	11.66759	.0715330	.0166478
#2	4.549049	.3510006	4.461662	11.67483	.0850934	.0167110
#3	4.607285	.3525925	4.447738	11.86196	.0935088	.0167256

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2743-01 Acquired: 8/4/2025 14:25:08 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6490466	3.579469	F 21.85182	F 22.50887	6.010009	.2048905
Stddev	.0013743	.016668	.24991	.01308	.017774	.0030687
%RSD	.2117438	.4656481	1.143672	.0580957	.2957474	1.497740
#1	.6474609	3.580140	21.90387	22.52372	5.991119	.2026501
#2	.6497847	3.562476	21.57999	22.49910	6.012506	.2083882
#3	.6498940	3.595791	22.07162	22.50379	6.026404	.2036332

Elem	Sr4077
Units	ppm
Avg	2.013551
Stddev	.019468
%RSD	.9668285
#1	2.029163
#2	2.019751
#3	1.991738

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6039.484	102811.6	9178.543	5073.206	5946.380
Stddev	6.923	371.4	72.605	12.289	11.572
%RSD	.1146231	.3612195	.7910249	.2422269	.1946122
#1	6045.739	102785.7	9099.081	5080.788	5955.988
#2	6040.667	103195.2	9195.130	5079.802	5949.617
#3	6032.046	102453.8	9241.420	5059.028	5933.533

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: CCV03 Acquired: 8/4/2025 14:43:24 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV03 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.887699**	**5.424548**	**4.644272**	**5.051938**	**4.993085**	**9.425452**
Stddev	.024410	.082576	.021580	.010807	.019201	.115874
%RSD	.4994087	1.522260	.4646609	.2139268	.3845526	1.229377
#1	4.865246	5.334771	4.630106	5.041593	4.985627	9.556688
#2	4.884169	5.497254	4.633601	5.051065	4.978733	9.382411
#3	4.913681	5.441620	4.669109	5.063155	5.014897	9.337257

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.740061**	**.2356263**	**2.306539**	**24.44081**	**.9069431**	**2.322529**
Stddev	.119433	.0029379	.010066	.25087	.0049643	.010310
%RSD	1.226209	1.246855	.4364174	1.026428	.5473644	.4439102
#1	9.875268	.2390158	2.297734	24.72659	.9067920	2.315145
#2	9.648928	.2340527	2.304370	24.25690	.9119812	2.318134
#3	9.695988	.2338104	2.317513	24.33895	.9020561	2.334308

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.187689**	**4.988521**	**2.403007**	**22.99524**	**2.329188**	**1.212028**
Stddev	.004736	.014062	.022408	.31344	.009781	.000215
%RSD	.3987208	.2818931	.9325186	1.363065	.4199135	.0177035
#1	1.185105	4.972631	2.428860	23.34617	2.322664	1.212180
#2	1.184808	4.993571	2.391006	22.89644	2.324467	1.211782
#3	1.193155	4.999361	2.389154	22.74310	2.340434	1.212121

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**23.59068**	**2.376575**	**2.552583**	**25.11571**	**4.755081**	**4.882919**
Stddev	.01375	.032911	.003936	.05451	.067555	.017458
%RSD	.0582752	1.384798	.1541831	.2170433	1.420688	.3575417
#1	23.57485	2.413406	2.554993	25.05370	4.831805	4.870671
#2	23.59761	2.366268	2.554714	25.13733	4.728914	4.875177
#3	23.59958	2.350052	2.548041	25.15609	4.704524	4.902910

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: CCV03 Acquired: 8/4/2025 14:43:24 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV03 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.692204**	**4.907049**	**4.876584**	F **4.416047**	**4.791513**	**4.584649**
Stddev	.019448	.051800	.003399	.019544	.017386	.062031
%RSD	.4144782	1.055622	.0697024	.4425691	.3628398	1.353019
#1	4.672929	4.966740	4.874046	4.399414	4.774433	4.651243
#2	4.691863	4.873900	4.875260	4.411154	4.790919	4.574198
#3	4.711821	4.880506	4.880446	4.437572	4.809189	4.528508

Elem	Sr4077
Units	ppm
Avg	**4.813588**
Stddev	.049043
%RSD	1.018843
#1	4.869818
#2	4.791292
#3	4.779654

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5538.849**	**93952.66**	**8304.604**	**4615.462**	**6601.219**
Stddev	15.889	136.99	104.805	9.723	13.484
%RSD	.2868593	.1458127	1.262013	.2106521	.2042622
#1	5536.420	94078.53	8187.206	4617.776	6606.976
#2	5555.813	93806.75	8337.861	4623.819	6610.869
#3	5524.315	93972.72	8388.746	4604.791	6585.812

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: CCB03 Acquired: 8/4/2025 14:54:00 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB03 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001004**	**-.002587**	**-.000449**	**-.002294**	**-.001972**	**.0103815**	**-.001047**
Stddev	.001876	.001908	.000428	.002167	.001482	.0075638	.000294
%RSD	186.8362	73.76854	95.34063	94.44399	75.16611	72.85841	28.10387
#1	.000015	-.001550	-.000692	-.004779	-.002488	.0154775	-.001347
#2	.000141	-.001422	-.000700	-.000798	-.000301	.0016907	-.001035
#3	-.003169	-.004789	.000045	-.001305	-.003127	.0139763	-.000759

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000011**	**.0001790**	**.0107735**	**-.001616**	**.0003821**	**.0000369**	**-.003017**
Stddev	.0000426	.0000059	.0102869	.000435	.0001537	.0002036	.004215
%RSD	4020.786	3.275910	95.48322	26.90498	40.22742	550.9103	139.6932
#1	-.000011	.0001724	.0191212	-.001115	.0002462	-.000198	-.004511
#2	.000048	.0001813	.0139181	-.001831	.0005489	.000168	-.006282
#3	-.000034	.0001835	-.000719	-.001900	.0003512	.000140	.001741

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001003**	**.0409153**	**.0002490**	**.0003119**	**.0893059**	**.0013942**	**-.000553**
Stddev	.000362	.0306196	.0001906	.0003427	.0109424	.0024088	.000152
%RSD	36.07911	74.83658	76.53609	109.8619	12.25273	172.7769	27.43109
#1	-.000969	.0186428	.0004563	.0002871	.1011304	.0032729	-.000472
#2	-.000660	.0758320	.0000813	-.000018	.0795372	-.001321	-.000727
#3	-.001381	.0282711	.0002094	.000666	.0872501	.002231	-.000459

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2938677**	**-.002224**	**.0005655**	**-.000138**	**.0000446**	**.0038449**	**.0073822**
Stddev	.0216567	.000710	.0004134	.000467	.0019057	.0047645	.0016628
%RSD	7.369537	31.93202	73.09943	337.7094	4270.500	123.9160	22.52432
#1	.2786912	-.001437	.0006482	-.000243	.0021869	.0014573	.0081408
#2	.3186684	-.002417	.0001171	.000372	-.000591	.0007464	.0054754
#3	.2842437	-.002817	.0009314	-.000544	-.001462	.0093311	.0085303

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: CCB03 Acquired: 8/4/2025 14:54:00 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB03 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0063128	F -.010474	.0001927
Stddev	.0013811	.004020	.0000176
%RSD	21.87798	38.38015	9.108911
#1	.0078797	-.014620	.0002069
#2	.0052726	-.006593	.0001731
#3	.0057859	-.010211	.0001981

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5731.640	97444.49	8295.522	4770.804	7438.205
Stddev	5.190	212.63	29.327	14.947	14.198
%RSD	.0905518	.2182057	.3535267	.3133113	.1908764
#1	5725.882	97362.34	8311.979	4780.745	7430.057
#2	5735.957	97685.94	8312.925	4778.053	7454.599
#3	5733.082	97285.20	8261.663	4753.615	7429.959

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2753-01 Acquired: 8/4/2025 14:58:51 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0957210	-.004256	.7666531	-.010024	.0012154	174.9108	1.539126
Stddev	.0040433	.001646	.0008593	.003657	.0028492	.1555	.001781
%RSD	4.224063	38.67491	.1120788	36.48494	234.4292	.0888837	.1157141
#1	.1003678	-.002387	.7665876	-.010810	.0031000	174.9577	1.541058
#2	.0937892	-.004889	.7658284	-.006037	.0026086	175.0375	1.537549
#3	.0930059	-.005492	.7675432	-.013224	-.002062	174.7373	1.538771

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0117925	.0121572	561.4770	3.737702	.2223763	.8773246	356.7957
Stddev	.0001079	.0000859	3.5500	.003964	.0005678	.0034433	.7094
%RSD	.9151479	.7064084	.6322654	.1060598	.2553487	.3924819	.1988140
#1	.0116802	.0120800	557.3917	3.733133	.2218627	.8748547	357.2673
#2	.0118020	.0121418	563.2272	3.740228	.2222800	.8758613	355.9799
#3	.0118954	.0122497	563.8121	3.739746	.2229861	.8812580	357.1400

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.509101	340.4060	.5029179	.0151111	31.37846	.7742756	1.754994
Stddev	.003508	.5521	.0021371	.0009541	.08208	.0030365	.008721
%RSD	.0636780	.1621880	.4249424	6.313765	.2615754	.3921789	.4969513
#1	5.511266	340.3437	.5020356	.0148015	31.47293	.7749904	1.764676
#2	5.505053	340.9866	.5013631	.0143503	31.33778	.7768910	1.752555
#3	5.510983	339.8877	.5053549	.0161816	31.32467	.7709455	1.747752

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	38.51879	.4215986	.0160442	.0733122	12.55244	12.19184	13.41759
Stddev	.19889	.0027359	.0001649	.0009126	.03157	.12908	.07075
%RSD	.5163329	.6489444	1.027521	1.244809	.2515169	1.058730	.5272572
#1	38.70160	.4215592	.0162331	.0730274	12.55815	12.09925	13.38068
#2	38.30701	.4188826	.0159294	.0743332	12.51840	12.13700	13.37292
#3	38.54777	.4243541	.0159700	.0725759	12.58076	12.33929	13.49915

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2753-01 Acquired: 8/4/2025 14:58:51 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**19.05323**	**.2831442**	**2.239012**
Stddev	.10985	.0060079	.014626
%RSD	.5765624	2.121834	.6532305
#1	19.01812	.2890873	2.255472
#2	18.96523	.2770737	2.234054
#3	19.17635	.2832715	2.227509

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5895.692**	**103691.4**	**9773.511**	**5008.856**	**5434.167**
Stddev	13.670	187.5	43.537	22.615	16.037
%RSD	.2318641	.1808409	.4454588	.4515067	.2951130
#1	5907.773	103753.4	9814.827	4987.709	5444.269
#2	5898.450	103480.8	9728.050	5006.162	5442.556
#3	5880.854	103840.1	9777.656	5032.698	5415.675

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2758-01 Acquired: 8/4/2025 15:03:09 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2138828**	**-.050440**	**8.279147**	**.0103532**	**.0744110**	**91.94769**	**3.472369**
Stddev	.0013945	.003615	.010021	.0012284	.0032474	.31337	.012367
%RSD	.6519746	7.166020	.1210343	11.86522	4.364170	.3408118	.3561529
#1	.2123925	-.053493	8.276583	.0097794	.0747976	92.17046	3.479951
#2	.2151560	-.046449	8.270656	.0095166	.0774479	91.58936	3.458099
#3	.2140999	-.051377	8.290200	.0117635	.0709876	92.08325	3.479058

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0109097**	**.0481277**	**57.85778**	**.2908835**	**.1217018**	**2.720003**	**354.8127**
Stddev	.0000748	.0002363	.29096	.0008488	.0003324	.004216	1.1896
%RSD	.6859979	.4908948	.5028959	.2918113	.2731713	.1550159	.3352722
#1	.0109223	.0478554	57.93680	.2902078	.1214083	2.717475	356.1526
#2	.0109774	.0482495	57.53547	.2906064	.1216342	2.717664	353.8806
#3	.0108293	.0482782	58.10108	.2918363	.1220629	2.724870	354.4050

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.701109**	**27.84784**	**.5878527**	**.0787748**	**3.404661**	**.3960250**	**8.405977**
Stddev	.021618	.06079	.0003514	.0007075	.012147	.0011824	.020848
%RSD	.4598414	.2182775	.0597842	.8981748	.3567727	.2985710	.2480139
#1	4.714605	27.89761	.5880813	.0794331	3.412447	.3972315	8.415380
#2	4.676175	27.78009	.5874480	.0780266	3.410870	.3959754	8.382084
#3	4.712545	27.86583	.5880287	.0788646	3.390664	.3948683	8.420468

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.40596**	**.1059254**	**.0389463**	**1.545463**	**2.953953**	**6.218144**	**10.15438**
Stddev	.05764	.0097593	.0002101	.001353	.017344	.171672	.00648
%RSD	.5538797	9.213403	.5395273	.0875426	.5871363	2.760818	.0638422
#1	10.44300	.1156661	.0387087	1.543947	2.973848	6.397491	10.15385
#2	10.33955	.1059625	.0391077	1.545894	2.942019	6.055346	10.14818
#3	10.43531	.0961475	.0390226	1.546548	2.945993	6.201597	10.16112

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2758-01 Acquired: 8/4/2025 15:03:09 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**8.636914**	**.1650970**	**.0651473**
Stddev	.021434	.0005581	.0012892
%RSD	.2481662	.3380403	1.978847
#1	8.619462	.1645293	.0655420
#2	8.630442	.1656450	.0637069
#3	8.660838	.1651167	.0661929

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6292.784**	**109018.8**	**9864.917**	**5300.934**	**6470.275**
Stddev	4.973	193.7	24.057	12.943	6.848
%RSD	.0790330	.1776579	.2438644	.2441669	.1058446
#1	6296.336	108797.6	9866.941	5286.706	6470.517
#2	6294.916	109157.6	9887.898	5312.009	6476.999
#3	6287.100	109101.3	9839.912	5304.087	6463.308

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: PB169096BL Acquired: 8/4/2025 15:07:10 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001977**	**-.002884**	**-.000528**	**-.001637**	**-.004900**	**.0016097**	**-.002680**
Stddev	.000199	.000864	.000213	.001361	.001796	.0060949	.000517
%RSD	10.08525	29.96950	40.24217	83.11953	36.65833	378.6391	19.29425
#1	-.001844	-.003316	-.000772	-.002080	-.006351	.0085141	-.002666
#2	-.002206	-.003448	-.000387	-.002722	-.002891	-.000662	-.003203
#3	-.001880	-.001889	-.000425	-.000110	-.005457	-.003023	-.002170

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000152**	**-.000001**	**.0023385**	**-.001615**	**.0002250**	**-.000264**	**-.003889**
Stddev	.0000885	.000041	.0078937	.000068	.0001255	.000364	.001157
%RSD	584.1273	3902.284	337.5518	4.213027	55.76938	138.0304	29.74646
#1	-.000083	.000044	.0086970	-.001687	.0002763	-.000683	-.005140
#2	.000089	-.000011	.0048150	-.001552	.0000820	-.000031	-.002858
#3	.000039	-.000036	-.006496	-.001605	.0003166	-.000077	-.003670

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001492**	**.0096601**	**.0001442**	**.0006806**	**.1597940**	**-.001237**	**-.001059**
Stddev	.000337	.0066017	.0002597	.0004293	.0124086	.002326	.000295
%RSD	22.55678	68.33944	180.1316	63.07156	7.765366	188.0753	27.87411
#1	-.001134	.0078317	-.000113	.0004680	.1521892	.001441	-.001389
#2	-.001801	.0169833	.000139	.0011747	.1530799	-.002759	-.000967
#3	-.001541	.0041654	.000406	.0003991	.1741130	-.002393	-.000821

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3615645**	**-.005016**	**-.000156**	**-.000963**	**-.000403**	**-.006997**	**.0043014**
Stddev	.0385000	.000976	.000114	.000449	.000901	.016283	.0019691
%RSD	10.64816	19.46754	72.94046	46.59433	223.6372	232.7036	45.77687
#1	.4054588	-.004498	-.000198	-.001450	-.000248	-.025145	.0020901
#2	.3335167	-.006142	-.000027	-.000566	.000411	.006337	.0049491
#3	.3457181	-.004407	-.000243	-.000873	-.001371	-.002185	.0058650

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: PB169096BL Acquired: 8/4/2025 15:07:10 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0052634	-.004898	-.000125
Stddev	.0012532	.001441	.000050
%RSD	23.81049	29.42826	40.09690
#1	.0045169	-.005395	-.000140
#2	.0045630	-.003274	-.000166
#3	.0067102	-.006026	-.000069

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5845.319	101785.1	8372.885	4958.919	7527.062
Stddev	11.689	286.8	21.823	31.698	16.352
%RSD	.1999767	.2817397	.2606344	.6392020	.2172409
#1	5848.584	101883.8	8397.556	4988.710	7525.701
#2	5855.029	102009.5	8364.988	4962.438	7544.052
#3	5832.345	101462.0	8356.109	4925.608	7511.434

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2740-01 Acquired: 8/4/2025 15:15:29 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0601583**	**-.021496**	**.2850456**	**.0005846**	**-.015433**	**114.0077**	**.4989343**
Stddev	.0008284	.003026	.0010466	.0020494	.001770	1.8975	.0081146
%RSD	1.377101	14.07479	.3671570	350.5650	11.47021	1.664392	1.626386
#1	.0608918	-.024977	.2848814	.0013865	-.016836	111.8576	.4897999
#2	.0592597	-.019498	.2840908	-.001744	-.016017	115.4480	.5053095
#3	.0603233	-.020014	.2861646	.002112	-.013444	114.7174	.5016936

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0079424**	**.0013461**	**40.88128**	**.1453248**	**.0899992**	**.2431471**	**214.9471**
Stddev	.0002341	.0002118	.69675	.0007582	.0001543	.0013621	1.0361
%RSD	2.947739	15.73117	1.704320	.5217509	.1713981	.5601883	.4820197
#1	.0076868	.0013432	40.07957	.1457745	.0900391	.2425425	215.2571
#2	.0081464	.0011358	41.34052	.1444494	.0898289	.2421919	215.7927
#3	.0079939	.0015593	41.22374	.1457506	.0901295	.2447068	213.7913

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.343718**	**40.68533**	**.1619377**	**.0076301**	**7.495061**	**.3018671**	**.5267707**
Stddev	.058923	.69786	.0005233	.0010430	.051692	.0034467	.0017169
%RSD	1.762204	1.715252	.3231413	13.66965	.6896861	1.141801	.3259214
#1	3.275912	39.88284	.1622128	.0075574	7.523675	.2980727	.5286984
#2	3.382482	41.14986	.1613342	.0087075	7.526119	.3027241	.5254060
#3	3.372762	41.02330	.1622660	.0066253	7.435388	.3048045	.5262078

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**8.445972**	**.0935112**	**.0036873**	**.0157001**	**2.927158**	**8.342020**	**5.966076**
Stddev	.088848	.0111795	.0000870	.0007995	.030667	.313479	.031427
%RSD	1.051960	11.95525	2.360571	5.092213	1.047678	3.757835	.5267574
#1	8.506332	.1045237	.0035868	.0165697	2.891898	8.331193	5.963218
#2	8.487636	.0938381	.0037341	.0155337	2.947624	8.660773	5.936176
#3	8.343948	.0821719	.0037409	.0149970	2.941952	8.034095	5.998834

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2740-01 Acquired: 8/4/2025 15:15:29 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**2.694316**	**.1179152**	**-.095517**
Stddev	.015477	.0033121	.002147
%RSD	.5744229	2.808904	2.247765
#1	2.707911	.1144568	-.097787
#2	2.677473	.1182301	-.095243
#3	2.697564	.1210586	-.093520

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6422.091**	**111158.3**	**10000.67**	**5433.276**	**6703.292**
Stddev	24.902	214.2	183.40	15.674	23.821
%RSD	.3877556	.1927386	1.833894	.2884756	.3553678
#1	6434.950	110966.5	10204.99	5415.389	6720.565
#2	6437.934	111389.6	9946.75	5439.833	6713.194
#3	6393.388	111118.9	9850.27	5444.607	6676.116

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2740-01DUP Acquired: 8/4/2025 15:19:31 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0587561	-.020789	.3159849	.0002960	-.017639	116.1339	.4946312
Stddev	.0029039	.002465	.0019953	.0033254	.001943	.8005	.0031630
%RSD	4.942309	11.85785	.6314519	1123.501	11.01392	.6892977	.6394618
#1	.0605719	-.018023	.3137668	-.003501	-.017458	116.5661	.4967678
#2	.0602894	-.022755	.3165546	.002692	-.019667	116.6253	.4961281
#3	.0554069	-.021587	.3176335	.001697	-.015794	115.2101	.4909976

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0080066	.0016181	48.79580	.1468359	.0936180	.2652391	217.0486
Stddev	.0000933	.0001069	.27064	.0004205	.0007623	.0015977	1.1050
%RSD	1.164909	6.605777	.5546456	.2863797	.8142250	.6023680	.5091022
#1	.0079394	.0014947	48.99578	.1465045	.0928641	.2640832	215.7991
#2	.0081131	.0016783	48.90380	.1473089	.0936015	.2645717	217.4496
#3	.0079674	.0016814	48.48784	.1466942	.0943884	.2670623	217.8971

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.598403	44.60370	.1653258	.0073409	7.510562	.3109951	.5166814
Stddev	.020736	.18639	.0007128	.0003337	.053048	.0022334	.0014165
%RSD	.5762623	.4178701	.4311607	4.545498	.7063134	.7181394	.2741602
#1	3.606459	44.78385	.1647808	.0069920	7.453359	.3102637	.5154408
#2	3.613903	44.61560	.1661324	.0076570	7.558137	.3135025	.5182248
#3	3.574848	44.41165	.1650640	.0073735	7.520189	.3092192	.5163785

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.940663	.1016509	.0040851	.0146159	2.958903	8.537185	5.933210
Stddev	.060901	.0029970	.0002171	.0015986	.035321	.098356	.017381
%RSD	.7669569	2.948369	5.314397	10.93737	1.193728	1.152093	.2929430
#1	7.870749	.0988760	.0038366	.0164440	2.994798	8.633126	5.915142
#2	7.969059	.1012475	.0042376	.0134803	2.957726	8.541849	5.949811
#3	7.982180	.1048292	.0041811	.0139235	2.924185	8.436579	5.934677

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2740-01DUP Acquired: 8/4/2025 15:19:31 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**2.569044**	**.1214514**	**-.089126**
Stddev	.014363	.0011400	.001695
%RSD	.5590605	.9386832	1.901633
#1	2.557388	.1209155	-.087389
#2	2.585089	.1206781	-.089215
#3	2.564653	.1227607	-.090775

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6383.076**	**109862.9**	**9892.069**	**5383.837**	**6614.727**
Stddev	19.092	351.5	65.647	24.291	22.304
%RSD	.2991048	.3199393	.6636299	.4511767	.3371845
#1	6403.077	110264.8	9844.557	5411.512	6639.871
#2	6381.108	109710.9	9864.673	5373.950	6606.984
#3	6365.045	109613.0	9966.976	5366.049	6597.327

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2740-01LX5 Acquired: 8/4/2025 15:23:33 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0114247**	**-.004763**	**.0608822**	**-.001140**	**-.004428**	**27.33667**	**.1198741**
Stddev	.0031252	.002477	.0017784	.001447	.002236	.05185	.0007399
%RSD	27.35448	52.01002	2.920995	126.9597	50.50429	.1896684	.6172038
#1	.0149857	-.003468	.0628893	.000470	-.006651	27.39017	.1192073
#2	.0101499	-.003202	.0602544	-.002332	-.002178	27.28665	.1197450
#3	.0091383	-.007619	.0595029	-.001558	-.004455	27.33317	.1206700

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0020499**	**-.000314**	**10.05932**	**.0338072**	**.0186751**	**.0592371**	**51.39489**
Stddev	.0000452	.000092	.01541	.0001421	.0000913	.0001114	.29209
%RSD	2.204135	29.31808	.1531460	.4204012	.4891646	.1879716	.5683320
#1	.0020428	-.000312	10.06292	.0339710	.0186506	.0592413	51.72913
#2	.0020086	-.000407	10.07261	.0337155	.0185985	.0591237	51.26694
#3	.0020982	-.000223	10.04243	.0337352	.0187762	.0593463	51.18861

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8258233**	**10.04175**	**.0338293**	**.0013772**	**1.814524**	**.0731866**	**.1254675**
Stddev	.0015643	.09383	.0005142	.0001081	.006405	.0014151	.0005380
%RSD	.1894258	.9344308	1.519982	7.851305	.3529651	1.933610	.4288276
#1	.8260561	10.13927	.0344084	.0012563	1.817807	.0729877	.1260888
#2	.8272582	9.95210	.0334264	.0014105	1.807144	.0746907	.1251568
#3	.8241556	10.03389	.0336531	.0014648	1.818623	.0718815	.1251569

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.187361**	**.0087483**	**.0004761**	**.0017859**	**.7157088**	**2.171288**	**1.248960**
Stddev	.007548	.0006971	.0002154	.0003783	.0071458	.086899	.006303
%RSD	.3450953	7.968752	45.24824	21.18133	.9984288	4.002205	.5046981
#1	2.187159	.0095356	.0002372	.0015675	.7230291	2.237132	1.255407
#2	2.179915	.0082094	.0005356	.0015674	.7153459	2.072792	1.248662
#3	2.195008	.0084998	.0006556	.0022226	.7087513	2.203940	1.242811

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2740-01LX5 Acquired: 8/4/2025 15:23:33 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.5562493	.0227762	-.022328
Stddev	.0021657	.0009004	.000179
%RSD	.3893332	3.953438	.8028667
#1	.5566553	.0220899	-.022483
#2	.5539094	.0224429	-.022369
#3	.5581833	.0237958	-.022132

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5878.586	99868.39	8639.124	4888.806	7082.898
Stddev	9.100	394.29	31.135	12.996	7.984
%RSD	.1547934	.3948059	.3603910	.2658414	.1127233
#1	5868.191	99904.82	8658.630	4888.631	7076.269
#2	5885.110	99457.15	8603.218	4875.899	7080.662
#3	5882.457	100243.2	8655.524	4901.890	7091.761

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2740-01MS Acquired: 8/4/2025 15:27:42 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7496555	2.114708	1.215441	1.709726	.3516101	133.9694	.7096058
Stddev	.0042552	.028556	.002007	.007149	.0028020	.0153	.0004715
%RSD	.5676258	1.350354	.1651004	.4181524	.7969123	.0114036	.0664512
#1	.7533083	2.147048	1.217340	1.717972	.3543379	133.9572	.7097875
#2	.7449831	2.104109	1.215641	1.705941	.3487394	133.9865	.7090704
#3	.7506751	2.092968	1.213341	1.705265	.3517529	133.9645	.7099595

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1771721	.1902928	46.52999	.4876150	.2970501	.5357169	232.9811
Stddev	.0006555	.0002140	.21673	.0018377	.0004468	.0019311	.1559
%RSD	.3699855	.1124565	.4657865	.3768781	.1503999	.3604638	.0669174
#1	.1767149	.1904978	46.30774	.4890008	.2967419	.5354223	233.0947
#2	.1779232	.1900708	46.74075	.4883139	.2968459	.5339501	233.0454
#3	.1768784	.1903098	46.54149	.4855304	.2975625	.5377784	232.8034

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.112943	47.43986	.6631065	.0745779	10.41222	.5939609	.7451838
Stddev	.014253	.07135	.0008001	.0004281	.03314	.0014656	.0032235
%RSD	.3465340	.1503977	.1206641	.5740809	.3182344	.2467488	.4325803
#1	4.096794	47.39536	.6639786	.0740859	10.44956	.5942792	.7458843
#2	4.123763	47.52215	.6624063	.0747820	10.38634	.5952413	.7416676
#3	4.118272	47.40206	.6629345	.0748658	10.40074	.5923624	.7479994

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	17.35406	.2774447	.3536638	.6552097	3.082702	8.313481	11.45938
Stddev	.06188	.0011820	.0011324	.0006747	.002714	.061163	.02251
%RSD	.3565515	.4260127	.3201828	.1029768	.0880345	.7357102	.1964037
#1	17.42140	.2786897	.3537345	.6557604	3.084350	8.321583	11.43447
#2	17.29971	.2763380	.3524978	.6554116	3.084187	8.248671	11.46542
#3	17.34106	.2773064	.3547592	.6544571	3.079570	8.370190	11.47825

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2740-01MS Acquired: 8/4/2025 15:27:42 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**2.474113**	**.3103010**	**.0852198**
Stddev	.008928	.0023798	.0005076
%RSD	.3608576	.7669348	.5955955
#1	2.473345	.3099616	.0849503
#2	2.465594	.3128323	.0849039
#3	2.483400	.3081091	.0858053

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6302.975**	**108249.9**	**9651.923**	**5296.618**	**6485.342**
Stddev	29.629	268.4	29.964	23.897	17.636
%RSD	.4700800	.2479805	.3104485	.4511796	.2719393
#1	6322.690	108006.2	9680.681	5295.750	6503.164
#2	6317.333	108205.9	9620.883	5320.937	6484.965
#3	6268.903	108537.6	9654.203	5273.166	6467.897

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2740-01MSD Acquired: 8/4/2025 15:31:38 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7345470	2.097679	1.229112	1.673623	.3290827	138.9777	.7174662
Stddev	.0020335	.032844	.000655	.003418	.0005487	.3294	.0017059
%RSD	.2768429	1.565714	.0532798	.2042551	.1667327	.2370466	.2377601
#1	.7323061	2.120392	1.229843	1.676052	.3295924	139.1037	.7180741
#2	.7362749	2.112625	1.228915	1.675103	.3285019	139.2255	.7187849
#3	.7350600	2.060021	1.228579	1.669714	.3291538	138.6038	.7155397

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1728371	.1862503	63.82360	.4734833	.3010534	.5615803	243.2166
Stddev	.0011738	.0004644	.04518	.0034473	.0004368	.0035231	1.7228
%RSD	.6791313	.2493355	.0707902	.7280814	.1451016	.6273570	.7083397
#1	.1723102	.1861991	63.86555	.4771765	.3010368	.5582384	244.4318
#2	.1720191	.1858137	63.82950	.4729230	.3006251	.5612422	243.9730
#3	.1741820	.1867382	63.77576	.4703505	.3014983	.5652603	241.2450

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.050515	56.53255	.6624747	.0719712	10.95741	.6082517	.7880094
Stddev	.006025	.09459	.0009600	.0010300	.12561	.0043670	.0015662
%RSD	.1487514	.1673201	.1449175	1.431179	1.146361	.7179677	.1987523
#1	4.056922	56.44609	.6620868	.0721153	11.03286	.6092186	.7862311
#2	4.049660	56.63358	.6617692	.0729216	11.02697	.6120542	.7886138
#3	4.044963	56.51799	.6635680	.0708767	10.81241	.6034822	.7891834

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	17.92717	.2563497	.3452924	.6374315	3.440887	11.01546	11.88616
Stddev	.12868	.0041387	.0004717	.0023575	.009930	.07412	.02214
%RSD	.7177762	1.614476	.1366092	.3698456	.2886020	.6728560	.1862269
#1	17.97434	.2585886	.3448013	.6375707	3.436945	11.07638	11.87982
#2	18.02561	.2588866	.3457419	.6350075	3.452183	11.03706	11.86789
#3	17.78157	.2515738	.3453340	.6397163	3.433532	10.93294	11.91078

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2740-01MSD Acquired: 8/4/2025 15:31:38 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	3.093375	.3096774	.0852119
Stddev	.003052	.0026638	.0006529
%RSD	.0986528	.8601790	.7662577
#1	3.091000	.3121403	.0846520
#2	3.092307	.3100417	.0850546
#3	3.096817	.3068503	.0859291

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6356.273	109740.3	9764.137	5322.946	6453.302
Stddev	8.800	368.2	33.210	25.361	10.521
%RSD	.1384500	.3355348	.3401174	.4764442	.1630381
#1	6361.976	109632.7	9791.513	5352.230	6461.470
#2	6360.706	109437.9	9773.705	5308.314	6457.007
#3	6346.138	110150.3	9727.194	5308.293	6441.430

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2740-01A Acquired: 8/4/2025 15:35:34 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7824732**	**2.093827**	**1.246210**	**1.819257**	**.7551545**	**116.6964**	**.6812506**
Stddev	.0028056	.056526	.003303	.011707	.0041599	.3325	.0027077
%RSD	.3585577	2.699632	.2650227	.6434970	.5508705	.2848846	.3974580
#1	.7853335	2.084189	1.249925	1.813991	.7595593	116.5465	.6807399
#2	.7823606	2.154552	1.245099	1.832673	.7546112	116.4653	.6788346
#3	.7797256	2.042740	1.243606	1.811109	.7512929	117.0774	.6841772

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1816451**	**.1938285**	**46.12780**	**.4831797**	**.2904132**	**.5112817**	**221.4649**
Stddev	.0016564	.0007009	.36110	.0015334	.0011386	.0018534	1.3406
%RSD	.9119128	.3616358	.7828349	.3173566	.3920778	.3625045	.6053156
#1	.1817865	.1945657	46.09868	.4828914	.2917224	.5134189	221.6402
#2	.1799225	.1937495	45.78214	.4818109	.2896539	.5103104	222.7092
#3	.1832263	.1931704	46.50259	.4848368	.2898632	.5101159	220.0453

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.662507**	**44.42278**	**.6600598**	**.0783104**	**10.27925**	**.5706860**	**.7086514**
Stddev	.021517	.11771	.0020573	.0005804	.09187	.0059485	.0008086
%RSD	.5874824	.2649760	.3116882	.7411789	.8937466	1.042350	.1141007
#1	3.658525	44.39202	.6624220	.0786887	10.31829	.5639563	.7095264
#2	3.643260	44.32351	.6590964	.0786004	10.34515	.5728598	.7084959
#3	3.685737	44.55282	.6586609	.0776422	10.17431	.5752418	.7079318

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**17.99044**	**.3445693**	**.3862569**	**.7229155**	**3.137715**	**8.746515**	**11.24565**
Stddev	.09889	.0033691	.0016600	.0017963	.026636	.067018	.06484
%RSD	.5497051	.9777679	.4297548	.2484741	.8489082	.7662273	.5765858
#1	17.96590	.3474335	.3876394	.7246160	3.132980	8.670400	11.31765
#2	18.09930	.3454172	.3867155	.7230938	3.113763	8.796671	11.22743
#3	17.90613	.3408573	.3844159	.7210368	3.166401	8.772472	11.19186

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2740-01A Acquired: 8/4/2025 15:35:34 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**2.605949**	**.2926821**	**.0848243**
Stddev	.013028	.0013381	.0021579
%RSD	.4999483	.4571828	2.543923
#1	2.607049	.2912212	.0843475
#2	2.618393	.2938483	.0829447
#3	2.592406	.2929766	.0871807

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6228.052**	**106389.8**	**9648.521**	**5161.439**	**6477.047**
Stddev	19.848	88.5	108.246	10.274	24.602
%RSD	.3186875	.0831878	1.121897	.1990624	.3798325
#1	6218.416	106310.0	9657.856	5150.693	6455.172
#2	6214.863	106374.5	9751.798	5162.458	6472.289
#3	6250.879	106485.0	9535.909	5171.166	6503.681

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: PB169096BS Acquired: 8/4/2025 15:39:30 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8400997**	**2.261154**	**.9876114**	**2.194648**	**.8864899**	**2.084241**
Stddev	.0175596	.047431	.0203964	.046800	.0182592	.010550
%RSD	2.090186	2.097624	2.065228	2.132459	2.059714	.5061911
#1	.8319353	2.260571	.9794357	2.169420	.8792642	2.078340
#2	.8281087	2.214018	.9725713	2.165874	.8729494	2.096421
#3	.8602551	2.308874	1.010827	2.248649	.9072562	2.077962

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2133099**	**.2190446**	**.1943195**	**1.110407**	**.3939953**	**.2016720**
Stddev	.0003068	.0005982	.0037031	.003351	.0040976	.0041026
%RSD	.1438491	.2730984	1.905688	.3018266	1.040013	2.034299
#1	.2133457	.2186364	.1925286	1.110244	.3908725	.1996868
#2	.2135973	.2197313	.1918522	1.107139	.3986351	.1989396
#3	.2129868	.2187662	.1985776	1.113837	.3924784	.2063896

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3231059**	**3.174536**	**.2127403**	**2.063601**	**.5070956**	**.0809264**
Stddev	.0068632	.026606	.0014510	.008966	.0103919	.0010907
%RSD	2.124136	.8380986	.6820579	.4344693	2.049301	1.347791
#1	.3196573	3.149718	.2125866	2.054414	.5019835	.0797257
#2	.3186509	3.202627	.2142620	2.072328	.5002500	.0818560
#3	.3310095	3.171264	.2113722	2.064061	.5190533	.0811976

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.960448**	**.3062188**	**.2214626**	**10.45629**	**.3151953**	**.4314858**
Stddev	.029879	.0036205	.0021877	.05760	.0021240	.0089211
%RSD	1.009261	1.182335	.9878229	.5508999	.6738571	2.067528
#1	2.927522	.3034406	.2201232	10.39813	.3130652	.4266841
#2	2.985834	.3103133	.2239872	10.51332	.3173130	.4259940
#3	2.967988	.3049024	.2202776	10.45741	.3152078	.4417793

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: PB169096BS Acquired: 8/4/2025 15:39:30 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6999886	.2112517	.8728646	5.415255	F .0026339	.1884312
Stddev	.0154115	.0010918	.0117234	.105252	.0008779	.0034840
%RSD	2.201682	.5168314	1.343093	1.943623	33.33247	1.848960
#1	.6928208	.2117386	.8699050	5.364722	.0032741	.1846286
#2	.6894664	.2100012	.8857842	5.344799	.0029944	.1914697
#3	.7176786	.2120154	.8629046	5.536244	.0016331	.1891954

Elem	Sr4077
Units	ppm
Avg	.2101126
Stddev	.0001489
%RSD	.0708854
#1	.2102805
#2	.2100610
#3	.2099963

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5745.071	99018.53	8316.721	4816.145	7257.747
Stddev	104.393	929.60	30.440	32.986	123.870
%RSD	1.817085	.9388188	.3660110	.6849053	1.706731
#1	5801.057	99755.43	8334.409	4836.853	7320.551
#2	5809.528	97974.14	8281.572	4778.105	7337.635
#3	5624.628	99326.02	8334.181	4833.476	7115.054

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: CCV04 Acquired: 8/4/2025 15:48:51 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV04 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.933937**	**5.355718**	**4.718979**	**5.065650**	**5.061572**	**9.683473**
Stddev	.009231	.156443	.017587	.019588	.009046	.031926
%RSD	.1870990	2.921037	.3726774	.3866755	.1787104	.3296982
#1	4.939555	5.534329	4.739167	5.086799	5.066871	9.715381
#2	4.923283	5.243006	4.706982	5.048131	5.051127	9.683508
#3	4.938972	5.289819	4.710789	5.062022	5.066717	9.651529

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.10395**	**.2473070**	**2.340222**	**25.16229**	**.9162079**	**2.360378**
Stddev	.04271	.0029653	.005316	.12352	.0045715	.005616
%RSD	.4227281	1.199029	.2271641	.4909132	.4989581	.2379362
#1	10.14754	.2493117	2.346340	25.21282	.9133276	2.366795
#2	10.10216	.2439007	2.337595	25.02150	.9214790	2.356358
#3	10.06217	.2487085	2.336730	25.25253	.9138170	2.357982

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.205756**	**4.903295**	**2.462535**	**23.56326**	**2.368349**	**1.225786**
Stddev	.001049	.007049	.007970	.19950	.004981	.002869
%RSD	.0869593	.1437611	.3236309	.8466691	.2103034	.2340690
#1	1.206918	4.895733	2.462407	23.65064	2.374054	1.227517
#2	1.205467	4.909684	2.454631	23.33498	2.364868	1.222474
#3	1.204882	4.904468	2.470568	23.70416	2.366124	1.227368

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**23.22854**	**2.425313**	**2.526868**	**24.59942**	**4.961421**	**5.004750**
Stddev	.16493	.006140	.004078	.14016	.050150	.009677
%RSD	.7100410	.2531633	.1613950	.5697653	1.010805	.1933588
#1	23.12593	2.425484	2.527286	24.45022	4.997962	5.015842
#2	23.41879	2.419089	2.522596	24.72833	4.904245	4.998035
#3	23.14091	2.431365	2.530721	24.61970	4.982056	5.000373

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: CCV04 Acquired: 8/4/2025 15:48:51 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV04 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.752170**	**5.044555**	**4.878586**	F **4.444369**	**4.756237**	**4.700495**
Stddev	.021690	.021598	.064890	.015808	.036005	.008731
%RSD	.4564173	.4281357	1.330097	.3556786	.7570072	.1857517
#1	4.777201	5.064845	4.837599	4.461751	4.794050	4.700877
#2	4.740380	5.021852	4.953400	4.430852	4.722363	4.691579
#3	4.738930	5.046967	4.844758	4.440504	4.752299	4.709029

Elem	Sr4077
Units	ppm
Avg	**5.042140**
Stddev	.044425
%RSD	.8810828
#1	5.029139
#2	5.005665
#3	5.091615

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5598.193**	**95994.20**	**8104.002**	**4661.369**	**6698.053**
Stddev	5.881	353.84	73.940	23.942	15.130
%RSD	.1050560	.3686052	.9123842	.5136172	.2258861
#1	5591.408	95716.86	8031.421	4636.074	6680.594
#2	5601.825	95873.02	8179.229	4683.677	6707.327
#3	5601.347	96392.70	8101.357	4664.356	6706.239

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: CCB04 Acquired: 8/4/2025 15:53:27 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB04 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004171	-.000104	-.000581	-.002368	-.000545	.0219944	.0053843
Stddev	.0006343	.001141	.000400	.002520	.000425	.0100631	.0005646
%RSD	152.0549	1097.797	68.92471	106.4365	77.94990	45.75309	10.48583
#1	-.000289	.001177	-.000984	.000498	-.000075	.0335871	.0055208
#2	.000602	-.001008	-.000183	-.004239	-.000658	.0168861	.0058681
#3	.000939	-.000481	-.000576	-.003363	-.000901	.0155099	.0047640

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000569	.0002837	.0050741	-.001739	.0003045	.0004712	.0025177
Stddev	.0000245	.0000788	.0051008	.000061	.0000919	.0003230	.0044546
%RSD	43.14469	27.77987	100.5260	3.497457	30.19791	68.55107	176.9297
#1	.0000441	.0002220	.0027687	-.001808	.0001984	.0005004	.0014481
#2	.0000851	.0002566	.0015329	-.001693	.0003542	.0007786	-.001305
#3	.0000413	.0003725	.0109206	-.001715	.0003609	.0001346	.007410

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001208	.0017039	.0004202	.0008924	.0060575	-.000931	.0001160
Stddev	.000284	.0212501	.0003857	.0004887	.0139764	.002366	.0001761
%RSD	23.48589	1247.177	91.78193	54.75853	230.7281	254.0818	151.8807
#1	-.001077	-.000072	.0002441	.0013290	.0007825	.000792	-.000040
#2	-.001013	-.018603	.0001541	.0003645	-.004514	.000043	.000080
#3	-.001533	.023786	.0008626	.0009836	.021904	-.003629	.000307

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2003097	.0007139	.0012626	.0004318	.0008577	-.002785	.0056832
Stddev	.0130533	.0006135	.0001779	.0004277	.0008794	.002969	.0027214
%RSD	6.516559	85.93463	14.09353	99.04786	102.5355	106.6051	47.88533
#1	.2136801	.0002864	.0014651	.0005918	.0007212	-.000141	.0026087
#2	.1996506	.0004385	.0011311	-.000053	.0000544	-.005997	.0077832
#3	.1875984	.0014168	.0011916	.000756	.0017973	-.002217	.0066577

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: CCB04 Acquired: 8/4/2025 15:53:27 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB04 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0003928	F -.012139	.0006210
Stddev	.0028378	.002043	.0001149
%RSD	722.4573	16.82943	18.50723
#1	.0011947	-.014026	.0006355
#2	-.002760	-.012421	.0007279
#3	.002743	-.009970	.0004994

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5868.673	102564.3	8315.143	4947.055	7594.830
Stddev	17.630	31.0	41.740	11.651	13.110
%RSD	.3004064	.0302638	.5019753	.2355112	.1726111
#1	5852.269	102546.1	8298.429	4957.351	7588.192
#2	5887.315	102600.1	8284.350	4934.408	7609.931
#3	5866.434	102546.7	8362.649	4949.404	7586.367

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2734-02 Acquired: 8/4/2025 16:08:13 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.003158**	**-.000758**	**.0052809**	**-.002741**	**.0009076**	**.1396059**	**.2464523**
Stddev	.002028	.001809	.0012945	.004091	.0008397	.0175862	.0000895
%RSD	64.21776	238.5616	24.51226	149.2603	92.51590	12.59703	.0363154
#1	-.004003	.000373	.0052949	-.007441	.0003712	.1333321	.2464284
#2	-.000844	.000197	.0065684	-.000797	.0018752	.1260170	.2463771
#3	-.004628	-.002845	.0039795	.000015	.0004763	.1594687	.2465513

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000212**	**.0013339**	**97.17866**	**-.001327**	**.0030524**	**.0375028**	**.0052035**
Stddev	.000055	.0000282	.47154	.000137	.0000770	.0007326	.0054431
%RSD	25.88837	2.112057	.4852288	10.35554	2.522796	1.953402	104.6034
#1	-.000209	.0013664	97.68175	-.001244	.0031409	.0382945	.0114846
#2	-.000269	.0013160	96.74677	-.001252	.0030004	.0373652	.0022583
#3	-.000159	.0013193	97.10746	-.001485	.0030160	.0368489	.0018677

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8317996**	**3.381918**	**.0077576**	**.0005191**	**374.1284**	**.0010376**	**.1021287**
Stddev	.0021661	.070475	.0001976	.0002941	.3601	.0025219	.0007303
%RSD	.2604155	2.083874	2.547454	56.65017	.0962586	243.0517	.7150511
#1	.8334699	3.404099	.0075758	.0001832	373.7562	.0014393	.1017207
#2	.8293521	3.303021	.0079679	.0007298	374.1538	.0033345	.1016935
#3	.8325768	3.438633	.0077290	.0006444	374.4751	-.001661	.1029718

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.531718**	**.0146688**	**.0007273**	**-.001640**	**-.003468**	**2.406620**	**.0194313**
Stddev	.039997	.0003096	.0002495	.000320	.001034	.013347	.0010594
%RSD	1.579847	2.110273	34.29893	19.51180	29.80146	.5546094	5.452099
#1	2.487637	.0149335	.0006784	-.001320	-.004656	2.392945	.0203595
#2	2.565693	.0147445	.0005059	-.001640	-.002771	2.407302	.0182772
#3	2.541823	.0143285	.0009976	-.001960	-.002979	2.419613	.0196573

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2734-02 Acquired: 8/4/2025 16:08:13 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.9345081	-.008328	.3585607
Stddev	.0147899	.001116	.0008715
%RSD	1.582634	13.39442	.2430649
#1	.9515857	-.008318	.3593261
#2	.9258950	-.009449	.3576122
#3	.9260436	-.007218	.3587438

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5353.987	92636.08	8330.835	4497.634	6286.259
Stddev	60.496	187.42	57.252	6.894	72.417
%RSD	1.129922	.2023238	.6872258	.1532767	1.151982
#1	5284.156	92733.13	8269.130	4504.196	6202.650
#2	5387.322	92755.08	8382.233	4490.450	6326.892
#3	5390.483	92420.03	8341.142	4498.255	6329.234

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2703-05 Acquired: 8/4/2025 16:12:37 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0055904**	**-.007673**	**.0003200**	**.0018439**	**-.004291**	**.0527921**	**.1485130**
Stddev	.0017540	.001940	.0011616	.0038136	.001196	.0092672	.0001480
%RSD	31.37556	25.27919	362.9935	206.8207	27.88173	17.55414	.0996759
#1	.0036267	-.009176	.0015025	.0049157	-.003540	.0432411	.1486753
#2	.0070017	-.008358	-.000820	-.002424	-.003662	.0617468	.1484784
#3	.0061429	-.005483	.000277	.003040	-.005671	.0533884	.1483853

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002687**	**-.000755**	**16.88295**	**-.000997**	**.0037732**	**.0004083**	**45.82412**
Stddev	.0000829	.000058	.02363	.000223	.0000922	.0002187	.17847
%RSD	30.84334	7.724654	.1399750	22.36853	2.442995	53.57753	.3894778
#1	.0002930	-.000725	16.90975	-.000887	.0038510	.0001559	45.69690
#2	.0001763	-.000718	16.86513	-.000851	.0037974	.0005251	46.02814
#3	.0003366	-.000822	16.87396	-.001254	.0036714	.0005437	45.74731

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.492877**	**7.925547**	**.0038324**	**.0029112**	**274.1330**	**-.000835**	**.0938304**
Stddev	.007327	.019760	.0003922	.0007585	1.7371	.001549	.0006705
%RSD	.1630695	.2493248	10.23255	26.05467	.6336639	185.5700	.7146072
#1	4.501235	7.920356	.0037421	.0037513	273.5968	-.002584	.0934291
#2	4.489835	7.908900	.0042618	.0027057	272.7273	-.000285	.0946045
#3	4.487563	7.947384	.0034933	.0022766	276.0750	.000364	.0934577

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.343011**	**.1052691**	**.0012989**	**-.001463**	**.0015170**	**2.796760**	**1.729402**
Stddev	.057838	.0009446	.0001740	.000622	.0008228	.031754	.004578
%RSD	1.331749	.8973385	13.39251	42.53864	54.24043	1.135387	.2647109
#1	4.281884	.1045350	.0012147	-.002178	.0022059	2.764396	1.731644
#2	4.396873	.1063348	.0014989	-.001041	.0006059	2.798018	1.732427
#3	4.350276	.1049375	.0011831	-.001171	.0017392	2.827867	1.724135

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2703-05 Acquired: 8/4/2025 16:12:37 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.4046088	-.005862	.1018619
Stddev	.0018804	.001653	.0002486
%RSD	.4647426	28.19044	.2440951
#1	.4059896	-.005190	.1016153
#2	.4053697	-.007745	.1021125
#3	.4024672	-.004652	.1018581

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5520.943	93968.95	8552.001	4590.987	6549.624
Stddev	6.412	125.23	16.079	18.417	14.071
%RSD	.1161460	.1332705	.1880127	.4011463	.2148368
#1	5513.598	94069.30	8540.095	4576.912	6537.582
#2	5525.423	93828.60	8570.291	4584.218	6546.198
#3	5523.810	94008.94	8545.615	4611.830	6565.092

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2743-02 Acquired: 8/4/2025 16:16:59 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.003231	-.001415	.2491284	-.000844	.0000074	.1470087	.4631542
Stddev	.001167	.000607	.0004147	.004288	.0017639	.0072663	.0019232
%RSD	36.13098	42.91434	.1664597	507.9929	23949.19	4.942742	.4152424
#1	-.001993	-.001691	.2486762	.003846	.0003166	.1552932	.4612740
#2	-.003388	-.000719	.2494909	-.004565	-.001891	.1440175	.4630710
#3	-.004312	-.001834	.2492180	-.001813	.001596	.1417155	.4651177

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000142	.0014188	72.82911	-.001956	.0006714	.0283514	.0127992
Stddev	.000068	.0000666	.15716	.000188	.0001584	.0004252	.0014972
%RSD	47.94193	4.690642	.2157940	9.594688	23.59403	1.499619	11.69726
#1	-.000126	.0013420	72.73167	-.002167	.0008544	.0281057	.0110748
#2	-.000217	.0014550	73.01042	-.001896	.0005787	.0288423	.0135554
#3	-.000084	.0014594	72.74524	-.001806	.0005813	.0281061	.0137674

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0733620	4.305053	.0055463	.0005165	340.4104	.0033061	.4394339
Stddev	.0006644	.024244	.0002970	.0002745	.4446	.0012410	.0003318
%RSD	.9056147	.5631551	5.355258	53.14419	.1306096	37.53749	.0754984
#1	.0731167	4.280503	.0053087	.0006630	340.8210	.0046340	.4391989
#2	.0728552	4.328979	.0054509	.0001999	340.4720	.0031087	.4398134
#3	.0741142	4.305677	.0058793	.0006868	339.9382	.0021756	.4392893

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.397331	.0225255	.0014014	-.001719	-.002367	3.834780	.0264549
Stddev	.029221	.0007533	.0002089	.000603	.000273	.014124	.0035075
%RSD	2.091166	3.344431	14.90837	35.06248	11.52666	.3683169	13.25849
#1	1.368154	.0222897	.0016392	-.002026	-.002079	3.818778	.0291708
#2	1.397245	.0219183	.0013177	-.002105	-.002398	3.840054	.0276989
#3	1.426594	.0233686	.0012473	-.001024	-.002622	3.845509	.0224949

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2743-02 Acquired: 8/4/2025 16:16:59 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**1.281389**	**-.005353**	**.4790180**
Stddev	.012141	.002230	.0009394
%RSD	.9474911	41.65451	.1961163
#1	1.269142	-.005984	.4780697
#2	1.281603	-.007199	.4799483
#3	1.293421	-.002876	.4790360

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5471.478**	**94375.38**	**8464.895**	**4610.568**	**6454.322**
Stddev	10.216	393.08	16.783	15.312	10.596
%RSD	.1867221	.4165038	.1982713	.3321023	.1641714
#1	5462.761	93954.21	8446.702	4596.286	6453.176
#2	5482.720	94439.44	8468.206	4608.683	6465.445
#3	5468.954	94732.49	8479.776	4626.735	6444.346

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2753-02 Acquired: 8/4/2025 16:21:22 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001347**	**-.000468**	**-.000614**	**-.004237**	**-.004173**	**.0788907**	**.0695576**
Stddev	.001042	.001349	.001320	.002828	.001828	.0028808	.0004635
%RSD	77.34590	288.4039	214.9161	66.73460	43.81095	3.651593	.6663577
#1	-.001125	-.001900	-.001398	-.005856	-.006051	.0764813	.0700507
#2	-.000434	-.000281	-.001354	-.005884	-.002399	.0781091	.0691309
#3	-.002482	.000778	.000910	-.000972	-.004070	.0820816	.0694911

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001055**	**.0002363**	**40.42580**	**.0074878**	**.0009345**	**.0060888**	**.0041161**
Stddev	.0000322	.0000506	.12139	.0003812	.0001295	.0002247	.0070268
%RSD	30.49847	21.39975	.3002766	5.091145	13.86101	3.690205	170.7129
#1	.0001119	.0002182	40.50919	.0076823	.0007875	.0059282	.0050175
#2	.0001339	.0001972	40.48168	.0070486	.0009839	.0063456	.0106488
#3	.0000706	.0002934	40.28654	.0077326	.0010320	.0059927	-.003318

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1411790**	**6.233491**	**.0046825**	**.0011882**	**233.2891**	**.0021121**	**.0551203**
Stddev	.0003539	.001416	.0002853	.0001508	2.0076	.0014554	.0001410
%RSD	.2506568	.0227211	6.093380	12.69343	.8605825	68.90498	.2558588
#1	.1412395	6.232234	.0044526	.0011225	231.3638	.0030478	.0551704
#2	.1414987	6.235025	.0050018	.0013607	233.1334	.0028532	.0549610
#3	.1407988	6.233212	.0045932	.0010814	235.3700	.0004354	.0552294

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.399924**	**.0064630**	**-.000527**	**-.004068**	**-.001458**	**.4185896**	**.0098724**
Stddev	.031341	.0005244	.000128	.000087	.001258	.0061108	.0016131
%RSD	2.238748	8.114646	24.35678	2.146493	86.23561	1.459847	16.33940
#1	1.374931	.0070016	-.000642	-.004169	-.000189	.4171283	.0087428
#2	1.389754	.0064332	-.000550	-.004012	-.001483	.4252986	.0091546
#3	1.435086	.0059540	-.000388	-.004023	-.002704	.4133421	.0117199

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2753-02 Acquired: 8/4/2025 16:21:22 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**3.941334**	**-.012375**	**.1261452**
Stddev	.011014	.000348	.0001650
%RSD	.2794374	2.815563	.1308256
#1	3.929985	-.012545	.1260279
#2	3.951979	-.011974	.1263340
#3	3.942038	-.012606	.1260739

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5610.531**	**96482.49**	**8784.047**	**4716.450**	**6652.982**
Stddev	17.262	76.56	40.957	5.923	12.133
%RSD	.3076724	.0793524	.4662636	.1255717	.1823690
#1	5624.800	96570.67	8742.488	4714.032	6655.685
#2	5615.449	96432.94	8785.280	4712.118	6663.535
#3	5591.343	96443.86	8824.373	4723.198	6639.725

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2753-02DUP Acquired: 8/4/2025 16:25:47 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003129**	**.0016026**	**.0012538**	**-.005974**	**-.004041**	**.1223261**	**.1174975**
Stddev	.0015391	.0014764	.0006156	.001389	.001735	.0101439	.0006487
%RSD	491.8530	92.12417	49.09956	23.25457	42.93103	8.292528	.5521200
#1	-.001253	.0008720	.0007355	-.007579	-.002501	.1323053	.1179951
#2	.000369	.0006339	.0010916	-.005184	-.003702	.1120251	.1167638
#3	.001823	.0033018	.0019343	-.005161	-.005921	.1226477	.1177336

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000289**	**.0004235**	**66.33726**	**.0134379**	**.0018640**	**.0101021**	**.0072363**
Stddev	.0001079	.0000250	.28411	.0001488	.0001880	.0001097	.0032442
%RSD	373.0878	5.894037	.4282769	1.107062	10.08492	1.085566	44.83177
#1	.0000875	.0004042	66.46425	.0135294	.0020730	.0101321	.0092986
#2	.0000948	.0004147	66.01180	.0135181	.0017087	.0101937	.0034969
#3	-.000096	.0004517	66.53571	.0132663	.0018102	.0099806	.0089135

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2342796**	**10.21421**	**.0075606**	**.0011602**	**413.4146**	**.0007785**	**.0955069**
Stddev	.0010673	.04090	.0000726	.0004462	3.0816	.0021076	.0005286
%RSD	.4555472	.4004497	.9603508	38.45830	.7453908	270.7213	.5535040
#1	.2351140	10.25881	.0074839	.0006685	414.7674	-.001227	.0960208
#2	.2330770	10.20536	.0076283	.0012726	409.8880	.002975	.0949647
#3	.2346477	10.17846	.0075695	.0015394	415.5883	.000587	.0955353

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.534949**	**.0150171**	**.0000118**	**-.003541**	**-.002778**	**.7531656**	**.0179872**
Stddev	.022309	.0003354	.0001966	.000207	.000448	.0119043	.0020756
%RSD	.8800395	2.233297	1662.052	5.853709	16.12256	1.580571	11.53946
#1	2.540299	.0146554	.0000014	-.003313	-.002296	.7457862	.0184279
#2	2.554096	.0150781	-.000179	-.003589	-.003181	.7668987	.0198071
#3	2.510452	.0153178	.000213	-.003719	-.002856	.7468117	.0157266

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2753-02DUP Acquired: 8/4/2025 16:25:47 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	6.711361	-.010523	.2099763
Stddev	.013120	.001769	.0007381
%RSD	.1954842	16.80568	.3515210
#1	6.709624	-.008876	.2108237
#2	6.699197	-.010301	.2094734
#3	6.725263	-.012393	.2096319

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5371.602	91531.61	8860.132	4456.039	6262.147
Stddev	8.739	399.05	82.255	17.269	7.533
%RSD	.1626972	.4359664	.9283705	.3875525	.1202882
#1	5368.600	91983.27	8896.815	4465.884	6265.447
#2	5381.447	91226.78	8917.663	4466.134	6267.466
#3	5364.759	91384.77	8765.918	4436.098	6253.527

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2753-02LX5 Acquired: 8/4/2025 16:30:09 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000138**	**-.001557**	**-.001460**	**-.003628**	**-.002302**	**.0191961**	**.0106101**
Stddev	.000924	.001494	.000488	.002969	.000950	.0060298	.0012987
%RSD	667.3233	95.97899	33.42138	81.82773	41.25763	31.41163	12.23990
#1	-.001146	-.003023	-.000948	-.000515	-.002310	.0124591	.0119817
#2	.000668	-.001609	-.001919	-.006428	-.001348	.0240872	.0093993
#3	.000063	-.000037	-.001514	-.003942	-.003248	.0210421	.0104494

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000023**	**.0000264**	**7.677756**	**-.000049**	**.0002495**	**.0010828**	**-.004744**
Stddev	.000023	.0000331	.025388	.000234	.0000763	.0002590	.008240
%RSD	97.33440	125.4371	.3306729	478.2434	30.58653	23.91703	173.6825
#1	-.000014	.0000550	7.648446	.000045	.0002130	.0013790	-.014252
#2	-.000007	-.000010	7.691914	-.000315	.0003372	.0009701	.000316
#3	-.000049	.000034	7.692908	.000123	.0001983	.0008993	-.000297

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0255686**	**1.194560**	**.0008708**	**.0009748**	**37.92130**	**.0009080**	**.0086837**
Stddev	.0003223	.030030	.0001438	.0003326	.50831	.0043088	.0000988
%RSD	1.260464	2.513895	16.51010	34.11961	1.340433	474.5675	1.138255
#1	.0251964	1.227122	.0008676	.0007689	37.33997	-.001106	.0087787
#2	.0257543	1.167956	.0007286	.0013585	38.28215	.005855	.0086910
#3	.0257550	1.188602	.0010161	.0007970	38.14176	-.002025	.0085814

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.929360**	**-.004280**	**-.000154**	**-.001755**	**-.000793**	**.0753319**	**.0039150**
Stddev	.071772	.000177	.000065	.000181	.000828	.0058141	.0023132
%RSD	3.719976	4.128385	42.24786	10.31359	104.3937	7.718013	59.08415
#1	2.010597	-.004209	-.000190	-.001924	-.001693	.0818400	.0049076
#2	1.902939	-.004481	-.000194	-.001564	-.000625	.0706504	.0055663
#3	1.874543	-.004149	-.000079	-.001777	-.000062	.0735054	.0012712

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2753-02LX5 Acquired: 8/4/2025 16:30:09 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.6778322	.0242892	.0236516
Stddev	.0106854	.0029765	.0001133
%RSD	1.576406	12.25454	.4789016
#1	.6655113	.0274358	.0235436
#2	.6834236	.0215185	.0236417
#3	.6845617	.0239132	.0237695

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5650.763	98233.96	8366.823	4726.336	7004.255
Stddev	2.615	234.20	45.999	15.858	6.336
%RSD	.0462745	.2384128	.5497806	.3355149	.0904572
#1	5647.894	98272.58	8315.912	4721.954	7000.030
#2	5653.011	97982.85	8405.393	4713.130	7001.196
#3	5651.385	98446.45	8379.163	4743.923	7011.540

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2753-02MS Acquired: 8/4/2025 16:34:26 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8398932**	**2.045577**	**.9114502**	**2.151195**	**.8569874**	**2.111390**	**.3213753**
Stddev	.0022265	.099784	.0044200	.003700	.0022951	.009209	.0012562
%RSD	.2650872	4.878046	.4849443	.1720174	.2678135	.4361610	.3908922
#1	.8403058	2.109903	.9129412	2.150545	.8563066	2.120026	.3228031
#2	.8418845	2.096200	.9064775	2.147863	.8551096	2.101699	.3208830
#3	.8374893	1.930628	.9149319	2.155178	.8595458	2.112444	.3204397

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1917569**	**.1908848**	**64.80961**	**.3945520**	**.1970934**	**.3018463**	**3.271492**
Stddev	.0019997	.0005468	.34630	.0005230	.0007825	.0008085	.035179
%RSD	1.042825	.2864656	.5343276	.1325531	.3970203	.2678626	1.075312
#1	.1940659	.1905470	65.20750	.3951356	.1968074	.3017200	3.231871
#2	.1906050	.1905917	64.64501	.3943947	.1964942	.3011084	3.283547
#3	.1905998	.1915157	64.57630	.3941257	.1979787	.3027106	3.299059

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4286318**	**11.68458**	**.4965829**	**.0770439**	**377.2951**	**.3022892**	**.3026980**
Stddev	.0011435	.07996	.0017959	.0003651	4.2214	.0037909	.0008315
%RSD	.2667821	.6843063	.3616529	.4738572	1.118870	1.254050	.2747023
#1	.4293790	11.77683	.4959907	.0768716	381.8591	.3048183	.3026435
#2	.4273154	11.64169	.4951579	.0774632	373.5305	.2979305	.3018950
#3	.4292009	11.63522	.4986002	.0767967	376.4957	.3041187	.3035554

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**13.63537**	**.2723322**	**.4334339**	**.6776901**	**.2023708**	**1.632411**	**5.514006**
Stddev	.12181	.0038131	.0012364	.0031414	.0003306	.010212	.014108
%RSD	.8933284	1.400170	.2852585	.4635466	.1633823	.6255614	.2558580
#1	13.50759	.2766566	.4330328	.6756667	.2027521	1.624433	5.522623
#2	13.75017	.2708871	.4324479	.6760945	.2021964	1.628881	5.521670
#3	13.64836	.2694529	.4348211	.6813091	.2021639	1.643920	5.497725

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2753-02MS Acquired: 8/4/2025 16:34:26 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**5.751954**	**.1829014**	**.4002432**
Stddev	.025630	.0024485	.0006686
%RSD	.4455832	1.338692	.1670577
#1	5.776835	.1816436	.4006857
#2	5.753389	.1857232	.4005699
#3	5.725636	.1813375	.3994740

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5344.276**	**92050.11**	**8458.601**	**4450.378**	**6312.963**
Stddev	15.765	361.02	71.058	21.873	13.605
%RSD	.2949936	.3921945	.8400739	.4914765	.2155081
#1	5352.650	92452.96	8379.863	4474.555	6317.551
#2	5354.087	91755.85	8477.980	4431.964	6323.681
#3	5326.091	91941.52	8517.959	4444.616	6297.658

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2753-02MSD Acquired: 8/4/2025 16:38:32 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7570134	1.774206	.8200104	1.942775	.7734025	1.935918	.2832207
Stddev	.0021520	.054385	.0018832	.014167	.0024574	.011288	.0003658
%RSD	.2842698	3.065317	.2296493	.7291986	.3177429	.5830969	.1291382
#1	.7556646	1.714142	.8180717	1.926768	.7755101	1.939545	.2834501
#2	.7558804	1.820111	.8201270	1.953701	.7707032	1.923262	.2834131
#3	.7594951	1.788366	.8218325	1.947854	.7739941	1.944947	.2827989

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1740792	.1728138	52.88993	.3638979	.1790844	.2749159	2.935407
Stddev	.0015706	.0003999	.22715	.0012455	.0006513	.0006573	.030075
%RSD	.9022501	.2314363	.4294829	.3422575	.3636843	.2390882	1.024575
#1	.1754224	.1725968	53.05278	.3644191	.1788154	.2749090	2.903353
#2	.1744629	.1725692	52.98657	.3624765	.1786107	.2742620	2.939858
#3	.1723522	.1732753	52.63043	.3647982	.1798271	.2755765	2.963008

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3687832	9.750946	.4508134	.0674772	297.0097	.2762537	.2636469
Stddev	.0005150	.065324	.0011677	.0006039	.9030	.0029108	.0003848
%RSD	.1396594	.6699261	.2590174	.8949553	.3040177	1.053665	.1459595
#1	.3686050	9.755416	.4499111	.0668554	296.5323	.2758667	.2633212
#2	.3683808	9.813921	.4503969	.0675147	296.4456	.2793386	.2635480
#3	.3693636	9.683502	.4521322	.0680615	298.0511	.2735557	.2640715

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.87142	.2430719	.4062817	.6146896	.1880823	1.401766	4.951852
Stddev	.05602	.0030186	.0015668	.0018411	.0031079	.007425	.029042
%RSD	.4718851	1.241868	.3856408	.2995158	1.652393	.5297089	.5864861
#1	11.80795	.2454390	.4050329	.6125679	.1899138	1.393599	4.921144
#2	11.89233	.2441041	.4057726	.6158655	.1898391	1.403589	4.955537
#3	11.91397	.2396725	.4080398	.6156355	.1844939	1.408110	4.978876

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2753-02MSD Acquired: 8/4/2025 16:38:32 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**4.358149**	**.1675862**	**.3473383**
Stddev	.013762	.0033317	.0006111
%RSD	.3157669	1.988073	.1759525
#1	4.342258	.1685785	.3470112
#2	4.366110	.1703091	.3480434
#3	4.366078	.1638711	.3469604

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5369.402**	**93502.61**	**8314.913**	**4489.592**	**6453.216**
Stddev	12.549	360.99	60.400	18.806	15.325
%RSD	.2337113	.3860710	.7264002	.4188828	.2374839
#1	5374.902	93852.06	8270.540	4504.262	6458.539
#2	5378.261	93131.10	8290.500	4468.391	6465.171
#3	5355.042	93524.67	8383.697	4496.124	6435.939

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2753-02A Acquired: 8/4/2025 16:42:38 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8931505	2.153681	.9721821	2.384159	.9236906	2.125508	.3031364
Stddev	.0038881	.083274	.0027700	.004808	.0034143	.021248	.0016993
%RSD	.4353238	3.866593	.2849263	.2016505	.3696342	.9996837	.5605626
#1	.8887760	2.206437	.9694366	2.388824	.9232675	2.148371	.3019313
#2	.8944634	2.196924	.9721336	2.384432	.9272967	2.106366	.3023979
#3	.8962123	2.057681	.9749760	2.379220	.9205075	2.121786	.3050799

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2058085	.1994202	54.43700	.3971040	.2039678	.3144773	3.298823
Stddev	.0008006	.0006180	.08399	.0006549	.0005720	.0003236	.009176
%RSD	.3889818	.3099057	.1542813	.1649122	.2804184	.1029073	.2781533
#1	.2061437	.1991933	54.52816	.3967574	.2033300	.3148509	3.290753
#2	.2048948	.1989477	54.42005	.3978594	.2041383	.3142886	3.296913
#3	.2063869	.2001196	54.36278	.3966953	.2044351	.3142922	3.308804

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3944886	10.18330	.5155753	.0808039	310.0165	.3064893	.3020094
Stddev	.0004131	.01682	.0016785	.0004940	4.5336	.0016305	.0005240
%RSD	.1047275	.1652142	.3255609	.6113055	1.462387	.5319982	.1734872
#1	.3949290	10.20034	.5145618	.0809285	315.0664	.3061382	.3015884
#2	.3944272	10.16670	.5146512	.0812235	306.2967	.3082667	.3018436
#3	.3941096	10.18287	.5175127	.0802595	308.6863	.3050629	.3025962

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	13.44590	.3053052	.4473551	.7381658	.2125531	1.541211	5.882031
Stddev	.00057	.0018777	.0006835	.0030069	.0004801	.018829	.002885
%RSD	.0042449	.6150128	.1527767	.4073493	.2258717	1.221711	.0490521
#1	13.44655	.3055900	.4476758	.7359609	.2127791	1.561102	5.884250
#2	13.44564	.3033014	.4465703	.7369455	.2128784	1.538867	5.883073
#3	13.44550	.3070242	.4478192	.7415910	.2120017	1.523664	5.878769

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2753-02A Acquired: 8/4/2025 16:42:38 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**5.212484**	**.1864561**	**.3705449**
Stddev	.013913	.0036528	.0011130
%RSD	.2669094	1.959073	.3003576
#1	5.223386	.1866900	.3695924
#2	5.217251	.1826919	.3702741
#3	5.196814	.1899863	.3717683

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5578.471**	**95820.70**	**8741.096**	**4682.985**	**6544.131**
Stddev	14.625	257.18	27.260	17.968	31.234
%RSD	.2621620	.2683956	.3118587	.3836873	.4772784
#1	5589.271	95631.58	8717.421	4672.289	6566.136
#2	5584.314	95716.96	8770.898	4672.937	6557.874
#3	5561.828	96113.54	8734.969	4703.729	6508.382

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: PB169079TB Acquired: 8/4/2025 16:46:44 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.002832**	**-.000223**	**-.001560**	**.0020740**	**.0009031**	**.0087036**	**-.003611**
Stddev	.000588	.001766	.000684	.0030456	.0005355	.0051250	.000767
%RSD	20.74549	792.3663	43.87211	146.8466	59.29050	58.88317	21.24844
#1	-.002598	-.001671	-.002049	.0023072	.0014018	.0031758	-.004142
#2	-.002399	.001745	-.000778	-.001082	.0003372	.0132973	-.002731
#3	-.003501	-.000742	-.001853	.004996	.0009704	.0096378	-.003959

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000229**	**-.000094**	**.1096785**	**-.001271**	**-.000136**	**-.000201**	**-.000049**
Stddev	.000039	.000011	.0077739	.000189	.000105	.000423	.001580
%RSD	16.96892	11.54909	7.087873	14.85825	77.63184	210.1439	3193.243
#1	-.000260	-.000092	.1103331	-.001091	-.000102	-.000665	.001559
#2	-.000186	-.000106	.1171044	-.001254	-.000253	.000166	-.000110
#3	-.000242	-.000085	.1015980	-.001468	-.000051	-.000105	-.001598

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0039757**	**.0036799**	**.0009315**	**.0008503**	**431.5816**	**-.000537**	**-.000326**
Stddev	.0002252	.0046463	.0002205	.0001144	3.7276	.000776	.000117
%RSD	5.665230	126.2607	23.67708	13.45858	.8636992	144.3593	35.79940
#1	.0038996	.0085716	.0010557	.0009723	435.8781	.000358	-.000262
#2	.0037984	.0031426	.0006768	.0007454	429.6573	-.000972	-.000256
#3	.0042291	-.000674	.0010619	.0008330	429.2095	-.000998	-.000461

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4314809**	**-.006179**	**.0007739**	**.0008398**	**.0003189**	**.0177407**	**.0078511**
Stddev	.0265127	.000541	.0000712	.0001986	.0021228	.0237740	.0004628
%RSD	6.144593	8.753080	9.203286	23.64153	665.7914	134.0081	5.895242
#1	.4610459	-.006475	.0008539	.0006446	.0002845	.0258509	.0079635
#2	.4098165	-.005555	.0007174	.0008333	.0024587	-.009027	.0073424
#3	.4235803	-.006508	.0007503	.0010416	-.001787	.036398	.0082474

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: PB169079TB Acquired: 8/4/2025 16:46:44 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.1614388	-.015539	.0002025
Stddev	.0033753	.001507	.0000639
%RSD	2.090742	9.697198	31.55809
#1	.1650741	-.015679	.0001979
#2	.1584041	-.013967	.0001410
#3	.1608383	-.016970	.0002685

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5360.970	91800.66	8505.768	4477.329	6359.662
Stddev	9.169	402.19	70.781	27.371	8.779
%RSD	.1710289	.4381123	.8321508	.6113302	.1380382
#1	5352.851	92236.80	8562.270	4508.912	6361.119
#2	5359.146	91444.41	8426.374	4462.585	6350.247
#3	5370.914	91720.77	8528.661	4460.491	6367.622

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: CCV05 Acquired: 8/4/2025 16:51:13 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV05 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.045389**	**5.467332**	**4.761515**	**5.200185**	**5.192293**	**9.769146**
Stddev	.011800	.086196	.011420	.013052	.008333	.026387
%RSD	.2338862	1.576569	.2398435	.2509861	.1604951	.2701076
#1	5.035874	5.553591	4.755721	5.202331	5.188395	9.743905
#2	5.041700	5.381199	4.754154	5.186194	5.186623	9.766988
#3	5.058594	5.467206	4.774671	5.212031	5.201861	9.796547

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.21710**	**.2485988**	**2.362057**	**25.37261**	**.9250536**	**2.390471**
Stddev	.18023	.0006163	.005557	.01028	.0021479	.007119
%RSD	1.764036	.2478978	.2352595	.0405070	.2321907	.2978028
#1	10.41033	.2488335	2.359826	25.36515	.9259539	2.386587
#2	10.18742	.2490633	2.357962	25.38433	.9226021	2.386140
#3	10.05354	.2478997	2.368383	25.36835	.9266049	2.398687

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.224184**	**5.038449**	**2.493760**	**23.70394**	**2.397817**	**1.250612**
Stddev	.002265	.037440	.003967	.08967	.005694	.001910
%RSD	.1850295	.7430840	.1590653	.3782824	.2374741	.1527081
#1	1.223328	5.003820	2.489475	23.60811	2.394711	1.249935
#2	1.222472	5.033349	2.497304	23.78580	2.394350	1.249133
#3	1.226753	5.078177	2.494501	23.71792	2.404388	1.252768

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**22.92344**	**2.456797**	**2.554071**	**25.97577**	**4.991582**	**5.100979**
Stddev	.13566	.003444	.002183	.06392	.006166	.011091
%RSD	.5917752	.1401985	.0854676	.2460936	.1235376	.2174292
#1	22.87518	2.452882	2.556513	25.99427	4.988429	5.096524
#2	22.81852	2.458152	2.552309	25.90464	4.998687	5.092808
#3	23.07663	2.459359	2.553392	26.02841	4.987629	5.113604

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: CCV05 Acquired: 8/4/2025 16:51:13 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV05 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.804484**	**5.128402**	**4.910328**	F **4.470553**	**4.838739**	**4.781711**
Stddev	.012009	.008364	.017222	.002523	.017564	.007772
%RSD	.2499627	.1630909	.3507369	.0564370	.3629959	.1625331
#1	4.802352	5.123536	4.904452	4.470746	4.837577	4.772814
#2	4.793683	5.123610	4.896813	4.467939	4.821784	4.785144
#3	4.817417	5.138060	4.929719	4.472974	4.856856	4.787176

Elem	Sr4077
Units	ppm
Avg	**5.151225**
Stddev	.049038
%RSD	.9519652
#1	5.105303
#2	5.145495
#3	5.202876

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5522.212**	**95192.88**	**8164.842**	**4597.654**	**6625.980**
Stddev	5.253	149.10	15.782	5.424	4.312
%RSD	.0951276	.1566290	.1932941	.1179670	.0650733
#1	5528.264	95224.30	8172.311	4594.400	6630.561
#2	5519.534	95323.77	8146.712	4594.647	6625.378
#3	5518.837	95030.58	8175.504	4603.915	6622.000

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: CCB05 Acquired: 8/4/2025 16:55:23 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB05 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001412**	**-.002559**	**-.000147**	**-.002958**	**-.001332**	**-.003873**	**-.002239**
Stddev	.001156	.001713	.000907	.002341	.000146	.002681	.000518
%RSD	81.92319	66.94086	617.0180	79.15541	10.97994	69.23721	23.14277
#1	-.000102	-.002062	.000757	-.004593	-.001452	-.005741	-.001707
#2	-.001841	-.004466	-.000142	-.004004	-.001376	-.005077	-.002269
#3	-.002292	-.001150	-.001056	-.000276	-.001169	-.000800	-.002742

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000253**	**.0002595**	**-.004178**	**-.001661**	**.0003623**	**-.000093**	**-.001394**
Stddev	.0000691	.0000546	.001253	.000064	.0002262	.000217	.002530
%RSD	273.0765	21.03772	30.00447	3.868330	62.43894	233.4908	181.4527
#1	-.000016	.0002978	-.003205	-.001714	.0006163	.000134	-.001194
#2	.000105	.0002838	-.003736	-.001680	.0002878	-.000298	.001029
#3	-.000013	.0001970	-.005592	-.001590	.0001827	-.000115	-.004019

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001494**	**.0128087**	**.0003759**	**.0009849**	**.6133761**	**-.001069**	**-.000775**
Stddev	.000647	.0307598	.0004622	.0002901	.0106258	.003042	.000130
%RSD	43.32349	240.1469	122.9379	29.45816	1.732350	284.5819	16.83380
#1	-.001882	-.019716	.0009013	.0009041	.6159950	-.000145	-.000926
#2	-.001853	.041432	.0001945	.0007437	.6224475	-.004466	-.000692
#3	-.000747	.016710	.0000320	.0013068	.6016857	.001404	-.000708

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7843530**	**-.001772**	**.0011708**	**.0004467**	**.0007808**	**-.008786**	**.0070010**
Stddev	.0278875	.000876	.0003256	.0004551	.0006785	.007596	.0009224
%RSD	3.555476	49.45570	27.81239	101.8647	86.89924	86.45074	13.17586
#1	.8068645	-.000774	.0015160	.0001137	.0015155	-.017147	.0080628
#2	.7531564	-.002125	.0011273	.0002612	.0006490	-.002311	.0063972
#3	.7930381	-.002416	.0008692	.0009653	.0001778	-.006901	.0065430

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: CCB05 Acquired: 8/4/2025 16:55:23 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB05 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.000274	.0027505	.0003584
Stddev	.001490	.0034052	.0000804
%RSD	544.2708	123.8036	22.42777
#1	.000442	-.000647	.0002656
#2	-.001987	.006163	.0004028
#3	.000724	.002735	.0004067

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5763.602	100941.6	8420.762	4819.244	7529.502
Stddev	3.617	204.0	14.627	8.885	14.834
%RSD	.0627500	.2020625	.1737013	.1843693	.1970131
#1	5767.778	100819.1	8432.139	4819.138	7542.452
#2	5761.505	100828.6	8425.884	4828.182	7532.735
#3	5761.522	101177.0	8404.263	4810.412	7513.318

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: PB169101BL Acquired: 8/4/2025 16:59:43 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001361**	**-.003057**	**-.001638**	**.0008507**	**-.001657**	**-.003085**	**-.002143**
Stddev	.000392	.000740	.001073	.0023219	.000567	.005671	.000191
%RSD	28.79500	24.19536	65.51154	272.9328	34.19622	183.8401	8.904787
#1	-.000946	-.003891	-.000622	-.000421	-.002289	.002868	-.001925
#2	-.001724	-.002481	-.002760	-.000557	-.001194	-.003698	-.002280
#3	-.001411	-.002799	-.001532	.003531	-.001488	-.008424	-.002224

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000022**	**-.000016**	**-.003969**	**-.001645**	**.0000066**	**-.000223**	**-.004623**
Stddev	.000010	.000047	.004156	.000204	.0002375	.000292	.002059
%RSD	42.97009	298.7474	104.7114	12.41291	3623.978	131.3153	44.54377
#1	-.000030	-.000067	-.007487	-.001418	.0002291	-.000516	-.006243
#2	-.000025	-.000005	-.005038	-.001704	.0000341	.000069	-.005321
#3	-.000012	.000025	.000617	-.001813	-.000244	-.000221	-.002306

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001411**	**.0129143**	**.0001187**	**.0010828**	**.5688024**	**-.002678**	**-.000392**
Stddev	.000258	.0101453	.0001868	.0002294	.0142334	.000362	.000173
%RSD	18.29895	78.55890	157.2977	21.18536	2.502339	13.53139	44.19097
#1	-.001147	.0235367	.0002502	.0008184	.5529228	-.002364	-.000586
#2	-.001663	.0118809	-.000095	.0012290	.5730728	-.002595	-.000336
#3	-.001424	.0033252	.000201	.0012011	.5804118	-.003075	-.000254

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7765640**	**-.003882**	**.0002023**	**-.000661**	**.0004905**	**-.003203**	**.0037968**
Stddev	.0071025	.000125	.0002438	.000523	.0012082	.003236	.0015385
%RSD	.9146004	3.232901	120.5015	79.17494	246.3310	101.0342	40.52234
#1	.7765664	-.003737	-.000077	-.001189	.0013403	.000461	.0020681
#2	.7836652	-.003961	.000374	-.000142	.0010237	-.004401	.0050159
#3	.7694603	-.003947	.000309	-.000652	-.000893	-.005669	.0043063

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: PB169101BL Acquired: 8/4/2025 16:59:43 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.001047	-.001312	-.000088
Stddev	.000411	.003578	.000039
%RSD	39.23689	272.6657	44.03750
#1	-.001171	.000578	-.000043
#2	-.000589	.000925	-.000109
#3	-.001382	-.005439	-.000112

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5777.614	100168.1	8178.732	4811.618	7502.089
Stddev	6.196	261.2	54.081	3.510	13.269
%RSD	.1072381	.2607597	.6612435	.0729582	.1768722
#1	5770.682	100466.9	8116.481	4815.253	7487.374
#2	5782.611	100054.0	8205.572	4811.353	7505.749
#3	5779.550	99983.4	8214.144	4808.247	7513.144

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: PB169101BS Acquired: 8/4/2025 17:04:03 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8341163**	**2.277296**	**.9791135**	**2.159901**	**.8753933**	**2.119021**	**.2205247**
Stddev	.0033898	.096677	.0020942	.010224	.0028607	.010623	.0006530
%RSD	.4063900	4.245254	.2138857	.4733641	.3267952	.5012933	.2961305
#1	.8349120	2.272142	.9769837	2.160834	.8785416	2.111870	.2203887
#2	.8303994	2.183299	.9791866	2.149242	.8729531	2.113965	.2199503
#3	.8370374	2.376447	.9811701	2.169626	.8746851	2.131227	.2212350

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2198950**	**.1930648**	**1.133548**	**.3943866**	**.2015689**	**.3202678**	**3.131049**
Stddev	.0008059	.0004843	.005765	.0019045	.0001802	.0008700	.009979
%RSD	.3664729	.2508651	.5086010	.4828944	.0894222	.2716567	.3187063
#1	.2197646	.1925804	1.130952	.3965852	.2015792	.3198573	3.141821
#2	.2191624	.1930648	1.129537	.3933265	.2013837	.3196789	3.129207
#3	.2207582	.1935491	1.140155	.3932481	.2017437	.3212671	3.122120

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2179455**	**2.083324**	**.5046666**	**.0810738**	**3.237253**	**.3174009**	**.2183420**
Stddev	.0013504	.027103	.0013026	.0004239	.010185	.0082108	.0009692
%RSD	.6196180	1.300970	.2581190	.5228120	.3146077	2.586891	.4438884
#1	.2186884	2.069348	.5032299	.0814085	3.248898	.3173168	.2192693
#2	.2163867	2.066061	.5049991	.0812157	3.232850	.3092324	.2184211
#3	.2187613	2.114563	.5057708	.0805972	3.230011	.3256534	.2173357

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.69693**	**.3211964**	**.4352903**	**.6903375**	**.2158186**	**.8605360**	**5.367101**
Stddev	.03136	.0011466	.0009628	.0040243	.0006950	.0057434	.015548
%RSD	.2931594	.3569914	.2211758	.5829447	.3220195	.6674230	.2896850
#1	10.71161	.3207139	.4357639	.6918405	.2150355	.8645261	5.371423
#2	10.71826	.3203698	.4341824	.6857780	.2163621	.8539533	5.349849
#3	10.66093	.3225054	.4359245	.6933939	.2160581	.8631284	5.380030

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: PB169101BS Acquired: 8/4/2025 17:04:03 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	F -.001127	.2028508	.2161019
Stddev	.002493	.0009183	.0006899
%RSD	221.2220	.4527220	.3192486
#1	.001293	.2035619	.2161424
#2	-.000987	.2031765	.2153926
#3	-.003687	.2018140	.2167707

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5685.499	98679.84	8080.234	4752.108	7182.894
Stddev	9.292	309.75	16.336	12.251	15.132
%RSD	.1634292	.3138940	.2021782	.2578007	.2106726
#1	5688.053	98498.47	8079.527	4744.054	7198.154
#2	5693.246	98503.54	8096.912	4746.063	7182.636
#3	5675.197	99037.49	8064.262	4766.207	7167.892

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2745-01 Acquired: 8/4/2025 17:08:04 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000923**	**-.015476**	**-.000797**	**-.006190**	**-.005163**	**-.007183**	**-.021701**
Stddev	.000094	.000067	.000279	.000603	.000127	.004854	.000087
%RSD	10.21894	.4304077	35.00440	9.743325	2.461007	67.57059	.3999574
#1	-.000952	-.015544	-.000628	-.006877	-.005094	-.010506	-.021635
#2	-.001000	-.015475	-.000645	-.005747	-.005086	-.009430	-.021799
#3	-.000818	-.015411	-.001120	-.005947	-.005310	-.001613	-.021667

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000092**	**.0001280**	**-.028056**	**-.002473**	**-.000079**	**-.000733**	**-.016467**
Stddev	.0000154	.0000227	.002553	.000107	.000033	.000060	.001279
%RSD	168.5322	17.72373	9.100879	4.330655	41.68234	8.242435	7.764544
#1	.0000038	.0001467	-.025993	-.002384	-.000106	-.000795	-.016641
#2	-.000003	.0001345	-.027263	-.002592	-.000089	-.000674	-.017650
#3	.000027	.0001027	-.030912	-.002444	-.000042	-.000731	-.015110

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001893**	**.0151405**	**.0005323**	**.0005180**	**-.226672**	**.0011011**	**-.002559**
Stddev	.000050	.0094223	.0000252	.0000972	.001829	.0006730	.000081
%RSD	2.645048	62.23217	4.725627	18.77070	.8067214	61.11994	3.183142
#1	-.001897	.0260018	.0005054	.0005498	-.224762	.0004207	-.002532
#2	-.001840	.0102618	.0005552	.0005953	-.226846	.0011163	-.002494
#3	-.001940	.0091580	.0005363	.0004088	-.228407	.0017664	-.002650

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1945188**	**-.008083**	**-.000636**	**-.002975**	**-.000191**	**-.035548**	**-.009091**
Stddev	.0161650	.000077	.000038	.000109	.000084	.001597	.000098
%RSD	8.310262	.9509016	5.898590	3.655278	43.78632	4.491904	1.081621
#1	.1921690	-.008043	-.000629	-.002888	-.000112	-.037028	-.009203
#2	.1796573	-.008172	-.000676	-.002939	-.000181	-.033856	-.009018
#3	.2117301	-.008035	-.000602	-.003097	-.000279	-.035761	-.009053

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2745-01 Acquired: 8/4/2025 17:08:04 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.010656	-.016227	-.000182
Stddev	.001122	.000332	.000032
%RSD	10.52455	2.048066	17.75410
#1	-.011014	-.016255	-.000145
#2	-.011555	-.016545	-.000194
#3	-.009399	-.015882	-.000206

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	24878.19	411765.2	24819.73	21097.95	32249.32
Stddev	38.46	5259.0	187.55	50.05	41.88
%RSD	.1546020	1.277189	.7556641	.2372288	.1298709
#1	24862.78	417806.9	24825.31	21150.44	32240.80
#2	24921.97	409274.1	24629.45	21092.64	32294.81
#3	24849.83	408214.7	25004.44	21050.76	32212.36

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2745-02 Acquired: 8/4/2025 17:12:31 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002841	-.000659	.0052184	-.002580	-.000059	.0525176	.0027563
Stddev	.000182	.001661	.0008764	.001566	.000775	.0058691	.0009117
%RSD	6.421512	252.2116	16.79511	60.68482	1324.440	11.17551	33.07604
#1	-.003040	-.001066	.0056774	-.003646	.000668	.0583833	.0035811
#2	-.002802	-.002078	.0057700	-.003313	-.000874	.0525244	.0017774
#3	-.002681	.001168	.0042078	-.000782	.000030	.0466451	.0029106

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000230	-.000058	4.411034	-.001653	.0068016	.0149624	.0856149
Stddev	.000022	.000042	.032751	.000188	.0001026	.0001422	.0035295
%RSD	9.673478	71.84299	.7424679	11.39566	1.508114	.9501543	4.122525
#1	-.000255	-.000026	4.448746	-.001436	.0068737	.0149639	.0882937
#2	-.000224	-.000106	4.394614	-.001749	.0068470	.0148196	.0869356
#3	-.000211	-.000043	4.389741	-.001773	.0066842	.0151039	.0816156

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0203974	1.693124	.0085384	.0007467	13.57396	-.001063	.0541778
Stddev	.0005061	.020931	.0004194	.0002373	.04019	.000259	.0003470
%RSD	2.480996	1.236233	4.912075	31.77466	.2961047	24.38225	.6405129
#1	.0209647	1.668988	.0080694	.0009124	13.56342	-.001130	.0540809
#2	.0202348	1.706285	.0086681	.0004749	13.61837	-.001282	.0545629
#3	.0199926	1.704099	.0088776	.0008529	13.54009	-.000777	.0538895

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.085240	.0027942	.0001465	.0023133	-.000052	5.684093	.0075338
Stddev	.035388	.0004411	.0002606	.0003476	.000972	.042632	.0007695
%RSD	3.260829	15.78611	177.8308	15.02806	1872.354	.7500267	10.21440
#1	1.092078	.0024062	-.000039	.0020316	.001059	5.639339	.0074226
#2	1.046932	.0032740	.000034	.0022064	-.000470	5.724227	.0083529
#3	1.116709	.0027025	.000444	.0027018	-.000744	5.688713	.0068260

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2745-02 Acquired: 8/4/2025 17:12:31 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	5.023897	-.016426	.0240902
Stddev	.021341	.003132	.0001070
%RSD	.4247941	19.06437	.4441519
#1	5.000731	-.019612	.0242131
#2	5.028202	-.013352	.0240180
#3	5.042757	-.016314	.0240394

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5750.511	99861.55	8190.111	4839.801	7335.710
Stddev	3.652	347.63	71.846	23.671	6.174
%RSD	.0635082	.3481160	.8772277	.4890963	.0841638
#1	5746.294	99460.32	8109.435	4816.035	7342.138
#2	5752.652	100072.7	8213.706	4839.990	7329.826
#3	5752.587	100051.6	8247.193	4863.376	7335.166

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2756-01 Acquired: 8/4/2025 17:16:47 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0065968**	**.0003186**	**.0404387**	**.0002410**	**-.001429**	**.2347676**	**.1233951**
Stddev	.0028716	.0023743	.0001157	.0009378	.001593	.0073837	.0013113
%RSD	43.53049	745.2431	.2860422	389.1427	111.4388	3.145105	1.062690
#1	.0036200	-.000978	.0404598	-.000309	.000410	.2327440	.1225752
#2	.0093502	-.001125	.0403140	.001324	-.002334	.2429521	.1249075
#3	.0068201	.003059	.0405424	-.000292	-.002365	.2286067	.1227027

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000306**	**-.000108**	**73.21005**	**.0022463**	**.0071272**	**.0055409**	**11.94045**
Stddev	.000042	.000004	.08974	.0002463	.0000814	.0002235	.01423
%RSD	13.86656	3.337213	.1225731	10.96274	1.142435	4.033897	.1192014
#1	-.000355	-.000109	73.21140	.0021323	.0070720	.0052984	11.95555
#2	-.000282	-.000104	73.29911	.0020778	.0072207	.0057387	11.93853
#3	-.000281	-.000111	73.11965	.0025289	.0070888	.0055854	11.92728

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.456535**	**9.660896**	**.0229897**	**.0008795**	**109.4275**	**.0011712**	**.2545955**
Stddev	.004992	.035211	.0002513	.0001561	.5047	.0002909	.0007116
%RSD	.1444151	.3644643	1.093065	17.75023	.4612243	24.83996	.2794857
#1	3.459358	9.646468	.0231271	.0009226	109.9854	.0014804	.2551475
#2	3.459475	9.635191	.0231422	.0010095	109.0027	.0009028	.2548465
#3	3.450771	9.701029	.0226996	.0007063	109.2945	.0011306	.2537924

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**38.33082**	**.1046518**	**.0123367**	**-.002850**	**.0035140**	**9.384983**	**.5541484**
Stddev	.11654	.0006470	.0001852	.000218	.0014104	.083295	.0056685
%RSD	.3040475	.6182102	1.501233	7.639183	40.13747	.8875369	1.022916
#1	38.45110	.1041283	.0124438	-.003000	.0037342	9.479346	.5547622
#2	38.21842	.1044519	.0124434	-.002949	.0020064	9.321685	.5594850
#3	38.32293	.1053751	.0121228	-.002600	.0048013	9.353917	.5481980

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2756-01 Acquired: 8/4/2025 17:16:47 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**3.485168**	**-.003321**	**.7511036**
Stddev	.007975	.001725	.0010616
%RSD	.2288129	51.94070	.1413456
#1	3.476051	-.005307	.7523248
#2	3.490846	-.002186	.7505864
#3	3.488607	-.002471	.7503997

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5418.551**	**92475.47**	**8075.666**	**4536.815**	**6526.450**
Stddev	2.248	185.40	20.460	29.347	4.677
%RSD	.0414935	.2004861	.2533571	.6468615	.0716567
#1	5420.728	92316.26	8077.803	4519.653	6522.883
#2	5418.687	92431.13	8054.221	4520.091	6531.744
#3	5416.238	92679.02	8094.974	4570.701	6524.722

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2756-01DUP Acquired: 8/4/2025 17:20:59 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0079896**	**-.003535**	**.0405787**	**-.000252**	**-.000753**	**.2183800**	**.1207158**
Stddev	.0010074	.000511	.0011198	.002996	.000349	.0055148	.0013593
%RSD	12.60912	14.46273	2.759482	1187.275	46.30450	2.525320	1.126006
#1	.0088300	-.004054	.0401573	-.002702	-.000760	.2139155	.1193120
#2	.0068729	-.003518	.0397308	-.001144	-.001099	.2245447	.1208096
#3	.0082659	-.003032	.0418481	.003089	-.000401	.2166798	.1220257

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000290**	**-.000078**	**72.26127**	**-.000428**	**.0071883**	**.0052526**	**11.57145**
Stddev	.000025	.000022	.09205	.000104	.0001517	.0004302	.06862
%RSD	8.604879	28.82531	.1273835	24.29103	2.111002	8.190333	.5929898
#1	-.000317	-.000084	72.16170	-.000349	.0072986	.0048059	11.51462
#2	-.000268	-.000053	72.34327	-.000546	.0070152	.0052877	11.55206
#3	-.000286	-.000097	72.27885	-.000390	.0072510	.0056642	11.64768

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.415868**	**9.582448**	**.0222816**	**.0008409**	**106.2755**	**.0029982**	**.2501051**
Stddev	.006870	.093037	.0001717	.0004789	.2621	.0022394	.0001454
%RSD	.2011223	.9709096	.7705491	56.95432	.2466013	74.69364	.0581142
#1	3.408908	9.519722	.0224680	.0009958	106.1475	.0051934	.2502709
#2	3.422644	9.689342	.0221299	.0012233	106.5770	.0007170	.2500450
#3	3.416053	9.538278	.0222469	.0003037	106.1020	.0030842	.2499995

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**37.18525**	**.1028818**	**.0122811**	**-.000132**	**.0044454**	**9.146012**	**.5312861**
Stddev	.08272	.0000785	.0000985	.000390	.0021954	.013305	.0011746
%RSD	.2224611	.0763329	.8024539	294.4424	49.38512	.1454719	.2210865
#1	37.10326	.1029724	.0122785	-.000232	.0031686	9.146956	.5299775
#2	37.26869	.1028411	.0121838	-.000463	.0069804	9.158820	.5322492
#3	37.18380	.1028320	.0123809	.000297	.0031872	9.132261	.5316315

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2756-01DUP Acquired: 8/4/2025 17:20:59 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**3.416818**	**-.002886**	**.7431860**
Stddev	.030307	.003837	.0011567
%RSD	.8870053	132.9585	.1556448
#1	3.388871	-.007315	.7444235
#2	3.412548	-.000764	.7430027
#3	3.449033	-.000579	.7421319

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5574.965**	**96013.75**	**8266.070**	**4668.381**	**6709.954**
Stddev	8.934	465.16	26.055	24.552	16.051
%RSD	.1602591	.4844770	.3152041	.5259176	.2392099
#1	5580.900	96542.86	8294.181	4696.716	6720.174
#2	5579.306	95669.14	8242.730	4653.403	6718.234
#3	5564.690	95829.24	8261.300	4655.025	6691.454

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2756-01LX5 Acquired: 8/4/2025 17:25:10 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0019902**	**-.002526**	**.0088772**	**-.001394**	**-.001955**	**.0528297**	**.0238505**
Stddev	.0011782	.001712	.0011967	.002582	.000395	.0135561	.0007655
%RSD	59.19864	67.78709	13.48043	185.1987	20.18589	25.66009	3.209496
#1	.0014254	-.003725	.0075411	.001061	-.001501	.0461918	.0238720
#2	.0012008	-.000565	.0098506	-.001156	-.002146	.0684256	.0230745
#3	.0033445	-.003288	.0092398	-.004088	-.002218	.0438717	.0246050

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000102**	**-.000023**	**15.98740**	**-.000802**	**.0014830**	**.0008443**	**2.512668**
Stddev	.000008	.000033	.07530	.000254	.0000335	.0002108	.026100
%RSD	7.678193	148.2520	.4709747	31.70511	2.255805	24.96828	1.038717
#1	-.000095	-.000012	16.07183	-.000564	.0014653	.0008935	2.538397
#2	-.000110	-.000060	15.92719	-.001070	.0015215	.0006133	2.513393
#3	-.000101	.000004	15.96320	-.000771	.0014621	.0010263	2.486213

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7577342**	**2.157204**	**.0046404**	**.0009004**	**21.73043**	**.0005227**	**.0523714**
Stddev	.0020501	.003253	.0002983	.0000898	.14716	.0042664	.0000846
%RSD	.2705584	.1507801	6.428866	9.977778	.6772292	816.1894	.1614696
#1	.7598352	2.158794	.0049556	.0009364	21.82933	.0023669	.0524634
#2	.7576284	2.153463	.0043624	.0009666	21.80066	-.004356	.0522970
#3	.7557391	2.159356	.0046033	.0007981	21.56131	.003557	.0523537

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**8.497520**	**.0185290**	**.0024440**	**-.001881**	**.0027481**	**1.964946**	**.1124326**
Stddev	.046329	.0005166	.0000653	.000408	.0020185	.031936	.0030100
%RSD	.5452098	2.788042	2.670651	21.68436	73.45138	1.625265	2.677122
#1	8.529856	.0190177	.0025090	-.001870	.0004508	1.992153	.1140602
#2	8.518259	.0179884	.0023785	-.002294	.0042375	1.972901	.1089592
#3	8.444444	.0185810	.0024444	-.001478	.0035561	1.929785	.1142783

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2756-01LX5 Acquired: 8/4/2025 17:25:10 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.7213896	.0037919	.1627970
Stddev	.0054342	.0035414	.0003405
%RSD	.7533025	93.39265	.2091579
#1	.7273243	.0075839	.1630574
#2	.7201875	.0005704	.1629219
#3	.7166571	.0032215	.1624117

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5610.058	96439.74	8206.583	4682.765	6981.958
Stddev	8.844	7.07	33.371	12.030	13.550
%RSD	.1576433	.0073327	.4066329	.2569021	.1940785
#1	5618.669	96442.77	8229.235	4670.887	6991.232
#2	5610.507	96431.66	8222.251	4682.465	6988.235
#3	5600.998	96444.80	8168.261	4694.942	6966.407

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2756-01MS Acquired: 8/4/2025 17:29:26 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8449154	2.076044	.9859208	2.097338	.8516944	2.262961	.3303057
Stddev	.0054908	.049140	.0004593	.009543	.0007566	.017792	.0006982
%RSD	.6498607	2.367025	.0465823	.4549904	.0888373	.7862136	.2113752
#1	.8449077	2.042310	.9857378	2.087806	.8509163	2.283321	.3310705
#2	.8394285	2.053397	.9855813	2.097316	.8517392	2.255156	.3297025
#3	.8504100	2.132424	.9864434	2.106892	.8524276	2.250405	.3301441

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1999118	.1938471	72.03852	.3963230	.2076575	.3090029	14.72017
Stddev	.0006472	.0002945	.21699	.0020353	.0003905	.0006988	.04654
%RSD	.3237354	.1519123	.3012205	.5135411	.1880513	.2261512	.3161655
#1	.1998815	.1939874	72.28658	.3947484	.2080973	.3095700	14.72078
#2	.2005735	.1940452	71.88387	.3955993	.2075237	.3082222	14.67332
#3	.1992802	.1935087	71.94512	.3986212	.2073515	.3092164	14.76639

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.574420	11.39536	.5248802	.0768450	109.2837	.3149829	.4586746
Stddev	.007243	.06826	.0006226	.0007496	.3422	.0041039	.0012469
%RSD	.2026480	.5990169	.1186151	.9754409	.3131553	1.302906	.2718381
#1	3.582721	11.38386	.5255899	.0776027	109.5123	.3194910	.4578517
#2	3.571159	11.46864	.5246244	.0768286	108.8903	.3139939	.4580630
#3	3.569380	11.33357	.5244262	.0761038	109.4487	.3114639	.4601092

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	47.70870	.3704846	.4619500	.6936969	.2115965	10.05036	6.073967
Stddev	.16795	.0009444	.0003530	.0003246	.0030844	.05085	.016199
%RSD	.3520308	.2549068	.0764194	.0467937	1.457695	.5059405	.2666874
#1	47.84657	.3707107	.4620833	.6933305	.2124617	10.05959	6.090400
#2	47.52165	.3712954	.4615498	.6938118	.2081718	9.99553	6.058013
#3	47.75789	.3694477	.4622170	.6939485	.2141559	10.09597	6.073486

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2756-01MS Acquired: 8/4/2025 17:29:26 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**3.357179**	**.1936212**	**.9423980**
Stddev	.015196	.0014483	.0023168
%RSD	.4526516	.7480326	.2458427
#1	3.356447	.1924545	.9450210
#2	3.342362	.1931669	.9406309
#3	3.372728	.1952423	.9415423

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5572.941**	**96553.25**	**8424.019**	**4719.376**	**6683.804**
Stddev	11.400	40.58	17.478	20.530	12.188
%RSD	.2045686	.0420282	.2074762	.4350164	.1823556
#1	5568.342	96599.51	8425.197	4696.976	6673.492
#2	5585.923	96523.65	8405.982	4723.856	6697.255
#3	5564.559	96536.58	8440.879	4737.296	6680.665

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2756-01MSD Acquired: 8/4/2025 17:33:23 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8199562	2.060472	.9581171	2.052741	.8442549	2.203254	.3205217
Stddev	.0037862	.034093	.0013123	.005366	.0042321	.008154	.0000717
%RSD	.4617615	1.654627	.1369658	.2614103	.5012863	.3700856	.0223596
#1	.8173474	2.084096	.9580775	2.047427	.8393687	2.195288	.3205621
#2	.8182223	2.075931	.9594487	2.052639	.8467678	2.202889	.3204389
#3	.8242989	2.021387	.9568250	2.058158	.8466281	2.211584	.3205640

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1946276	.1875539	70.52251	.3829856	.2010569	.2991747	14.35146
Stddev	.0008812	.0002086	.22321	.0014702	.0005311	.0006973	.07127
%RSD	.4527810	.1112301	.3165098	.3838708	.2641776	.2330715	.4966320
#1	.1946233	.1873612	70.75627	.3813904	.2011080	.2988022	14.30870
#2	.1937486	.1877755	70.31161	.3842861	.2015607	.2987427	14.43374
#3	.1955110	.1875251	70.49965	.3832802	.2005021	.2999791	14.31194

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.509935	11.21388	.5069703	.0750437	107.8148	.3044273	.4500774
Stddev	.004563	.03152	.0008643	.0005199	.3222	.0024557	.0023157
%RSD	.1300042	.2811248	.1704901	.6928066	.2988478	.8066487	.5145065
#1	3.515167	11.24161	.5066224	.0744438	107.6974	.3021113	.4485792
#2	3.507861	11.22044	.5079544	.0753229	108.1792	.3041685	.4489085
#3	3.506777	11.17959	.5063342	.0753643	107.5677	.3070021	.4527446

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	46.96124	.3645071	.4610047	.6802942	.2034495	9.872045	5.920330
Stddev	.08454	.0013417	.0005941	.0014099	.0028832	.048711	.031179
%RSD	.1800305	.3680941	.1288654	.2072530	1.417132	.4934234	.5266418
#1	46.87053	.3651701	.4603412	.6790927	.2052651	9.830042	5.895822
#2	47.03784	.3629629	.4614873	.6799436	.2049583	9.925444	5.955424
#3	46.97534	.3653882	.4611856	.6818464	.2001250	9.860650	5.909743

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2756-01MSD Acquired: 8/4/2025 17:33:23 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	3.339844	.1893796	.9210524
Stddev	.009393	.0015435	.0033891
%RSD	.2812497	.8150094	.3679597
#1	3.329016	.1877374	.9247715
#2	3.344704	.1908004	.9202476
#3	3.345811	.1896011	.9181381

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5535.035	95386.62	8299.829	4667.529	6636.606
Stddev	2.978	73.26	34.838	15.242	11.153
%RSD	.0537986	.0768012	.4197424	.3265549	.1680491
#1	5532.406	95431.28	8269.912	4664.025	6634.993
#2	5534.429	95426.50	8338.077	4684.218	6626.347
#3	5538.269	95302.07	8291.498	4654.345	6648.477

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2756-01A Acquired: 8/4/2025 17:37:20 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8454532	2.072467	.9867124	2.116776	.8645448	2.283343	.3307969
Stddev	.0033704	.006263	.0027858	.001311	.0010726	.014500	.0008854
%RSD	.3986475	.3021901	.2823323	.0619347	.1240635	.6350529	.2676662
#1	.8436307	2.066172	.9851097	2.116069	.8657520	2.273110	.3317626
#2	.8433865	2.078697	.9850984	2.115972	.8641808	2.299937	.3306050
#3	.8493424	2.072532	.9899292	2.118289	.8637016	2.276983	.3300232

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2007829	.1938617	71.95897	.3950669	.2080496	.3094195	14.66191
Stddev	.0005636	.0001137	.25873	.0001678	.0006877	.0002618	.04407
%RSD	.2806780	.0586319	.3595525	.0424850	.3305695	.0846169	.3005506
#1	.2010180	.1937849	72.25770	.3949145	.2080393	.3095552	14.65148
#2	.2011908	.1938080	71.81320	.3952468	.2073671	.3091177	14.62398
#3	.2001399	.1939923	71.80602	.3950393	.2087425	.3095856	14.71025

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.565577	11.26407	.5248433	.0742927	108.3314	.3182622	.4581978
Stddev	.009946	.06126	.0009324	.0004822	.3658	.0029899	.0007905
%RSD	.2789478	.5438661	.1776486	.6490149	.3376492	.9394464	.1725243
#1	3.576138	11.28223	.5247055	.0744396	108.0198	.3154808	.4579067
#2	3.556388	11.31420	.5239875	.0737541	108.2402	.3178816	.4590925
#3	3.564203	11.19578	.5258369	.0746843	108.7341	.3214242	.4575941

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	47.18572	.3740403	.4640683	.7059024	.2123980	10.01274	6.098130
Stddev	.05399	.0021961	.0008196	.0032111	.0018912	.06877	.028486
%RSD	.1144241	.5871250	.1766110	.4548967	.8903833	.6868620	.4671263
#1	47.19292	.3759046	.4631551	.7044894	.2139219	9.98028	6.066671
#2	47.12849	.3745967	.4643096	.7036400	.2102815	9.96620	6.105542
#3	47.23576	.3716195	.4647401	.7095777	.2129905	10.09174	6.122178

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: Q2756-01A Acquired: 8/4/2025 17:37:20 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	3.363746	.1919704	.9413001
Stddev	.010991	.0027209	.0029028
%RSD	.3267362	1.417345	.3083859
#1	3.355743	.1950439	.9445878
#2	3.359218	.1909979	.9402221
#3	3.376277	.1898695	.9390906

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5547.961	96082.55	8339.612	4674.941	6641.222
Stddev	10.128	145.27	16.817	15.966	13.657
%RSD	.1825618	.1511883	.2016494	.3415214	.2056405
#1	5558.292	96238.66	8323.283	4689.015	6653.107
#2	5547.541	96057.63	8338.675	4657.592	6644.256
#3	5538.048	95951.35	8356.877	4678.217	6626.304

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: CCV06 Acquired: 8/4/2025 17:41:17 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV06 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.207554**	F **5.644167**	**4.947107**	**5.375657**	**5.335246**	**10.17259**
Stddev	.010264	.147212	.006867	.024157	.022224	.01373
%RSD	.1971023	2.608211	.1388038	.4493863	.4165545	.1349346
#1	5.215380	5.806622	4.945209	5.403114	5.325127	10.15677
#2	5.195933	5.519608	4.941389	5.357667	5.319882	10.17963
#3	5.211350	5.606271	4.954724	5.366190	5.360729	10.18137

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.48390**	**.2569625**	**2.456395**	**25.96603**	**.9816118**	**2.474372**
Stddev	.10991	.0006316	.004279	.10327	.0060713	.003413
%RSD	1.048406	.2457765	.1741914	.3977045	.6185085	.1379510
#1	10.56170	.2572847	2.459778	26.05919	.9884492	2.475726
#2	10.53183	.2573681	2.451585	25.98392	.9768518	2.470490
#3	10.35816	.2562349	2.457822	25.85499	.9795346	2.476901

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.263441**	**5.210934**	**2.573160**	**24.83924**	**2.480082**	**1.302802**
Stddev	.001756	.055596	.002870	.04237	.003887	.010940
%RSD	.1389562	1.066919	.1115554	.1705866	.1567160	.8397305
#1	1.265124	5.264695	2.576422	24.87532	2.483159	1.315225
#2	1.261621	5.153668	2.572037	24.79258	2.475714	1.294604
#3	1.263580	5.214438	2.571021	24.84982	2.481372	1.298578

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.62369**	**2.551277**	**2.608871**	**26.64902**	**5.183090**	**5.233687**
Stddev	.25104	.009301	.021695	.22955	.010968	.015200
%RSD	1.019490	.3645611	.8315860	.8613920	.2116176	.2904175
#1	24.84951	2.561696	2.633921	26.91047	5.183499	5.249362
#2	24.35338	2.543811	2.596135	26.48053	5.193848	5.219012
#3	24.66817	2.548326	2.596558	26.55605	5.171923	5.232688

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: CCV06 Acquired: 8/4/2025 17:41:17 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV06 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.002160**	**5.247242**	**5.167543**	**4.748392**	**5.048424**	**5.009154**
Stddev	.013804	.023049	.053569	.020304	.015739	.014447
%RSD	.2759628	.4392585	1.036646	.4275948	.3117689	.2884110
#1	5.014115	5.268161	5.201187	4.755037	5.055910	5.016127
#2	4.987052	5.251033	5.105769	4.725598	5.030339	4.992543
#3	5.005313	5.222533	5.195675	4.764541	5.059024	5.018792

Elem	Sr4077
Units	ppm
Avg	**5.160484**
Stddev	.044414
%RSD	.8606636
#1	5.188907
#2	5.109303
#3	5.183241

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5494.899**	**92713.57**	**8036.789**	**4582.226**	**6548.755**
Stddev	5.259	708.56	50.269	46.960	7.857
%RSD	.0956981	.7642462	.6254847	1.024832	.1199739
#1	5489.712	91895.88	8024.540	4531.648	6542.097
#2	5494.760	93097.89	7993.777	4590.585	6546.748
#3	5500.226	93146.93	8092.050	4624.446	6557.421

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: CCB06 Acquired: 8/4/2025 17:45:26 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB06 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001953**	**-.003278**	**-.000272**	**-.001002**	**.0009781**	**-.005556**	**-.001641**
Stddev	.002405	.001456	.001300	.003586	.0017039	.006302	.000408
%RSD	123.1707	44.41983	477.9699	357.8611	174.2140	113.4290	24.87114
#1	-.001426	-.004833	-.001030	-.001099	.0015423	.001654	-.001343
#2	.000145	-.003053	-.001015	-.004539	.0023282	-.010016	-.002107
#3	-.004578	-.001947	.001229	.002632	-.000936	-.008306	-.001475

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000067**	**-.000010**	**.0123406**	**-.001365**	**.0000370**	**.0001671**	**-.004097**
Stddev	.000020	.000073	.0054762	.000102	.0000857	.0004070	.005688
%RSD	29.07712	761.7588	44.37542	7.471912	231.5531	243.5202	138.8313
#1	-.000072	.000063	.0178040	-.001454	-.000033	-.000247	-.010627
#2	-.000084	-.000008	.0123660	-.001386	.000012	.000183	-.001445
#3	-.000046	-.000083	.0068517	-.001253	.000132	.000566	-.000220

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001748**	**.0197872**	**-.000056**	**.0003345**	**.4808028**	**-.000893**	**-.001483**
Stddev	.000061	.0092507	.000253	.0002591	.0118931	.003777	.000179
%RSD	3.503249	46.75085	449.4302	77.45057	2.473585	422.7134	12.07669
#1	-.001693	.0208723	.000217	.0002520	.4801000	-.004559	-.001389
#2	-.001814	.0100418	-.000281	.0001267	.4930316	-.001107	-.001372
#3	-.001736	.0284474	-.000105	.0006248	.4692767	.002985	-.001690

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7273479**	**-.001623**	**.0005332**	**-.000918**	**-.000185**	**-.001517**	**.0011179**
Stddev	.0052620	.000571	.0001027	.000455	.000794	.010933	.0009549
%RSD	.7234461	35.20468	19.25368	49.58882	428.2939	720.6270	85.42216
#1	.7334011	-.001134	.0006424	-.000906	-.000630	.009927	.0005516
#2	.7247771	-.002251	.0005186	-.000469	.000732	-.011855	.0022204
#3	.7238656	-.001484	.0004387	-.001378	-.000659	-.002624	.0005816

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: CCB06 Acquired: 8/4/2025 17:45:26 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB06 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0011899	.0017796	-.000075
Stddev	.0006709	.0004319	.000023
%RSD	56.38081	24.26922	31.12434
#1	.0015758	.0013542	-.000060
#2	.0015786	.0017668	-.000063
#3	.0004152	.0022177	-.000102

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5703.553	98376.85	8067.648	4791.889	7374.489
Stddev	10.647	441.68	57.211	29.602	14.215
%RSD	.1866792	.4489648	.7091464	.6177542	.1927632
#1	5697.221	97891.61	8097.315	4758.949	7367.984
#2	5715.846	98483.51	8103.933	4816.266	7390.792
#3	5697.593	98755.43	8001.697	4800.452	7364.689

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: PB169098BL Acquired: 8/4/2025 17:49:45 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001420**	**-.002579**	**-.000651**	**-.003239**	**-.001169**	**-.004212**	**-.002683**
Stddev	.000540	.001454	.001248	.003756	.000484	.012100	.000148
%RSD	38.00381	56.39078	191.7216	115.9394	41.45136	287.2963	5.511282
#1	-.000945	-.003325	-.001800	-.004377	-.001028	-.007112	-.002697
#2	-.001309	-.000903	-.000830	.000954	-.001708	-.014598	-.002824
#3	-.002007	-.003509	.000677	-.006295	-.000770	.009075	-.002529

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000067**	**-.000007**	**-.004343**	**-.001327**	**.0001634**	**-.000222**	**-.012412**
Stddev	.000040	.000058	.005282	.000245	.0001059	.000430	.003681
%RSD	60.20735	773.1005	121.6425	18.47547	64.83980	193.8757	29.65869
#1	-.000076	.000012	-.009049	-.001158	.0001459	.000245	-.013565
#2	-.000023	-.000072	-.005350	-.001214	.0000673	-.000309	-.008292
#3	-.000101	.000038	.001371	-.001608	.0002770	-.000601	-.015379

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001709**	**.0210407**	**.0003974**	**.0007210**	**.3002081**	**-.004211**	**-.001313**
Stddev	.000431	.0016385	.0004888	.0005602	.0113580	.001257	.000241
%RSD	25.19744	7.787496	122.9924	77.70040	3.783364	29.84614	18.37986
#1	-.001239	.0194739	.0009530	.0010216	.3031495	-.005649	-.001079
#2	-.002085	.0209056	.0002054	.0010666	.3098061	-.003318	-.001561
#3	-.001802	.0227427	.0000338	.0000746	.2876688	-.003667	-.001299

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4723482**	**-.004207**	**.0001235**	**-.000740**	**.0001848**	**-.008228**	**.0034968**
Stddev	.0278525	.001149	.0001008	.000327	.0011743	.010636	.0013830
%RSD	5.896595	27.32021	81.58071	44.19209	635.3455	129.2635	39.55121
#1	.4403612	-.005534	.0000693	-.001117	-.000862	-.012671	.0028865
#2	.4854461	-.003562	.0000615	-.000571	-.000038	.003909	.0050801
#3	.4912373	-.003526	.0002398	-.000532	.001455	-.015922	.0025239

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: PB169098BL Acquired: 8/4/2025 17:49:45 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.000189	-.004310	-.000047
Stddev	.002098	.001590	.000110
%RSD	1112.285	36.89291	233.9617
#1	-.000199	-.002869	-.000069
#2	-.002281	-.006016	.000072
#3	.001915	-.004045	-.000145

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5701.019	97998.73	8156.370	4790.984	7383.226
Stddev	12.150	107.56	65.638	19.314	22.343
%RSD	.2131210	.1097548	.8047443	.4031315	.3026173
#1	5699.376	98049.83	8125.308	4812.983	7383.569
#2	5713.907	98071.22	8231.773	4776.816	7405.395
#3	5689.774	97875.15	8112.028	4783.152	7360.713

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: PB169098BS Acquired: 8/4/2025 17:54:04 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8286884	2.268502	.9873966	2.146380	.8682653	2.098414	.2156878
Stddev	.0035818	.059139	.0040384	.012312	.0022161	.010199	.0006649
%RSD	.4322261	2.606981	.4089995	.5735997	.2552341	.4860446	.3082749
#1	.8292880	2.273645	.9876906	2.144748	.8691944	2.110159	.2151837
#2	.8248447	2.206959	.9832191	2.134966	.8657359	2.093293	.2154384
#3	.8319327	2.324902	.9912799	2.159427	.8698657	2.091790	.2164414

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2158895	.1946567	1.097595	.4003897	.2017913	.3198428	3.117149
Stddev	.0009104	.0005849	.012615	.0020871	.0005029	.0008979	.019873
%RSD	.4217086	.3004939	1.149300	.5212765	.2492358	.2807435	.6375385
#1	.2149280	.1943149	1.083474	.3996795	.2013563	.3199476	3.127775
#2	.2167385	.1943231	1.101563	.3987503	.2016755	.3188970	3.094222
#3	.2160019	.1953321	1.107749	.4027393	.2023420	.3206837	3.129451

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2145582	2.073511	.5070696	.0797174	3.125107	.3147398	.2144790
Stddev	.0005428	.009966	.0011048	.0002964	.008516	.0031911	.0010143
%RSD	.2529889	.4806527	.2178781	.3718103	.2725148	1.013888	.4729191
#1	.2148245	2.062047	.5064280	.0800043	3.134819	.3114339	.2149394
#2	.2149164	2.080122	.5064355	.0794124	3.118917	.3178021	.2133161
#3	.2139337	2.078363	.5083453	.0797356	3.121583	.3149833	.2151814

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.39477	.3143765	.4320874	.6986423	.2095401	.8563865	5.470143
Stddev	.08582	.0004240	.0006989	.0020346	.0022852	.0142156	.011452
%RSD	.8255843	.1348725	.1617412	.2912161	1.090589	1.659947	.2093554
#1	10.49266	.3148365	.4327755	.6987005	.2114854	.8688553	5.475571
#2	10.33247	.3140013	.4313783	.6965792	.2070234	.8409066	5.456986
#3	10.35919	.3142916	.4321084	.7006471	.2101115	.8593975	5.477872

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: PB169098BS Acquired: 8/4/2025 17:54:04 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	F -.002496	.1963459	.2113864
Stddev	.000217	.0025605	.0002282
%RSD	8.681902	1.304098	.1079485
#1	-.002337	.1992230	.2116449
#2	-.002743	.1943173	.2113016
#3	-.002409	.1954975	.2112128

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5692.692	98467.77	8131.479	4837.914	7133.981
Stddev	6.965	365.86	40.641	10.711	10.185
%RSD	.1223563	.3715567	.4997949	.2213934	.1427728
#1	5690.023	98309.71	8172.745	4825.552	7140.378
#2	5700.597	98886.09	8091.494	4844.425	7139.329
#3	5687.457	98207.50	8130.197	4843.765	7122.236

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: CCV07 Acquired: 8/4/2025 17:58:04 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV07 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.177838**	**5.474469**	**4.953695**	**5.296073**	**5.301003**	**10.17227**	**10.48381**
Stddev	.026512	.180847	.026838	.040153	.029469	.02762	.15564
%RSD	.5120189	3.303456	.5417707	.7581691	.5559043	.2715639	1.484566
#1	5.172757	5.456542	4.962264	5.300733	5.300638	10.18527	10.30933
#2	5.154235	5.303254	4.923620	5.253793	5.271718	10.19100	10.60835
#3	5.206522	5.663612	4.975202	5.333693	5.330652	10.14055	10.53374

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2569703**	**2.461921**	**26.04076**	**.9664635**	**2.481171**	**1.263141**	**5.152231**
Stddev	.0014204	.013122	.08211	.0039601	.014018	.006137	.008165
%RSD	.5527449	.5329903	.3153010	.4097482	.5649780	.4858770	.1584696
#1	.2565559	2.465959	25.98485	.9687748	2.483938	1.264321	5.146180
#2	.2585518	2.447255	26.13503	.9687248	2.465975	1.256499	5.148997
#3	.2558031	2.472550	26.00241	.9618909	2.493599	1.268602	5.161518

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.572244**	**24.80999**	**2.486178**	**1.284916**	**24.57227**	**2.562872**	**2.581289**
Stddev	.011048	.06080	.014211	.004054	.04437	.008511	.010749
%RSD	.4295062	.2450708	.5716087	.3154972	.1805493	.3320874	.4164380
#1	2.564406	24.75147	2.491141	1.284018	24.58115	2.562195	2.577256
#2	2.584880	24.80564	2.470150	1.289343	24.61153	2.571701	2.593472
#3	2.567447	24.87284	2.497241	1.281386	24.52414	2.554719	2.573140

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.84841**	**5.166863**	**5.241326**	**4.999842**	**5.254931**	**5.046844**	**4.776803**
Stddev	.02248	.031885	.028879	.036383	.019536	.044678	.017195
%RSD	.0869566	.6171008	.5509899	.7276741	.3717719	.8852629	.3599759
#1	25.82325	5.161252	5.242075	5.006863	5.248105	4.995394	4.776169
#2	25.86653	5.201181	5.212080	4.960460	5.276964	5.075850	4.759934
#3	25.85544	5.138156	5.269824	5.032202	5.239723	5.069289	4.794307

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: CCV07 Acquired: 8/4/2025 17:58:04 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV07 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**4.983798**	**4.979217**	**5.318714**
Stddev	.046037	.012482	.026097
%RSD	.9237243	.2506840	.4906636
#1	4.976446	4.979340	5.291894
#2	4.941880	4.991637	5.320227
#3	5.033069	4.966674	5.344022

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5486.677**	**94057.46**	**8004.828**	**4600.312**	**6536.840**
Stddev	17.107	269.64	31.924	27.927	29.431
%RSD	.3117924	.2866786	.3988143	.6070693	.4502334
#1	5480.655	94360.19	8039.497	4631.920	6522.599
#2	5505.981	93843.06	7976.644	4578.976	6570.682
#3	5473.396	93969.13	7998.343	4590.039	6517.238

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: CCB07 Acquired: 8/4/2025 18:02:15 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB07 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003154**	**-.002479**	**-.000834**	**-.003447**	**-.000736**	**-.009617**	**-.000774**
Stddev	.0006361	.000783	.000542	.001676	.000642	.006835	.000981
%RSD	201.6825	31.57573	64.96223	48.62870	87.26483	71.07513	126.7226
#1	.0000245	-.001783	-.000271	-.002763	-.001199	-.011558	-.000256
#2	-.000123	-.003327	-.000879	-.002221	-.001005	-.015272	-.000161
#3	.001045	-.002328	-.001352	-.005357	-.000003	-.002021	-.001906

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000054**	**.0000113**	**.0044678**	**-.001335**	**-.000004**	**-.000138**	**-.008404**
Stddev	.000082	.0000438	.0002733	.000198	.000061	.000245	.001995
%RSD	152.9065	388.6179	6.117116	14.81870	1511.276	177.7802	23.74360
#1	-.000033	-.000001	.0041566	-.001421	.000035	-.000314	-.010443
#2	.000016	.000060	.0045783	-.001475	.000027	.000142	-.006456
#3	-.000144	-.000025	.0046686	-.001109	-.000074	-.000241	-.008312

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001592**	**.0137549**	**-.000004**	**.0011277**	**.1957975**	**-.000641**	**-.001413**
Stddev	.000016	.0065219	.000416	.0002933	.0046831	.001393	.000232
%RSD	1.030069	47.41536	11772.67	26.00754	2.391801	217.3655	16.41956
#1	-.001602	.0062634	-.000478	.0008234	.1921041	-.002126	-.001150
#2	-.001600	.0181670	.000297	.0011513	.2010648	-.000434	-.001590
#3	-.001573	.0168343	.000170	.0014085	.1942236	.000637	-.001498

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3810149**	**-.000114**	**.0006969**	**-.001076**	**.0006125**	**.0023695**	**.0030818**
Stddev	.0327118	.001236	.0001739	.000486	.0014604	.0154246	.0023761
%RSD	8.585433	1079.514	24.95673	45.20890	238.4421	650.9647	77.09959
#1	.3608147	-.000112	.0006954	-.001576	.0022216	-.006727	.0023761
#2	.4187559	-.001352	.0008716	-.000605	-.000629	.020179	.0057308
#3	.3634739	.001120	.0005238	-.001047	.000245	-.006343	.0011386

Reviewed By:jaswal
On:8/6/2025 7:45:51 AM
Inst Id :P4
LB :LB136697

Sample Name: CCB07 Acquired: 8/4/2025 18:02:15 Type: Unk
Method: 6010-200.7 NEW(v81) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB07 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0001190	-.006649	-.000090
Stddev	.0010541	.002446	.000082
%RSD	886.1925	36.78502	90.12106
#1	.0008696	-.004955	.000004
#2	.0005734	-.005540	-.000139
#3	-.001086	-.009454	-.000136

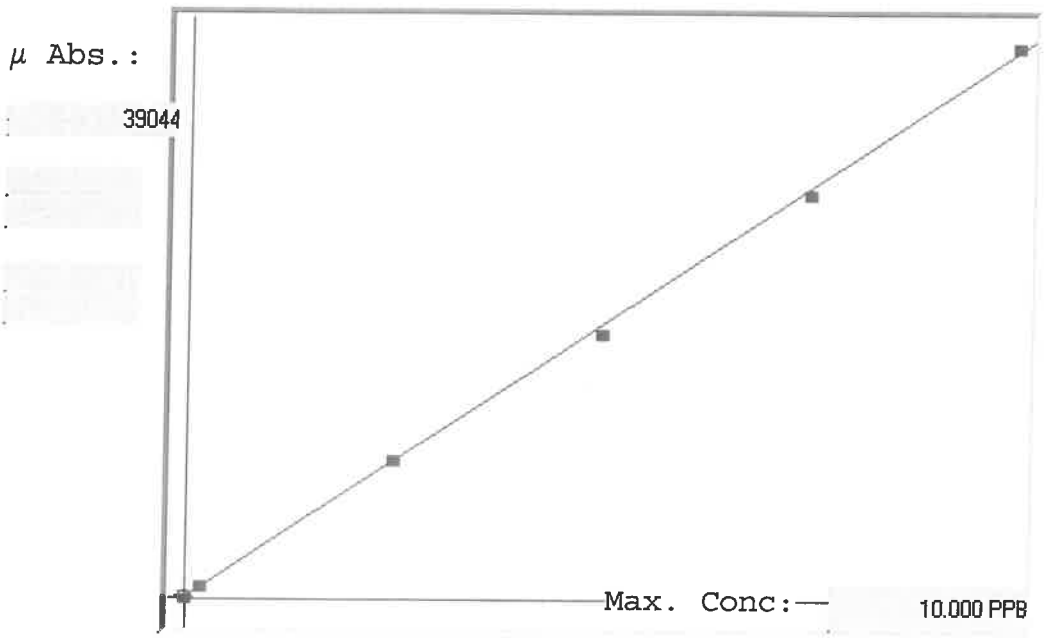
Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5697.260	98863.27	7984.403	4836.340	7346.968
Stddev	11.429	238.71	84.235	4.279	9.936
%RSD	.2006033	.2414544	1.054993	.0884861	.1352434
#1	5689.385	98589.03	7983.503	4839.701	7337.028
#2	5710.369	98976.36	7900.622	4837.797	7356.900
#3	5692.027	99024.42	8069.084	4831.522	7346.978

LB136721
INSTRUMENT ID: CV1

Reviewed By:jaswal
On:8/8/2025 1:24:44 PM
Inst Id :CV1
LB :LB136721

7470A

Linear



A= 0.0000e+000
B= 2.5941e-004
C= -2.6318e-002
Rho= 0.9997871
Accept=Accepted

Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	% D
0.0	0.000	0.026	0.026	200	0.000	200	0				-11
0.2	0.200	0.222	0.022	957	0.0 %	957					2
2.5	2.500	2.549	0.049	9928	0.0 %	9928	0				-2
5.0	5.000	4.877	-0.123	18902	0.0 %	18902					-1
7.5	7.500	7.424	-0.076	28722	0.0 %	28722					1
10.0	10.000	10.102	0.102	39044	0.0 %	39044					

Reviewed By:jaswal
On:8/8/2025 1:24:44 PM
Inst Id :CV1
LB :LB136721

LB136721 INSTRUMENT ID: CV1

Method: 7470A Operator: Admin Date of Analysis: 06 Aug 2025 08:46:28

Type	Sample ID	Extended ID	Conc.	µ Abs.	Units	Type	Stnd Conc	Method	Date
S	0.0 - 1	S0	-	200	PPB	Std	0.0000	7470A	06 Aug 2025 08:55:59
S	0.2 - 1	S0.2	-	957	PPB	Std	0.2000	7470A	06 Aug 2025 08:58:16
S	2.5 - 1	S2.5	-	9928	PPB	Std	2.5000	7470A	06 Aug 2025 09:00:33
S	5.0 - 1	S5.0	-	18902	PPB	Std	5.0000	7470A	06 Aug 2025 09:02:50
S	7.5 - 1	S7.5	-	28722	PPB	Std	7.5000	7470A	06 Aug 2025 09:05:06
S	10.0 - 1	S10.0	-	39044	PPB	Std	10.0000	7470A	06 Aug 2025 09:07:24
U	ICV54 - 1	ICV54	4.0897	15867	PPB	SMPL		7470A	06 Aug 2025 09:10:12
U	ICB54 - 1	ICB54	0.0310	221	PPB	SMPL		7470A	06 Aug 2025 09:12:29
U	CCV89 - 1	CCV89	4.8285	18715	PPB	SMPL		7470A	06 Aug 2025 09:14:46
U	CCB89 - 1	CCB89	0.0352	237	PPB	SMPL		7470A	06 Aug 2025 09:17:02
U	CRA - 1	CRA	0.2378	1018	PPB	SMPL		7470A	06 Aug 2025 09:19:18
U	HighStd - 1	HighStd	10.0841	38975	PPB	SMPL		7470A	06 Aug 2025 09:21:33
U	ChkStd - 1	ChkStd	7.4363	28768	PPB	SMPL		7470A	06 Aug 2025 09:26:37
U	PB169140BL - 1	PBW	0.0702	372	PPB	SMPL		7470A	06 Aug 2025 09:28:53
U	PB169140BS - 1	LCSW	4.0799	15829	PPB	SMPL		7470A	06 Aug 2025 09:31:13
U	Q2734-02 - 1	VNJ-253	0.0852	430	PPB	SMPL		7470A	06 Aug 2025 09:33:30
U	Q2743-02 - 1	WC1	0.1317	609	PPB	SMPL		7470A	06 Aug 2025 09:35:48
U	Q2753-02 - 1	289	0.0186	173	PPB	SMPL		7470A	06 Aug 2025 09:38:05
U	Q2753-02DUP - 1	289DUP	0.0487	289	PPB	SMPL		7470A	06 Aug 2025 09:40:22
U	Q2753-02MS - 1	289MS	3.9937	15497	PPB	SMPL		7470A	06 Aug 2025 09:45:16
U	CCV90 - 1	CCV90	4.8173	18672	PPB	SMPL		7470A	06 Aug 2025 09:49:01
U	CCB90 - 1	CCB90	0.0676	362	PPB	SMPL		7470A	06 Aug 2025 09:51:17
U	Q2753-02MSD - 1	289MSD	3.8272	14855	PPB	SMPL		7470A	06 Aug 2025 09:53:34
U	PB169079TB - 1	PB169079TB	0.0720	379	PPB	SMPL		7470A	06 Aug 2025 09:55:49
U	Q2753-02LX5 - 1		-0.0014	96	PPB	SMPL		7470A	06 Aug 2025 09:58:06
U	Q2753-02A - 1		4.0640	15768	PPB	SMPL		7470A	06 Aug 2025 10:00:22
U	CCV91 - 1	CCV91	4.7756	18511	PPB	SMPL		7470A	06 Aug 2025 10:02:38
U	CCB91 - 1	CCB91	0.0440	271	PPB	SMPL		7470A	06 Aug 2025 10:04:56

Alliance TECHNICAL GROUP

Water Metals Preparation Sheet

PB169101

SOP ID : M3010A-Digestion-17

SDG No : N/A

Matrix : WATER

Pippete ID: ICP A

Balance ID : N/A

Filter paper ID : N/A

pH Strip ID : M6069

Hood ID : #3

Block ID: 1. HOT BLOCK #1 2. N/A

Start Digest Date: 08/04/2025 **Time :** 12:30 **Temp :** 96 °C

End Digest Date: 08/04/2025 **Time :** 15:32 **Temp :** 96 °C

Digestion tube ID: M5595

Block thermometer ID: MET-DIG. #1

Dig Technician Signature: SLS

Supervisor Signature: SO

Temp : 1. 96°C 2. N/A

Standared Name	MLS USED	STD REF. # FROM LOG
LFS-1	0.25	M6007
LFS-2	0.25	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	3.00	M6158
1:1 HCL	5.00	MP85156
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Extraction Conformance/Non-Conformance Comments:

HOT BLOCK#1 CELL#50 96C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
08/04/25 ~~16:00~~ 15:50	SLS MET DIG	MDark LES
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

Water Metals Preparation Sheet

PB169101

Lab Sample ID	Client Sample ID	pH	Initial Vol (ml)	Final Vol (ml)	Color Before	Color After	Clarity Before	Clarity After	Comment	Prep Pos
PB169079TB	PB169079TB	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	14
PB169101BL	PBW101	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	15
PB169101BS	LCS101	<2	5	25	Colorless	Colorless	Clear	Clear	MP6007,MP6015	16
Q2703-05	TP-4	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	17
Q2734-02	VNJ-253	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	18
Q2743-02	WC1	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	19
Q2753-02	289	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	20
Q2753-02MS	289MS	<2	5	25	Colorless	Colorless	Clear	Clear	MP6007,MP6015	22
Q2753-02MSD	289MSD	<2	5	25	Colorless	Colorless	Clear	Clear	MP6007,MP6015	23
Q2753-02DUP	289DUP	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	21

Alliance TECHNICAL GROUP

TCLP EXTRACTION LOGPAGE

PB169079

Sample ID	ClientID	TCLP Vessel ID	Sample Wt (g)	Volume Extraction Fluid #1 (mL)	Multi phasic	Phase Miscible	Phases Combined	Final Leachate PH	Metals Leachate Adj. PH	Prep Pos
PB169079TB	LEB079	05	N/A	2000	N/A	N/A	N/A	4.94	1.0	T-1
Q2703-05	TP-4	01	100.02	2000	N/A	N/A	N/A	5.6	1.5	T-1
Q2734-02	VNJ-253	02	100.03	2000	N/A	N/A	N/A	6.2	1.0	T-1
Q2743-02	WC1	03	100.02	2000	N/A	N/A	N/A	5.8	1.5	T-1
Q2753-02	289	04	100.01	2000	N/A	N/A	N/A	6.0	1.5	T-1

Alliance TECHNICAL GROUP

Water Mercury Preparation Sheet

PB169140

SOP ID : M7470A-Mercury-20

SDG No : N/A

Matrix : WATER

Pippete ID: HG A

Balance ID : N/A

Filter paper ID : N/A

pH Strip ID : M6069

Hood ID : #1

Block ID: 1. HG HOT BLOCK#3 2. N/A

Start Digest Date: 08/05/2025 **Time :** 12:33 **Temp :** 95 °C

End Digest Date: 08/05/2025 **Time :** 14:35 **Temp :** 95 °C

Digestion tube ID: M5595

Block thermometer ID: HG-DIG#3

Dig Technician Signature: SKS.

Supervisor Signature:

Temp : 1. 95°C 2. N/A

Standared Name	MLS USED	STD REF. # FROM LOG
ICV	30mL	MP86628
CCV	30mL	MP86631
CRA	30mL	MP86633
Blank Spike	0.48mL	MP86620
Matrix Spike	0.48mL	MP86620

Chemical Used	ML/SAMPLE USED	Lot Number
HNO3/H2SO4(1:2)	2.25mL	MP85892
KMnO4 (5%)	4.5mL	MP85893
K2S2O8 (5%)	2.4mL	MP85894
Hydroxylamine HCL (12%)	1.8mL	MP85895
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	MP86621
0.05 ppb	S0.05	N/A	N/A
0.2 ppb	S0.2	30mL	MP86622
2.5 ppb	S2.5	30mL	MP86623
5.0 ppb	S5.0	30mL	MP86624
7.5 ppb	S7.5	30mL	MP86625
10.0 ppb	S10.0	30mL	MP86626
ICV	ICV	30mL	MP86628
ICB	ICB	30mL	MP86630
CCV	CCV	30mL	MP86631
CCB	CCB	30mL	MP86632
CRI	CRI	30mL	MP86633
CHK STD	CHK STD	30mL	MP86634

Extraction Conformance/Non-Conformance Comments:

N/A

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
08/05/25 15:35	SKS met dig	
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

Water Mercury Preparation Sheet

PB169140

Lab Sample ID	Client Sample ID	Initial Vol (ml)	Final Vol (ml)	pH	Comment	Prep Pos
PB169079TB	PB169079TB	3	30	<2	N/A	1-1
PB169140BL	PBW140	30	30	<2	MP86620	2
PB169140BS	LCS140	30	30	<2	N/A	3
Q2734-02	VNJ-253	3	30	<2	N/A	4
Q2743-02	WC1	3	30	<2	N/A	5
Q2753-02	289	3	30	<2	N/A	6
Q2753-02MS	289MS	3	30	<2	MP86620	8
Q2753-02MSD	289MSD	3	30	<2	MP86620	9
Q2753-02DUP	289DUP	3	30	<2	N/A	7

Alliance TECHNICAL GROUP

TCLP EXTRACTION LOGPAGE

PB169079

Sample ID	ClientID	TCLP Vessel ID	Sample Wt (g)	Volume Extraction Fluid #1 (mL)	Multi phasic	Phase Miscible	Phases Combined	Final Leachate PH	Metals Leachate Adj. PH	Prep Pos
PB169079TB	LEB079	05	N/A	2000	N/A	N/A	N/A	4.94	1.0	T-1
Q2703-05	TP-4	01	100.02	2000	N/A	N/A	N/A	5.6	1.5	T-1
Q2734-02	VNJ-253	02	100.03	2000	N/A	N/A	N/A	6.2	1.0	T-1
Q2743-02	WC1	03	100.02	2000	N/A	N/A	N/A	5.8	1.5	T-1
Q2753-02	289	04	100.01	2000	N/A	N/A	N/A	6.0	1.5	T-1

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

Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB136697

Review By	Janvi	Review On	8/5/2025 10:04:40 AM
Supervise By	jaswal	Supervise On	8/6/2025 7:45:51 AM

STD. NAME	STD REF.#
ICAL Standard	MP86452,MP86453,MP86454,MP86455,MP86456,MP86458
ICV Standard	MP86459
CCV Standard	MP86462
ICSA Standard	MP86460,MP86461
CRI Standard	MP86458
LCS Standard	
Chk Standard	MP86463,MP86464

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	08/04/25 11:15		Jaswal	OK
2	S1	S1	CAL2	08/04/25 11:20		Jaswal	OK
3	S2	S2	CAL3	08/04/25 11:24		Jaswal	OK
4	S3	S3	CAL4	08/04/25 11:28		Jaswal	OK
5	S4	S4	CAL5	08/04/25 11:32		Jaswal	OK
6	S5	S5	CAL6	08/04/25 11:36		Jaswal	OK
7	ICV01	ICV01	ICV	08/04/25 11:41		Jaswal	OK
8	LLICV01	LLICV01	LLICV	08/04/25 11:45		Jaswal	OK
9	ICB01	ICB01	ICB	08/04/25 11:52		Jaswal	OK
10	CRI01	CRI01	CRDL	08/04/25 11:57		Jaswal	OK
11	ICSA01	ICSA01	ICSA	08/04/25 12:01		Jaswal	OK
12	ICSAB01	ICSAB01	ICSAB	08/04/25 12:05		Jaswal	OK
13	ICSADL	ICSADL	ICSA	08/04/25 12:09		Jaswal	OK
14	ICSABDL	ICSABDL	ICSAB	08/04/25 12:14		Jaswal	OK
15	CCV01	CCV01	CCV	08/04/25 12:25		Jaswal	OK
16	CCB01	CCB01	CCB	08/04/25 12:29		Jaswal	OK
17	PB169076BL	PB169076BL	MB	08/04/25 12:55		Jaswal	OK
18	PB169076BS	PB169076BS	LCS	08/04/25 13:00		Jaswal	OK

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Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB136697

Review By	Janvi	Review On	8/5/2025 10:04:40 AM
Supervise By	jaswal	Supervise On	8/6/2025 7:45:51 AM

STD. NAME	STD REF.#
ICAL Standard	MP86452,MP86453,MP86454,MP86455,MP86456,MP86458
ICV Standard	MP86459
CCV Standard	MP86462
ICSA Standard	MP86460,MP86461
CRI Standard	MP86458
LCS Standard	
Chk Standard	MP86463,MP86464

19	Q2725-02DL	CompDL	SAM	08/04/25 13:04	Straight 5x dilution for all elements	Jaswal	OK
20	Q2725-02DUPDL	CompDUPDL	DUP	08/04/25 13:08	Straight 5x dilution for all elements	Jaswal	OK
21	Q2725-02LDL	CompLDL	SD	08/04/25 13:12	Straight 25x dilution for all elements	Jaswal	OK
22	Q2725-02MSDL	CompMSDL	MS	08/04/25 13:16	Straight 5x dilution for all elements	Jaswal	OK
23	Q2725-02MSDDL	CompMSDDL	MSD	08/04/25 13:20	Straight 5x dilution for all elements	Jaswal	OK
24	Q2725-02ADL	CompADL	PS	08/04/25 13:24	Straight 5x dilution for all elements (0.1ml m6004,m6013-10ml sample before dilution)	Jaswal	OK
25	PB169078BL	PB169078BL	MB	08/04/25 13:29		Jaswal	OK
26	PB169078BS	PB169078BS	LCS	08/04/25 13:33		Jaswal	OK
27	CCV02	CCV02	CCV	08/04/25 13:37		Jaswal	OK
28	CCB02	CCB02	CCB	08/04/25 13:41		Jaswal	OK
29	Q2733-01	TW-WTS-12	SAM	08/04/25 13:45		Jaswal	OK
30	Q2733-01DUP	TW-WTS-12DUP	DUP	08/04/25 13:50		Jaswal	OK
31	Q2733-01L	TW-WTS-12L	SD	08/04/25 13:54		Jaswal	OK
32	Q2733-01MS	TW-WTS-12MS	MS	08/04/25 13:59		Jaswal	OK
33	Q2733-01MSD	TW-WTS-12MSD	MSD	08/04/25 14:03		Jaswal	OK
34	Q2733-01A	TW-WTS-12A	PS	08/04/25 14:07	0.1ml m6004,m6013-10ml sample	Jaswal	OK
35	Q2742-01	9 Banker	SAM	08/04/25 14:12		Jaswal	OK

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Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB136697

Review By	Janvi	Review On	8/5/2025 10:04:40 AM
Supervise By	jaswal	Supervise On	8/6/2025 7:45:51 AM

STD. NAME	STD REF.#
ICAL Standard	MP86452,MP86453,MP86454,MP86455,MP86456,MP86458
ICV Standard	MP86459
CCV Standard	MP86462
ICSA Standard	MP86460,MP86461
CRI Standard	MP86458
LCS Standard	
Chk Standard	MP86463,MP86464

36	Q2734-01	VNJ-253	SAM	08/04/25 14:17		Jaswal	OK
37	Q2741-01	TR-05-07312025	SAM	08/04/25 14:21		Jaswal	OK
38	Q2743-01	WC1	SAM	08/04/25 14:25		Jaswal	OK
39	CCV03	CCV03	CCV	08/04/25 14:43		Jaswal	OK
40	CCB03	CCB03	CCB	08/04/25 14:54		Jaswal	OK
41	Q2753-01	289	SAM	08/04/25 14:58		Jaswal	OK
42	Q2758-01	WASTE	SAM	08/04/25 15:03	%soil missing	Jaswal	OK
43	PB169096BL	PB169096BL	MB	08/04/25 15:07		Jaswal	OK
44	Q2740-01	OR-02-07312025	SAM	08/04/25 15:15		Jaswal	OK
45	Q2740-01DUP	OR-02-07312025DUP	DUP	08/04/25 15:19		Jaswal	OK
46	Q2740-01L	OR-02-07312025L	SD	08/04/25 15:23		Jaswal	OK
47	Q2740-01MS	OR-02-07312025MS	MS	08/04/25 15:27		Jaswal	OK
48	Q2740-01MSD	OR-02-07312025MSD	MSD	08/04/25 15:31		Jaswal	OK
49	Q2740-01A	OR-02-07312025A	PS	08/04/25 15:35	0.1ml m6004,m6013-10ml sample	Jaswal	OK
50	PB169096BS	PB169096BS	LCS	08/04/25 15:39		Jaswal	OK
51	CCV04	CCV04	CCV	08/04/25 15:48		Jaswal	OK
52	CCB04	CCB04	CCB	08/04/25 15:53		Jaswal	OK
53	Q2734-02	VNJ-253	SAM	08/04/25 16:08		Jaswal	OK
54	Q2703-05	TP-4	SAM	08/04/25 16:12		Jaswal	OK

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Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB136697

Review By	Janvi	Review On	8/5/2025 10:04:40 AM
Supervise By	jaswal	Supervise On	8/6/2025 7:45:51 AM

STD. NAME	STD REF.#
ICAL Standard	MP86452,MP86453,MP86454,MP86455,MP86456,MP86458
ICV Standard	MP86459
CCV Standard	MP86462
ICSA Standard	MP86460,MP86461
CRI Standard	MP86458
LCS Standard	
Chk Standard	MP86463,MP86464

55	Q2743-02	WC1	SAM	08/04/25 16:16		Jaswal	OK
56	Q2753-02	289	SAM	08/04/25 16:21		Jaswal	OK
57	Q2753-02DUP	289DUP	DUP	08/04/25 16:25		Jaswal	OK
58	Q2753-02L	289L	SD	08/04/25 16:30		Jaswal	OK
59	Q2753-02MS	289MS	MS	08/04/25 16:34		Jaswal	OK
60	Q2753-02MSD	289MSD	MSD	08/04/25 16:38		Jaswal	OK
61	Q2753-02A	289A	PS	08/04/25 16:42	0.1ml m6004,m6013-10ml sample	Jaswal	OK
62	PB169079TB	PB169079TB	MB	08/04/25 16:46		Jaswal	OK
63	CCV05	CCV05	CCV	08/04/25 16:51		Jaswal	OK
64	CCB05	CCB05	CCB	08/04/25 16:55		Jaswal	OK
65	PB169101BL	PB169101BL	MB	08/04/25 16:59		Jaswal	OK
66	PB169101BS	PB169101BS	LCS	08/04/25 17:04		Jaswal	OK
67	Q2745-01	RW8-SP100-2025073	SAM	08/04/25 17:08		Jaswal	OK
68	Q2745-02	RW8-SP303-2025073	SAM	08/04/25 17:12		Jaswal	OK
69	Q2756-01	71725	SAM	08/04/25 17:16	CCV fail for Tl	Jaswal	Not Ok
70	Q2756-01DUP	71725DUP	DUP	08/04/25 17:20	CCV fail for Tl	Jaswal	Not Ok
71	Q2756-01L	71725L	SD	08/04/25 17:25	CCV fail for Tl	Jaswal	Not Ok
72	Q2756-01MS	71725MS	MS	08/04/25 17:29	CCV fail for Tl	Jaswal	Not Ok
73	Q2756-01MSD	71725MSD	MSD	08/04/25 17:33	CCV fail for Tl	Jaswal	Not Ok

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Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB136697

Review By	Janvi	Review On	8/5/2025 10:04:40 AM
Supervise By	jaswal	Supervise On	8/6/2025 7:45:51 AM

STD. NAME	STD REF.#
ICAL Standard	MP86452,MP86453,MP86454,MP86455,MP86456,MP86458
ICV Standard	MP86459
CCV Standard	MP86462
ICSA Standard	MP86460,MP86461
CRI Standard	MP86458
LCS Standard	
Chk Standard	MP86463,MP86464

74	Q2756-01A	71725A	PS	08/04/25 17:37	CCV fail for Tl	Jaswal	Not Ok
75	CCV06	CCV06	CCV	08/04/25 17:41	CCV fail for Tl	Jaswal	OK
76	CCB06	CCB06	CCB	08/04/25 17:45		Jaswal	OK
77	PB169098BL	PB169098BL	MB	08/04/25 17:49	CCV fail for Tl	Jaswal	Not Ok
78	PB169098BS	PB169098BS	LCS	08/04/25 17:54	CCV fail for Tl	Jaswal	Not Ok
79	CCV07	CCV07	CCV	08/04/25 17:58		Jaswal	OK
80	CCB07	CCB07	CCB	08/04/25 18:02		Jaswal	OK

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Instrument ID: CV1

Daily Analysis Runlog For Sequence/QCBatch ID # LB136721

Review By	MOHAN	Review On	8/8/2025 1:20:55 PM
Supervise By	jaswal	Supervise On	8/8/2025 1:24:44 PM

STD. NAME	STD REF.#
ICAL Standard	MP86620,MP86621,MP86622,MP86623,MP86624,MP86625,MP86626
ICV Standard	MP86628
CCV Standard	MP86631
ICSA Standard	
CRI Standard	MP86633
LCS Standard	
Chk Standard	MP86630,MP86632,MP86634,MP86637

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	08/06/25 08:55		MOHAN	OK
2	S0.2	S0.2	CAL2	08/06/25 08:58		MOHAN	OK
3	S2.5	S2.5	CAL3	08/06/25 09:00		MOHAN	OK
4	S5	S5	CAL4	08/06/25 09:02		MOHAN	OK
5	S7.5	S7.5	CAL5	08/06/25 09:05		MOHAN	OK
6	S10	S10	CAL6	08/06/25 09:07		MOHAN	OK
7	ICV54	ICV54	ICV	08/06/25 09:10		MOHAN	OK
8	ICB54	ICB54	ICB	08/06/25 09:12		MOHAN	OK
9	CCV89	CCV89	CCV	08/06/25 09:14		MOHAN	OK
10	CCB89	CCB89	CCB	08/06/25 09:17		MOHAN	OK
11	CRA	CRA	CRDL	08/06/25 09:19		MOHAN	OK
12	HighStd	HighStd	HIGH STD	08/06/25 09:21		MOHAN	OK
13	ChkStd	ChkStd	SAM	08/06/25 09:26		MOHAN	OK
14	PB169140BL	PB169140BL	MB	08/06/25 09:28		MOHAN	OK
15	PB169140BS	PB169140BS	LCS	08/06/25 09:31		MOHAN	OK
16	Q2734-02	VNJ-253	SAM	08/06/25 09:33		MOHAN	OK
17	Q2743-02	WC1	SAM	08/06/25 09:35		MOHAN	OK
18	Q2753-02	289	SAM	08/06/25 09:38		MOHAN	OK

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Fax : 908 789 8922

Instrument ID: CV1

Daily Analysis Runlog For Sequence/QCBatch ID # LB136721

Review By	MOHAN	Review On	8/8/2025 1:20:55 PM
Supervise By	jaswal	Supervise On	8/8/2025 1:24:44 PM

STD. NAME	STD REF.#
ICAL Standard	MP86620,MP86621,MP86622,MP86623,MP86624,MP86625,MP86626
ICV Standard	MP86628
CCV Standard	MP86631
ICSA Standard	
CRI Standard	MP86633
LCS Standard	
Chk Standard	MP86630,MP86632,MP86634,MP86637

19	Q2753-02DUP	289DUP	DUP	08/06/25 09:40		MOHAN	OK
20	Q2753-02MS	289MS	MS	08/06/25 09:45		MOHAN	OK
21	CCV90	CCV90	CCV	08/06/25 09:49		MOHAN	OK
22	CCB90	CCB90	CCB	08/06/25 09:51		MOHAN	OK
23	Q2753-02MSD	289MSD	MSD	08/06/25 09:53		MOHAN	OK
24	PB169079TB	PB169079TB	MB	08/06/25 09:55		MOHAN	OK
25	Q2753-02L	289L	SD	08/06/25 09:58		MOHAN	OK
26	Q2753-02A	289A	PS	08/06/25 10:00		MOHAN	OK
27	CCV91	CCV91	CCV	08/06/25 10:02		MOHAN	OK
28	CCB91	CCB91	CCB	08/06/25 10:04		MOHAN	OK

Alliance TECHNICAL GROUP

TCLP EXTRACTION LOGPAGE

PB169079

SOP ID : M1311-TCLP-16

SDG No : N/A

Weigh By : JP

Balance ID : WC SC-7

pH Meter ID : WC PH METER-1

Extraction By : JP

Filter By : JP

Pippete ID : WC

Tumbler ID : T-1

TCLP Filter ID : 115525

Start Prep Date : 08/01/2025 **Time :** 17:00

End Prep Date : 08/02/2025 **Time :** 11:25

Combination Ratio : 20

ZHE Cleaning Batch : 18 N/A

Initial Room Temperature: 24 °C

Final Room Temperature: 22 °C

TCLP Technician Signature : JP

Supervisor By : JZ

Standared Name	MLS USED	STD REF. # FROM LOG
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Chemical Used	ML/SAMPLE U	Lot Number
TCLP-FLUID-1	N/A	WP112804
HCL-TCLP,1N	N/A	WP112797
HNO3-TCLP,1N	N/A	WP112799
pH Strips	N/A	W1931,W1934,W3171,W3172
pH Strips	W1940,W1941,W1942	W3166,W1938,W1939,
1 Liter Amber	N/A	90924-08
120ml Plastic bottle	N/A	2738
1:1 HNO3	N/A	MP84041

Extraction Conformance/Non-Conformance Comments:

Matrix spikes are added after fiftration and before preservation. TUMMBLER T-1 checked,30 rpm. Particle size reduction is not required. q2753-02 IS USED FOR MS-MSD.

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
08/04/25 10:30	JP / Lab Room	SHS. RJ/EH
	Preparation Group	**Analysis Group** WetChem

Alliance TECHNICAL GROUP

TCLP EXTRACTION LOGPAGE

PB169079

Sample ID	ClientID	TCLP Vessel ID	Sample Wt (g)	Volume Extraction Fluid #1 (mL)	Multi phasic	Phase Miscible	Phases Combined	Final Leachate PH	Metals Leachate Adj. PH	Prep Pos
PB169079TB	LEB079	05	N/A	2000	N/A	N/A	N/A	4.94	1.0	T-1
Q2703-05	TP-4	01	100.02	2000	N/A	N/A	N/A	5.6	1.5	T-1
Q2734-02	VNJ-253	02	100.03	2000	N/A	N/A	N/A	6.2	1.0	T-1
Q2743-02	WC1	03	100.02	2000	N/A	N/A	N/A	5.8	1.5	T-1
Q2753-02	289	04	100.01	2000	N/A	N/A	N/A	6.0	1.5	T-1

SampleID	ClientID	Sample Weight (g)	Filter Weight (g)	Filtrate (mL)	Filter + Solid (After 100°C)	% solids	% Dry Solids
PB169079TB	LEB079	N/A	N/A	N/A	N/A	N/A	N/A
Q2703-05	TP-4	N/A	N/A	N/A	N/A	100	N/A
Q2734-02	VNJ-253	N/A	N/A	N/A	N/A	100	N/A
Q2743-02	WC1	N/A	N/A	N/A	N/A	100	N/A
Q2753-02	289	N/A	N/A	N/A	N/A	100	N/A

Alliance TECHNICAL GROUP

TCLP Fluid Determination

PB169079

Hot Block ID : WC S-1 / WC S-2

Thermometer ID : FLASHPOINT

SampleID	ClientID	Sample Weight (g)	Volume DI Water (mL)	PH after 5 min stir	PH after 10 min stir	Extraction Fluid 1 or 2	pH Extraction Fluid
PB169079TB	LEB079	N/A	N/A	N/A	N/A	#1	4.94
Q2703-05	TP-4	5.02	96.5	7.6	2.5	#1	4.94
Q2734-02	VNJ-253	5.03	96.5	8.6	3.0	#1	4.94
Q2743-02	WC1	5.02	96.5	7.6	2.5	#1	4.94
Q2753-02	289	5.01	96.5	8.0	3.0	#1	4.94

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Prep Standard - Chemical Standard Summary

Order ID : Q2743

Test : TCLP ICP Metals,TCLP Mercury

Prepbatch ID : PB169101,PB169140,

Sequence ID/Qc Batch ID: LB136697,LB136697,LB136721,

Standard ID :

MP85156,MP85892,MP85893,MP85894,MP85895,MP86452,MP86453,MP86454,MP86455,MP86456,MP86457,MP86458,MP86459,MP86460,MP86461,MP86462,MP86463,MP86464,MP86620,MP86621,MP86622,MP86623,MP86624,MP86625,MP86626,MP86628,MP86630,MP86631,MP86632,MP86633,MP86634,MP86637,

Chemical ID :

M4371,M4465,M4916,M5062,M5467,M5470,M5499,M5658,M5747,M5748,M5751,M5798,M5799,M5800,M5801,M5811,M5814,M5816,M5820,M5884,M5942,M5962,M5970,M5984,M5985,M5996,M5997,M6007,M6015,M6021,M6023,M6028,M6030,M6032,M6041,M6077,M6127,M6128,M6137,M6142,M6144,M6145,M6146,M6151,M6152,M6155,M6158,M6159,M6162,M6163,M6164,M6165,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	09/06/2025	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
3965	2:1 H2SO4 : HNO3	MP85892	06/05/2025	11/27/2025	Mohan Bera	None	None	Sarabjit Jaswal 06/14/2025

FROM 1600.00000ml of M6041 + 800.00000ml of M6162 = Final Quantity: 3200.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
65	POTASSIUM PERMANGANATE SOLUTION 5 %	MP85893	06/05/2025	12/05/2025	Mohan Bera	METALS_SCALE_3 (M SC-3)	None	Sarabjit Jaswal 06/14/2025

FROM 100.00000gram of M4916 + 2000.00000ml of W3112 = Final Quantity: 2000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
66	POTASSIUM PERSULFATE SOLUTION 5 %	MP85894	06/05/2025	08/31/2025	Mohan Bera	METALS_SCALE_3 (M SC-3)	None	Sarabjit Jaswal 06/14/2025

FROM 100.00000ml of M4465 + 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)	MP86452	07/18/2025	08/08/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 07/23/2025

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)	MP86453	07/18/2025	08/08/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 07/23/2025

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 M6077 + 5.00000ml of M6146 + 455.00000ml of MP86452 = Final Quantity: 500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
910	ICP AES STD S4	MP86454	07/18/2025	08/08/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 07/23/2025

FROM 50.00000ml of MP86452 + 50.00000ml of MP86453 = 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	MP86455	07/18/2025	08/08/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 07/23/2025

FROM 25.00000ml of MP86453 + 75.00000ml of MP86452 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3913	ICP AES STD S2	MP86456	07/18/2025	08/08/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 07/23/2025

FROM 16.00000ml of MP86453 + 184.00000ml of MP86452 = 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	MP86457	07/18/2025	08/08/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 07/23/2025

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 M5470 + 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 MP86452 = 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	MP86458	07/18/2025	08/08/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 07/23/2025

FROM 2.00000ml of MP86457 + 98.00000ml of MP86452 = 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
4163	NEW ICV-060925	MP86459	07/18/2025	08/08/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 07/23/2025

FROM 0.40000ml of M6163 + 0.40000ml of M6164 + 0.40000ml of M6165 + 48.80000ml of MP86452 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
904	ICP AES ICSA SOLN	MP86460	07/18/2025	08/08/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 07/23/2025

FROM 25.00000ml of M6152 + 225.00000ml of MP86452 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3494	ICP AES ICSAB SOLN-1	MP86461	07/18/2025	08/08/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 07/23/2025

FROM 10.00000ml of M6152 + 10.00000ml of M6155 + 80.00000ml of MP86452 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
911	ICP AES CCV SOLN	MP86462	07/18/2025	08/08/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 07/23/2025

FROM 50.00000ml of MP86452 + 50.00000ml of MP86453 = 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	MP86463	07/18/2025	08/08/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 07/23/2025

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	MP86464	07/18/2025	08/08/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 07/23/2025

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
871	MERCURY INTERMEDIATE B 250PPB WORKING STD.	MP86620	08/05/2025	08/06/2025	Mohan Bera	None	None	Sarabjit Jaswal 08/07/2025

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	MP86621	08/05/2025	08/06/2025	Mohan Bera	None	None	Sarabjit Jaswal 08/07/2025

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	MP86622	08/05/2025	08/06/2025	Mohan Bera	None	None	Sarabjit Jaswal 08/07/2025

FROM 2.50000ml of M6162 + 247.30000ml of W3112 + 0.20000ml of MP86620 = 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	MP86623	08/05/2025	08/06/2025	Mohan Bera	None	None	Sarabjit Jaswal 08/07/2025

FROM 2.50000ml of M6162 + 245.00000ml of W3112 + 2.50000ml of MP86620 = 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	MP86624	08/05/2025	08/06/2025	Mohan Bera	None	None	Sarabjit Jaswal 08/07/2025

FROM 2.50000ml of M6162 + 242.50000ml of W3112 + 5.00000ml of MP86620 = 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	MP86625	08/05/2025	08/06/2025	Mohan Bera	None	None	Sarabjit Jaswal 08/07/2025

FROM 2.50000ml of M6162 + 240.00000ml of W3112 + 7.50000ml of MP86620 = 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	MP86626	08/05/2025	08/06/2025	Mohan Bera	None	None	Sarabjit Jaswal 08/07/2025

FROM 2.50000ml of M6162 + 237.50000ml of W3112 + 10.00000ml of MP86620 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1346	Hg ICV SOLUTION	MP86628	08/05/2025	08/06/2025	Mohan Bera	None	None	Sarabjit Jaswal 08/07/2025

FROM 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)	MP86630	08/05/2025	08/06/2025	Mohan Bera	None	None	Sarabjit Jaswal 08/07/2025

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)	MP86631	08/05/2025	08/06/2025	Mohan Bera	None	None	Sarabjit Jaswal 08/07/2025

FROM 485.00000ml of W3112 + 5.00000ml of M6162 + 10.00000ml of MP86620 = 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)	MP86632	08/05/2025	08/06/2025	Mohan Bera	None	None	Sarabjit Jaswal 08/07/2025

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)	MP86633	08/05/2025	08/06/2025	Mohan Bera	None	None	Sarabjit Jaswal 08/07/2025

FROM 2.50000ml of M6162 + 247.30000ml of W3112 + 0.20000ml of MP86620 = 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)	MP86634	08/05/2025	08/06/2025	Mohan Bera	None	None	Sarabjit Jaswal 08/07/2025

FROM 2.50000ml of M6162 + 240.50000ml of W3112 + 7.00000ml of MP86620 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
104	5% RINSING HCL	MP86637	08/05/2025	08/18/2025	Mohan Bera	None	None	Sarabjit Jaswal 08/07/2025

FROM 100.00000ml of M6151 + 1900.00000ml of W3112 = Final Quantity: 2000.000 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-3238-05 / Potassium Persulfate (2.5kg)	0000234156	08/06/2025	07/23/2019 /	07/25/2019 / manojkumar	M4465

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

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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 #
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

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

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57050 / Sn, 1000 PPM, 125 ml	071123	07/11/2026	02/09/2024 / bin	02/09/2024 / bin	M5799

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57027 / CO, 1000 PPM, 125 ml	091923	09/19/2026	05/31/2024 / bin	02/09/2024 / bin	M5800

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57033 / As, 1000 PPM, 125 ml	111323	11/13/2026	02/09/2024 / bin	02/09/2024 / bin	M5801

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58126 / Fe, 10000 PPM, 500 ml	051523	05/15/2026	02/06/2025 / kareem	01/03/2024 / jaswal	M5811

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57005 / B, 1000 PPM, 125 ml	071123	07/11/2026	03/26/2024 / Sohil	01/03/2024 / jaswal	M5814

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57016 / S, 1000 PPM, 125 ml	122923	12/29/2026	05/20/2024 / Jaswal	02/09/2024 / jaswal	M5816

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57015 / P, 1000 PPM, 125 ml	091123	09/11/2026	05/01/2024 / jaswal	02/09/2024 / jaswal	M5820

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3624-05 / Sodium Chloride, Crystal (cs/4x2.5kg)	0000281938	07/06/2026	04/30/2024 / mohan	04/25/2024 / mohan	M5884

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGTI1-1 / TITANIUM 125mL 1000ug/mL	T2-TI719972	06/17/2027	06/18/2024 / Jaswal	02/22/2024 / Jaswal	M5942

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
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

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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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	WW-LFS-1 / Laboratory Fortified Stock Solution 1, 125 ml	T2-MEB723367	05/27/2026	05/27/2025 / Janvi	05/14/2024 / Jaswal	M6007

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	WW-LFS-2 / Laboratory Fortified Stock Solution 2, 125 ml	U2-MEB731108	03/17/2028	06/19/2025 / MOHAN	05/14/2024 / Jaswal	M6015

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57023 / V, 1000 PPM, 125 ml	062424	06/24/2027	09/28/2024 / jaswal	08/05/2024 / Jaswal	M6021

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57081 / Tl, 1000 PPM, 125 ml	0624724	06/27/2027	08/05/2024 / kareem	08/05/2024 / Jaswal	M6023

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57048 / Cd, 1000 PPM, 125 ml	070124	07/01/2027	08/05/2024 / kareem	08/05/2024 / Jaswal	M6028

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57047 / Ag, 1000 PPM, 125 ml	122823	12/28/2026	08/05/2024 / kareem	08/05/2024 / Jaswal	M6030

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57056 / Ba, 1000 PPM, 125 ml	010924	01/09/2027	01/14/2025 / Jaswal	08/05/2024 / Jaswal	M6032

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9673-33 / Sulfuric Acid, Instra-Analyzed (cs/6c2.5L)	23D2462010	03/20/2028	08/16/2024 / mohan	08/16/2024 / mohan	M6041

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	Z9651Q / CHEM-CLP-4/.25L	V2-MEB746762	09/06/2029	01/23/2025 / kareem	09/19/2024 / kareem	M6077

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58112 / Mg, 10000 PPM, 500 ml	112124	11/21/2027	01/13/2025 / kareem	01/13/2025 / kareem	M6127

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58025 / Mn, 1000 PPM, 500 ml	101124	10/11/2027	01/13/2025 / kareem	01/13/2025 / kareem	M6128

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGSI1-1 / SILICON 125mL 1000ug/mL	V2-SI744713	07/10/2029	01/14/2025 / Jaswal	10/03/2024 / Jaswal	M6137

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	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

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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.	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	08/17/2025	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

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	08/24/2025	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	09/09/2025	03/10/2025 / Eman	02/02/2025 / Sagar	M6158

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58113 / Al, 10000 PPM, 500 ml	011325	03/18/2026	03/18/2025 / kareem	02/09/2025 / kareem	M6159

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	24H0162012	11/27/2025	05/27/2025 / Sagar	04/27/2025 / Sagar	M6162

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	QCP-CICV-1-125ML / EPA CLP ICP Verification Standard1	V2-MEB744107	06/08/2026	06/09/2025 / jaswal	06/06/2025 / jaswal	M6163

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	QCP-CICV-2-125ML / EPA CLP ICP Verification Standard2	U2-MEB733713	06/08/2026	06/09/2025 / jaswal	06/09/2025 / jaswal	M6164

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	QCP-CICV-3-125ML / EPA CLP ICP Verification Standard3	V2-MEB749572	06/08/2026	06/09/2025 / jaswal	06/09/2025 / jaswal	M6165

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	DIW / DI Water	Daily Lab-Certified	07/03/2029	07/03/2024 / Iwona	07/03/2024 / Iwona	W3112

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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		

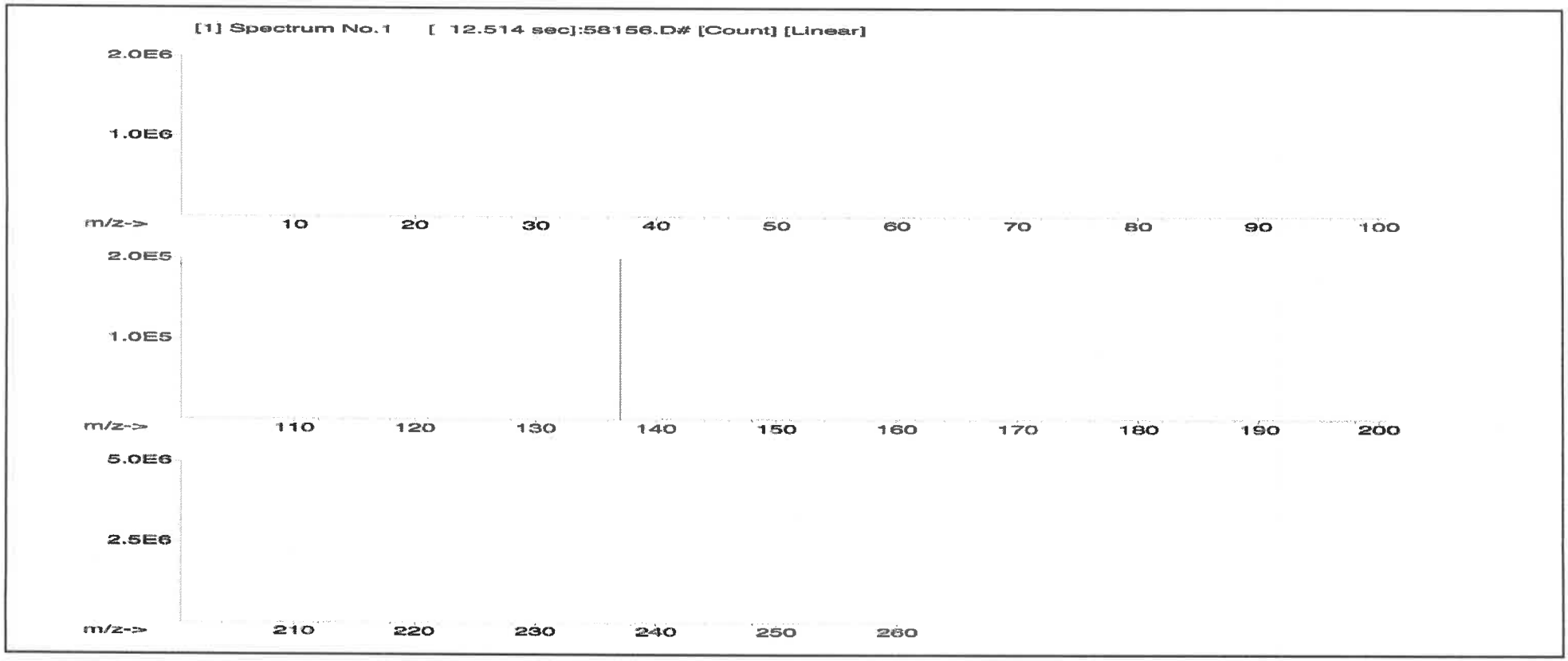
Giovanni Esposito

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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M6028

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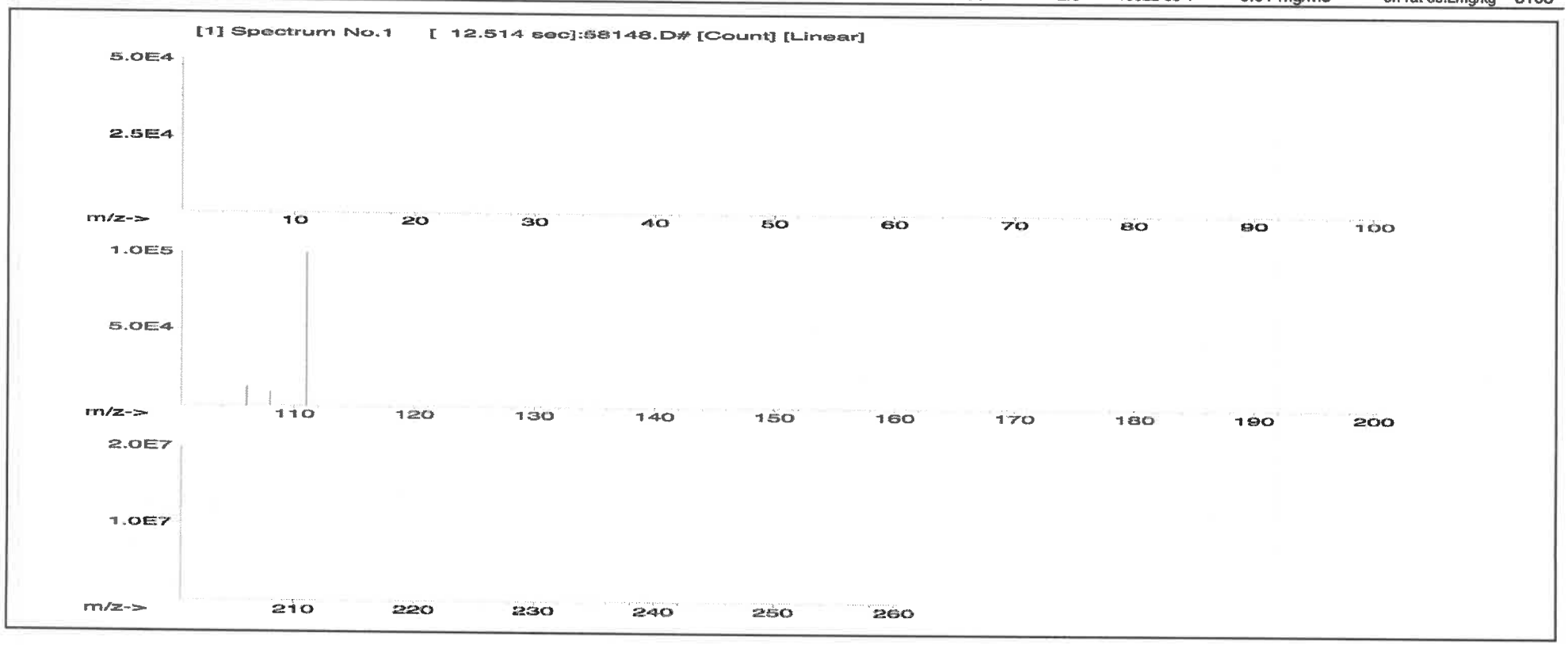
CERTIFIED WEIGHT REPORT:

Part Number:	**57048**		**Lot #**		
Lot Number:	**070124**	**Solvent:**	24002546	Nitric Acid	
Description:	**Cadmium (Cd)**	2%	40.0 (mL)	Nitric Acid	
Expiration Date:	070127				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.07	0.100	Flask Uncertainty		

Aleah O'Brady		
Formulated By:	Aleah O'Brady	070124
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

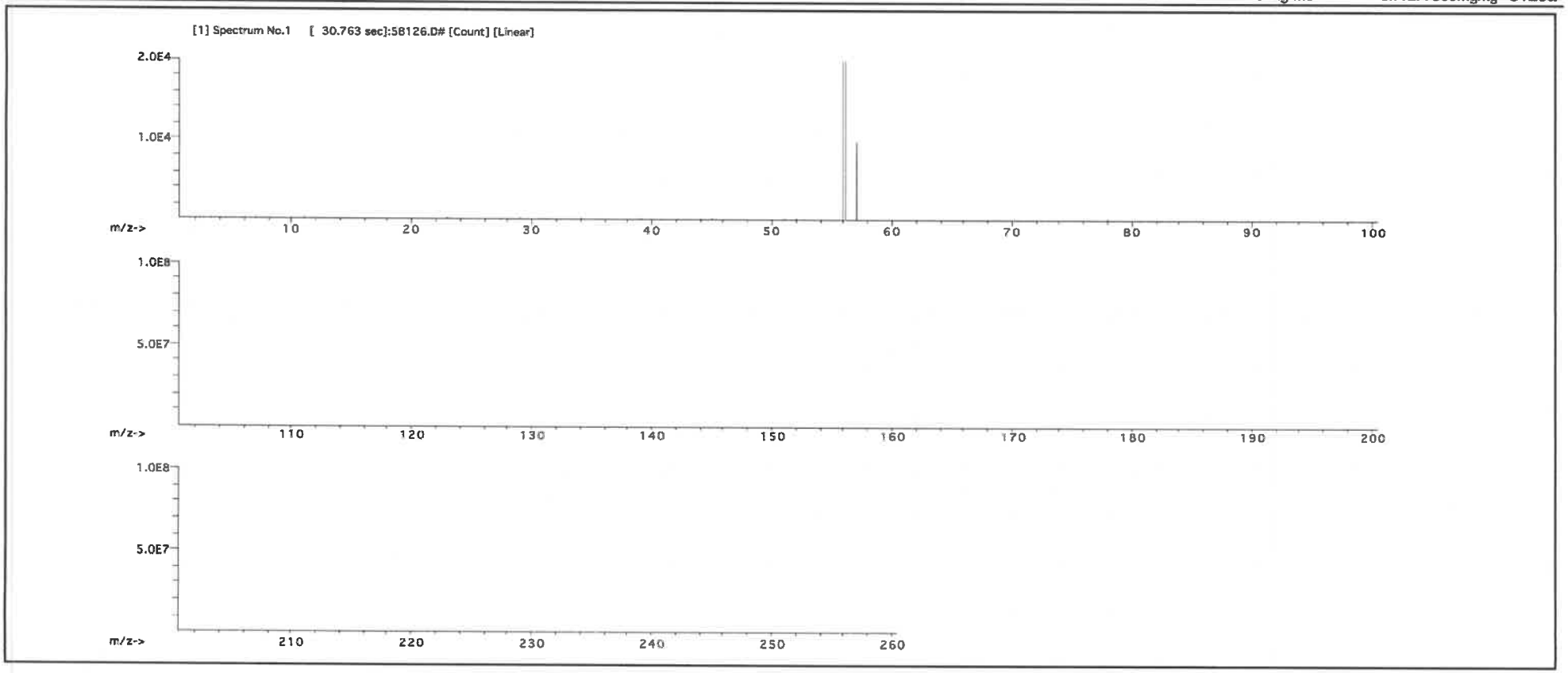
	Lot #		
Solvent:	21110221	Nitric Acid	
5.0%	250.0 (mL)	Nitric Acid	
5E-05	Balance Uncertainty		
0.12	Flask Uncertainty		

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

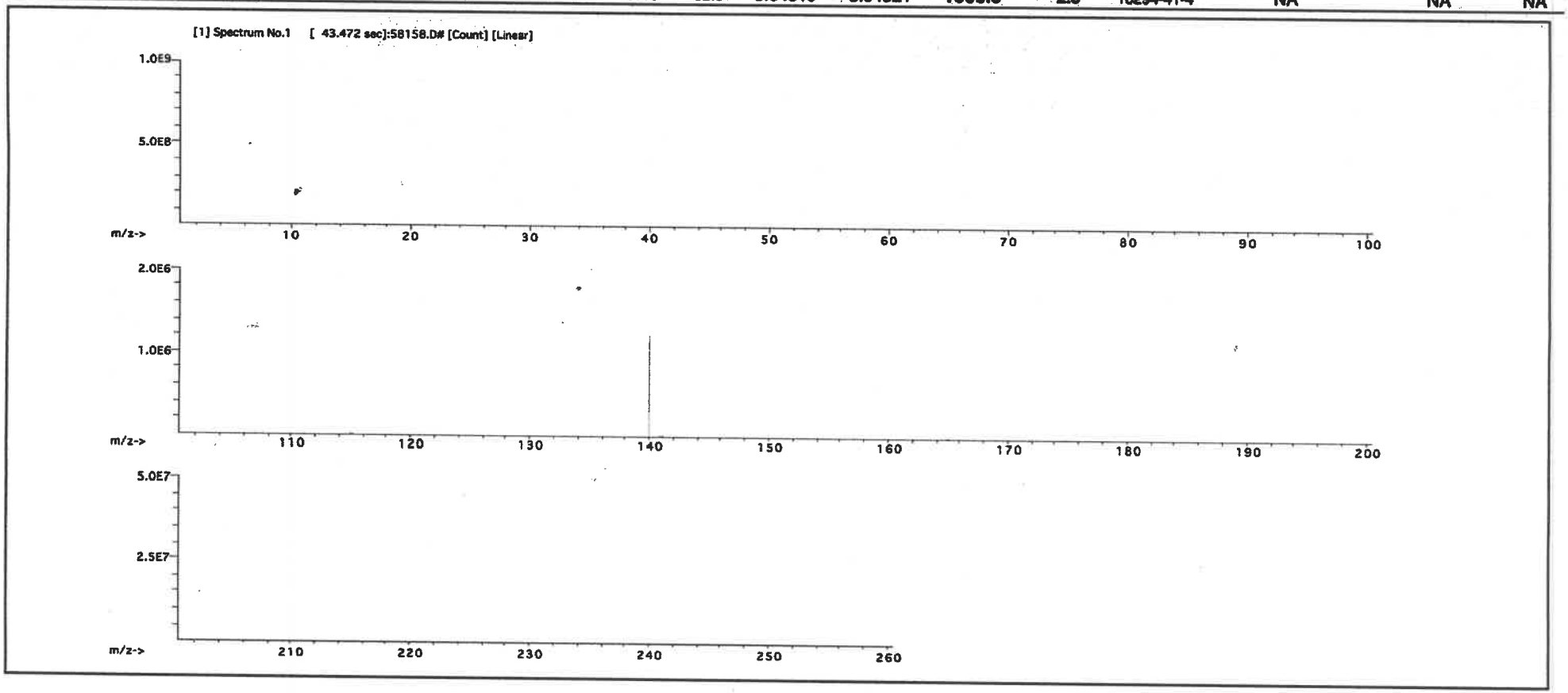
Weight shown below was diluted to (mL): 1000.12 0.058 Flask Uncertainty

		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

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Certified Reference Material CRM

M5658 R! 8/25/23

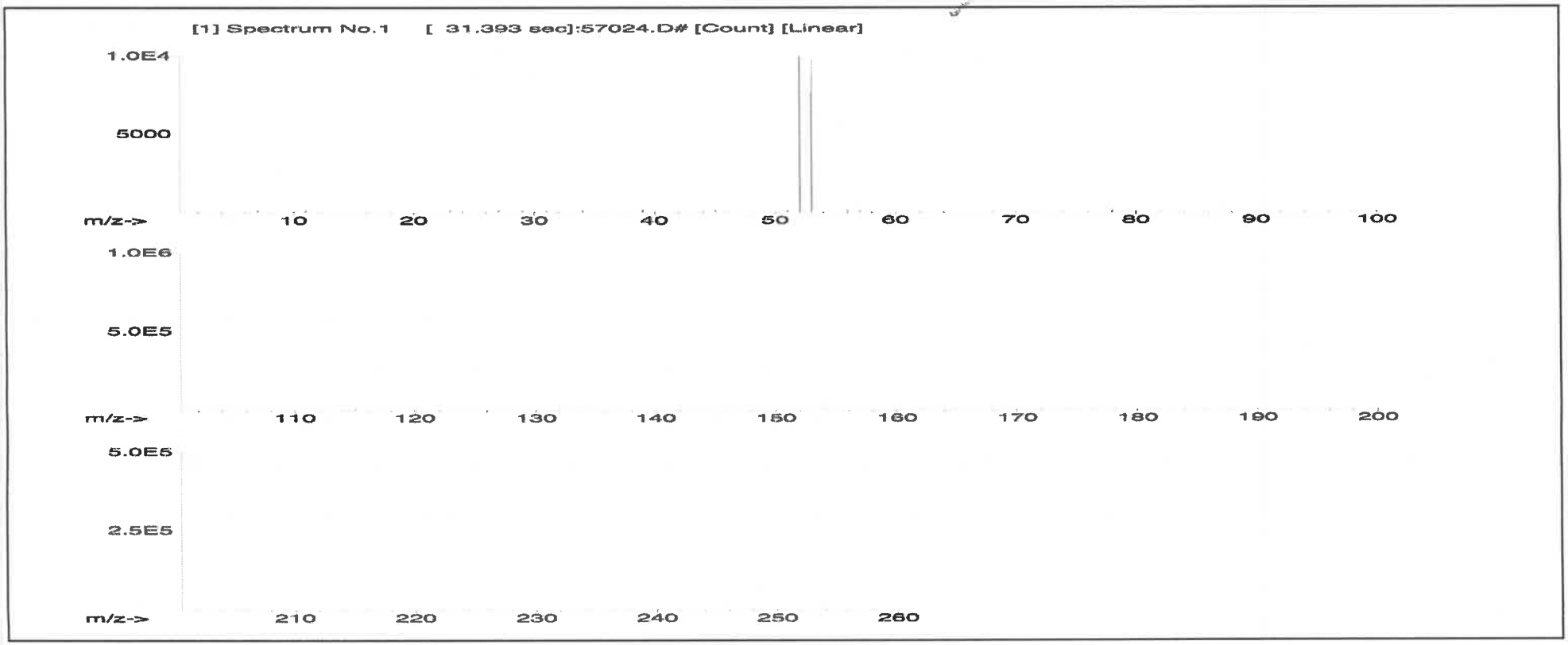
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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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* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

R: 12/20/23 M5747

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AR-1539 Certificate Number
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CERTIFIED WEIGHT REPORT:

Part Number: 57082
Lot Number: 100923
Description: Lead (Pb)

Expiration Date: 100926
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

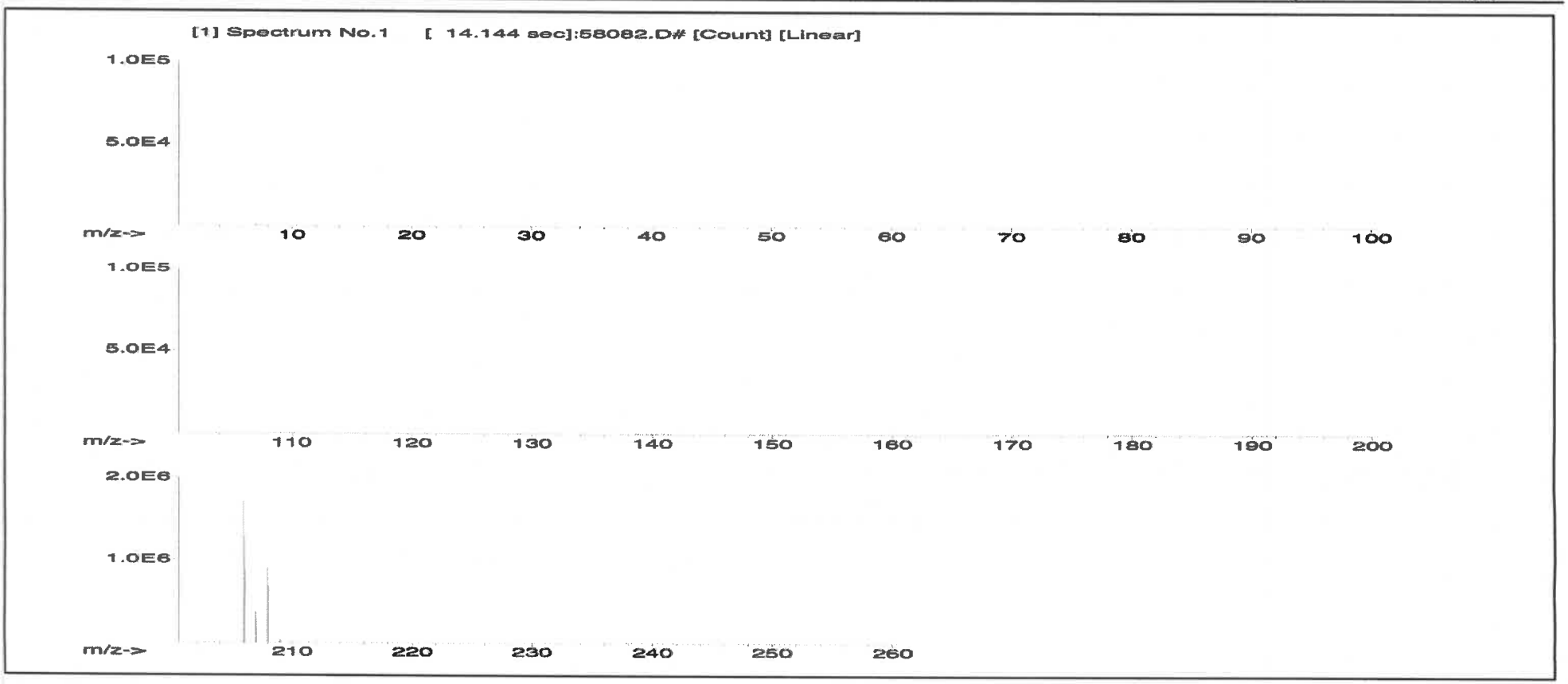
Weight shown below was diluted to (mL): 3000.41 ± 0.06 Flask Uncertainty

	Lot #		
Solvent:	24002546	Nitric Acid	
2%	60.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

Formulated By:	Lawrence Barry	100923
Reviewed By:	Pedro L. Rentas	100923

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lead(II) nitrate (Pb)	IN029	PBD122016A1	1000	99.999	0.10	62.5	4.80071	4.80077	**1000.0**	**2.0**	10099-74-8	0.05 mg/m3	intrvns-rat 93 mg/kg	3128



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	T	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

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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* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

R: 12/20/23 M5748

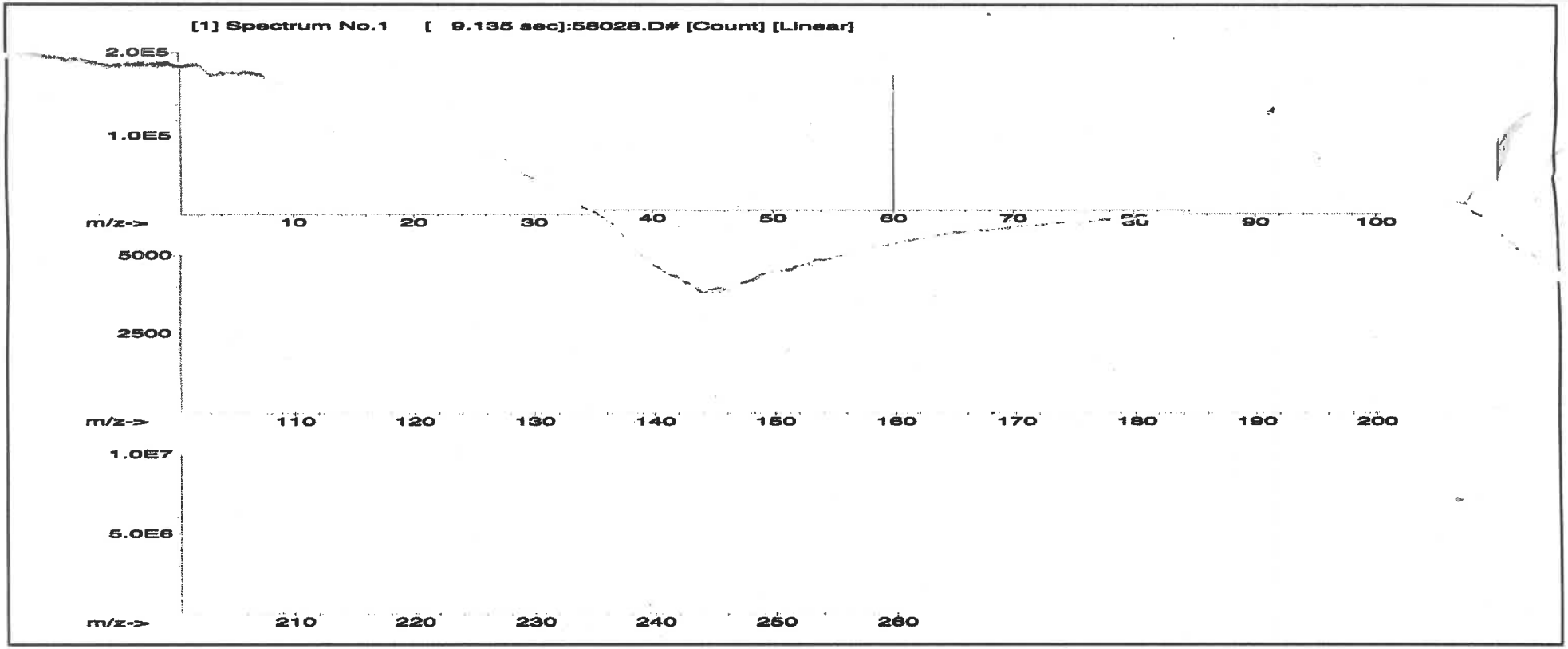
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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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* 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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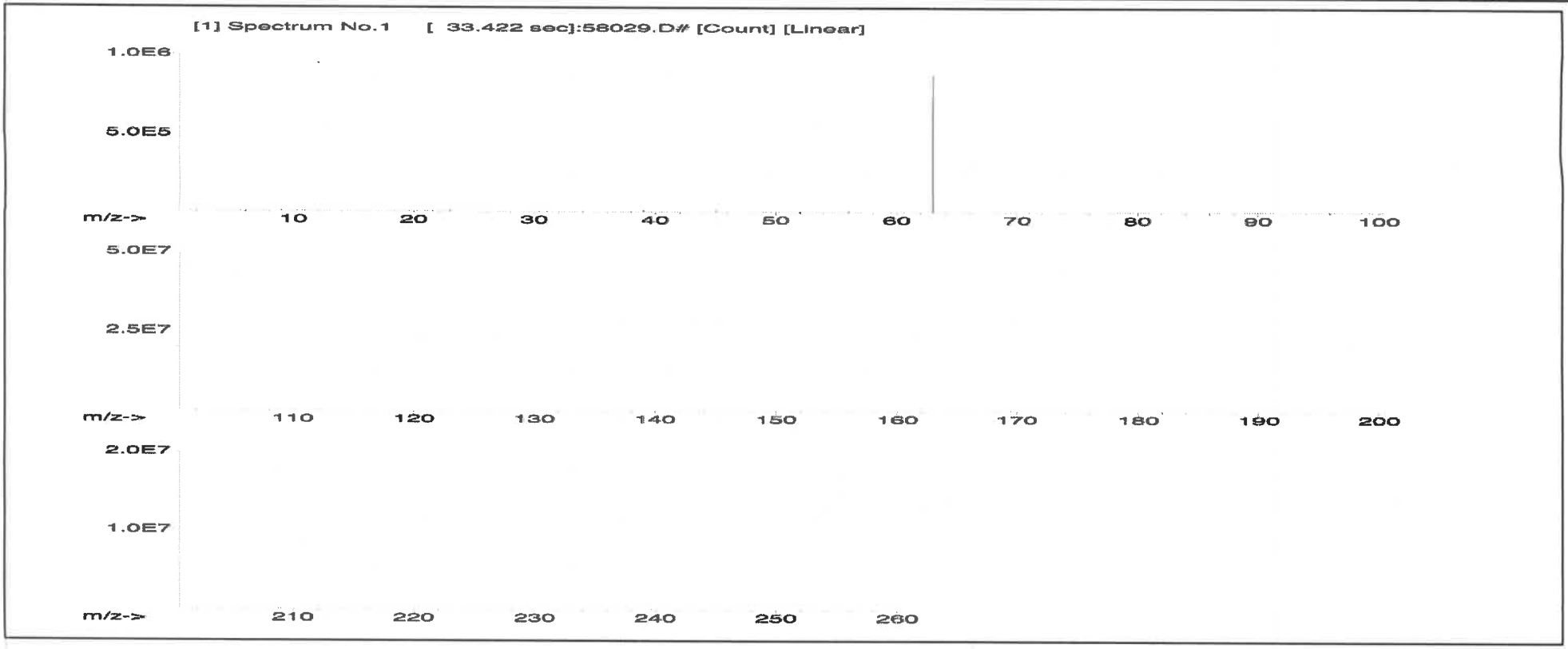
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**58029**	21110221	Nitric Acid	
Lot Number:	**071723**			
Description:	**Copper (Cu)**	2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	071726			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Benson Chan	071723
Reviewed By:	Pedro L. Rentas	071723

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Copper(II) nitrate trihydrate (Cu)	58129	022723	0.1000	200.0	0.084	1000	10000.5	**1000.0**	**2.2**	10031-43-3	1 mg/m3	orl-rat 794 mg/kg	3114



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	T	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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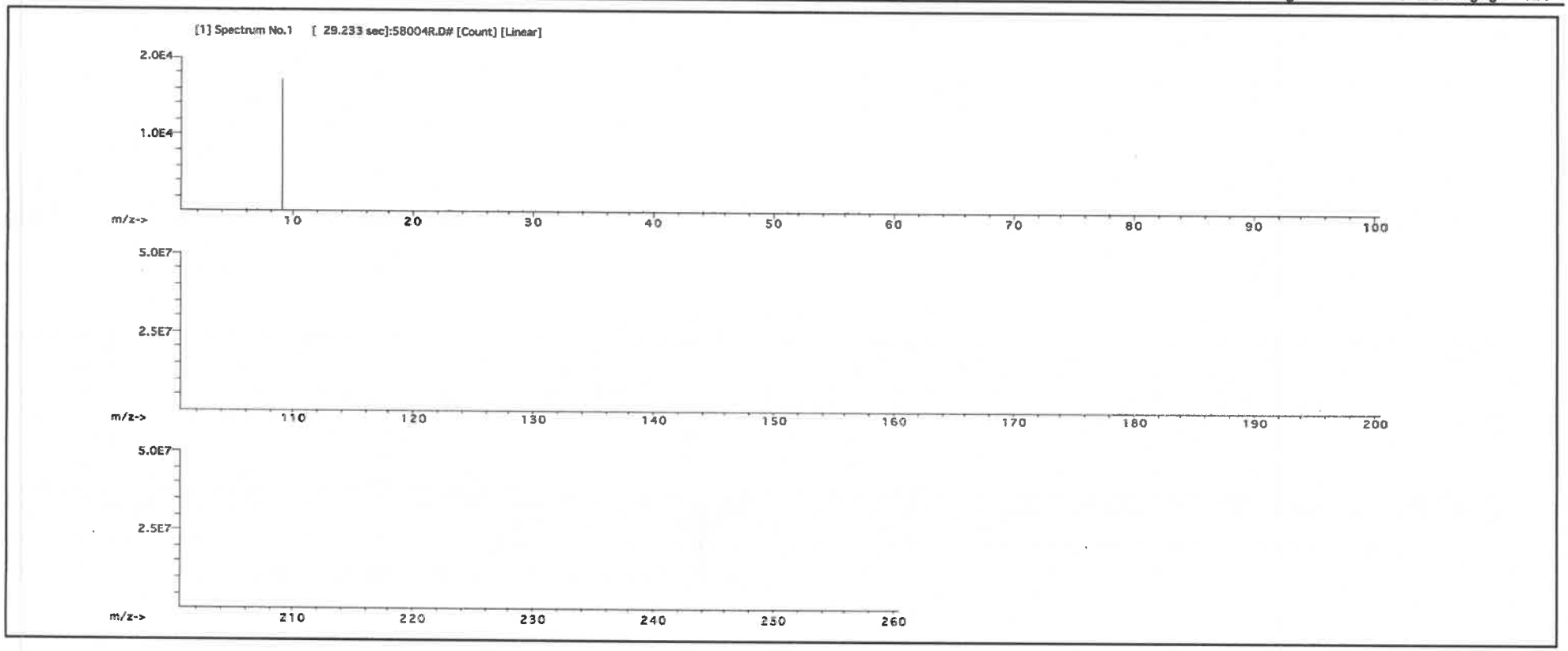
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57004**	24002546	Nitric Acid	
Lot Number:	**102523**			
Description:	**Beryllium (Be)**	2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	102526			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Benson Chan	102523
Reviewed By:	Pedro L. Rentas	102523

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Beryllium nitrate (Be)	58104	091423	0.1000	200.0	0.084	1000	10001.5	**1000.0**	**2.2**	13597-99-4	0.2ug/m3	intrvns-rat 3.16mg/kg	NA



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																		
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	T	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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CERTIFIED WEIGHT REPORT:

Part Number: 57050
Lot Number: 071123
Description: Tin (Sn)

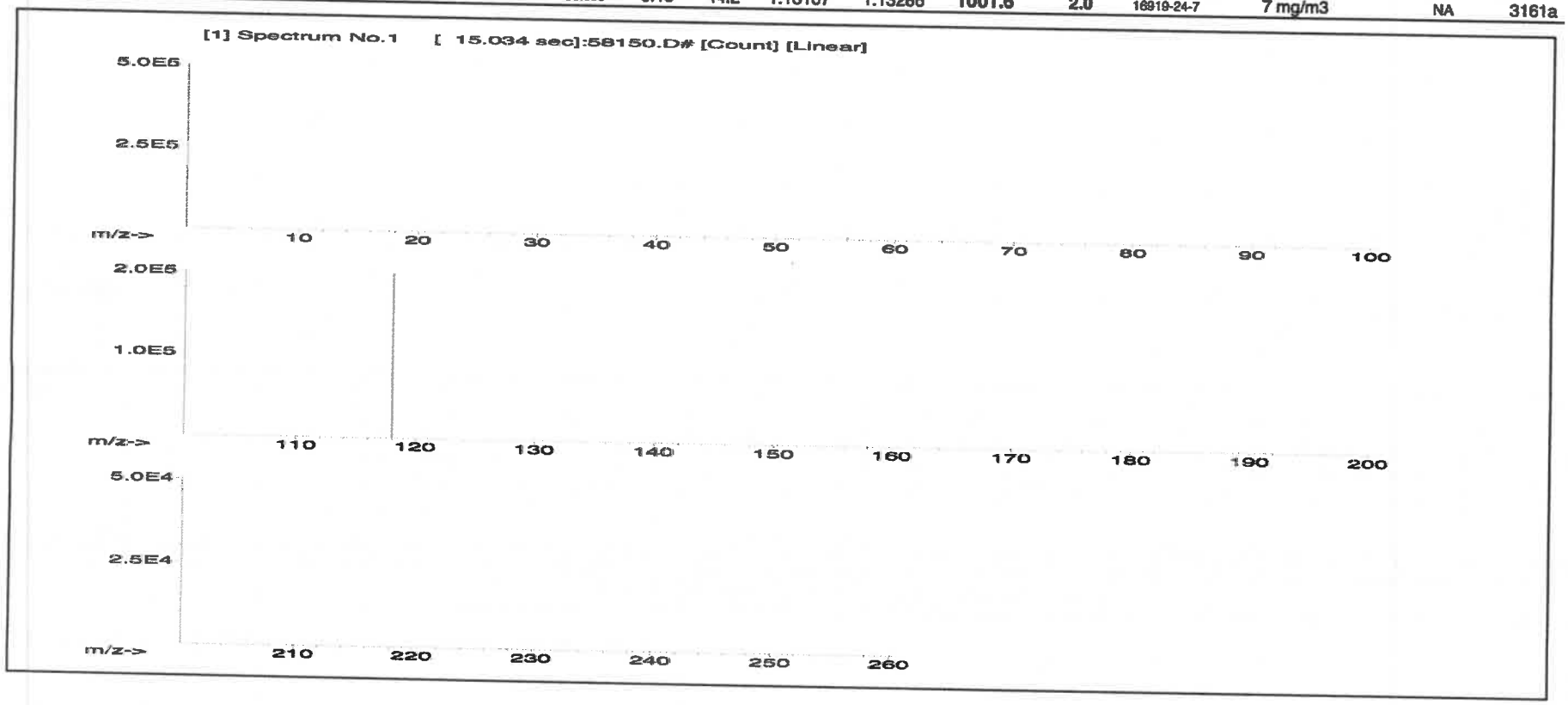
Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 499.93

	Lot #	
Solvents:	21110221	Nitric Acid
	22D0562008	Hydrochloric acid
2%	10.0	Nitric Acid
6%	30.0	Hydrochloric acid
	(mL)	

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By:	Benson Chan	071123
Reviewed By:	Pedro L. Rentas	071123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium hexafluorostannate(IV) (Sn)	IN010	SND042023A1	1000	99.999	0.10	44.2	1.13107	1.13286	**1001.6**	**2.0**	16919-24-7	7 mg/m3	NA	3161a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<500	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	T	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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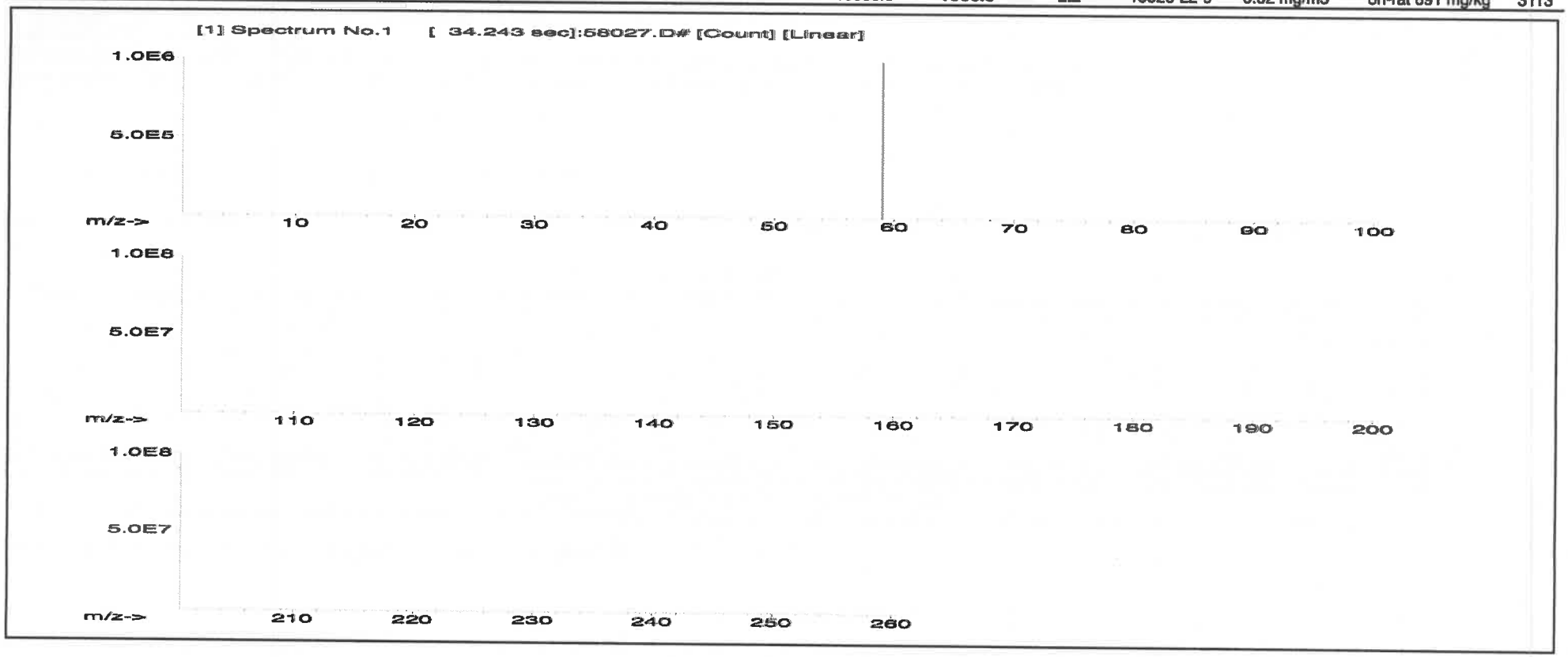
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:		
Part Number:	**57027**	24002546	Nitric Acid		
Lot Number:	**091923**				
Description:	**Cobalt (Co)**				
		2.0%	40.0 (mL)	Nitric Acid	
Expiration Date:	091926				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Formulated By:	Lawrence Barry	091923
Reviewed By:	Pedro L. Rentas	091923

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Cobalt(II) nitrate hexahydrate (Co)	58127	050923	0.1000	200.0	0.084	1000	10000.0	**1000.0**	**2.2**	10026-22-9	0.02 mg/m3	orl-rat 691 mg/kg	3113



Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	T	Gé	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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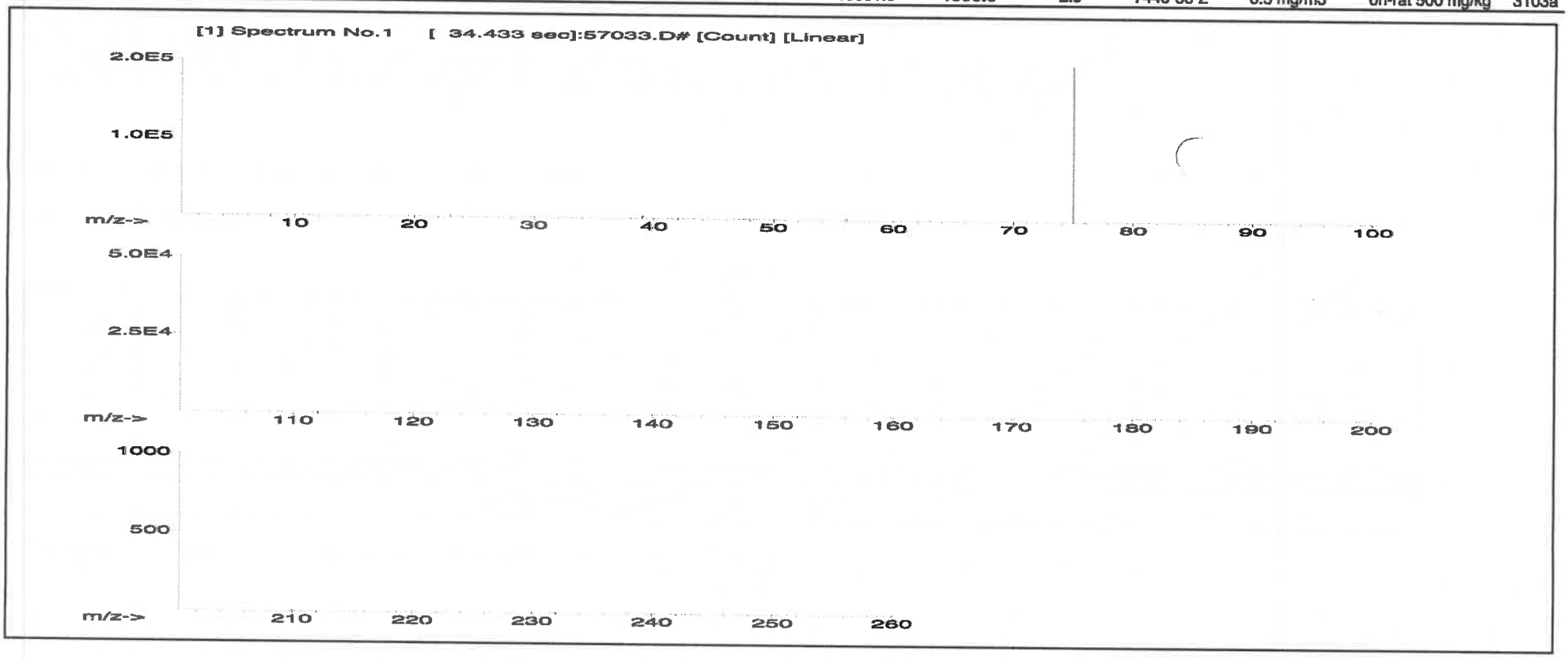
CERTIFIED **WEIGHT** REPORT:

		Lot #	Solvent:		
Part Number:	**57033**	24002546	Nitric Acid		
Lot Number:	**111323**				
Description:	**Arsenic (As)**	2.0%	80.0 (mL)	Nitric Acid	
Expiration Date:	111326				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	4000.0	0.06	Flask Uncertainty		

Formulated By:	Lawrence Barry	111323
Reviewed By:	Pedro L. Rentas	111323

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Arsenic (As)	58133	020522	0.1000	400.0	0.084	1000	10001.0	**1000.0**	**2.0**	7440-38-2	0.5 mg/m3	orl-rat 500 mg/kg	3103a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	T	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge*	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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A: 02/09/24 M.5814

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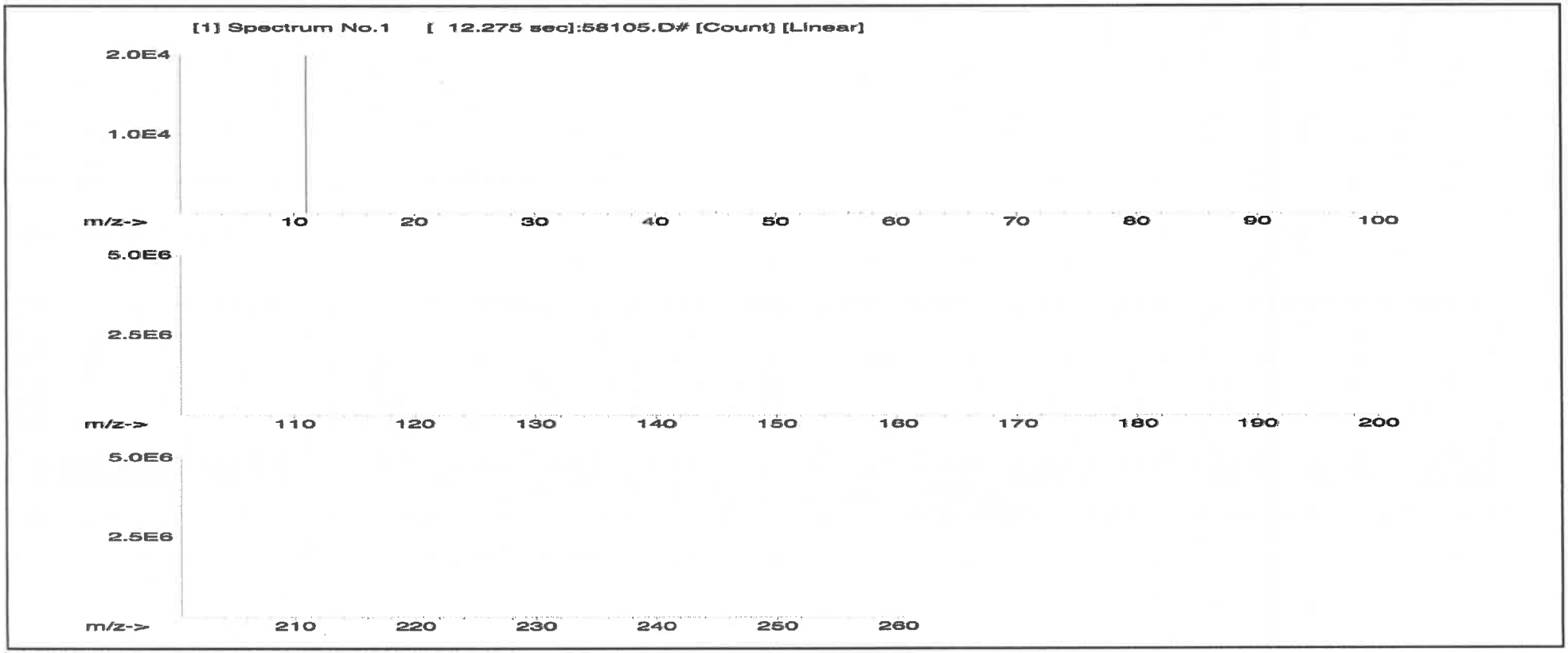
CERTIFIED WEIGHT REPORT:

Part Number:	**57005**		**Solvent:**	MKBQ8597V	Ammonium hydroxide
Lot Number:	**071123**				
Description:	**Boron (B)**		2.0%	40.0 (mL)	Ammonium hydroxide
Expiration Date:	071126				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	1999.48	0.058	Flask Uncertainty		

Formulated By:	Benson Chan	071123
Reviewed By:	Pedro L. Rentas	071123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Boric acid (B)	IN018	BV092016A1	1000	99.9999	0.10	17.3	11.55772	11.56201	**1000.4**	**2.0**	10043-35-3	2 mg/m3	orl-rat 2660 mg/kg	3107



Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	T	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* 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

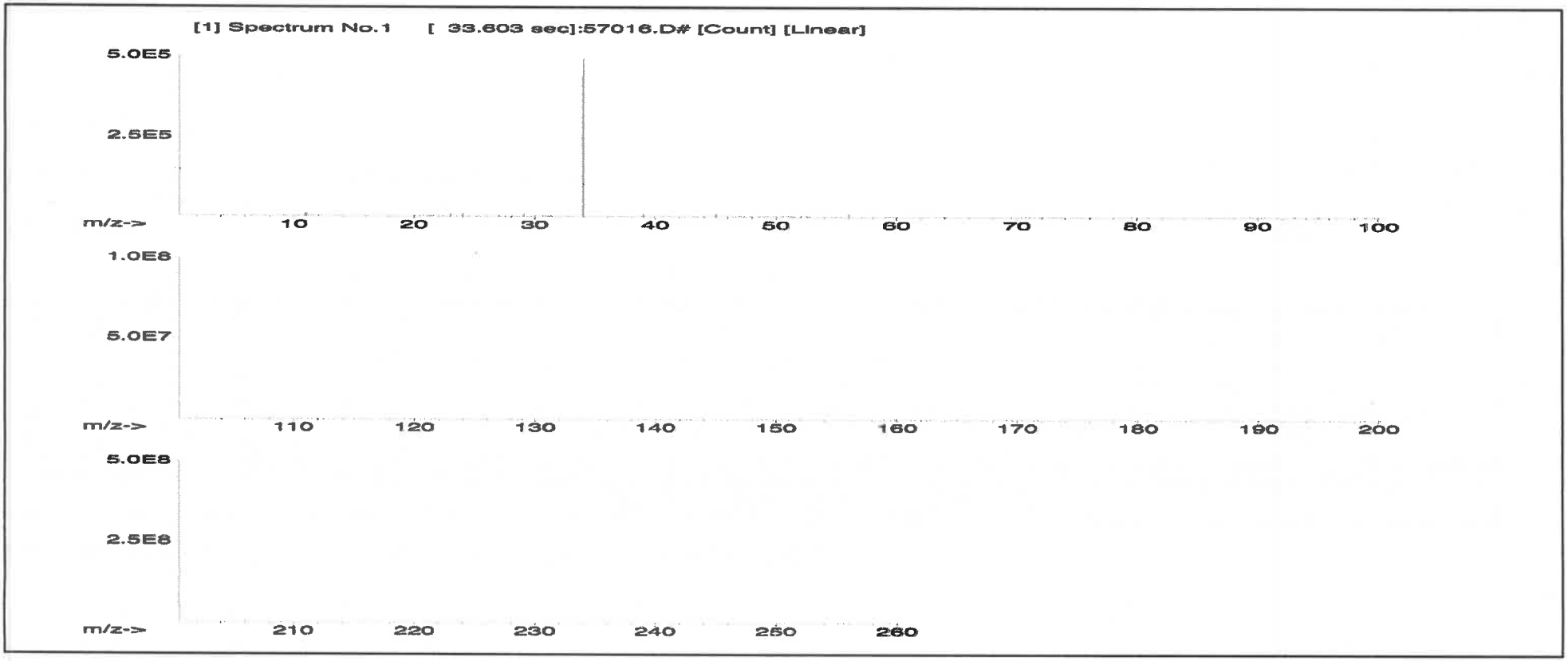
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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).
* 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: 02/09/24 M5820

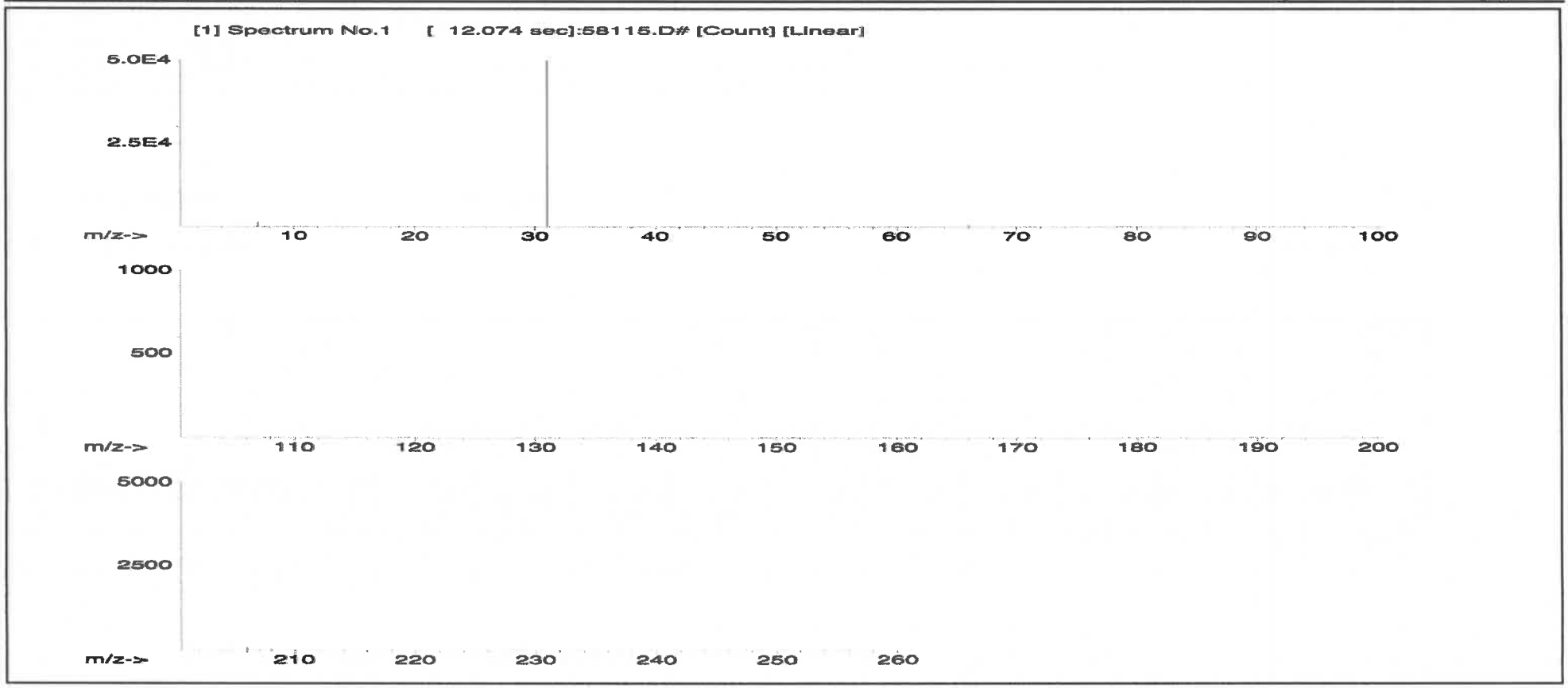
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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.
* All standard containers are meticulously cleaned prior to use.
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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.

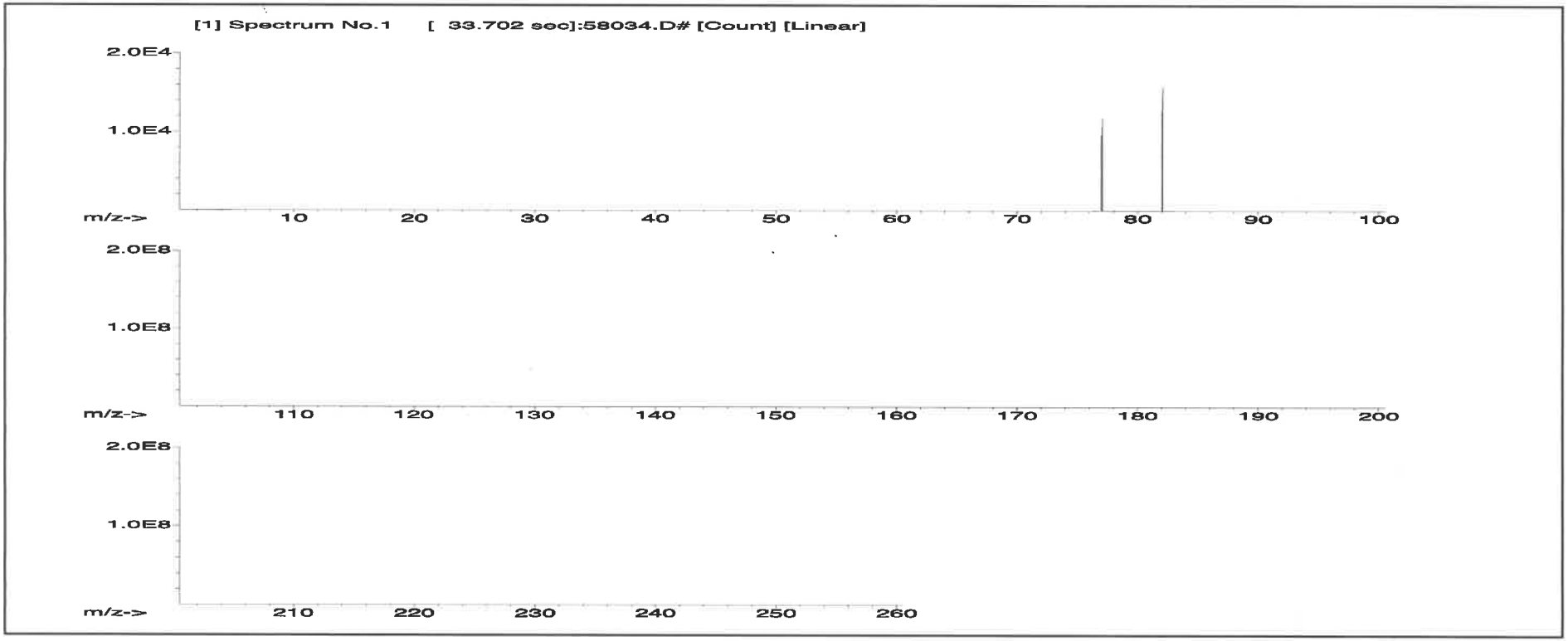
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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:

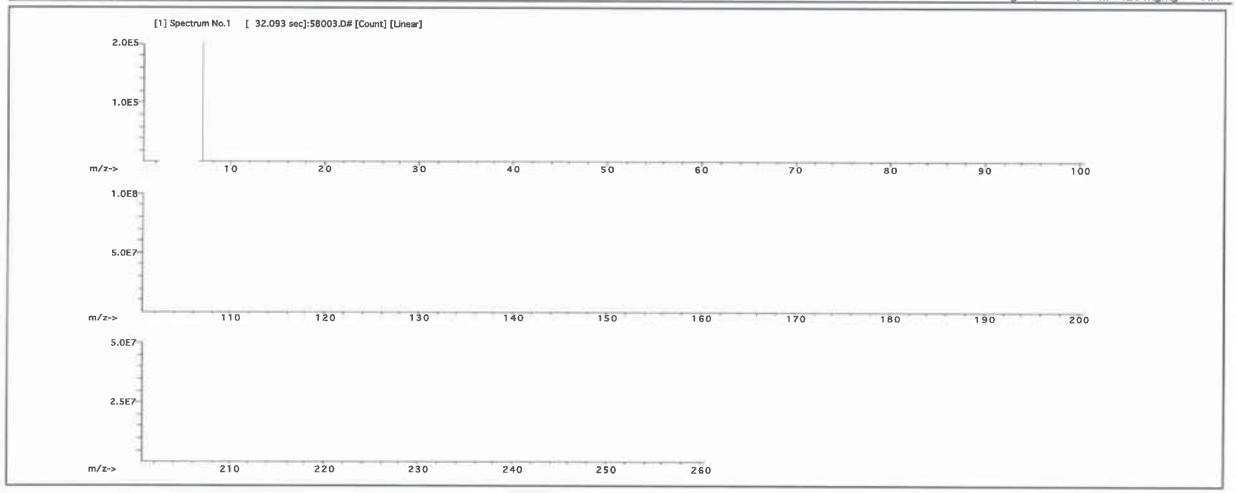
		Lot #	Solvent:
Part Number:	**57003**	24002546	Nitric Acid
Lot Number:	**062124**		
Description:	**Lithium (Li)**		
		2.0%	5.0 (mL) Nitric Acid
Expiration Date:	062127		
Recommended Storage:	Ambient (20 °C)		
Nominal Concentration (µg/mL):	**1000**		
NIST Test Number:	6UTB	5E-05 Balance Uncertainty	
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

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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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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

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 21, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- February 21, 2028

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certificate of Analysis

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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"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 21, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- December 21, 2027

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Sulfuric Acid
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis
Low Selenium

M 6041-46
MS

avantor™ | J.T.Baker®

Material No.: 9673-33
Batch No.: 23D2462010
Manufactured Date: 2023-03-22
Retest Date: 2028-03-20
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
ACS – Assay (H_2SO_4)	95.0 – 98.0 %	96.1 %
Appearance	Passes Test	Passes Test
ACS – Color (APHA)	≤ 10	5
ACS – Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS – Substances Reducing Permanganate (as SO2)	≤ 2 ppm	< 2 ppm
Ammonium (NH_4)	≤ 1 ppm	1 ppm
Chloride (Cl)	≤ 0.1 ppm	< 0.1 ppm
Nitrate (NO_3)	≤ 0.2 ppm	< 0.1 ppm
Phosphate (PO_4)	≤ 0.5 ppm	< 0.1 ppm
Trace Impurities – Aluminum (Al)	≤ 30.0 ppb	< 5.0 ppb
Arsenic and Antimony (as As)	≤ 4.0 ppb	< 2.0 ppb
Trace Impurities – Boron (B)	≤ 10.0 ppb	8.5 ppb
Trace Impurities – Cadmium (Cd)	≤ 2.0 ppb	< 0.3 ppb
Trace Impurities – Chromium (Cr)	≤ 6.0 ppb	< 0.4 ppb
Trace Impurities – Cobalt (Co)	≤ 0.5 ppb	< 0.3 ppb
Trace Impurities – Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities – Gold (Au)	≤ 10.0 ppb	0.5 ppb
Heavy Metals (as Pb)	≤ 500.0 ppb	< 100.0 ppb
Trace Impurities – Iron (Fe)	≤ 50.0 ppb	1.3 ppb
Trace Impurities – Lead (Pb)	≤ 0.5 ppb	< 0.5 ppb
Trace Impurities – Magnesium (Mg)	≤ 7.0 ppb	0.8 ppb
Trace Impurities – Manganese (Mn)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities – Mercury (Hg)	≤ 0.5 ppb	< 0.1 ppb
Trace Impurities – Nickel (Ni)	≤ 2.0 ppb	0.3 ppb
Trace Impurities – Potassium (K)	≤ 500.0 ppb	< 2.0 ppb
Trace Impurities – Selenium (Se)	≤ 50.0 ppb	< 0.1 ppb
Trace Impurities – Silicon (Si)	≤ 100.0 ppb	31.5 ppb
Trace Impurities – Silver (Ag)	≤ 1.0 ppb	< 0.3 ppb

>>> Continued on page 2 >>>

Sulfuric Acid
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis
Low Selenium

avantor™ | J.T.Baker®

Material No.: 9673-33
Batch No.: 23D2462010

Test	Specification	Result
Trace Impurities - Sodium (Na)	≤ 500.0 ppb	5.4 ppb
Trace Impurities - Strontium (Sr)	≤ 5.0 ppb	< 0.2 ppb
Trace Impurities - Tin (Sn)	≤ 5.0 ppb	< 0.8 ppb
Trace Impurities - Zinc (Zn)	≤ 5.0 ppb	0.4 ppb

For Laboratory,Research,or Manufacturing Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

James T Ethier

Jamie Ethier
Vice President Global Quality

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P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

EXP.: 9/6/2029

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CHEM-CLP-4
Lot Number:	V2-MEB746762
Matrix:	3% (v/v) HNO3 3% (v/v) HF
Value / Analyte(s):	1 000 µg/mL ea: Boron, Molybdenum, Silicon, Tin, Titanium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Boron, B	1 000 ± 5 µg/mL	Molybdenum, Mo	1 000 ± 5 µg/mL
Silicon, Si	1 000 ± 7 µg/mL	Tin, Sn	1 000 ± 5 µg/mL
Titanium, Ti	1 000 ± 6 µg/mL		

Density: 1.033 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
B	ICP Assay	3107	190605
B	Calculated		See Sec. 4.2
Mo	ICP Assay	traceable to 3134	U2-MO739068
Si	ICP Assay	Traceable to 3150	S2-SI702546
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	traceable to 3162a	T2-TI725816

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

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

September 06, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- September 06, 2029

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Joseph Burns
Custom VS Manager

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

R → 1/13/25

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	

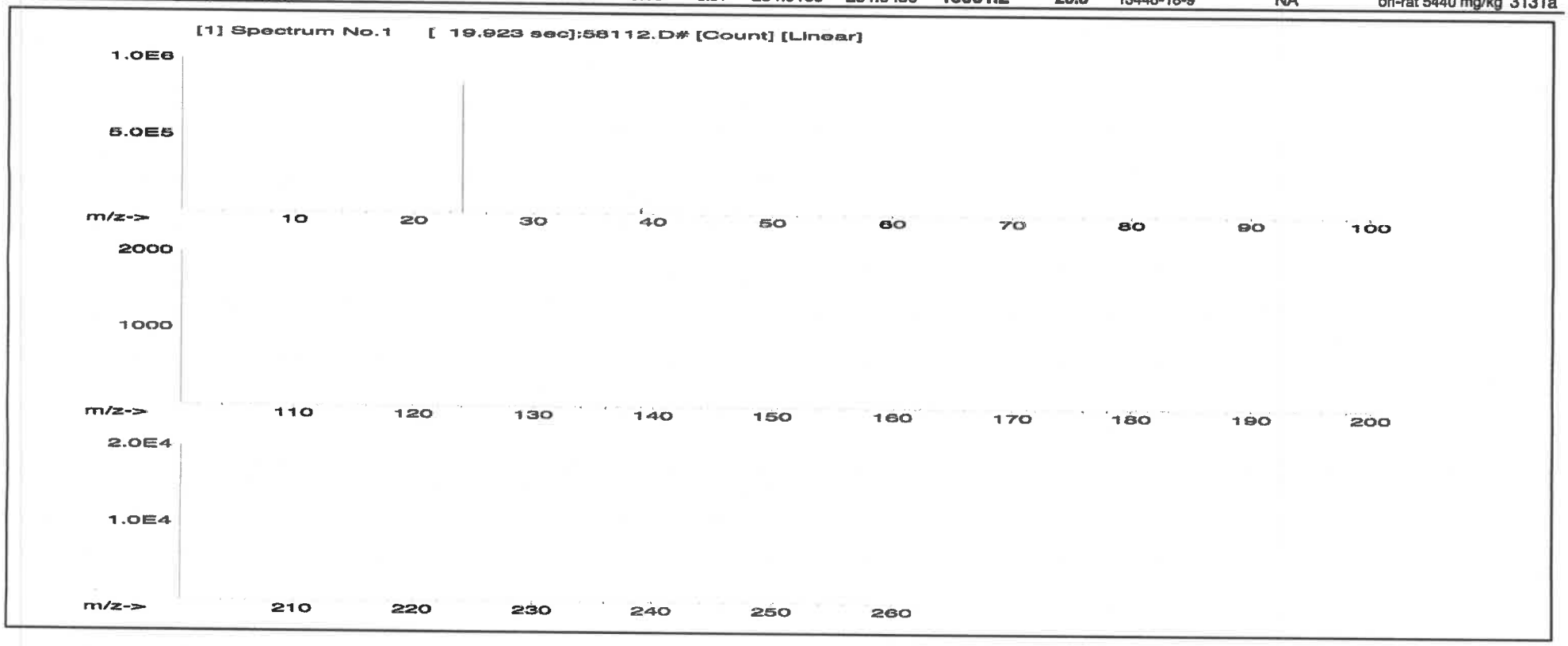
Giovanni Esposito

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).

Absolute Standards, Inc.
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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->1/13/28

M6128

Part Number:	**58025**	**Solvent:**	**Lot #** 24002546	Nitric Acid
Lot Number:	**101124**			
Description:	**Manganese (Mn)**	2%	80.0 (mL)	Nitric Acid
Expiration Date:	101127			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	4000.2	0.10	Flask Uncertainty	

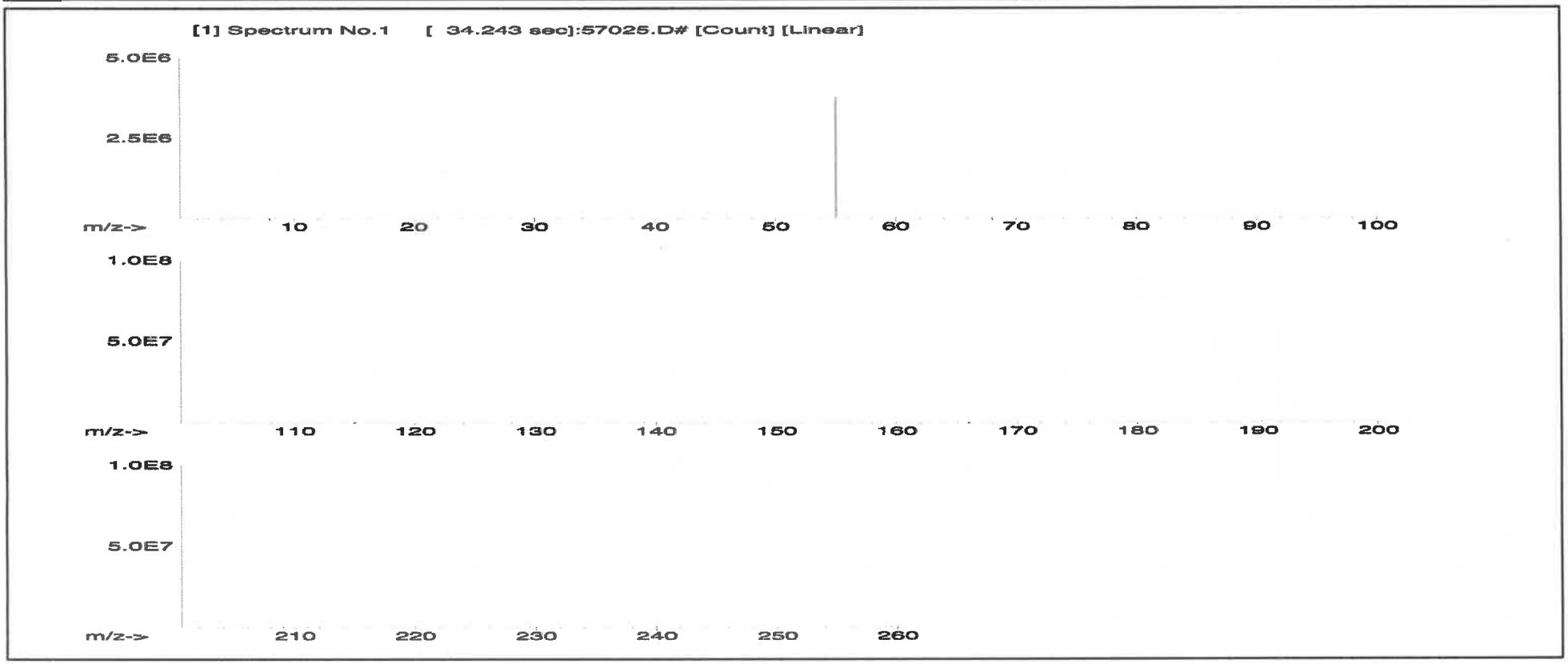
Giovanni Esposito

Formulated By:	Giovanni Esposito	101124

Pedro Rentas

Reviewed By:	Pedro L. Rentas	101124

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	**Actual Conc. (µg/mL)**	Expanded Uncertainty +/- (µg/mL)	**SDS Information** (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Manganese(II) nitrate hydrate (Mn)	IN031	MNM092020A1	1000	99.999	0.10	20.8	19.2322	19.2344	**1000.1**	**2.0**	15710-66-4	5 mg/m3	orl-rat >300mg/kg	3132



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	T	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

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M6137 R→10/3/24

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:	Single Analyte Custom Grade Solution
Catalog Number:	CGSI1
Lot Number:	V2-SI744713
Matrix:	tr. HNO3 tr. HF
Value / Analyte(s):	1 000 µg/mL ea: Silicon
Starting Material:	Silica
Starting Material Lot#:	1771
Starting Material Purity:	99.9981%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 999 ± 6 µg/mL

Density: 1.003 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	**999 ± 5 µg/mL** ICP Assay NIST SRM Traceable to 3150 Lot Number: S2-SI702546
Assay Method #2	**1000 ± 7 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000310	M	Eu	<	0.000310	O	Na		0.001656	M	Se	<	0.022000	M	Zn	<	0.002500
M	Al		0.010787	M	Fe	<	0.027000	M	Nb	<	0.001300	s	Si	<		O	Zr	<	0.001900
M	As	<	0.001900	M	Ga	<	0.001300	M	Nd	<	0.000310	M	Sm	<	0.000310				
M	Au	<	0.000910	M	Gd	<	0.000310	M	Ni	<	0.005500	M	Sn		0.000096				
M	B		0.016180	M	Ge	<	0.001900	M	Os	<	0.000610	O	Sr		0.000092				
M	Ba		0.000096	M	Hf		0.000423	i	P	<		M	Ta		0.002542				
O	Be	<	0.000570	M	Hg	<	0.000610	M	Pb	<	0.000310	M	Tb	<	0.000310				
M	Bi	<	0.000310	M	Ho	<	0.000610	M	Pd	<	0.000610	M	Te	<	0.000910				
O	Ca		0.011557	M	In	<	0.000310	M	Pr	<	0.000310	M	Th	<	0.001900				
M	Cd	<	0.000310	M	Ir	<	0.000310	M	Pt	<	0.000310	M	Ti		0.001078				
M	Ce	<	0.000610	O	K		0.000577	M	Rb	<	0.009100	M	Tl	<	0.000310				
M	Co	<	0.001600	M	La	<	0.000310	M	Re	<	0.000310	M	Tm	<	0.000310				
M	Cr	<	0.010000	O	Li	<	0.000460	M	Rh	<	0.000310	M	U	<	0.000310				
M	Cs	<	0.000310	M	Lu	<	0.000310	M	Ru	<	0.000310	O	V	<	0.001300				
M	Cu	<	0.002500	O	Mg		0.001348	O	S	<	0.570000	M	W	<	0.001900				
M	Dy	<	0.000310	M	Mn	<	0.002500	M	Sb	<	0.000310	M	Y	<	0.000310				
M	Er	<	0.000310	M	Mo	<	0.000310	O	Sc	<	0.000590	M	Yb	<	0.000310				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 28.09 +4 6 Si(OH)x(F)y2-

Chemical Compatibility -Soluble in HCl, HF, H3PO4 H2SO4 and HNO3 as the Si(OH)x(F)y2-. Avoid neutral to basic media. Unstable at ppm levels with metals that would pull F- away (i.e. Do not mix with Alkaline or Rare Earths, or high levels of transition elements unless they are fluorinated. Stable with most inorganic anions with a tendency to hydrolyze forming silicic acid (silicic acid is soluble up to ∼100 ppm in water) in all dilute acids except HF.

Stability - 2-100 ppb levels - stability unknown - (alone or mixed with all other metals) as the Si(OH)x(F)y2-. 1-10,000 ppm single element solutions as the Si(OH)x(F)y2- chemically stable for years in 2-5 % HNO3 / trace HF in a LDPE container.

Si Containing Samples (Preparation and Solution) -Metal (Soluble in 1:1:1 H2O / HF / HNO3); Oxide - SiO2, amorphic (dissolve by heating in 1:1:1 H2O / HF / HNO3); Oxide - quartz (fuse in Pt0 with Na2CO3); Geological Samples(fuse in Pt0with Na2CO3 followed by HCl solution of the fuseate); Organic Matrices containing silicates and non volatile silicon compounds (dry ash at 4500C in Pt0 and dissolve by gently warming with 1:1:1 H2O / HF / H2SO4 or fuse / ash with Na2CO3 and dissolve fuseate with HCl / H2O); Silicone Oils - dimethyl silicones depolymerize to form volatile monomer units when heated (Measure directly in alcoholic KOH / xylene mixture where sample is treated first with the KOH at 60-1000C to "unzip" the Si- O-Si polymeric structure or digest with conc. H2SO4 / H2O2 followed by cooling and dissolution of the dehydrated silica with HF.) Note that the direct analysis of silicone oils in an organic solvent will result in false high results due to high vapor pressure of volatile monomer units like hexamethylcyclotrisiloxane. The KOH forms the K2+Si(CH3)2O= salt which is not volatile at room temperature.

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 28 amu	4000 - 8000 ppt	N/A	N2, 12C16O
ICP-OES 212.412 nm	0.02/0.01 µg/mL	1	Hf, Os, Mo, Ta
ICP-OES 251.611 nm	0.012/0.003 µg/mL	1	Ta, U, Zn, Th
ICP-OES 288.158 nm	0.03/0.004 µg/mL	1	Ta, Ce, Cr, Cd, Th

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 10, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **July 10, 2029**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Custom Processing Supervisor

Certificate Approved By:

Muzzammil Khan
Stock Laboratory Supervisor

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Absolute Standards, Inc.
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CERTIFIED WEIGHT REPORT:

R-> 1/13/25

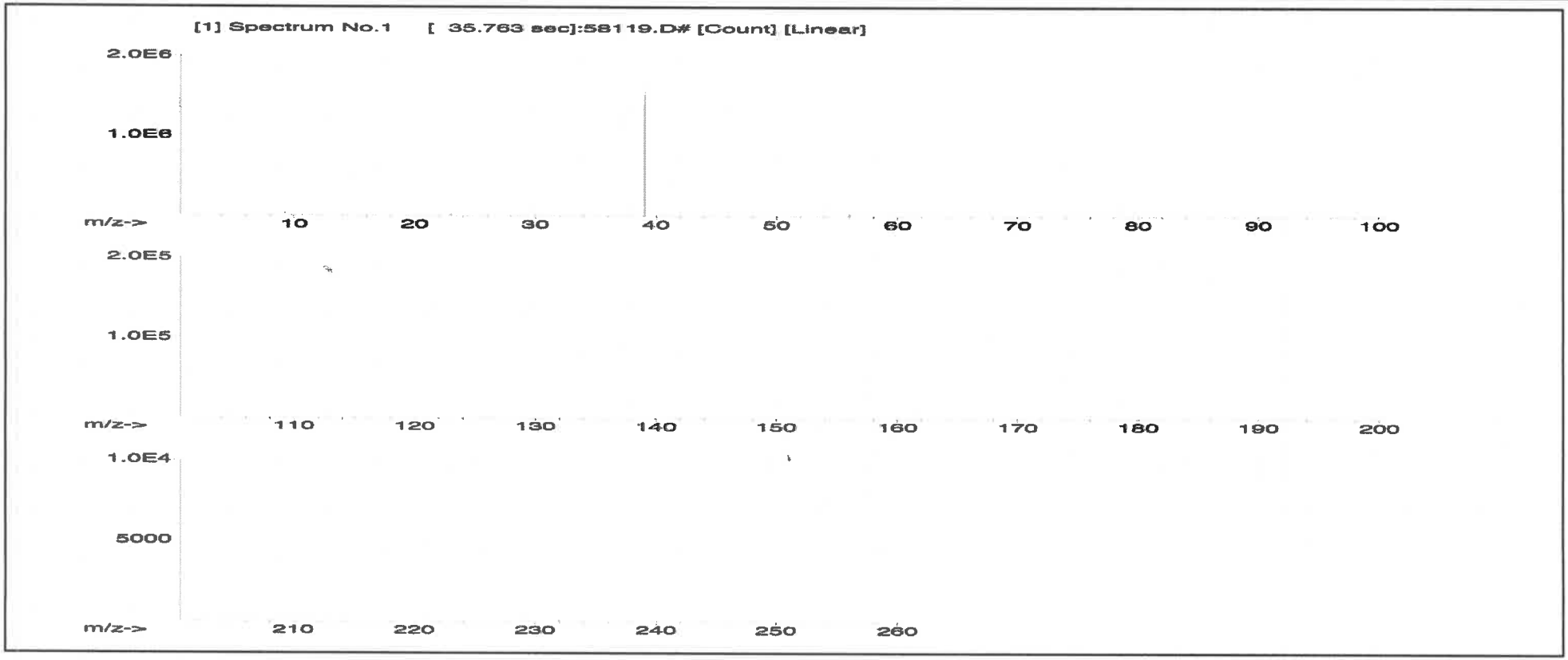
Part Number:	**57119**		**Lot #**		
Lot Number:	**103024**	**Solvent:**	24002546	Nitric Acid	
Description:	**Potassium (K)**	2%	80.0 (mL)	Nitric Acid	
Expiration Date:	103027				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**10000**				
NIST Test Number:	6UTB	5E-05	Balance 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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CERTIFIED WEIGHT REPORT:

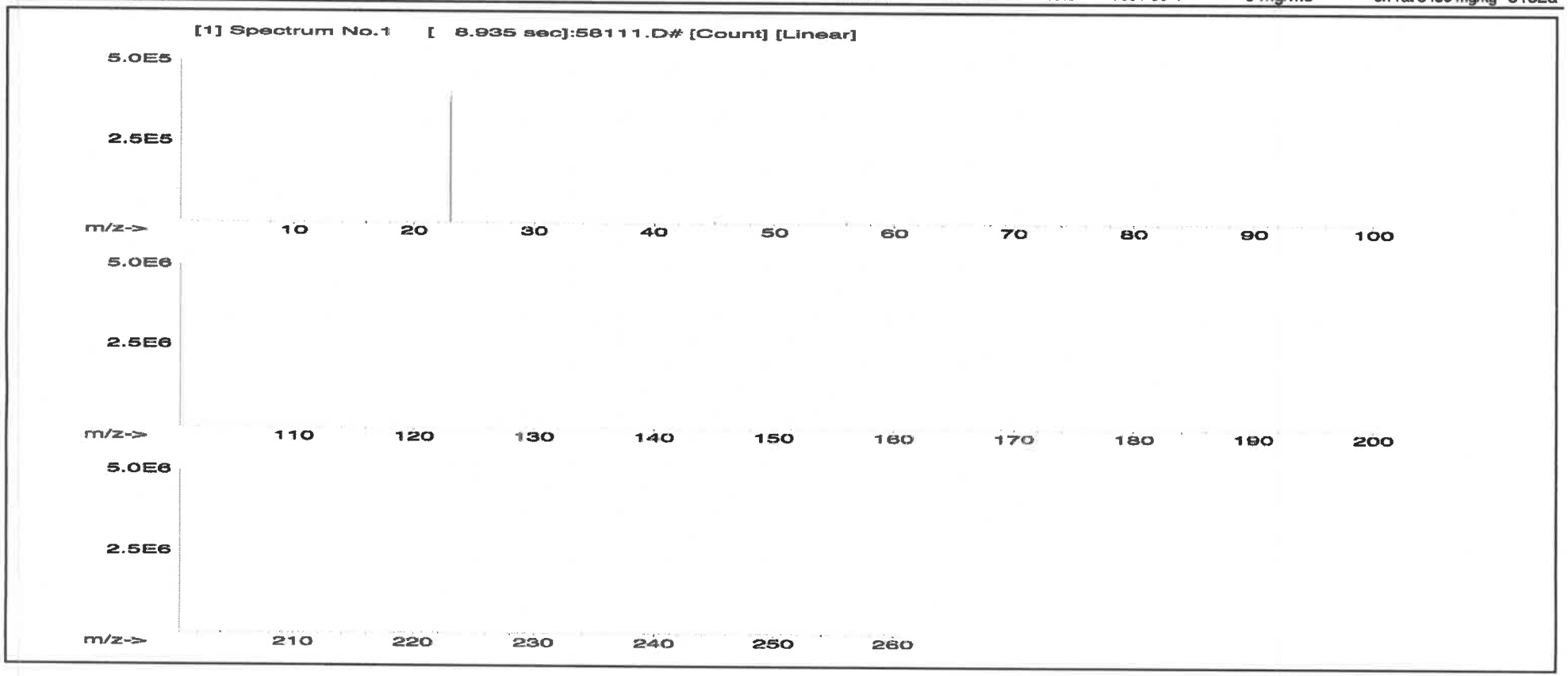
R->1/13/25

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 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

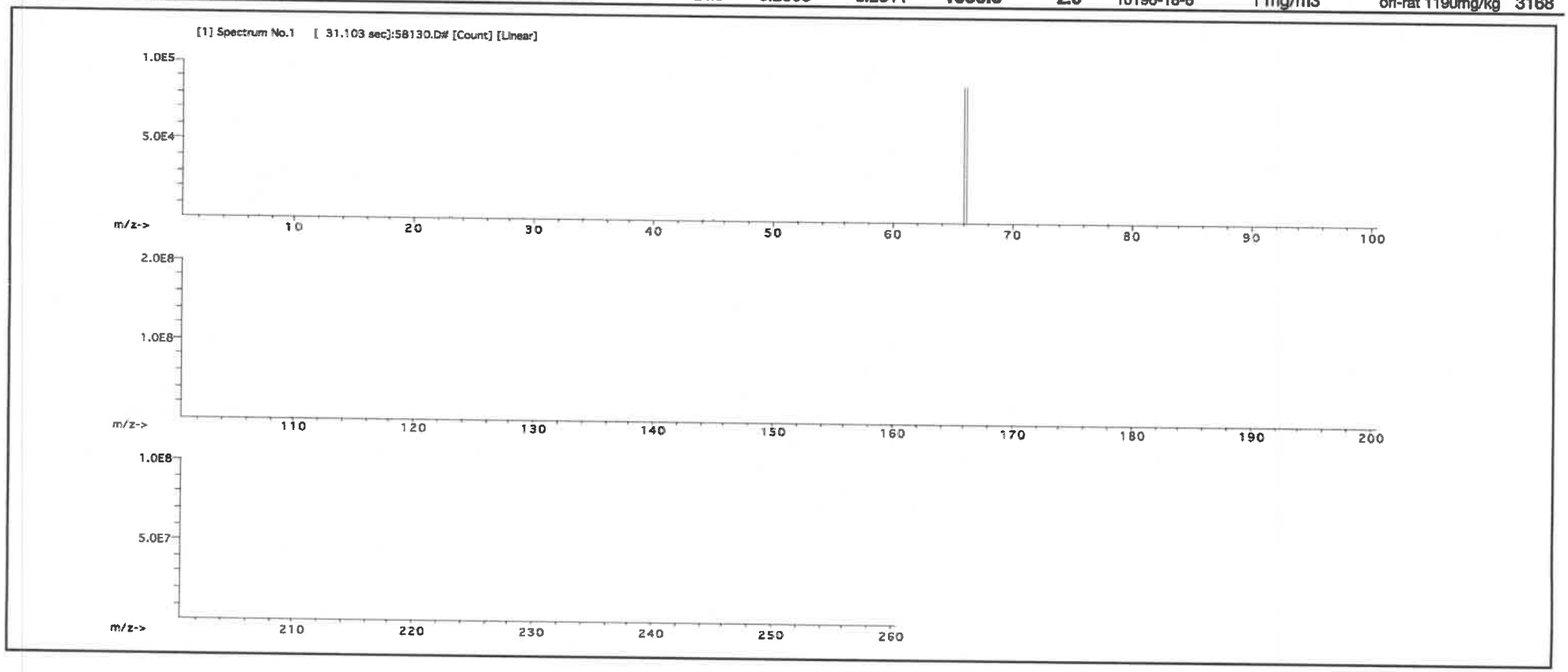
		Lot #	
Solvent:	24012496	Nitric Acid	
	2%	40.0 (mL)	Nitric Acid

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.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

M6151

R→ 1/15/25

Material No.: 9530-33
Batch No.: 22G2862015
Manufactured Date: 2022-06-15
Retest Date: 2027-06-14
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
ACS – Assay (as HCl) (by acid-base titrn)	36.5 – 38.0 %	37.9 %
ACS – Color (APHA)	≤ 10	5
ACS – Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS – Specific Gravity at 60°/60°F	1.185 – 1.192	1.191
ACS – Bromide (Br)	≤ 0.005 %	< 0.005 %
ACS – Extractable Organic Substances	≤ 5 ppm	< 1 ppm
ACS – Free Chlorine (as Cl_2)	≤ 0.5 ppm	< 0.5 ppm
Phosphate (PO_4)	≤ 0.05 ppm	< 0.03 ppm
Sulfate (SO_4)	≤ 0.5 ppm	< 0.3 ppm
Sulfite (SO_3)	≤ 0.8 ppm	0.3 ppm
Ammonium (NH_4)	≤ 3 ppm	< 1 ppm
Trace Impurities – Arsenic (As)	≤ 0.010 ppm	< 0.003 ppm
Trace Impurities – Aluminum (Al)	≤ 10.0 ppb	1.3 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 3.0 ppb
Trace Impurities – Barium (Ba)	≤ 1.0 ppb	0.2 ppb
Trace Impurities – Beryllium (Be)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Bismuth (Bi)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Boron (B)	≤ 20.0 ppb	< 5.0 ppb
Trace Impurities – Cadmium (Cd)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities – Calcium (Ca)	≤ 50.0 ppb	163.0 ppb
Trace Impurities – Chromium (Cr)	≤ 1.0 ppb	0.7 ppb
Trace Impurities – Cobalt (Co)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities – Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities – Gallium (Ga)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Germanium (Ge)	≤ 3.0 ppb	< 2.0 ppb
Trace Impurities – Gold (Au)	≤ 4.0 ppb	0.6 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities – Iron (Fe)	≤ 15 ppb	6 ppb

>>> Continued on page 2 >>>

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

Material No.: 9530-33
Batch No.: 22G2862015

Test	Specification	Result
Trace Impurities - Lead (Pb)	≤ 1.0 ppb	< 0.5 ppb
Trace Impurities - Lithium (Li)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Magnesium (Mg)	≤ 10.0 ppb	2.9 ppb
Trace Impurities - Manganese (Mn)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities - Mercury (Hg)	≤ 0.5 ppb	0.1 ppb
Trace Impurities - Molybdenum (Mo)	≤ 10.0 ppb	< 3.0 ppb
Trace Impurities - Nickel (Ni)	≤ 4.0 ppb	< 0.3 ppb
Trace Impurities - Niobium (Nb)	≤ 1.0 ppb	0.8 ppb
Trace Impurities - Potassium (K)	≤ 9.0 ppb	< 2.0 ppb
Trace Impurities - Selenium (Se), For Information Only		< 1.0 ppb
Trace Impurities - Silicon (Si)	≤ 100.0 ppb	< 10.0 ppb
Trace Impurities - Silver (Ag)	≤ 1.0 ppb	0.5 ppb
Trace Impurities - Sodium (Na)	≤ 100.0 ppb	2.3 ppb
Trace Impurities - Strontium (Sr)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Tantalum (Ta)	≤ 1.0 ppb	1.6 ppb
Trace Impurities - Thallium (Tl)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities - Tin (Sn)	≤ 5.0 ppb	4.0 ppb
Trace Impurities - Titanium (Ti)	≤ 1.0 ppb	1.5 ppb
Trace Impurities - Vanadium (V)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Zinc (Zn)	≤ 5.0 ppb	0.8 ppb
Trace Impurities - Zirconium (Zr)	≤ 1.0 ppb	0.3 ppb

>>> Continued on page 3 >>>

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

Material No.: 9530-33
Batch No.: 22G2862015

Test	Specification	Result

For Laboratory,Research,or Manufacturing Use
Product Information (not specifications):
Appearance (clear, fuming liquid)
Meets ACS Specifications
Storage Condition: Store below 25 °C.

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

James T Ethier

Jamie Ethier
Vice President Global Quality

Nitric Acid 69%
CMOS

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.

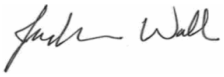
12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

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

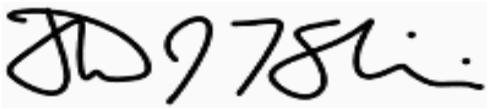
- Sealed TCT Bag Open Date: _____

- 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
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P: 800-669-6799/540-585-3030
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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:	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.

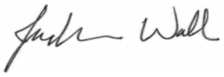
12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Justin Dirico
Stock Processing Supervisor

Certificate Approved By:

Jodie Wall
Stock VSM Coordinator



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M6030

R: 8/5/24

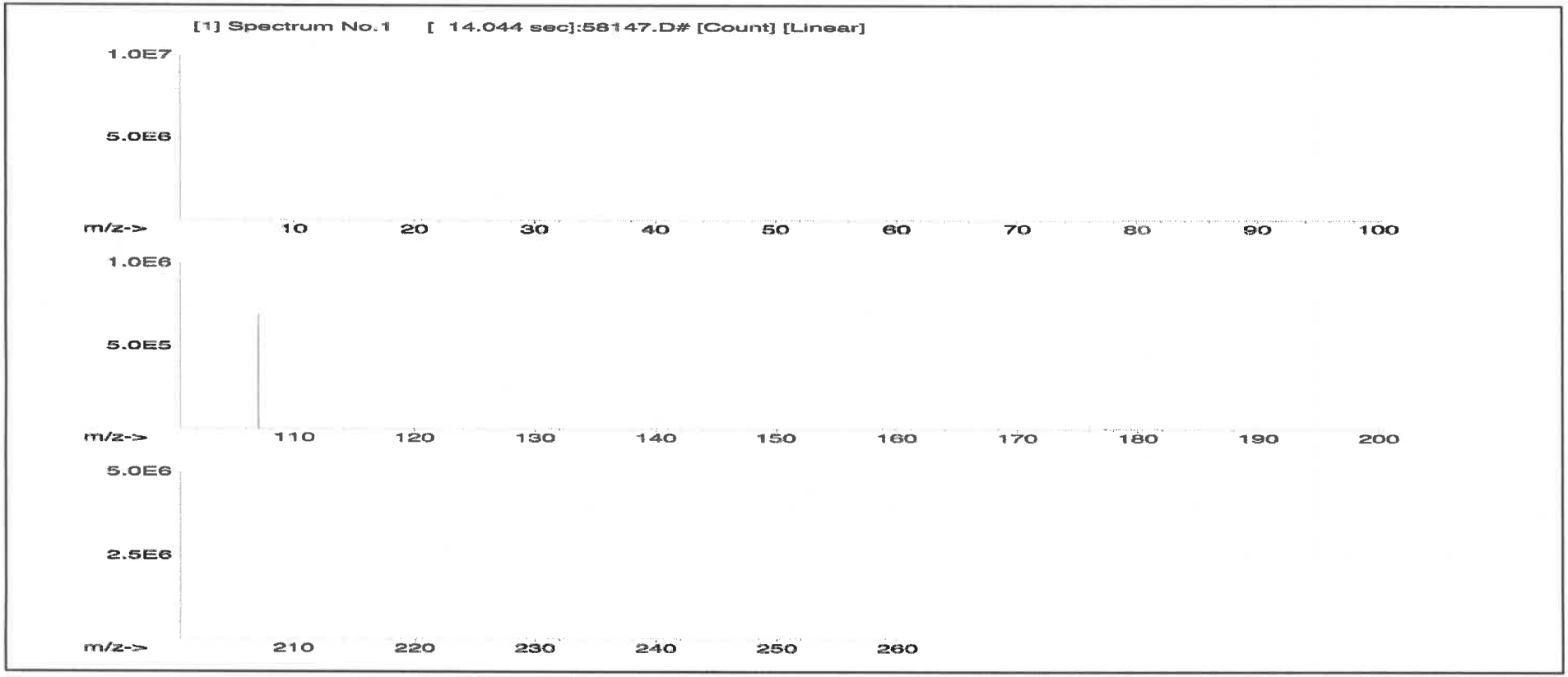
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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		

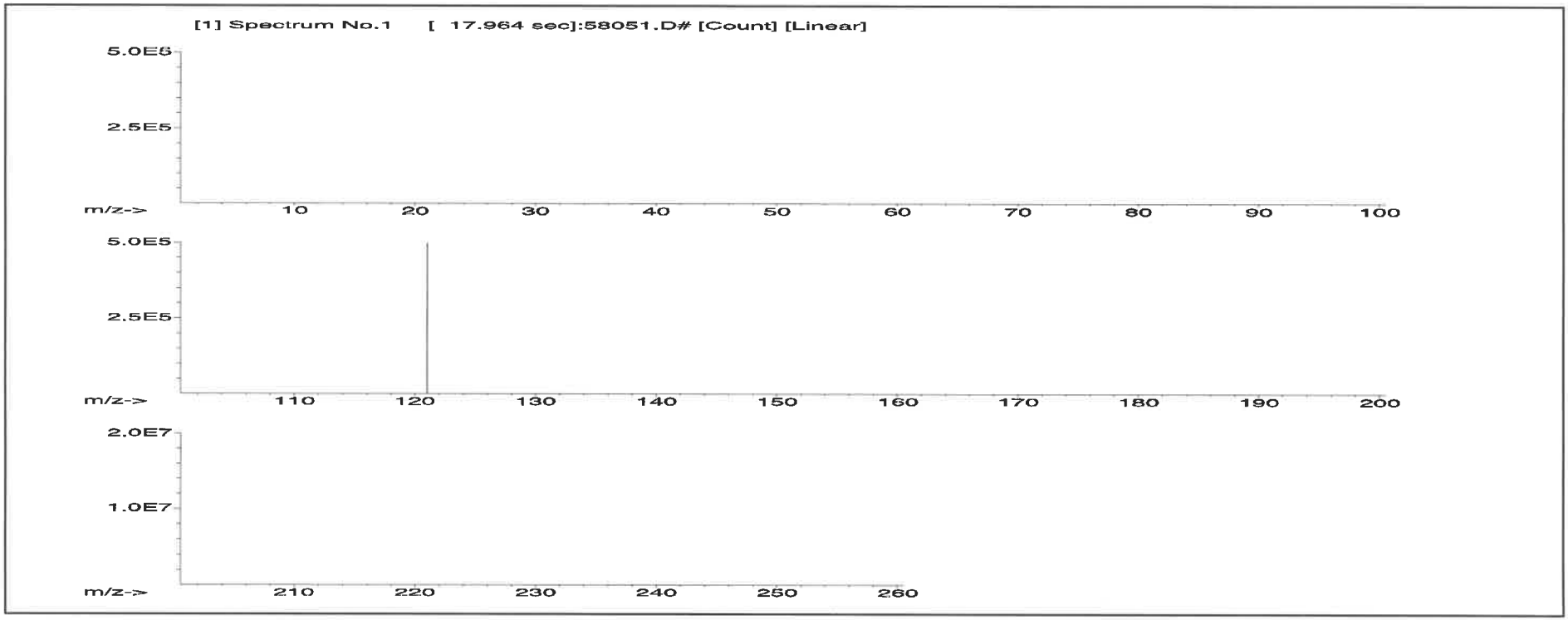
Giovanni Esposito

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
Cu	25	(2.0)	-23.0	27.0	511	434	588
Fe	100	101000	85600	116500	99300	84400	114500
Pb	10	(0.0)	-10.0	10.0	(49.0)	39.0	59.0
Mg	5000	255000	216000	294000	248000	210000	286000
Mn	15	(7.0)	-8.0	22.0	507	430	584
Ni	40	(2.0)	-38.0	42.0	954	810	1100
Se	35	(0.0)	-35.0	35.0	(46.0)	11.0	81.0
Ag	10	(0.0)	-10.0	10.0	201	170	232
Tl	25	(0.0)	-25.0	25.0	(108)	83.0	133
V	50	(0.0)	-50.0	50.0	491	417	565
Zn	60	(0.0)	-60.0	60.0	952	809	1095

The acceptance ranges for all analytes in parentheses in the above table were determined using the listed certified value ± 1 times the associated CLP SOW CRQL. The acceptance ranges for all other analytes were determined using the certified value ± 15 percent of the listed certified value.

INORGANIC VENTURES™

Refine your results. Redefine your industry.

Certificate of Analysis

R: 8/5/24 M6019

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 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

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		

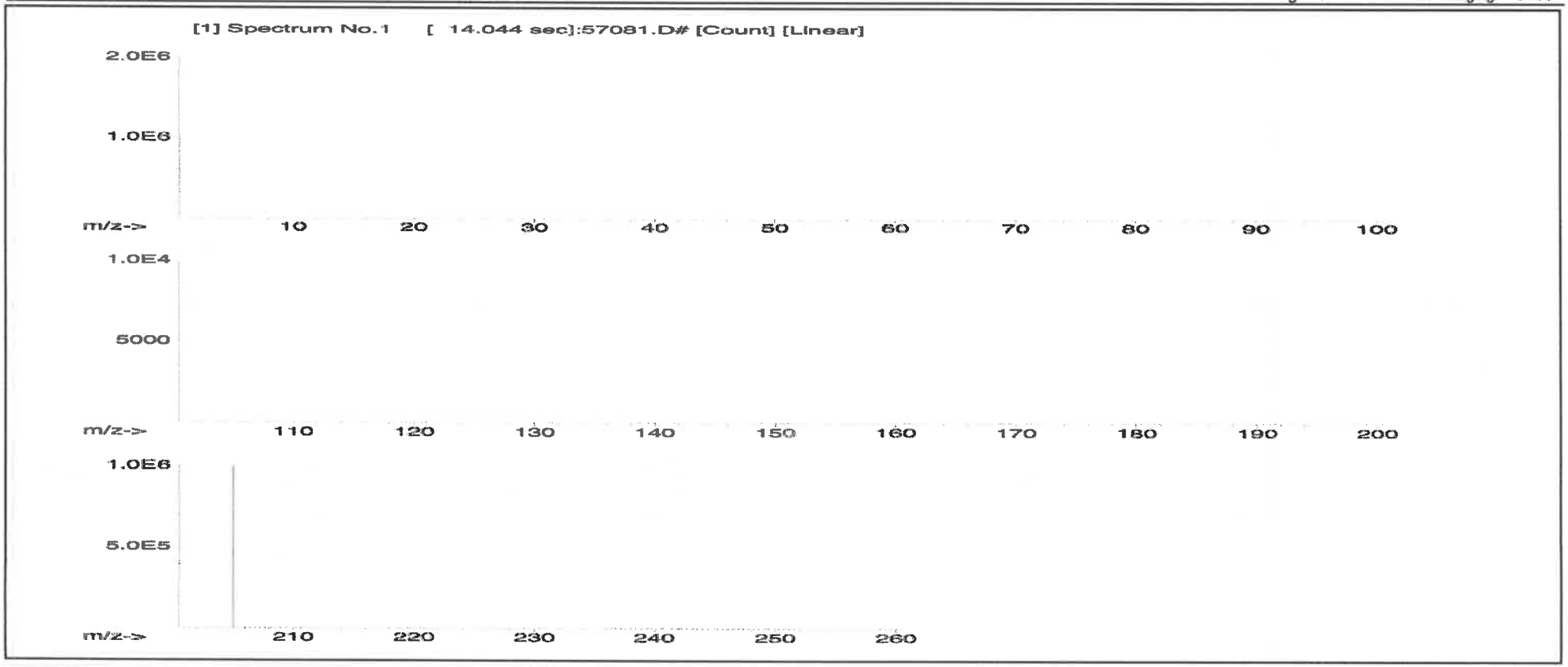
Aleah O'Brady

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	

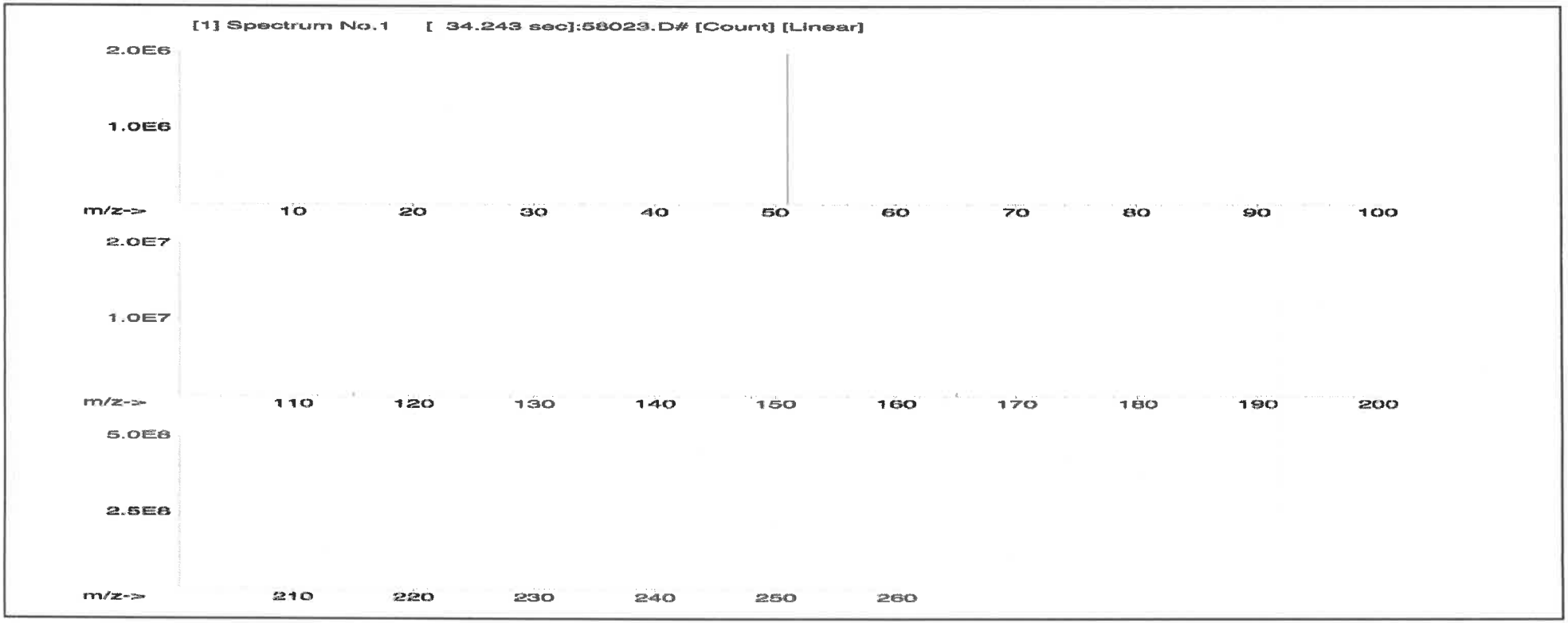
Aleah O'Brady

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.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

SHIPPING DOCUMENTS

Alliance TECHNICAL GROUP
284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 · Fax (908) 789-8922
www.chemtech.net

ALLIANCE PROJECT NO.
QUOTE NO. Q 2743
COC Number 2047567

CLIENT INFORMATION

REPORT TO BE SENT TO:
COMPANY: GECP INC
ADDRESS: 8 CARRIAGE
CITY Succasunna STATE: NJ ZIP 07876
ATTENTION:
PHONE: FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: CAPRA
PROJECT NO.: LOCATION:
PROJECT MANAGER: GL
e-mail:
PHONE: FAX:

CLIENT BILLING INFORMATION

BILL TO: GECP INC PO#:
ADDRESS: 8 CARRIAGE
CITY Succasunna STATE: NJ ZIP 07876
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX (RUSH) _____ DAYS*
HARDCOPY (DATA PACKAGE) STANDARD DAYS*
EDD: _____ DAYS*
*TO BE APPROVED BY CHEMTECH
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS

DATA DELIVERABLE INFORMATION

☐ Level 1 (Results Only) ☐ Level 4 (QC + Full Raw Data)
☐ Level 2 (Results + QC) X ☐ NJ Reduced ☐ US EPA CLP
☐ Level 3 (Results + QC + Raw Data) ☐ NYS ASP A ☐ NYS ASP B
☐ Other _____
X EDD FORMAT excel.

ANALYSIS

1. TCL VOCs
2. TCL BNAs
3. TAL Metals
4. TCL Pesticides
5. RCRA
6. pH, Ignitability
7. Paint Filter
8. PCBs
9. EPH

PRESERVATIVES

COMMENTS

← Specify Preservatives
A-HCl D-NaOH
B-HN03 E-ICE
C-H2SO4 F-OTHER

ALLIANCE SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	1	2	3	4	5	6	7	8	9
1.	WC1	SOIL		X	7/31/25	1530	2	X	X	X	X	X	X	X	X	X
2.																
3.																
4.																
5.																
6.																
7.																
8.																
9.																
10.																

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:
1.	7/31/25	1. 15:52
2.		2.
3.		3.

Conditions of bottles or coolers at receipt: ☐ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP 3.9 °C
Comments: CAPRA Waste Class

Page _____ of
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

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

LOGIN REPORT/SAMPLE TRANSFER

Order ID : Q2743 GENV01
Client Name : G Environmental
Client Contact : Gary Landis
Invoice Name : G Environmental
Invoice Contact : Gary Landis

Order Date : 7/31/2025 4:05:00 PM
Project Name : Capra
Receive DateTime : 7/31/2025 3:52:00 PM
Purchase Order :

Project Mgr : Deepak
Report Type : NJ Reduced
EDD Type : Excel NJ
Hard Copy Date :
Date Signoff : 7/31/2025 4:17:25 PM

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
Q2743-01	WC1	Solid	07/31/2025	15:30					
					VOC-TCLVOA-10		8260D		10 Bus. Days

Relinguished By : [signature]
Date / Time : 8/1/25 9:15

Received By : [signature]
Date / Time : 08/01/25 9:15

Storage Area : VOA Refridgerator Room

Reg # 6
FTZ