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

Order ID : P4495

Project ID : NJ Soil PT

Client : Chemtech Consulting Group

Lab Sample Number	Client Sample Number
P4495-01	PT-AN-SOIL
P4495-02	PT-CORR-SOIL
P4495-03	PT-CN-SOIL
P4495-04	PT-CN-SOIL
P4495-05	PT-FP-SOIL
P4495-06	PT-CR6-SOIL
P4495-07	PT-NUT-SOIL
P4495-08	PT-NUT-SOIL
P4495-09	PT-OGR-SOIL
P4495-10	PT-MET-SOIL
P4495-11	PT-BNA-SOIL
P4495-12	PT-TRIAZINE-SOIL
P4495-13	PT-PAH-SOIL
P4495-14	PT-DIES-SOIL
P4495-15	PT-GAS-SOIL
P4495-16	PT-NJEPH-SOIL
P4495-17	PT-HERB-SOIL
P4495-18	PT-PCB-SOIL
P4495-19	PT-PCBO-SOIL
P4495-20	PT-PEST-SOIL
P4495-21	PT-CHLR-SOIL
P4495-22	PT-TXP-SOIL
P4495-23	PT-VOA-SOIL
P4495-24	PT-SOL-SOIL
P4495-25	PT-NO2-SOIL

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

Signature : _____

Date: 12/12/2024

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

Alliance TECHNICAL GROUP

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

DATA REPORTING QUALIFIERS- INORGANIC

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

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

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APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: **P4495**

	Completed
For thorough review, the report must have the following:	
GENERAL:	
Are all original paperwork present (chain of custody, record of communication,airbill, sample management lab chronicle, login page)	✓
Check chain-of-custody for proper relinquish/return of samples	✓
Is the chain of custody signed and complete	✓
Check internal chain-of-custody for proper relinquish/return of samples /sample extracts	✓
Collect information for each project id from server. Were all requirements followed	✓
COVER PAGE:	
Do numbers of samples correspond to the number of samples in the Chain of Custody on login page	✓
Do lab numbers and client Ids on cover page agree with the Chain of Custody	✓
CHAIN OF CUSTODY:	
Do requested analyses on Chain of Custody agree with form I results	✓
Do requested analyses on Chain of Custody agree with the log-in page	✓
Were the correct method log-in for analysis according to the Analytical Request and Chain of Castody	✓
Were the samples received within hold time	✓
Were any problems found with the samples at arrival recorded in the Sample Management Laboratory Chronicle	✓
ANALYTICAL:	
Was method requirement followed?	✓
Was client requirement followed?	✓
Does the case narrative summarize all QC failure?	✓
All runlogs and manual integration are reviewed for requirements	✓
All manual calculations and /or hand notations verified	✓

QA Review Signature: **SOHIL JODHANI** **Date:** **12/12/2024**

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LAB CHRONICLE

OrderID:	P4495	**OrderDate:**	10/23/2024 10:29:00 AM
Client:	Chemtech Consulting Group	**Project:**	NJ Soil PT
Contact:	QA Officer	**Location:**	QA Office,VOA Lab

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
P4495-10	**PT-MET-SOIL**	**SOIL**			**10/21/24**			**10/23/24**
			Mercury	7471B		10/30/24	10/31/24	
			Metals ICP-Group1	6010D		11/26/24	11/27/24	
			Metals ICP-Group1	6010D		11/26/24	12/04/24	

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Hit Summary Sheet
SW-846

SDG No.: P4495 **Order ID:** P4495

Client: Chemtech Consulting Group **Project ID:** NJ Soil PT

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Client ID : PT-MET-SOIL								
P4495-10	PT-MET-SOIL	SOIL	Aluminum	10700		2.14	4.44	mg/Kg
P4495-10	PT-MET-SOIL	SOIL	Antimony	50.3		0.13	2.22	mg/Kg
P4495-10	PT-MET-SOIL	SOIL	Arsenic	83.2		0.26	0.89	mg/Kg
P4495-10	PT-MET-SOIL	SOIL	Barium	265		0.57	4.44	mg/Kg
P4495-10	PT-MET-SOIL	SOIL	Beryllium	139	D	0.11	2.67	mg/Kg
P4495-10	PT-MET-SOIL	SOIL	Boron	308		0.70	4.44	mg/Kg
P4495-10	PT-MET-SOIL	SOIL	Cadmium	73.5		0.014	0.27	mg/Kg
P4495-10	PT-MET-SOIL	SOIL	Calcium	5000		2.49	88.9	mg/Kg
P4495-10	PT-MET-SOIL	SOIL	Chromium	283	D	0.24	2.22	mg/Kg
P4495-10	PT-MET-SOIL	SOIL	Cobalt	101		0.052	1.33	mg/Kg
P4495-10	PT-MET-SOIL	SOIL	Copper	229		0.42	0.89	mg/Kg
P4495-10	PT-MET-SOIL	SOIL	Iron	10400		2.39	4.44	mg/Kg
P4495-10	PT-MET-SOIL	SOIL	Lead	181		0.13	0.53	mg/Kg
P4495-10	PT-MET-SOIL	SOIL	Magnesium	6900		3.05	88.9	mg/Kg
P4495-10	PT-MET-SOIL	SOIL	Manganese	896		0.063	0.89	mg/Kg
P4495-10	PT-MET-SOIL	SOIL	Mercury	21.8	D	0.29	0.65	mg/Kg
P4495-10	PT-MET-SOIL	SOIL	Nickel	95.8		0.080	1.78	mg/Kg
P4495-10	PT-MET-SOIL	SOIL	Potassium	8040		25.5	88.9	mg/Kg
P4495-10	PT-MET-SOIL	SOIL	Selenium	164		0.29	0.89	mg/Kg
P4495-10	PT-MET-SOIL	SOIL	Silicon	430		3.64	17.8	mg/Kg
P4495-10	PT-MET-SOIL	SOIL	Silver	29.2		0.046	0.44	mg/Kg
P4495-10	PT-MET-SOIL	SOIL	Sulfur	409		0.30	1.78	mg/Kg
P4495-10	PT-MET-SOIL	SOIL	Sodium	8990		32.1	88.9	mg/Kg
P4495-10	PT-MET-SOIL	SOIL	Strontium	231		0.22	8.89	mg/Kg
P4495-10	PT-MET-SOIL	SOIL	Lithium	629	D	0.17	4.44	mg/Kg
P4495-10	PT-MET-SOIL	SOIL	Thallium	175		0.39	1.78	mg/Kg
P4495-10	PT-MET-SOIL	SOIL	Tin	73.7		0.15	1.78	mg/Kg
P4495-10	PT-MET-SOIL	SOIL	Titanium	350	D	0.98	8.89	mg/Kg
P4495-10	PT-MET-SOIL	SOIL	Vanadium	213		0.24	1.78	mg/Kg
P4495-10	PT-MET-SOIL	SOIL	Zinc	267		0.098	1.78	mg/Kg

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SAMPLE DATA

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Report of Analysis

Client:	Chemtech Consulting Group	Date Collected:	10/21/24
Project:	NJ Soil PT	Date Received:	10/23/24
Client Sample ID:	PT-MET-SOIL	SDG No.:	P4495
Lab Sample ID:	P4495-10	Matrix:	SOIL
Level (low/med):	low	% Solid:	100

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.	Prep Met.
7429-90-5	Aluminum	10700		1	2.14	4.44	mg/Kg	11/26/24 12:45	11/27/24 14:52	SW6010	SW3050
7440-36-0	Antimony	50.3		1	0.13	2.22	mg/Kg	11/26/24 12:45	11/27/24 14:52	SW6010	SW3050
7440-38-2	Arsenic	83.2		1	0.26	0.89	mg/Kg	11/26/24 12:45	11/27/24 14:52	SW6010	SW3050
7440-39-3	Barium	265		1	0.57	4.44	mg/Kg	11/26/24 12:45	11/27/24 14:52	SW6010	SW3050
7440-41-7	Beryllium	139	D	10	0.11	2.67	mg/Kg	11/26/24 12:45	12/04/24 14:33	SW6010	SW3050
7440-42-8	Boron	308		1	0.70	4.44	mg/Kg	11/26/24 12:45	11/27/24 14:52	SW6010	SW3050
7440-43-9	Cadmium	73.5		1	0.014	0.27	mg/Kg	11/26/24 12:45	11/27/24 14:52	SW6010	SW3050
7440-70-2	Calcium	5000		1	2.49	88.9	mg/Kg	11/26/24 12:45	11/27/24 14:52	SW6010	SW3050
7440-47-3	Chromium	283	D	5	0.24	2.22	mg/Kg	11/26/24 12:45	11/27/24 15:07	SW6010	SW3050
7440-48-4	Cobalt	101		1	0.052	1.33	mg/Kg	11/26/24 12:45	11/27/24 14:52	SW6010	SW3050
7440-50-8	Copper	229		1	0.42	0.89	mg/Kg	11/26/24 12:45	11/27/24 14:52	SW6010	SW3050
7439-89-6	Iron	10400		1	2.39	4.44	mg/Kg	11/26/24 12:45	11/27/24 14:52	SW6010	SW3050
7439-92-1	Lead	181		1	0.13	0.53	mg/Kg	11/26/24 12:45	11/27/24 14:52	SW6010	SW3050
7439-93-2	Lithium	629	D	5	0.17	4.44	mg/Kg	11/26/24 12:45	11/27/24 15:07	SW6010	SW3050
7439-95-4	Magnesium	6900		1	3.05	88.9	mg/Kg	11/26/24 12:45	11/27/24 14:52	SW6010	SW3050
7439-96-5	Manganese	896		1	0.063	0.89	mg/Kg	11/26/24 12:45	11/27/24 14:52	SW6010	SW3050
7439-97-6	Mercury	21.8	D	50	0.29	0.65	mg/Kg	10/30/24 16:50	10/31/24 12:00	SW7471B	
7440-02-0	Nickel	95.8		1	0.080	1.78	mg/Kg	11/26/24 12:45	11/27/24 14:52	SW6010	SW3050
7440-09-7	Potassium	8040		1	25.5	88.9	mg/Kg	11/26/24 12:45	11/27/24 14:52	SW6010	SW3050
7782-49-2	Selenium	164		1	0.29	0.89	mg/Kg	11/26/24 12:45	11/27/24 14:52	SW6010	SW3050
7440-21-3	Silicon	430		1	3.64	17.8	mg/Kg	11/26/24 12:45	11/27/24 14:52	SW6010	SW3050
7440-22-4	Silver	29.2		1	0.046	0.44	mg/Kg	11/26/24 12:45	11/27/24 14:52	SW6010	SW3050
7440-23-5	Sodium	8990		1	32.1	88.9	mg/Kg	11/26/24 12:45	11/27/24 14:52	SW6010	SW3050
7440-24-6	Strontium	231		1	0.22	8.89	mg/Kg	11/26/24 12:45	11/27/24 14:52	SW6010	SW3050
7704-34-9	Sulfur	409		1	0.30	1.78	mg/Kg	11/26/24 12:45	11/27/24 14:52	SW6010	SW3050
7440-28-0	Thallium	175		1	0.39	1.78	mg/Kg	11/26/24 12:45	11/27/24 14:52	SW6010	SW3050
7440-31-5	Tin	73.7		1	0.15	1.78	mg/Kg	11/26/24 12:45	11/27/24 14:52	SW6010	SW3050
7440-32-6	Titanium	350	D	5	0.98	8.89	mg/Kg	11/26/24 12:45	11/27/24 15:07	SW6010	SW3050
7440-62-2	Vanadium	213		1	0.24	1.78	mg/Kg	11/26/24 12:45	11/27/24 14:52	SW6010	SW3050
7440-66-6	Zinc	267		1	0.098	1.78	mg/Kg	11/26/24 12:45	11/27/24 14:52	SW6010	SW3050

Color Before:	Brown	Clarity Before:		Texture:	Medium
Color After:	Yellow	Clarity After:		Artifacts:	
Comments:	Mercury				

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

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

METAL CALIBRATION DATA

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Chemtech Consulting Group **SDG No.:** P4495

Contract: CHEM02 **Lab Code:** CHEM **Case No.:** P4495 **SAS No.:** P4495

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
ICV61	Mercury	3.77	4.0	94	90 - 110	CV	10/31/2024	10:21	LB133227

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Chemtech Consulting Group **SDG No.:** P4495

Contract: CHEM02 **Lab Code:** CHEM **Case No.:** P4495 **SAS No.:** P4495

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
CCV04	Mercury	4.88	5.0	98	90 - 110	CV	10/31/2024	10:25	LB133227
CCV05	Mercury	4.92	5.0	98	90 - 110	CV	10/31/2024	10:56	LB133227
CCV06	Mercury	4.95	5.0	99	90 - 110	CV	10/31/2024	11:26	LB133227
CCV07	Mercury	4.93	5.0	99	90 - 110	CV	10/31/2024	12:02	LB133227

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Metals

- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Chemtech Consulting Group **SDG No.:** P4495

Contract: CHEM02 **Lab Code:** CHEM **Case No.:** P4495 **SAS No.:** P4495

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
ICV01	Aluminum	2690	2500	108	90 - 110	P	11/27/2024	12:25	LB133669
	Antimony	1030	1000	103	90 - 110	P	11/27/2024	12:25	LB133669
	Arsenic	1040	1000	104	90 - 110	P	11/27/2024	12:25	LB133669
	Barium	546	520	105	90 - 110	P	11/27/2024	12:25	LB133669
	Beryllium	516	510	101	90 - 110	P	11/27/2024	12:25	LB133669
	Boron	2510	2500	100	90 - 110	P	11/27/2024	12:25	LB133669
	Cadmium	514	510	101	90 - 110	P	11/27/2024	12:25	LB133669
	Calcium	10400	10000	104	90 - 110	P	11/27/2024	12:25	LB133669
	Chromium	528	520	102	90 - 110	P	11/27/2024	12:25	LB133669
	Cobalt	518	520	100	90 - 110	P	11/27/2024	12:25	LB133669
	Copper	532	510	104	90 - 110	P	11/27/2024	12:25	LB133669
	Iron	9930	10000	99	90 - 110	P	11/27/2024	12:25	LB133669
	Lead	1020	1000	102	90 - 110	P	11/27/2024	12:25	LB133669
	Lithium	2380	2500	95	90 - 110	P	11/27/2024	12:25	LB133669
	Magnesium	6080	6000	101	90 - 110	P	11/27/2024	12:25	LB133669
	Manganese	533	520	103	90 - 110	P	11/27/2024	12:25	LB133669
	Nickel	520	530	98	90 - 110	P	11/27/2024	12:25	LB133669
	Potassium	10100	9900	102	90 - 110	P	11/27/2024	12:25	LB133669
	Selenium	1080	1000	108	90 - 110	P	11/27/2024	12:25	LB133669
	Silicon	2460	2500	98	90 - 110	P	11/27/2024	12:25	LB133669
	Silver	255	250	102	90 - 110	P	11/27/2024	12:25	LB133669
	Sodium	9690	10000	97	90 - 110	P	11/27/2024	12:25	LB133669
	Strontium	2440	2500	98	90 - 110	P	11/27/2024	12:25	LB133669
	Sulfur	2340	2500	93	90 - 110	P	11/27/2024	12:25	LB133669
	Thallium	1080	1000	108	90 - 110	P	11/27/2024	12:25	LB133669
	Tin	2490	2500	100	90 - 110	P	11/27/2024	12:25	LB133669
	Titanium	2610	2500	104	90 - 110	P	11/27/2024	12:25	LB133669
	Vanadium	522	500	104	90 - 110	P	11/27/2024	12:25	LB133669
	Zinc	1060	1000	106	90 - 110	P	11/27/2024	12:25	LB133669

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Metals

- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Chemtech Consulting Group **SDG No.:** P4495

Contract: CHEM02 **Lab Code:** CHEM **Case No.:** P4495 **SAS No.:** P4495

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
LLICV01	Aluminum	106	100	106	80 - 120	P	11/27/2024	12:38	LB133669
	Antimony	51.0	50.0	102	80 - 120	P	11/27/2024	12:38	LB133669
	Arsenic	21.9	20.0	109	80 - 120	P	11/27/2024	12:38	LB133669
	Barium	99.6	100	100	80 - 120	P	11/27/2024	12:38	LB133669
	Beryllium	5.87	6.0	98	80 - 120	P	11/27/2024	12:38	LB133669
	Boron	104	100	104	80 - 120	P	11/27/2024	12:38	LB133669
	Cadmium	5.82	6.0	97	80 - 120	P	11/27/2024	12:38	LB133669
	Calcium	2010	2000	100	80 - 120	P	11/27/2024	12:38	LB133669
	Chromium	10.4	10.0	104	80 - 120	P	11/27/2024	12:38	LB133669
	Cobalt	29.5	30.0	98	80 - 120	P	11/27/2024	12:38	LB133669
	Copper	22.1	20.0	111	80 - 120	P	11/27/2024	12:38	LB133669
	Iron	98.4	100	98	80 - 120	P	11/27/2024	12:38	LB133669
	Lead	11.9	12.0	99	80 - 120	P	11/27/2024	12:38	LB133669
	Lithium	18.8	20.0	94	80 - 120	P	11/27/2024	12:38	LB133669
	Magnesium	2070	2000	103	80 - 120	P	11/27/2024	12:38	LB133669
	Manganese	20.3	20.0	102	80 - 120	P	11/27/2024	12:38	LB133669
	Nickel	39.1	40.0	98	80 - 120	P	11/27/2024	12:38	LB133669
	Potassium	1890	2000	94	80 - 120	P	11/27/2024	12:38	LB133669
	Selenium	19.7	20.0	98	80 - 120	P	11/27/2024	12:38	LB133669
	Silicon	338	400	84	80 - 120	P	11/27/2024	12:38	LB133669
	Silver	10.4	10.0	104	80 - 120	P	11/27/2024	12:38	LB133669
	Sodium	1760	2000	88	80 - 120	P	11/27/2024	12:38	LB133669
	Strontium	20.7	20.0	104	80 - 120	P	11/27/2024	12:38	LB133669
	Sulfur	18.4	20.0	92	80 - 120	P	11/27/2024	12:38	LB133669
	Thallium	42.2	40.0	106	80 - 120	P	11/27/2024	12:38	LB133669
	Tin	38.5	40.0	96	80 - 120	P	11/27/2024	12:38	LB133669
	Titanium	40.1	40.0	100	80 - 120	P	11/27/2024	12:38	LB133669
	Vanadium	39.9	40.0	100	80 - 120	P	11/27/2024	12:38	LB133669
	Zinc	47.3	40.0	118	80 - 120	P	11/27/2024	12:38	LB133669

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Metals

- 2a -
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Chemtech Consulting Group **SDG No.:** P4495

Contract: CHEM02 **Lab Code:** CHEM **Case No.:** P4495 **SAS No.:** P4495

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV01	Aluminum	10600	10000	106	90 - 110	P	11/27/2024	14:08	LB133669
	Antimony	5250	5000	105	90 - 110	P	11/27/2024	14:08	LB133669
	Arsenic	5220	5000	104	90 - 110	P	11/27/2024	14:08	LB133669
	Barium	10600	10000	106	90 - 110	P	11/27/2024	14:08	LB133669
	Beryllium	264	250	105	90 - 110	P	11/27/2024	14:08	LB133669
	Boron	5250	5000	105	90 - 110	P	11/27/2024	14:08	LB133669
	Cadmium	2590	2500	104	90 - 110	P	11/27/2024	14:08	LB133669
	Calcium	26100	25000	104	90 - 110	P	11/27/2024	14:08	LB133669
	Chromium	1060	1000	106	90 - 110	P	11/27/2024	14:08	LB133669
	Cobalt	2590	2500	104	90 - 110	P	11/27/2024	14:08	LB133669
	Copper	1320	1250	106	90 - 110	P	11/27/2024	14:08	LB133669
	Iron	5210	5000	104	90 - 110	P	11/27/2024	14:08	LB133669
	Lead	5190	5000	104	90 - 110	P	11/27/2024	14:08	LB133669
	Lithium	5300	5000	106	90 - 110	P	11/27/2024	14:08	LB133669
	Magnesium	26000	25000	104	90 - 110	P	11/27/2024	14:08	LB133669
	Manganese	2600	2500	104	90 - 110	P	11/27/2024	14:08	LB133669
	Nickel	2590	2500	104	90 - 110	P	11/27/2024	14:08	LB133669
	Potassium	26400	25000	106	90 - 110	P	11/27/2024	14:08	LB133669
	Selenium	5220	5000	104	90 - 110	P	11/27/2024	14:08	LB133669
	Silicon	5210	5000	104	90 - 110	P	11/27/2024	14:08	LB133669
	Silver	1310	1250	105	90 - 110	P	11/27/2024	14:08	LB133669
	Sodium	27000	25000	108	90 - 110	P	11/27/2024	14:08	LB133669
	Strontium	5360	5000	107	90 - 110	P	11/27/2024	14:08	LB133669
	Sulfur	5080	5000	102	90 - 110	P	11/27/2024	14:08	LB133669
	Thallium	4830	5000	97	90 - 110	P	11/27/2024	14:08	LB133669
	Tin	5180	5000	104	90 - 110	P	11/27/2024	14:08	LB133669
	Titanium	5260	5000	105	90 - 110	P	11/27/2024	14:08	LB133669
	Vanadium	2640	2500	106	90 - 110	P	11/27/2024	14:08	LB133669
	Zinc	2660	2500	106	90 - 110	P	11/27/2024	14:08	LB133669
CCV02	Aluminum	9850	10000	98	90 - 110	P	11/27/2024	15:50	LB133669
	Antimony	4830	5000	97	90 - 110	P	11/27/2024	15:50	LB133669
	Arsenic	4810	5000	96	90 - 110	P	11/27/2024	15:50	LB133669
	Barium	10100	10000	101	90 - 110	P	11/27/2024	15:50	LB133669
	Beryllium	255	250	102	90 - 110	P	11/27/2024	15:50	LB133669

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Chemtech Consulting Group **SDG No.:** P4495

Contract: CHEM02 **Lab Code:** CHEM **Case No.:** P4495 **SAS No.:** P4495

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV02	Boron	5080	5000	102	90 - 110	P	11/27/2024	15:50	LB133669
	Cadmium	2430	2500	97	90 - 110	P	11/27/2024	15:50	LB133669
	Calcium	25000	25000	100	90 - 110	P	11/27/2024	15:50	LB133669
	Chromium	978	1000	98	90 - 110	P	11/27/2024	15:50	LB133669
	Cobalt	2420	2500	97	90 - 110	P	11/27/2024	15:50	LB133669
	Copper	1210	1250	97	90 - 110	P	11/27/2024	15:50	LB133669
	Iron	4830	5000	97	90 - 110	P	11/27/2024	15:50	LB133669
	Lead	4880	5000	98	90 - 110	P	11/27/2024	15:50	LB133669
	Lithium	4900	5000	98	90 - 110	P	11/27/2024	15:50	LB133669
	Magnesium	24600	25000	99	90 - 110	P	11/27/2024	15:50	LB133669
	Manganese	2510	2500	101	90 - 110	P	11/27/2024	15:50	LB133669
	Nickel	2420	2500	97	90 - 110	P	11/27/2024	15:50	LB133669
	Potassium	23800	25000	95	90 - 110	P	11/27/2024	15:50	LB133669
	Selenium	4840	5000	97	90 - 110	P	11/27/2024	15:50	LB133669
	Silicon	4720	5000	94	90 - 110	P	11/27/2024	15:50	LB133669
	Silver	1220	1250	98	90 - 110	P	11/27/2024	15:50	LB133669
	Sodium	24400	25000	98	90 - 110	P	11/27/2024	15:50	LB133669
	Strontium	5120	5000	102	90 - 110	P	11/27/2024	15:50	LB133669
	Sulfur	4850	5000	97	90 - 110	P	11/27/2024	15:50	LB133669
	Thallium	4980	5000	100	90 - 110	P	11/27/2024	15:50	LB133669
	Tin	4880	5000	98	90 - 110	P	11/27/2024	15:50	LB133669
	Titanium	5000	5000	100	90 - 110	P	11/27/2024	15:50	LB133669
	Vanadium	2500	2500	100	90 - 110	P	11/27/2024	15:50	LB133669
	Zinc	2460	2500	99	90 - 110	P	11/27/2024	15:50	LB133669
CCV03	Aluminum	10600	10000	106	90 - 110	P	11/27/2024	16:03	LB133669
	Antimony	5230	5000	104	90 - 110	P	11/27/2024	16:03	LB133669
	Arsenic	5230	5000	104	90 - 110	P	11/27/2024	16:03	LB133669
	Barium	10700	10000	108	90 - 110	P	11/27/2024	16:03	LB133669
	Beryllium	272	250	109	90 - 110	P	11/27/2024	16:03	LB133669
	Boron	5400	5000	108	90 - 110	P	11/27/2024	16:03	LB133669
	Cadmium	2660	2500	106	90 - 110	P	11/27/2024	16:03	LB133669
	Calcium	26900	25000	108	90 - 110	P	11/27/2024	16:03	LB133669
	Chromium	1060	1000	106	90 - 110	P	11/27/2024	16:03	LB133669
	Cobalt	2650	2500	106	90 - 110	P	11/27/2024	16:03	LB133669

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Chemtech Consulting Group **SDG No.:** P4495

Contract: CHEM02 **Lab Code:** CHEM **Case No.:** P4495 **SAS No.:** P4495

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV03	Copper	1320	1250	105	90 - 110	P	11/27/2024	16:03	LB133669
	Iron	5160	5000	103	90 - 110	P	11/27/2024	16:03	LB133669
	Lead	5310	5000	106	90 - 110	P	11/27/2024	16:03	LB133669
	Lithium	5230	5000	105	90 - 110	P	11/27/2024	16:03	LB133669
	Magnesium	26700	25000	107	90 - 110	P	11/27/2024	16:03	LB133669
	Manganese	2690	2500	108	90 - 110	P	11/27/2024	16:03	LB133669
	Nickel	2650	2500	106	90 - 110	P	11/27/2024	16:03	LB133669
	Potassium	25400	25000	101	90 - 110	P	11/27/2024	16:03	LB133669
	Selenium	5240	5000	105	90 - 110	P	11/27/2024	16:03	LB133669
	Silicon	5070	5000	101	90 - 110	P	11/27/2024	16:03	LB133669
	Silver	1300	1250	104	90 - 110	P	11/27/2024	16:03	LB133669
	Sodium	25800	25000	103	90 - 110	P	11/27/2024	16:03	LB133669
	Strontium	5470	5000	109	90 - 110	P	11/27/2024	16:03	LB133669
	Sulfur	5300	5000	106	90 - 110	P	11/27/2024	16:03	LB133669
	Thallium	5420	5000	108	90 - 110	P	11/27/2024	16:03	LB133669
	Tin	5360	5000	107	90 - 110	P	11/27/2024	16:03	LB133669
	Titanium	5370	5000	107	90 - 110	P	11/27/2024	16:03	LB133669
	Vanadium	2700	2500	108	90 - 110	P	11/27/2024	16:03	LB133669
	Zinc	2630	2500	105	90 - 110	P	11/27/2024	16:03	LB133669
CCV04	Aluminum	10600	10000	106	90 - 110	P	11/27/2024	16:39	LB133669
	Antimony	5250	5000	105	90 - 110	P	11/27/2024	16:39	LB133669
	Arsenic	5240	5000	105	90 - 110	P	11/27/2024	16:39	LB133669
	Barium	10700	10000	107	90 - 110	P	11/27/2024	16:39	LB133669
	Beryllium	263	250	105	90 - 110	P	11/27/2024	16:39	LB133669
	Boron	5250	5000	105	90 - 110	P	11/27/2024	16:39	LB133669
	Cadmium	2610	2500	104	90 - 110	P	11/27/2024	16:39	LB133669
	Calcium	26300	25000	105	90 - 110	P	11/27/2024	16:39	LB133669
	Chromium	1050	1000	105	90 - 110	P	11/27/2024	16:39	LB133669
	Cobalt	2610	2500	104	90 - 110	P	11/27/2024	16:39	LB133669
	Copper	1310	1250	105	90 - 110	P	11/27/2024	16:39	LB133669
	Iron	5210	5000	104	90 - 110	P	11/27/2024	16:39	LB133669
	Lead	5230	5000	105	90 - 110	P	11/27/2024	16:39	LB133669
	Lithium	5220	5000	104	90 - 110	P	11/27/2024	16:39	LB133669
	Magnesium	26200	25000	105	90 - 110	P	11/27/2024	16:39	LB133669

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Chemtech Consulting Group **SDG No.:** P4495

Contract: CHEM02 **Lab Code:** CHEM **Case No.:** P4495 **SAS No.:** P4495

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV04	Manganese	2630	2500	105	90 - 110	P	11/27/2024	16:39	LB133669
	Nickel	2610	2500	104	90 - 110	P	11/27/2024	16:39	LB133669
	Potassium	26000	25000	104	90 - 110	P	11/27/2024	16:39	LB133669
	Selenium	5260	5000	105	90 - 110	P	11/27/2024	16:39	LB133669
	Silicon	5170	5000	103	90 - 110	P	11/27/2024	16:39	LB133669
	Silver	1300	1250	104	90 - 110	P	11/27/2024	16:39	LB133669
	Sodium	26000	25000	104	90 - 110	P	11/27/2024	16:39	LB133669
	Strontium	5440	5000	109	90 - 110	P	11/27/2024	16:39	LB133669
	Sulfur	5160	5000	103	90 - 110	P	11/27/2024	16:39	LB133669
	Thallium	5290	5000	106	90 - 110	P	11/27/2024	16:39	LB133669
	Tin	5260	5000	105	90 - 110	P	11/27/2024	16:39	LB133669
	Titanium	5300	5000	106	90 - 110	P	11/27/2024	16:39	LB133669
	Vanadium	2670	2500	107	90 - 110	P	11/27/2024	16:39	LB133669
	Zinc	2640	2500	106	90 - 110	P	11/27/2024	16:39	LB133669
CCV05	Aluminum	10600	10000	106	90 - 110	P	11/27/2024	17:34	LB133669
	Antimony	5170	5000	103	90 - 110	P	11/27/2024	17:34	LB133669
	Arsenic	5120	5000	102	90 - 110	P	11/27/2024	17:34	LB133669
	Barium	10600	10000	106	90 - 110	P	11/27/2024	17:34	LB133669
	Beryllium	264	250	106	90 - 110	P	11/27/2024	17:34	LB133669
	Boron	5280	5000	106	90 - 110	P	11/27/2024	17:34	LB133669
	Cadmium	2570	2500	103	90 - 110	P	11/27/2024	17:34	LB133669
	Calcium	26200	25000	105	90 - 110	P	11/27/2024	17:34	LB133669
	Chromium	1030	1000	104	90 - 110	P	11/27/2024	17:34	LB133669
	Cobalt	2570	2500	103	90 - 110	P	11/27/2024	17:34	LB133669
	Copper	1290	1250	103	90 - 110	P	11/27/2024	17:34	LB133669
	Iron	5180	5000	104	90 - 110	P	11/27/2024	17:34	LB133669
	Lead	5150	5000	103	90 - 110	P	11/27/2024	17:34	LB133669
	Lithium	5220	5000	104	90 - 110	P	11/27/2024	17:34	LB133669
	Magnesium	26000	25000	104	90 - 110	P	11/27/2024	17:34	LB133669
	Manganese	2640	2500	106	90 - 110	P	11/27/2024	17:34	LB133669
	Nickel	2570	2500	103	90 - 110	P	11/27/2024	17:34	LB133669
	Potassium	25500	25000	102	90 - 110	P	11/27/2024	17:34	LB133669
	Selenium	5130	5000	103	90 - 110	P	11/27/2024	17:34	LB133669
	Silicon	5000	5000	100	90 - 110	P	11/27/2024	17:34	LB133669

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Chemtech Consulting Group **SDG No.:** P4495

Contract: CHEM02 **Lab Code:** CHEM **Case No.:** P4495 **SAS No.:** P4495

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	1280	1250	102	90 - 110	P	11/27/2024	17:34	LB133669
	Sodium	26300	25000	105	90 - 110	P	11/27/2024	17:34	LB133669
	Strontium	5400	5000	108	90 - 110	P	11/27/2024	17:34	LB133669
	Sulfur	5070	5000	101	90 - 110	P	11/27/2024	17:34	LB133669
	Thallium	5060	5000	101	90 - 110	P	11/27/2024	17:34	LB133669
	Tin	5150	5000	103	90 - 110	P	11/27/2024	17:34	LB133669
	Titanium	5280	5000	106	90 - 110	P	11/27/2024	17:34	LB133669
	Vanadium	2640	2500	106	90 - 110	P	11/27/2024	17:34	LB133669
	Zinc	2560	2500	103	90 - 110	P	11/27/2024	17:34	LB133669

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Chemtech Consulting Group **SDG No.:** P4495

Contract: CHEM02 **Lab Code:** CHEM **Case No.:** P4495 **SAS No.:** P4495

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
ICV01	Aluminum	2510	2500	100	90 - 110	P	12/04/2024	13:22	LB133739
	Antimony	984	1000	98	90 - 110	P	12/04/2024	13:22	LB133739
	Arsenic	977	1000	98	90 - 110	P	12/04/2024	13:22	LB133739
	Barium	508	520	98	90 - 110	P	12/04/2024	13:22	LB133739
	Beryllium	498	510	98	90 - 110	P	12/04/2024	13:22	LB133739
	Cadmium	497	510	98	90 - 110	P	12/04/2024	13:22	LB133739
	Calcium	9770	10000	98	90 - 110	P	12/04/2024	13:22	LB133739
	Chromium	511	520	98	90 - 110	P	12/04/2024	13:22	LB133739
	Cobalt	498	520	96	90 - 110	P	12/04/2024	13:22	LB133739
	Copper	509	510	100	90 - 110	P	12/04/2024	13:22	LB133739
	Iron	9610	10000	96	90 - 110	P	12/04/2024	13:22	LB133739
	Lead	983	1000	98	90 - 110	P	12/04/2024	13:22	LB133739
	Magnesium	5740	6000	96	90 - 110	P	12/04/2024	13:22	LB133739
	Manganese	505	520	97	90 - 110	P	12/04/2024	13:22	LB133739
	Nickel	500	530	94	90 - 110	P	12/04/2024	13:22	LB133739
	Potassium	9630	9900	97	90 - 110	P	12/04/2024	13:22	LB133739
	Selenium	1010	1000	100	90 - 110	P	12/04/2024	13:22	LB133739
	Silver	246	250	98	90 - 110	P	12/04/2024	13:22	LB133739
	Sodium	9770	10000	98	90 - 110	P	12/04/2024	13:22	LB133739
	Thallium	1020	1000	102	90 - 110	P	12/04/2024	13:22	LB133739
	Vanadium	499	500	100	90 - 110	P	12/04/2024	13:22	LB133739
	Zinc	1020	1000	102	90 - 110	P	12/04/2024	13:22	LB133739

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Chemtech Consulting Group **SDG No.:** P4495

Contract: CHEM02 **Lab Code:** CHEM **Case No.:** P4495 **SAS No.:** P4495

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
LLICV01	Aluminum	109	100	109	80 - 120	P	12/04/2024	13:34	LB133739
	Antimony	48.7	50.0	98	80 - 120	P	12/04/2024	13:34	LB133739
	Arsenic	18.8	20.0	94	80 - 120	P	12/04/2024	13:34	LB133739
	Barium	98.9	100	99	80 - 120	P	12/04/2024	13:34	LB133739
	Beryllium	6.05	6.0	101	80 - 120	P	12/04/2024	13:34	LB133739
	Cadmium	5.97	6.0	100	80 - 120	P	12/04/2024	13:34	LB133739
	Calcium	2010	2000	101	80 - 120	P	12/04/2024	13:34	LB133739
	Chromium	10.4	10.0	104	80 - 120	P	12/04/2024	13:34	LB133739
	Cobalt	29.4	30.0	98	80 - 120	P	12/04/2024	13:34	LB133739
	Copper	22.2	20.0	111	80 - 120	P	12/04/2024	13:34	LB133739
	Iron	99.8	100	100	80 - 120	P	12/04/2024	13:34	LB133739
	Lead	11.0	12.0	92	80 - 120	P	12/04/2024	13:34	LB133739
	Magnesium	2130	2000	106	80 - 120	P	12/04/2024	13:34	LB133739
	Manganese	21.1	20.0	105	80 - 120	P	12/04/2024	13:34	LB133739
	Nickel	39.4	40.0	98	80 - 120	P	12/04/2024	13:34	LB133739
	Potassium	1940	2000	97	80 - 120	P	12/04/2024	13:34	LB133739
	Selenium	21.4	20.0	107	80 - 120	P	12/04/2024	13:34	LB133739
	Silver	10.8	10.0	108	80 - 120	P	12/04/2024	13:34	LB133739
	Sodium	2040	2000	102	80 - 120	P	12/04/2024	13:34	LB133739
	Thallium	43.5	40.0	109	80 - 120	P	12/04/2024	13:34	LB133739
	Vanadium	40.7	40.0	102	80 - 120	P	12/04/2024	13:34	LB133739
	Zinc	43.2	40.0	108	80 - 120	P	12/04/2024	13:34	LB133739

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Chemtech Consulting Group **SDG No.:** P4495

Contract: CHEM02 **Lab Code:** CHEM **Case No.:** P4495 **SAS No.:** P4495

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV01	Aluminum	9930	10000	99	90 - 110	P	12/04/2024	14:20	LB133739
	Antimony	5140	5000	103	90 - 110	P	12/04/2024	14:20	LB133739
	Arsenic	5050	5000	101	90 - 110	P	12/04/2024	14:20	LB133739
	Barium	9600	10000	96	90 - 110	P	12/04/2024	14:20	LB133739
	Beryllium	229	250	92	90 - 110	P	12/04/2024	14:20	LB133739
	Cadmium	2350	2500	94	90 - 110	P	12/04/2024	14:20	LB133739
	Calcium	23000	25000	92	90 - 110	P	12/04/2024	14:20	LB133739
	Chromium	971	1000	97	90 - 110	P	12/04/2024	14:20	LB133739
	Cobalt	2360	2500	94	90 - 110	P	12/04/2024	14:20	LB133739
	Copper	1270	1250	102	90 - 110	P	12/04/2024	14:20	LB133739
	Iron	4790	5000	96	90 - 110	P	12/04/2024	14:20	LB133739
	Lead	4780	5000	96	90 - 110	P	12/04/2024	14:20	LB133739
	Magnesium	23600	25000	94	90 - 110	P	12/04/2024	14:20	LB133739
	Manganese	2290	2500	92	90 - 110	P	12/04/2024	14:20	LB133739
	Nickel	2370	2500	95	90 - 110	P	12/04/2024	14:20	LB133739
	Potassium	25600	25000	102	90 - 110	P	12/04/2024	14:20	LB133739
	Selenium	5090	5000	102	90 - 110	P	12/04/2024	14:20	LB133739
	Silver	1210	1250	97	90 - 110	P	12/04/2024	14:20	LB133739
	Sodium	26900	25000	108	90 - 110	P	12/04/2024	14:20	LB133739
	Thallium	4870	5000	97	90 - 110	P	12/04/2024	14:20	LB133739
	Vanadium	2390	2500	96	90 - 110	P	12/04/2024	14:20	LB133739
	Zinc	2520	2500	101	90 - 110	P	12/04/2024	14:20	LB133739
CCV02	Aluminum	9920	10000	99	90 - 110	P	12/04/2024	14:37	LB133739
	Antimony	5170	5000	103	90 - 110	P	12/04/2024	14:37	LB133739
	Arsenic	5090	5000	102	90 - 110	P	12/04/2024	14:37	LB133739
	Barium	9840	10000	98	90 - 110	P	12/04/2024	14:37	LB133739
	Beryllium	229	250	92	90 - 110	P	12/04/2024	14:37	LB133739
	Cadmium	2370	2500	95	90 - 110	P	12/04/2024	14:37	LB133739
	Calcium	23200	25000	93	90 - 110	P	12/04/2024	14:37	LB133739
	Chromium	969	1000	97	90 - 110	P	12/04/2024	14:37	LB133739
	Cobalt	2380	2500	95	90 - 110	P	12/04/2024	14:37	LB133739
	Copper	1280	1250	103	90 - 110	P	12/04/2024	14:37	LB133739
	Iron	4860	5000	97	90 - 110	P	12/04/2024	14:37	LB133739
	Lead	4820	5000	96	90 - 110	P	12/04/2024	14:37	LB133739

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Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Chemtech Consulting Group **SDG No.:** P4495

Contract: CHEM02 **Lab Code:** CHEM **Case No.:** P4495 **SAS No.:** P4495

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV02	Magnesium	23800	25000	95	90 - 110	P	12/04/2024	14:37	LB133739
	Manganese	2320	2500	93	90 - 110	P	12/04/2024	14:37	LB133739
	Nickel	2390	2500	96	90 - 110	P	12/04/2024	14:37	LB133739
	Potassium	26000	25000	104	90 - 110	P	12/04/2024	14:37	LB133739
	Selenium	5150	5000	103	90 - 110	P	12/04/2024	14:37	LB133739
	Silver	1220	1250	97	90 - 110	P	12/04/2024	14:37	LB133739
	Sodium	27000	25000	108	90 - 110	P	12/04/2024	14:37	LB133739
	Thallium	4960	5000	99	90 - 110	P	12/04/2024	14:37	LB133739
	Vanadium	2410	2500	96	90 - 110	P	12/04/2024	14:37	LB133739
	Zinc	2550	2500	102	90 - 110	P	12/04/2024	14:37	LB133739

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Metals

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CRDL STANDARD FOR AA & ICP

Client: Chemtech Consulting Group **SDG No.:** P4495

Contract: CHEM02 **Lab Code:** CHEM **Case No.:** P4495 **SAS No.:** P4495

Initial Calibration Source:

Continuing Calibration Source:

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CRA	Mercury	0.23	0.2	114	40 - 160	CV	10/31/2024	10:30	LB133227
CRI01	Aluminum	111	100	111	40 - 160	P	11/27/2024	12:47	LB133669
	Antimony	49.4	50.0	99	40 - 160	P	11/27/2024	12:47	LB133669
	Arsenic	22.6	20.0	113	40 - 160	P	11/27/2024	12:47	LB133669
	Barium	105	100	105	40 - 160	P	11/27/2024	12:47	LB133669
	Beryllium	6.16	6.0	103	40 - 160	P	11/27/2024	12:47	LB133669
	Boron	108	100	108	40 - 160	P	11/27/2024	12:47	LB133669
	Cadmium	5.94	6.0	99	40 - 160	P	11/27/2024	12:47	LB133669
	Calcium	2120	2000	106	40 - 160	P	11/27/2024	12:47	LB133669
	Chromium	9.62	10.0	96	40 - 160	P	11/27/2024	12:47	LB133669
	Cobalt	29.6	30.0	98	40 - 160	P	11/27/2024	12:47	LB133669
	Copper	22.2	20.0	111	40 - 160	P	11/27/2024	12:47	LB133669
	Iron	98.1	100	98	40 - 160	P	11/27/2024	12:47	LB133669
	Lead	11.4	12.0	95	40 - 160	P	11/27/2024	12:47	LB133669
	Lithium	20.2	20.0	101	40 - 160	P	11/27/2024	12:47	LB133669
	Magnesium	2200	2000	110	40 - 160	P	11/27/2024	12:47	LB133669
	Manganese	21.6	20.0	108	40 - 160	P	11/27/2024	12:47	LB133669
	Nickel	39.4	40.0	98	40 - 160	P	11/27/2024	12:47	LB133669
	Potassium	1920	2000	96	40 - 160	P	11/27/2024	12:47	LB133669
	Selenium	20.3	20.0	102	40 - 160	P	11/27/2024	12:47	LB133669
	Silicon	341	400	85	40 - 160	P	11/27/2024	12:47	LB133669
	Silver	10.0	10.0	100	40 - 160	P	11/27/2024	12:47	LB133669
	Sodium	1740	2000	87	40 - 160	P	11/27/2024	12:47	LB133669
	Strontium	22.0	20.0	110	40 - 160	P	11/27/2024	12:47	LB133669
	Sulfur	17.2	20.0	86	40 - 160	P	11/27/2024	12:47	LB133669
	Thallium	41.9	40.0	105	40 - 160	P	11/27/2024	12:47	LB133669
	Tin	38.2	40.0	96	40 - 160	P	11/27/2024	12:47	LB133669
	Titanium	42.7	40.0	107	40 - 160	P	11/27/2024	12:47	LB133669
	Vanadium	41.9	40.0	105	40 - 160	P	11/27/2024	12:47	LB133669
	Zinc	44.2	40.0	110	40 - 160	P	11/27/2024	12:47	LB133669
CRI01	Aluminum	107	100	107	40 - 160	P	12/04/2024	13:52	LB133739
	Antimony	49.5	50.0	99	40 - 160	P	12/04/2024	13:52	LB133739
	Arsenic	20.4	20.0	102	40 - 160	P	12/04/2024	13:52	LB133739
	Barium	96.1	100	96	40 - 160	P	12/04/2024	13:52	LB133739
	Beryllium	6.11	6.0	102	40 - 160	P	12/04/2024	13:52	LB133739

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Metals

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CRDL STANDARD FOR AA & ICP

Client: Chemtech Consulting Group **SDG No.:** P4495

Contract: CHEM02 **Lab Code:** CHEM **Case No.:** P4495 **SAS No.:** P4495

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	Cadmium	6.04	6.0	101	40 - 160	P	12/04/2024	13:52	LB133739
	Calcium	2040	2000	102	40 - 160	P	12/04/2024	13:52	LB133739
	Chromium	10.6	10.0	106	40 - 160	P	12/04/2024	13:52	LB133739
	Cobalt	29.9	30.0	100	40 - 160	P	12/04/2024	13:52	LB133739
	Copper	22.1	20.0	110	40 - 160	P	12/04/2024	13:52	LB133739
	Iron	99.7	100	100	40 - 160	P	12/04/2024	13:52	LB133739
	Lead	11.2	12.0	94	40 - 160	P	12/04/2024	13:52	LB133739
	Magnesium	2160	2000	108	40 - 160	P	12/04/2024	13:52	LB133739
	Manganese	20.7	20.0	104	40 - 160	P	12/04/2024	13:52	LB133739
	Nickel	40.0	40.0	100	40 - 160	P	12/04/2024	13:52	LB133739
	Potassium	1920	2000	96	40 - 160	P	12/04/2024	13:52	LB133739
	Selenium	20.6	20.0	103	40 - 160	P	12/04/2024	13:52	LB133739
	Silver	10.6	10.0	106	40 - 160	P	12/04/2024	13:52	LB133739
	Sodium	2040	2000	102	40 - 160	P	12/04/2024	13:52	LB133739
	Thallium	42.4	40.0	106	40 - 160	P	12/04/2024	13:52	LB133739
	Vanadium	41.9	40.0	105	40 - 160	P	12/04/2024	13:52	LB133739
	Zinc	43.5	40.0	109	40 - 160	P	12/04/2024	13:52	LB133739

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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Chemtech Consulting Group **SDG No.:** P4495

Contract: CHEM02 **Lab Code:** CHEM **Case No.:** P4495 **SAS No.:** P4495

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB61	Mercury	0.20	+/-0.20	U	0.20	CV	10/31/2024	10:23	LB133227

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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Chemtech Consulting Group **SDG No.:** P4495

Contract: CHEM02 **Lab Code:** CHEM **Case No.:** P4495 **SAS No.:** P4495

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB04	Mercury	0.20	+/-0.20	U	0.20	CV	10/31/2024	10:27	LB133227
CCB05	Mercury	0.20	+/-0.20	U	0.20	CV	10/31/2024	11:01	LB133227
CCB06	Mercury	0.20	+/-0.20	U	0.20	CV	10/31/2024	11:31	LB133227
CCB07	Mercury	0.20	+/-0.20	U	0.20	CV	10/31/2024	12:05	LB133227

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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Chemtech Consulting Group **SDG No.:** P4495

Contract: CHEM02 **Lab Code:** CHEM **Case No.:** P4495 **SAS No.:** P4495

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB01	Aluminum	100	+/-100	U	100	P	11/27/2024	12:43	LB133669
	Antimony	50.0	+/-50.0	U	50.0	P	11/27/2024	12:43	LB133669
	Arsenic	20.0	+/-20.0	U	20.0	P	11/27/2024	12:43	LB133669
	Barium	100	+/-100	U	100	P	11/27/2024	12:43	LB133669
	Beryllium	6.00	+/-6.00	U	6.00	P	11/27/2024	12:43	LB133669
	Boron	100	+/-100	U	100	P	11/27/2024	12:43	LB133669
	Cadmium	6.00	+/-6.00	U	6.00	P	11/27/2024	12:43	LB133669
	Calcium	2000	+/-2000	U	2000	P	11/27/2024	12:43	LB133669
	Chromium	10.0	+/-10.0	U	10.0	P	11/27/2024	12:43	LB133669
	Cobalt	30.0	+/-30.0	U	30.0	P	11/27/2024	12:43	LB133669
	Copper	20.0	+/-20.0	U	20.0	P	11/27/2024	12:43	LB133669
	Iron	100	+/-100	U	100	P	11/27/2024	12:43	LB133669
	Lead	12.0	+/-12.0	U	12.0	P	11/27/2024	12:43	LB133669
	Magnesium	2000	+/-2000	U	2000	P	11/27/2024	12:43	LB133669
	Manganese	20.0	+/-20.0	U	20.0	P	11/27/2024	12:43	LB133669
	Nickel	40.0	+/-40.0	U	40.0	P	11/27/2024	12:43	LB133669
	Potassium	2000	+/-2000	U	2000	P	11/27/2024	12:43	LB133669
	Selenium	20.0	+/-20.0	U	20.0	P	11/27/2024	12:43	LB133669
	Silicon	400	+/-400	U	400	P	11/27/2024	12:43	LB133669
	Silver	10.0	+/-10.0	U	10.0	P	11/27/2024	12:43	LB133669
	Sulfur	20.0	+/-20.0	U	20.0	P	11/27/2024	12:43	LB133669
	Sodium	2000	+/-2000	U	2000	P	11/27/2024	12:43	LB133669
	Strontium	20.0	+/-20.0	U	20.0	P	11/27/2024	12:43	LB133669
	Lithium	20.0	+/-20.0	U	20.0	P	11/27/2024	12:43	LB133669
	Thallium	40.0	+/-40.0	U	40.0	P	11/27/2024	12:43	LB133669
	Tin	40.0	+/-40.0	U	40.0	P	11/27/2024	12:43	LB133669
	Titanium	40.0	+/-40.0	U	40.0	P	11/27/2024	12:43	LB133669
	Vanadium	40.0	+/-40.0	U	40.0	P	11/27/2024	12:43	LB133669
	Zinc	40.0	+/-40.0	U	40.0	P	11/27/2024	12:43	LB133669

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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Chemtech Consulting Group **SDG No.:** P4495

Contract: CHEM02 **Lab Code:** CHEM **Case No.:** P4495 **SAS No.:** P4495

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB01	Aluminum	100	+/-100	U	100	P	11/27/2024	14:48	LB133669
	Antimony	50.0	+/-50.0	U	50.0	P	11/27/2024	14:48	LB133669
	Arsenic	20.0	+/-20.0	U	20.0	P	11/27/2024	14:48	LB133669
	Barium	100	+/-100	U	100	P	11/27/2024	14:48	LB133669
	Beryllium	6.00	+/-6.00	U	6.00	P	11/27/2024	14:48	LB133669
	Boron	100	+/-100	U	100	P	11/27/2024	14:48	LB133669
	Cadmium	6.00	+/-6.00	U	6.00	P	11/27/2024	14:48	LB133669
	Calcium	2000	+/-2000	U	2000	P	11/27/2024	14:48	LB133669
	Chromium	10.0	+/-10.0	U	10.0	P	11/27/2024	14:48	LB133669
	Cobalt	30.0	+/-30.0	U	30.0	P	11/27/2024	14:48	LB133669
	Copper	20.0	+/-20.0	U	20.0	P	11/27/2024	14:48	LB133669
	Iron	100	+/-100	U	100	P	11/27/2024	14:48	LB133669
	Lead	12.0	+/-12.0	U	12.0	P	11/27/2024	14:48	LB133669
	Magnesium	2000	+/-2000	U	2000	P	11/27/2024	14:48	LB133669
	Manganese	20.0	+/-20.0	U	20.0	P	11/27/2024	14:48	LB133669
	Nickel	40.0	+/-40.0	U	40.0	P	11/27/2024	14:48	LB133669
	Potassium	2000	+/-2000	U	2000	P	11/27/2024	14:48	LB133669
	Selenium	20.0	+/-20.0	U	20.0	P	11/27/2024	14:48	LB133669
	Silicon	400	+/-400	U	400	P	11/27/2024	14:48	LB133669
	Silver	10.0	+/-10.0	U	10.0	P	11/27/2024	14:48	LB133669
	Sulfur	20.0	+/-20.0	U	20.0	P	11/27/2024	14:48	LB133669
	Sodium	2000	+/-2000	U	2000	P	11/27/2024	14:48	LB133669
	Strontium	20.0	+/-20.0	U	20.0	P	11/27/2024	14:48	LB133669
	Lithium	20.0	+/-20.0	U	20.0	P	11/27/2024	14:48	LB133669
	Thallium	40.0	+/-40.0	U	40.0	P	11/27/2024	14:48	LB133669
	Tin	40.0	+/-40.0	U	40.0	P	11/27/2024	14:48	LB133669
	Titanium	40.0	+/-40.0	U	40.0	P	11/27/2024	14:48	LB133669
	Vanadium	40.0	+/-40.0	U	40.0	P	11/27/2024	14:48	LB133669
	Zinc	40.0	+/-40.0	U	40.0	P	11/27/2024	14:48	LB133669
CCB02	Aluminum	100	+/-100	U	100	P	11/27/2024	15:54	LB133669
	Antimony	50.0	+/-50.0	U	50.0	P	11/27/2024	15:54	LB133669
	Arsenic	20.0	+/-20.0	U	20.0	P	11/27/2024	15:54	LB133669
	Barium	100	+/-100	U	100	P	11/27/2024	15:54	LB133669
	Beryllium	6.00	+/-6.00	U	6.00	P	11/27/2024	15:54	LB133669
	Boron	100	+/-100	U	100	P	11/27/2024	15:54	LB133669
	Cadmium	6.00	+/-6.00	U	6.00	P	11/27/2024	15:54	LB133669
	Calcium	2000	+/-2000	U	2000	P	11/27/2024	15:54	LB133669
	Chromium	10.0	+/-10.0	U	10.0	P	11/27/2024	15:54	LB133669
	Cobalt	30.0	+/-30.0	U	30.0	P	11/27/2024	15:54	LB133669

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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Chemtech Consulting Group **SDG No.:** P4495

Contract: CHEM02 **Lab Code:** CHEM **Case No.:** P4495 **SAS No.:** P4495

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB02	Copper	20.0	+/-20.0	U	20.0	P	11/27/2024	15:54	LB133669
	Iron	100	+/-100	U	100	P	11/27/2024	15:54	LB133669
	Lead	12.0	+/-12.0	U	12.0	P	11/27/2024	15:54	LB133669
	Magnesium	2000	+/-2000	U	2000	P	11/27/2024	15:54	LB133669
	Manganese	20.0	+/-20.0	U	20.0	P	11/27/2024	15:54	LB133669
	Nickel	40.0	+/-40.0	U	40.0	P	11/27/2024	15:54	LB133669
	Potassium	2000	+/-2000	U	2000	P	11/27/2024	15:54	LB133669
	Selenium	20.0	+/-20.0	U	20.0	P	11/27/2024	15:54	LB133669
	Silicon	400	+/-400	U	400	P	11/27/2024	15:54	LB133669
	Silver	10.0	+/-10.0	U	10.0	P	11/27/2024	15:54	LB133669
	Sulfur	20.0	+/-20.0	U	20.0	P	11/27/2024	15:54	LB133669
	Sodium	2000	+/-2000	U	2000	P	11/27/2024	15:54	LB133669
	Strontium	20.0	+/-20.0	U	20.0	P	11/27/2024	15:54	LB133669
	Lithium	20.0	+/-20.0	U	20.0	P	11/27/2024	15:54	LB133669
	Thallium	40.0	+/-40.0	U	40.0	P	11/27/2024	15:54	LB133669
	Tin	40.0	+/-40.0	U	40.0	P	11/27/2024	15:54	LB133669
	Titanium	40.0	+/-40.0	U	40.0	P	11/27/2024	15:54	LB133669
	Vanadium	40.0	+/-40.0	U	40.0	P	11/27/2024	15:54	LB133669
	Zinc	40.0	+/-40.0	U	40.0	P	11/27/2024	15:54	LB133669
CCB03	Aluminum	100	+/-100	U	100	P	11/27/2024	16:07	LB133669
	Antimony	50.0	+/-50.0	U	50.0	P	11/27/2024	16:07	LB133669
	Arsenic	20.0	+/-20.0	U	20.0	P	11/27/2024	16:07	LB133669
	Barium	100	+/-100	U	100	P	11/27/2024	16:07	LB133669
	Beryllium	6.00	+/-6.00	U	6.00	P	11/27/2024	16:07	LB133669
	Boron	100	+/-100	U	100	P	11/27/2024	16:07	LB133669
	Cadmium	6.00	+/-6.00	U	6.00	P	11/27/2024	16:07	LB133669
	Calcium	2000	+/-2000	U	2000	P	11/27/2024	16:07	LB133669
	Chromium	10.0	+/-10.0	U	10.0	P	11/27/2024	16:07	LB133669
	Cobalt	30.0	+/-30.0	U	30.0	P	11/27/2024	16:07	LB133669
	Copper	20.0	+/-20.0	U	20.0	P	11/27/2024	16:07	LB133669
	Iron	100	+/-100	U	100	P	11/27/2024	16:07	LB133669
	Lead	12.0	+/-12.0	U	12.0	P	11/27/2024	16:07	LB133669
	Magnesium	2000	+/-2000	U	2000	P	11/27/2024	16:07	LB133669
	Manganese	20.0	+/-20.0	U	20.0	P	11/27/2024	16:07	LB133669
	Nickel	40.0	+/-40.0	U	40.0	P	11/27/2024	16:07	LB133669
	Potassium	2000	+/-2000	U	2000	P	11/27/2024	16:07	LB133669
	Selenium	20.0	+/-20.0	U	20.0	P	11/27/2024	16:07	LB133669
	Silicon	400	+/-400	U	400	P	11/27/2024	16:07	LB133669
	Silver	10.0	+/-10.0	U	10.0	P	11/27/2024	16:07	LB133669

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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Chemtech Consulting Group **SDG No.:** P4495

Contract: CHEM02 **Lab Code:** CHEM **Case No.:** P4495 **SAS No.:** P4495

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB03	Sulfur	20.0	+/-20.0	U	20.0	P	11/27/2024	16:07	LB133669
	Sodium	2000	+/-2000	U	2000	P	11/27/2024	16:07	LB133669
	Strontium	20.0	+/-20.0	U	20.0	P	11/27/2024	16:07	LB133669
	Lithium	20.0	+/-20.0	U	20.0	P	11/27/2024	16:07	LB133669
	Thallium	40.0	+/-40.0	U	40.0	P	11/27/2024	16:07	LB133669
	Tin	40.0	+/-40.0	U	40.0	P	11/27/2024	16:07	LB133669
	Titanium	40.0	+/-40.0	U	40.0	P	11/27/2024	16:07	LB133669
	Vanadium	40.0	+/-40.0	U	40.0	P	11/27/2024	16:07	LB133669
	Zinc	40.0	+/-40.0	U	40.0	P	11/27/2024	16:07	LB133669
CCB04	Aluminum	100	+/-100	U	100	P	11/27/2024	16:43	LB133669
	Antimony	50.0	+/-50.0	U	50.0	P	11/27/2024	16:43	LB133669
	Arsenic	20.0	+/-20.0	U	20.0	P	11/27/2024	16:43	LB133669
	Barium	100	+/-100	U	100	P	11/27/2024	16:43	LB133669
	Beryllium	6.00	+/-6.00	U	6.00	P	11/27/2024	16:43	LB133669
	Boron	100	+/-100	U	100	P	11/27/2024	16:43	LB133669
	Cadmium	6.00	+/-6.00	U	6.00	P	11/27/2024	16:43	LB133669
	Calcium	2000	+/-2000	U	2000	P	11/27/2024	16:43	LB133669
	Chromium	10.0	+/-10.0	U	10.0	P	11/27/2024	16:43	LB133669
	Cobalt	30.0	+/-30.0	U	30.0	P	11/27/2024	16:43	LB133669
	Copper	20.0	+/-20.0	U	20.0	P	11/27/2024	16:43	LB133669
	Iron	100	+/-100	U	100	P	11/27/2024	16:43	LB133669
	Lead	12.0	+/-12.0	U	12.0	P	11/27/2024	16:43	LB133669
	Magnesium	2000	+/-2000	U	2000	P	11/27/2024	16:43	LB133669
	Manganese	20.0	+/-20.0	U	20.0	P	11/27/2024	16:43	LB133669
	Nickel	40.0	+/-40.0	U	40.0	P	11/27/2024	16:43	LB133669
	Potassium	2000	+/-2000	U	2000	P	11/27/2024	16:43	LB133669
	Selenium	20.0	+/-20.0	U	20.0	P	11/27/2024	16:43	LB133669
	Silicon	400	+/-400	U	400	P	11/27/2024	16:43	LB133669
	Silver	10.0	+/-10.0	U	10.0	P	11/27/2024	16:43	LB133669
	Sulfur	20.0	+/-20.0	U	20.0	P	11/27/2024	16:43	LB133669
	Sodium	2000	+/-2000	U	2000	P	11/27/2024	16:43	LB133669
	Strontium	20.0	+/-20.0	U	20.0	P	11/27/2024	16:43	LB133669
	Lithium	20.0	+/-20.0	U	20.0	P	11/27/2024	16:43	LB133669
	Thallium	40.0	+/-40.0	U	40.0	P	11/27/2024	16:43	LB133669
	Tin	40.0	+/-40.0	U	40.0	P	11/27/2024	16:43	LB133669
	Titanium	40.0	+/-40.0	U	40.0	P	11/27/2024	16:43	LB133669
	Vanadium	40.0	+/-40.0	U	40.0	P	11/27/2024	16:43	LB133669
	Zinc	40.0	+/-40.0	U	40.0	P	11/27/2024	16:43	LB133669
CCB05	Aluminum	100	+/-100	U	100	P	11/27/2024	17:46	LB133669

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Chemtech Consulting Group **SDG No.:** P4495

Contract: CHEM02 **Lab Code:** CHEM **Case No.:** P4495 **SAS No.:** P4495

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB05	Antimony	50.0	+/-50.0	U	50.0	P	11/27/2024	17:46	LB133669
	Arsenic	20.0	+/-20.0	U	20.0	P	11/27/2024	17:46	LB133669
	Barium	100	+/-100	U	100	P	11/27/2024	17:46	LB133669
	Beryllium	6.00	+/-6.00	U	6.00	P	11/27/2024	17:46	LB133669
	Boron	100	+/-100	U	100	P	11/27/2024	17:46	LB133669
	Cadmium	6.00	+/-6.00	U	6.00	P	11/27/2024	17:46	LB133669
	Calcium	2000	+/-2000	U	2000	P	11/27/2024	17:46	LB133669
	Chromium	10.0	+/-10.0	U	10.0	P	11/27/2024	17:46	LB133669
	Cobalt	30.0	+/-30.0	U	30.0	P	11/27/2024	17:46	LB133669
	Copper	20.0	+/-20.0	U	20.0	P	11/27/2024	17:46	LB133669
	Iron	100	+/-100	U	100	P	11/27/2024	17:46	LB133669
	Lead	12.0	+/-12.0	U	12.0	P	11/27/2024	17:46	LB133669
	Magnesium	2000	+/-2000	U	2000	P	11/27/2024	17:46	LB133669
	Manganese	20.0	+/-20.0	U	20.0	P	11/27/2024	17:46	LB133669
	Nickel	40.0	+/-40.0	U	40.0	P	11/27/2024	17:46	LB133669
	Potassium	2000	+/-2000	U	2000	P	11/27/2024	17:46	LB133669
	Selenium	20.0	+/-20.0	U	20.0	P	11/27/2024	17:46	LB133669
	Silicon	400	+/-400	U	400	P	11/27/2024	17:46	LB133669
	Silver	10.0	+/-10.0	U	10.0	P	11/27/2024	17:46	LB133669
	Sulfur	20.0	+/-20.0	U	20.0	P	11/27/2024	17:46	LB133669
	Sodium	2000	+/-2000	U	2000	P	11/27/2024	17:46	LB133669
	Strontium	20.0	+/-20.0	U	20.0	P	11/27/2024	17:46	LB133669
	Lithium	20.0	+/-20.0	U	20.0	P	11/27/2024	17:46	LB133669
	Thallium	40.0	+/-40.0	U	40.0	P	11/27/2024	17:46	LB133669
	Tin	40.0	+/-40.0	U	40.0	P	11/27/2024	17:46	LB133669
	Titanium	40.0	+/-40.0	U	40.0	P	11/27/2024	17:46	LB133669
	Vanadium	40.0	+/-40.0	U	40.0	P	11/27/2024	17:46	LB133669
	Zinc	40.0	+/-40.0	U	40.0	P	11/27/2024	17:46	LB133669

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Chemtech Consulting Group **SDG No.:** P4495

Contract: CHEM02 **Lab Code:** CHEM **Case No.:** P4495 **SAS No.:** P4495

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB01	Aluminum	100	+/-100	U	100	P	12/04/2024	13:43	LB133739
	Antimony	50.0	+/-50.0	U	50.0	P	12/04/2024	13:43	LB133739
	Arsenic	20.0	+/-20.0	U	20.0	P	12/04/2024	13:43	LB133739
	Barium	100	+/-100	U	100	P	12/04/2024	13:43	LB133739
	Beryllium	6.00	+/-6.00	U	6.00	P	12/04/2024	13:43	LB133739
	Cadmium	6.00	+/-6.00	U	6.00	P	12/04/2024	13:43	LB133739
	Calcium	2000	+/-2000	U	2000	P	12/04/2024	13:43	LB133739
	Chromium	10.0	+/-10.0	U	10.0	P	12/04/2024	13:43	LB133739
	Cobalt	30.0	+/-30.0	U	30.0	P	12/04/2024	13:43	LB133739
	Copper	20.0	+/-20.0	U	20.0	P	12/04/2024	13:43	LB133739
	Iron	100	+/-100	U	100	P	12/04/2024	13:43	LB133739
	Lead	12.0	+/-12.0	U	12.0	P	12/04/2024	13:43	LB133739
	Magnesium	2000	+/-2000	U	2000	P	12/04/2024	13:43	LB133739
	Manganese	20.0	+/-20.0	U	20.0	P	12/04/2024	13:43	LB133739
	Nickel	40.0	+/-40.0	U	40.0	P	12/04/2024	13:43	LB133739
	Potassium	2000	+/-2000	U	2000	P	12/04/2024	13:43	LB133739
	Selenium	20.0	+/-20.0	U	20.0	P	12/04/2024	13:43	LB133739
	Silver	10.0	+/-10.0	U	10.0	P	12/04/2024	13:43	LB133739
	Sodium	2000	+/-2000	U	2000	P	12/04/2024	13:43	LB133739
	Thallium	40.0	+/-40.0	U	40.0	P	12/04/2024	13:43	LB133739
	Vanadium	40.0	+/-40.0	U	40.0	P	12/04/2024	13:43	LB133739
	Zinc	40.0	+/-40.0	U	40.0	P	12/04/2024	13:43	LB133739

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Chemtech Consulting Group **SDG No.:** P4495

Contract: CHEM02 **Lab Code:** CHEM **Case No.:** P4495 **SAS No.:** P4495

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB01	Aluminum	100	+/-100	U	100	P	12/04/2024	14:29	LB133739
	Antimony	50.0	+/-50.0	U	50.0	P	12/04/2024	14:29	LB133739
	Arsenic	20.0	+/-20.0	U	20.0	P	12/04/2024	14:29	LB133739
	Barium	100	+/-100	U	100	P	12/04/2024	14:29	LB133739
	Beryllium	6.00	+/-6.00	U	6.00	P	12/04/2024	14:29	LB133739
	Cadmium	6.00	+/-6.00	U	6.00	P	12/04/2024	14:29	LB133739
	Calcium	2000	+/-2000	U	2000	P	12/04/2024	14:29	LB133739
	Chromium	10.0	+/-10.0	U	10.0	P	12/04/2024	14:29	LB133739
	Cobalt	30.0	+/-30.0	U	30.0	P	12/04/2024	14:29	LB133739
	Copper	20.0	+/-20.0	U	20.0	P	12/04/2024	14:29	LB133739
	Iron	100	+/-100	U	100	P	12/04/2024	14:29	LB133739
	Lead	12.0	+/-12.0	U	12.0	P	12/04/2024	14:29	LB133739
	Magnesium	2000	+/-2000	U	2000	P	12/04/2024	14:29	LB133739
	Manganese	20.0	+/-20.0	U	20.0	P	12/04/2024	14:29	LB133739
	Nickel	40.0	+/-40.0	U	40.0	P	12/04/2024	14:29	LB133739
	Potassium	2000	+/-2000	U	2000	P	12/04/2024	14:29	LB133739
	Selenium	20.0	+/-20.0	U	20.0	P	12/04/2024	14:29	LB133739
	Silver	10.0	+/-10.0	U	10.0	P	12/04/2024	14:29	LB133739
	Sodium	2000	+/-2000	U	2000	P	12/04/2024	14:29	LB133739
	Thallium	40.0	+/-40.0	U	40.0	P	12/04/2024	14:29	LB133739
	Vanadium	40.0	+/-40.0	U	40.0	P	12/04/2024	14:29	LB133739
	Zinc	40.0	+/-40.0	U	40.0	P	12/04/2024	14:29	LB133739
CCB02	Aluminum	100	+/-100	U	100	P	12/04/2024	14:41	LB133739
	Antimony	50.0	+/-50.0	U	50.0	P	12/04/2024	14:41	LB133739
	Arsenic	20.0	+/-20.0	U	20.0	P	12/04/2024	14:41	LB133739
	Barium	100	+/-100	U	100	P	12/04/2024	14:41	LB133739
	Beryllium	6.00	+/-6.00	U	6.00	P	12/04/2024	14:41	LB133739
	Cadmium	6.00	+/-6.00	U	6.00	P	12/04/2024	14:41	LB133739
	Calcium	2000	+/-2000	U	2000	P	12/04/2024	14:41	LB133739
	Chromium	10.0	+/-10.0	U	10.0	P	12/04/2024	14:41	LB133739
	Cobalt	30.0	+/-30.0	U	30.0	P	12/04/2024	14:41	LB133739
	Copper	20.0	+/-20.0	U	20.0	P	12/04/2024	14:41	LB133739
	Iron	100	+/-100	U	100	P	12/04/2024	14:41	LB133739
	Lead	12.0	+/-12.0	U	12.0	P	12/04/2024	14:41	LB133739
	Magnesium	2000	+/-2000	U	2000	P	12/04/2024	14:41	LB133739
	Manganese	20.0	+/-20.0	U	20.0	P	12/04/2024	14:41	LB133739
	Nickel	40.0	+/-40.0	U	40.0	P	12/04/2024	14:41	LB133739
	Potassium	2000	+/-2000	U	2000	P	12/04/2024	14:41	LB133739
	Selenium	20.0	+/-20.0	U	20.0	P	12/04/2024	14:41	LB133739

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Chemtech Consulting Group **SDG No.:** P4495

Contract: CHEM02 **Lab Code:** CHEM **Case No.:** P4495 **SAS No.:** P4495

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB02	Silver	10.0	+/-10.0	U	10.0	P	12/04/2024	14:41	LB133739
	Sodium	2000	+/-2000	U	2000	P	12/04/2024	14:41	LB133739
	Thallium	40.0	+/-40.0	U	40.0	P	12/04/2024	14:41	LB133739
	Vanadium	40.0	+/-40.0	U	40.0	P	12/04/2024	14:41	LB133739
	Zinc	40.0	+/-40.0	U	40.0	P	12/04/2024	14:41	LB133739

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PREPARATION BLANK SUMMARY

Client: Chemtech Consulting Group **SDG No.:** P4495

Instrument: CV1

Sample ID	Analyte	Result (mg/Kg)	Acceptance Limit	Conc Qual	CRQL mg/Kg	M	Analysis Date	Analysis Time	Run
PB164552BL		**SOLID**		**Batch Number:**	**PB164552**		**Prep Date:**	**10/30/2024**	
	Mercury	0.013	<0.013	U	0.013	CV	10/31/2024	10:36	LB133227

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PREPARATION BLANK SUMMARY

Client: Chemtech Consulting Group **SDG No.:** P4495

Instrument: P4

Sample ID	Analyte	Result (mg/Kg)	Acceptance Limit	Conc Qual	CRQL mg/Kg	M	Analysis Date	Analysis Time	Run
PB165242BL		**SOLID**		**Batch Number:**	**PB165242**		**Prep Date:**	**11/26/2024**	
	Aluminum	5.00	<5.00	U	5.00	P	11/27/2024	15:11	LB133669
	Antimony	2.50	<2.50	U	2.50	P	11/27/2024	15:11	LB133669
	Arsenic	1.00	<1.00	U	1.00	P	11/27/2024	15:11	LB133669
	Barium	5.00	<5.00	U	5.00	P	11/27/2024	15:11	LB133669
	Beryllium	0.30	<0.30	U	0.30	P	11/27/2024	15:11	LB133669
	Boron	5.00	<5.00	U	5.00	P	11/27/2024	15:11	LB133669
	Cadmium	0.30	<0.30	U	0.30	P	11/27/2024	15:11	LB133669
	Calcium	100	<100	U	100	P	11/27/2024	15:11	LB133669
	Chromium	0.50	<0.50	U	0.50	P	11/27/2024	15:11	LB133669
	Cobalt	1.50	<1.50	U	1.50	P	11/27/2024	15:11	LB133669
	Copper	1.00	<1.00	U	1.00	P	11/27/2024	15:11	LB133669
	Iron	5.00	<5.00	U	5.00	P	11/27/2024	15:11	LB133669
	Lead	0.60	<0.60	U	0.60	P	11/27/2024	15:11	LB133669
	Magnesium	100	<100	U	100	P	11/27/2024	15:11	LB133669
	Manganese	1.00	<1.00	U	1.00	P	11/27/2024	15:11	LB133669
	Nickel	2.00	<2.00	U	2.00	P	11/27/2024	15:11	LB133669
	Potassium	100	<100	U	100	P	11/27/2024	15:11	LB133669
	Selenium	1.00	<1.00	U	1.00	P	11/27/2024	15:11	LB133669
	Silicon	20.0	<20.0	U	20.0	P	11/27/2024	15:11	LB133669
	Silver	0.50	<0.50	U	0.50	P	11/27/2024	15:11	LB133669
	Sulfur	2.00	<2.00	U	2.00	P	11/27/2024	15:11	LB133669
	Sodium	100	<100	U	100	P	11/27/2024	15:11	LB133669
	Strontium	10.0	<10.0	U	10.0	P	11/27/2024	15:11	LB133669
	Lithium	1.00	<1.00	U	1.00	P	11/27/2024	15:11	LB133669
	Thallium	2.00	<2.00	U	2.00	P	11/27/2024	15:11	LB133669
	Tin	2.00	<2.00	U	2.00	P	11/27/2024	15:11	LB133669
	Titanium	2.00	<2.00	U	2.00	P	11/27/2024	15:11	LB133669
	Vanadium	2.00	<2.00	U	2.00	P	11/27/2024	15:11	LB133669
	Zinc	2.00	<2.00	U	2.00	P	11/27/2024	15:11	LB133669

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INTERFERENCE CHECK SAMPLE

Client: Chemtech Consulting Group **SDG No.:** P4495

Contract: CHEM02 **Lab Code:** CHEM **Case No.:** P4495 **SAS No.:** P4495

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

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Low Limit (ug/L)	High Limit (ug/L)	Analysis Date	Analysis Time	Run Number
ICSA01	Aluminum	267000	255000	105	216000	294000	11/27/2024	13:25	LB133669
	Antimony	-3.00			-50	50	11/27/2024	13:25	LB133669
	Arsenic	5.12			-20	20	11/27/2024	13:25	LB133669
	Barium	4.09	6.0	68	-94	106	11/27/2024	13:25	LB133669
	Beryllium	1.38			-6	6	11/27/2024	13:25	LB133669
	Boron	31.1	1000	3	-100	100	11/27/2024	13:25	LB133669
	Cadmium	6.81	1.0	681	-5	7	11/27/2024	13:25	LB133669
	Calcium	249000	245000	102	208000	282000	11/27/2024	13:25	LB133669
	Chromium	58.0	52.0	112	42	62	11/27/2024	13:25	LB133669
	Cobalt	2.31			-30	30	11/27/2024	13:25	LB133669
	Copper	21.8	2.0	1090	-18	22	11/27/2024	13:25	LB133669
	Iron	102000	101000	101	85600	116500	11/27/2024	13:25	LB133669
	Lead	9.71			-12	12	11/27/2024	13:25	LB133669
	Magnesium	273000	255000	107	216000	294000	11/27/2024	13:25	LB133669
	Manganese	4.30	7.0	61	-13	27	11/27/2024	13:25	LB133669
	Nickel	2.60	2.0	130	-38	42	11/27/2024	13:25	LB133669
	Potassium	-57.5			0	0	11/27/2024	13:25	LB133669
	Selenium	-19.4			-20	20	11/27/2024	13:25	LB133669
	Silicon	17.3			0	0	11/27/2024	13:25	LB133669
	Silver	-7.66			-10	10	11/27/2024	13:25	LB133669
	Sulfur	-8.87			0	0	11/27/2024	13:25	LB133669
	Sodium	25.1			0	0	11/27/2024	13:25	LB133669
	Strontium	4.50			0	0	11/27/2024	13:25	LB133669
	Lithium	-13.0	1000	1	-20	20	11/27/2024	13:25	LB133669
	Thallium	12.7			-40	40	11/27/2024	13:25	LB133669
	Tin	-4.01	1000		-40	40	11/27/2024	13:25	LB133669
	Titanium	-0.71			0	0	11/27/2024	13:25	LB133669
	Vanadium	6.75			-40	40	11/27/2024	13:25	LB133669
	Zinc	7.62			-40	40	11/27/2024	13:25	LB133669
ICSAB01	Aluminum	270000	247000	109	209000	285000	11/27/2024	14:03	LB133669
	Antimony	620	618	100	525	711	11/27/2024	14:03	LB133669
	Arsenic	113	104	109	88.4	120	11/27/2024	14:03	LB133669
	Barium	538	537	100	437	637	11/27/2024	14:03	LB133669
	Beryllium	524	495	106	420	570	11/27/2024	14:03	LB133669
	Boron	989	1000	99	850	1150	11/27/2024	14:03	LB133669
	Cadmium	1020	972	105	826	1120	11/27/2024	14:03	LB133669
	Calcium	253000	235000	108	199000	271000	11/27/2024	14:03	LB133669
	Chromium	554	542	102	460	624	11/27/2024	14:03	LB133669
	Cobalt	509	476	107	404	548	11/27/2024	14:03	LB133669
	Copper	501	511	98	434	588	11/27/2024	14:03	LB133669
	Iron	99000	99300	100	84400	114500	11/27/2024	14:03	LB133669
	Lead	56.4	49.0	115	37	61	11/27/2024	14:03	LB133669

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INTERFERENCE CHECK SAMPLE

Client: Chemtech Consulting Group **SDG No.:** P4495

Contract: CHEM02 **Lab Code:** CHEM **Case No.:** P4495 **SAS No.:** P4495

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

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Low Limit (ug/L)	High Limit (ug/L)	Analysis Date	Analysis Time	Run Number
ICSAB01	Magnesium	276000	248000	111	210000	286000	11/27/2024	14:03	LB133669
	Manganese	514	507	101	430	584	11/27/2024	14:03	LB133669
	Nickel	1000	954	105	810	1100	11/27/2024	14:03	LB133669
	Potassium	-88.0			0	0	11/27/2024	14:03	LB133669
	Selenium	36.1	46.0	78	26	66	11/27/2024	14:03	LB133669
	Silicon	1120			0	0	11/27/2024	14:03	LB133669
	Silver	190	201	94	170	232	11/27/2024	14:03	LB133669
	Sulfur	976			0	0	11/27/2024	14:03	LB133669
	Sodium	-8.70			0	0	11/27/2024	14:03	LB133669
	Strontium	1010			0	0	11/27/2024	14:03	LB133669
	Lithium	966	1000	97	850	1150	11/27/2024	14:03	LB133669
	Thallium	104	108	96	68	148	11/27/2024	14:03	LB133669
	Tin	979	1000	98	850	1150	11/27/2024	14:03	LB133669
	Titanium	1000			0	0	11/27/2024	14:03	LB133669
	Vanadium	511	491	104	417	565	11/27/2024	14:03	LB133669
	Zinc	1080	952	113	809	1095	11/27/2024	14:03	LB133669
ICSA01	Aluminum	263000	255000	103	216000	294000	12/04/2024	13:57	LB133739
	Antimony	-1.94			-50	50	12/04/2024	13:57	LB133739
	Arsenic	1.57			-20	20	12/04/2024	13:57	LB133739
	Barium	-0.17	6.0	3	-94	106	12/04/2024	13:57	LB133739
	Beryllium	1.23			-6	6	12/04/2024	13:57	LB133739
	Cadmium	8.30	1.0	830	-5	7	12/04/2024	13:57	LB133739
	Calcium	244000	245000	100	208000	282000	12/04/2024	13:57	LB133739
	Chromium	56.0	52.0	108	42	62	12/04/2024	13:57	LB133739
	Cobalt	2.84			-30	30	12/04/2024	13:57	LB133739
	Copper	-8.89	2.0	444	-18	22	12/04/2024	13:57	LB133739
	Iron	97500	101000	96	85600	116500	12/04/2024	13:57	LB133739
	Lead	7.22			-12	12	12/04/2024	13:57	LB133739
	Magnesium	267000	255000	105	216000	294000	12/04/2024	13:57	LB133739
	Manganese	5.09	7.0	73	-13	27	12/04/2024	13:57	LB133739
	Nickel	2.40	2.0	120	-38	42	12/04/2024	13:57	LB133739
	Potassium	47.8			0	0	12/04/2024	13:57	LB133739
	Selenium	-10.7			-20	20	12/04/2024	13:57	LB133739
	Silver	-5.06			-10	10	12/04/2024	13:57	LB133739
	Sodium	100			0	0	12/04/2024	13:57	LB133739
	Thallium	11.5			-40	40	12/04/2024	13:57	LB133739
	Vanadium	6.74			-40	40	12/04/2024	13:57	LB133739
	Zinc	8.15			-40	40	12/04/2024	13:57	LB133739
ICSAB01	Aluminum	261000	247000	106	209000	285000	12/04/2024	14:15	LB133739
	Antimony	629	618	102	525	711	12/04/2024	14:15	LB133739
	Arsenic	110	104	106	88.4	120	12/04/2024	14:15	LB133739
	Barium	500	537	93	437	637	12/04/2024	14:15	LB133739

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INTERFERENCE CHECK SAMPLE

Client: Chemtech Consulting Group **SDG No.:** P4495

Contract: CHEM02 **Lab Code:** CHEM **Case No.:** P4495 **SAS No.:** P4495

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

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Low Limit (ug/L)	High Limit (ug/L)	Analysis Date	Analysis Time	Run Number
ICSAB01	Beryllium	505	495	102	420	570	12/04/2024	14:15	LB133739
	Cadmium	1010	972	104	826	1120	12/04/2024	14:15	LB133739
	Calcium	239000	235000	102	199000	271000	12/04/2024	14:15	LB133739
	Chromium	561	542	104	460	624	12/04/2024	14:15	LB133739
	Cobalt	503	476	106	404	548	12/04/2024	14:15	LB133739
	Copper	474	511	93	434	588	12/04/2024	14:15	LB133739
	Iron	96000	99300	97	84400	114500	12/04/2024	14:15	LB133739
	Lead	52.7	49.0	108	37	61	12/04/2024	14:15	LB133739
	Magnesium	264000	248000	106	210000	286000	12/04/2024	14:15	LB133739
	Manganese	482	507	95	430	584	12/04/2024	14:15	LB133739
	Nickel	987	954	104	810	1100	12/04/2024	14:15	LB133739
	Potassium	-30.8			0	0	12/04/2024	14:15	LB133739
	Selenium	34.2	46.0	74	26	66	12/04/2024	14:15	LB133739
	Silver	193	201	96	170	232	12/04/2024	14:15	LB133739
	Sodium	114			0	0	12/04/2024	14:15	LB133739
	Thallium	94.7	108	88	68	148	12/04/2024	14:15	LB133739
	Vanadium	496	491	101	417	565	12/04/2024	14:15	LB133739
	Zinc	1100	952	116	809	1095	12/04/2024	14:15	LB133739

METAL QC DATA

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MATRIX SPIKE SUMMARY

client: Chemtech Consulting Group **level:** low **sdg no.:** P4495

contract: CHEM02 **lab code:** CHEM **case no.:** P4495 **sas no.:** P4495

matrix: Solid **sample id:** P4618-01 **client id:** HR-01-102924MS

Percent Solids for Sample: 95.4 **Spiked ID:** P4618-01MS **Percent Solids for Spike Sample:** 95.4

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	mg/Kg	80 - 120	0.25		0.030		0.25	89		CV

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MATRIX SPIKE DUPLICATE SUMMARY

client: Chemtech Consulting Group **level:** low **sdg no.:** P4495

contract: CHEM02 **lab code:** CHEM **case no.:** P4495 **sas no.:** P4495

matrix: Solid **sample id:** P4618-01 **client id:** HR-01-102924MSD

Percent Solids for Sample: 95.4 **Spiked ID:** P4618-01MSD **Percent Solids for Spike Sample:** 95.4

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	mg/Kg	80 - 120	0.27		0.030		0.25	97		CV

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Metals
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Client: Chemtech Consulting Group **SDG No.:** P4495

Contract: CHEM02 **Lab Code:** CHEM **Case No.:** P4495 **SAS No.:** P4495

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

Sample ID: **Spiked ID:**

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

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DUPLICATE SAMPLE SUMMARY

Client: Chemtech Consulting Group **Level:** LOW **SDG No.:** P4495

Contract: CHEM02 **Lab Code:** CHEM **Case No.:** P4495 **SAS No.:** P4495

Matrix: Solid **Sample ID:** P4618-01 **Client ID:** HR-01-102924DUP

Percent Solids for Sample: 95.4 **Duplicate ID** P4618-01DUP **Percent Solids for Spike Sample:** 95.4

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	mg/Kg	20	0.030		0.032		6		CV

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

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DUPLICATE SAMPLE SUMMARY

Client: Chemtech Consulting Group **Level:** LOW **SDG No.:** P4495

Contract: CHEM02 **Lab Code:** CHEM **Case No.:** P4495 **SAS No.:** P4495

Matrix: Solid **Sample ID:** P4618-01MS **Client ID:** HR-01-102924MSD

Percent Solids for Sample: 95.4 **Duplicate ID** P4618-01MSD **Percent Solids for Spike Sample:** 95.4

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	mg/Kg	20	0.25		0.27		7		CV

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

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LABORATORY CONTROL SAMPLE SUMMARY

Client: Chemtech Consulting Group **SDG No.:** P4495

Contract: CHEM02 **Lab Code:** CHEM **Case No.:** P4495 **SAS No.:** P4495

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB164552BS							
Mercury	mg/Kg	0.25	0.23		92	80 - 120	CV

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LABORATORY CONTROL SAMPLE SUMMARY

Client: Chemtech Consulting Group **SDG No.:** P4495

Contract: CHEM02 **Lab Code:** CHEM **Case No.:** P4495 **SAS No.:** P4495

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB165242BS							
Aluminum	mg/Kg	100	95.4		95	80 - 120	P
Antimony	mg/Kg	40.0	36.3		91	80 - 120	P
Arsenic	mg/Kg	40.0	36.7		92	80 - 120	P
Barium	mg/Kg	10.0	9.77		98	80 - 120	P
Beryllium	mg/Kg	10.0	9.97		100	80 - 120	P
Boron	mg/Kg	15.0	14.7		98	80 - 120	P
Cadmium	mg/Kg	10.0	9.25		92	80 - 120	P
Calcium	mg/Kg	50.0	51.7	J	103	80 - 120	P
Chromium	mg/Kg	20.0	19.2		96	80 - 120	P
Cobalt	mg/Kg	10.0	9.32		93	80 - 120	P
Copper	mg/Kg	15.0	14.5		97	80 - 120	P
Iron	mg/Kg	150	139		93	80 - 120	P
Lead	mg/Kg	50.0	46.4		93	80 - 120	P
Magnesium	mg/Kg	100	95.9	J	96	80 - 120	P
Manganese	mg/Kg	10.0	10.0		100	80 - 120	P
Nickel	mg/Kg	25.0	23.4		94	80 - 120	P
Potassium	mg/Kg	500	443		89	80 - 120	P
Selenium	mg/Kg	100	92.1		92	80 - 120	P
Silicon	mg/Kg	46.7	38.2		82	80 - 120	P
Silver	mg/Kg	3.8	3.57		94	80 - 120	P
Sulfur	mg/Kg	500	427		85	80 - 120	P
Sodium	mg/Kg	150	123		82	80 - 120	P
Strontium	mg/Kg	10.0	10.1		101	80 - 120	P
Lithium	mg/Kg	10.0	9.89		99	80 - 120	P
Thallium	mg/Kg	100	98.2		98	80 - 120	P
Tin	mg/Kg	35.0	31.7		91	80 - 120	P
Titanium	mg/Kg	10.0	9.74		97	80 - 120	P
Vanadium	mg/Kg	15.0	14.8		99	80 - 120	P
Zinc	mg/Kg	10.0	9.87		99	80 - 120	P

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ICP SERIAL DILUTIONS

SAMPLE NO.

HR-01-102924L

Lab Name: Chemtech Consulting Group **Contract:** CHEM02

Lab Code: CHEM **Lb No.:** lb133227 **Lab Sample ID :** P4618-01L **SDG No.:** P4495

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

Concentration Units: mg/Kg

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Mercury	0.030		0.071	U	100.0		CV

METAL PREPARATION & INSTRUMENT DATA

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ICP INTERELEMENT CORRECTION FACTORS

Client: Chemtech Consulting Group **SDG No.:** P4495

Contract: CHEM02 **Lab Code:** CHEM **Case No.:** P4495 **SAS No.:** P4495

Instrument ID: **Date:**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

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

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ICP INTERELEMENT CORRECTION FACTORS

Client: Chemtech Consulting Group **SDG No.:** P4495

Contract: CHEM02 **Lab Code:** CHEM **Case No.:** P4495 **SAS No.:** P4495

Instrument ID: **Date:**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

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

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ICP INTERELEMENT CORRECTION FACTORS

Client: Chemtech Consulting Group **SDG No.:** P4495

Contract: CHEM02 **Lab Code:** CHEM **Case No.:** P4495 **SAS No.:** P4495

Instrument ID: **Date:**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

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

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ICP INTERELEMENT CORRECTION FACTORS

Client: Chemtech Consulting Group **SDG No.:** P4495

Contract: CHEM02 **Lab Code:** CHEM **Case No.:** P4495 **SAS No.:** P4495

Instrument ID: **Date:**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

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

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Metals
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ICP INTERELEMENT CORRECTION FACTORS

Client: Chemtech Consulting Group **SDG No.:** P4495

Contract: CHEM02 **Lab Code:** CHEM **Case No.:** P4495 **SAS No.:** P4495

Instrument ID: **Date:**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

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

METAL PREPARATION & ANALYICAL SUMMARY

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Metals
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SAMPLE PREPARATION SUMMARY

Client: Chemtech Consulting Group **SDG No.:** P4495

Contract: CHEM02 **Lab Code:** CHEM **Method:**

Case No.: P4495 **SAS No.:** P4495

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(g)	Final Sample Volume (mL)	Percent Solids
Batch Number:	**PB164552**						
P4495-10	PT-MET-SOIL	SAM	SOLID	10/30/2024	0.54	35.0	100.00
P4618-01DUP	HR-01-102924DUP	DUP	SOLID	10/30/2024	0.56	35.0	95.40
P4618-01MS	HR-01-102924MS	MS	SOLID	10/30/2024	0.58	35.0	95.40
P4618-01MSD	HR-01-102924MSD	MSD	SOLID	10/30/2024	0.59	35.0	95.40
PB164552BL	PB164552BL	MB	SOLID	10/30/2024	0.55	35.0	100.00
PB164552BS	PB164552BS	LCS	SOLID	10/30/2024	0.56	35.0	100.00

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Metals
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SAMPLE PREPARATION SUMMARY

Client: Chemtech Consulting Group **SDG No.:** P4495

Contract: CHEM02 **Lab Code:** CHEM **Method:**

Case No.: P4495 **SAS No.:** P4495

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(g)	Final Sample Volume (mL)	Percent Solids
Batch Number:	**PB165242**						
P4495-10	PT-MET-SOIL	SAM	SOLID	11/26/2024	2.25	100.0	100.00
PB165242BL	PB165242BL	MB	SOLID	11/26/2024	2.00	100.0	100.00
PB165242BS	PB165242BS	LCS	SOLID	11/26/2024	2.00	100.0	100.00

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metals
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ANALYSIS RUN LOG

Client: Chemtech Consulting Group **Contract:** CHEM02

Lab code: CHEM **Case no.:** P4495 **Sas no.:** P4495 **Sdg no.:** P4495

Instrument id number: **Method:** **Run number:** LB133227

Start date: 10/31/2024 **End date:** 10/31/2024

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1001	HG
S0.2	S0.2	1	1003	HG
S2.5	S2.5	1	1005	HG
S5	S5	1	1008	HG
S7.5	S7.5	1	1010	HG
S10	S10	1	1018	HG
ICV61	ICV61	1	1021	HG
ICB61	ICB61	1	1023	HG
CCV04	CCV04	1	1025	HG
CCB04	CCB04	1	1027	HG
CRA	CRA	1	1030	HG
PB164552BL	PB164552BL	1	1036	HG
PB164552BS	PB164552BS	1	1039	HG
CCV05	CCV05	1	1056	HG
CCB05	CCB05	1	1101	HG
P4618-01DUP	HR-01-102924DUP	1	1110	HG
P4618-01MS	HR-01-102924MS	1	1112	HG
P4618-01MSD	HR-01-102924MSD	1	1114	HG
CCV06	CCV06	1	1126	HG
CCB06	CCB06	1	1131	HG
P4618-01L	HR-01-102924L	5	1143	HG
P4495-10	PT-MET-SOIL	50	1200	HG
CCV07	CCV07	1	1202	HG
CCB07	CCB07	1	1205	HG

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metals
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ANALYSIS RUN LOG

Client: Chemtech Consulting Group **Contract:** CHEM02

Lab code: CHEM **Case no.:** P4495 **Sas no.:** P4495 **Sdg no.:** P4495

Instrument id number: **Method:** **Run number:** LB133669

Start date: 11/27/2024 **End date:** 11/27/2024

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1006	Ag,Al,As,B,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Li,Mg,Mn,Na,Ni,Pb,S,Sb,Se,Si,Sn,Sr,T
S1	S1	1	1011	Ag,Al,As,B,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Li,Mg,Mn,Na,Ni,Pb,S,Sb,Se,Si,Sn,Sr,T
S2	S2	1	1015	Ag,Al,As,B,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Li,Mg,Mn,Na,Ni,Pb,S,Sb,Se,Si,Sn,Sr,T
S3	S3	1	1019	Ag,Al,As,B,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Li,Mg,Mn,Na,Ni,Pb,S,Sb,Se,Si,Sn,Sr,T
S4	S4	1	1024	Ag,Al,As,B,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Li,Mg,Mn,Na,Ni,Pb,S,Sb,Se,Si,Sn,Sr,T
S5	S5	1	1028	Ag,Al,As,B,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Li,Mg,Mn,Na,Ni,Pb,S,Sb,Se,Si,Sn,Sr,T
ICV01	ICV01	1	1225	Ag,Al,As,B,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Li,Mg,Mn,Na,Ni,Pb,S,Sb,Se,Si,Sn,Sr,T
LLICV01	LLICV01	1	1238	Ag,Al,As,B,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Li,Mg,Mn,Na,Ni,Pb,S,Sb,Se,Si,Sn,Sr,T
ICB01	ICB01	1	1243	Ag,Al,As,B,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Li,Mg,Mn,Na,Ni,Pb,S,Sb,Se,Si,Sn,Sr,T
CRI01	CRI01	1	1247	Ag,Al,As,B,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Li,Mg,Mn,Na,Ni,Pb,S,Sb,Se,Si,Sn,Sr,T
ICSA01	ICSA01	1	1325	Ag,Al,As,B,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Li,Mg,Mn,Na,Ni,Pb,S,Sb,Se,Si,Sn,Sr,T
ICSAB01	ICSAB01	1	1403	Ag,Al,As,B,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Li,Mg,Mn,Na,Ni,Pb,S,Sb,Se,Si,Sn,Sr,T
CCV01	CCV01	1	1408	Ag,Al,As,B,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Li,Mg,Mn,Na,Ni,Pb,S,Sb,Se,Si,Sn,Sr,T
CCB01	CCB01	1	1448	Ag,Al,As,B,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Li,Mg,Mn,Na,Ni,Pb,S,Sb,Se,Si,Sn,Sr,T
P4495-10	PT-MET-SOIL	1	1452	Ag,Al,As,B,Ba,Ca,Cd,Co,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,S,Sb,Se,Si,Sn,Sr,Tl,V,Zn
P4495-10	PT-MET-SOIL	5	1507	Cr,Li,Ti
PB165242BL	PB165242BL	1	1511	Ag,Al,As,B,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Li,Mg,Mn,Na,Ni,Pb,S,Sb,Se,Si,Sn,Sr,T
PB165242BS	PB165242BS	1	1540	Ag,Al,As,B,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Li,Mg,Mn,Na,Ni,Pb,S,Sb,Se,Si,Sn,Sr,T
CCV02	CCV02	1	1550	Ag,Al,As,B,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Li,Mg,Mn,Na,Ni,Pb,S,Sb,Se,Si,Sn,Sr,T
CCB02	CCB02	1	1554	Ag,Al,As,B,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Li,Mg,Mn,Na,Ni,Pb,S,Sb,Se,Si,Sn,Sr,T
CCV03	CCV03	1	1603	Ag,Al,As,B,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Li,Mg,Mn,Na,Ni,Pb,S,Sb,Se,Si,Sn,Sr,T
CCB03	CCB03	1	1607	Ag,Al,As,B,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Li,Mg,Mn,Na,Ni,Pb,S,Sb,Se,Si,Sn,Sr,T
CCV04	CCV04	1	1639	Ag,Al,As,B,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Li,Mg,Mn,Na,Ni,Pb,S,Sb,Se,Si,Sn,Sr,T
CCB04	CCB04	1	1643	Ag,Al,As,B,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Li,Mg,Mn,Na,Ni,Pb,S,Sb,Se,Si,Sn,Sr,T
CCV05	CCV05	1	1734	Ag,Al,As,B,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Li,Mg,Mn,Na,Ni,Pb,S,Sb,Se,Si,Sn,Sr,T
CCB05	CCB05	1	1746	Ag,Al,As,B,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Li,Mg,Mn,Na,Ni,Pb,S,Sb,Se,Si,Sn,Sr,T

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metals
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ANALYSIS RUN LOG

Client: Chemtech Consulting Group **Contract:** CHEM02

Lab code: CHEM **Case no.:** P4495 **Sas no.:** P4495 **Sdg no.:** P4495

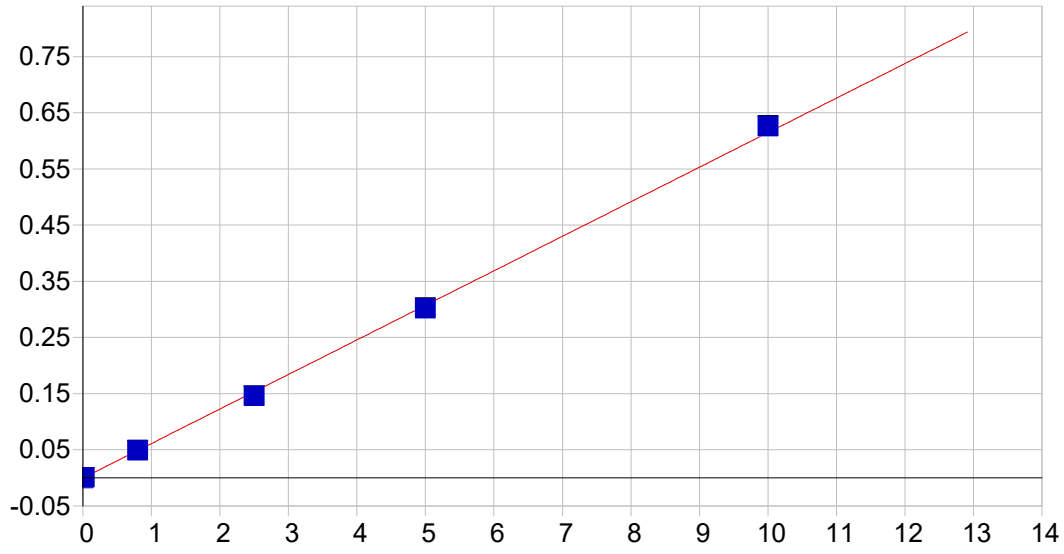
Instrument id number: **Method:** **Run number:** LB133739

Start date: 12/04/2024 **End date:** 12/04/2024

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1257	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
S1	S1	1	1301	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
S2	S2	1	1305	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
S3	S3	1	1310	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
S4	S4	1	1314	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
S5	S5	1	1318	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
ICV01	ICV01	1	1322	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
LLICV01	LLICV01	1	1334	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
ICB01	ICB01	1	1343	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CRI01	CRI01	1	1352	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
ICSA01	ICSA01	1	1357	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
ICSAB01	ICSAB01	1	1415	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCV01	CCV01	1	1420	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCB01	CCB01	1	1429	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
P4495-10	PT-MET-SOIL	10	1433	Be
CCV02	CCV02	1	1437	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCB02	CCB02	1	1441	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn

METAL
RAW DATA

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669



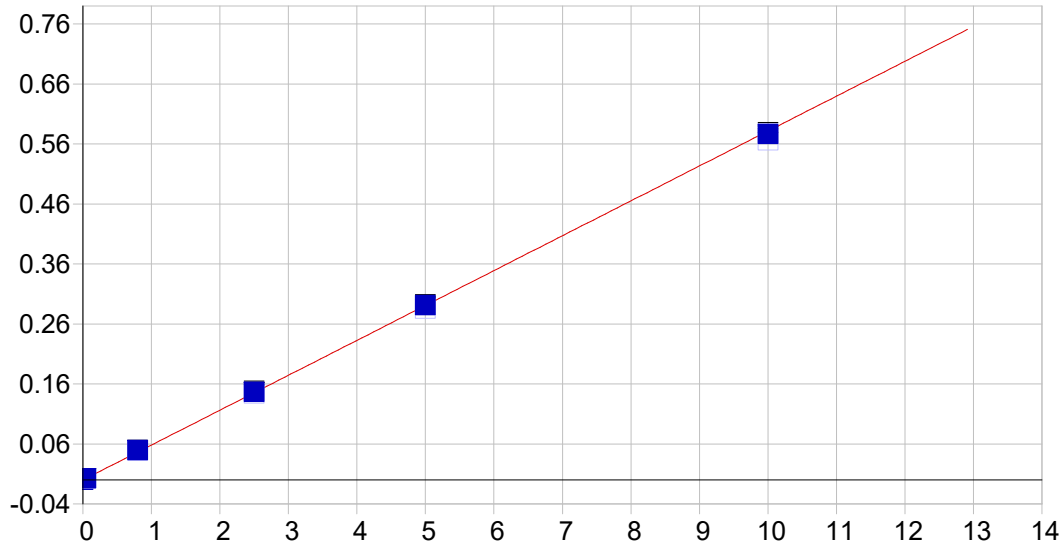
As 189.042 {479}

Date of Fit:	11/27/2024 16:14:44	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000305	Re-Slope:	1.000000
A1 (Gain):	0.061503	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999681	Status:	OK.
Std Error of Est:	0.000036		
Predicted MDL:	0.002536		
Predicted MQL:	0.008454		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00031	.000	1
S1	.02000	.02464	.005	23.2	.00120	.000	1
S3	2.5000	2.3827	-.117	-4.69	.14607	.000	1
S4	5.0000	4.9174	-.083	-1.65	.30180	.001	1
S5	10.000	10.193	.193	1.93	.62592	.001	1
S2	.80000	.80247	.002	.309	.04900	.000	1

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669



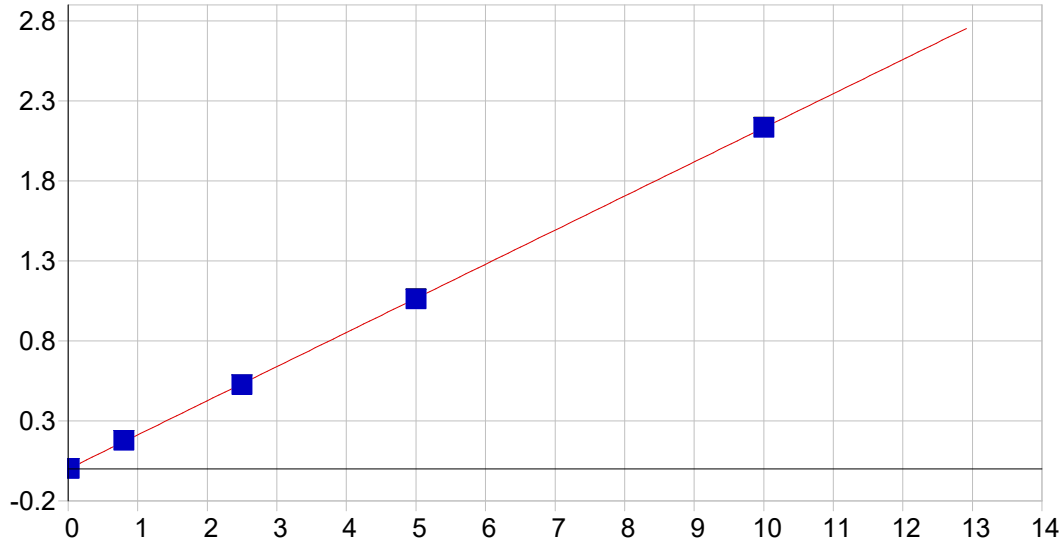
Tl 190.856 {477}

Date of Fit:	11/27/2024 16:14:44	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000105	Re-Slope:	1.000000
A1 (Gain):	0.058160	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999864	Status:	OK.
Std Error of Est:	0.000031		
Predicted MDL:	0.002005		
Predicted MQL:	0.006682		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	-.00010	.000	1
S1	.04000	.04364	.004	9.11	.00228	.000	1
S3	2.5000	2.5265	.026	1.06	.14416	.001	1
S4	5.0000	5.0050	.005	.100	.28563	.001	1
S5	10.000	9.9128	-.087	-.872	.56571	.003	1
S2	.80000	.85223	.052	6.53	.04860	.000	1

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669



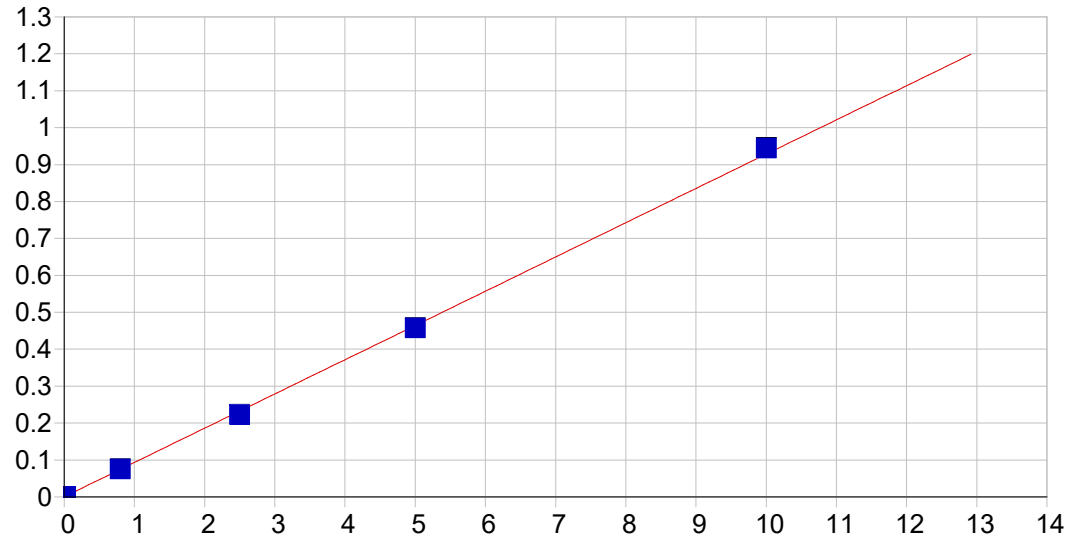
Pb 220.353 {453}

Date of Fit:	11/27/2024 16:14:44	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000278	Re-Slope:	1.000000
A1 (Gain):	0.213211	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999933	Status:	OK.
Std Error of Est:	0.000045		
Predicted MDL:	0.001142		
Predicted MQL:	0.003806		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00028	.000	1
S1	.01200	.01267	.001	5.58	.00237	.000	1
S3	2.5000	2.4673	-.033	-1.31	.52519	.002	1
S4	5.0000	4.9808	-.019	-.384	1.0605	.001	1
S5	10.000	10.012	.012	.122	2.1321	.002	1
S2	.80000	.83906	.039	4.88	.17843	.000	1

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669



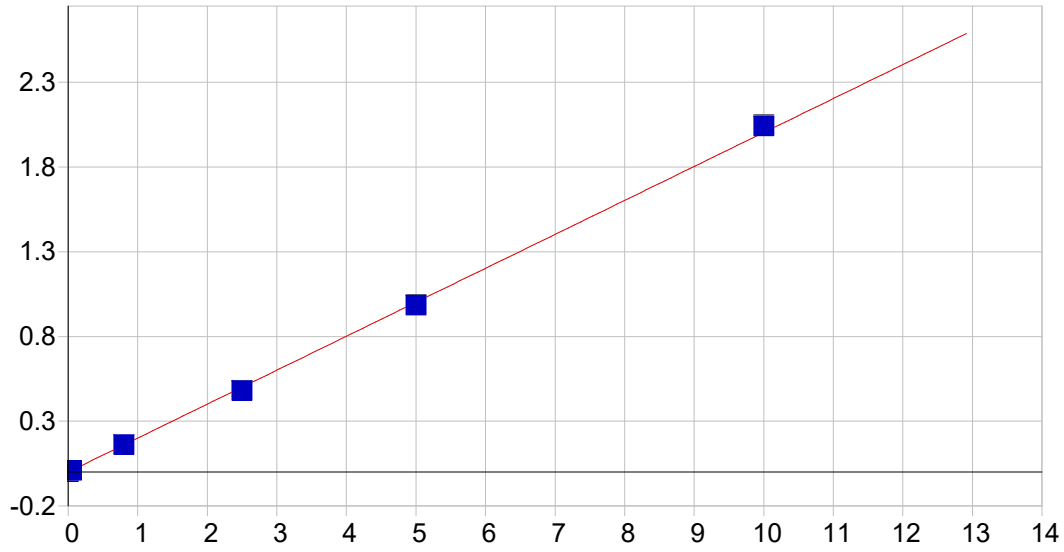
Se 196.090 {472}

Date of Fit:	11/27/2024 16:14:44	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000450	Re-Slope:	1.000000
A1 (Gain):	0.092772	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999757	Status:	OK.
Std Error of Est:	0.000048		
Predicted MDL:	0.002184		
Predicted MQL:	0.007279		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00045	.000	1
S1	.02000	.02162	.002	8.11	.00246	.000	1
S3	2.5000	2.3940	-.106	-4.24	.22248	.001	1
S4	5.0000	4.9236	-.076	-1.53	.45709	.001	1
S5	10.000	10.175	.175	1.75	.94415	.002	1
S2	.80000	.80584	.006	.729	.07519	.000	1

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669



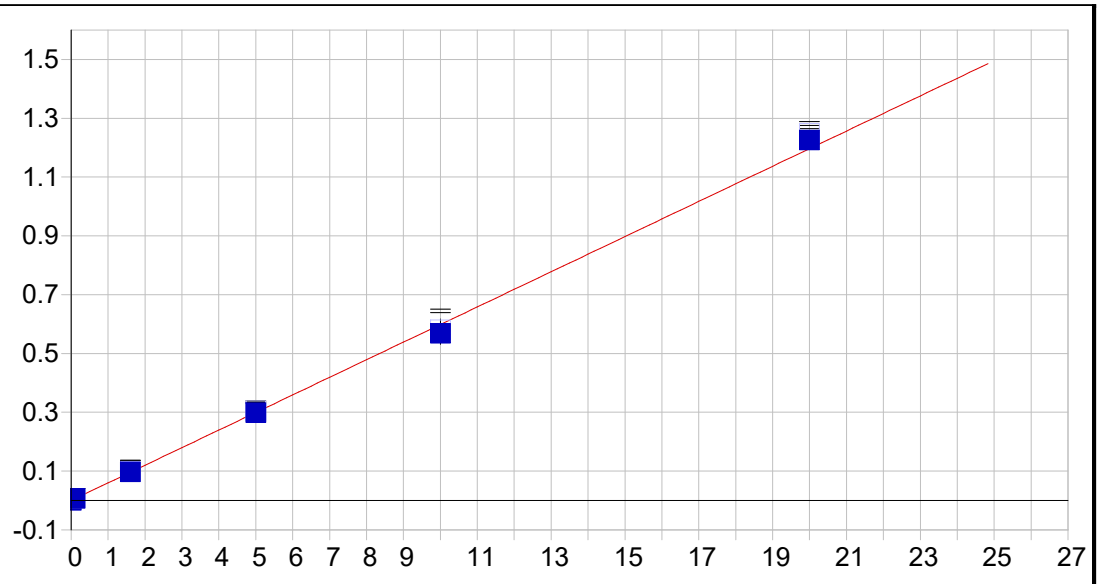
Sb 206.833 {463}

Date of Fit:	11/27/2024 16:14:44	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000047	Re-Slope:	1.000000
A1 (Gain):	0.200371	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999727	Status:	OK.
Std Error of Est:	0.000174		
Predicted MDL:	0.001218		
Predicted MQL:	0.004059		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00005	.000	1
S1	.05000	.05224	.002	4.48	.01044	.000	1
S3	2.5000	2.3910	-.109	-4.36	.48041	.001	1
S4	5.0000	4.9106	-.089	-1.79	.98662	.002	1
S5	10.000	10.189	.189	1.89	2.0471	.002	1
S2	.80000	.80668	.007	.835	.16202	.000	1

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669



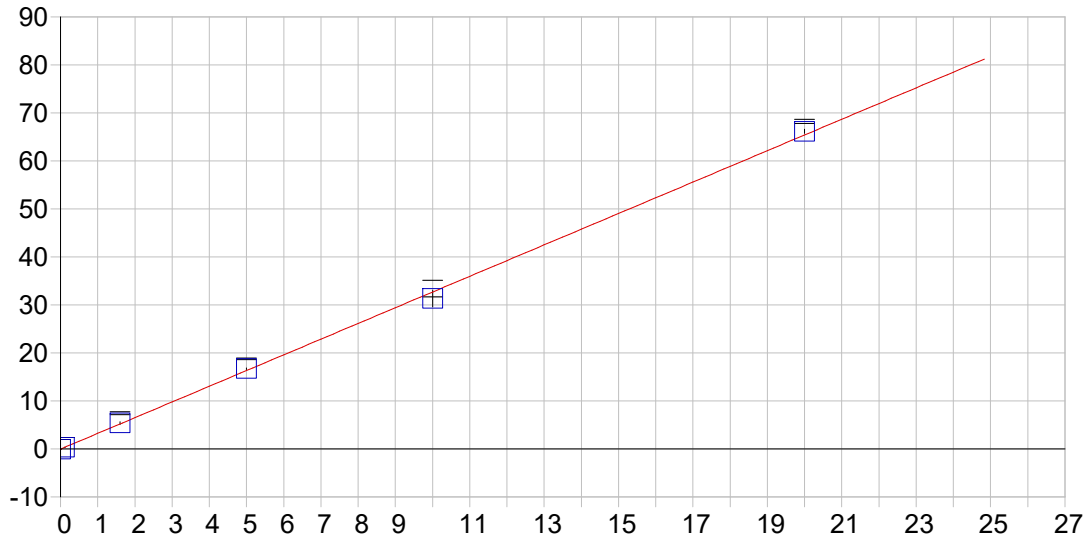
Al 396.152 { 85}

Date of Fit:	11/27/2024 16:14:44	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000271	Re-Slope:	1.000000
A1 (Gain):	0.059822	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999504	Status:	OK.
Std Error of Est:	0.000143		
Predicted MDL:	0.005729		
Predicted MQL:	0.019096		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00027	.000	1
S1	.10000	.11230	.012	12.3	.00745	.000	1
S3	5.0000	4.9905	-.010	-.191	.30461	.000	1
S4	10.000	9.5024	-.498	-4.98	.58033	.037	1
S5	20.000	20.478	.478	2.39	1.2485	.006	1
S2	1.6000	1.6161	.016	1.01	.09881	.005	1

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669



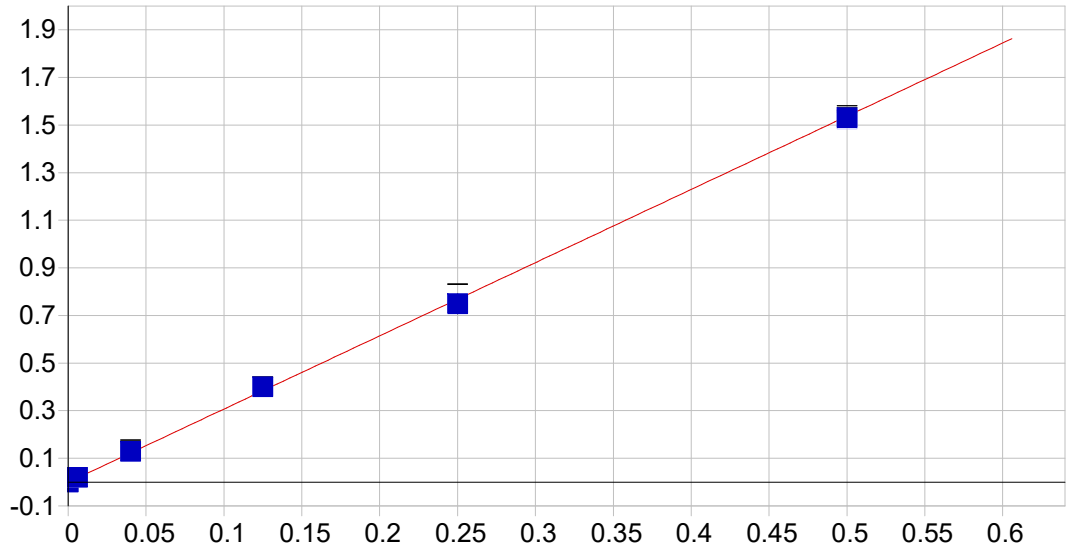
Ba 493.409 { 68}

Date of Fit:	11/27/2024 16:14:44	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.036031	Re-Slope:	1.000000
A1 (Gain):	3.272095	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999671	Status:	OK.
Std Error of Est:	0.006222		
Predicted MDL:	0.000431		
Predicted MQL:	0.001435		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	-.03606	.002	1
S1	.10000	.10734	.007	7.34	.31518	.002	1
S3	5.0000	5.1197	.120	2.39	16.716	.155	1
S4	10.000	9.5951	-.405	-4.05	31.360	1.74	1
S5	20.000	20.224	.224	1.12	66.138	.432	1
S2	1.6000	1.6541	.054	3.38	5.3763	.293	1

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669



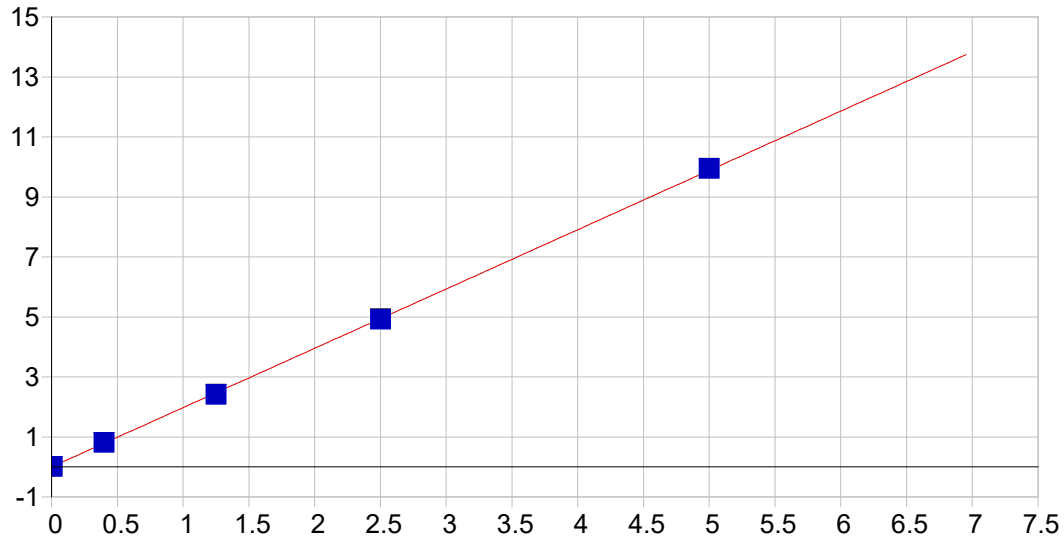
Be 234.861 {144}

Date of Fit:	11/27/2024 16:14:44	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000637	Re-Slope:	1.000000
A1 (Gain):	3.075697	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999702	Status:	OK.
Std Error of Est:	0.000215		
Predicted MDL:	0.000060		
Predicted MQL:	0.000201		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00064	.000	1
S1	.00600	.00657	.001	9.45	.01942	.000	1
S3	.12500	.13032	.005	4.26	.39848	.000	1
S4	.25000	.24415	-.006	-2.34	.74686	.041	1
S5	.50000	.49780	-.002	-.440	1.5235	.010	1
S2	.04000	.04216	.002	5.40	.12848	.006	1

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669



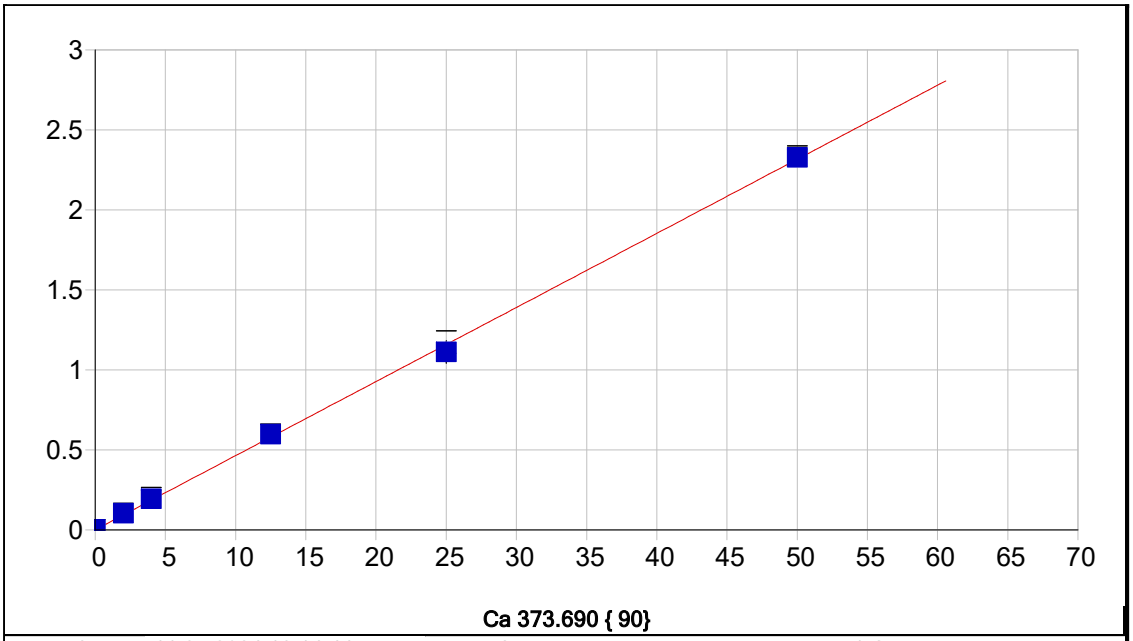
Cd 226.502 {449}

Date of Fit:	11/27/2024 16:14:44	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000104	Re-Slope:	1.000000
A1 (Gain):	1.976656	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999934	Status:	OK.
Std Error of Est:	0.000206		
Predicted MDL:	0.000094		
Predicted MQL:	0.000315		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00010	.000	1
S1	.00600	.00623	.000	3.89	.01227	.000	1
S3	1.2500	1.2206	-.029	-2.35	2.4145	.006	1
S4	2.5000	2.4885	-.011	-.458	4.9227	.007	1
S5	5.0000	5.0303	.030	.606	9.9508	.004	1
S2	.40000	.41035	.010	2.59	.81163	.001	1

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669



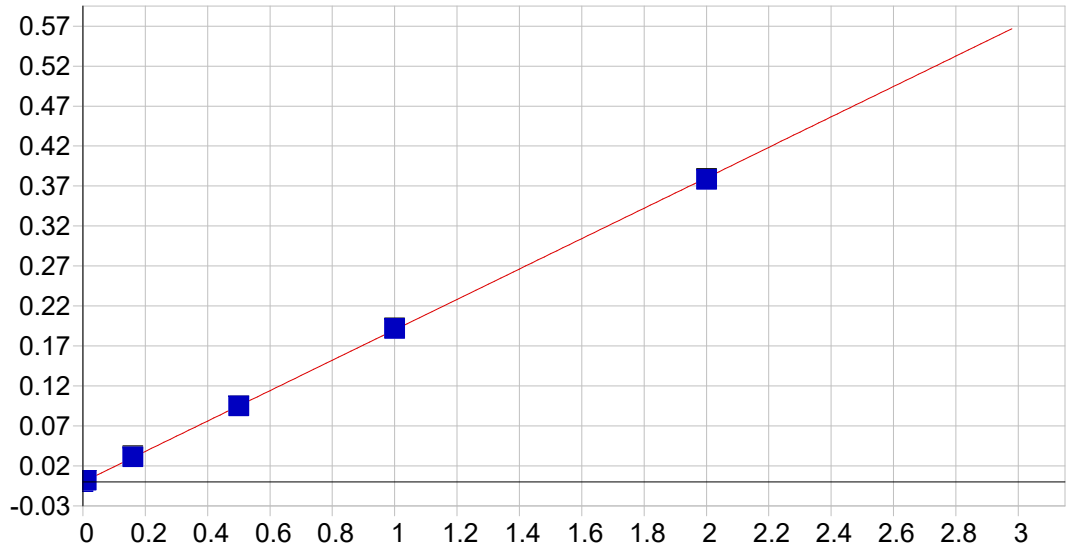
Ca 373.690 { 90}

Date of Fit:	11/27/2024 16:14:44	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001093	Re-Slope:	1.000000
A1 (Gain):	0.046303	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999567	Status:	OK.
Std Error of Est:	0.000721		
Predicted MDL:	0.007473		
Predicted MQL:	0.024911		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00028	-.000	.000	.00108	.000	1
S2	4.0000	4.1567	.157	3.92	.19356	.009	1
S3	12.500	12.871	.371	2.97	.59705	.002	1
S4	25.000	24.002	-.998	-3.99	1.1125	.071	1
S5	50.000	50.257	.257	.514	2.3281	.010	1
S1	2.0000	2.2132	.213	10.7	.10357	.000	1

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669



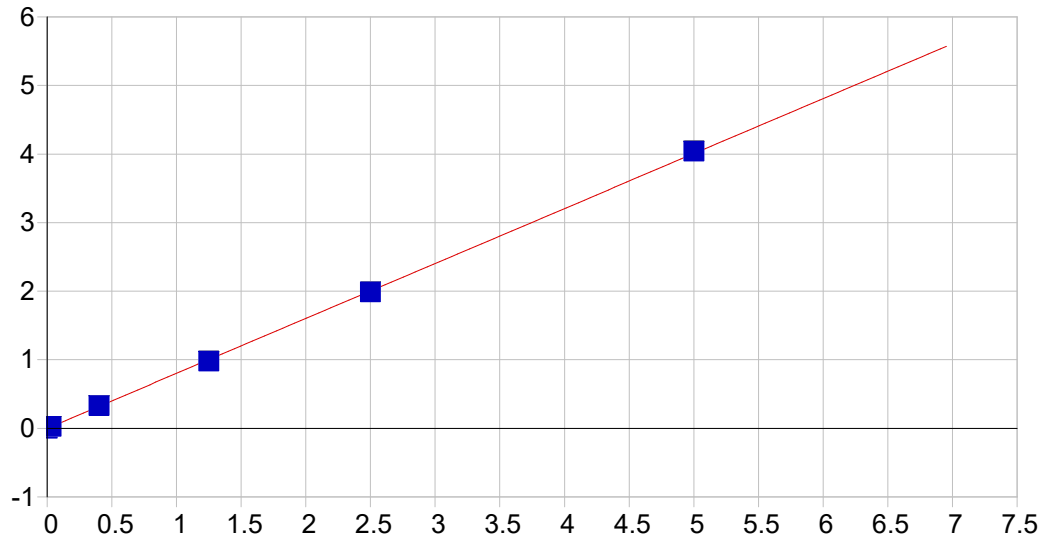
Cr 267.716 {126}

Date of Fit:	11/27/2024 16:14:44	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000002	Re-Slope:	1.000000
A1 (Gain):	0.190174	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999962	Status:	OK.
Std Error of Est:	0.000012		
Predicted MDL:	0.000385		
Predicted MQL:	0.001284		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00000	.000	1
S1	.01000	.01052	.001	5.25	.00200	.000	1
S3	.50000	.49971	-.000	-.058	.09506	.000	1
S4	1.0000	1.0079	.008	.789	.19173	.001	1
S5	2.0000	1.9876	-.012	-.618	.37811	.001	1
S2	.16000	.16424	.004	2.65	.03124	.001	1

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669



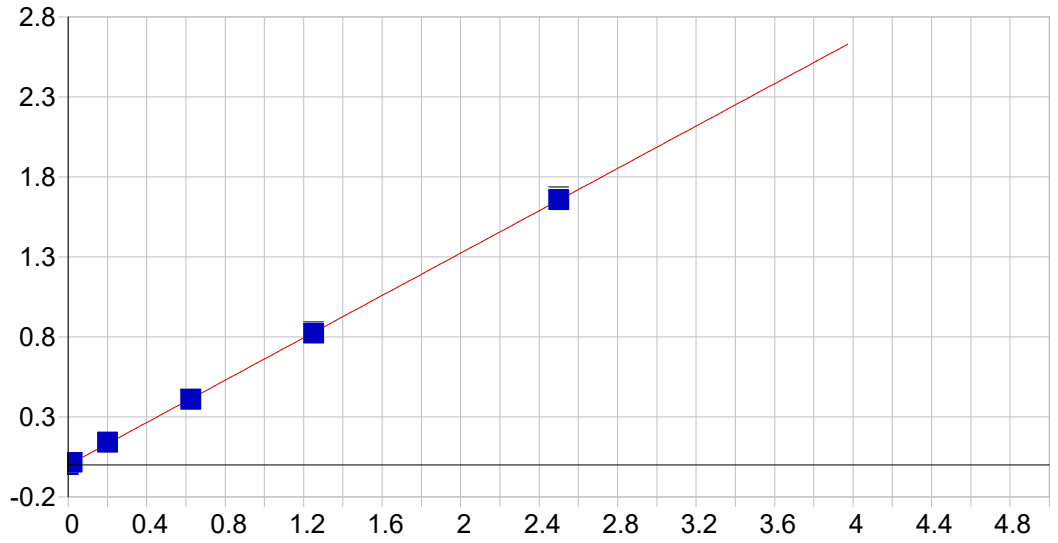
Co 228.616 {448}

Date of Fit:	11/27/2024 16:14:44	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000102	Re-Slope:	1.000000
A1 (Gain):	0.801315	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999914	Status:	OK.
Std Error of Est:	0.000214		
Predicted MDL:	0.000208		
Predicted MQL:	0.000694		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00010	.000	1
S1	.03000	.03129	.001	4.31	.02487	.000	1
S3	1.2500	1.2186	-.031	-2.51	.97806	.003	1
S4	2.5000	2.4803	-.020	-.789	1.9908	.002	1
S5	5.0000	5.0393	.039	.786	4.0448	.000	1
S2	.40000	.41055	.011	2.64	.32942	.000	1

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669



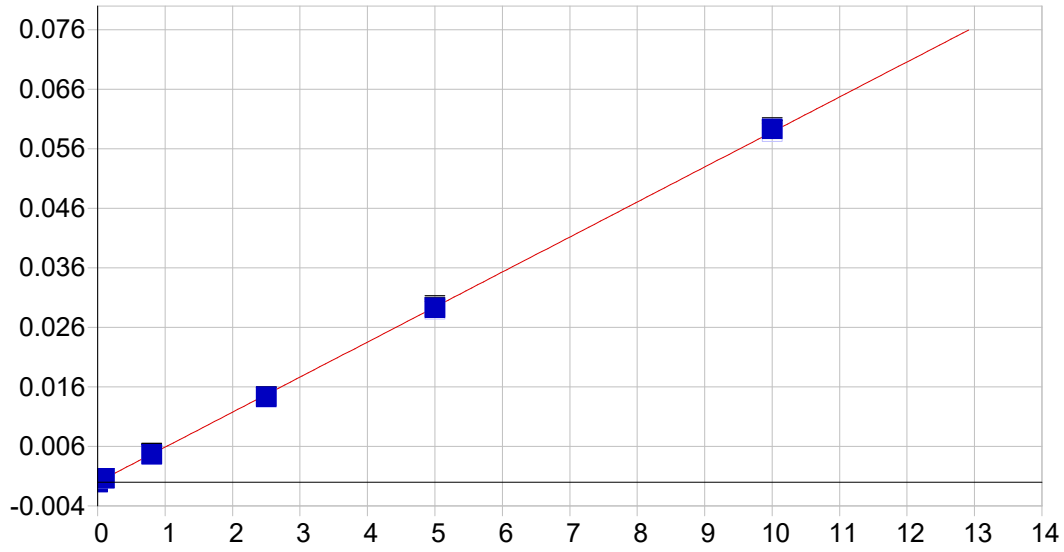
Cu 224.700 {450}

Date of Fit:	11/27/2024 16:14:44	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000021	Re-Slope:	1.000000
A1 (Gain):	0.661865	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999859	Status:	OK.
Std Error of Est:	0.000132		
Predicted MDL:	0.000452		
Predicted MQL:	0.001506		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00002	.000	1
S1	.02000	.02274	.003	13.7	.01525	.000	1
S3	.62500	.61515	-.010	-1.58	.41145	.001	1
S4	1.2500	1.2424	-.008	-.609	.83089	.001	1
S5	2.5000	2.5026	.003	.102	1.6735	.002	1
S2	.20000	.21217	.012	6.08	.14182	.000	1

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669



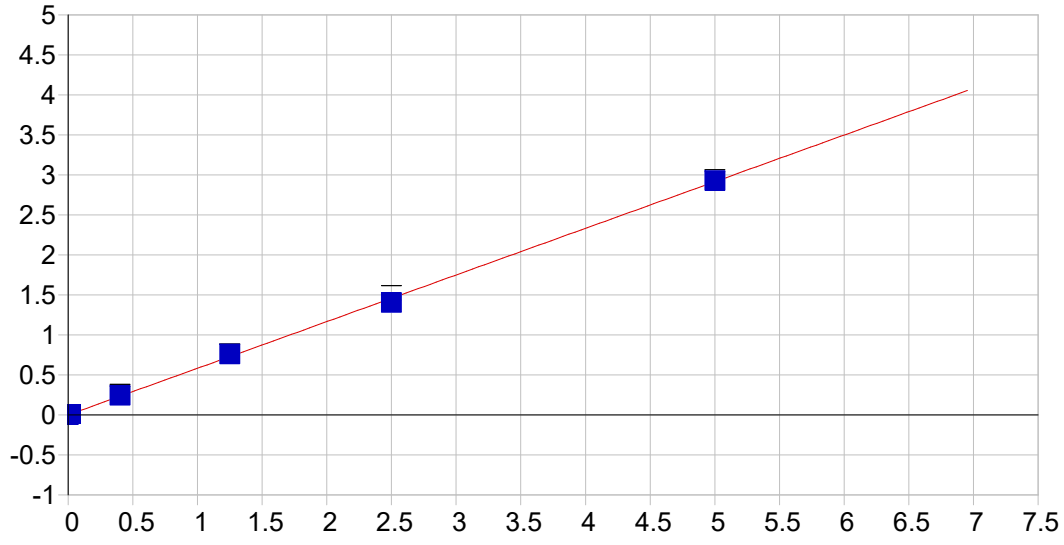
Fe 240.488 {140}

Date of Fit:	11/27/2024 16:14:44	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000011	Re-Slope:	1.000000
A1 (Gain):	0.005885	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999915	Status:	OK.
Std Error of Est:	0.000004		
Predicted MDL:	0.004074		
Predicted MQL:	0.013580		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00001	.000	1
S1	.10000	.10722	.007	7.22	.00061	.000	1
S3	2.5000	2.4358	-.064	-2.57	.01420	.000	1
S4	5.0000	4.9798	-.020	-.403	.02905	.000	1
S5	10.000	10.086	.086	.856	.05884	.000	1
S2	.80000	.79154	-.008	-1.06	.00461	.000	1

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669



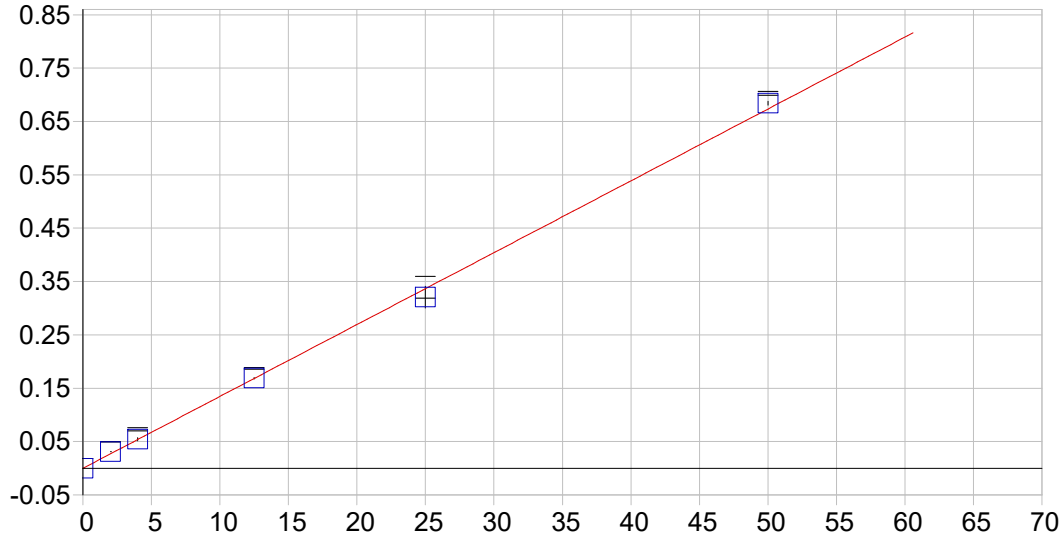
Mn 257.610 {131}

Date of Fit:	11/27/2024 16:14:44	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000066	Re-Slope:	1.000000
A1 (Gain):	0.583034	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999609	Status:	OK.
Std Error of Est:	0.000270		
Predicted MDL:	0.000257		
Predicted MQL:	0.000857		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00006	.000	1
S1	.02000	.02268	.003	13.4	.01330	.000	1
S3	1.2500	1.3016	.052	4.12	.75906	.003	1
S4	2.5000	2.4056	-.094	-3.78	1.4029	.089	1
S5	5.0000	5.0197	.020	.394	2.9273	.012	1
S2	.40000	.42049	.020	5.12	.24527	.013	1

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669



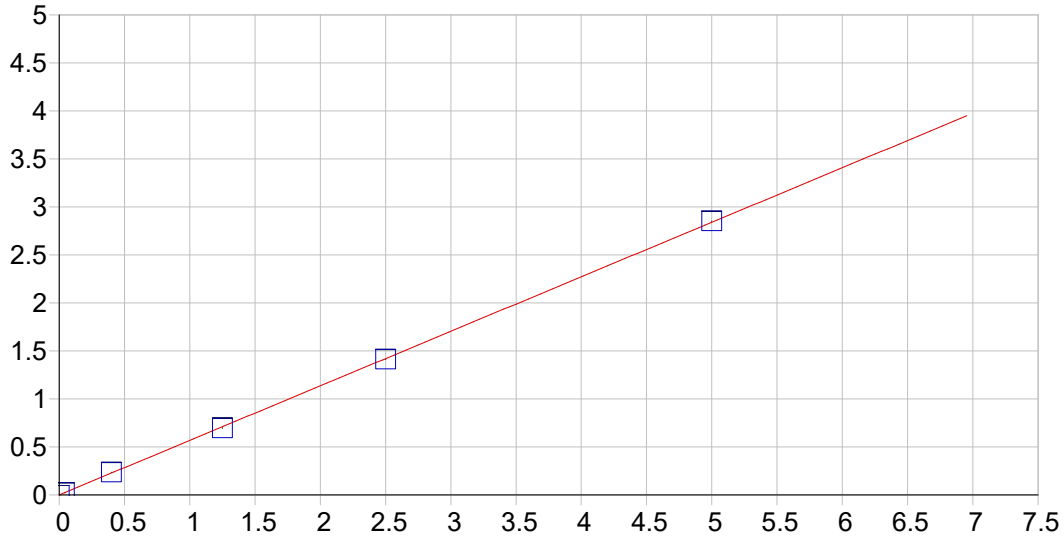
Mg 279.079 {121}

Date of Fit:	11/27/2024 16:14:44	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000088	Re-Slope:	1.000000
A1 (Gain):	0.013471	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999377	Status:	OK.
Std Error of Est:	0.000252		
Predicted MDL:	0.011915		
Predicted MQL:	0.039716		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00028	-.000	.000	-.00009	.000	1
S2	4.0000	4.0571	.057	1.43	.05456	.003	1
S3	12.500	12.540	.040	.320	.16884	.001	1
S4	25.000	23.811	-1.19	-4.76	.32066	.020	1
S5	50.000	50.787	.787	1.57	.68405	.004	1
S1	2.0000	2.3054	.305	15.3	.03097	.000	1

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669



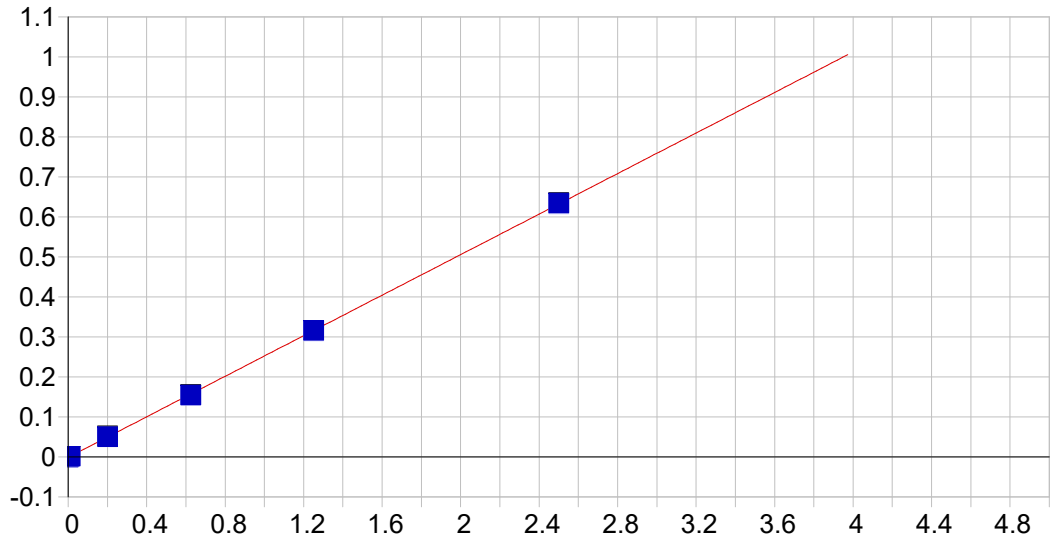
Ni 231.604 {446}

Date of Fit:	11/27/2024 16:14:44	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000048	Re-Slope:	1.000000
A1 (Gain):	0.567999	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999935	Status:	OK.
Std Error of Est:	0.000152		
Predicted MDL:	0.000329		
Predicted MQL:	0.001097		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00005	.000	1
S1	.04000	.04144	.001	3.60	.02359	.000	1
S3	1.2500	1.2259	-.024	-1.93	.69635	.003	1
S4	2.5000	2.4859	-.014	-.564	1.4120	.001	1
S5	5.0000	5.0226	.023	.452	2.8529	.002	1
S2	.40000	.41420	.014	3.55	.23531	.000	1

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669



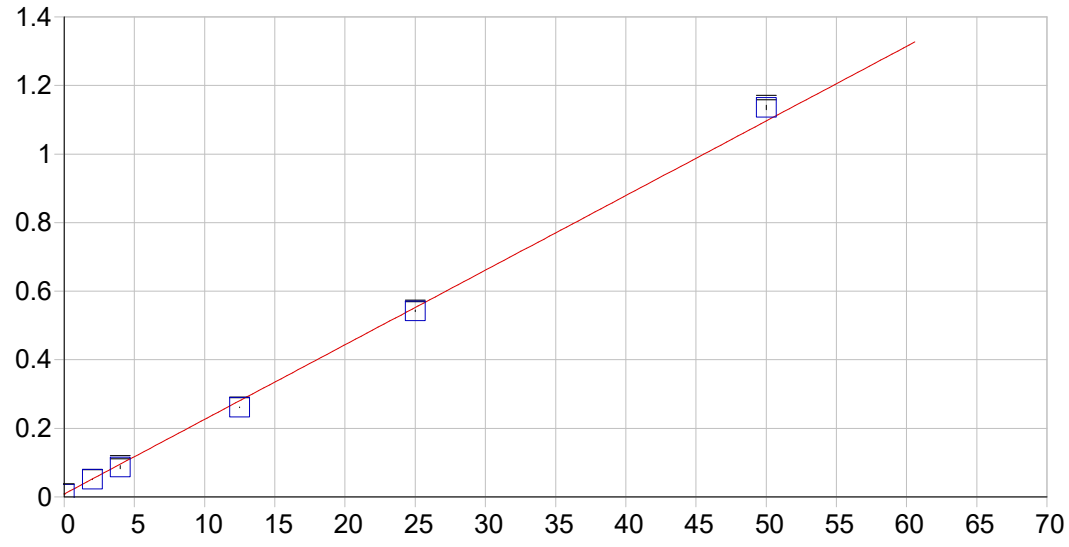
Ag 328.068 {103}

Date of Fit:	11/27/2024 16:14:44	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001050	Re-Slope:	1.000000
A1 (Gain):	0.253363	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999964	Status:	OK.
Std Error of Est:	0.000018		
Predicted MDL:	0.000364		
Predicted MQL:	0.001215		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00105	.000	1
S1	.01000	.01089	.001	8.90	.00169	.000	1
S3	.62500	.61375	-.011	-1.80	.15382	.000	1
S4	1.2500	1.2498	-.000	-.013	.31436	.000	1
S5	2.5000	2.5088	.009	.353	.63208	.000	1
S2	.20000	.20170	.002	.850	.04985	.002	1

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669



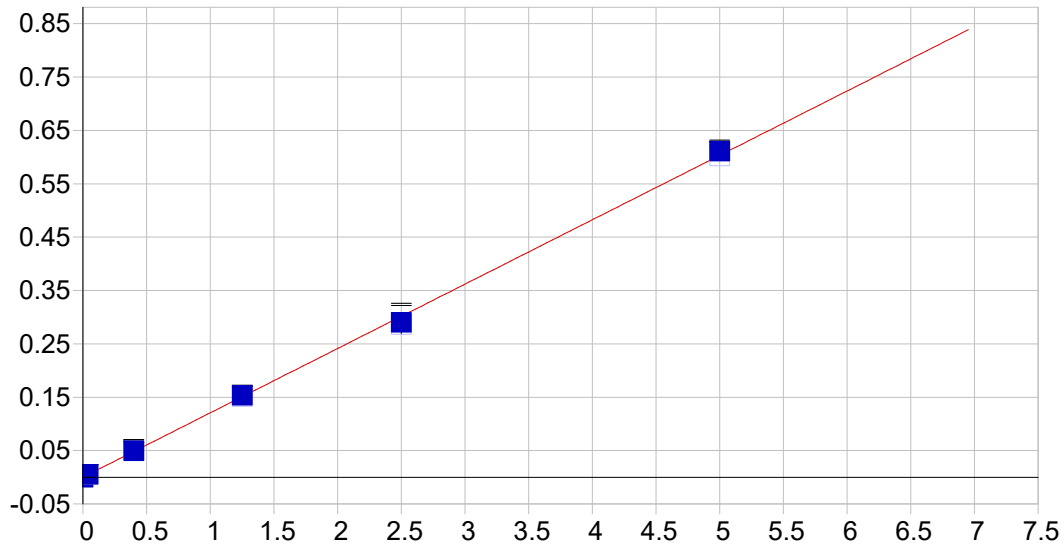
Na 589.592 { 57}

Date of Fit:	11/27/2024 16:14:44	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.008623	Re-Slope:	1.000000
A1 (Gain):	0.021755	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999041	Status:	OK.
Std Error of Est:	0.000504		
Predicted MDL:	0.007443		
Predicted MQL:	0.024812		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00037	.000	.000	.00863	.000	1
S2	4.0000	3.5959	-.404	-10.1	.08685	.004	1
S3	12.500	11.613	-.887	-7.10	.26126	.001	1
S4	25.000	24.539	-.461	-1.84	.54247	.002	1
S5	50.000	51.809	1.81	3.62	1.1357	.006	1
S1	2.0000	1.9422	-.058	-2.89	.05087	.000	1

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669



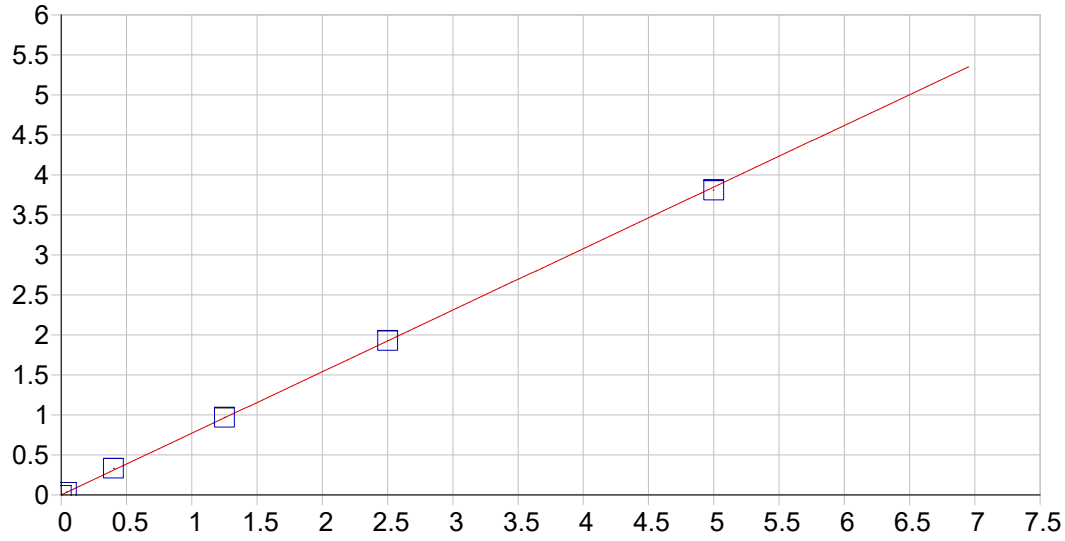
V 292.402 {115}

Date of Fit:	11/27/2024 16:14:44	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000017	Re-Slope:	1.000000
A1 (Gain):	0.120642	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999708	Status:	OK.
Std Error of Est:	0.000067		
Predicted MDL:	0.001355		
Predicted MQL:	0.004518		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00002	.000	1
S1	.04000	.04213	.002	5.33	.00492	.000	1
S3	1.2500	1.2713	.021	1.70	.15119	.001	1
S4	2.5000	2.4037	-.096	-3.85	.28560	.018	1
S5	5.0000	5.0635	.064	1.27	.60209	.002	1
S2	.40000	.40942	.009	2.36	.04871	.002	1

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669



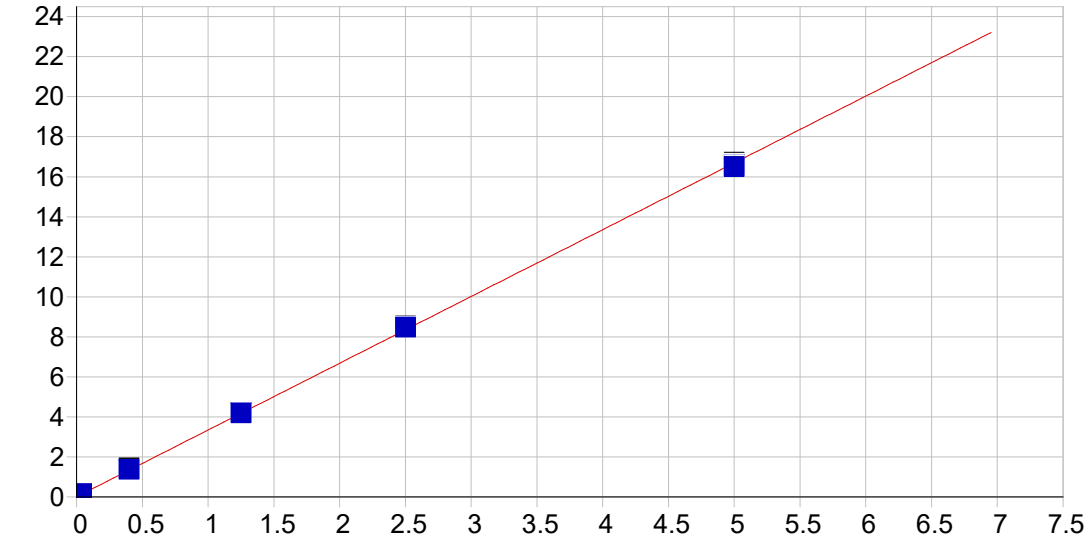
Zn 206.200 {464}

Date of Fit:	11/27/2024 16:14:44	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000623	Re-Slope:	1.000000
A1 (Gain):	0.769587	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999796	Status:	OK.
Std Error of Est:	0.000364		
Predicted MDL:	0.000256		
Predicted MQL:	0.000852		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00062	.000	1
S1	.04000	.04514	.005	12.8	.03536	.000	1
S3	1.2500	1.2588	.009	.705	.96939	.003	1
S4	2.5000	2.5047	.005	.187	1.9282	.002	1
S5	5.0000	4.9497	-.050	-1.01	3.8099	.006	1
S2	.40000	.43164	.032	7.91	.33281	.001	1

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669



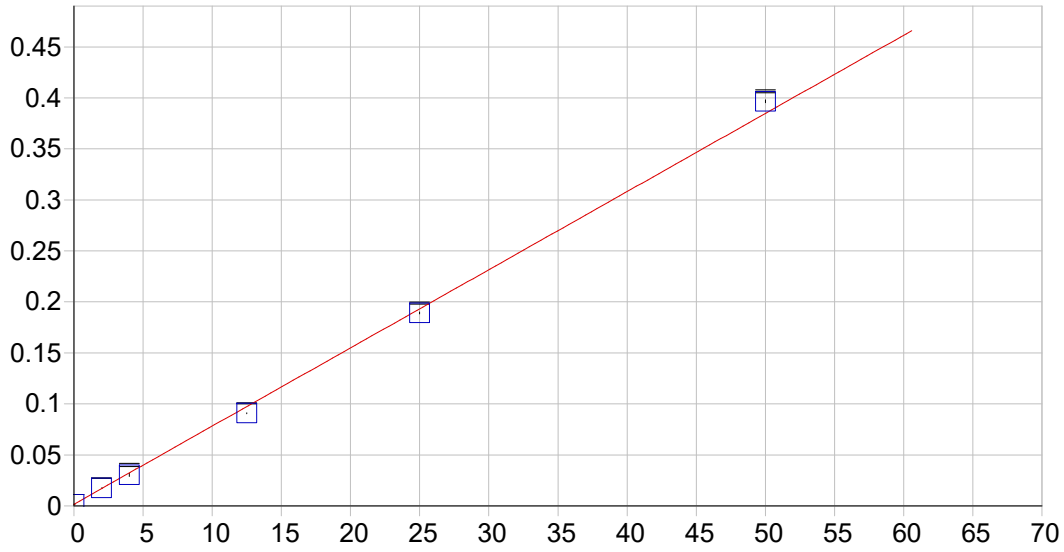
Zn 213.856 {158}

Date of Fit:	11/27/2024 16:14:44	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.004750	Re-Slope:	1.000000
A1 (Gain):	3.337604	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999875	Status:	OK.
Std Error of Est:	0.001246		
Predicted MDL:	0.000270		
Predicted MQL:	0.000899		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00473	.000	1
S1	.04000	.04590	.006	14.8	.15889	.002	1
S3	1.2500	1.2542	.004	.338	4.2199	.009	1
S4	2.5000	2.5371	.037	1.48	8.5305	.005	1
S5	5.0000	4.9430	-.057	-1.14	16.619	.113	1
S2	.40000	.40983	.010	2.46	1.3819	.062	1

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669



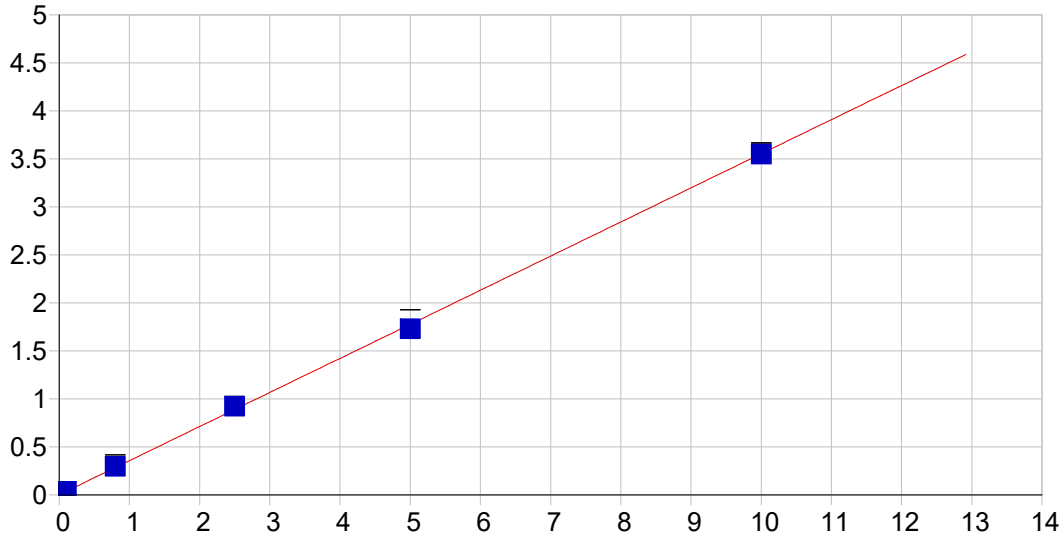
K 766.490 { 44}

Date of Fit:	11/27/2024 16:14:44	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001653	Re-Slope:	1.000000
A1 (Gain):	0.007662	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999271	Status:	OK.
Std Error of Est:	0.000155		
Predicted MDL:	0.022089		
Predicted MQL:	0.073631		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00016	.000	.000	.00165	.000	1
S2	4.0000	3.7486	-.251	-6.29	.03037	.002	1
S3	12.500	11.646	-.854	-6.83	.09089	.000	1
S4	25.000	24.476	-.524	-2.10	.18919	.001	1
S5	50.000	51.546	1.55	3.09	.39660	.001	1
S1	2.0000	2.0832	.083	4.16	.01761	.000	1

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669



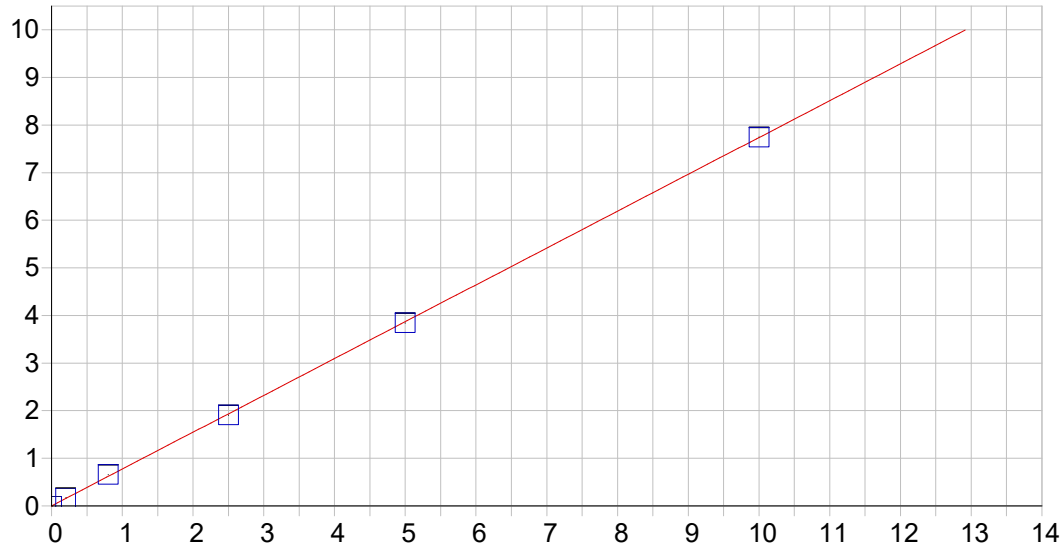
B 249.678 {135}

Date of Fit:	11/27/2024 16:14:44	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001102	Re-Slope:	1.000000
A1 (Gain):	0.355213	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999716	Status:	OK.
Std Error of Est:	0.000444		
Predicted MDL:	0.000623		
Predicted MQL:	0.002077		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00002	-.000	.000	.00110	.000	1
S1	.10000	.11290	.013	12.9	.04105	.000	1
S3	2.5000	2.5929	.093	3.71	.92038	.002	1
S4	5.0000	4.8647	-.135	-2.71	1.7256	.097	1
S5	10.000	9.9935	-.007	-.065	3.5440	.016	1
S2	.80000	.83608	.036	4.51	.29753	.014	1

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669



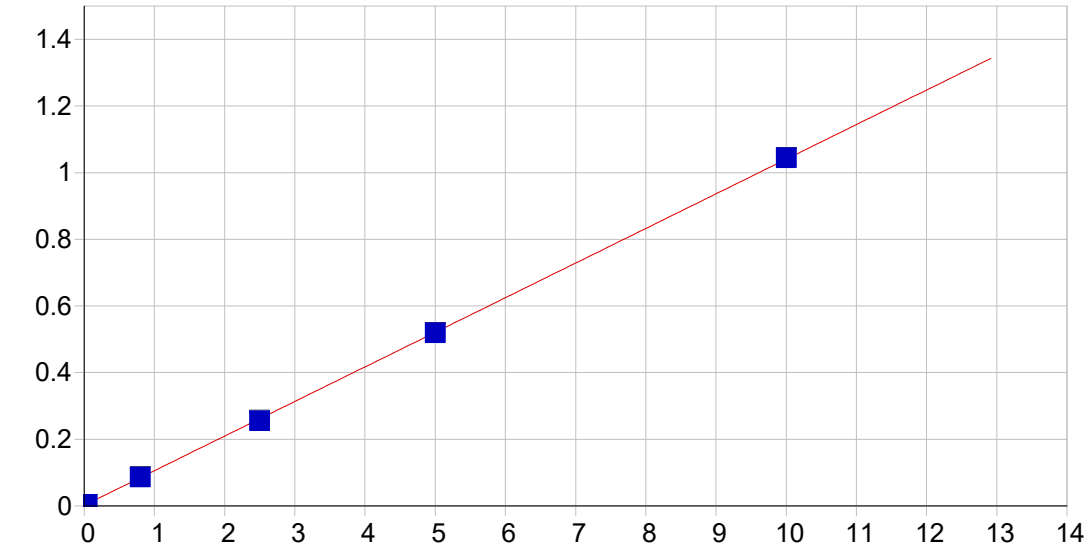
Mo 202.030 {467}

Date of Fit:	11/27/2024 16:14:44	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000379	Re-Slope:	1.000000
A1 (Gain):	0.773870	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999856	Status:	OK.
Std Error of Est:	0.000976		
Predicted MDL:	0.000269		
Predicted MQL:	0.000895		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00003	-.000	.000	.00036	.000	1
S1	.20000	.21871	.019	9.36	.16963	.000	1
S3	2.5000	2.4626	-.037	-1.50	1.9061	.006	1
S4	5.0000	4.9653	-.035	-.694	3.8429	.004	1
S5	10.000	10.006	.006	.065	7.7441	.007	1
S2	.80000	.84694	.047	5.87	.65580	.001	1

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669



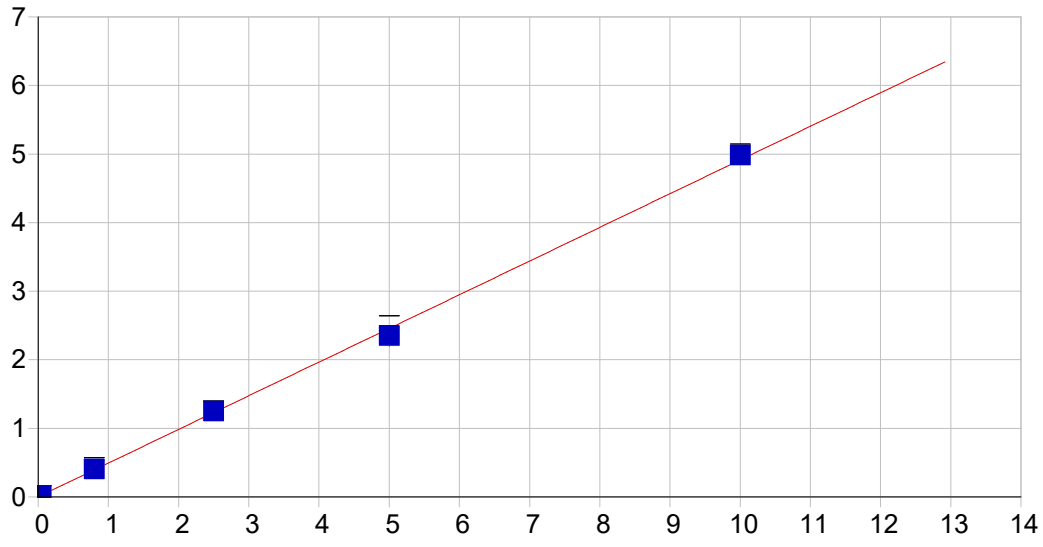
Sn 189.989 {478}

Date of Fit:	11/27/2024 16:14:44	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001730	Re-Slope:	1.000000
A1 (Gain):	0.103856	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999948	Status:	OK.
Std Error of Est:	0.000035		
Predicted MDL:	0.000856		
Predicted MQL:	0.002854		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00173	.000	1
S1	.04000	.04134	.001	3.36	.00602	.000	1
S3	2.5000	2.4474	-.053	-2.10	.25564	.001	1
S4	5.0000	4.9850	-.015	-.300	.51892	.001	1
S5	10.000	10.047	.047	.467	1.0441	.001	1
S2	.80000	.81952	.020	2.44	.08676	.000	1

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669



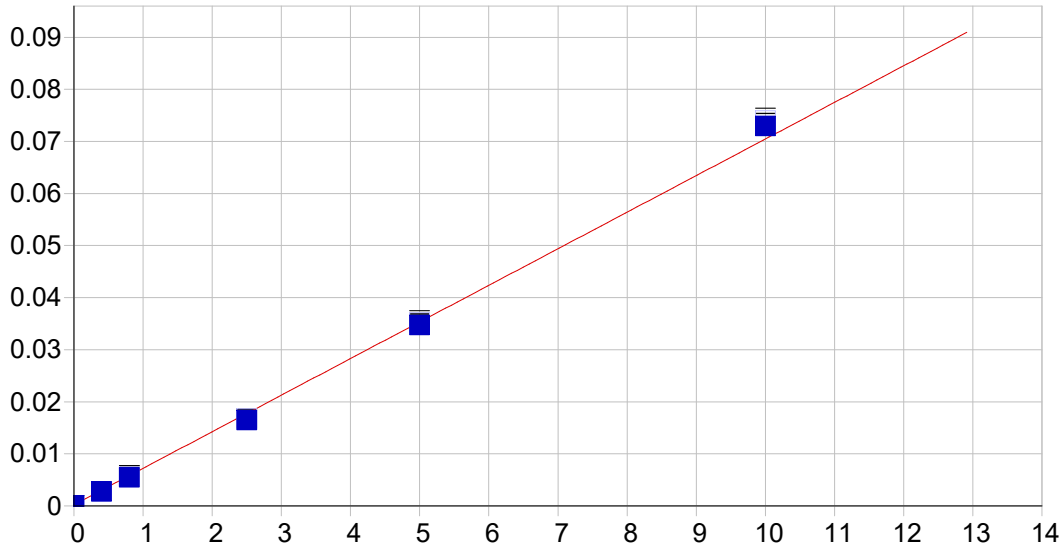
Ti 336.121 {100}

Date of Fit:	11/27/2024 16:14:44	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001769	Re-Slope:	1.000000
A1 (Gain):	0.491093	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999631	Status:	OK.
Std Error of Est:	0.000442		
Predicted MDL:	0.000483		
Predicted MQL:	0.001610		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00177	.000	1
S1	.04000	.04378	.004	9.44	.02325	.000	1
S3	2.5000	2.5455	.045	1.82	1.2514	.002	1
S4	5.0000	4.7815	-.219	-4.37	2.3490	.148	1
S5	10.000	10.147	.147	1.47	4.9829	.017	1
S2	.80000	.82267	.023	2.83	.40564	.021	1

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669



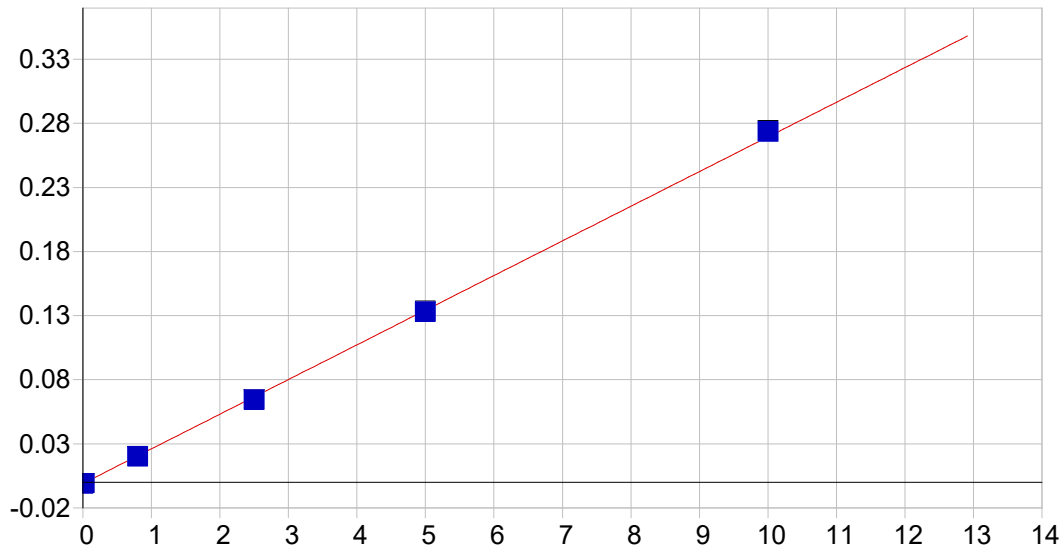
Si 288.158 {117}

Date of Fit:	11/27/2024 16:14:44	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000197	Re-Slope:	1.000000
A1 (Gain):	0.007027	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999127	Status:	OK.
Std Error of Est:	0.000032		
Predicted MDL:	0.005755		
Predicted MQL:	0.019184		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00008	.000	.000	.00020	.000	1
S1	.40000	.36121	-.039	-9.70	.00274	.000	1
S3	2.5000	2.3177	-.182	-7.29	.01675	.000	1
S4	5.0000	4.9125	-.087	-1.75	.03525	.000	1
S5	10.000	10.353	.353	3.53	.07401	.000	1
S2	.80000	.75465	-.045	-5.67	.00558	.000	1

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669



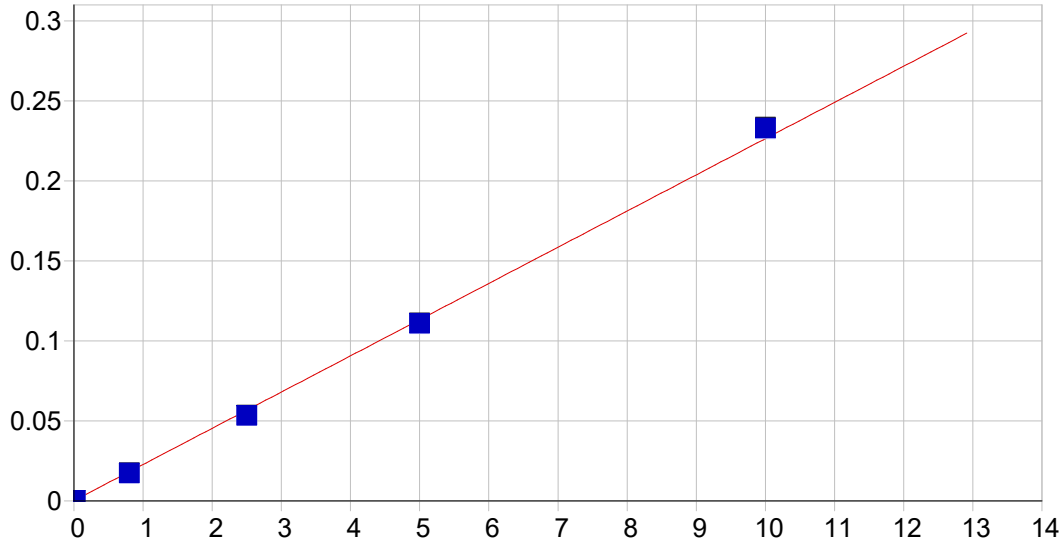
P 177.495 {490}

Date of Fit:	11/27/2024 16:14:44	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000959	Re-Slope:	1.000000
A1 (Gain):	0.027041	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999825	Status:	OK.
Std Error of Est:	0.000012		
Predicted MDL:	0.003010		
Predicted MQL:	0.010034		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00096	.000	1
S1	.02000	.01707	-.003	-14.6	-.00050	.000	1
S3	2.5000	2.4166	-.083	-3.33	.06438	.000	1
S4	5.0000	4.9569	-.043	-.862	.13306	.001	1
S5	10.000	10.151	.151	1.51	.27348	.001	1
S2	.80000	.77877	-.021	-2.65	.02010	.000	1

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669



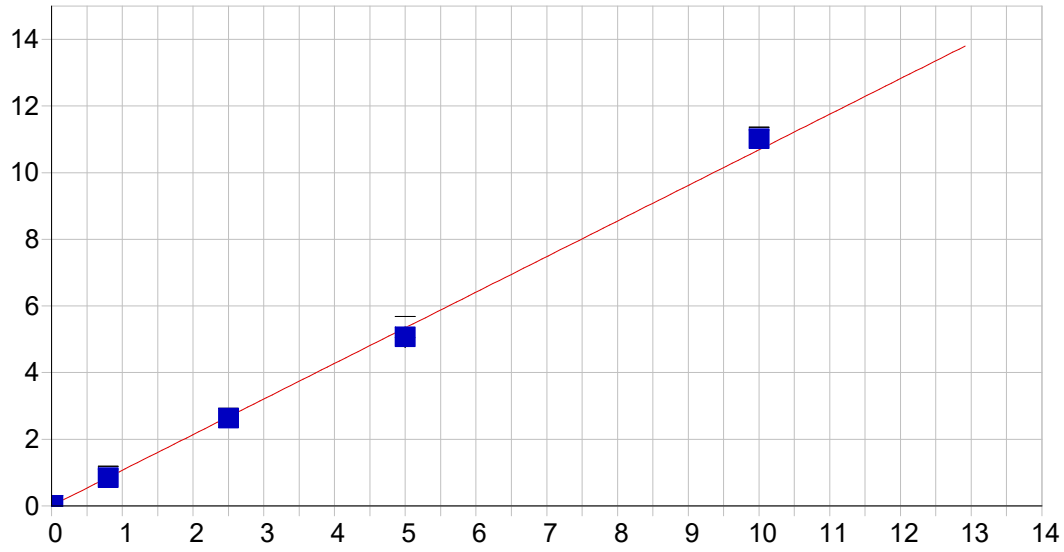
S 182.034 {485}

Date of Fit:	11/27/2024 16:14:44	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000150	Re-Slope:	1.000000
A1 (Gain):	0.022627	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999414	Status:	OK.
Std Error of Est:	0.000018		
Predicted MDL:	0.003631		
Predicted MQL:	0.012105		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00015	.000	1
S1	.02000	.01845	-.002	-7.74	.00055	.000	1
S3	2.5000	2.3531	-.147	-5.88	.05324	.000	1
S4	5.0000	4.8976	-.102	-2.05	.11067	.000	1
S5	10.000	10.291	.291	2.91	.23242	.001	1
S2	.80000	.75957	-.040	-5.05	.01729	.000	1

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669



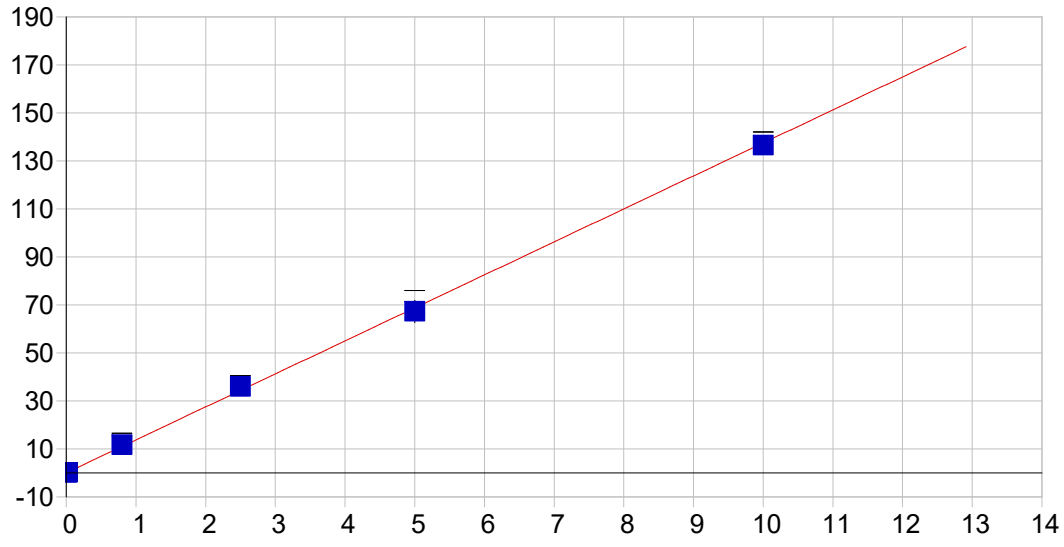
Li 670.784 { 50}

Date of Fit:	11/27/2024 16:14:44	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002598	Re-Slope:	1.000000
A1 (Gain):	1.068388	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999347	Status:	OK.
Std Error of Est:	0.000906		
Predicted MDL:	0.000623		
Predicted MQL:	0.002076		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00260	.000	1
S5	10.000	10.311	.311	3.11	11.028	.044	1
S4	5.0000	4.7405	-.259	-5.19	5.0721	.316	1
S3	2.5000	2.4567	-.043	-1.73	2.6297	.004	1
S1	.02000	.02069	.001	3.45	.02509	.000	1
S2	.80000	.79108	-.009	-1.12	.84854	.045	1

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669



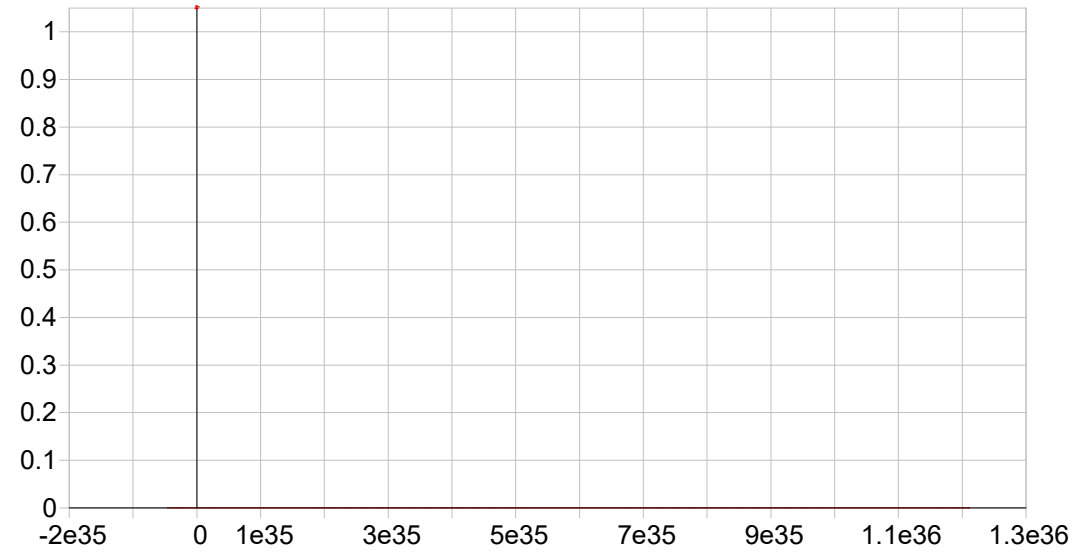
Sr 407.771 { 83}

Date of Fit:	11/27/2024 16:14:44	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000519	Re-Slope:	1.000000
A1 (Gain):	13.749911	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999662	Status:	OK.
Std Error of Est:	0.008391		
Predicted MDL:	0.000029		
Predicted MQL:	0.000097		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00058	.000	1
S1	.02000	.02235	.002	11.8	.30817	.002	1
S3	2.5000	2.6174	.117	4.70	36.023	.391	1
S4	5.0000	4.8925	-.108	-2.15	67.339	4.56	1
S5	10.000	9.9322	-.068	-.678	136.70	1.26	1
S2	.80000	.85561	.056	6.95	11.775	.584	1

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

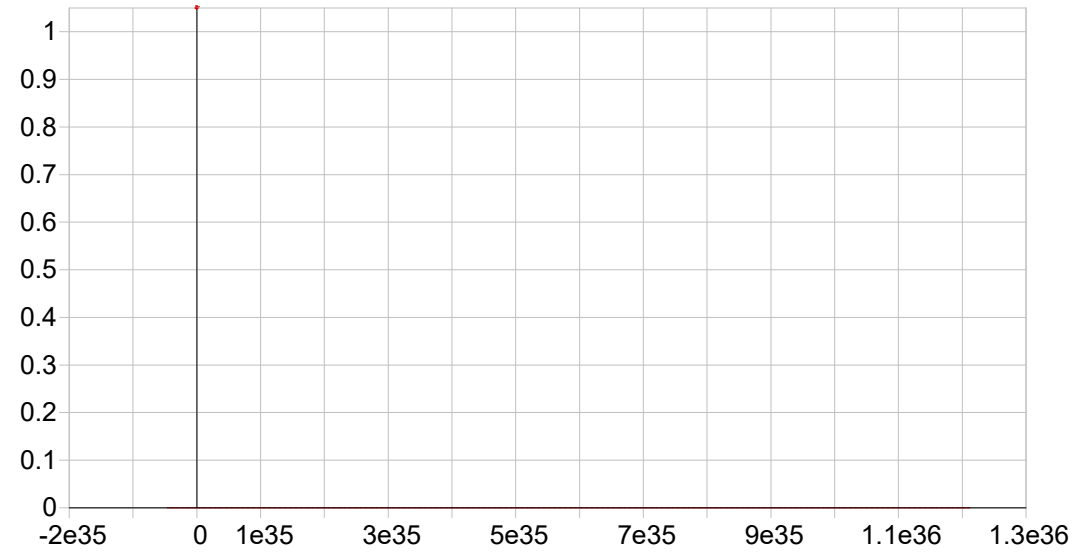


Y 224.306 {450}*

Date of Fit:	11/27/2024 16:14:44	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}*

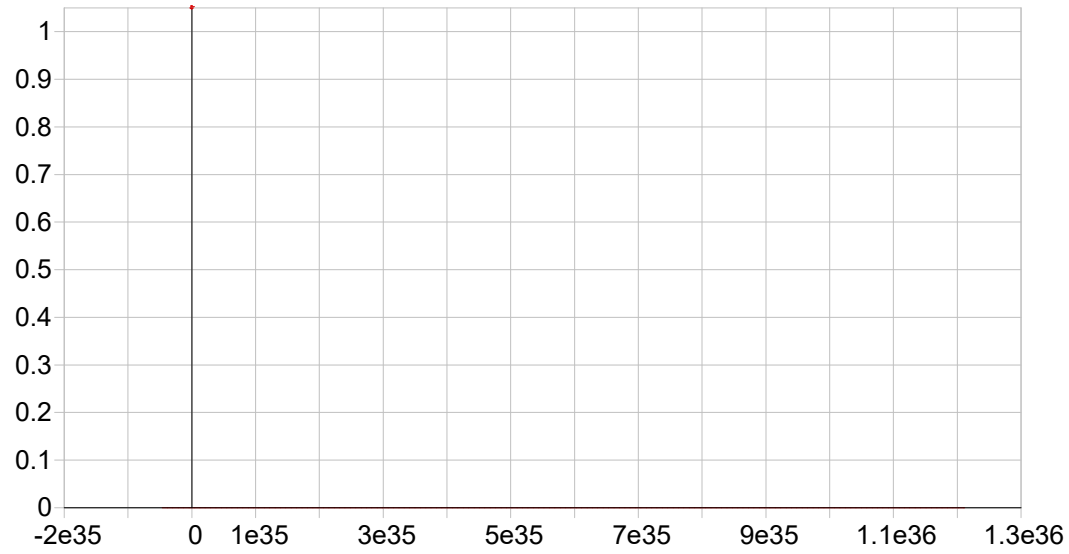
Date of Fit:	<not fit>	Type of Fit:	Linear	Weighting:	1/Conc

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

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

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



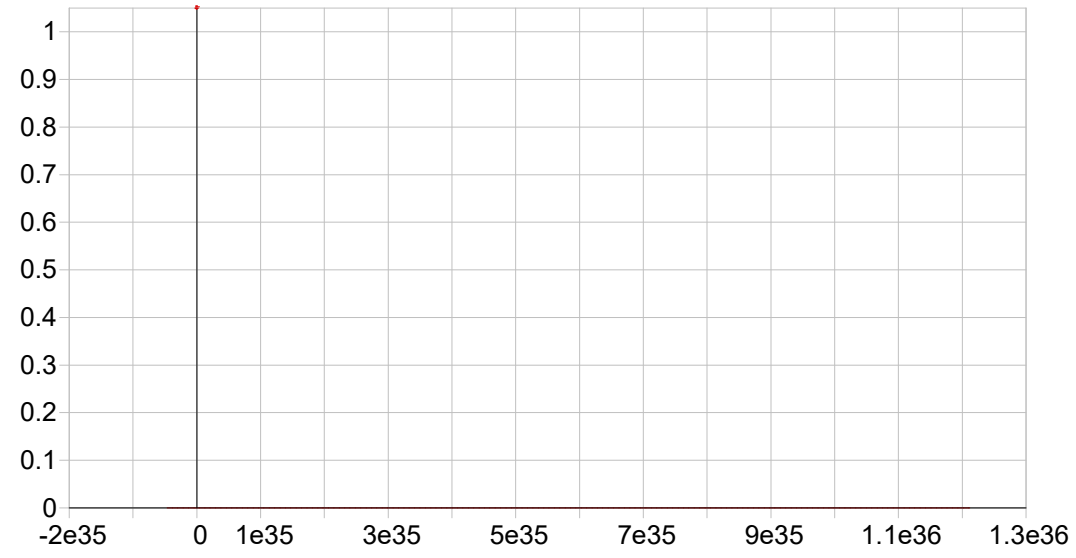
Y 371.030 { 91}*

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

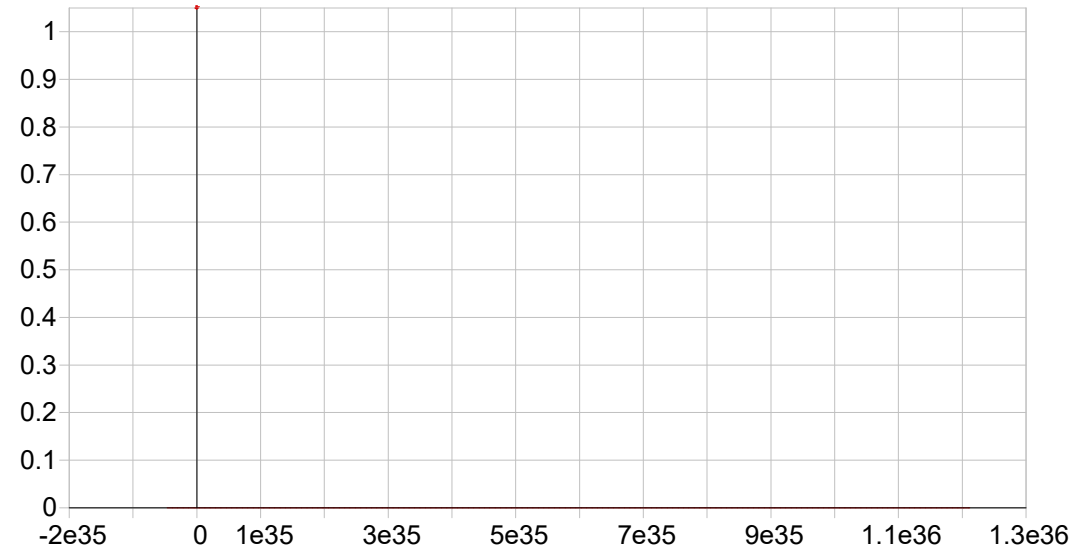
Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669



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:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

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:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: S0 Acquired: 11/27/2024 10:06:48 Type: Cal
Method: NON EPA-6010-200.7(v2480) Mode: IR Corr. Factor: 1.000000
User: Kareem 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	-.00031	-.00010	-.00028	.00045	-.00005	.00027	-.03606	-.00064
Stddev	.00004	.00009	.00024	.00016	.00022	.00028	.00233	.00006
%RSD	11.884	82.800	85.236	34.918	472.32	103.62	6.4510	8.6212
#1	-.00030	-.00002	-.00001	.00063	-.00022	.00055	-.03768	-.00067
#2	-.00034	-.00010	-.00047	.00033	.00020	-.00001	-.03711	-.00058
#3	-.00027	-.00020	-.00036	.00039	-.00012	.00027	-.03340	-.00067

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	-.00010	.00108	-.00000	-.00010	.00002	-.00001	.00006	-.00009
Stddev	.00015	.00002	.00002	.00009	.00016	.00001	.00013	.00009
%RSD	147.55	1.8762	803.26	89.241	881.28	71.614	208.94	96.176
#1	-.00023	.00107	.00002	-.00005	-.00006	-.00002	-.00009	-.00016
#2	.00007	.00106	-.00000	-.00006	.00020	-.00001	.00016	-.00012
#3	-.00015	.00110	-.00002	-.00021	-.00008	-.00001	.00012	.00001

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	.00005	-.00105	.00863	.00002	.00473	.00165	.00110	.00036
Stddev	.00003	.00004	.00029	.00010	.00018	.00007	.00011	.00017
%RSD	61.193	3.9718	3.3110	598.22	3.7460	3.9301	9.8706	47.389
#1	.00003	-.00103	.00841	.00002	.00459	.00166	.00114	.00019
#2	.00008	-.00103	.00853	.00011	.00466	.00159	.00097	.00035
#3	.00003	-.00110	.00895	-.00009	.00493	.00171	.00117	.00053

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	.00173	.00177	.00020	-.00096	.00015	.00260	-.00058
Stddev	.00005	.00010	.00001	.00002	.00006	.00042	.00014
%RSD	2.7475	5.5923	6.7777	1.8161	39.324	16.124	25.039
#1	.00168	.00171	.00021	-.00097	.00014	.00256	-.00050
#2	.00178	.00188	.00018	-.00094	.00010	.00304	-.00074
#3	.00173	.00171	.00020	-.00097	.00021	.00220	-.00049

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: S0 Acquired: 11/27/2024 10:06:48 Type: Cal
Method: NON EPA-6010-200.7(v2480) Mode: IR Corr. Factor: 1.000000
User: Kareem 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	2419.4	58112.	13886.	1666.2	4351.9
Stddev	2.5	54.	591.	6.0	10.5
%RSD	.10135	.09222	4.2547	.35980	.24069
#1	2421.6	58050.	13206.	1667.9	4343.9
#2	2416.8	58139.	14184.	1671.1	4348.1
#3	2419.8	58147.	14269.	1659.5	4363.8

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: S1 Acquired: 11/27/2024 10:11:14 Type: Cal
Method: NON EPA-6010-200.7(v2480) Mode: IR Corr. Factor: 1.000000
User: Kareem 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	.00120	.00228	.00237	.00246	.01044	.00745	.31518	.01942
Stddev	.00004	.00010	.00006	.00018	.00028	.00023	.00167	.00011
%RSD	3.1712	4.4662	2.6391	7.4112	2.6827	3.1337	.52865	.55130
#1	.00119	.00237	.00238	.00247	.01059	.00767	.31634	.01954
#2	.00117	.00231	.00243	.00263	.01012	.00720	.31327	.01940
#3	.00125	.00217	.00231	.00227	.01062	.00749	.31593	.01933

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	.01227	.10357	.00200	.02487	.01525	.00061	.01330	.03097
Stddev	.00010	.00040	.00010	.00009	.00014	.00002	.00019	.00004
%RSD	.82303	.39101	4.8002	.36868	.93533	2.7322	1.4650	.14177
#1	.01237	.10311	.00210	.02479	.01542	.00061	.01307	.03100
#2	.01217	.10388	.00199	.02497	.01516	.00063	.01338	.03092
#3	.01226	.10372	.00191	.02486	.01517	.00060	.01344	.03098

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	.02359	.00169	.05087	.00492	.15889	.01761	.04105	.16963
Stddev	.00014	.00004	.00030	.00007	.00186	.00003	.00012	.00006
%RSD	.57729	2.1848	.59664	1.3391	1.1706	.14462	.28333	.03330
#1	.02374	.00165	.05062	.00485	.15697	.01764	.04114	.16967
#2	.02354	.00169	.05079	.00499	.15902	.01760	.04092	.16967
#3	.02348	.00173	.05121	.00492	.16069	.01760	.04110	.16957

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	.00602	.02325	.00274	-.00050	.00055	.02509	.30817
Stddev	.00007	.00027	.00003	.00006	.00003	.00006	.00167
%RSD	1.1421	1.1441	1.1281	13.077	5.3216	.24015	.54051
#1	.00608	.02329	.00272	-.00048	.00055	.02514	.31000
#2	.00594	.02350	.00273	-.00044	.00057	.02509	.30675
#3	.00604	.02297	.00278	-.00057	.00052	.02502	.30775

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: S1 Acquired: 11/27/2024 10:11:14 Type: Cal
Method: NON EPA-6010-200.7(v2480) Mode: IR Corr. Factor: 1.000000
User: Kareem 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	2406.2	57134.	13778.	1633.2	4281.1
Stddev	5.8	58.	36.	4.7	1.7
%RSD	.24131	.10144	.26175	.28847	.03893
#1	2404.1	57199.	13738.	1638.0	4283.0
#2	2412.8	57115.	13809.	1628.6	4279.8
#3	2401.8	57087.	13786.	1632.9	4280.4

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: S2 Acquired: 11/27/2024 10:15:36 Type: Cal
Method: NON EPA-6010-200.7(v2480) Mode: IR Corr. Factor: 1.000000
User: Kareem 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	.04900	.04860	.17843	.07519	.16202	.09881	5.3763	.12848
Stddev	.00019	.00017	.00033	.00017	.00020	.00511	.2930	.00632
%RSD	.38951	.35650	.18272	.22174	.12143	5.1701	5.4496	4.9163
#1	.04917	.04870	.17867	.07533	.16207	.10263	5.5671	.13301
#2	.04902	.04871	.17806	.07523	.16219	.09300	5.0389	.12127
#3	.04879	.04840	.17857	.07501	.16181	.10079	5.5228	.13117

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	.81163	.19356	.03124	.32942	.14182	.00461	.24527	.05456
Stddev	.00050	.00946	.00130	.00047	.00036	.00022	.01276	.00295
%RSD	.06163	4.8858	4.1699	.14390	.25034	4.8138	5.2027	5.3997
#1	.81110	.20121	.03156	.32906	.14222	.00471	.25432	.05690
#2	.81209	.18299	.02981	.32925	.14171	.00435	.23068	.05125
#3	.81172	.19648	.03235	.32996	.14153	.00476	.25082	.05554

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	.23531	.04985	.08685	.04871	1.3819	.03037	.29753	.65580
Stddev	.00045	.00215	.00431	.00249	.0625	.00159	.01446	.00101
%RSD	.19046	4.3154	4.9651	5.1199	4.5223	5.2269	4.8592	.15384
#1	.23582	.05055	.08783	.05078	1.4086	.03064	.30898	.65673
#2	.23497	.04744	.08213	.04594	1.3105	.02867	.28128	.65473
#3	.23515	.05157	.09059	.04940	1.4266	.03181	.30233	.65596

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	.08676	.40564	.00558	.02010	.01729	.84854	11.775
Stddev	.00015	.02131	.00025	.00010	.00007	.04457	.584
%RSD	.17195	5.2545	4.5269	.48872	.39497	5.2527	4.9556
#1	.08693	.42103	.00566	.02013	.01733	.87719	12.208
#2	.08668	.38131	.00530	.02018	.01721	.79719	11.112
#3	.08667	.41457	.00579	.01999	.01732	.87125	12.005

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: S2 Acquired: 11/27/2024 10:15:36 Type: Cal
Method: NON EPA-6010-200.7(v2480) Mode: IR Corr. Factor: 1.000000
User: Kareem 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	2456.3	60397.	14372.	1774.3	4266.8
Stddev	12.4	2448.	673.	90.5	15.4
%RSD	.50429	4.0538	4.6847	5.0979	.36203
#1	2442.1	59297.	13827.	1724.0	4249.0
#2	2461.7	63203.	15125.	1878.7	4273.9
#3	2465.0	58692.	14164.	1720.2	4277.3

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: S3 Acquired: 11/27/2024 10:19:49 Type: Cal
Method: NON EPA-6010-200.7(v2480) Mode: IR Corr. Factor: 1.000000
User: Kareem 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	.14607	.14416	.52519	.22248	.48041	.30461	16.716	.39848
Stddev	.00032	.00141	.00212	.00081	.00129	.00039	.155	.00049
%RSD	.22204	.97824	.40365	.36296	.26848	.12711	.92629	.12172
#1	.14631	.14530	.52628	.22296	.48058	.30444	16.584	.39844
#2	.14621	.14460	.52654	.22294	.48160	.30434	16.887	.39801
#3	.14570	.14258	.52274	.22155	.47904	.30505	16.678	.39898

Elem	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2.4145	.59705	.09506	.97806	.41145	.01420	.75906	.16884
Stddev	.0060	.00239	.00007	.00273	.00099	.00003	.00329	.00140
%RSD	.24780	.39964	.07499	.27889	.23980	.22085	.43307	.83110
#1	2.4175	.59552	.09511	.97978	.41121	.01417	.75734	.16791
#2	2.4183	.59582	.09509	.97949	.41254	.01420	.75700	.16815
#3	2.4076	.59980	.09498	.97492	.41061	.01423	.76285	.17045

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	.69635	.15382	.26126	.15119	4.2199	.09089	.92038	1.9061
Stddev	.00261	.00038	.00076	.00050	.0086	.00045	.00178	.0057
%RSD	.37436	.24475	.29132	.33109	.20498	.49395	.19369	.30153
#1	.69774	.15409	.26106	.15075	4.2161	.09052	.92141	1.9077
#2	.69796	.15399	.26210	.15108	4.2297	.09139	.91832	1.9108
#3	.69334	.15339	.26062	.15173	4.2137	.09075	.92141	1.8997

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	.25564	1.2514	.01675	.06438	.05324	2.6297	36.023
Stddev	.00110	.0024	.00002	.00017	.00023	.0037	.391
%RSD	.43154	.19598	.12280	.27167	.43134	.14109	1.0857
#1	.25618	1.2492	.01673	.06453	.05349	2.6280	35.577
#2	.25638	1.2509	.01675	.06442	.05321	2.6340	36.310
#3	.25438	1.2541	.01677	.06419	.05304	2.6272	36.180

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: S3 Acquired: 11/27/2024 10:19:49 Type: Cal
Method: NON EPA-6010-200.7(v2480) Mode: IR Corr. Factor: 1.000000
User: Kareem 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	2525.8	60866.	14346.	1776.7	4267.2
Stddev	6.6	207.	16.	8.3	9.1
%RSD	.26093	.34042	.10994	.46504	.21335
#1	2525.4	60921.	14352.	1779.6	4263.0
#2	2519.4	60637.	14328.	1767.4	4261.0
#3	2532.6	61040.	14358.	1783.1	4277.7

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: S4 Acquired: 11/27/2024 10:24:05 Type: Cal
Method: NON EPA-6010-200.7(v2480) Mode: IR Corr. Factor: 1.000000
User: Kareem 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	.30180	.28563	1.0605	.45709	.98662	.58033	31.360	.74686
Stddev	.00079	.00136	.0012	.00060	.00202	.03706	1.736	.04135
%RSD	.26064	.47506	.11490	.13084	.20426	6.3855	5.5347	5.5367
#1	.30141	.28482	1.0598	.45674	.98473	.54150	29.509	.70236
#2	.30128	.28487	1.0619	.45675	.98638	.58417	31.620	.75412
#3	.30270	.28720	1.0598	.45778	.98874	.61531	32.951	.78409

Elem	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4.9227	1.1125	.19173	1.9908	.83089	.02905	1.4029	.32066
Stddev	.0070	.0705	.00057	.0022	.00087	.00035	.0892	.02046
%RSD	.14323	6.3405	.29608	.11188	.10436	1.2080	6.3596	6.3820
#1	4.9251	1.0376	.19119	1.9930	.83015	.02864	1.3077	.29897
#2	4.9283	1.1222	.19232	1.9907	.83068	.02922	1.4162	.32340
#3	4.9148	1.1776	.19168	1.9886	.83185	.02928	1.4847	.33962

Elem	Ni2316	Ag3280	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1.4120	.31436	.54247	.28560	8.5305	.18919	1.7256	3.8429
Stddev	.0008	.00031	.00231	.01756	.0050	.00105	.0974	.0037
%RSD	.05633	.09757	.42542	6.1477	.05887	.55386	5.6416	.09638
#1	1.4126	.31452	.54083	.26715	8.5320	.18832	1.6213	3.8390
#2	1.4123	.31454	.54146	.28755	8.5345	.18889	1.7415	3.8432
#3	1.4111	.31400	.54511	.30211	8.5249	.19035	1.8141	3.8464

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	.51892	2.3490	.03525	.13306	.11067	5.0721	67.339
Stddev	.00054	.1481	.00036	.00052	.00017	.3161	4.560
%RSD	.10457	6.3041	1.0157	.39198	.15151	6.2329	6.7719
#1	.51934	2.1934	.03487	.13348	.11077	4.7450	62.429
#2	.51912	2.3656	.03528	.13248	.11048	5.0954	68.147
#3	.51831	2.4882	.03559	.13322	.11077	5.3760	71.442

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: S4 Acquired: 11/27/2024 10:24:05 Type: Cal
Method: NON EPA-6010-200.7(v2480) Mode: IR Corr. Factor: 1.000000
User: Kareem 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	2316.3	55414.	14421.	1595.9	3861.2
Stddev	4.4	96.	788.	3.6	5.2
%RSD	.19003	.17325	5.4650	.22836	.13518
#1	2318.2	55326.	15271.	1591.7	3858.9
#2	2319.4	55400.	14279.	1597.6	3867.2
#3	2311.3	55516.	13714.	1598.3	3857.5

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: S5 Acquired: 11/27/2024 10:28:16 Type: Cal
Method: NON EPA-6010-200.7(v2480) Mode: IR Corr. Factor: 1.000000
User: Kareem 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	.62592	.56571	2.1321	.94415	2.0471	1.2485	66.138	1.5235
Stddev	.00088	.00278	.0021	.00174	.0022	.0062	.432	.0099
%RSD	.14092	.49072	.09882	.18443	.10530	.49277	.65345	.64735
#1	.62570	.56336	2.1339	.94434	2.0490	1.2428	65.645	1.5122
#2	.62518	.56500	2.1325	.94233	2.0447	1.2477	66.450	1.5287
#3	.62690	.56877	2.1298	.94579	2.0475	1.2550	66.319	1.5297

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	9.9508	2.3281	.37811	4.0448	1.6735	.05884	2.9273	.68405
Stddev	.0038	.0101	.00082	.0004	.0020	.00020	.0119	.00368
%RSD	.03846	.43471	.21639	.00988	.12012	.33612	.40715	.53806
#1	9.9547	2.3171	.37730	4.0452	1.6758	.05868	2.9139	.68008
#2	9.9506	2.3302	.37808	4.0448	1.6719	.05878	2.9313	.68472
#3	9.9470	2.3371	.37894	4.0444	1.6729	.05906	2.9367	.68735

Elem	Ni2316	Ag3280	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2.8529	.63208	1.1357	.60209	16.619	.39660	3.5440	7.7441
Stddev	.0020	.00037	.0063	.00217	.113	.00147	.0165	.0071
%RSD	.06901	.05868	.55751	.36064	.67971	.36954	.46451	.09178
#1	2.8527	.63166	1.1425	.59961	16.706	.39753	3.5250	7.7487
#2	2.8510	.63236	1.1300	.60307	16.491	.39491	3.5540	7.7359
#3	2.8549	.63221	1.1346	.60361	16.659	.39735	3.5529	7.7477

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1.0441	4.9829	.07401	.27348	.23242	11.028	136.70
Stddev	.0008	.0171	.00049	.00084	.00052	.044	1.26
%RSD	.07426	.34422	.65677	.30718	.22169	.39647	.92339
#1	1.0437	4.9659	.07366	.27287	.23213	10.993	135.63
#2	1.0436	4.9827	.07380	.27314	.23211	11.014	136.39
#3	1.0450	5.0002	.07456	.27444	.23301	11.077	138.09

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: S5 Acquired: 11/27/2024 10:28:16 Type: Cal
Method: NON EPA-6010-200.7(v2480) Mode: IR Corr. Factor: 1.000000
User: Kareem 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	2248.3	55901.	14116.	1553.0	3707.7
Stddev	5.0	249.	12.	21.3	8.4
%RSD	.22418	.44528	.08170	1.3713	.22762
#1	2244.5	55633.	14109.	1530.1	3704.1
#2	2254.0	56125.	14130.	1572.3	3717.4
#3	2246.5	55946.	14111.	1556.5	3701.7

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: ICV01 Acquired: 11/27/2024 12:25:35 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICV01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.040957	1.083020	1.016127	1.079736	1.029768	2.688198	.5462565
Stddev	.002879	.019037	.001678	.004324	.001031	.089769	.0160780
%RSD	.2765594	1.757756	.1651717	.4004738	.1000776	3.339384	2.943307
#1	1.038668	1.064629	1.014537	1.081797	1.029037	2.789760	.5646774
#2	1.040013	1.102643	1.017882	1.074767	1.029321	2.619462	.5350446
#3	1.044189	1.081787	1.015961	1.082644	1.030947	2.655372	.5390477

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5162735	.5143256	10.38839	.5279517	.5176684	.5320567	9.926041
Stddev	.0134261	.0006528	.29286	.0005699	.0014012	.0010201	.019843
%RSD	2.600575	.1269216	2.819115	.1079460	.2706780	.1917325	.1999078
#1	.5317710	.5136203	10.72636	.5285138	.5163355	.5329577	9.927235
#2	.5081640	.5144477	10.20931	.5273743	.5175405	.5309491	9.945260
#3	.5088854	.5149087	10.22951	.5279670	.5191292	.5322633	9.905628

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5333968	6.076199	.5195818	.2547615	9.691388	.5217650	1.058783
Stddev	.0137426	.176514	.0003143	.0001854	.088014	.0151002	.002355
%RSD	2.576424	2.905003	.0604996	.0727586	.9081666	2.894053	.2224285
#1	.5491434	6.279204	.5197788	.2545654	9.792886	.5388485	1.056237
#2	.5238231	5.990462	.5197473	.2549338	9.636158	.5102019	1.059229
#3	.5272240	5.958930	.5192193	.2547853	9.645120	.5162444	1.060883

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.06076	2.505214	2.649049	2.488948	2.612519	2.458851	2.256057
Stddev	.06423	.064864	.002715	.005386	.080773	.008506	.012884
%RSD	.6384419	2.589153	.1024750	.2164004	3.091781	.3459499	.5710689
#1	10.12495	2.579991	2.646941	2.482905	2.705417	2.468674	2.242815
#2	9.99649	2.464130	2.648094	2.490698	2.558868	2.453997	2.256808
#3	10.06082	2.471521	2.652112	2.493242	2.573272	2.453884	2.268549

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: ICV01 Acquired: 11/27/2024 12:25:35 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICV01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.335192	2.380803	2.443681
Stddev	.013904	.074768	.068000
%RSD	.5954004	3.140446	2.782699
#1	2.324114	2.466170	2.520695
#2	2.350795	2.326956	2.391922
#3	2.330667	2.349284	2.418425

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2331.445	57938.25	14143.10	1585.027	4091.612
Stddev	6.390	55.26	373.70	4.224	5.800
%RSD	.2740791	.0953691	2.642290	.2665153	.1417560
#1	2324.149	57898.14	13712.05	1587.916	4085.053
#2	2336.043	57915.33	14376.05	1580.179	4093.723
#3	2334.144	58001.27	14341.19	1586.986	4096.062

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: LLICV01 Acquired: 11/27/2024 12:38:46 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LLICV01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0218548	.0422068	.0118832	.0196821	.0510254	.1056105	.0996348
Stddev	.0012615	.0018806	.0008617	.0008421	.0000080	.0094400	.0057262
%RSD	5.772396	4.455604	7.251496	4.278752	.0156893	8.938480	5.747168
#1	.0220222	.0440710	.0110449	.0187725	.0510323	.0949743	.0932069
#2	.0205179	.0403102	.0118381	.0204346	.0510272	.1088630	.1015069
#3	.0230242	.0422393	.0127666	.0198393	.0510166	.1129942	.1041907

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0058668	.0058226	2.009294	.0103609	.0294660	.0221164	.0984388
Stddev	.0003084	.0000926	.134746	.0008731	.0001541	.0000619	.0017685
%RSD	5.256989	1.590072	6.706123	8.426392	.5228547	.2797648	1.796556
#1	.0055120	.0059054	1.857106	.0113556	.0293662	.0220906	.0964039
#2	.0060182	.0057227	2.057359	.0097215	.0296434	.0220716	.0993073
#3	.0060703	.0058398	2.113416	.0100056	.0293884	.0221870	.0996051

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0203257	2.066692	.0390508	.0103667	1.757364	.0399287	.0472669
Stddev	.0013561	.125584	.0002207	.0001561	.020297	.0031847	.0000863
%RSD	6.671811	6.076559	.5650325	1.505671	1.154953	7.975911	.1825664
#1	.0188021	1.926449	.0389666	.0102274	1.757032	.0362805	.0473577
#2	.0207746	2.104873	.0388847	.0103372	1.737236	.0413532	.0471859
#3	.0214004	2.168754	.0393012	.0105354	1.777825	.0421526	.0472569

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.890136	.1035194	.2122802	.0384996	.0401348	.3379858	.0187373
Stddev	.009763	.0059183	.0005027	.0003532	.0024453	.0028724	.0030508
%RSD	.5165324	5.717100	.2367952	.9173270	6.092784	.8498522	16.28174
#1	1.879075	.0968410	.2117093	.0383235	.0373115	.3376981	.0167055
#2	1.893777	.1056033	.2126563	.0389062	.0415086	.3352681	.0222454
#3	1.897555	.1081139	.2124750	.0382691	.0415842	.3409912	.0172611

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: LLICV01 Acquired: 11/27/2024 12:38:46 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LLICV01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0184312	.0187774	.0207282
Stddev	.0003732	.0009615	.0012622
%RSD	2.024749	5.120562	6.089283
#1	.0180170	.0177447	.0192931
#2	.0187411	.0189407	.0212258
#3	.0185355	.0196467	.0216658

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2401.311	59656.44	14777.02	1655.061	4344.084
Stddev	7.206	522.43	764.54	9.501	4.153
%RSD	.3001061	.8757230	5.173835	.5740733	.0955956
#1	2409.632	59267.94	15646.10	1646.387	4348.544
#2	2397.041	60250.35	14476.80	1665.216	4343.378
#3	2397.262	59451.03	14208.16	1653.581	4340.329

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: ICB01 Acquired: 11/27/2024 12:43:04 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem 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	.0016487	.0000688	-.001478	.0010598	-.000413	-.004112	-.002096
Stddev	.0005840	.0023276	.000535	.0002861	.000226	.006662	.000669
%RSD	35.42033	3383.973	36.16882	26.99924	54.63533	162.0023	31.90620
#1	.0013080	-.002307	-.001544	.0008945	-.000664	-.001259	-.001659
#2	.0023230	.000168	-.000913	.0008947	-.000349	-.011726	-.001763
#3	.0013151	.002345	-.001976	.0013902	-.000226	.000648	-.002866

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000237	-.000009	.0003214	.0002300	.0001535	-.000166	.0018191
Stddev	.0000352	.000053	.0057960	.0002977	.0000778	.000563	.0023478
%RSD	148.3691	606.7521	1803.370	129.3997	50.69721	338.1141	129.0627
#1	.0000115	.000053	-.004808	.0004634	.0002043	-.000813	.0015841
#2	.0000633	-.000041	.006609	-.000105	.0000639	.000214	.0042757
#3	-.000004	-.000038	-.000836	.000332	.0001923	.000100	-.000402

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000482	-.007919	-.000196	.0003890	-.125243	-.001175	-.000486
Stddev	.0002198	.005257	.000097	.0001627	.015400	.000966	.000082
%RSD	456.0942	66.38184	49.55880	41.82890	12.29589	82.23728	16.78979
#1	-.000021	-.003440	-.000206	.0003878	-.141871	-.001408	-.000497
#2	-.000129	-.006611	-.000288	.0005524	-.122386	-.000114	-.000400
#3	.000294	-.013707	-.000095	.0002269	-.111471	-.002004	-.000562

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.058422	.0013564	-.000262	-.000701	.0003224	-.000997	-.000890
Stddev	.014431	.0003146	.000155	.000380	.0003280	.005239	.000499
%RSD	24.70211	23.19241	59.06836	54.20888	101.7389	525.5873	56.09047
#1	-.072351	.0011093	-.000199	-.000276	.0006217	-.006663	-.000352
#2	-.043535	.0012493	-.000439	-.001009	.0003737	.000000	-.001338
#3	-.059380	.0017105	-.000149	-.000818	-.000028	.003672	-.000980

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: ICB01 Acquired: 11/27/2024 12:43:04 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICB01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0007425	-.000634	-.000009
Stddev	.0005539	.000467	.000018
%RSD	74.59927	73.58399	197.9254
#1	.0013167	-.000670	-.000019
#2	.0006993	-.001082	-.000019
#3	.0002115	-.000151	.000011

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2432.366	59913.18	13578.59	1662.694	4435.529
Stddev	3.563	425.65	819.17	9.641	6.999
%RSD	.1464883	.7104453	6.032803	.5798591	.1578015
#1	2428.550	59848.59	14033.30	1654.023	4428.997
#2	2435.606	60367.43	14069.54	1673.076	4442.917
#3	2432.941	59523.51	12632.93	1660.983	4434.672

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: CRI01 Acquired: 11/27/2024 12:47:24 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem 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	.0226331	.0419136	.0114464	.0203050	.0494162	.1109604	.1052744
Stddev	.0012036	.0011206	.0011302	.0009650	.0011766	.0112937	.0067040
%RSD	5.318078	2.673477	9.874043	4.752342	2.380978	10.17811	6.368158
#1	.0240129	.0407148	.0103017	.0204614	.0486402	.1238495	.1130110
#2	.0217989	.0429346	.0125616	.0211822	.0488384	.1062335	.1011769
#3	.0220874	.0420916	.0114758	.0192714	.0507700	.1027982	.1016352

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0061628	.0059366	2.120601	.0096232	.0295519	.0222286	.0980894
Stddev	.0004530	.0001028	.142452	.0001822	.0008437	.0006336	.0017060
%RSD	7.351312	1.730817	6.717529	1.893006	2.854983	2.850280	1.739217
#1	.0066857	.0059244	2.283370	.0094512	.0289114	.0218994	.0996430
#2	.0058876	.0058406	2.018665	.0096043	.0292364	.0218275	.0983615
#3	.0059150	.0060450	2.059768	.0098141	.0305079	.0229591	.0962638

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0215570	2.202452	.0393663	.0100250	1.741983	.0418554	.0441895
Stddev	.0016091	.142555	.0007751	.0002517	.007662	.0020944	.0003589
%RSD	7.464567	6.472547	1.969063	2.511001	.4398485	5.003953	.8122292
#1	.0234132	2.365810	.0389224	.0100384	1.750655	.0441924	.0443391
#2	.0205566	2.103240	.0389151	.0097669	1.736130	.0412258	.0444494
#3	.0207013	2.138306	.0402613	.0102698	1.739164	.0401480	.0437800

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.918839	.1079083	.2127003	.0382111	.0426816	.3406400	.0168570
Stddev	.011971	.0068325	.0044283	.0014644	.0031042	.0080407	.0018303
%RSD	.6238508	6.331797	2.081938	3.832356	7.272876	2.360468	10.85751
#1	1.929909	.1157042	.2094369	.0372349	.0462097	.3474729	.0182177
#2	1.906136	.1029610	.2109229	.0375034	.0403693	.3426675	.0147762
#3	1.920473	.1050596	.2177412	.0398949	.0414659	.3317796	.0175771

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: CRI01 Acquired: 11/27/2024 12:47:24 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CRI01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0172262	.0202455	.0220316
Stddev	.0036193	.0013375	.0015532
%RSD	21.01064	6.606148	7.049676
#1	.0141486	.0217554	.0238112
#2	.0163164	.0197711	.0209492
#3	.0212137	.0192098	.0213343

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2418.847	60915.19	14241.74	1673.487	4370.575
Stddev	35.673	70.14	876.27	4.387	67.340
%RSD	1.474780	.1151356	6.152844	.2621380	1.540762
#1	2441.585	60861.04	13238.06	1668.781	4406.185
#2	2437.224	60890.12	14854.60	1674.216	4412.633
#3	2377.733	60994.42	14632.57	1677.464	4292.907

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: ICSA01 Acquired: 11/27/2024 13:25:16 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSA01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0051162	.0127311	.0097080	-.019432	-.003001	266.9598	.0040947
Stddev	.0029500	.0034266	.0014482	.002583	.001614	6.1449	.0002479
%RSD	57.66053	26.91526	14.91749	13.29171	53.77378	2.301806	6.054818
#1	.0056530	.0102692	.0110085	-.022393	-.004861	271.0670	.0039031
#2	.0077610	.0166446	.0081474	-.017649	-.001979	259.8954	.0043747
#3	.0019346	.0112795	.0099682	-.018253	-.002162	269.9171	.0040063

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013846	.0068128	248.5519	.0580260	.0023124	.0217507	102.1713
Stddev	.0000031	.0001262	7.4583	.0003568	.0001208	.0010281	.7759
%RSD	.2207374	1.852274	3.000681	.6149388	5.222080	4.726551	.7594282
#1	.0013852	.0066672	252.3173	.0579626	.0022563	.0220896	101.9288
#2	.0013873	.0068812	239.9616	.0584102	.0024510	.0225665	101.5457
#3	.0013813	.0068901	253.3768	.0577051	.0022300	.0205959	103.0396

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0043012	273.3484	.0026043	-.007664	.0251020	.0067468	.0076171
Stddev	.0004733	8.3789	.0002611	.000278	.0268817	.0015881	.0004042
%RSD	11.00402	3.065266	10.02520	3.632438	107.0897	23.53872	5.307054
#1	.0047378	277.2010	.0027791	-.007872	-.004245	.0085770	.0073325
#2	.0037982	263.7362	.0027296	-.007773	.031018	.0057324	.0074390
#3	.0043675	279.1080	.0023042	-.007348	.048533	.0059310	.0080798

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.057512	.0310982	-.000921	-.004011	-.000707	.0172662	.0062749
Stddev	.021919	.0024479	.000438	.000526	.000105	.0017613	.0040863
%RSD	38.11100	7.871472	47.48259	13.11172	14.87332	10.20101	65.12178
#1	-.057936	.0287744	-.001419	-.004380	-.000590	.0161394	.0099755
#2	-.079216	.0336537	-.000595	-.003409	-.000736	.0163632	.0069598
#3	-.035385	.0308665	-.000750	-.004243	-.000794	.0192959	.0018894

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: ICSA01 Acquired: 11/27/2024 13:25:16 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSA01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.008871	-.013041	.0045018
Stddev	.002890	.000519	.0023251
%RSD	32.57697	3.977768	51.64711
#1	-.008275	-.012602	.0065859
#2	-.006326	-.012907	.0019940
#3	-.012013	-.013613	.0049257

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2113.106	51774.71	13996.45	1445.696	3430.878
Stddev	11.305	86.11	334.77	4.906	8.114
%RSD	.5349977	.1663214	2.391815	.3393604	.2364903
#1	2114.716	51859.91	13754.07	1448.491	3432.314
#2	2123.519	51687.71	14378.42	1440.031	3438.178
#3	2101.082	51776.51	13856.84	1448.566	3422.143

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: ICSAB01 Acquired: 11/27/2024 14:03:41 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSAB01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1131290	.1038538	.0564009	.0361112	.6197261	270.3157	.5382464
Stddev	.0062463	.0022278	.0008735	.0004151	.0045559	5.7669	.0087630
%RSD	5.521422	2.145135	1.548736	1.149552	.7351524	2.133382	1.628066
#1	.1192864	.1033039	.0566152	.0365897	.6145650	276.9636	.5483486
#2	.1067974	.1019525	.0571473	.0358959	.6214237	267.3242	.5326961
#3	.1133031	.1063051	.0554402	.0358479	.6231894	266.6592	.5336944

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5236877	1.017257	252.6648	.5537475	.5086643	.5005355	99.01304
Stddev	.0107787	.001098	5.3072	.0014756	.0003408	.0012398	.52477
%RSD	2.058232	.1079044	2.100489	.2664833	.0669958	.2476838	.5299998
#1	.5360575	1.018042	258.7154	.5548897	.5090551	.4992057	99.35152
#2	.5186944	1.016002	248.7976	.5542715	.5085083	.5016595	98.40854
#3	.5163110	1.017726	250.4813	.5520814	.5084294	.5007413	99.27906

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5144915	276.3639	1.004638	.1904165	-.008702	.5112992	1.083989
Stddev	.0110107	5.6096	.001170	.0006440	.018008	.0074245	.001921
%RSD	2.140121	2.029783	.1165025	.3382062	206.9422	1.452081	.1772488
#1	.5269394	282.7148	1.005240	.1911453	-.028393	.5197591	1.086195
#2	.5060261	272.0853	1.003289	.1899242	-.004643	.5058672	1.082679
#3	.5105090	274.2916	1.005384	.1901799	.006930	.5082712	1.083093

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.087985	.9887404	.9949657	.9786533	1.003665	1.117426	.9832811
Stddev	.014173	.0160112	.0018797	.0010365	.017629	.005180	.0054852
%RSD	16.10885	1.619357	.1889249	.1059065	1.756490	.4635789	.5578498
#1	-.104310	1.007214	.9932894	.9792962	1.023999	1.117921	.9770553
#2	-.080819	.980143	.9946099	.9792060	.992675	1.122341	.9874026
#3	-.078825	.978864	.9969980	.9774576	.994321	1.112016	.9853855

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: ICSAB01 Acquired: 11/27/2024 14:03:41 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSAB01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.9757524	.9660499	1.011317
Stddev	.0013806	.0149507	.025432
%RSD	.1414939	1.547612	2.514780
#1	.9769220	.9832376	1.038483
#2	.9742294	.9588555	.988075
#3	.9761058	.9560565	1.007392

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2117.913	53027.00	13570.13	1489.958	3434.876
Stddev	4.607	116.45	243.10	6.229	2.977
%RSD	.2175185	.2196144	1.791400	.4180730	.0866761
#1	2123.163	53030.40	13290.36	1486.163	3437.978
#2	2116.034	53141.72	13729.84	1497.147	3434.607
#3	2114.543	52908.88	13690.19	1486.563	3432.042

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: CCV01 Acquired: 11/27/2024 14:08:00 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem 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	5.221168	4.830492	5.194023	5.219664	5.251242	10.60329	10.58439
Stddev	.003152	.104991	.008539	.008320	.005625	.05874	.05128
%RSD	.0603617	2.173496	.1643925	.1593962	.1071087	.5539764	.4844746
#1	5.217890	4.906929	5.196887	5.226280	5.255414	10.53546	10.57230
#2	5.224175	4.873767	5.200762	5.222389	5.253466	10.63724	10.54023
#3	5.221440	4.710781	5.184421	5.210324	5.244845	10.63717	10.64063

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2635180	2.587498	26.06621	1.055892	2.586647	1.321094	5.211938
Stddev	.0005698	.004078	.10239	.003108	.003972	.000994	.026150
%RSD	.2162233	.1575980	.3928049	.2943493	.1535630	.0752464	.5017326
#1	.2640262	2.590412	25.97339	1.052991	2.591121	1.321955	5.182046
#2	.2636257	2.589245	26.04920	1.055514	2.585285	1.321321	5.230581
#3	.2629020	2.582838	26.17604	1.059172	2.583535	1.320006	5.223186

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.604039	26.01528	2.593998	1.308873	27.00646	2.641633	2.657630
Stddev	.005968	.11122	.004621	.001288	.07864	.013086	.013391
%RSD	.2291834	.4275021	.1781290	.0983844	.2912063	.4953823	.5038574
#1	2.597281	25.88754	2.597043	1.308183	26.91636	2.626570	2.671060
#2	2.608587	26.09054	2.596271	1.308076	27.04167	2.650203	2.657550
#3	2.606249	26.06777	2.588681	1.310358	27.06134	2.648124	2.644279

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	26.38614	5.250580	5.274969	5.177121	5.264750	5.213359	5.340931
Stddev	.18022	.010127	.008082	.010104	.016152	.071168	.039807
%RSD	.6830238	.1928780	.1532224	.1951601	.3067860	1.365107	.7453196
#1	26.18103	5.260448	5.283026	5.186416	5.246118	5.132286	5.379463
#2	26.45819	5.251079	5.275020	5.178579	5.274783	5.242270	5.343369
#3	26.51919	5.240213	5.266861	5.166367	5.273348	5.265522	5.299961

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: CCV01 Acquired: 11/27/2024 14:08:00 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	5.077502	5.303837	5.357542
Stddev	.031570	.023312	.054136
%RSD	.6217710	.4395336	1.010459
#1	5.101332	5.277295	5.300185
#2	5.089478	5.320996	5.407745
#3	5.041696	5.313219	5.364695

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2257.032	54821.75	13794.17	1542.620	3814.928
Stddev	1.687	150.67	15.78	2.197	5.255
%RSD	.0747342	.2748438	.1144222	.1424006	.1377365
#1	2255.130	54983.65	13788.69	1541.950	3811.028
#2	2257.621	54796.00	13781.86	1545.074	3812.852
#3	2258.345	54685.62	13811.96	1540.836	3820.903

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: CCB01 Acquired: 11/27/2024 14:48:10 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem 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	.0010099	-.000829	.0006901	.0013526	.0003453	-.002339	-.000783
Stddev	.0012893	.000725	.0008690	.0013828	.0003301	.002181	.000413
%RSD	127.6727	87.38405	125.9321	102.2305	95.57548	93.21455	52.72049
#1	-.000241	-.000885	-.000097	.0018790	.0000602	-.001598	-.001238
#2	.002334	-.000079	.001622	-.000216	.0002690	-.004794	-.000675
#3	.000936	-.001525	.000545	.002395	.0007069	-.000626	-.000434

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000015	-.000127	.0221024	.0002264	.0000204	-.000061	.0029337
Stddev	.000023	.000081	.0064962	.0000251	.0002257	.000191	.0012190
%RSD	152.5435	63.73471	29.39149	11.07562	1104.026	314.5275	41.55292
#1	-.000015	-.000057	.0276136	.0002019	.0000095	-.000016	.0021937
#2	-.000037	-.000215	.0237537	.0002253	.0002514	-.000271	.0043407
#3	.000008	-.000108	.0149399	.0002520	-.000200	.000104	.0022666

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001419	-.007770	-.000101	.0002093	-.152842	-.000551	.0005887
Stddev	.0000598	.005592	.000346	.0000889	.022605	.000376	.0001486
%RSD	42.11601	71.96578	343.9254	42.47487	14.79006	68.09646	25.23388
#1	.0002032	-.012505	-.000325	.0001110	-.174539	-.000415	.0004289
#2	.0001387	-.001601	.000298	.0002328	-.154559	-.000976	.0007227
#3	.0000838	-.009203	-.000275	.0002840	-.129426	-.000263	.0006146

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.143495	.0009963	-.000320	-.014369	-.000004	.0017050	-.000950
Stddev	.007431	.0004849	.000123	.000260	.000336	.0013810	.002474
%RSD	5.178887	48.67288	38.31432	1.806280	8724.489	80.99479	260.4370
#1	-.152064	.0005691	-.000293	-.014223	.000343	.0004590	-.002714
#2	-.138817	.0008963	-.000213	-.014215	-.000328	.0014663	.001879
#3	-.139604	.0015233	-.000453	-.014669	-.000027	.0031898	-.002015

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: CCB01 Acquired: 11/27/2024 14:48:10 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.000373	-.000714	.0000118
Stddev	.002024	.000072	.0000185
%RSD	543.2420	10.12008	156.7755
#1	.001950	-.000703	.0000328
#2	-.001309	-.000791	-.000002
#3	-.001759	-.000647	.000005

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2454.127	58794.73	13626.82	1697.880	4452.259
Stddev	27.190	185.86	27.43	5.216	49.181
%RSD	1.107919	.3161087	.2012711	.3071810	1.104621
#1	2422.757	59008.40	13604.05	1702.733	4395.923
#2	2470.929	58705.20	13619.13	1698.541	4486.622
#3	2468.694	58670.58	13657.27	1692.365	4474.233

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: P4495-10 Acquired: 11/27/2024 14:52:31 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.870936	3.932607	4.076827	3.691498	1.130679	240.1363
Stddev	.004383	.035684	.002440	.011155	.002221	1.1474
%RSD	.2342758	.9073757	.0598439	.3021720	.1964404	.4778231
#1	1.865992	3.894924	4.075308	3.693961	1.132462	238.9812
#2	1.872473	3.965881	4.075531	3.679317	1.131385	241.2759
#3	1.874344	3.937016	4.079641	3.701215	1.128191	240.1517

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.957099	F 2.650338	1.654447	112.5693	F 5.408001	2.271873
Stddev	.018683	.004073	.001665	.3223	.013236	.000814
%RSD	.3136255	.1536748	.1006447	.2863268	.2447399	.0358359
#1	5.935639	2.654763	1.655716	112.9248	5.422839	2.271921
#2	5.965916	2.649507	1.652562	112.4869	5.403753	2.271035
#3	5.969741	2.646746	1.655062	112.2961	5.397412	2.272661

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.163357	233.2408	20.15939	155.2390	2.156044	.6565142
Stddev	.006456	.9242	.10118	.4623	.002643	.0013779
%RSD	.1250356	.3962534	.5019206	.2978030	.1225669	.2098744
#1	5.166454	234.2800	20.21914	155.7702	2.158324	.6577853
#2	5.155936	232.9313	20.21647	154.9278	2.153148	.6550499
#3	5.167680	232.5110	20.04256	155.0190	2.156661	.6567073

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	202.3713	4.795888	6.015743	180.9760	6.924174	2.712925
Stddev	.4915	.004797	.020085	.3809	.004537	.001897
%RSD	.2428758	.1000132	.3338660	.2104517	.0655258	.0699369
#1	202.2493	4.800198	6.018663	181.2758	6.928841	2.713730
#2	202.9123	4.796744	5.994358	181.1047	6.919779	2.710757
#3	201.9522	4.790720	6.034208	180.5474	6.923903	2.714286

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: P4495-10 Acquired: 11/27/2024 14:52:31 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.658739	6.263851	9.681107	F 16.39345	9.195857	F 12.89913
Stddev	.000754	.006551	.039199	.08002	.033112	.06903
%RSD	.0454788	.1045765	.4049059	.4881134	.3600732	.5351309
#1	1.657870	6.271284	9.722586	16.30148	9.160021	12.83692
#2	1.659221	6.261349	9.676060	16.43180	9.225318	12.97339
#3	1.659127	6.258920	9.644676	16.44708	9.202231	12.88709

Elem	Sr4077
Units	ppm
Avg	5.197786
Stddev	.021230
%RSD	.4084526
#1	5.208896
#2	5.211156
#3	5.173306

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2422.646	61994.76	16782.84	1699.864	3234.753
Stddev	4.040	62.89	22.90	11.692	3.526
%RSD	.1667492	.1014434	.1364411	.6878357	.1089890
#1	2422.524	62062.15	16805.67	1710.053	3236.451
#2	2426.746	61984.48	16782.96	1702.441	3237.108
#3	2418.669	61937.64	16759.88	1687.098	3230.700

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: P4495-10RE Acquired: 11/27/2024 15:02:33 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.831398	3.913154	4.086800	3.586504	1.034391	240.5849
Stddev	.008795	.062335	.009324	.006766	.003044	4.4879
%RSD	.4802121	1.592953	.2281422	.1886585	.2942814	1.865423
#1	1.838686	3.979657	4.091099	3.592447	1.037107	235.4193
#2	1.821630	3.856056	4.093199	3.579140	1.034965	243.5264
#3	1.833880	3.903749	4.076103	3.587925	1.031100	242.8091

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.984864	F 2.707656	1.669648	114.0114	F 5.417842	2.290216
Stddev	.060488	.010921	.005633	.2693	.012656	.008193
%RSD	1.010681	.4033378	.3374018	.2362099	.2335956	.3577425
#1	5.915490	2.696391	1.673515	114.1380	5.419095	2.294662
#2	6.026567	2.718197	1.672244	113.7021	5.429825	2.295224
#3	6.012535	2.708380	1.663184	114.1941	5.404607	2.280761

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.085348	231.9362	20.47107	156.4575	2.174780	.6488715
Stddev	.006223	1.2726	.22616	.3631	.007730	.0006743
%RSD	.1223701	.5486704	1.104763	.2320562	.3554163	.1039249
#1	5.092497	233.1878	20.28234	156.2576	2.178146	.6489664
#2	5.082406	230.6436	20.72174	156.2384	2.180256	.6494933
#3	5.081142	231.9771	20.40913	156.8766	2.165939	.6481547

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	198.4800	4.817211	5.968354	175.3140	7.017101	2.617227
Stddev	1.5684	.012581	.015817	.4312	.019897	.005615
%RSD	.7902166	.2611584	.2650120	.2459339	.2835513	.2145294
#1	196.8309	4.802685	5.986430	174.9356	6.994197	2.623535
#2	199.9528	4.824653	5.957054	175.2230	7.026983	2.615369
#3	198.6561	4.824293	5.961577	175.7834	7.030123	2.612776

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: P4495-10RE Acquired: 11/27/2024 15:02:33 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.650386	6.547306	F 15.93002	F 16.63075	9.333207	F 12.57925
Stddev	.008456	.025419	.04981	.06517	.033032	.19070
%RSD	.5123817	.3882366	.3126614	.3918860	.3539216	1.516017
#1	1.657589	6.521840	15.96256	16.70526	9.371185	12.40663
#2	1.652493	6.547399	15.87268	16.60261	9.311149	12.78397
#3	1.641075	6.572678	15.95482	16.58437	9.317289	12.54715

Elem	Sr4077
Units	ppm
Avg	5.262938
Stddev	.026773
%RSD	.5087058
#1	5.234748
#2	5.288023
#3	5.266043

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2506.082	63173.06	16651.34	1763.398	3295.716
Stddev	8.430	145.96	67.12	9.401	11.993
%RSD	.3363776	.2310495	.4030769	.5331140	.3638997
#1	2497.510	63262.31	16725.72	1759.898	3281.869
#2	2514.363	63252.25	16633.01	1774.047	3302.844
#3	2506.372	63004.62	16595.29	1756.249	3302.434

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: P4495-10DLX5 Acquired: 11/27/2024 15:07:34 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3906810	.8155249	.8293812	.7664618	.2160991	54.19194	1.406775
Stddev	.0023063	.0072018	.0015362	.0038629	.0013520	3.65215	.100914
%RSD	.5903309	.8830865	.1852244	.5039871	.6256355	6.739286	7.173414
#1	.3880621	.8155815	.8278687	.7688848	.2176455	50.45306	1.300384
#2	.3915716	.8082950	.8309401	.7620071	.2155112	57.75070	1.501133
#3	.3924091	.8226982	.8293350	.7684936	.2151407	54.37208	1.418808

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6611131	.3304235	27.85531	1.272854	.4521377	1.195665	51.40798
Stddev	.0290084	.0001675	1.53573	.002035	.0001518	.001069	.76850
%RSD	4.387808	.0506778	5.513229	.1598948	.0335804	.0894054	1.494912
#1	.6341456	.3304884	26.35002	1.270633	.4521158	1.196126	50.52116
#2	.6918030	.3305488	29.41976	1.273299	.4519981	1.194443	51.82361
#3	.6573907	.3302333	27.79615	1.274630	.4522993	1.196426	51.87915

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.161701	36.48586	.4351063	.1328221	39.09811	1.166063	1.381844
Stddev	.302974	1.88636	.0002588	.0005820	1.25651	.070981	.003308
%RSD	5.869649	5.170100	.0594726	.4381499	3.213737	6.087212	.2394226
#1	4.856320	34.67792	.4349789	.1322185	37.65193	1.093737	1.384684
#2	5.462209	38.44190	.4354041	.1333797	39.92235	1.235618	1.378211
#3	5.166574	36.33776	.4349360	.1328680	39.72006	1.168833	1.382637

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	34.07822	1.804379	.5999654	.3159238	1.575665	3.221951	3.114272
Stddev	1.00632	.078582	.0019231	.0010254	.101481	.047573	.006084
%RSD	2.952962	4.355074	.3205299	.3245829	6.440500	1.476539	.1953475
#1	32.91790	1.734037	.6002799	.3162544	1.469659	3.173891	3.115890
#2	34.71249	1.889190	.5979044	.3147739	1.671916	3.269023	3.107543
#3	34.60426	1.789911	.6017118	.3167432	1.585421	3.222938	3.119383

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: P4495-10DLX5 Acquired: 11/27/2024 15:07:34 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.674142	2.831445	1.295039
Stddev	.004027	.210713	.059259
%RSD	.2405216	7.441890	4.575808
#1	1.675841	2.608485	1.246940
#2	1.669545	3.027285	1.361237
#3	1.677042	2.858565	1.276941

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2561.916	62760.94	14363.11	1821.757	4038.074
Stddev	4.933	82.68	610.62	10.888	4.845
%RSD	.1925390	.1317439	4.251303	.5976459	.1199911
#1	2564.223	62714.75	14902.69	1813.242	4041.679
#2	2565.272	62711.68	13700.26	1818.005	4039.977
#3	2556.253	62856.40	14486.37	1834.025	4032.566

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: PB165242BL Acquired: 11/27/2024 15:11:45 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013043	.0008416	-.000286	.0020992	.0001950	.0018754	-.000716
Stddev	.0014769	.0012798	.000613	.0032690	.0003720	.0065981	.000302
%RSD	113.2282	152.0573	214.1058	155.7282	190.8116	351.8190	42.19802
#1	.0009214	.0018781	-.000596	.0018740	-.000226	.0083626	-.000500
#2	.0029350	.0012357	.000420	.0054749	.000480	-.004828	-.001062
#3	.0000566	-.000589	-.000682	-.001051	.000331	.002092	-.000588

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000157	-.000089	.0025589	.0000376	.0000533	.0001181	.0071955
Stddev	.0000270	.000051	.0051475	.0001051	.0001284	.0001745	.0018562
%RSD	171.4053	56.84397	201.1626	279.5771	241.0468	147.7686	25.79617
#1	-.000012	-.000095	-.003381	-.000048	.0001879	-.000059	.0091307
#2	.000018	-.000036	.005347	.000006	.0000396	.000124	.0054301
#3	.000042	-.000136	.005711	.000155	-.000068	.000289	.0070256

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002251	-.001454	.0001568	.0000889	-.103089	-.000736	.0001797
Stddev	.0002501	.008759	.0003402	.0001724	.008440	.001072	.0001690
%RSD	111.1258	602.4751	216.9106	193.8176	8.187437	145.6774	94.04603
#1	-.000064	-.009925	.0001990	.0002652	-.111069	.000413	.0003677
#2	.000363	-.002004	-.000202	-.000079	-.103944	-.001711	.0001310
#3	.000376	.007568	.000474	.000081	-.094254	-.000910	.0000404

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.092442	.0102273	.0002815	-.000843	.0006358	.0003007	-.003391
Stddev	.019456	.0005739	.0001670	.000189	.0003563	.0039138	.001605
%RSD	21.04671	5.611521	59.32479	22.44949	56.03863	1301.418	47.32268
#1	-.111673	.0105932	.0003605	-.000790	.0007549	-.003179	-.005113
#2	-.092886	.0095659	.0000897	-.001053	.0002352	-.000457	-.003125
#3	-.072768	.0105229	.0003944	-.000686	.0009172	.004538	-.001936

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: PB165242BL Acquired: 11/27/2024 15:11:45 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.001078	-.000076	.0000388
Stddev	.003074	.000340	.0000240
%RSD	285.1573	448.2007	61.98320
#1	-.001918	-.000445	.0000637
#2	.002328	.000226	.0000157
#3	-.003644	-.000009	.0000369

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2418.441	58870.78	13584.47	1671.751	4350.356
Stddev	7.609	253.07	37.57	8.333	4.398
%RSD	.3146291	.4298717	.2765681	.4984423	.1010973
#1	2425.197	58605.08	13552.05	1662.143	4348.790
#2	2419.928	59108.97	13575.73	1677.010	4355.323
#3	2410.198	58898.29	13625.65	1676.099	4346.956

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: PB165242BS Acquired: 11/27/2024 15:40:59 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7348284	1.964753	.9273817	1.841567	.7254486	1.907640	.1953837
Stddev	.0015983	.013282	.0015904	.005887	.0024662	.036736	.0046754
%RSD	.2175093	.6760344	.1714949	.3196689	.3399587	1.925745	2.392908
#1	.7363235	1.950358	.9262478	1.835299	.7268372	1.950037	.2006513
#2	.7331437	1.967366	.9291997	1.842421	.7269074	1.885257	.1917259
#3	.7350178	1.976535	.9266976	1.846979	.7226011	1.887624	.1937740

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1993083	.1849314	1.034512	.3845627	.1863674	.2907393	2.779287
Stddev	.0041345	.0004251	.027085	.0040595	.0005416	.0003134	.028946
%RSD	2.074416	.2298625	2.618143	1.055614	.2905994	.1077916	1.041493
#1	.2040799	.1844524	1.063251	.3847444	.1857431	.2909101	2.786881
#2	.1967875	.1852638	1.009459	.3885283	.1867108	.2909301	2.803679
#3	.1970576	.1850779	1.030825	.3804154	.1866483	.2903776	2.747301

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2004279	1.918234	.4676229	.0714188	2.461992	.2956189	.1974481
Stddev	.0040781	.051700	.0016170	.0006052	.011931	.0066137	.0022470
%RSD	2.034688	2.695204	.3457900	.8473194	.4846011	2.237234	1.138020
#1	.2045950	1.971187	.4658756	.0713052	2.467457	.3029022	.1974201
#2	.1964451	1.867884	.4690665	.0720727	2.470211	.2899884	.1997090
#3	.2002437	1.915632	.4679266	.0708785	2.448307	.2939660	.1952152

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.860901	.2941308	.3857630	.6333719	.1948935	.7640135	5.464885
Stddev	.039277	.0065999	.0008152	.0014016	.0047507	.0054900	.017599
%RSD	.4432611	2.243872	.2113228	.2212907	2.437609	.7185678	.3220401
#1	8.860953	.3017377	.3849185	.6317953	.2003723	.7682483	5.455359
#2	8.900152	.2899277	.3858252	.6338436	.1919161	.7659813	5.454103
#3	8.821598	.2907268	.3865453	.6344768	.1923921	.7578108	5.485194

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: PB165242BS Acquired: 11/27/2024 15:40:59 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	8.533555	.1977398	.2018093
Stddev	.027704	.0043971	.0047716
%RSD	.3246500	2.223693	2.364434
#1	8.501594	.2027729	.2071529
#2	8.548353	.1946439	.1979743
#3	8.550719	.1958026	.2003008

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2617.022	62431.49	14637.35	1778.253	4611.869
Stddev	5.293	579.01	325.12	15.889	8.998
%RSD	.2022462	.9274293	2.221187	.8935117	.1951055
#1	2611.184	62272.39	14262.81	1769.344	4601.534
#2	2621.506	61948.66	14846.88	1768.817	4617.966
#3	2618.378	63073.41	14802.35	1796.597	4616.106

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: P4938-04 Acquired: 11/27/2024 15:44:58 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.004622	-.010617	.0180460	.0048645	.0015646	.1103016	.4200207
Stddev	.001713	.000560	.0008234	.0004119	.0013438	.0054783	.0015698
%RSD	37.07291	5.276099	4.562743	8.467910	85.88961	4.966627	.3737474
#1	-.006098	-.010201	.0177692	.0048490	.0006230	.1135144	.4185138
#2	-.005024	-.011254	.0173967	.0044605	.0031035	.1039761	.4199018
#3	-.002743	-.010396	.0189722	.0052839	.0009673	.1134143	.4216466

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008180	.0005289	8.342817	.0018379	.0181788	.0086850	5.524612
Stddev	.0000465	.0000641	.034019	.0005289	.0001463	.0005094	.020937
%RSD	5.689445	12.12234	.4077634	28.77661	.8049848	5.865439	.3789822
#1	.0008229	.0005867	8.306559	.0020706	.0182163	.0084888	5.501761
#2	.0007692	.0004599	8.374035	.0022106	.0180173	.0092634	5.542875
#3	.0008620	.0005400	8.347858	.0012326	.0183027	.0083029	5.529202

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.571193	1.650291	.0127568	-.000368	336.1534	.0002249	.1792215
Stddev	.007670	.014646	.0000258	.000346	3.3629	.0011728	.0005014
%RSD	.2982920	.8874727	.2023010	94.01267	1.000412	521.4726	.2797779
#1	2.563529	1.654809	.0127431	.000011	332.3279	-.000087	.1797113
#2	2.571182	1.662146	.0127866	-.000449	338.6437	.001522	.1792439
#3	2.578869	1.633919	.0127407	-.000665	337.4886	-.000761	.1787092

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.607424	.0459166	.0005050	-.014102	.0026661	.6756525	.0125645
Stddev	.028661	.0005019	.0000906	.000651	.0003574	.0071483	.0011680
%RSD	1.099208	1.093013	17.93338	4.619397	13.40549	1.057990	9.296443
#1	2.581656	.0462016	.0004722	-.014620	.0028641	.6685320	.0114859
#2	2.638293	.0462110	.0006074	-.013371	.0028807	.6828284	.0138051
#3	2.602323	.0453371	.0004354	-.014317	.0022535	.6755972	.0124023

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: P4938-04 Acquired: 11/27/2024 15:44:58 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.6663174	-.001277	.0527415
Stddev	.0042809	.000401	.0001489
%RSD	.6424635	31.40911	.2823259
#1	.6712006	-.001648	.0526104
#2	.6645399	-.000851	.0527106
#3	.6632117	-.001332	.0529034

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2197.606	52870.32	13491.02	1523.969	3663.408
Stddev	4.623	301.29	39.68	18.099	2.498
%RSD	.2103806	.5698606	.2941312	1.187607	.0681802
#1	2194.797	52812.92	13452.69	1516.036	3660.536
#2	2195.080	52601.86	13488.44	1511.193	3664.612
#3	2202.943	53196.18	13531.92	1544.680	3665.076

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: CCV02 Acquired: 11/27/2024 15:50:07 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV02 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.808117	4.976655	4.876825	4.838923	4.834964	9.852820	10.07529
Stddev	.006926	.027484	.006993	.005562	.005521	.004100	.10668
%RSD	.1440544	.5522588	.1433986	.1149328	.1141946	.0416135	1.058866
#1	4.811064	4.962526	4.874400	4.843709	4.840242	9.857394	10.18682
#2	4.800205	4.959109	4.871367	4.832822	4.829228	9.849474	9.97422
#3	4.813083	5.008329	4.884708	4.840237	4.835423	9.851593	10.06482

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2544998	2.429623	24.98427	.9781118	2.420749	1.214090	4.832092
Stddev	.0012432	.004067	.12381	.0041061	.003276	.001129	.021042
%RSD	.4885001	.1673926	.4955343	.4197948	.1353338	.0930255	.4354654
#1	.2557844	2.427144	25.09251	.9734908	2.417860	1.215042	4.810407
#2	.2533026	2.427409	24.84928	.9813411	2.420078	1.214387	4.833445
#3	.2544125	2.434317	25.01104	.9795036	2.424308	1.212842	4.852426

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.514281	24.63820	2.422936	1.221113	24.43886	2.502994	2.464995
Stddev	.013693	.08812	.004777	.002655	.12182	.005621	.008979
%RSD	.5446073	.3576638	.1971551	.2173855	.4984743	.2245830	.3642479
#1	2.528434	24.65197	2.418013	1.218108	24.43127	2.508983	2.467399
#2	2.501100	24.54400	2.423243	1.223137	24.56430	2.497833	2.472527
#3	2.513308	24.71863	2.427552	1.222094	24.32101	2.502166	2.455059

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	23.78773	5.077544	4.894571	4.883426	5.002561	4.716364	5.070771
Stddev	.10097	.028705	.004257	.010729	.019892	.035027	.013163
%RSD	.4244416	.5653289	.0869752	.2196990	.3976296	.7426702	.2595860
#1	23.68339	5.108911	4.895447	4.875533	5.024970	4.676070	5.065084
#2	23.88495	5.052584	4.889945	4.879103	4.986993	4.739541	5.061407
#3	23.79484	5.071137	4.898322	4.895642	4.995718	4.733482	5.085821

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: CCV02 Acquired: 11/27/2024 15:50:07 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV02 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.846028	4.897178	5.115632
Stddev	.017873	.022631	.048316
%RSD	.3688130	.4621258	.9444696
#1	4.828023	4.911631	5.169646
#2	4.846297	4.908808	5.076532
#3	4.863765	4.871097	5.100719

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2460.219	59073.86	14278.27	1710.610	4102.166
Stddev	8.708	54.93	97.52	13.284	11.369
%RSD	.3539541	.0929844	.6829878	.7765589	.2771464
#1	2452.916	59116.86	14168.89	1697.463	4095.490
#2	2457.884	59092.73	14356.14	1710.341	4095.714
#3	2469.856	59011.98	14309.77	1724.027	4115.293

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: CCB02 Acquired: 11/27/2024 15:54:19 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem 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	.0002098	.0014286	-.000078	.0006081	.0011133	-.003696	-.000743
Stddev	.0024707	.0017043	.000456	.0024395	.0010526	.005929	.000135
%RSD	1177.487	119.2945	583.0706	401.1505	94.54398	160.4001	18.15997
#1	.0027895	.0030563	-.000385	.0032092	.0022569	-.006938	-.000689
#2	-.000025	.0015726	.000446	.0002439	.0001850	.003147	-.000643
#3	-.002135	-.000343	-.000295	-.001629	.0008981	-.007298	-.000896

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000006	-.000034	-.009380	.0002963	.0002084	-.000367	.0022211
Stddev	.000034	.000050	.003327	.0001302	.0001004	.000236	.0032903
%RSD	547.4265	148.3587	35.47329	43.94496	48.18839	64.14119	148.1418
#1	-.000033	-.000065	-.013041	.0001963	.0001753	-.000136	.0059947
#2	.000032	.000024	-.006540	.0002489	.0003212	-.000358	.0007167
#3	-.000018	-.000060	-.008558	.0004435	.0001287	-.000607	-.000048

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001401	-.002251	-.000225	.0000851	-.138737	.0005880	-.000297
Stddev	.0002585	.002789	.000147	.0001892	.010316	.0006863	.000246
%RSD	184.4391	123.9344	65.45115	222.4094	7.435719	116.7118	82.58520
#1	.0003263	-.000420	-.000136	.0002340	-.146893	.0006932	-.000570
#2	-.000155	-.005461	-.000395	.0001491	-.142178	-.000145	-.000230
#3	.000249	-.000871	-.000145	-.000128	-.127140	.001216	-.000093

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.103427	.0064743	.0012365	-.000380	.0007457	.0000073	-.001604
Stddev	.005565	.0002980	.0005168	.001180	.0003227	.0027394	.003082
%RSD	5.380273	4.602693	41.79847	310.7557	43.27224	37681.49	192.2096
#1	-.107511	.0068182	.0017218	-.000217	.0008105	-.002979	-.003819
#2	-.097089	.0063103	.0012948	-.001632	.0010310	.000598	.001917
#3	-.105681	.0062943	.0006930	.000711	.0003955	.002403	-.002909

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: CCB02 Acquired: 11/27/2024 15:54:19 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB02 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.002679	-.000401	.0001505
Stddev	.003311	.000048	.0000124
%RSD	123.5891	11.96693	8.245425
#1	-.004607	-.000362	.0001613
#2	-.004573	-.000385	.0001532
#3	.001144	-.000455	.0001370

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2422.388	59293.67	13618.89	1662.446	4394.774
Stddev	.381	223.04	36.18	11.064	2.331
%RSD	.0157177	.3761608	.2656385	.6655011	.0530371
#1	2421.971	59099.04	13606.99	1650.349	4392.594
#2	2422.476	59537.05	13590.16	1672.052	4394.498
#3	2422.717	59244.90	13659.51	1664.936	4397.231

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: P4938-08 Acquired: 11/27/2024 15:58:40 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.008701	-.015570	.0041478	.0084113	.0016694	.1087101	.2650481
Stddev	.001499	.003469	.0007370	.0009302	.0006092	.0018046	.0016010
%RSD	17.22396	22.28253	17.76939	11.05886	36.49438	1.659995	.6040552
#1	-.009567	-.018079	.0044329	.0091859	.0009943	.1068529	.2632086
#2	-.006970	-.011611	.0046996	.0073796	.0021784	.1104570	.2658074
#3	-.009565	-.017019	.0033108	.0086685	.0018354	.1088206	.2661282

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000769	-.000082	13.63883	.0063258	.0075705	.0088606	3.786762
Stddev	.0000509	.000053	.10386	.0002687	.0001395	.0000891	.002962
%RSD	66.18897	65.21348	.7614841	4.247479	1.842204	1.005998	.0782160
#1	.0000807	-.000110	13.52801	.0062201	.0074373	.0089006	3.789635
#2	.0000242	-.000020	13.65455	.0066312	.0077154	.0087585	3.783719
#3	.0001258	-.000116	13.73393	.0061260	.0075587	.0089228	3.786933

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.539518	1.594143	.0076749	-.000149	330.1502	.0001919	.0822541
Stddev	.007691	.006320	.0001787	.000228	1.9190	.0007812	.0004774
%RSD	.4995536	.3964481	2.327919	153.2700	.5812422	407.0566	.5804419
#1	1.531568	1.587868	.0076054	-.000309	331.3043	.0006447	.0827446
#2	1.540068	1.594052	.0078779	-.000250	327.9350	-.000710	.0822268
#3	1.546920	1.600507	.0075415	.000112	331.2113	.000641	.0817909

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.006809	.0279375	.0011905	-.014211	.0003507	.6901845	.0049215
Stddev	.026211	.0003153	.0003354	.000597	.0001837	.0078322	.0046519
%RSD	1.306093	1.128564	28.17193	4.204508	52.37898	1.134792	94.52339
#1	1.998757	.0282138	.0015671	-.013634	.0001616	.6918246	-.000299
#2	2.036101	.0275940	.0010803	-.014827	.0005285	.6970668	.008628
#3	1.985568	.0280046	.0009240	-.014172	.0003620	.6816622	.006435

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: P4938-08 Acquired: 11/27/2024 15:58:40 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.9487049	-.004402	.1028437
Stddev	.0043161	.000199	.0003611
%RSD	.4549436	4.530070	.3510654
#1	.9458938	-.004396	.1024268
#2	.9536744	-.004604	.1030495
#3	.9465465	-.004206	.1030547

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2127.585	52244.95	13602.39	1457.486	3595.362
Stddev	9.078	53.39	16.51	.191	12.871
%RSD	.4266875	.1021824	.1213521	.0131233	.3580012
#1	2118.728	52198.53	13612.15	1457.311	3580.917
#2	2127.159	52233.02	13583.33	1457.456	3599.552
#3	2136.869	52303.29	13611.70	1457.690	3605.616

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: CCV03 Acquired: 11/27/2024 16:03:07 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.225701	5.423115	5.314923	5.244318	5.227412	10.64726	10.74623
Stddev	.002895	.063342	.014361	.002430	.004385	.03304	.10372
%RSD	.0553921	1.168009	.2702106	.0463425	.0838841	.3102699	.9651842
#1	5.224680	5.350453	5.298381	5.244113	5.230083	10.61586	10.65667
#2	5.223456	5.466692	5.322182	5.246844	5.222351	10.64420	10.85988
#3	5.228968	5.452198	5.324206	5.241996	5.229801	10.68172	10.72214

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2716289	2.655780	26.93288	1.058137	2.649634	1.318086	5.156039
Stddev	.0017733	.005500	.07792	.004366	.003908	.002471	.014027
%RSD	.6528314	.2070963	.2893195	.4126284	.1474763	.1874892	.2720589
#1	.2736679	2.649440	26.84518	1.063042	2.645201	1.320563	5.142371
#2	.2707721	2.658629	26.99414	1.056693	2.651123	1.315621	5.155345
#3	.2704468	2.659271	26.95933	1.054675	2.652579	1.318073	5.170400

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.690868	26.71273	2.652007	1.300788	25.75523	2.697890	2.630773
Stddev	.006363	.08925	.004154	.003744	.02332	.002287	.006369
%RSD	.2364755	.3341152	.1566514	.2878128	.0905255	.0847795	.2421115
#1	2.684398	26.61289	2.647227	1.304430	25.78212	2.695297	2.631112
#2	2.691087	26.78479	2.654048	1.300984	25.74058	2.698750	2.624240
#3	2.697119	26.74050	2.654746	1.296950	25.74300	2.699622	2.636966

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.35150	5.400841	5.318755	5.356513	5.371228	5.070337	5.544594
Stddev	.03585	.020639	.002779	.016775	.012306	.040161	.029600
%RSD	.1414144	.3821370	.0522415	.3131770	.2291117	.7920830	.5338538
#1	25.31609	5.423817	5.321026	5.337188	5.357045	5.031596	5.513352
#2	25.35062	5.394832	5.315657	5.367327	5.377557	5.067634	5.572221
#3	25.38778	5.383873	5.319583	5.365023	5.379081	5.111782	5.548208

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: CCV03 Acquired: 11/27/2024 16:03:07 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	5.298839	5.233937	5.470809
Stddev	.022760	.005416	.028666
%RSD	.4295334	.1034802	.5239741
#1	5.272729	5.240074	5.447028
#2	5.309303	5.229826	5.502638
#3	5.314486	5.231911	5.462759

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2301.005	55995.37	13469.77	1604.683	3807.468
Stddev	7.024	82.81	44.63	5.028	2.587
%RSD	.3052401	.1478802	.3313364	.3133455	.0679450
#1	2293.635	55903.32	13423.59	1607.581	3806.061
#2	2307.622	56019.02	13473.06	1607.591	3810.453
#3	2301.758	56063.78	13512.67	1598.877	3805.889

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: CCB03 Acquired: 11/27/2024 16:07:17 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0017780	.0003686	-.000692	-.000023	.0008078	.0013067	.0022181
Stddev	.0031261	.0004960	.000129	.000751	.0003194	.0029988	.0003731
%RSD	175.8221	134.5501	18.63062	3305.590	39.54298	229.4957	16.82039
#1	.0053655	.0007618	-.000829	-.000805	.0010913	.0013336	.0024845
#2	-.000362	.0005326	-.000673	.000043	.0008703	.0042919	.0017917
#3	.000331	-.000189	-.000573	.000694	.0004617	-.001705	.0023783

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000754	-.000037	.0146699	-.000001	.0001738	-.000140	.0024580
Stddev	.0000864	.000072	.0069246	.000038	.0000572	.000408	.0019603
%RSD	114.6066	196.2180	47.20291	3168.342	32.89387	291.2277	79.75304
#1	.0001597	.000044	.0118645	-.000045	.0002225	-.000327	.0005832
#2	.0000794	-.000094	.0225571	.000024	.0001109	.000328	.0022968
#3	-.000013	-.000060	.0095882	.000017	.0001881	-.000422	.0044939

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002146	-.004866	-.000027	.0000384	-.138360	-.000083	.0003469
Stddev	.0000691	.005604	.000188	.0001184	.012758	.001208	.0000519
%RSD	32.20705	115.1781	706.8510	308.0978	9.220860	1459.711	14.96764
#1	.0001483	-.006583	.000109	-.000040	-.153087	-.001476	.0002933
#2	.0002862	-.009410	-.000241	-.000019	-.131318	.000670	.0003504
#3	.0002093	.001396	.000052	.000175	-.130676	.000557	.0003970

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.083356	.0070182	.0010547	-.014972	.0004461	-.000436	-.002261
Stddev	.009263	.0005357	.0002904	.000316	.0000715	.004350	.001267
%RSD	11.11205	7.633071	27.53437	2.108833	16.02826	997.5554	56.03380
#1	-.086577	.0073791	.0013535	-.014980	.0004761	.001681	-.002882
#2	-.090579	.0072728	.0007735	-.015283	.0003645	.002450	-.000804
#3	-.072913	.0064027	.0010370	-.014652	.0004978	-.005440	-.003099

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: CCB03 Acquired: 11/27/2024 16:07:17 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.000575	-.000378	.0001667
Stddev	.003146	.000449	.0000632
%RSD	547.2939	118.6621	37.88747
#1	.000029	-.000469	.0002321
#2	.002226	.000109	.0001619
#3	-.003980	-.000774	.0001061

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2709.851	65349.62	15588.81	1896.598	4881.852
Stddev	17.184	143.70	608.15	6.913	29.051
%RSD	.6341235	.2198935	3.901175	.3645071	.5950884
#1	2691.361	65304.27	15986.27	1895.703	4848.674
#2	2712.861	65234.07	14888.72	1890.176	4894.155
#3	2725.331	65510.52	15891.44	1903.915	4902.728

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: P4938-04DUP Acquired: 11/27/2024 16:11:54 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.003474	-.008968	.0159354	.0026498	.0013987	.1161259	.4179389
Stddev	.000700	.001241	.0006559	.0011399	.0007462	.0232515	.0559269
%RSD	20.14068	13.83674	4.116274	43.01963	53.35196	20.02266	13.38159
#1	-.003849	-.008670	.0151821	.0035608	.0010859	.1005264	.3964928
#2	-.002667	-.007903	.0163800	.0030170	.0022504	.1050014	.3759090
#3	-.003906	-.010331	.0162442	.0013715	.0008598	.1428498	.4814148

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008174	.0004326	8.122282	.0017087	.0169314	.0081013	5.456860
Stddev	.0001132	.0000908	1.141642	.0004477	.0001138	.0005609	.323870
%RSD	13.84953	20.99096	14.05568	26.20227	.6718648	6.924275	5.935094
#1	.0008216	.0003383	7.673514	.0018015	.0170458	.0074535	5.830832
#2	.0007022	.0005194	7.273213	.0021027	.0169302	.0084232	5.270324
#3	.0009285	.0004402	9.420120	.0012218	.0168183	.0084271	5.269424

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.527147	1.604889	.0117872	-.000564	337.3354	.0002685	.1752882
Stddev	.349814	.250437	.0002604	.000489	27.8233	.0019125	.0138230
%RSD	13.84224	15.60465	2.208876	86.70878	8.247953	712.1812	7.885866
#1	2.389002	1.489689	.0115108	-.001124	368.7276	-.001554	.1910194
#2	2.267500	1.432782	.0118229	-.000340	327.5578	.000100	.1697623
#3	2.924939	1.892197	.0120278	-.000227	315.7206	.002260	.1650831

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.602513	.0468790	.0003999	-.014425	.0025743	.6719186	.0093411
Stddev	.167935	.0052865	.0002894	.000066	.0003927	.0385500	.0028100
%RSD	6.452796	11.27686	72.37410	.4589607	15.25434	5.737305	30.08211
#1	2.795729	.0456969	.0000826	-.014478	.0025073	.7162230	.0061053
#2	2.491661	.0422837	.0004678	-.014351	.0022194	.6535008	.0111679
#3	2.520149	.0526565	.0006494	-.014445	.0029961	.6460321	.0107499

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: P4938-04DUP Acquired: 11/27/2024 16:11:54 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.6115500	-.001072	.0521924
Stddev	.0040523	.000452	.0079851
%RSD	.6626341	42.13969	15.29943
#1	.6118195	-.000580	.0488434
#2	.6154608	-.001168	.0464272
#3	.6073696	-.001467	.0613067

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2290.763	53736.20	13887.81	1535.758	3861.420
Stddev	7.431	3512.50	1582.46	102.114	5.568
%RSD	.3243968	6.536558	11.39462	6.649072	.1441871
#1	2292.064	49806.57	14424.84	1420.278	3866.017
#2	2297.457	54831.46	15131.88	1572.871	3863.015
#3	2282.767	56570.57	12106.72	1614.125	3855.229

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: P4938-04LX5 Acquired: 11/27/2024 16:16:21 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001526	-.002148	.0035856	.0016608	.0001060	.0220011	.0834746
Stddev	.000985	.000820	.0015542	.0023275	.0010421	.0026182	.0003156
%RSD	64.52113	38.15657	43.34629	140.1417	983.1509	11.90043	.3781082
#1	-.002660	-.001601	.0049442	.0031962	-.000976	.0234162	.0837706
#2	-.001036	-.003090	.0039217	-.001017	.000190	.0189798	.0835108
#3	-.000883	-.001753	.0018908	.002803	.001103	.0236072	.0831425

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001914	.0000089	1.660077	.0003401	.0037871	.0017609	1.064892
Stddev	.0000239	.0001066	.004539	.0001306	.0000340	.0002361	.005045
%RSD	12.50338	1199.121	.2734195	38.39701	.8982370	13.40941	.4737653
#1	.0001925	-.000108	1.655204	.0001932	.0037495	.0020281	1.059401
#2	.0001669	.000102	1.660841	.0004430	.0038158	.0015805	1.065954
#3	.0002147	.000033	1.664185	.0003842	.0037960	.0016741	1.069322

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5155096	.3355606	.0025965	.0000495	64.53467	-.000345	.0352102
Stddev	.0023953	.0139977	.0002455	.0003766	.24919	.000697	.0003833
%RSD	.4646394	4.171437	9.456763	760.9926	.3861268	201.9678	1.088633
#1	.5127675	.3258083	.0023130	-.000316	64.81351	-.001143	.0353392
#2	.5165675	.3292742	.0027359	.000436	64.45673	.000145	.0355123
#3	.5171937	.3515994	.0027406	.000028	64.33376	-.000037	.0347790

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4198571	.0117076	-.000149	-.003464	.0008566	.1383659	-.000451
Stddev	.0083058	.0006044	.000226	.000600	.0001694	.0012526	.000730
%RSD	1.978252	5.162033	151.7001	17.33400	19.77566	.9053152	161.6494
#1	.4120660	.0117423	-.000265	-.003759	.0008884	.1371591	.000172
#2	.4285963	.0122939	.000111	-.002773	.0010078	.1396598	-.000273
#3	.4189090	.0110867	-.000293	-.003859	.0006735	.1382786	-.001254

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: P4938-04LX5 Acquired: 11/27/2024 16:16:21 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.1292225	-.000802	.0105728
Stddev	.0018159	.000363	.0000204
%RSD	1.405259	45.23091	.1924451
#1	.1300175	-.000869	.0105627
#2	.1271447	-.000410	.0105963
#3	.1305055	-.001126	.0105595

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2359.123	56440.44	13875.71	1610.320	4055.973
Stddev	8.366	80.81	29.22	4.483	12.903
%RSD	.3546139	.1431776	.2105579	.2783828	.3181324
#1	2353.329	56347.32	13849.27	1606.059	4048.914
#2	2368.714	56492.22	13870.79	1609.904	4070.866
#3	2355.326	56481.77	13907.08	1614.996	4048.140

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: P4938-04MS Acquired: 11/27/2024 16:20:39 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8161237	1.803763	.9263919	2.014259	.8244108	2.122501	.7419307
Stddev	.0037783	.021136	.0011226	.003659	.0020222	.006874	.0009319
%RSD	.4629616	1.171766	.1211836	.1816480	.2452882	.3238804	.1256027
#1	.8202872	1.782464	.9268178	2.018484	.8240971	2.123891	.7411335
#2	.8129129	1.824732	.9251186	2.012091	.8265715	2.128574	.7429552
#3	.8151710	1.804093	.9272393	2.012203	.8225638	2.115038	.7417033

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1977400	.1959410	11.60981	.3953778	.2183545	.2875425	9.871139
Stddev	.0003471	.0002371	.03494	.0014395	.0001107	.0011787	.041525
%RSD	.1755135	.1209904	.3009235	.3640940	.0506831	.4099151	.4206735
#1	.1981389	.1961819	11.57018	.3962605	.2184259	.2888990	9.838869
#2	.1975075	.1957080	11.63616	.3937167	.2184105	.2869598	9.856560
#3	.1975735	.1959333	11.62310	.3961563	.2182270	.2867686	9.917988

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.341526	3.999793	.4998089	.0760635	427.3740	.3075295	.4345538
Stddev	.005279	.026479	.0002316	.0003976	1.1810	.0010919	.0010851
%RSD	.1579949	.6620134	.0463378	.5227211	.2763431	.3550460	.2497088
#1	3.335611	3.988543	.4997811	.0756047	427.8877	.3087743	.4357039
#2	3.345760	4.030040	.4995924	.0762784	426.0231	.3067341	.4344093
#3	3.343207	3.980796	.5000531	.0763075	428.2111	.3070800	.4335481

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	13.64323	.3253398	.4309472	.6884517	.2146541	1.678088	6.266372
Stddev	.02683	.0006402	.0009011	.0000671	.0016149	.007571	.025241
%RSD	.1966884	.1967692	.2091089	.0097393	.7523156	.4511893	.4027960
#1	13.65350	.3250927	.4311902	.6883803	.2129247	1.677111	6.237545
#2	13.66342	.3248600	.4317020	.6884615	.2161226	1.671052	6.277063
#3	13.61278	.3260667	.4299495	.6885133	.2149151	1.686100	6.284507

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: P4938-04MS Acquired: 11/27/2024 16:20:39 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.8052996	.2061909	.2732660
Stddev	.0024945	.0004231	.0005060
%RSD	.3097537	.2052181	.1851706
#1	.8072434	.2057170	.2729006
#2	.8061685	.2063247	.2738435
#3	.8024870	.2065309	.2730537

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2127.388	52577.54	13291.99	1459.423	3514.647
Stddev	7.661	48.49	32.39	5.869	8.321
%RSD	.3600950	.0922207	.2436613	.4021380	.2367451
#1	2118.640	52523.99	13284.25	1452.899	3505.616
#2	2130.627	52590.16	13264.17	1461.099	3516.321
#3	2132.897	52618.47	13327.54	1464.272	3522.003

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: P4938-04MSD Acquired: 11/27/2024 16:24:48 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7560074	1.702647	.8703875	1.874108	.7678210	1.984145	.7123387
Stddev	.0031353	.011713	.0051878	.006479	.0027748	.011295	.0024425
%RSD	.4147138	.6879014	.5960382	.3457073	.3613844	.5692460	.3428913
#1	.7526807	1.707953	.8701706	1.879167	.7707935	1.971132	.7113524
#2	.7564340	1.689220	.8756803	1.866805	.7652990	1.989896	.7105435
#3	.7589076	1.710767	.8653114	1.876351	.7673705	1.991405	.7151202

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1890501	.1833611	10.95343	.3690223	.2041252	.2690436	9.292847
Stddev	.0003048	.0002122	.06386	.0094712	.0003822	.0007578	.256046
%RSD	.1612334	.1157016	.5830014	2.566574	.1872204	.2816613	2.755301
#1	.1890254	.1835217	10.90983	.3581861	.2038548	.2696954	9.015105
#2	.1887583	.1834411	11.02673	.3757198	.2045624	.2682121	9.519490
#3	.1893664	.1831206	10.92372	.3731610	.2039583	.2692234	9.343945

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.187449	3.779773	.4677701	.0718891	411.0736	.2899142	.4047221
Stddev	.005124	.014147	.0006593	.0015640	8.4372	.0017580	.0099405
%RSD	.1607566	.3742845	.1409459	2.175586	2.052481	.6063830	2.456123
#1	3.181804	3.768604	.4671174	.0701531	401.3356	.2890132	.3937765
#2	3.191808	3.795681	.4684358	.0731882	416.1973	.2919400	.4131880
#3	3.188734	3.775033	.4677572	.0723261	415.6880	.2887894	.4072019

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.80817	.3115697	.4032537	.6457933	.2043772	1.556506	5.966839
Stddev	.30671	.0004780	.0009152	.0012980	.0009985	.045264	.012471
%RSD	2.394665	.1534122	.2269574	.2009890	.4885714	2.908057	.2090091
#1	12.45659	.3113566	.4025715	.6443316	.2038020	1.507934	5.964363
#2	13.02091	.3121172	.4028957	.6462373	.2037993	1.597508	5.955792
#3	12.94701	.3112354	.4042938	.6468110	.2055301	1.564074	5.980363

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: P4938-04MSD Acquired: 11/27/2024 16:24:48 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.7595632	.1953427	.2604357
Stddev	.0028671	.0013004	.0006662
%RSD	.3774681	.6657082	.2558190
#1	.7570910	.1952871	.2604133
#2	.7588923	.1940710	.2597810
#3	.7627062	.1966701	.2611129

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2286.753	55634.53	13930.92	1594.374	3769.200
Stddev	1.884	1331.22	36.16	39.285	2.750
%RSD	.0824011	2.392793	.2595628	2.463978	.0729556
#1	2286.453	57118.21	13901.23	1635.221	3770.568
#2	2288.770	54544.59	13920.35	1556.863	3770.997
#3	2285.038	55240.80	13971.19	1591.037	3766.035

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: P4938-04A Acquired: 11/27/2024 16:28:57 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7527677	1.659871	.8597213	1.860330	.7610571	1.940477	.7065597
Stddev	.0040054	.012453	.0015623	.011217	.0043147	.016214	.0024048
%RSD	.5320948	.7502106	.1817272	.6029420	.5669332	.8355740	.3403527
#1	.7499561	1.673421	.8592851	1.857329	.7585148	1.923727	.7050132
#2	.7509932	1.648929	.8584234	1.850920	.7586175	1.956097	.7053356
#3	.7573539	1.657263	.8614554	1.872743	.7660389	1.941606	.7093303

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1852967	.1815822	10.79529	.3633163	.2023572	.2666948	9.139456
Stddev	.0006627	.0001991	.03810	.0011430	.0001587	.0005221	.100746
%RSD	.3576221	.1096485	.3529083	.3145881	.0784428	.1957466	1.102323
#1	.1858292	.1815393	10.75212	.3628650	.2025273	.2662198	9.032507
#2	.1855064	.1817993	10.80957	.3624678	.2022130	.2666110	9.153292
#3	.1845546	.1814081	10.82420	.3646159	.2023315	.2672538	9.232570

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.162356	3.712228	.4638180	.0706122	405.5033	.2843695	.3981156
Stddev	.015061	.020794	.0007891	.0001431	2.0047	.0018099	.0004485
%RSD	.4762568	.5601495	.1701398	.2026894	.4943829	.6364639	.1126651
#1	3.146085	3.690128	.4632455	.0704484	404.2176	.2825782	.3976982
#2	3.165175	3.731407	.4647182	.0706754	404.4791	.2861975	.3985899
#3	3.175809	3.715150	.4634904	.0707129	407.8133	.2843329	.3980586

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.48659	.3077041	.3989890	.6391075	.2017413	1.510030	5.904479
Stddev	.06545	.0012355	.0017127	.0009407	.0006174	.017623	.026226
%RSD	.5241365	.4015209	.4292628	.1471957	.3060436	1.167051	.4441791
#1	12.41214	.3088553	.3978626	.6380216	.2011349	1.489741	5.934275
#2	12.51260	.3063987	.3981443	.6396760	.2017198	1.518828	5.894269
#3	12.53503	.3078583	.4009599	.6396249	.2023692	1.521522	5.884893

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: P4938-04A Acquired: 11/27/2024 16:28:57 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.7547440	.1927782	.2571526
Stddev	.0047055	.0001855	.0006696
%RSD	.6234518	.0962042	.2603991
#1	.7510441	.1926961	.2564760
#2	.7600399	.1926479	.2571667
#3	.7531481	.1929905	.2578150

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2298.427	57098.37	14162.93	1631.221	3786.862
Stddev	12.030	153.76	13.02	8.313	9.774
%RSD	.5234109	.2692973	.0919240	.5096034	.2580941
#1	2301.086	57262.31	14151.83	1640.628	3782.912
#2	2308.905	57075.45	14159.70	1628.169	3797.992
#3	2285.289	56957.35	14177.26	1624.865	3779.681

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: P4971-01 Acquired: 11/27/2024 16:35:37 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0403811	-.003438	.3378510	-.032950	.0030391	109.6251
Stddev	.0006827	.002334	.0016012	.002467	.0027218	.1799
%RSD	1.690570	67.87785	.4739269	7.486631	89.55803	.1640877
#1	.0398532	-.000760	.3368527	-.035524	.0059952	109.4243
#2	.0401381	-.004516	.3370025	-.030607	.0006370	109.6792
#3	.0411521	-.005039	.3396979	-.032719	.0024850	109.7717

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7378213	.0074792	.0173626	53.00237	.1826748	.0973030
Stddev	.0007863	.0000325	.0001663	.28777	.0009152	.0000874
%RSD	.1065644	.4338218	.9580133	.5429420	.5010029	.0898430
#1	.7373027	.0075135	.0175542	52.68721	.1819052	.0972224
#2	.7387260	.0074489	.0172552	53.06872	.1824324	.0973959
#3	.7374352	.0074753	.0172785	53.25117	.1836868	.0972906

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4163906	196.2371	3.132490	34.04200	.1633270	-.012963
Stddev	.0021973	1.8484	.020652	.20925	.0004928	.000568
%RSD	.5277040	.9419228	.6592990	.6146702	.3017596	4.384801
#1	.4188001	194.1572	3.110073	33.82902	.1634443	-.013620
#2	.4158742	196.8624	3.136651	34.04966	.1627861	-.012646
#3	.4144974	197.6918	3.150744	34.24730	.1637507	-.012625

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.436278	.3423183	.5989199	6.329051	.0807461	.0033091
Stddev	.029472	.0032161	.0030180	.039159	.0026599	.0002972
%RSD	.4579040	.9395054	.5039092	.6187122	3.294159	8.980980
#1	6.402255	.3407067	.5966388	6.286258	.0778984	.0029685
#2	6.452652	.3402267	.6023421	6.363096	.0811735	.0034433
#3	6.453927	.3460216	.5977788	6.337797	.0831665	.0035156

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: P4971-01 Acquired: 11/27/2024 16:35:37 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009177	3.901037	F 10.73442	5.977753	2.038499	.0887070
Stddev	.0008416	.015058	.06715	.023154	.005914	.0004496
%RSD	91.70514	.3859923	.6255576	.3873378	.2901246	.5068182
#1	.0001137	3.883673	10.65824	5.951021	2.032396	.0883511
#2	.0017924	3.910497	10.78502	5.990702	2.044204	.0885576
#3	.0008470	3.908940	10.76000	5.991535	2.038897	.0892122

Elem	Sr4077
Units	ppm
Avg	.0178982
Stddev	.0015123
%RSD	8.449542
#1	.0195739
#2	.0174861
#3	.0166347

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2565.829	64051.23	15645.92	1761.531	3725.594
Stddev	9.239	149.76	73.35	5.165	6.674
%RSD	.3600840	.2338051	.4688029	.2932022	.1791367
#1	2555.204	63912.59	15563.80	1756.347	3718.453
#2	2571.975	64031.06	15669.04	1761.568	3726.655
#3	2570.308	64210.05	15704.92	1766.677	3731.673

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: CCV04 Acquired: 11/27/2024 16:39:43 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV04 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.242592	5.294909	5.233468	5.260102	5.252741	10.59894	10.68911
Stddev	.010166	.064611	.002443	.014252	.012432	.06299	.08149
%RSD	.1939136	1.220242	.0466813	.2709461	.2366770	.5943400	.7623339
#1	5.238475	5.238098	5.233517	5.257663	5.252893	10.52884	10.62790
#2	5.235131	5.365194	5.235887	5.247227	5.240234	10.61717	10.78160
#3	5.254171	5.281434	5.231001	5.275416	5.265097	10.65081	10.65783

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2631387	2.611861	26.33443	1.053488	2.611424	1.313943	5.209082
Stddev	.0014117	.001715	.14017	.005217	.001314	.002426	.009684
%RSD	.5364918	.0656701	.5322621	.4951943	.0503262	.1845981	.1858985
#1	.2620010	2.610197	26.21689	1.047893	2.609908	1.315358	5.214994
#2	.2626965	2.613623	26.29684	1.054352	2.612244	1.311142	5.197907
#3	.2647186	2.611764	26.48956	1.058218	2.612120	1.315328	5.214346

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.630128	26.22670	2.613241	1.299111	25.96259	2.666191	2.642848
Stddev	.013706	.17573	.002633	.001347	.11676	.018657	.001951
%RSD	.5211044	.6700409	.1007667	.1037001	.4497110	.6997671	.0738078
#1	2.622141	26.06235	2.610606	1.297623	26.09317	2.649121	2.640635
#2	2.622289	26.20580	2.615873	1.300249	25.86826	2.663344	2.643595
#3	2.645954	26.41194	2.613243	1.299460	25.92633	2.686108	2.644315

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.98328	5.245375	5.318069	5.262100	5.298828	5.168180	5.374034
Stddev	.05200	.015100	.006813	.001575	.021377	.033959	.011309
%RSD	.2001324	.2878636	.1281061	.0299399	.4034214	.6570719	.2104458
#1	25.99183	5.237471	5.316427	5.260287	5.282692	5.130583	5.362064
#2	25.92754	5.235869	5.312228	5.263141	5.290721	5.177331	5.375499
#3	26.03048	5.262786	5.325553	5.262871	5.323073	5.196625	5.384540

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: CCV04 Acquired: 11/27/2024 16:39:43 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV04 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	5.163042	5.222425	5.436133
Stddev	.010504	.021441	.020652
%RSD	.2034416	.4105618	.3799112
#1	5.156990	5.221048	5.435246
#2	5.175171	5.201706	5.415938
#3	5.156965	5.244522	5.457215

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2259.303	54699.19	13594.72	1535.852	3784.081
Stddev	7.633	24.79	17.57	.896	6.643
%RSD	.3378451	.0453254	.1292230	.0583473	.1755401
#1	2252.354	54683.43	13587.46	1535.003	3776.420
#2	2267.472	54686.37	13614.75	1535.764	3788.226
#3	2258.082	54727.76	13581.95	1536.789	3787.598

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: CCB04 Acquired: 11/27/2024 16:43:54 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem 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	.0035102	-.001846	.0001318	.0012341	.0011571	-.000194	-.000335
Stddev	.0020149	.001295	.0007416	.0023969	.0008323	.004312	.000462
%RSD	57.40143	70.13598	562.7084	194.2183	71.92986	2225.099	137.8846
#1	.0056999	-.001933	-.000697	.0035634	.0017008	.002101	-.000808
#2	.0030966	-.000510	.000361	.0013641	.0015715	.002486	-.000312
#3	.0017342	-.003095	.000732	-.001225	.0001990	-.005168	.000115

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000190	-.000067	.0168317	.0002316	.0000845	-.000104	.0054550
Stddev	.0000232	.000040	.0041607	.0002245	.0000895	.000384	.0022866
%RSD	121.8542	59.86880	24.71918	96.95894	105.9151	370.8355	41.91650
#1	.0000064	-.000026	.0196513	.0000454	.0001195	-.000408	.0072714
#2	.0000458	-.000106	.0120532	.0004809	.0001511	-.000230	.0028873
#3	.0000049	-.000068	.0187907	.0001684	-.000017	.000328	.0062063

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003068	-.009224	-.000227	.0000781	-.057090	-.000462	.0007263
Stddev	.0002951	.009390	.000251	.0002837	.014415	.000664	.0001357
%RSD	96.19174	101.8008	110.4082	363.3464	25.24900	143.8363	18.69040
#1	.0000843	-.001739	-.000000	-.000249	-.070750	-.001225	.0006762
#2	.0001945	-.006172	-.000497	.000228	-.058495	-.000147	.0006228
#3	.0006415	-.019760	-.000185	.000255	-.042024	-.000013	.0008800

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.029887	.0064832	.0007920	-.015042	.0001488	.0001239	-.004483
Stddev	.018794	.0008911	.0001834	.000334	.0001880	.0062027	.002299
%RSD	62.88495	13.74461	23.15320	2.222150	126.3361	5006.277	51.27525
#1	-.051388	.0074328	.0009620	-.014838	.0003473	.0048444	-.002100
#2	-.016590	.0056653	.0008164	-.014861	.0001257	-.006901	-.006687
#3	-.021681	.0063514	.0005977	-.015428	-.000027	.002429	-.004662

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: CCB04 Acquired: 11/27/2024 16:43:54 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB04 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0015644	-.000105	.0001033
Stddev	.0011896	.000460	.0000387
%RSD	76.04152	438.6958	37.49851
#1	.0003677	-.000635	.0001480
#2	.0027468	.000125	.0000822
#3	.0015788	.000195	.0000797

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2451.298	59656.58	13658.58	1692.204	4388.027
Stddev	9.993	74.31	33.03	8.700	8.811
%RSD	.4076632	.1245603	.2418601	.5141509	.2007987
#1	2443.685	59590.17	13632.29	1685.897	4382.600
#2	2447.595	59642.73	13647.78	1688.585	4383.288
#3	2462.614	59736.83	13695.66	1702.130	4398.193

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: PB165159TB Acquired: 11/27/2024 16:49:45 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.006843	-.008808	-.001116	.0072000	.0008697	.0061602
Stddev	.002425	.002350	.000870	.0007051	.0000342	.0051553
%RSD	35.44052	26.67687	77.90080	9.793574	3.926744	83.68681
#1	-.009266	-.011060	-.000193	.0075031	.0008830	.0054948
#2	-.004416	-.006371	-.001920	.0077030	.0008309	.0013700
#3	-.006847	-.008993	-.001236	.0063940	.0008952	.0116159

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004180	-.000185	-.000285	.0498948	.0010092	-.000113
Stddev	.0002175	.000025	.000056	.0014523	.0001923	.000223
%RSD	52.04146	13.31913	19.79041	2.910688	19.05246	197.5192
#1	.0006157	-.000197	-.000245	.0492762	.0008188	.000115
#2	.0001850	-.000201	-.000260	.0515539	.0012033	-.000123
#3	.0004533	-.000156	-.000350	.0488542	.0010054	-.000330

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005478	.0290322	.0043927	.0021502	.0007311	-.000085
Stddev	.0001351	.0004823	.0000317	.0061468	.0000707	.000067
%RSD	24.65826	1.661218	.7206374	285.8664	9.673187	79.22663
#1	.0006454	.0290207	.0043734	.0057720	.0006849	-.000064
#2	.0003937	.0285557	.0044293	.0056258	.0006960	-.000031
#3	.0006044	.0295201	.0043755	-.004947	.0008125	-.000160

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 421.4214	-.000624	.0032352	-.073563	.0015152	.0007417
Stddev	4.8383	.000480	.0001602	.003051	.0004801	.0000700
%RSD	1.148080	77.04426	4.951766	4.146881	31.68837	9.439542
#1	416.4138	-.000471	.0032302	-.073660	.0019596	.0007302
#2	426.0704	-.001162	.0030776	-.076564	.0010060	.0006781
#3	421.7801	-.000238	.0033979	-.070465	.0015799	.0008167

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: PB165159TB Acquired: 11/27/2024 16:49:45 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.014316	-.000171	.0067360	.0011368	F .0577206	-.002944
Stddev	.000757	.000198	.0055217	.0033551	.0052495	.000307
%RSD	5.285351	115.8144	81.97247	295.1424	9.094608	10.42510
#1	-.014912	.000058	.0055783	-.002737	.0637764	-.003048
#2	-.014572	-.000287	.0018850	.003035	.0549198	-.003186
#3	-.013465	-.000282	.0127448	.003113	.0544655	-.002599

Elem	Sr4077
Units	ppm
Avg	.0000287
Stddev	.0000264
%RSD	91.86663
#1	.0000586
#2	.0000186
#3	.0000089

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2194.821	52795.36	13437.90	1540.067	3635.177
Stddev	7.063	87.87	6.90	6.366	6.769
%RSD	.3218195	.1664304	.0513356	.4133909	.1862143
#1	2202.972	52813.36	13443.73	1545.352	3642.921
#2	2190.995	52872.83	13430.28	1541.850	3632.227
#3	2190.496	52699.88	13439.68	1532.999	3630.384

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: PB165233BL Acquired: 11/27/2024 16:54:14 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010494	-.000355	-.000818	.0010808	-.000462	.0004705	-.000510
Stddev	.0015104	.001425	.000451	.0009137	.001217	.0018941	.000433
%RSD	143.9262	401.0521	55.13595	84.54456	263.2868	402.5640	84.78492
#1	.0012359	.001237	-.000465	.0017113	-.001866	-.000671	-.000632
#2	.0024579	-.001511	-.000663	.0000329	.000177	-.000574	-.000869
#3	-.000546	-.000791	-.001326	.0014982	.000302	.002657	-.000030

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000290	-.000012	-.003897	-.000067	.0000459	-.000465	.0020757
Stddev	.0000054	.000054	.005828	.000308	.0000546	.000307	.0025573
%RSD	18.63630	440.4949	149.5539	459.1304	118.7392	66.05586	123.2020
#1	.0000249	-.000072	-.006377	-.000092	-.000011	-.000815	.0016057
#2	.0000351	.000004	.002761	.000253	.000098	-.000340	.0048354
#3	.0000270	.000032	-.008075	-.000363	.000051	-.000240	-.000214

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000176	-.005731	-.000092	.0001183	-.027873	-.000645	-.000225
Stddev	.0000275	.003820	.000217	.0003574	.013597	.000456	.000156
%RSD	155.6675	66.66542	236.9813	302.0717	48.78195	70.72224	69.28408
#1	.0000364	-.007055	-.000328	.0000807	-.040954	-.000185	-.000136
#2	.0000304	-.001425	.000098	-.000219	-.028851	-.001097	-.000406
#3	-.000014	-.008713	-.000045	.000493	-.013813	-.000652	-.000134

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.054563	.0019954	-.000005	-.000174	.0002182	.0023789	-.003153
Stddev	.015782	.0003432	.000091	.000054	.0001461	.0030159	.001712
%RSD	28.92481	17.19706	1905.263	31.24995	66.92699	126.7769	54.28183
#1	-.072785	.0018190	-.000016	-.000152	.0000511	.0053329	-.001178
#2	-.045671	.0017764	-.000089	-.000134	.0002822	.0024992	-.004076
#3	-.045234	.0023909	.000091	-.000236	.0003214	-.000695	-.004205

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: PB165233BL Acquired: 11/27/2024 16:54:14 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.000445	.0002647	.0000076
Stddev	.002068	.0001941	.0000125
%RSD	464.9567	73.32896	163.6294
#1	-.001253	.0004857	.0000111
#2	-.001987	.0001220	-.000006
#3	.001906	.0001865	.000018

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2434.435	58722.59	13642.68	1677.393	4409.199
Stddev	4.276	92.22	49.56	5.241	5.168
%RSD	.1756296	.1570437	.3633057	.3124690	.1172108
#1	2436.300	58617.62	13609.95	1671.749	4413.795
#2	2437.462	58790.59	13618.38	1682.106	4410.196
#3	2429.544	58759.54	13699.70	1678.323	4403.605

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: PB165233BS Acquired: 11/27/2024 16:58:35 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8169702	2.113389	1.027558	2.064403	.8059432	2.099976
Stddev	.0007268	.020111	.004521	.005033	.0022000	.005735
%RSD	.0889679	.9515951	.4399972	.2438093	.2729720	.2731046
#1	.8174079	2.091939	1.031828	2.058947	.8058945	2.093361
#2	.8161312	2.116409	1.028025	2.065395	.8037679	2.103031
#3	.8173716	2.131819	1.022822	2.068866	.8081671	2.103538

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2117220	.2198078	.2051971	1.122512	.4185905	.2063507
Stddev	.0008213	.0007284	.0003690	.017228	.0021394	.0003264
%RSD	.3878910	.3313837	.1798055	1.534737	.5110867	.1581968
#1	.2107868	.2191880	.2055289	1.104625	.4171880	.2066390
#2	.2123256	.2196252	.2052626	1.123918	.4175306	.2064169
#3	.2120536	.2206101	.2047998	1.138994	.4210528	.2059962

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3234588	3.021476	.2193136	2.090682	.5184340	.0779594
Stddev	.0004413	.028034	.0020268	.012679	.0011781	.0001860
%RSD	.1364302	.9278180	.9241576	.6064685	.2272381	.2385360
#1	.3231193	2.989681	.2169749	2.080364	.5194118	.0779031
#2	.3239576	3.032107	.2205594	2.086846	.5187640	.0778081
#3	.3232995	3.042639	.2204065	2.104836	.5171261	.0781670

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.739936	.3235205	.2162182	9.634455	.3278222	.4250435
Stddev	.015930	.0030599	.0002404	.022426	.0008684	.0001865
%RSD	.5814116	.9458239	.1111858	.2327690	.2648952	.0438683
#1	2.727789	.3202494	.2162766	9.628494	.3268197	.4248299
#2	2.757973	.3239991	.2159540	9.659259	.3283406	.4251268
#3	2.734047	.3263129	.2164240	9.615611	.3283064	.4251737

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: PB165233BS Acquired: 11/27/2024 16:58:35 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7162179	.2133478	F .7361121	6.147714	F -.011629	.2180983
Stddev	.0037494	.0009514	.0037891	.032668	.001963	.0008741
%RSD	.5235020	.4459536	.5147381	.5313916	16.87786	.4008067
#1	.7119332	.2122864	.7354561	6.173757	-.011760	.2173886
#2	.7178224	.2136330	.7326938	6.158327	-.013523	.2190747
#3	.7188980	.2141240	.7401863	6.111059	-.009604	.2178316

Elem	Sr4077
Units	ppm
Avg	.2201355
Stddev	.0005184
%RSD	.2355035
#1	.2196092
#2	.2206457
#3	.2201515

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2374.693	58273.33	13468.13	1646.298	4169.294
Stddev	5.713	65.43	16.72	8.766	2.268
%RSD	.2405612	.1122780	.1241450	.5324696	.0544052
#1	2380.732	58201.15	13481.69	1638.496	4171.775
#2	2373.974	58290.11	13473.25	1644.614	4167.327
#3	2369.374	58328.74	13449.45	1655.784	4168.779

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: LR1 Acquired: 11/27/2024 17:07:53 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0560976	.1481714	-.025154	-.282232	-.010823	2062.120	.0222211
Stddev	.0110103	.0070286	.006276	.002778	.010433	14.799	.0001780
%RSD	19.62706	4.743569	24.95229	.9843008	96.39348	.7176470	.8008536
#1	.0666160	.1467252	-.030917	-.285422	-.002630	2075.037	.0222951
#2	.0570231	.1419784	-.026079	-.280342	-.022568	2065.351	.0223501
#3	.0446538	.1558106	-.018466	-.280932	-.007271	2045.973	.0220181

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0105243	.1753667	1792.217	-.001846	.0524036	-.333575	1024.598
Stddev	.0003741	.0019166	8.446	.000710	.0007520	.006662	6.586
%RSD	3.554205	1.092906	.4712802	38.45119	1.435107	1.997060	.6427659
#1	.0106176	.1733973	1798.095	-.002664	.0519233	-.339737	1030.831
#2	.0101124	.1754773	1782.538	-.001475	.0520173	-.334481	1025.254
#3	.0108428	.1772257	1796.019	-.001399	.0532703	-.326506	1017.709

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.124039	1924.551	.0165996	-.117395	2036.064	.0699193	.3507030
Stddev	.000558	1.267	.0005029	.001589	10.484	.0015819	.0022869
%RSD	.4497090	.0658108	3.029528	1.353230	.5149378	2.262486	.6520901
#1	-.123651	1925.920	.0163918	-.116510	2045.576	.0680937	.3533105
#2	-.124678	1923.421	.0162339	-.116446	2037.795	.0707775	.3497610
#3	-.123788	1924.312	.0171731	-.119229	2024.822	.0708866	.3490376

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1286.583	.0872353	-.015896	.0135922	-.040508	.1687299	.0987644
Stddev	2.932	.0022416	.002012	.0043716	.000609	.0019493	.0101226
%RSD	.2278524	2.569623	12.65833	32.16249	1.504293	1.155255	10.24925
#1	1288.652	.0894226	-.017691	.0156162	-.040129	.1706738	.0955311
#2	1287.868	.0873402	-.013721	.0085754	-.040183	.1667753	.1101086
#3	1283.228	.0849431	-.016278	.0165850	-.041211	.1687406	.0906534

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: LR1 Acquired: 11/27/2024 17:07:53 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.188406	-.289799	-1.01037
Stddev	.018212	.001011	.00656
%RSD	9.666375	.3488990	.6497486
#1	-.172924	-.290514	-1.01659
#2	-.208472	-.288642	-1.01100
#3	-.183822	-.290240	-1.00351

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1392.892	35746.50	10148.85	972.8302	2026.651
Stddev	5.741	117.37	18.17	6.4186	5.504
%RSD	.4121594	.3283488	.1790177	.6597877	.2715705
#1	1397.890	35664.16	10127.92	967.8158	2032.083
#2	1394.164	35694.44	10160.45	970.6109	2026.792
#3	1386.622	35880.90	10158.19	980.0640	2021.078

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: LR2 Acquired: 11/27/2024 17:12:50 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0084484	-.038106	235.9281	.0031682	-.002366	5.448357	^F *****
Stddev	.0024113	.002655	1.6195	.0055731	.000321	4.654276	-----
%RSD	28.54160	6.967026	.6864291	175.9075	13.55553	85.42531	-----
#1	.0082097	-.038862	236.8697	.0086319	-.002072	10.59100	^ -----
#2	.0109702	-.035155	236.8564	.0033810	-.002708	4.22878	^ -----
#3	.0061653	-.040301	234.0581	-.002508	-.002317	1.52529	^ -----

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002797	-.007273	4.961549	.0123740	-.025406	233.0449	2.964168
Stddev	.000054	.000617	4.601131	.0006136	.000364	.5348	2.598733
%RSD	1.927206	8.478317	92.73578	4.958868	1.433664	.2295030	87.67160
#1	-.002735	-.007942	10.11220	.0124225	-.025289	233.2325	5.834472
#2	-.002824	-.007152	3.51474	.0129619	-.025814	233.4608	2.286925
#3	-.002832	-.006726	1.25772	.0117375	-.025114	232.4416	.771106

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	47.86790	4.899395	47.11020	.0026194	3.465855	-.019021	34.48590
Stddev	.13329	4.798618	.34189	.0005989	3.472028	.000279	.09907
%RSD	.2784436	97.94307	.7257142	22.86518	100.1781	1.464401	.2872672
#1	47.76528	10.25620	47.31285	.0032972	7.411343	-.018835	34.49980
#2	47.81989	3.44788	47.30228	.0021613	2.109408	-.018887	34.57729
#3	48.01854	.99411	46.71547	.0023999	.876814	-.019342	34.38062

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.589574	.0045153	-.005203	-.020160	-.049833	-.011885	2.494836
Stddev	1.560592	.0032196	.000255	.001753	.000617	.002352	.034010
%RSD	98.17673	71.30413	4.897871	8.698007	1.237974	19.79041	1.363201
#1	3.369667	.0080368	-.005248	-.019186	-.049290	-.012973	2.506652
#2	.942213	.0037865	-.005432	-.022184	-.049706	-.013496	2.521362
#3	.456841	.0017226	-.004928	-.019108	-.050504	-.009186	2.456495

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: LR2 Acquired: 11/27/2024 17:12:50 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.044430	-.001489	-.000677
Stddev	.002773	.001197	.002579
%RSD	6.242245	80.38050	380.7649
#1	-.041422	-.002843	-.003519
#2	-.046886	-.001053	-.000029
#3	-.044981	-.000571	.001516

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2025.178	56998.99	13500.75	1502.867	3952.169
Stddev	4.819	129.04	101.24	5.179	15.565
%RSD	.2379598	.2263827	.7499027	.3446364	.3938459
#1	2027.248	56972.54	13389.23	1507.855	3955.528
#2	2019.670	56885.22	13526.14	1497.516	3935.199
#3	2028.617	57139.20	13586.88	1503.229	3965.781

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: P4946-01 Acquired: 11/27/2024 17:19:22 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.011961	-.013280	.0048707	.0099300	.0011089	1.415110	.3398377
Stddev	.001830	.002109	.0004381	.0003312	.0016424	.004316	.0018397
%RSD	15.30251	15.87837	8.993908	3.335579	148.1005	.3049803	.5413496
#1	-.013474	-.015497	.0053166	.0099011	-.000356	1.416541	.3419620
#2	-.009927	-.011300	.0044410	.0096142	.002885	1.410261	.3387840
#3	-.012481	-.013042	.0048545	.0102748	.000798	1.418529	.3387671

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009807	.0001509	3.365648	.0893073	.0043711	.0474008	7.301970
Stddev	.0000318	.0000562	.022353	.0005724	.0001605	.0003482	.063360
%RSD	3.246765	37.27701	.6641553	.6409333	3.672411	.7346002	.8677085
#1	.0010149	.0001291	3.342254	.0895264	.0043731	.0473011	7.230944
#2	.0009751	.0002147	3.386790	.0897377	.0042096	.0471133	7.322286
#3	.0009520	.0001087	3.367899	.0886577	.0045306	.0477880	7.352680

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6786575	.5630086	.1286396	-.000340	444.5703	.0002114	.4885508
Stddev	.0031654	.0048960	.0007933	.000023	4.3230	.0008107	.0020920
%RSD	.4664210	.8696198	.6167216	6.899019	.9723903	383.5083	.4282041
#1	.6750194	.5658903	.1277733	-.000329	440.3486	.0008898	.4866998
#2	.6801715	.5573555	.1288147	-.000367	444.3743	.0004309	.4908205
#3	.6807815	.5657800	.1293307	-.000324	448.9879	-.000686	.4881322

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6799644	.1164421	.0041328	-.013071	.0034341	.6705928	.0097024
Stddev	.0182653	.0003828	.0000463	.000747	.0003844	.0082003	.0028872
%RSD	2.686208	.3287775	1.120469	5.712225	11.19354	1.222841	29.75761
#1	.6998417	.1167711	.0040801	-.013268	.0033325	.6627038	.0071158
#2	.6639193	.1160219	.0041514	-.012246	.0031107	.6790724	.0128173
#3	.6761321	.1165333	.0041670	-.013700	.0038591	.6700023	.0091741

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: P4946-01 Acquired: 11/27/2024 17:19:22 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.154521	.0689938	.0767372
Stddev	.020649	.0005582	.0003420
%RSD	1.788494	.8091196	.4456301
#1	1.131860	.0684360	.0763688
#2	1.159430	.0689930	.0767984
#3	1.172272	.0695525	.0770445

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2101.056	53006.10	13924.07	1470.882	3525.046
Stddev	29.359	52.89	7.01	7.099	36.610
%RSD	1.397349	.0997729	.0503344	.4826286	1.038561
#1	2130.952	53067.06	13917.71	1479.059	3563.152
#2	2099.950	52978.87	13922.91	1467.295	3521.844
#3	2072.265	52972.39	13931.58	1466.293	3490.142

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: P4946-02 Acquired: 11/27/2024 17:23:46 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0102462	-.000443	.0065946	-.010579	-.034949	2.639603
Stddev	.0004971	.001261	.0010771	.001242	.001882	.085780
%RSD	4.851482	284.6777	16.33286	11.73881	5.384272	3.249746
#1	.0096937	-.001669	.0056281	-.011912	-.037109	2.733126
#2	.0106573	-.000509	.0064000	-.009455	-.033668	2.621097
#3	.0103875	.000850	.0077558	-.010370	-.034070	2.564586

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2392625	.0027950	.0041647	8.924935	F 4.732630	.0120316
Stddev	.0068067	.0001230	.0001925	.050170	.017628	.0001176
%RSD	2.844847	4.400674	4.622211	.5621274	.3724884	.9770357
#1	.2469273	.0027203	.0043558	8.982554	4.751680	.0119432
#2	.2369367	.0029369	.0041674	8.901324	4.729317	.0119865
#3	.2339237	.0027276	.0039708	8.890927	4.716893	.0121650

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0524571	110.9527	2.494219	1.065904	.0599419	-.005243
Stddev	.0010968	.4690	.011155	.078044	.0003515	.000224
%RSD	2.090942	.4227041	.4472197	7.321902	.5863369	4.279923
#1	.0537020	110.4182	2.481799	1.151039	.0603375	-.005318
#2	.0520365	111.2957	2.497471	1.048929	.0598225	-.005421
#3	.0516328	111.1440	2.503385	.997745	.0596657	-.004991

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	385.9374	.0291006	.1309855	1.130312	.2397924	.0377623
Stddev	1.8739	.0003883	.0007089	.075870	.0015909	.0000635
%RSD	.4855535	1.334249	.5412420	6.712268	.6634411	.1681741
#1	383.7884	.0286570	.1317243	1.210237	.2380816	.0378286
#2	387.2310	.0293784	.1303108	1.121417	.2400682	.0377565
#3	386.7929	.0292666	.1309212	1.059282	.2412273	.0377019

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: P4946-02 Acquired: 11/27/2024 17:23:46 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.012817	.0127110	1.472273	.0533619	1.762499	.1276728
Stddev	.001398	.0004022	.003086	.0011664	.007126	.0001953
%RSD	10.90430	3.164447	.2095922	2.185850	.4043288	.1529778
#1	-.013181	.0130919	1.469665	.0524764	1.769932	.1274778
#2	-.013997	.0127506	1.475680	.0529257	1.761839	.1276722
#3	-.011273	.0122904	1.471474	.0546835	1.755725	.1278684

Elem	Sr4077
Units	ppm
Avg	.0554557
Stddev	.0004921
%RSD	.8874341
#1	.0558819
#2	.0549171
#3	.0555681

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2160.868	53683.90	14154.63	1481.706	3595.288
Stddev	8.234	186.59	12.49	7.566	9.181
%RSD	.3810605	.3475789	.0882061	.5106604	.2553666
#1	2151.611	53514.19	14153.72	1474.325	3584.689
#2	2167.376	53653.78	14167.55	1481.346	3600.774
#3	2163.618	53883.72	14142.63	1489.446	3600.401

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: P4946-02DLX2 Acquired: 11/27/2024 17:29:56 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0026338	.0013027	.0018959	-.002878	-.007244	.5415684	.0503333
Stddev	.0006693	.0002082	.0012314	.000412	.001129	.0106175	.0015073
%RSD	25.41100	15.98070	64.94883	14.29964	15.57790	1.960517	2.994555
#1	.0019516	.0012217	.0016523	-.003231	-.008529	.5517649	.0514087
#2	.0032893	.0015392	.0008046	-.002977	-.006790	.5423657	.0509807
#3	.0026605	.0011471	.0032309	-.002426	-.006414	.5305747	.0486105

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006311	.0004424	1.936650	.9933721	.0025879	.0127124	22.21025
Stddev	.0000567	.0000685	.009151	.0029041	.0000946	.0003780	.07010
%RSD	8.983904	15.48844	.4724929	.2923480	3.654895	2.973238	.3156136
#1	.0006554	.0004902	1.943781	.9963475	.0024790	.0130199	22.16321
#2	.0005663	.0003639	1.939837	.9905450	.0026492	.0122904	22.29082
#3	.0006716	.0004731	1.926332	.9932237	.0026356	.0128269	22.17674

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5515311	.2337712	.0122205	-.001249	74.63846	.0063223	.0262146
Stddev	.0015907	.0187139	.0003570	.000226	.68254	.0002991	.0005093
%RSD	.2884077	8.005210	2.921618	18.05773	.9144603	4.730902	1.942801
#1	.5499318	.2543669	.0125900	-.001509	75.21692	.0065040	.0263663
#2	.5531129	.2178101	.0118774	-.001130	74.81281	.0064858	.0266308
#3	.5515488	.2291365	.0121943	-.001108	73.88566	.0059771	.0256467

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3710089	.0525072	.0071346	-.015247	.0028841	.2775286	.0080842
Stddev	.0175842	.0000811	.0001784	.000439	.0000090	.0016137	.0016798
%RSD	4.739558	.1545382	2.501046	2.878456	.3138344	.5814400	20.77830
#1	.3542245	.0524228	.0072831	-.015095	.0028896	.2793608	.0065226
#2	.3695059	.0525847	.0071841	-.015742	.0028891	.2769062	.0098613
#3	.3892964	.0525140	.0069367	-.014904	.0028737	.2763189	.0078686

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: P4946-02DLX2 Acquired: 11/27/2024 17:29:56 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.3623690	.0277027	.0129413
Stddev	.0020696	.0003097	.0001936
%RSD	.5711279	1.117912	1.496306
#1	.3645949	.0276443	.0130928
#2	.3605030	.0280375	.0130081
#3	.3620091	.0274265	.0127231

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2406.890	58805.43	13922.51	1671.152	4083.992
Stddev	7.471	283.04	66.77	19.074	6.199
%RSD	.3103970	.4813210	.4795698	1.141360	.1517779
#1	2410.374	58539.00	13861.46	1649.935	4082.082
#2	2411.983	58774.70	13912.26	1676.645	4090.920
#3	2398.314	59102.58	13993.81	1686.878	4078.973

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: CCV05 Acquired: 11/27/2024 17:34:14 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV05 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.122140	5.056537	5.151656	5.127636	5.169663	10.55957	10.63535
Stddev	.023405	.120912	.005859	.019631	.006631	.02070	.11922
%RSD	.4569449	2.391209	.1137275	.3828514	.1282755	.1960595	1.121003
#1	5.147454	5.194550	5.158420	5.148810	5.174344	10.57388	10.56654
#2	5.117680	4.969252	5.148160	5.124057	5.172571	10.56899	10.56649
#3	5.101285	5.005808	5.148389	5.110040	5.162075	10.53583	10.77302

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2636539	2.569136	26.21484	1.034761	2.571945	1.292323	5.181919
Stddev	.0010938	.004246	.06047	.004071	.003433	.001233	.102369
%RSD	.4148628	.1652675	.2306807	.3934318	.1334725	.0954030	1.975508
#1	.2627415	2.573260	26.27054	1.030234	2.573648	1.293588	5.281984
#2	.2633539	2.564778	26.15052	1.038121	2.567993	1.292256	5.186381
#3	.2648664	2.569371	26.22347	1.035927	2.574192	1.291125	5.077392

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.641317	26.01083	2.573100	1.281237	26.32178	2.644676	2.563781
Stddev	.011152	.03904	.002206	.004000	.38509	.000450	.010571
%RSD	.4222170	.1501066	.0857328	.3121725	1.462998	.0170142	.4123328
#1	2.653350	26.00422	2.574234	1.278698	26.70744	2.644230	2.575362
#2	2.631329	25.97552	2.570558	1.285848	26.32062	2.644668	2.561333
#3	2.639272	26.05276	2.574509	1.279166	25.93727	2.645130	2.554650

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.45034	5.280466	5.216027	5.149364	5.282320	5.002325	5.357302
Stddev	.12806	.016795	.013367	.012615	.010259	.026019	.042604
%RSD	.5031614	.3180528	.2562756	.2449786	.1942107	.5201402	.7952445
#1	25.46726	5.279757	5.231276	5.163494	5.291183	4.978839	5.403680
#2	25.56910	5.264037	5.210477	5.139235	5.271082	5.030294	5.319904
#3	25.31467	5.297604	5.206329	5.145362	5.284695	4.997840	5.348323

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: CCV05 Acquired: 11/27/2024 17:34:14 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV05 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	5.070702	5.221226	5.404167
Stddev	.055368	.006913	.052154
%RSD	1.091911	.1323964	.9650615
#1	5.133275	5.221761	5.346640
#2	5.028055	5.227855	5.417505
#3	5.050777	5.214061	5.448357

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2325.710	56652.53	13764.96	1605.344	3888.952
Stddev	4.003	266.12	65.14	14.738	4.929
%RSD	.1721398	.4697429	.4732143	.9180333	.1267418
#1	2327.237	56399.72	13692.83	1589.115	3893.749
#2	2321.168	56627.64	13819.47	1609.026	3883.901
#3	2328.726	56930.21	13782.59	1617.892	3889.206

Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: CCB05 Acquired: 11/27/2024 17:46:23 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem 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	.0014053	-.001412	.0001939	.0014934	.0005871	-.004206	-.001651
Stddev	.0007907	.000692	.0012634	.0006961	.0011867	.003416	.000438
%RSD	56.26160	48.99086	651.6133	46.60924	202.1305	81.23371	26.53490
#1	.0022825	-.001628	.0016466	.0022920	.0002765	-.000702	-.001946
#2	.0011858	-.000638	-.000417	.0011725	-.000413	-.007527	-.001858
#3	.0007476	-.001970	-.000648	.0010156	.001898	-.004389	-.001147

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000037	-.000067	.0175713	.0000262	-.000038	.0000113	.0002041
Stddev	.0000276	.000015	.0038335	.0002214	.000069	.0002291	.0018038
%RSD	750.3612	21.94823	21.81669	844.9566	182.9919	2027.235	883.9877
#1	.0000348	-.000063	.0132383	-.000119	-.000105	.0001549	.0007196
#2	-.000018	-.000083	.0205218	-.000083	.000033	.0001319	.0016940
#3	-.000006	-.000054	.0189538	.000281	-.000041	-.000253	-.001801

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000510	.0030987	-.000055	.0002391	.0649225	.0003577	.0004758
Stddev	.0000233	.0052271	.000078	.0002249	.0210582	.0016367	.0002037
%RSD	45.69156	168.6890	141.2313	94.04556	32.43594	457.5974	42.81619
#1	.0000241	-.001756	-.000032	.0004711	.0424709	.0014295	.0005596
#2	.0000657	.002419	.000008	.0000221	.0680617	.0011698	.0002435
#3	.0000632	.008632	-.000142	.0002242	.0842349	-.001526	.0006242

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0351390	.0017595	-.000115	-.015162	.0003122	.0022741	-.000435
Stddev	.0349254	.0002520	.000051	.000678	.0001264	.0048066	.000648
%RSD	99.39216	14.31977	43.99980	4.469747	40.47558	211.3657	148.8799
#1	-.004613	.0015400	-.000163	-.015039	.0003329	.0022122	-.000682
#2	.049130	.0017040	-.000121	-.014554	.0001767	.0071113	-.000924
#3	.060899	.0020346	-.000062	-.015892	.0004269	-.002501	.000300

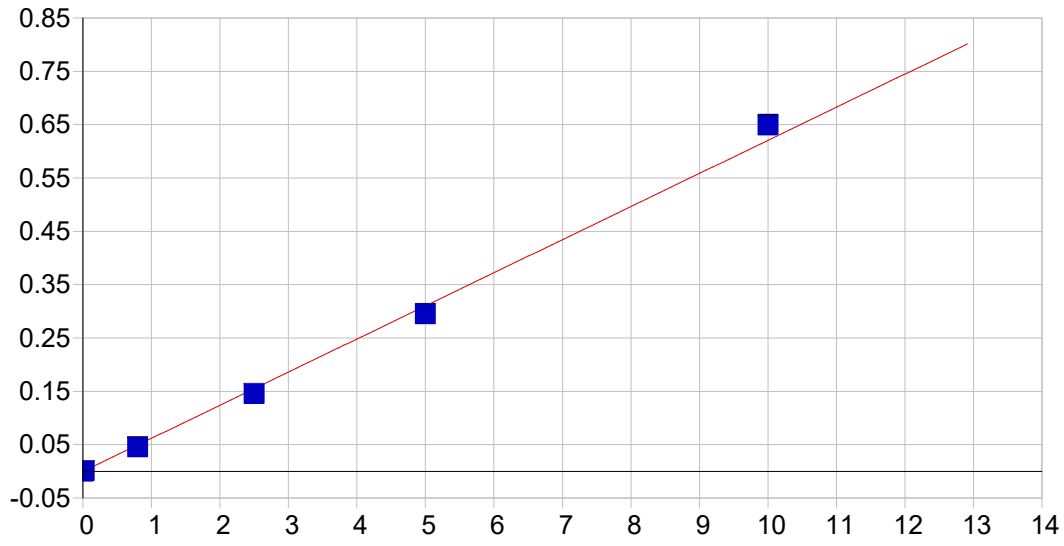
Reviewed By:Jaswal
On:12/11/2024 2:14:36 AM
Inst Id :P4
LB :LB133669

Sample Name: CCB05 Acquired: 11/27/2024 17:46:23 Type: Unk
Method: NON EPA-6010-200.7(v2480) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB05 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0016842	.0001058	.0000219
Stddev	.0029954	.0004143	.0000094
%RSD	177.8533	391.4471	42.83305
#1	-.001456	-.000218	.0000327
#2	.001998	.000573	.0000163
#3	.004510	-.000037	.0000166

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2468.761	59958.06	13854.52	1667.084	4489.956
Stddev	18.058	128.23	25.09	2.816	20.469
%RSD	.7314800	.2138714	.1811245	.1689144	.4558924
#1	2450.143	59813.09	13825.56	1664.308	4469.906
#2	2469.936	60056.64	13868.27	1667.005	4489.142
#3	2486.203	60004.45	13869.73	1669.938	4510.821

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739



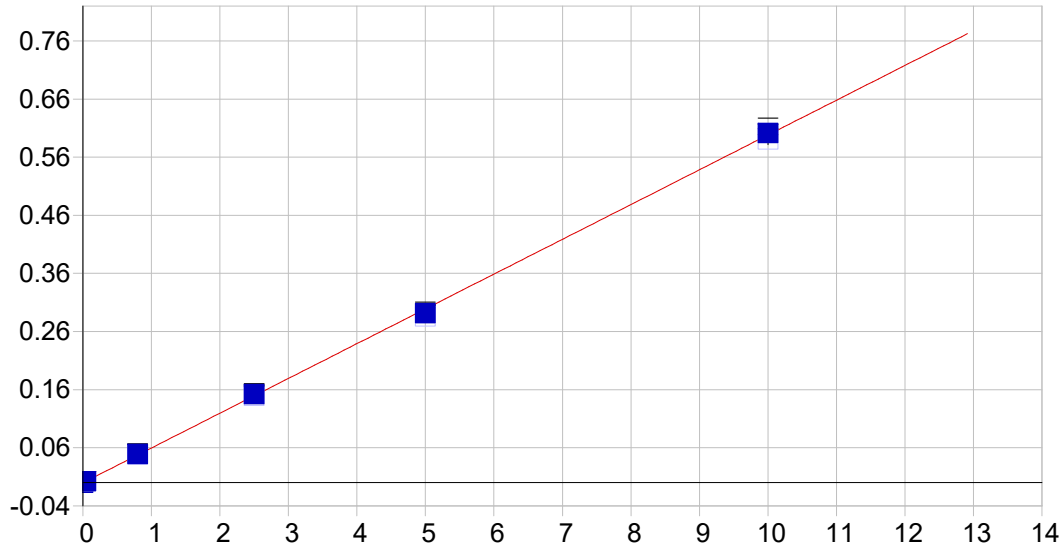
As 189.042 {479}

Date of Fit:	12/4/2024 15:50:34	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000239	Re-Slope:	1.000000
A1 (Gain):	0.062085	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998712	Status:	OK.
Std Error of Est:	0.000074		
Predicted MDL:	0.002202		
Predicted MQL:	0.007340		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00024	.000	1
S1	.02000	.02028	.000	1.41	.00101	.000	1
S3	2.5000	2.3495	-.150	-6.02	.14546	.001	1
S4	5.0000	4.7529	-.247	-4.94	.29451	.001	1
S5	10.000	10.459	.459	4.59	.64846	.001	1
S2	.80000	.73804	-.062	-7.75	.04553	.000	1

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739



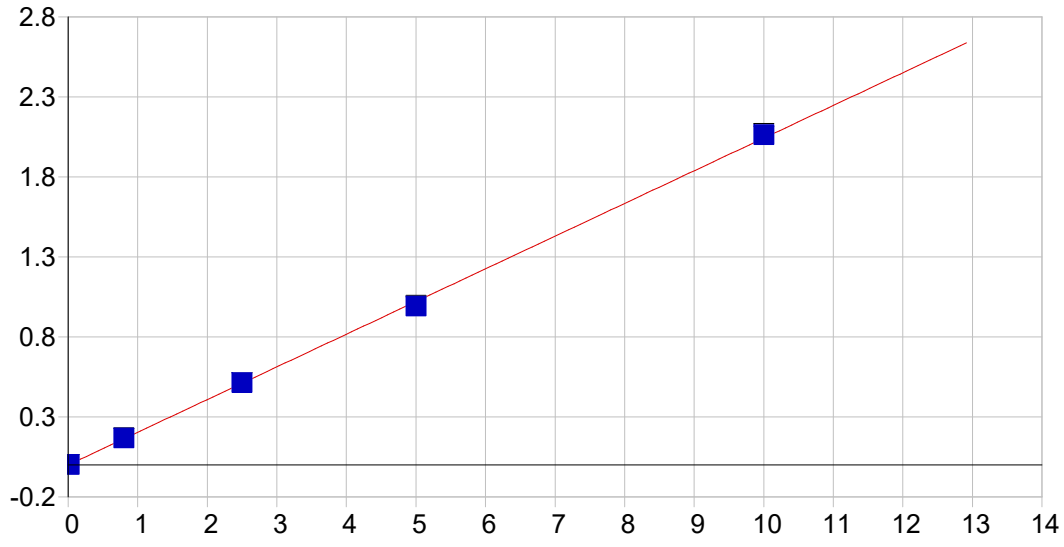
Tl 190.856 {477}

Date of Fit:	12/4/2024 15:50:34	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000199	Re-Slope:	1.000000
A1 (Gain):	0.059836	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999854	Status:	OK.
Std Error of Est:	0.000033		
Predicted MDL:	0.001766		
Predicted MQL:	0.005887		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00020	.000	1
S1	.04000	.04285	.003	7.12	.00221	.000	1
S3	2.5000	2.5464	.046	1.86	.14941	.001	1
S4	5.0000	4.8734	-.127	-2.53	.28589	.002	1
S5	10.000	10.056	.056	.559	.59048	.009	1
S2	.80000	.82165	.022	2.71	.04808	.001	1

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739



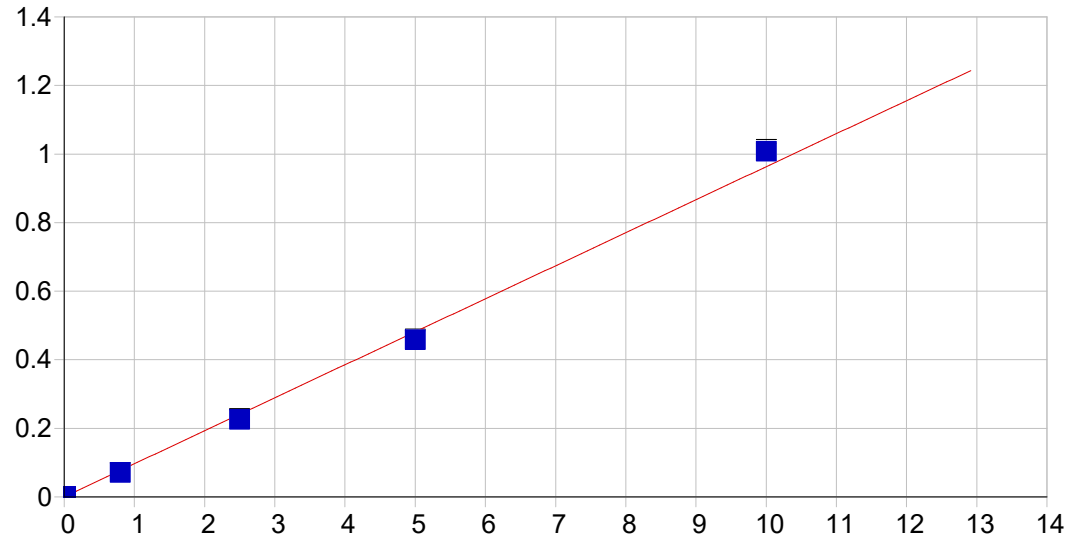
Pb 220.353 {453}

Date of Fit:	12/4/2024 15:50:34	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000193	Re-Slope:	1.000000
A1 (Gain):	0.204271	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999851	Status:	OK.
Std Error of Est:	0.000064		
Predicted MDL:	0.001057		
Predicted MQL:	0.003523		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00019	.000	1
S1	.01200	.01220	.000	1.69	.00225	.000	1
S3	2.5000	2.5171	.017	.685	.51342	.000	1
S4	5.0000	4.8618	-.138	-2.76	.99180	.005	1
S5	10.000	10.102	.102	1.02	2.0611	.008	1
S2	.80000	.81914	.019	2.39	.16695	.002	1

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739



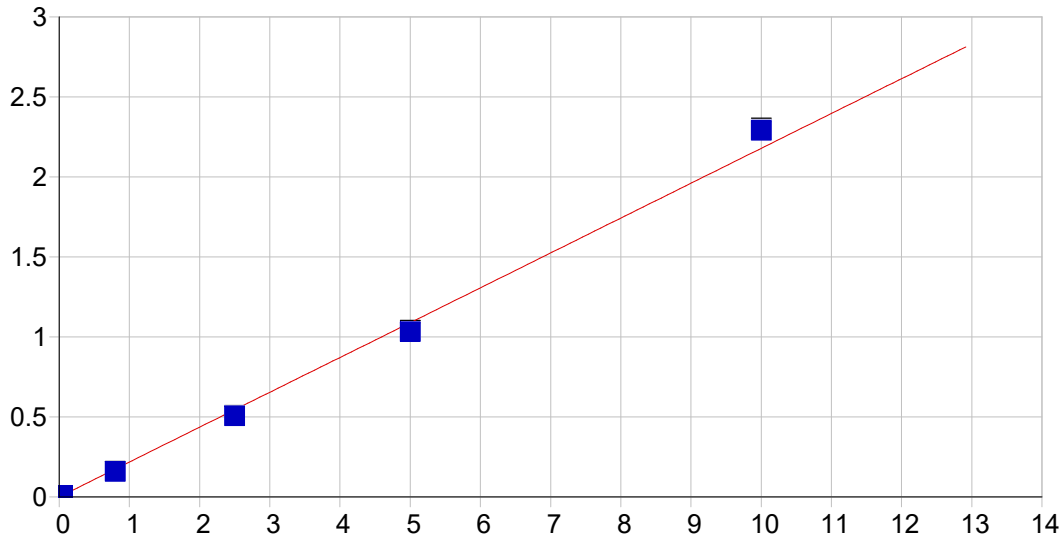
Se 196.090 {472}

Date of Fit:	12/4/2024 15:50:34	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000355	Re-Slope:	1.000000
A1 (Gain):	0.096265	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998645	Status:	OK.
Std Error of Est:	0.000118		
Predicted MDL:	0.001860		
Predicted MQL:	0.006201		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00036	.000	1
S1	.02000	.02073	.001	3.65	.00235	.000	1
S3	2.5000	2.3449	-.155	-6.20	.22602	.001	1
S4	5.0000	4.7551	-.245	-4.90	.45797	.002	1
S5	10.000	10.469	.469	4.69	1.0079	.005	1
S2	.80000	.73025	-.070	-8.72	.07063	.000	1

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739



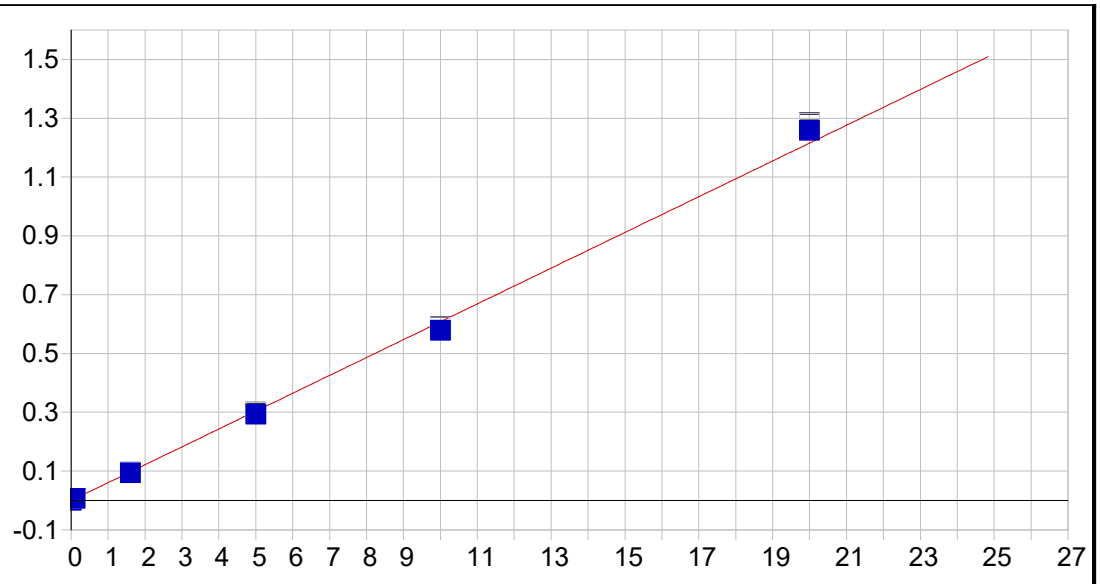
Sb 206.833 {463}

Date of Fit:	12/4/2024 15:50:34	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000135	Re-Slope:	1.000000
A1 (Gain):	0.217804	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998373	Status:	OK.
Std Error of Est:	0.000462		
Predicted MDL:	0.001003		
Predicted MQL:	0.003343		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00014	.000	1
S1	.05000	.04630	-.004	-7.41	.01024	.000	1
S3	2.5000	2.3212	-.179	-7.15	.50719	.002	1
S4	5.0000	4.7370	-.263	-5.26	1.0348	.007	1
S5	10.000	10.518	.518	5.18	2.2968	.009	1
S2	.80000	.72794	-.072	-9.01	.15916	.001	1

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739



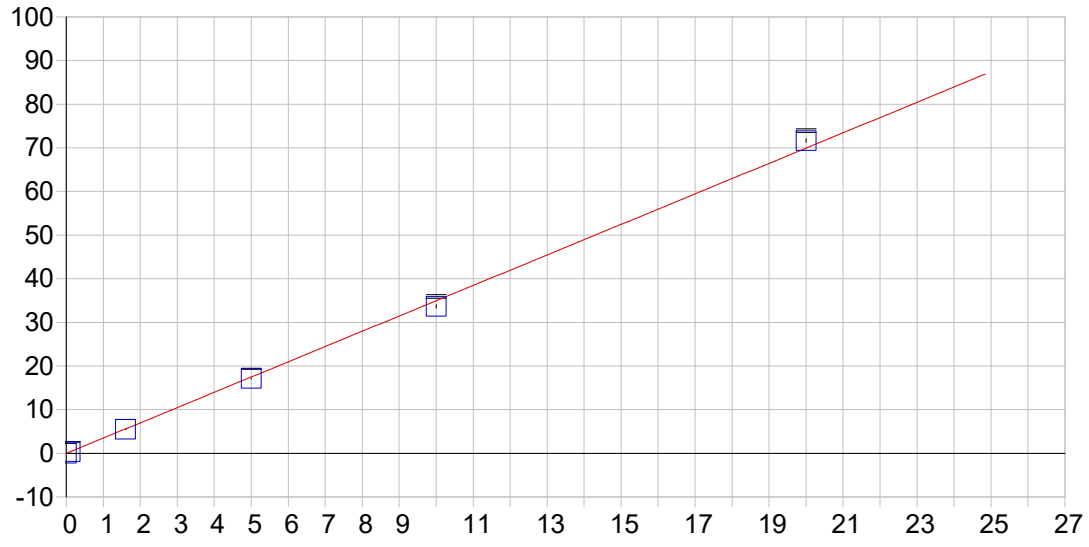
Al 396.152 { 85}

Date of Fit:	12/4/2024 15:50:34	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000015	Re-Slope:	1.000000
A1 (Gain):	0.060779	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999252	Status:	OK.
Std Error of Est:	0.000178		
Predicted MDL:	0.005359		
Predicted MQL:	0.017862		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00001	.000	1
S1	.10000	.10894	.009	8.94	.00711	.000	1
S3	5.0000	4.8273	-.173	-3.45	.29931	.001	1
S4	10.000	9.5097	-.490	-4.90	.58980	.001	1
S5	20.000	20.704	.704	3.52	1.2820	.002	1
S2	1.6000	1.5498	-.050	-3.14	.09610	.000	1

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739



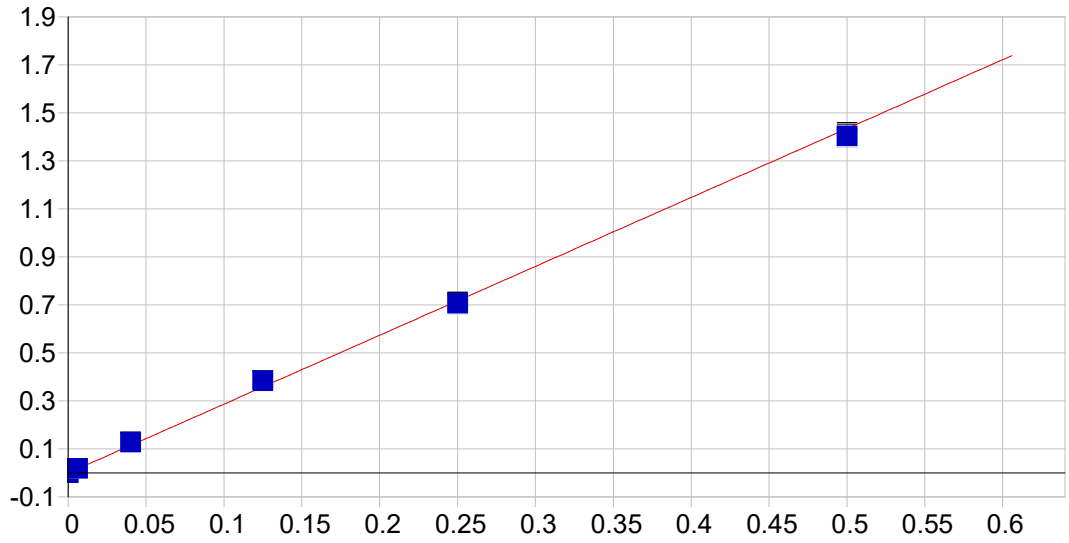
Ba 493.409 { 68}

Date of Fit:	12/4/2024 15:50:34	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.025171	Re-Slope:	1.000000
A1 (Gain):	3.498038	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999621	Status:	OK.
Std Error of Est:	0.007143		
Predicted MDL:	0.000368		
Predicted MQL:	0.001226		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.02517	.001	1
S1	.10000	.10336	.003	3.36	.33638	.002	1
S3	5.0000	4.9021	-.098	-1.96	17.123	.119	1
S4	10.000	9.6316	-.368	-3.68	33.667	.395	1
S5	20.000	20.487	.487	2.44	71.639	.414	1
S2	1.6000	1.5758	-.024	-1.51	5.4870	.018	1

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739



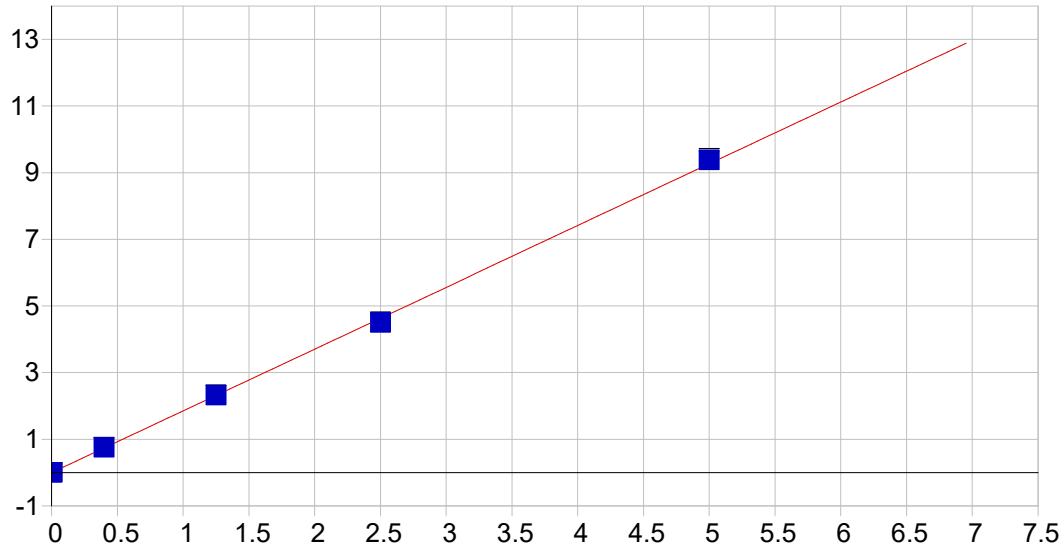
Be 234.861 {144}

Date of Fit:	12/4/2024 15:50:34	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000493	Re-Slope:	1.000000
A1 (Gain):	2.870346	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999094	Status:	OK.
Std Error of Est:	0.000350		
Predicted MDL:	0.000062		
Predicted MQL:	0.000206		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00050	.000	1
S1	.00600	.00688	.001	14.6	.01912	.000	1
S3	.12500	.13401	.009	7.21	.38256	.002	1
S4	.25000	.24616	-.004	-1.54	.70286	.006	1
S5	.50000	.48913	-.011	-2.17	1.3970	.015	1
S2	.04000	.04482	.005	12.1	.12765	.000	1

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739



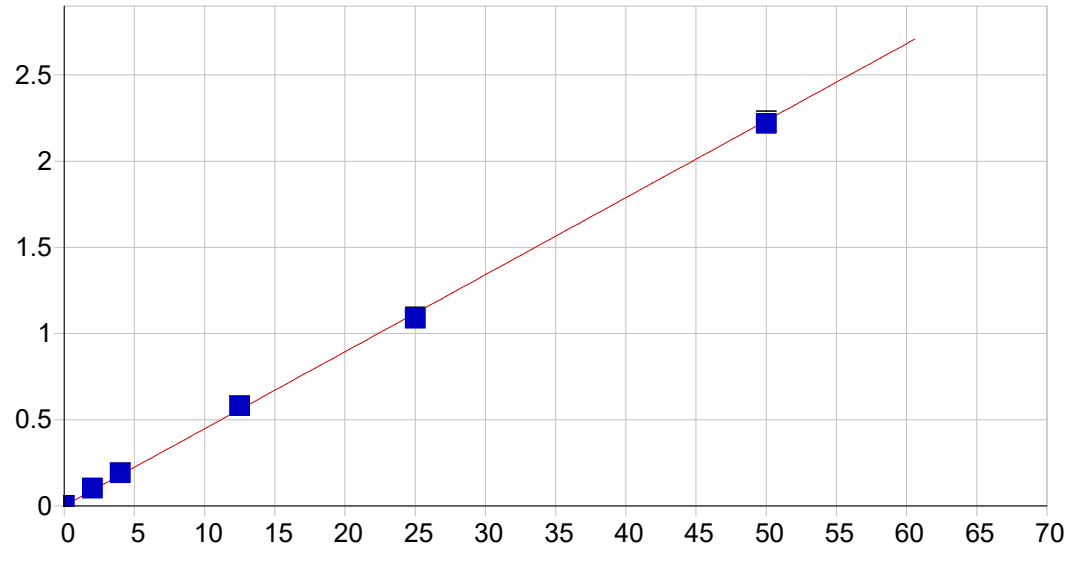
Cd 226.502 {449}

Date of Fit:	12/4/2024 15:50:34	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000120	Re-Slope:	1.000000
A1 (Gain):	1.853163	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999836	Status:	OK.
Std Error of Est:	0.000305		
Predicted MDL:	0.000089		
Predicted MQL:	0.000298		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00012	.000	1
S1	.00600	.00634	.000	5.70	.01168	.000	1
S3	1.2500	1.2530	.003	.238	2.3237	.003	1
S4	2.5000	2.4278	-.072	-2.89	4.5026	.017	1
S5	5.0000	5.0615	.061	1.23	9.3868	.044	1
S2	.40000	.40741	.007	1.85	.75545	.006	1

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739



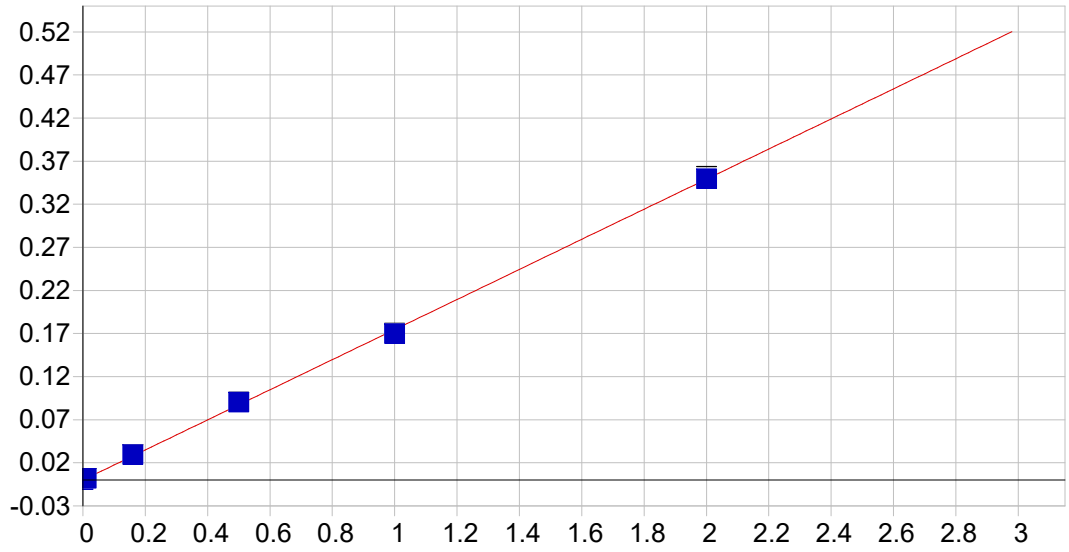
Ca 373.690 { 90}

Date of Fit:	12/4/2024 15:50:34	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000895	Re-Slope:	1.000000
A1 (Gain):	0.044683	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999510	Status:	OK.
Std Error of Est:	0.000740		
Predicted MDL:	0.007328		
Predicted MQL:	0.024426		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00041	-.000	.000	.00088	.000	1
S2	4.0000	4.2621	.262	6.55	.19134	.000	1
S3	12.500	12.995	.495	3.96	.58153	.001	1
S4	25.000	24.339	-.661	-2.64	1.0884	.008	1
S5	50.000	49.641	-.359	-.718	2.2190	.014	1
S1	2.0000	2.2634	.263	13.2	.10203	.001	1

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739



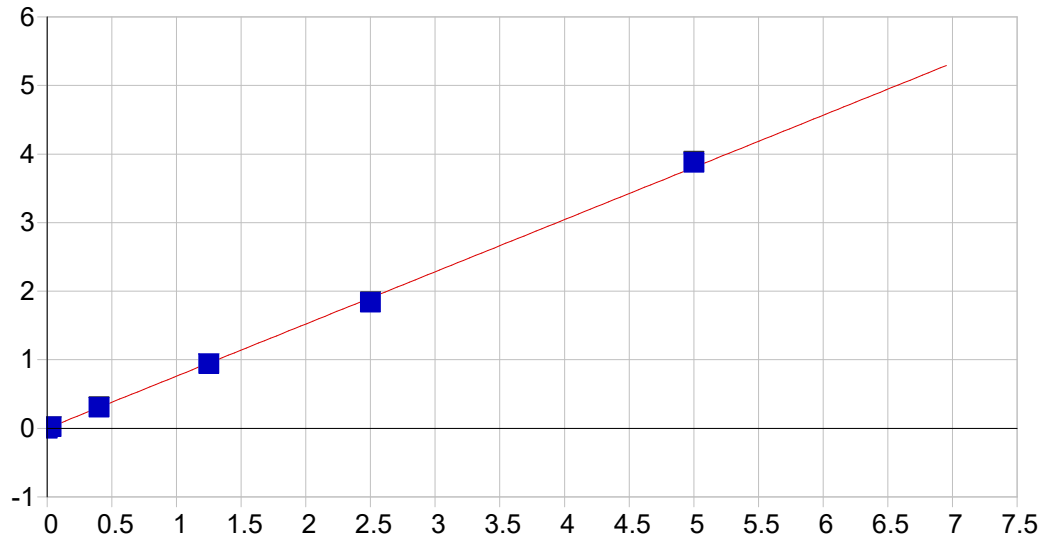
Cr 267.716 {126}

Date of Fit:	12/4/2024 15:50:34	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000007	Re-Slope:	1.000000
A1 (Gain):	0.174590	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999755	Status:	OK.
Std Error of Est:	0.000029		
Predicted MDL:	0.000368		
Predicted MQL:	0.001228		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00001	.000	1
S1	.01000	.01088	.001	8.81	.00191	.000	1
S3	.50000	.51650	.016	3.30	.09021	.000	1
S4	1.0000	.97281	-.027	-2.72	.16990	.000	1
S5	2.0000	2.0014	.001	.071	.34954	.003	1
S2	.16000	.16839	.008	5.24	.02941	.000	1

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739



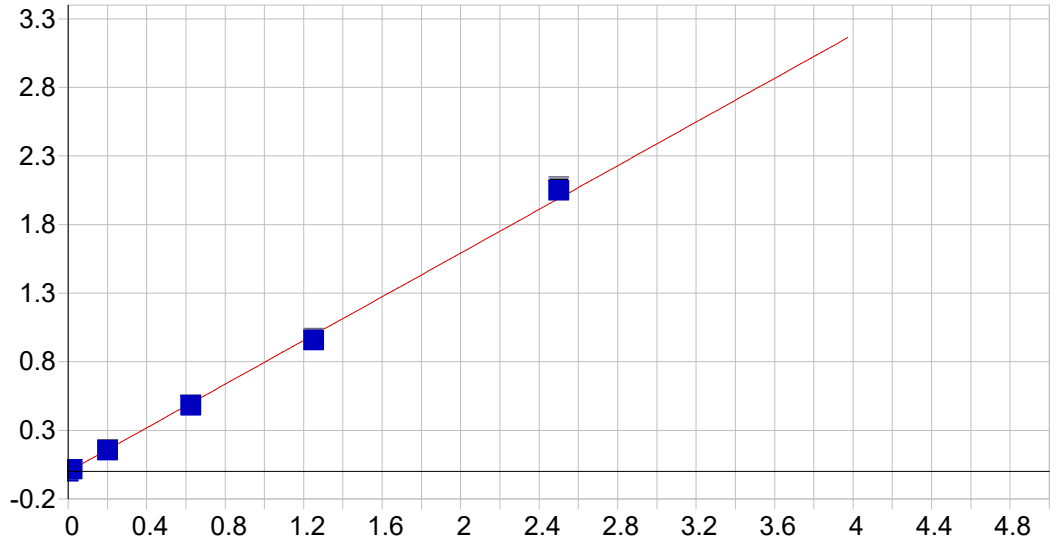
Co 228.616 {448}

Date of Fit:	12/4/2024 15:50:34	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000030	Re-Slope:	1.000000
A1 (Gain):	0.760966	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999749	Status:	OK.
Std Error of Est:	0.000347		
Predicted MDL:	0.000194		
Predicted MQL:	0.000646		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00003	.000	1
S1	.03000	.03083	.001	2.78	.02334	.000	1
S3	1.2500	1.2388	-.011	-.899	.94423	.002	1
S4	2.5000	2.4162	-.084	-3.35	1.8419	.006	1
S5	5.0000	5.0917	.092	1.83	3.8810	.016	1
S2	.40000	.40252	.003	.629	.30679	.003	1

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739



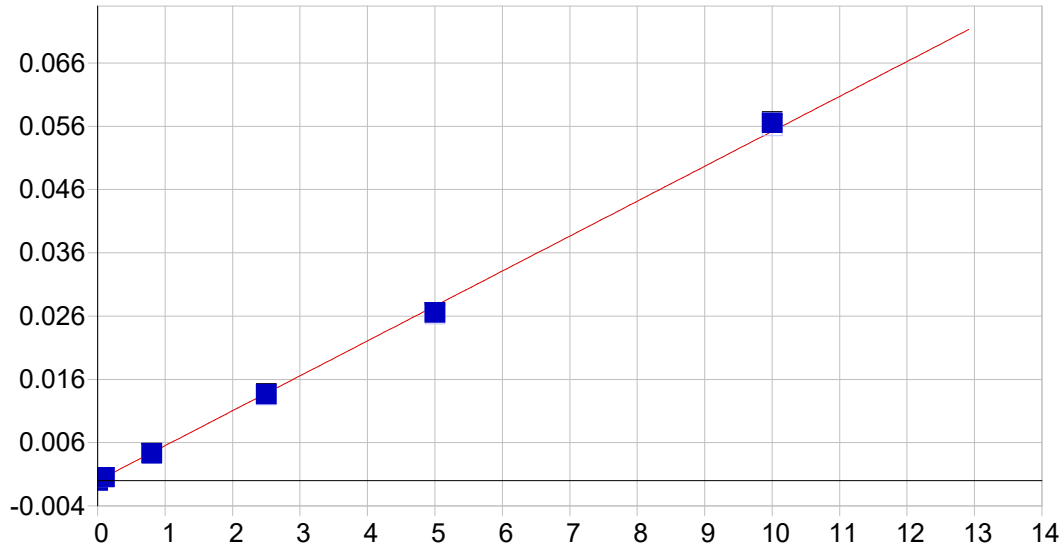
Cu 224.700 {450}

Date of Fit:	12/4/2024 15:50:34	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000316	Re-Slope:	1.000000
A1 (Gain):	0.796285	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999478	Status:	OK.
Std Error of Est:	0.000305		
Predicted MDL:	0.000347		
Predicted MQL:	0.001156		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00032	.000	1
S1	.02000	.02113	.001	5.63	.01671	.000	1
S3	.62500	.60447	-.021	-3.29	.48575	.001	1
S4	1.2500	1.2012	-.049	-3.91	.96564	.006	1
S5	2.5000	2.5730	.073	2.92	2.0675	.006	1
S2	.20000	.19521	-.005	-2.40	.15664	.002	1

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739



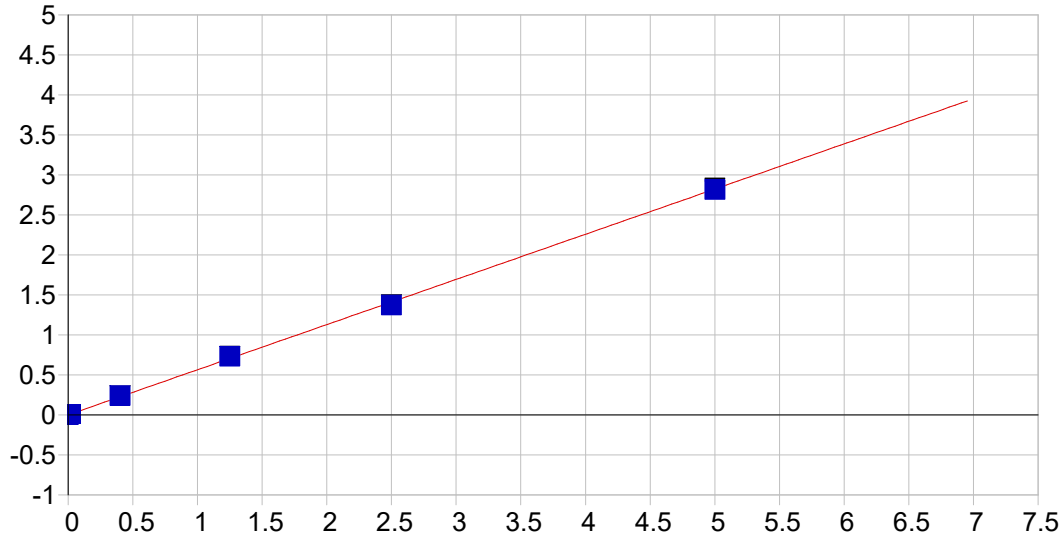
Fe 240.488 {140}

Date of Fit:	12/4/2024 15:50:34	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000004	Re-Slope:	1.000000
A1 (Gain):	0.005521	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999614	Status:	OK.
Std Error of Est:	0.000008		
Predicted MDL:	0.003693		
Predicted MQL:	0.012312		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00000	.000	1
S1	.10000	.10205	.002	2.05	.00055	.000	1
S3	2.5000	2.4708	-.029	-1.17	.01352	.000	1
S4	5.0000	4.8062	-.194	-3.88	.02629	.000	1
S5	10.000	10.238	.238	2.38	.05605	.000	1
S2	.80000	.78256	-.017	-2.18	.00428	.000	1

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739



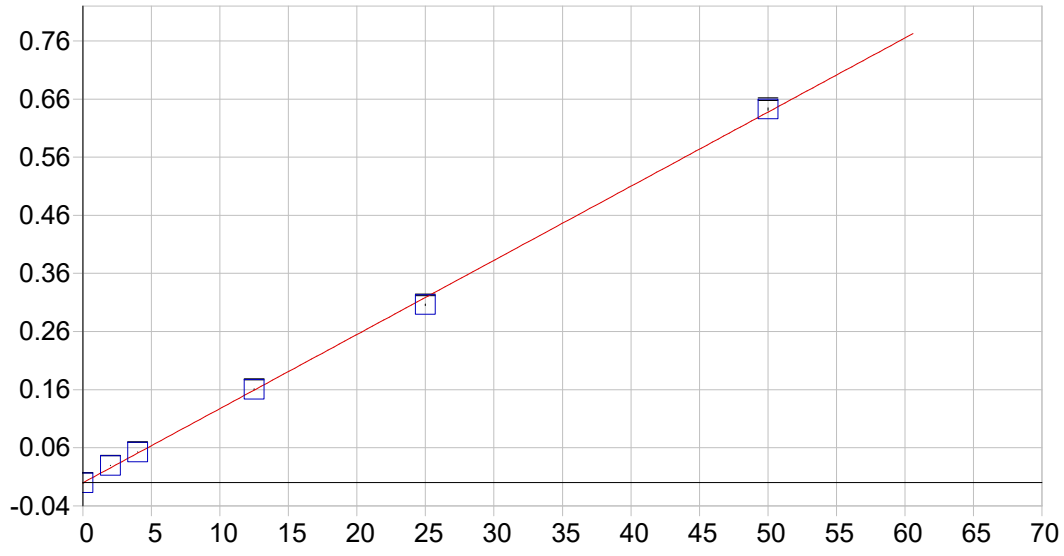
Mn 257.610 {131}

Date of Fit:	12/4/2024 15:50:34	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000072	Re-Slope:	1.000000
A1 (Gain):	0.564586	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999676	Status:	OK.
Std Error of Est:	0.000238		
Predicted MDL:	0.000250		
Predicted MQL:	0.000834		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00007	.000	1
S1	.02000	.02283	.003	14.1	.01282	.000	1
S3	1.2500	1.2970	.047	3.76	.73232	.002	1
S4	2.5000	2.4325	-.067	-2.70	1.3736	.007	1
S5	5.0000	4.9898	-.010	-.205	2.8177	.017	1
S2	.40000	.42790	.028	6.97	.24156	.000	1

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739



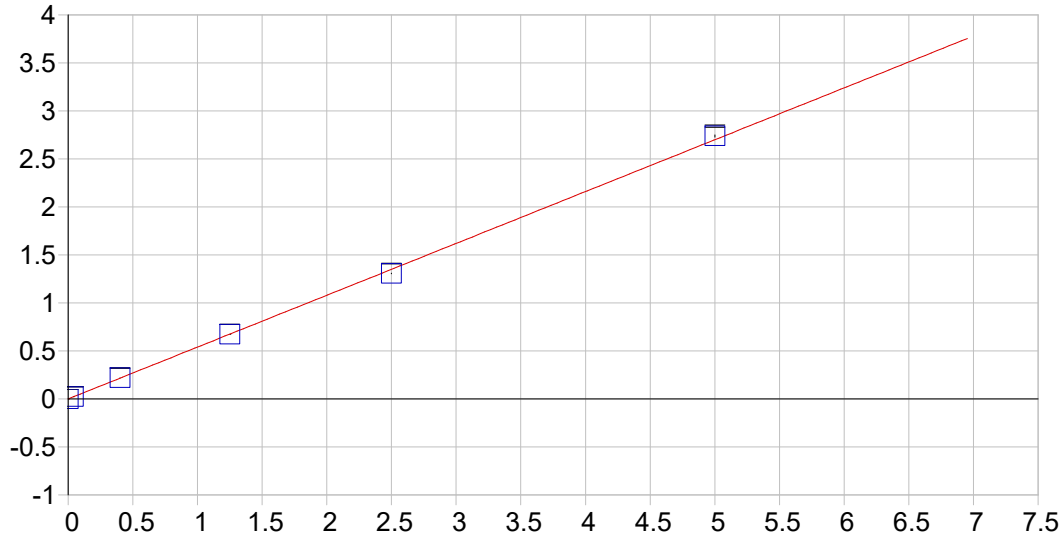
Mg 279.079 {121}

Date of Fit:	12/4/2024 15:50:34	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000139	Re-Slope:	1.000000
A1 (Gain):	0.012753	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999450	Status:	OK.
Std Error of Est:	0.000224		
Predicted MDL:	0.011584		
Predicted MQL:	0.038612		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00035	-.000	.000	-.00014	.000	1
S2	4.0000	4.1373	.137	3.43	.05263	.000	1
S3	12.500	12.598	.098	.787	.16053	.001	1
S4	25.000	24.018	-.982	-3.93	.30618	.001	1
S5	50.000	50.413	.413	.827	.64280	.002	1
S1	2.0000	2.3326	.333	16.6	.02961	.000	1

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739



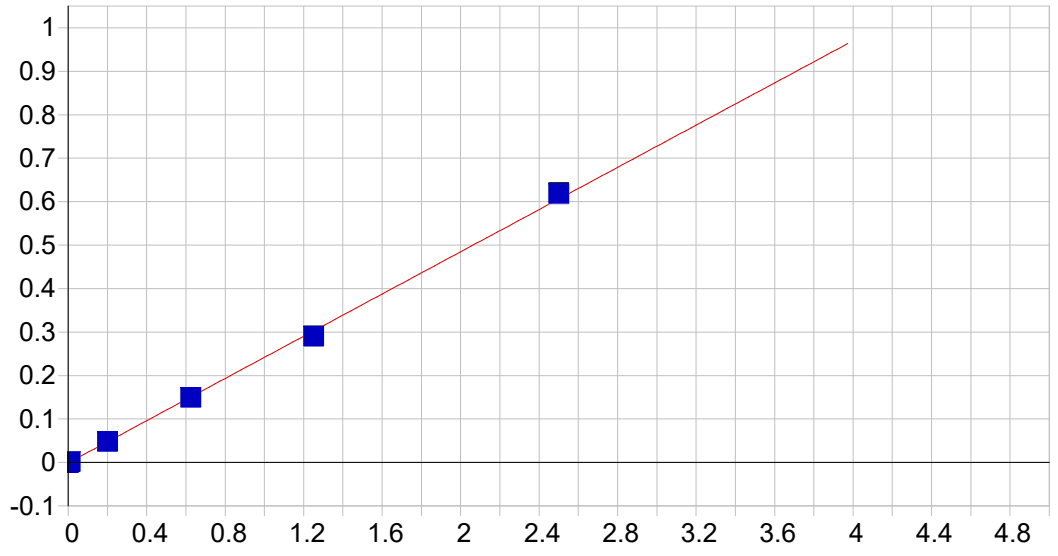
Ni 231.604 {446}

Date of Fit:	12/4/2024 15:50:34	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000081	Re-Slope:	1.000000
A1 (Gain):	0.539947	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999798	Status:	OK.
Std Error of Est:	0.000255		
Predicted MDL:	0.000307		
Predicted MQL:	0.001022		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00008	.000	1
S1	.04000	.04128	.001	3.21	.02221	.000	1
S3	1.2500	1.2467	-.003	-.265	.67306	.001	1
S4	2.5000	2.4215	-.079	-3.14	1.3074	.004	1
S5	5.0000	5.0742	.074	1.48	2.7397	.012	1
S2	.40000	.40640	.006	1.60	.21935	.002	1

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739



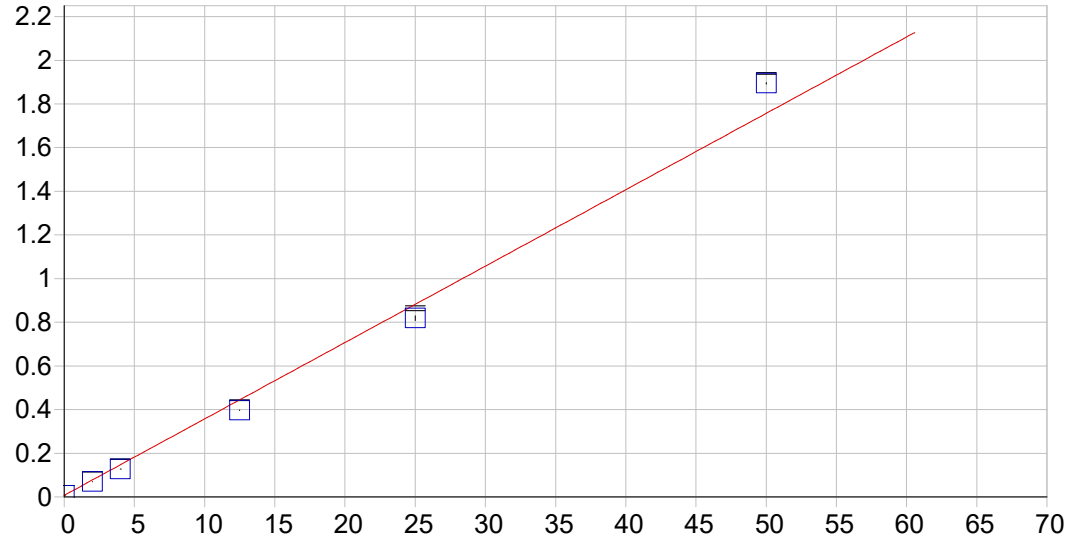
Ag 328.068 {103}

Date of Fit:	12/4/2024 15:50:34	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000995	Re-Slope:	1.000000
A1 (Gain):	0.242833	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999646	Status:	OK.
Std Error of Est:	0.000053		
Predicted MDL:	0.000339		
Predicted MQL:	0.001131		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00100	.000	1
S1	.01000	.01068	.001	6.78	.00158	.000	1
S3	.62500	.62042	-.005	-.733	.14906	.000	1
S4	1.2500	1.1997	-.050	-4.03	.28912	.000	1
S5	2.5000	2.5524	.052	2.10	.61641	.002	1
S2	.20000	.20179	.002	.896	.04781	.000	1

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739



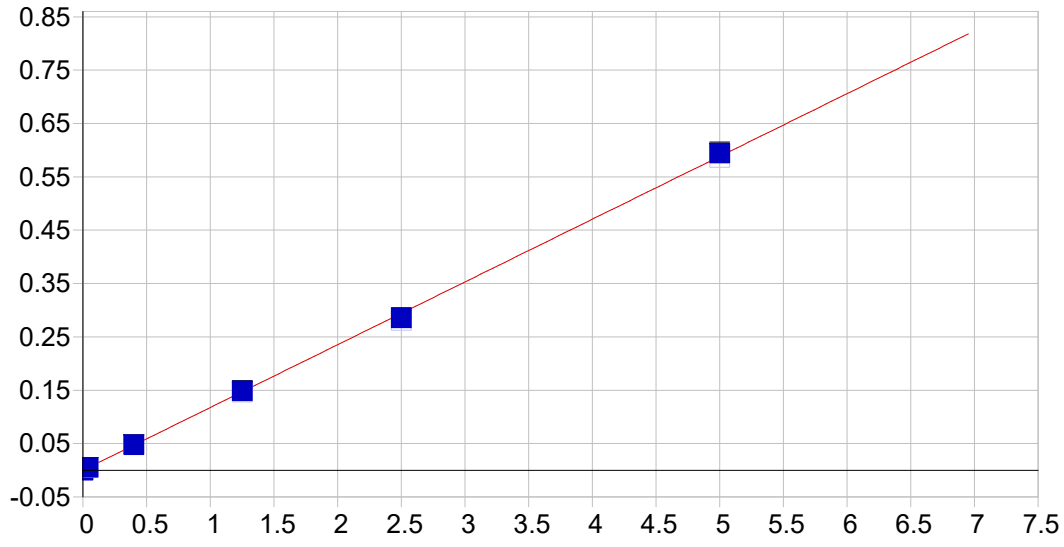
Na 589.592 { 57}

Date of Fit:	12/4/2024 15:50:34	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.007398	Re-Slope:	1.000000
A1 (Gain):	0.034990	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.996325	Status:	OK.
Std Error of Est:	0.001591		
Predicted MDL:	0.003895		
Predicted MQL:	0.012984		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00071	.001	.000	.00742	.000	1
S2	4.0000	3.4313	-.569	-14.2	.12746	.000	1
S3	12.500	11.151	-1.35	-10.8	.39758	.001	1
S4	25.000	23.200	-1.80	-7.20	.81916	.011	1
S5	50.000	53.938	3.94	7.88	1.8947	.004	1
S1	2.0000	1.7798	-.220	-11.0	.06967	.000	1

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739



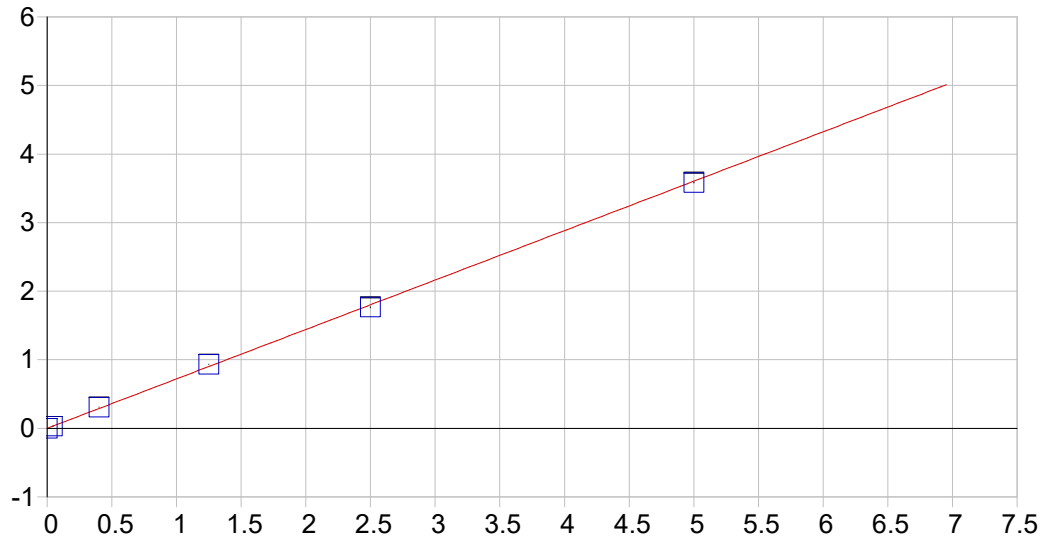
V 292.402 {115}

Date of Fit:	12/4/2024 15:50:34	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000060	Re-Slope:	1.000000
A1 (Gain):	0.117674	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999803	Status:	OK.
Std Error of Est:	0.000054		
Predicted MDL:	0.001293		
Predicted MQL:	0.004309		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00006	.000	1
S1	.04000	.04328	.003	8.19	.00486	.000	1
S3	1.2500	1.2623	.012	.982	.14633	.001	1
S4	2.5000	2.4229	-.077	-3.08	.28077	.001	1
S5	5.0000	5.0529	.053	1.06	.58595	.002	1
S2	.40000	.40873	.009	2.18	.04735	.000	1

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739



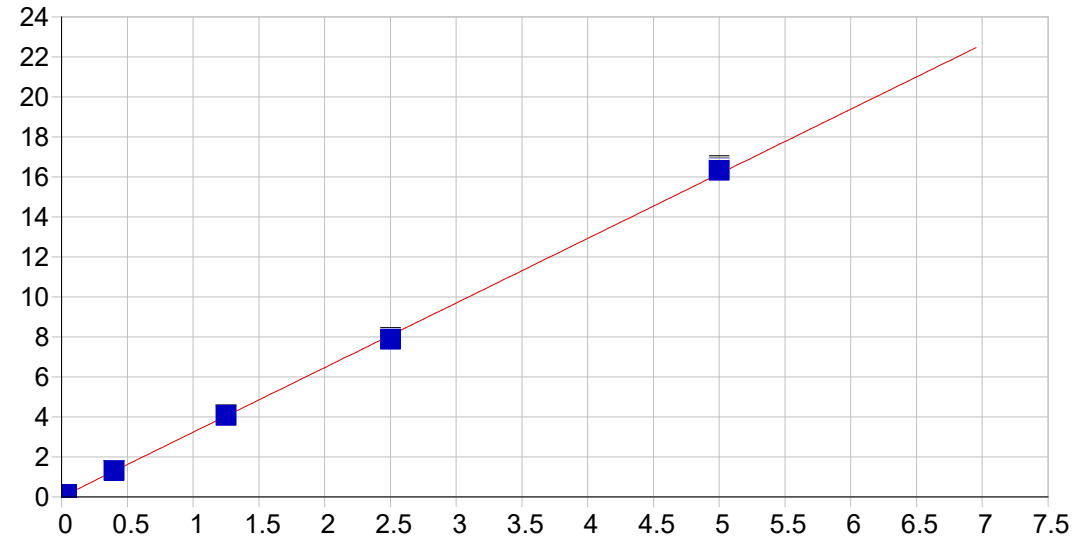
Zn 206.200 {464}

Date of Fit:	12/4/2024 15:50:34	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000180	Re-Slope:	1.000000
A1 (Gain):	0.720732	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999713	Status:	OK.
Std Error of Est:	0.000405		
Predicted MDL:	0.000241		
Predicted MQL:	0.000805		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00017	.000	1
S1	.04000	.04463	.005	11.6	.03235	.000	1
S3	1.2500	1.2958	.046	3.66	.93409	.003	1
S4	2.5000	2.4493	-.051	-2.03	1.7654	.006	1
S5	5.0000	4.9729	-.027	-.542	3.5843	.006	1
S2	.40000	.42744	.027	6.86	.30825	.002	1

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739



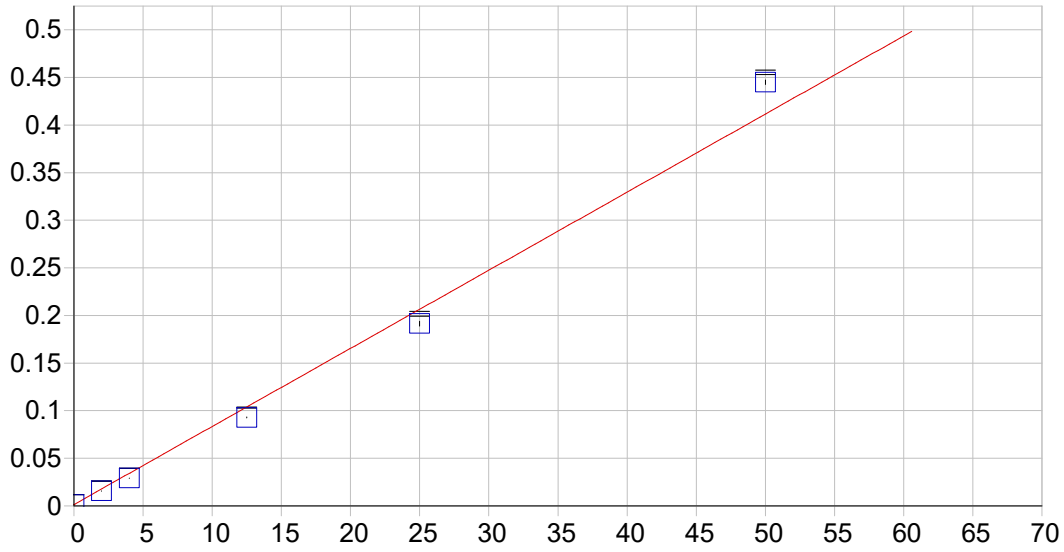
Zn 213.856 {158}

Date of Fit:	12/4/2024 15:50:34	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.003444	Re-Slope:	1.000000
A1 (Gain):	3.230451	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999864	Status:	OK.
Std Error of Est:	0.001259		
Predicted MDL:	0.000234		
Predicted MQL:	0.000780		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00344	.001	1
S1	.04000	.04249	.002	6.24	.14163	.002	1
S3	1.2500	1.2585	.009	.681	4.0971	.007	1
S4	2.5000	2.4338	-.066	-2.65	7.9218	.048	1
S5	5.0000	5.0513	.051	1.03	16.434	.123	1
S2	.40000	.40391	.004	.977	1.3172	.002	1

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739



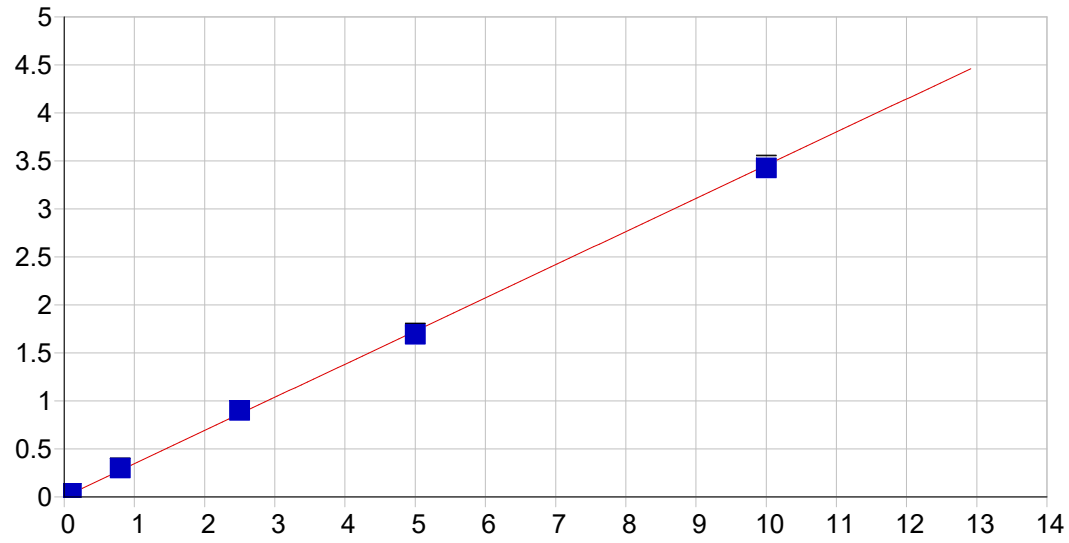
K 766.490 { 44}

Date of Fit:	12/4/2024 15:50:34	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001428	Re-Slope:	1.000000
A1 (Gain):	0.008203	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.996031	Status:	OK.
Std Error of Est:	0.000388		
Predicted MDL:	0.018166		
Predicted MQL:	0.060553		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00078	.001	.000	.00143	.000	1
S2	4.0000	3.3825	-.618	-15.4	.02917	.000	1
S3	12.500	11.144	-1.36	-10.8	.09284	.000	1
S4	25.000	23.162	-1.84	-7.35	.19142	.003	1
S5	50.000	54.079	4.08	8.16	.44502	.002	1
S1	2.0000	1.7332	-.267	-13.3	.01565	.000	1

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739



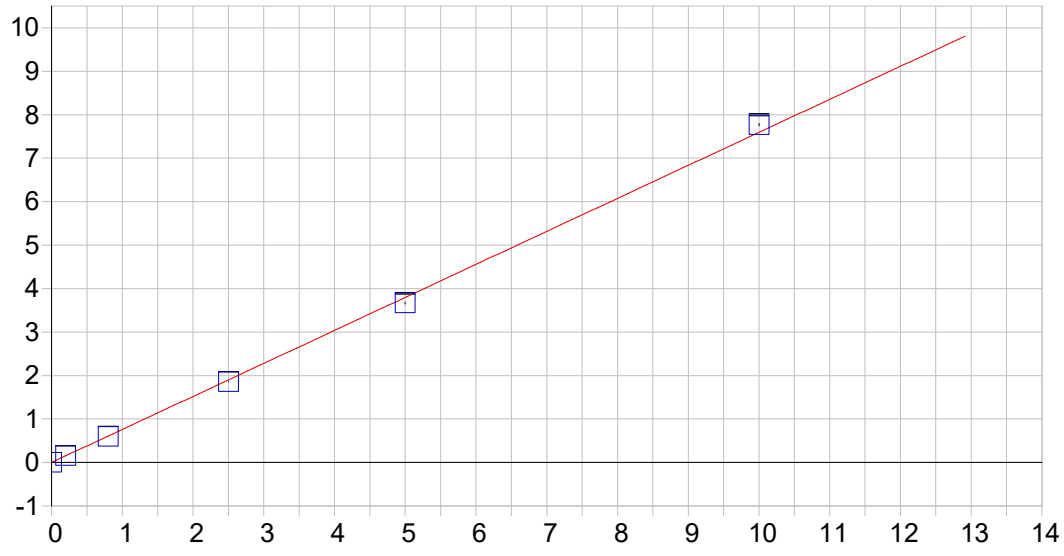
B 249.678 {135}

Date of Fit:	12/4/2024 15:50:34	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000763	Re-Slope:	1.000000
A1 (Gain):	0.345396	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999623	Status:	OK.
Std Error of Est:	0.000497		
Predicted MDL:	0.000627		
Predicted MQL:	0.002091		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00002	-.000	.000	.00075	.000	1
S1	.10000	.11562	.016	15.6	.04055	.000	1
S3	2.5000	2.5991	.099	3.96	.89678	.000	1
S4	5.0000	4.8994	-.101	-2.01	1.6896	.012	1
S5	10.000	9.9236	-.076	-.764	3.4216	.028	1
S2	.80000	.86234	.062	7.79	.29807	.001	1

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739



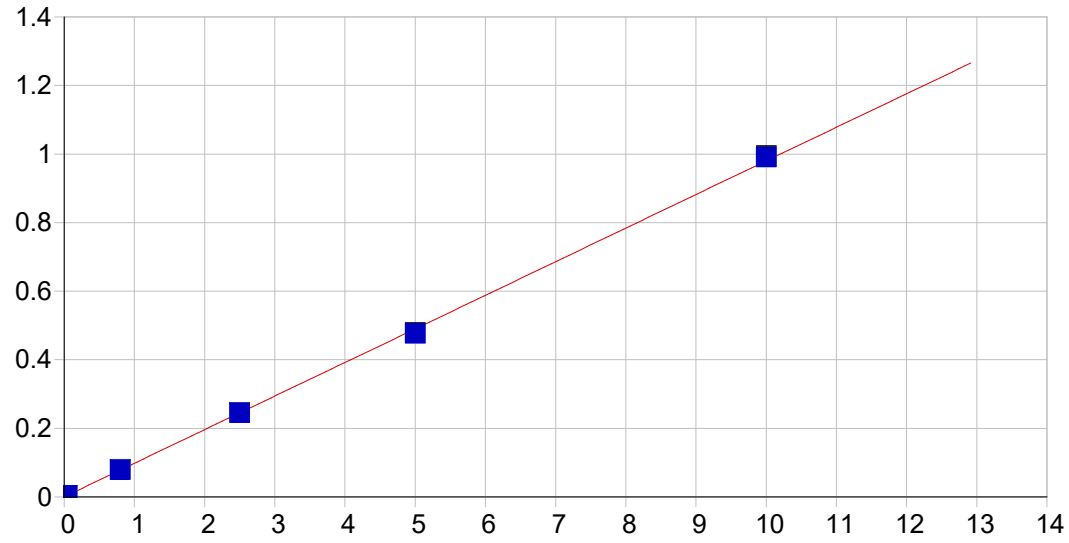
Mo 202.030 {467}

Date of Fit:	12/4/2024 15:50:34	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000141	Re-Slope:	1.000000
A1 (Gain):	0.759476	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999658	Status:	OK.
Std Error of Est:	0.001479		
Predicted MDL:	0.000243		
Predicted MQL:	0.000811		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	-.00014	.000	1
S1	.20000	.20272	.003	1.36	.15382	.000	1
S3	2.5000	2.4483	-.052	-2.07	1.8593	.005	1
S4	5.0000	4.8268	-.173	-3.46	3.6657	.020	1
S5	10.000	10.233	.233	2.33	7.7714	.024	1
S2	.80000	.78948	-.011	-1.31	.59945	.004	1

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739



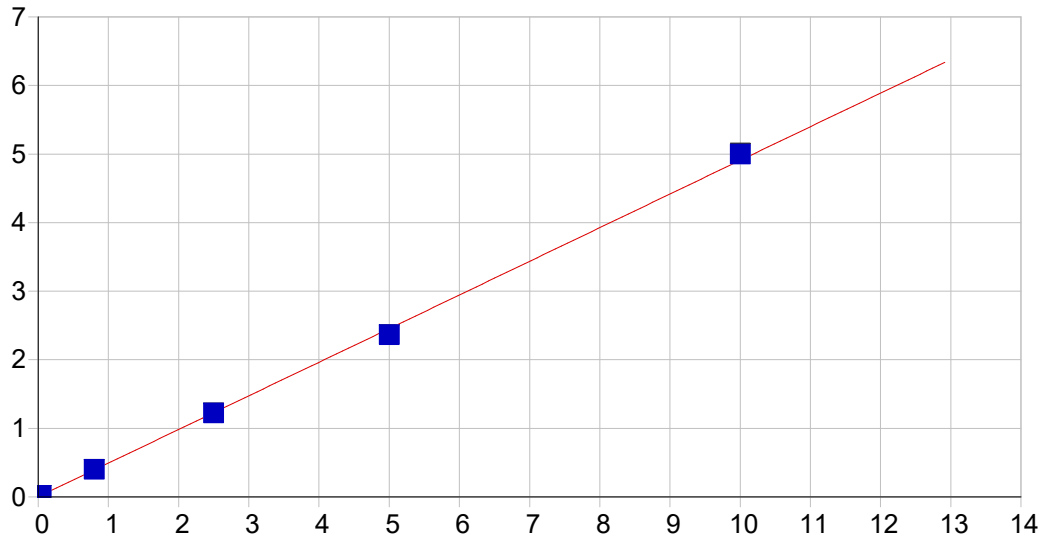
Sn 189.989 {478}

Date of Fit:	12/4/2024 15:50:34	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000141	Re-Slope:	1.000000
A1 (Gain):	0.097978	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999860	Status:	OK.
Std Error of Est:	0.000054		
Predicted MDL:	0.000807		
Predicted MQL:	0.002690		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00014	.000	1
S1	.04000	.04135	.001	3.37	.00419	.000	1
S3	2.5000	2.5082	.008	.328	.24564	.000	1
S4	5.0000	4.8654	-.135	-2.69	.47635	.002	1
S5	10.000	10.116	.116	1.16	.99025	.004	1
S2	.80000	.80945	.009	1.18	.07937	.001	1

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739



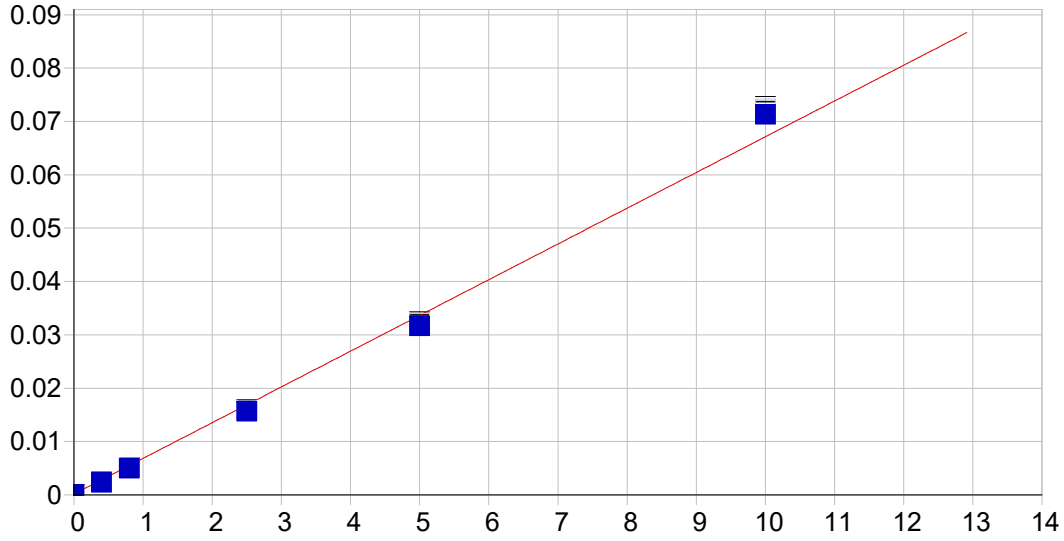
Ti 336.121 {100}

Date of Fit:	12/4/2024 15:50:34	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001635	Re-Slope:	1.000000
A1 (Gain):	0.490594	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999711	Status:	OK.
Std Error of Est:	0.000391		
Predicted MDL:	0.000458		
Predicted MQL:	0.001528		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00163	.000	1
S1	.04000	.04220	.002	5.50	.02232	.000	1
S3	2.5000	2.4857	-.014	-.571	1.2207	.004	1
S4	5.0000	4.8155	-.185	-3.69	2.3632	.003	1
S5	10.000	10.186	.186	1.86	4.9972	.014	1
S2	.80000	.81030	.010	1.29	.39902	.001	1

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739



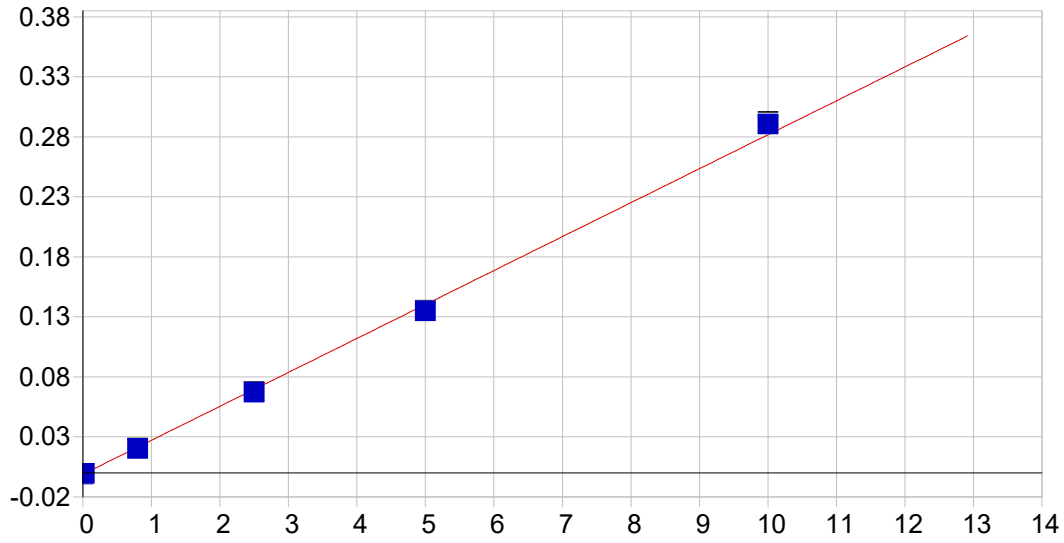
Si 288.158 {117}

Date of Fit:	12/4/2024 15:50:34	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000147	Re-Slope:	1.000000
A1 (Gain):	0.006699	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.997659	Status:	OK.
Std Error of Est:	0.000049		
Predicted MDL:	0.005094		
Predicted MQL:	0.016982		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00014	.000	.000	.00015	.000	1
S1	.40000	.32998	-.070	-17.5	.00236	.000	1
S3	2.5000	2.3142	-.186	-7.43	.01590	.000	1
S4	5.0000	4.7023	-.298	-5.95	.03215	.000	1
S5	10.000	10.628	.628	6.28	.07236	.000	1
S2	.80000	.72443	-.076	-9.45	.00508	.000	1

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739



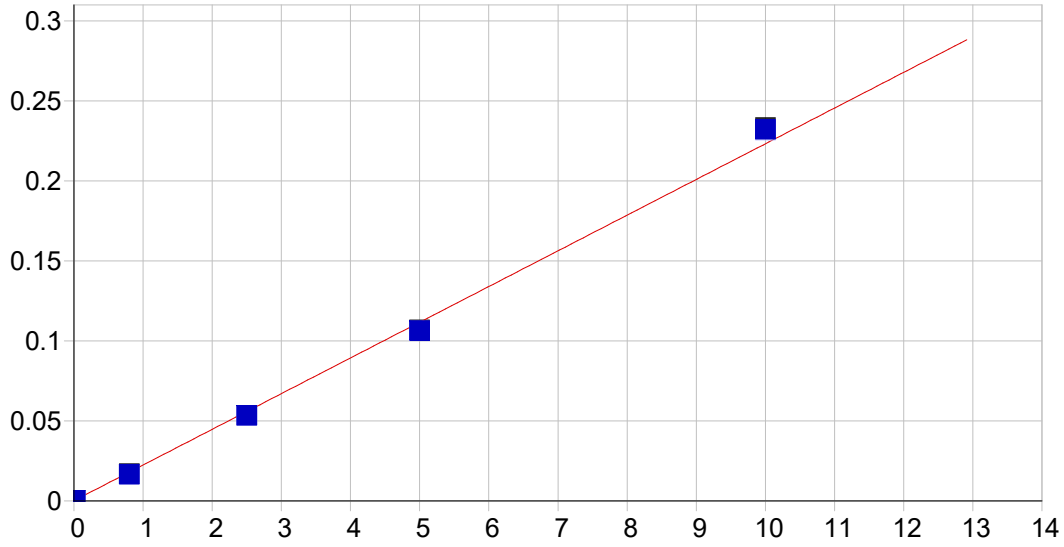
P 177.495 {490}

Date of Fit:	12/4/2024 15:50:34	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001092	Re-Slope:	1.000000
A1 (Gain):	0.028281	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999386	Status:	OK.
Std Error of Est:	0.000023		
Predicted MDL:	0.002638		
Predicted MQL:	0.008793		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00109	.000	1
S1	.02000	.02147	.001	7.37	-.00048	.000	1
S3	2.5000	2.4170	-.083	-3.32	.06725	.000	1
S4	5.0000	4.8057	-.194	-3.89	.13480	.001	1
S5	10.000	10.317	.317	3.17	.29063	.002	1
S2	.80000	.75937	-.041	-5.08	.02038	.000	1

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739



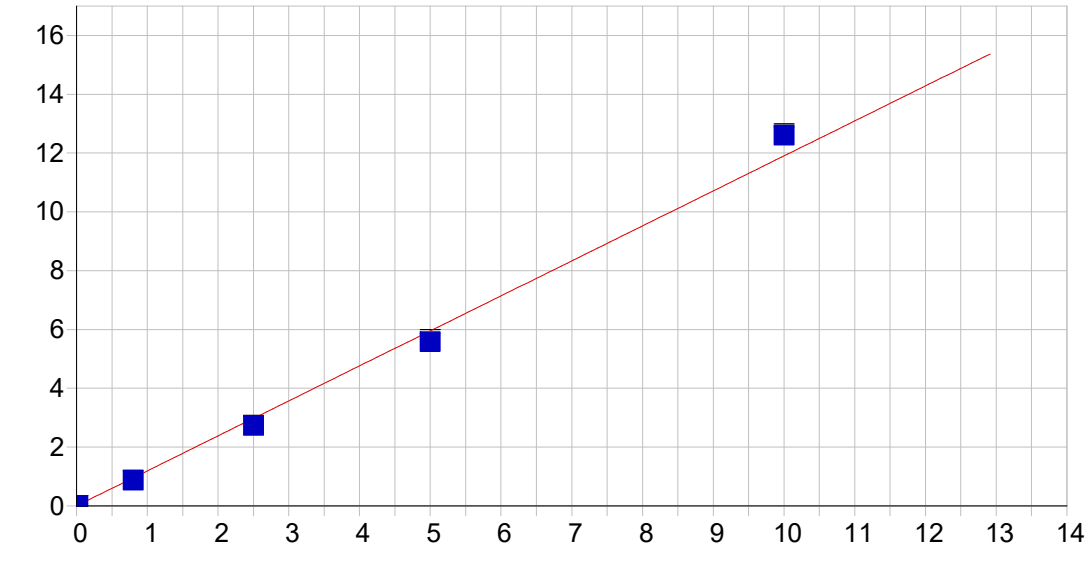
S 182.034 {485}

Date of Fit:	12/4/2024 15:50:34	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000129	Re-Slope:	1.000000
A1 (Gain):	0.022307	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998997	Status:	OK.
Std Error of Est:	0.000023		
Predicted MDL:	0.003308		
Predicted MQL:	0.011025		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00013	.000	1
S1	.02000	.02129	.001	6.47	.00059	.000	1
S3	2.5000	2.3893	-.111	-4.43	.05328	.000	1
S4	5.0000	4.7644	-.236	-4.71	.10612	.000	1
S5	10.000	10.403	.403	4.03	.23162	.001	1
S2	.80000	.74163	-.058	-7.30	.01663	.000	1

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739



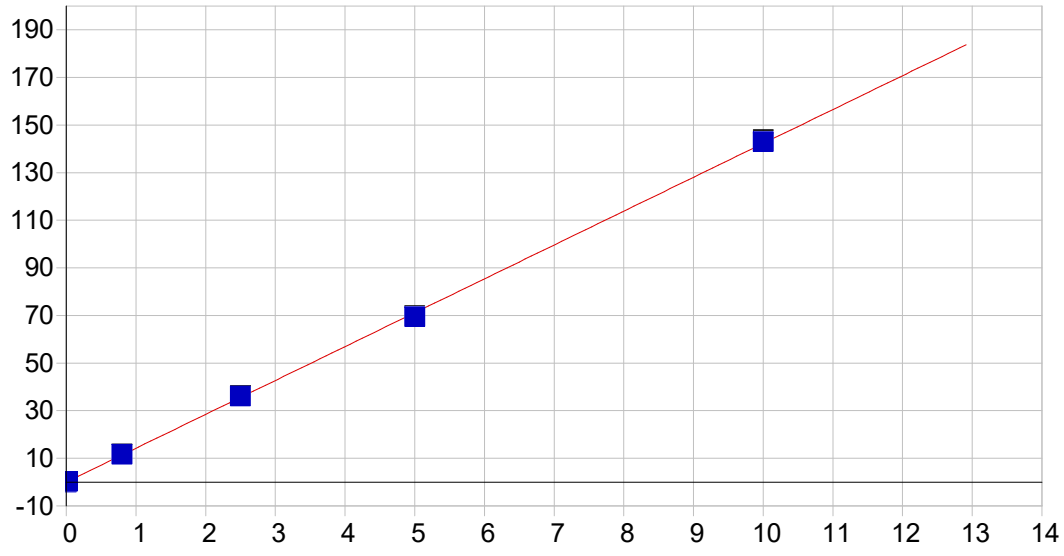
Li 670.784 { 50}

Date of Fit:	12/4/2024 15:50:34	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001442	Re-Slope:	1.000000
A1 (Gain):	1.190216	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.997928	Status:	OK.
Std Error of Est:	0.001800		
Predicted MDL:	0.000546		
Predicted MQL:	0.001819		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00145	.000	1
S5	10.000	10.585	.585	5.85	12.610	.050	1
S4	5.0000	4.6911	-.309	-6.18	5.5902	.071	1
S3	2.5000	2.2941	-.206	-8.24	2.7346	.007	1
S1	.02000	.01957	-.000	-2.15	.02516	.000	1
S2	.80000	.73046	-.070	-8.69	.87171	.004	1

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739



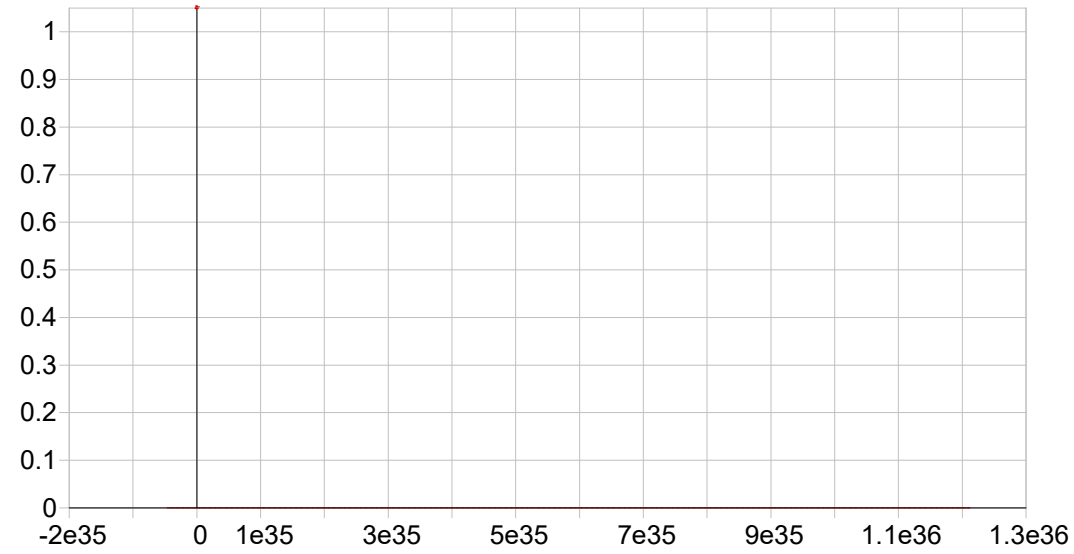
Sr 407.771 { 83}

Date of Fit:	12/4/2024 15:50:34	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000960	Re-Slope:	1.000000
A1 (Gain):	14.229324	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999883	Status:	OK.
Std Error of Est:	0.005111		
Predicted MDL:	0.000027		
Predicted MQL:	0.000090		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00099	.001	1
S1	.02000	.02137	.001	6.85	.30453	.002	1
S3	2.5000	2.5398	.040	1.59	36.174	.190	1
S4	5.0000	4.8844	-.116	-2.31	69.572	.232	1
S5	10.000	10.052	.052	.519	143.17	.631	1
S2	.80000	.82256	.023	2.82	11.715	.035	1

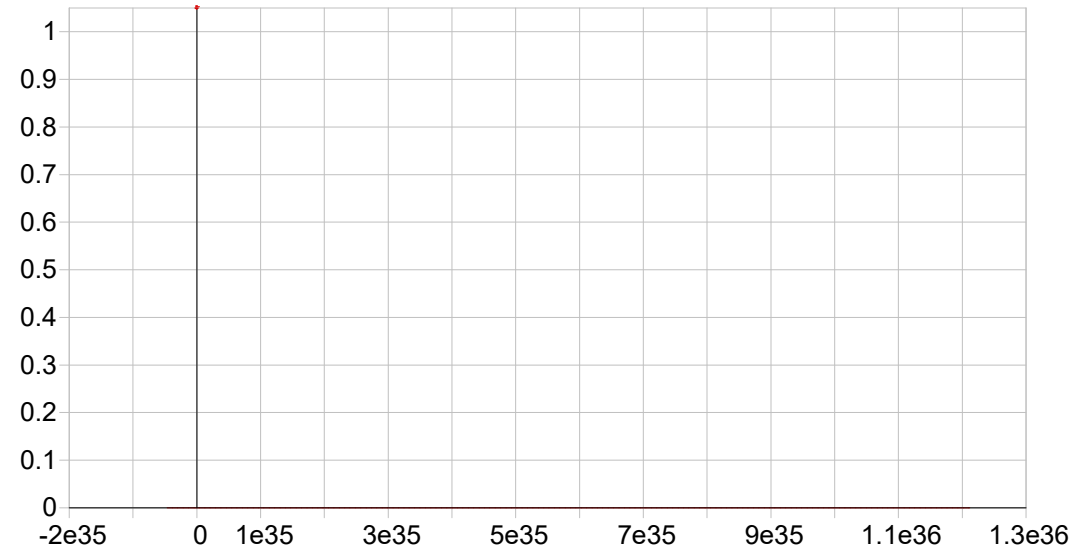
Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739



Y 224.306 {450}*

Date of Fit:	12/4/2024 15:50:34	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



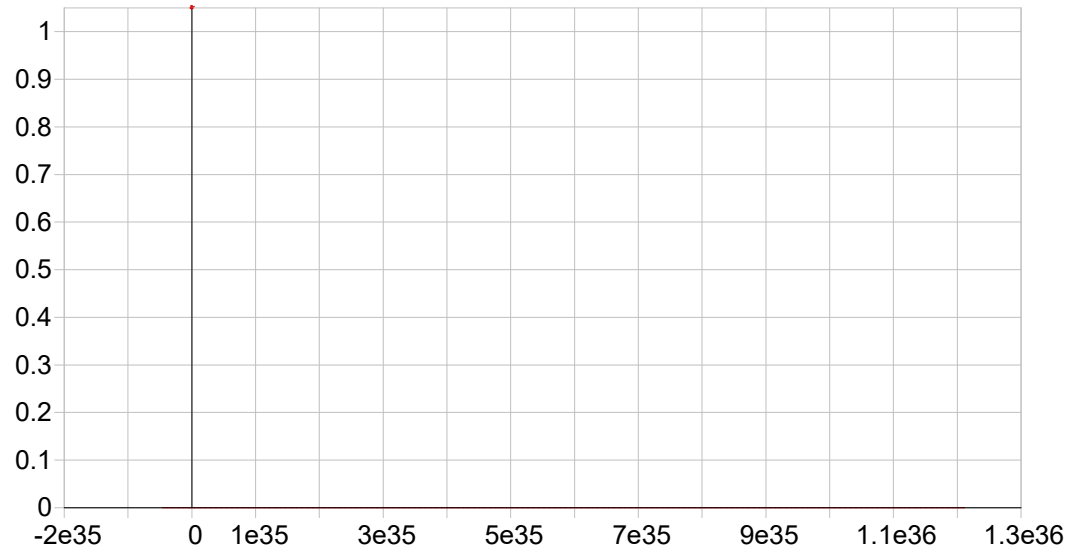
Y 360.073 { 94}*

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:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739

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



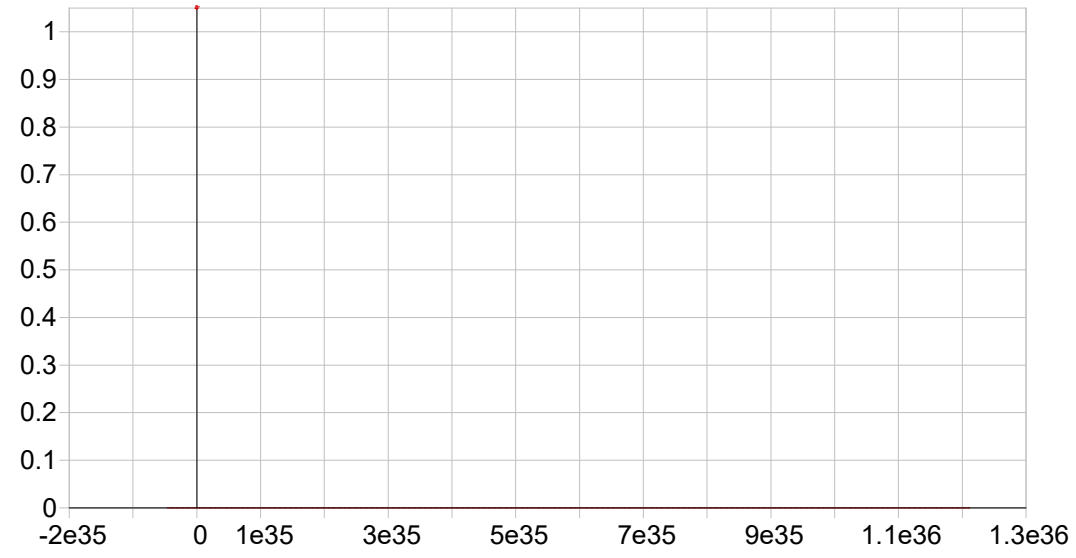
Y 371.030 { 91}*

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:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739

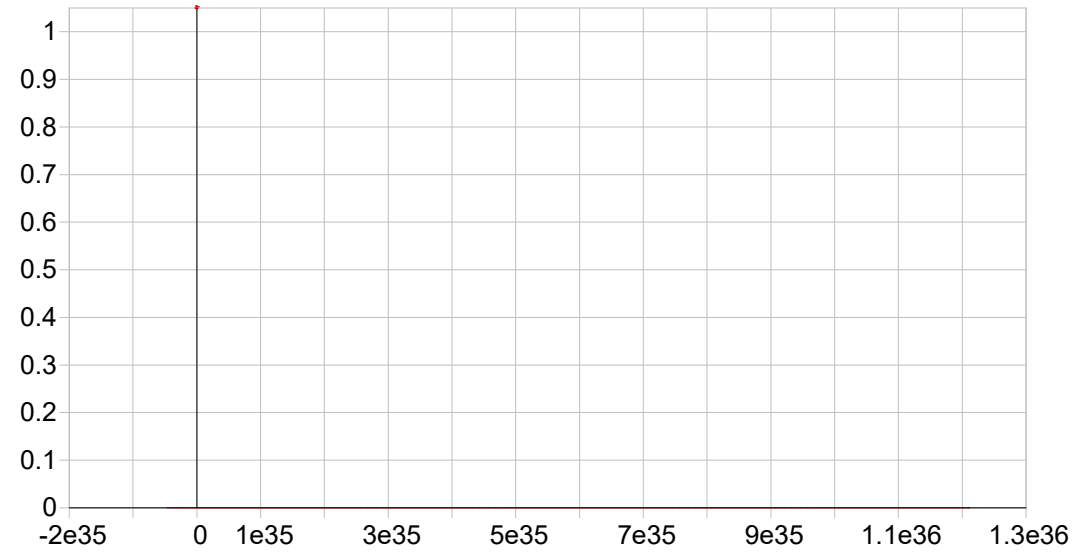


Y 224.306 {150}*

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:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739

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:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739

Sample Name: S0 Acquired: 12/4/2024 12:57:12 Type: Cal
Method: NON EPA-6010-200.7(v2484) Mode: IR Corr. Factor: 1.000000
User: Kareem 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	-.00024	-.00020	-.00019	.00036	.00014	.00001	-.02517	-.00050
Stddev	.00005	.00004	.00013	.00008	.00003	.00012	.00084	.00012
%RSD	20.603	20.270	67.427	22.494	18.507	825.08	3.3240	23.946
#1	-.00020	-.00015	-.00025	.00036	.00017	-.00002	-.02539	-.00052
#2	-.00022	-.00023	-.00029	.00043	.00013	-.00009	-.02587	-.00060
#3	-.00029	-.00022	-.00004	.00027	.00012	.00015	-.02424	-.00037

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	-.00012	.00088	.00001	-.00003	-.00032	-.00000	-.00007	-.00014
Stddev	.00004	.00008	.00004	.00009	.00028	.00001	.00007	.00010
%RSD	36.792	8.8480	625.27	307.28	90.151	217.67	97.483	69.913
#1	-.00007	.00087	.00005	.00005	-.00063	-.00000	-.00009	-.00005
#2	-.00014	.00096	-.00002	-.00001	-.00026	-.00001	-.00014	-.00025
#3	-.00015	.00080	-.00001	-.00013	-.00007	.00000	.00000	-.00013

Elem	Ni2316	Ag3280	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-.00008	-.00100	.00742	-.00006	.00344	.00143	.00075	-.00014
Stddev	.00013	.00008	.00024	.00011	.00130	.00019	.00015	.00010
%RSD	160.77	8.3257	3.2431	186.75	37.933	13.302	19.700	73.490
#1	-.00012	-.00109	.00715	-.00006	.00242	.00140	.00058	-.00016
#2	.00006	-.00094	.00750	-.00018	.00298	.00127	.00086	-.00003
#3	-.00019	-.00095	.00761	.00005	.00491	.00164	.00082	-.00022

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	.00014	.00163	.00015	-.00109	.00013	.00145	-.00099
Stddev	.00002	.00010	.00002	.00001	.00007	.00023	.00057
%RSD	12.951	6.3537	13.406	.86711	54.277	15.945	58.224
#1	.00016	.00167	.00013	-.00110	.00021	.00148	-.00138
#2	.00013	.00152	.00016	-.00109	.00010	.00120	-.00033
#3	.00013	.00172	.00015	-.00109	.00008	.00166	-.00125

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739

Sample Name: S0 Acquired: 12/4/2024 12:57:12 Type: Cal
Method: NON EPA-6010-200.7(v2484) Mode: IR Corr. Factor: 1.000000
User: Kareem 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	2800.5	68332.	14878.	2040.6	4970.7
Stddev	2.7	289.	58.	12.9	5.5
%RSD	.09747	.42225	.39110	.63163	.10994
#1	2797.7	68451.	14815.	2043.8	4964.5
#2	2803.2	68002.	14931.	2026.4	4972.8
#3	2800.7	68541.	14887.	2051.5	4974.9

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739

Sample Name: S1 Acquired: 12/4/2024 13:01:36 Type: Cal
Method: NON EPA-6010-200.7(v2484) Mode: IR Corr. Factor: 1.000000
User: Kareem 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	.00101	.00221	.00225	.00235	.01024	.00711	.33638	.01912
Stddev	.00008	.00006	.00007	.00019	.00008	.00001	.00162	.00024
%RSD	7.9894	2.8078	3.1882	8.1349	.75690	.12656	.48079	1.2631
#1	.00093	.00217	.00229	.00239	.01016	.00710	.33787	.01933
#2	.00103	.00218	.00229	.00252	.01031	.00710	.33662	.01918
#3	.00108	.00228	.00217	.00214	.01026	.00712	.33466	.01886

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	.01168	.10203	.00191	.02334	.01671	.00055	.01282	.02961
Stddev	.00011	.00062	.00003	.00007	.00013	.00000	.00012	.00035
%RSD	.95578	.60731	1.7791	.29814	.79718	.59887	.96399	1.1924
#1	.01177	.10224	.00188	.02341	.01671	.00056	.01276	.02983
#2	.01155	.10252	.00190	.02327	.01658	.00055	.01296	.02980
#3	.01172	.10133	.00195	.02333	.01685	.00055	.01274	.02920

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	.02221	.00158	.06967	.00486	.14163	.01565	.04055	.15382
Stddev	.00018	.00007	.00031	.00007	.00197	.00012	.00002	.00028
%RSD	.82083	4.1661	.44431	1.3609	1.3911	.73555	.05506	.18491
#1	.02202	.00163	.06940	.00483	.14363	.01551	.04056	.15390
#2	.02238	.00161	.07001	.00480	.14155	.01572	.04056	.15351
#3	.02223	.00151	.06962	.00493	.13970	.01570	.04052	.15406

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	.00419	.02232	.00236	-.00048	.00059	.02516	.30453
Stddev	.00003	.00014	.00003	.00003	.00004	.00031	.00213
%RSD	.72582	.63567	1.0865	5.5902	6.3208	1.2469	.69990
#1	.00422	.02226	.00234	-.00049	.00056	.02551	.30453
#2	.00419	.02249	.00237	-.00051	.00063	.02489	.30667
#3	.00416	.02223	.00239	-.00045	.00056	.02509	.30240

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739

Sample Name: S1 Acquired: 12/4/2024 13:01:36 Type: Cal
Method: NON EPA-6010-200.7(v2484) Mode: IR Corr. Factor: 1.000000
User: Kareem 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	2688.7	64878.	14384.	1918.6	4691.0
Stddev	4.1	142.	94.	9.3	12.9
%RSD	.15299	.21816	.65369	.48520	.27468
#1	2686.0	64812.	14328.	1913.1	4678.3
#2	2686.7	64781.	14331.	1913.4	4690.6
#3	2693.4	65040.	14493.	1929.4	4704.0

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739

Sample Name: S2 Acquired: 12/4/2024 13:05:59 Type: Cal
Method: NON EPA-6010-200.7(v2484) Mode: IR Corr. Factor: 1.000000
User: Kareem 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	.04553	.04808	.16695	.07063	.15916	.09610	5.4870	.12765
Stddev	.00028	.00075	.00158	.00046	.00087	.00031	.0181	.00040
%RSD	.61955	1.5593	.94892	.65677	.54879	.32608	.33060	.31550
#1	.04583	.04790	.16874	.07112	.16016	.09586	5.4664	.12720
#2	.04528	.04744	.16641	.07019	.15870	.09645	5.4940	.12797
#3	.04547	.04891	.16571	.07059	.15861	.09598	5.5007	.12779

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	.75545	.19134	.02941	.30679	.15664	.00428	.24156	.05263
Stddev	.00646	.00039	.00014	.00273	.00152	.00004	.00013	.00036
%RSD	.85559	.20216	.47433	.89038	.96899	.95833	.05365	.69022
#1	.76291	.19171	.02957	.30994	.15831	.00432	.24170	.05300
#2	.75175	.19094	.02932	.30524	.15627	.00427	.24146	.05228
#3	.75168	.19137	.02935	.30518	.15535	.00424	.24151	.05259

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	.21935	.04781	.12746	.04735	1.3172	.02917	.29807	.59945
Stddev	.00188	.00027	.00005	.00033	.0021	.00015	.00060	.00385
%RSD	.85579	.55941	.04231	.70309	.15576	.52402	.20136	.64231
#1	.22150	.04802	.12743	.04720	1.3189	.02902	.29782	.60390
#2	.21853	.04791	.12752	.04712	1.3179	.02933	.29876	.59716
#3	.21802	.04751	.12743	.04773	1.3149	.02917	.29764	.59730

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	.07937	.39902	.00508	.02038	.01663	.87171	11.715
Stddev	.00079	.00100	.00002	.00014	.00011	.00357	.035
%RSD	.99333	.24991	.47874	.67249	.63280	.40998	.29709
#1	.08027	.39812	.00510	.02039	.01675	.86759	11.729
#2	.07882	.39884	.00509	.02024	.01656	.87393	11.675
#3	.07901	.40009	.00505	.02051	.01657	.87361	11.741

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739

Sample Name: S2 Acquired: 12/4/2024 13:05:59 Type: Cal
Method: NON EPA-6010-200.7(v2484) Mode: IR Corr. Factor: 1.000000
User: Kareem 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	2674.8	65284.	14711.	1925.2	4593.9
Stddev	18.3	151.	15.	14.0	34.3
%RSD	.68447	.23143	.10500	.72487	.74704
#1	2656.0	65133.	14703.	1917.3	4556.2
#2	2675.9	65435.	14729.	1941.3	4602.2
#3	2692.6	65283.	14702.	1917.0	4623.3

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739

Sample Name: S3 Acquired: 12/4/2024 13:10:14 Type: Cal
Method: NON EPA-6010-200.7(v2484) Mode: IR Corr. Factor: 1.000000
User: Kareem 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	.14546	.14941	.51342	.22602	.50719	.29931	17.123	.38256
Stddev	.00057	.00130	.00025	.00134	.00249	.00131	.119	.00172
%RSD	.39100	.86846	.04809	.59318	.49138	.43742	.69342	.45036
#1	.14535	.14792	.51371	.22468	.50534	.29780	17.020	.38453
#2	.14496	.15021	.51328	.22603	.50621	.30004	17.096	.38177
#3	.14608	.15012	.51328	.22736	.51002	.30009	17.253	.38137

Elem	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2.3237	.58153	.09021	.94423	.48575	.01352	.73232	.16053
Stddev	.0032	.00126	.00013	.00178	.00099	.00013	.00158	.00070
%RSD	.13750	.21684	.14385	.18885	.20477	.96895	.21507	.43854
#1	2.3262	.58011	.09008	.94622	.48518	.01337	.73089	.15985
#2	2.3247	.58251	.09034	.94371	.48519	.01359	.73400	.16126
#3	2.3201	.58196	.09021	.94277	.48690	.01360	.73206	.16048

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	.67306	.14906	.39758	.14633	4.0971	.09284	.89678	1.8593
Stddev	.00087	.00015	.00111	.00052	.0073	.00047	.00045	.0051
%RSD	.12989	.10366	.27998	.35642	.17849	.50172	.04973	.27264
#1	.67321	.14892	.39630	.14575	4.1001	.09230	.89723	1.8571
#2	.67385	.14922	.39817	.14677	4.0887	.09308	.89634	1.8558
#3	.67212	.14904	.39829	.14647	4.1024	.09313	.89677	1.8651

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	.24564	1.2207	.01590	.06725	.05328	2.7346	36.174
Stddev	.00025	.0036	.00009	.00017	.00003	.0066	.190
%RSD	.10136	.29301	.59070	.25024	.05925	.24137	.52603
#1	.24578	1.2167	.01579	.06706	.05325	2.7270	35.994
#2	.24579	1.2236	.01596	.06737	.05330	2.7388	36.373
#3	.24535	1.2217	.01596	.06732	.05330	2.7380	36.154

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739

Sample Name: S3 Acquired: 12/4/2024 13:10:14 Type: Cal
Method: NON EPA-6010-200.7(v2484) Mode: IR Corr. Factor: 1.000000
User: Kareem 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	2586.7	64252.	15108.	1852.3	4425.3
Stddev	11.5	174.	21.	8.3	8.3
%RSD	.44360	.27123	.13637	.45005	.18720
#1	2595.0	64447.	15104.	1859.4	4433.5
#2	2591.4	64113.	15090.	1854.4	4425.5
#3	2573.6	64195.	15130.	1843.2	4416.9

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739

Sample Name: S4 Acquired: 12/4/2024 13:14:27 Type: Cal
Method: NON EPA-6010-200.7(v2484) Mode: IR Corr. Factor: 1.000000
User: Kareem 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	.29451	.28589	.99180	.45797	1.0348	.58980	33.667	.70286
Stddev	.00127	.00202	.00457	.00245	.0075	.00115	.395	.00581
%RSD	.42979	.70701	.46054	.53517	.72457	.19474	1.1719	.82673
#1	.29306	.28784	.98724	.45526	1.0264	.58850	33.982	.70895
#2	.29509	.28380	.99180	.45862	1.0372	.59021	33.224	.70224
#3	.29538	.28604	.99637	.46003	1.0408	.59068	33.794	.69738

Elem	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4.5026	1.0884	.16990	1.8419	.96564	.02629	1.3736	.30618
Stddev	.0166	.0078	.00045	.0065	.00626	.00001	.0073	.00125
%RSD	.36900	.71492	.26665	.35280	.64804	.04768	.53189	.40693
#1	4.4878	1.0947	.16999	1.8354	.95842	.02631	1.3811	.30734
#2	4.4995	1.0908	.17031	1.8418	.96924	.02629	1.3732	.30634
#3	4.5206	1.0797	.16941	1.8484	.96927	.02629	1.3665	.30486

Elem	Ni2316	Ag3280	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1.3074	.28912	.81916	.28077	7.9218	.19142	1.6896	3.6657
Stddev	.0037	.00036	.01079	.00094	.0477	.00264	.0124	.0198
%RSD	.28213	.12389	1.3173	.33333	.60161	1.3774	.73247	.54010
#1	1.3043	.28872	.80919	.28166	7.8668	.18894	1.7024	3.6439
#2	1.3063	.28925	.81766	.28085	7.9505	.19113	1.6888	3.6705
#3	1.3115	.28939	.83062	.27979	7.9480	.19419	1.6777	3.6826

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	.47635	2.3632	.03215	.13480	.10612	5.5902	69.572
Stddev	.00171	.0029	.00029	.00060	.00040	.0706	.232
%RSD	.35908	.12304	.91336	.44587	.37752	1.2633	.33290
#1	.47491	2.3659	.03181	.13420	.10574	5.5315	69.629
#2	.47589	2.3601	.03230	.13478	.10608	5.5706	69.317
#3	.47824	2.3635	.03234	.13540	.10654	5.6686	69.769

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739

Sample Name: S4 Acquired: 12/4/2024 13:14:27 Type: Cal
Method: NON EPA-6010-200.7(v2484) Mode: IR Corr. Factor: 1.000000
User: Kareem 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	2363.8	61251.	14950.	1699.2	4052.4
Stddev	15.0	103.	93.	13.1	19.8
%RSD	.63528	.16815	.61979	.76963	.48960
#1	2381.1	61362.	14848.	1712.4	4075.1
#2	2354.2	61233.	14975.	1698.8	4043.4
#3	2356.2	61159.	15028.	1686.3	4038.6

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739

Sample Name: S5 Acquired: 12/4/2024 13:18:39 Type: Cal
Method: NON EPA-6010-200.7(v2484) Mode: IR Corr. Factor: 1.000000
User: Kareem 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	.64846	.59048	2.0611	1.0079	2.2968	1.2820	71.639	1.3970
Stddev	.00149	.00873	.0083	.0055	.0094	.0023	.414	.0152
%RSD	.22993	1.4778	.40438	.54526	.40891	.17953	.57765	1.0903
#1	.64770	.59021	2.0522	1.0084	2.2973	1.2794	72.040	1.4144
#2	.64749	.58190	2.0688	1.0022	2.2872	1.2825	71.214	1.3911
#3	.65017	.59934	2.0622	1.0131	2.3059	1.2839	71.665	1.3857

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	9.3868	2.2190	.34954	3.8810	2.0675	.05605	2.8177	.64280
Stddev	.0440	.0136	.00275	.0155	.0065	.00021	.0167	.00235
%RSD	.46842	.61453	.78735	.40044	.31321	.38035	.59417	.36585
#1	9.3370	2.2342	.35161	3.8635	2.0649	.05588	2.8365	.64543
#2	9.4204	2.2150	.35058	3.8931	2.0628	.05629	2.8120	.64206
#3	9.4029	2.2078	.34642	3.8865	2.0749	.05598	2.8044	.64091

Elem	Ni2316	Ag3280	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2.7397	.61641	1.8947	.58595	16.434	.44502	3.4216	7.7714
Stddev	.0115	.00230	.0036	.00219	.123	.00241	.0281	.0242
%RSD	.42088	.37312	.18922	.37314	.74794	.54092	.82168	.31194
#1	2.7267	.61871	1.8911	.58845	16.573	.44227	3.4539	7.7739
#2	2.7488	.61642	1.8982	.58501	16.341	.44674	3.4031	7.7459
#3	2.7436	.61411	1.8948	.58439	16.387	.44604	3.4077	7.7942

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	.99025	4.9972	.07236	.29063	.23162	12.610	143.17
Stddev	.00364	.0140	.00046	.00173	.00102	.050	.63
%RSD	.36722	.27994	.63338	.59465	.43991	.39399	.44046
#1	.98605	5.0129	.07183	.29029	.23060	12.573	142.47
#2	.99217	4.9860	.07258	.28909	.23163	12.592	143.68
#3	.99252	4.9927	.07266	.29250	.23264	12.667	143.37

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739

Sample Name: S5 Acquired: 12/4/2024 13:18:39 Type: Cal
Method: NON EPA-6010-200.7(v2484) Mode: IR Corr. Factor: 1.000000
User: Kareem 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	2090.2	56402.	14472.	1486.1	3584.7
Stddev	9.1	98.	65.	4.7	11.1
%RSD	.43530	.17336	.44587	.31296	.30886
#1	2087.1	56471.	14397.	1481.9	3592.9
#2	2100.4	56290.	14514.	1491.1	3589.1
#3	2083.0	56445.	14503.	1485.2	3572.1

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739

Sample Name: ICV01 Acquired: 12/4/2024 13:22:50 Type: Unk
Method: NON EPA-6010-200.7(v2484) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICV01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9768547	1.015790	.9825301	1.005485	.9842541	2.512776
Stddev	.0056181	.005299	.0028671	.003328	.0048626	.011018
%RSD	.5751267	.5216494	.2918110	.3310149	.4940415	.4384675
#1	.9717317	1.011224	.9793704	1.002369	.9795045	2.523579
#2	.9759696	1.014545	.9832539	1.005096	.9840353	2.513192
#3	.9828629	1.021600	.9849660	1.008991	.9892224	2.501556

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5076200	.4984923	.4973717	9.766491	.5114062	.4978017
Stddev	.0026551	.0016965	.0019802	.026969	.0015722	.0021967
%RSD	.5230501	.3403190	.3981219	.2761420	.3074223	.4412734
#1	.5106810	.5004159	.4959109	9.747237	.5131604	.4959066
#2	.5059417	.4978511	.4965787	9.797315	.5101244	.4972892
#3	.5062371	.4972098	.4996254	9.754922	.5109337	.5002093

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5090539	9.606649	.5049499	5.737042	.5004179	.2461459
Stddev	.0027717	.040168	.0006547	.013244	.0020064	.0004389
%RSD	.5444859	.4181226	.1296481	.2308431	.4009541	.1782950
#1	.5063048	9.568145	.5042966	5.733370	.4987102	.2456461
#2	.5090093	9.603508	.5056059	5.726022	.4999158	.2463236
#3	.5118477	9.648296	.5049472	5.751734	.5026277	.2464680

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.773269	.4988876	1.016534	9.628906	F .0230480	F .0011537
Stddev	.052641	.0005756	.001643	.041934	.0003841	.0002744
%RSD	.5386265	.1153834	.1616493	.4355037	1.666738	23.78186
#1	9.829684	.4983855	1.015505	9.662147	.0234895	.0014121
#2	9.725462	.4987615	1.015668	9.581793	.0227906	.0011833
#3	9.764660	.4995159	1.018429	9.642776	.0228638	.0008657

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739

Sample Name: ICV01 Acquired: 12/4/2024 13:22:50 Type: Unk
Method: NON EPA-6010-200.7(v2484) Mode: CONC Corr. Factor: 1.000000
User: Kareem 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 -.001378	F -.000328	F .0071038	F .0071880	F -.000893	F -.001164
Stddev	.000617	.000200	.0049455	.0025965	.004107	.000434
%RSD	44.77877	60.79259	69.61760	36.12254	459.8159	37.30240
#1	-.000719	-.000115	.0105015	.0092675	-.004844	-.000973
#2	-.001473	-.000360	.0093797	.0042778	-.001190	-.000857
#3	-.001943	-.000510	.0014301	.0080187	.003354	-.001661

Elem	Sr4077
Units	ppm
Avg	F -.007949
Stddev	.000174
%RSD	2.193382
#1	-.007751
#2	-.008016
#3	-.008079

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2463.595	63913.19	15685.60	1722.506	4440.931
Stddev	13.732	38.10	54.69	.467	20.832
%RSD	.5573952	.0596058	.3486611	.0270859	.4690864
#1	2478.148	63877.37	15626.05	1723.026	4462.652
#2	2461.773	63953.21	15697.17	1722.369	4439.021
#3	2450.866	63908.98	15733.57	1722.124	4421.120

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739

Sample Name: LLICV01 Acquired: 12/4/2024 13:34:23 Type: Unk
Method: NON EPA-6010-200.7(v2484) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LLICV01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0188210	.0434584	.0110029	.0214420	.0487315	.1092887	.0988740
Stddev	.0004919	.0007074	.0005870	.0025535	.0010369	.0026826	.0004304
%RSD	2.613555	1.627878	5.334731	11.90884	2.127803	2.454627	.4352839
#1	.0186856	.0430652	.0105924	.0206481	.0479238	.1076777	.0989556
#2	.0184109	.0442751	.0107411	.0242982	.0483700	.1078029	.0984086
#3	.0193664	.0430349	.0116752	.0193798	.0499008	.1123855	.0992577

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0060473	.0059670	2.014470	.0104359	.0294194	.0222182	.0997902
Stddev	.0000428	.0000893	.010234	.0004474	.0002213	.0003150	.0006567
%RSD	.7069848	1.496742	.5080040	4.287160	.7520828	1.417887	.6581251
#1	.0060967	.0059619	2.006315	.0103281	.0293051	.0225655	.0996607
#2	.0060239	.0060587	2.025953	.0100522	.0296744	.0221385	.0992079
#3	.0060214	.0058803	2.011140	.0109273	.0292786	.0219508	.1005021

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0210725	2.127067	.0394171	.0108026	2.043633	.0407181	.0432169
Stddev	.0001822	.005543	.0003274	.0000867	.003689	.0013862	.0003733
%RSD	.8648008	.2605807	.8305554	.8027159	.1805081	3.404256	.8638112
#1	.0209230	2.122562	.0397698	.0107039	2.045546	.0421654	.0431065
#2	.0212755	2.125384	.0391229	.0108667	2.039380	.0394025	.0429113
#3	.0210191	2.133257	.0393587	.0108372	2.045972	.0405865	.0436330

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.942222	.1100521	.2089263	.0386445	.0413861	.3509052	.0213618
Stddev	.015311	.0004289	.0007724	.0008606	.0003899	.0029186	.0013693
%RSD	.7883119	.3897618	.3696827	2.227024	.9421375	.8317248	6.409839
#1	1.926976	.1099035	.2097444	.0392364	.0410782	.3476943	.0198008
#2	1.942092	.1105356	.2088249	.0390397	.0412557	.3516241	.0219249
#3	1.957597	.1097172	.2082097	.0376572	.0418246	.3533971	.0223598

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739

Sample Name: LLICV01 Acquired: 12/4/2024 13:34:23 Type: Unk
Method: NON EPA-6010-200.7(v2484) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LLICV01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0175309	.0212594	.0217304
Stddev	.0011421	.0005976	.0000401
%RSD	6.514793	2.810904	.1845268
#1	.0188337	.0210989	.0217560
#2	.0167025	.0219209	.0216842
#3	.0170565	.0207585	.0217511

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2415.964	62305.98	15069.85	1668.792	4455.185
Stddev	14.591	248.86	36.34	11.816	21.645
%RSD	.6039260	.3994120	.2411383	.7080648	.4858451
#1	2400.107	62027.53	15032.54	1655.202	4433.265
#2	2418.964	62383.70	15071.86	1674.541	4455.744
#3	2428.822	62506.70	15105.14	1676.634	4476.545

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739

Sample Name: ICB01 Acquired: 12/4/2024 13:43:22 Type: Unk
Method: NON EPA-6010-200.7(v2484) Mode: CONC Corr. Factor: 1.000000
User: Kareem 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	.0003214	-.000032	.0000969	.0020033	-.000763	-.000841	-.004690
Stddev	.0011066	.000414	.0005338	.0004587	.001298	.002720	.000523
%RSD	344.2912	1314.042	550.5908	22.89794	170.1575	323.3032	11.16023
#1	.0015252	.000123	-.000042	.0018059	.000394	-.003865	-.004203
#2	.0000905	.000283	.000686	.0016763	-.002166	.001406	-.005243
#3	-.000651	-.000501	-.000354	.0025277	-.000515	-.000065	-.004624

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000039	-.000084	-.006611	-.000113	.0000245	-.000157	.0008914
Stddev	.000067	.000044	.002776	.000264	.0001446	.000107	.0020070
%RSD	170.9759	52.01985	41.99506	232.6838	589.0684	68.08880	225.1492
#1	-.000111	-.000061	-.009701	-.000246	-.000008	-.000280	.0001556
#2	.000023	-.000056	-.005805	.000190	.000183	-.000101	-.000644
#3	-.000030	-.000134	-.004327	-.000284	-.000101	-.000089	.003163

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000084	.0045547	-.000120	.0002589	.0087668	.0004820	-.000382
Stddev	.000125	.0072576	.000162	.0003614	.0130118	.0009278	.000241
%RSD	148.2127	159.3437	134.0632	139.5831	148.4214	192.5081	63.07345
#1	.000050	.0085200	-.000004	.0000005	-.005312	.0015044	-.000449
#2	-.000197	-.003822	-.000052	.0006718	.011261	-.000307	-.000581
#3	-.000107	.008966	-.000305	.0001044	.020351	.000248	-.000114

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.048480	.0025174	.0000361	.0004915	.0003356	.0041082	.0038021
Stddev	.017750	.0006919	.0000260	.0006159	.0004081	.0028272	.0006939
%RSD	36.61234	27.48602	72.04242	125.3209	121.5934	68.81752	18.25073
#1	-.034419	.0031453	.0000615	-.000092	.0008049	.0041494	.0030416
#2	-.042598	.0026314	.0000373	.000432	.0001387	.0069146	.0039639
#3	-.068425	.0017756	.0000095	.001135	.0000633	.0012607	.0044009

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739

Sample Name: ICB01 Acquired: 12/4/2024 13:43:22 Type: Unk
Method: NON EPA-6010-200.7(v2484) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICB01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.001699	-.000516	-.000029
Stddev	.000989	.000100	.000013
%RSD	58.17658	19.37478	46.77419
#1	-.002754	-.000485	-.000013
#2	-.001551	-.000436	-.000036
#3	-.000793	-.000628	-.000036

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2431.346	63305.90	15200.45	1691.929	4564.896
Stddev	11.764	69.15	34.35	3.744	7.075
%RSD	.4838533	.1092309	.2259902	.2212883	.1549954
#1	2423.527	63362.38	15165.32	1695.766	4559.379
#2	2444.875	63228.78	15233.97	1688.286	4572.873
#3	2425.636	63326.53	15202.08	1691.735	4562.436

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739

Sample Name: CRI01 Acquired: 12/4/2024 13:52:45 Type: Unk
Method: NON EPA-6010-200.7(v2484) Mode: CONC Corr. Factor: 1.000000
User: Kareem 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	.0203860	.0423803	.0112388	.0206028	.0495065	.1070920	.0960515
Stddev	.0023176	.0008091	.0016629	.0008158	.0003538	.0025633	.0000127
%RSD	11.36868	1.909161	14.79633	3.959842	.7146355	2.393557	.0132507
#1	.0210056	.0429403	.0123732	.0211874	.0492408	.1049866	.0960652
#2	.0178216	.0427479	.0093299	.0209502	.0493705	.1063430	.0960494
#3	.0223309	.0414526	.0120132	.0196707	.0499081	.1099464	.0960400

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0061114	.0060412	2.037185	.0105560	.0298823	.0220931	.0997169
Stddev	.0000200	.0000376	.013502	.0001196	.0003951	.0003150	.0016513
%RSD	.3269202	.6227344	.6627801	1.133504	1.322062	1.425774	1.656031
#1	.0060935	.0060217	2.034616	.0105654	.0303298	.0223654	.0980054
#2	.0061330	.0060846	2.025152	.0104318	.0297354	.0221658	.0998447
#3	.0061078	.0060173	2.051787	.0106706	.0295818	.0217482	.1013007

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0207458	2.158557	.0400082	.0105571	2.044680	.0418946	.0435102
Stddev	.0002867	.002004	.0004579	.0004206	.013920	.0001562	.0001934
%RSD	1.381968	.0928525	1.144448	3.983655	.6807682	.3727264	.4443944
#1	.0205147	2.156243	.0398965	.0108532	2.028962	.0417594	.0432938
#2	.0206560	2.159700	.0405116	.0107424	2.055449	.0418590	.0435707
#3	.0210666	2.159728	.0396165	.0100757	2.049628	.0420655	.0436661

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.919891	.1069210	.2141711	.0400251	.0405732	.3535701	.0220759
Stddev	.016261	.0007095	.0004933	.0007328	.0006424	.0016435	.0018631
%RSD	.8469769	.6635348	.2303273	1.830852	1.583383	.4648432	8.439650
#1	1.902317	.1075172	.2144932	.0403843	.0401595	.3523027	.0200416
#2	1.922953	.1061363	.2144169	.0391820	.0413133	.3529805	.0236993
#3	1.934404	.1071094	.2136032	.0405089	.0402468	.3554271	.0224867

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739

Sample Name: CRI01 Acquired: 12/4/2024 13:52:45 Type: Unk
Method: NON EPA-6010-200.7(v2484) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CRI01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0190305	.0195546	.0210395
Stddev	.0015764	.0002186	.0000543
%RSD	8.283479	1.118008	.2580954
#1	.0208485	.0193467	.0209973
#2	.0182009	.0197825	.0211007
#3	.0180422	.0195346	.0210205

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2367.669	61567.11	14909.44	1644.321	4358.023
Stddev	9.753	116.91	21.75	5.186	16.575
%RSD	.4119381	.1898823	.1458531	.3154025	.3803268
#1	2358.349	61433.32	14884.57	1638.540	4340.427
#2	2366.854	61649.59	14918.91	1645.861	4360.302
#3	2377.804	61618.42	14924.85	1648.564	4373.341

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739

Sample Name: ICSA01 Acquired: 12/4/2024 13:57:03 Type: Unk
Method: NON EPA-6010-200.7(v2484) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSA01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015679	.0115054	.0072213	-.010698	-.001944	262.6705
Stddev	.0021306	.0036381	.0026919	.002329	.001202	.7003
%RSD	135.8930	31.62087	37.27690	21.76724	61.85292	.2666113
#1	.0019175	.0078032	.0043050	-.008276	-.002688	262.1031
#2	.0035021	.0150758	.0077482	-.012920	-.000557	262.4554
#3	-.000716	.0116371	.0096108	-.010900	-.002586	263.4532

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000170	.0012291	F .0082998	243.6338	.0559627	.0028401
Stddev	.000201	.0000715	.0002754	.3407	.0002905	.0003057
%RSD	118.0977	5.813477	3.317767	.1398337	.5191624	10.76535
#1	-.000211	.0011486	.0086171	243.3393	.0560093	.0031254
#2	.000048	.0012851	.0081233	244.0069	.0556516	.0025173
#3	-.000347	.0012536	.0081590	243.5552	.0562271	.0028774

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.008890	97.45466	.0050855	267.2540	.0024021	-.005057
Stddev	.000723	.30045	.0002107	.4184	.0002371	.000468
%RSD	8.128399	.3082997	4.143928	.1565444	9.869987	9.258125
#1	-.008187	97.16294	.0048842	266.8025	.0026753	-.005118
#2	-.009631	97.76314	.0050676	267.6285	.0022804	-.005492
#3	-.008851	97.43790	.0053046	267.3310	.0022506	-.004562

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1000363	.0067425	.0081492	.0477960	.0177823	.0005067
Stddev	.0200815	.0008596	.0002478	.0214907	.0002768	.0001071
%RSD	20.07421	12.74846	3.041012	44.96326	1.556793	21.12629
#1	.0783530	.0071240	.0079962	.0263018	.0175292	.0004083
#2	.1037617	.0057582	.0084351	.0478033	.0177399	.0004911
#3	.1179943	.0073453	.0080162	.0692831	.0180779	.0006207

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739

Sample Name: ICSA01 Acquired: 12/4/2024 13:57:03 Type: Unk
Method: NON EPA-6010-200.7(v2484) Mode: CONC Corr. Factor: 1.000000
User: Kareem 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	-.002294	-.000248	.0216001	.0028682	-.012358	F -.040873
Stddev	.001473	.000097	.0063661	.0028153	.004868	.000145
%RSD	64.19417	39.02865	29.47262	98.15378	39.39228	.3556353
#1	-.003959	-.000142	.0276568	.0050507	-.006804	-.040956
#2	-.001161	-.000271	.0149642	.0038634	-.015887	-.040958
#3	-.001762	-.000331	.0221793	-.000309	-.014382	-.040705

Elem	Sr4077
Units	ppm
Avg	.0059608
Stddev	.0001340
%RSD	2.247534
#1	.0059755
#2	.0058201
#3	.0060869

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2111.282	54905.43	14350.71	1451.692	3510.351
Stddev	4.516	77.55	17.89	7.232	2.671
%RSD	.2138851	.1412493	.1246527	.4981518	.0760900
#1	2116.336	54822.83	14330.52	1443.384	3510.715
#2	2109.867	54976.69	14364.60	1455.122	3507.516
#3	2107.643	54916.77	14356.99	1456.571	3512.821

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739

Sample Name: ICSAB01 Acquired: 12/4/2024 14:15:59 Type: Unk
Method: NON EPA-6010-200.7(v2484) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSAB01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1101198	.0947025	.0526695	.0341877	.6285621	260.8127
Stddev	.0023824	.0043810	.0011054	.0030069	.0047372	.6703
%RSD	2.163500	4.626056	2.098790	8.795160	.7536611	.2570109
#1	.1099154	.0992928	.0538785	.0332691	.6256926	260.1323
#2	.1125979	.0905662	.0524192	.0375467	.6259637	260.8333
#3	.1078461	.0942484	.0517106	.0317472	.6340299	261.4725

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5001952	.5046548	1.011061	238.8046	.5613743	.5028264
Stddev	.0025727	.0002303	.001632	.3192	.0013971	.0002831
%RSD	.5143317	.0456424	.1613919	.1336778	.2488640	.0562982
#1	.5029894	.5048020	1.010018	238.4570	.5599743	.5025767
#2	.4979246	.5047730	1.012942	239.0847	.5613801	.5031339
#3	.4996716	.5043893	1.010224	238.8722	.5627684	.5027687

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4742515	96.04983	.4819326	263.7278	.9871207	.1933743
Stddev	.0015489	.19911	.0010697	.3824	.0010723	.0004088
%RSD	.3265997	.2072987	.2219659	.1450040	.1086272	.2114275
#1	.4744962	95.85897	.4807888	263.3081	.9860335	.1937446
#2	.4725949	96.03424	.4829083	264.0565	.9881775	.1929356
#3	.4756635	96.25627	.4821009	263.8189	.9871510	.1934427

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1136050	.4957471	F 1.101398	-.030806	F .0214685	F .0012292
Stddev	.0190548	.0022663	.002237	.031735	.0009326	.0002443
%RSD	16.77285	.4571510	.2031244	103.0169	4.344003	19.87128
#1	.0936300	.4934151	1.102326	-.058900	.0204322	.0015047
#2	.1156027	.4979415	1.098846	-.037134	.0217329	.0011436
#3	.1315822	.4958845	1.103021	.003617	.0222403	.0010392

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739

Sample Name: ICSAB01 Acquired: 12/4/2024 14:15:59 Type: Unk
Method: NON EPA-6010-200.7(v2484) Mode: CONC Corr. Factor: 1.000000
User: Kareem 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 .0086765	F -.001104	F .0112551	F .0094900	F -.006842	F -.039725
Stddev	.0020812	.000171	.0049244	.0018667	.002386	.000307
%RSD	23.98643	15.53915	43.75220	19.67012	34.87174	.7740373
#1	.0068689	-.000910	.0059668	.0091395	-.005729	-.039851
#2	.0109517	-.001238	.0157089	.0078234	-.009581	-.039949
#3	.0082089	-.001163	.0120896	.0115071	-.005216	-.039374

Elem	Sr4077
Units	ppm
Avg	F .0061710
Stddev	.0004529
%RSD	7.338878
#1	.0066939
#2	.0059180
#3	.0059012

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2043.344	53911.78	14261.73	1401.879	3442.014
Stddev	11.293	117.18	47.10	6.426	11.250
%RSD	.5526625	.2173551	.3302331	.4583589	.3268347
#1	2044.186	53779.92	14214.18	1397.137	3444.405
#2	2054.192	53951.39	14262.67	1409.192	3451.876
#3	2031.654	54004.01	14308.36	1399.307	3429.761

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739

Sample Name: CCV01 Acquired: 12/4/2024 14:20:14 Type: Unk
Method: NON EPA-6010-200.7(v2484) Mode: CONC Corr. Factor: 1.000000
User: Kareem 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	5.053365	4.870526	4.777965	5.089465	5.142450	9.932856	9.599523
Stddev	.015725	.055699	.006879	.017566	.024892	.031170	.049648
%RSD	.3111714	1.143587	.1439736	.3451481	.4840519	.3138101	.5171905
#1	5.035214	4.928345	4.783938	5.072548	5.113713	9.899283	9.558781
#2	5.062049	4.866012	4.770444	5.107615	5.157349	9.960878	9.654822
#3	5.062834	4.817222	4.779513	5.088231	5.156286	9.938405	9.584965

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2293845	2.354322	23.02801	.9709500	2.362765	1.268759	4.785071
Stddev	.0023976	.007085	.26135	.0057621	.006032	.005851	.028776
%RSD	1.045248	.3009450	1.134920	.5934462	.2552909	.4611791	.6013702
#1	.2321412	2.362320	23.30662	.9773470	2.369178	1.262172	4.806051
#2	.2282283	2.348830	22.98915	.9693357	2.357204	1.273354	4.796896
#3	.2277842	2.351818	22.78827	.9661673	2.361914	1.270752	4.752267

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.286654	23.58967	2.367938	1.211983	26.89219	2.394025	2.520473
Stddev	.016988	.15335	.004467	.003371	.38191	.013415	.003474
%RSD	.7429149	.6500602	.1886551	.2780985	1.420139	.5603608	.1378457
#1	2.302278	23.73490	2.371862	1.215861	26.45132	2.405273	2.518372
#2	2.289112	23.60477	2.363076	1.209756	27.12152	2.397624	2.524483
#3	2.268571	23.42933	2.368875	1.210333	27.10372	2.379177	2.518563

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.63576	4.638997	5.044699	4.745389	4.754615	5.024527	4.727609
Stddev	.35895	.034851	.009643	.019117	.012304	.027070	.011249
%RSD	1.400196	.7512669	.1911430	.4028608	.2587706	.5387539	.2379529
#1	25.22200	4.677776	5.034871	4.766617	4.759901	4.993968	4.720651
#2	25.82151	4.628923	5.054145	4.729530	4.763393	5.034116	4.721587
#3	25.86378	4.610293	5.045081	4.740021	4.740552	5.045497	4.740587

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739

Sample Name: CCV01 Acquired: 12/4/2024 14:20:14 Type: Unk
Method: NON EPA-6010-200.7(v2484) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.676070	5.016695	4.891997
Stddev	.022174	.087170	.023603
%RSD	.4742090	1.737604	.4824739
#1	4.701600	4.916086	4.865386
#2	4.664999	5.064346	4.900206
#3	4.661612	5.069653	4.910400

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2151.815	58406.50	15254.85	1478.450	3879.919
Stddev	16.761	94.67	65.15	10.666	16.481
%RSD	.7789145	.1620850	.4270660	.7214646	.4247843
#1	2171.160	58500.82	15189.06	1490.546	3897.144
#2	2142.633	58311.49	15256.15	1470.393	3878.312
#3	2141.651	58407.18	15319.34	1474.412	3864.299

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739

Sample Name: CCB01 Acquired: 12/4/2024 14:29:11 Type: Unk
Method: NON EPA-6010-200.7(v2484) Mode: CONC Corr. Factor: 1.000000
User: Kareem 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	-.006701	-.005957	-.001409	.0031503	-.000427	.0016101	-.004959
Stddev	.001930	.000773	.000505	.0010650	.000794	.0007342	.000116
%RSD	28.81058	12.97685	35.87201	33.80843	185.9753	45.59846	2.340373
#1	-.007422	-.006610	-.000852	.0029653	.000305	.0023237	-.005055
#2	-.008166	-.006157	-.001838	.0021898	-.000315	.0008569	-.004830
#3	-.004513	-.005103	-.001536	.0042957	-.001271	.0016498	-.004991

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000179	-.000242	-.004453	.0002473	-.000104	.0001724	-.000302
Stddev	.000045	.000056	.004011	.0000407	.000081	.0001685	.001777
%RSD	25.10366	23.07943	90.08658	16.46656	77.30715	97.72343	588.7309
#1	-.000171	-.000180	-.006412	.0002103	-.000035	.0001919	-.000811
#2	-.000139	-.000256	-.007108	.0002407	-.000085	-.000005	.001674
#3	-.000227	-.000289	.000162	.0002909	-.000193	.000330	-.001768

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003012	.0135374	-.000385	.0002378	-.158112	.0005711	.0003511
Stddev	.0002197	.0028383	.000071	.0001587	.002765	.0001700	.0001838
%RSD	72.94913	20.96675	18.47342	66.75194	1.748609	29.76409	52.34431
#1	.0000776	.0167661	-.000317	.0001315	-.161302	.0007062	.0001645
#2	.0003093	.0114354	-.000459	.0004202	-.156638	.0003802	.0003569
#3	.0005167	.0124106	-.000379	.0001617	-.156398	.0006267	.0005320

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.167431	.0024301	.0002869	-.000167	.0001523	.0055882	.0034931
Stddev	.008971	.0003235	.0002213	.000964	.0002037	.0027435	.0006057
%RSD	5.358050	13.31130	77.14544	577.5125	133.7326	49.09469	17.33976
#1	-.176916	.0027534	.0000414	-.001058	-.000080	.0060782	.0035966
#2	-.159082	.0024304	.0003480	.000857	.000239	.0080537	.0040403
#3	-.166296	.0021064	.0004711	-.000299	.000298	.0026327	.0028423

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739

Sample Name: CCB01 Acquired: 12/4/2024 14:29:11 Type: Unk
Method: NON EPA-6010-200.7(v2484) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.004872	-.001681	-.000019
Stddev	.000481	.000411	.000025
%RSD	9.873977	24.42519	133.6906
#1	-.004905	-.001974	-.000032
#2	-.004375	-.001212	-.000034
#3	-.005335	-.001857	.000010

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2332.092	62956.33	15527.46	1606.717	4516.539
Stddev	4.429	181.62	37.53	12.105	4.887
%RSD	.1899339	.2884899	.2417324	.7534235	.1082088
#1	2332.075	62882.99	15484.27	1596.647	4516.866
#2	2327.670	62822.84	15545.95	1603.356	4511.497
#3	2336.529	63163.15	15552.17	1620.148	4521.255

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739

Sample Name: P4495-10DLX10 Acquired: 12/4/2024 14:33:33 Type: Unk
Method: NON EPA-6010-200.7(v2484) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2060090	.4499199	.4255115	.4138101	.0803207	27.72295	.6713782
Stddev	.0016849	.0046847	.0028684	.0010023	.0012135	.09092	.0024093
%RSD	.8178993	1.041232	.6741125	.2422048	1.510753	.3279638	.3588603
#1	.2048611	.4486845	.4250841	.4148437	.0812029	27.63916	.6688742
#2	.2079434	.4550985	.4228807	.4128424	.0808223	27.81963	.6736801
#3	.2052225	.4459767	.4285696	.4137442	.0789368	27.71006	.6715805

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3130274	.1675651	13.12454	.6928873	.2273561	.6504069	26.96711
Stddev	.0005805	.0004153	.01163	.0015602	.0007201	.0013677	.01902
%RSD	.1854614	.2478263	.0886255	.2251787	.3167141	.2102833	.0705382
#1	.3123802	.1670890	13.13178	.6917610	.2269099	.6508743	26.95875
#2	.3131997	.1677543	13.13071	.6922328	.2269716	.6488668	26.98888
#3	.3135022	.1678522	13.11112	.6946682	.2281868	.6514797	26.95369

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.377752	17.36215	.2194312	.0699834	21.58352	.5645357	.7572953
Stddev	.005720	.01676	.0002371	.0000479	.10932	.0020001	.0031293
%RSD	.2405796	.0965291	.1080437	.0684336	.5064902	.3542966	.4132150
#1	2.371189	17.35939	.2191761	.0699309	21.56629	.5624369	.7598795
#2	2.381682	17.38012	.2196447	.0699948	21.70043	.5664198	.7581903
#3	2.380384	17.34694	.2194730	.0700246	21.48384	.5647505	.7538160

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	18.55426	.8703126	.3254455	.1582060	.8181624	3.699709	1.453511
Stddev	.08110	.0014441	.0003497	.0009376	.0025081	.015730	.003629
%RSD	.4371193	.1659239	.1074400	.5926171	.3065491	.4251623	.2496976
#1	18.51250	.8718393	.3254771	.1574488	.8159002	3.687975	1.455424
#2	18.64773	.8701300	.3250811	.1579145	.8208595	3.717582	1.455784
#3	18.50255	.8689686	.3257783	.1592547	.8177275	3.693569	1.449326

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739

Sample Name: P4495-10DLX10 Acquired: 12/4/2024 14:33:33 Type: Unk
Method: NON EPA-6010-200.7(v2484) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.8124307	1.406001	.6146768
Stddev	.0015829	.008867	.0025352
%RSD	.1948377	.6306536	.4124470
#1	.8115034	1.396674	.6118740
#2	.8142584	1.414322	.6168100
#3	.8115303	1.407006	.6153464

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2359.505	61449.88	15609.73	1620.658	4092.222
Stddev	9.128	195.74	20.92	4.342	11.529
%RSD	.3868577	.3185393	.1340152	.2678936	.2817345
#1	2351.792	61245.25	15590.92	1616.312	4082.225
#2	2369.582	61469.06	15606.02	1620.666	4104.834
#3	2357.139	61635.32	15632.26	1624.995	4089.606

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739

Sample Name: CCV02 Acquired: 12/4/2024 14:37:35 Type: Unk
Method: NON EPA-6010-200.7(v2484) Mode: CONC Corr. Factor: 1.000000
User: Kareem 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	5.091912	4.961106	4.815259	5.146531	5.168855	9.922830	9.837046
Stddev	.035147	.075142	.010397	.037215	.041488	.044433	.062391
%RSD	.6902474	1.514621	.2159209	.7230997	.8026620	.4477842	.6342421
#1	5.062401	4.931894	4.804022	5.106239	5.135572	9.892179	9.765012
#2	5.082539	5.046467	4.817217	5.153740	5.155654	9.902524	9.872118
#3	5.130794	4.904956	4.824538	5.179614	5.215337	9.973788	9.874009

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2289225	2.372494	23.19034	.9685971	2.384841	1.282600	4.862700
Stddev	.0017776	.003053	.14018	.0031478	.002576	.008166	.031600
%RSD	.7765057	.1286979	.6044660	.3249889	.1080090	.6366586	.6498548
#1	.2300679	2.370787	23.22226	.9670758	2.382061	1.275535	4.838744
#2	.2298250	2.376019	23.31181	.9722167	2.385315	1.280724	4.898514
#3	.2268747	2.370675	23.03696	.9664990	2.387147	1.291540	4.850841

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.323056	23.75233	2.391787	1.215733	27.01423	2.411059	2.545001
Stddev	.014176	.08016	.003622	.001796	.35082	.005019	.004687
%RSD	.6102227	.3374929	.1514279	.1476911	1.298637	.2081853	.1841574
#1	2.320233	23.72385	2.387836	1.216031	26.82252	2.405625	2.547525
#2	2.338430	23.84284	2.394950	1.217361	26.80103	2.415522	2.539594
#3	2.310503	23.69029	2.392575	1.213807	27.41913	2.412029	2.547886

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	26.04747	4.663140	5.085301	4.785980	4.816917	5.053894	4.791264
Stddev	.34085	.024991	.025616	.011782	.013521	.057382	.031092
%RSD	1.308567	.5359342	.5037293	.2461865	.2807079	1.135410	.6489206
#1	25.77768	4.674134	5.057667	4.777623	4.801744	5.003597	4.757692
#2	25.93420	4.680749	5.089982	4.799456	4.827693	5.041689	4.819066
#3	26.43053	4.634536	5.108253	4.780862	4.821314	5.116398	4.797035

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739

Sample Name: CCV02 Acquired: 12/4/2024 14:37:35 Type: Unk
Method: NON EPA-6010-200.7(v2484) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV02 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.743324	5.075855	4.962205
Stddev	.013232	.074249	.033429
%RSD	.2789612	1.462791	.6736698
#1	4.734040	5.029419	4.946417
#2	4.758475	5.036657	4.939594
#3	4.737458	5.161489	5.000604

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2121.527	57646.82	15074.77	1460.494	3820.777
Stddev	23.480	214.89	16.06	14.237	28.384
%RSD	1.106734	.3727625	.1065427	.9748282	.7428756
#1	2140.231	57876.45	15073.99	1467.859	3845.418
#2	2129.172	57613.42	15059.11	1469.540	3827.172
#3	2095.177	57450.59	15091.21	1444.083	3789.741

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739

Sample Name: CCB02 Acquired: 12/4/2024 14:41:47 Type: Unk
Method: NON EPA-6010-200.7(v2484) Mode: CONC Corr. Factor: 1.000000
User: Kareem 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	-.002290	.0005777	-.000981	.0027489	-.000578	.0035833	^ *****
Stddev	.000258	.0012939	.000578	.0023938	.000613	.0015450	-----
%RSD	11.28096	223.9636	58.88255	87.08238	106.1184	43.11670	-----
#1	-.002414	.0012079	-.001343	.0052693	-.000904	.0025879	^ -----
#2	-.002464	-.000911	-.001285	.0024715	.000129	.0027989	-.006815
#3	-.001993	.001436	-.000315	.0005059	-.000959	.0053632	-.005817

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000024	-.000017	-.009087	.0001244	.0000652	-.000067	.0014505
Stddev	.000030	.000018	.003068	.0001340	.0000852	.000236	.0026781
%RSD	123.1196	109.0529	33.76240	107.6656	130.6614	354.0435	184.6317
#1	-.000058	.000001	-.008611	.0000786	.0001116	-.000220	.0045359
#2	-.000017	-.000016	-.012365	.0000194	-.000033	.000205	.0000871
#3	.000001	-.000036	-.006284	.0002753	.000117	-.000184	-.000272

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002364	-.001913	-.000186	.0004141	.0070800	.0008757	-.000541
Stddev	.0001990	.005607	.000114	.0002113	.0152953	.0003556	.000080
%RSD	84.16407	293.0680	61.56104	51.01477	216.0372	40.60750	14.82724
#1	.0004654	-.006916	-.000218	.0006208	-.009419	.0012811	-.000570
#2	.0001391	-.002970	-.000281	.0004230	.009872	.0006166	-.000450
#3	.0001048	.004147	-.000059	.0001986	.020787	.0007294	-.000603

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.077991	.0074871	.0006943	-.000414	.0004194	.0101697	.0057271
Stddev	.011044	.0004991	.0000902	.000558	.0001547	.0019993	.0005452
%RSD	14.16081	6.666264	12.99180	134.9683	36.88372	19.65918	9.520178
#1	-.080925	.0077651	.0007972	.000197	.0002411	.0084150	.0057867
#2	-.087272	.0077853	.0006563	-.000540	.0005169	.0097479	.0051545
#3	-.065776	.0069109	.0006293	-.000898	.0005003	.0123463	.0062400

Reviewed By:Jaswal
On:12/11/2024 2:16:21 AM
Inst Id :P4
LB :LB133739

Sample Name: CCB02 Acquired: 12/4/2024 14:41:47 Type: Unk
Method: NON EPA-6010-200.7(v2484) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB02 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.002929	-.000086	.0001426
Stddev	.001943	.000244	.0000483
%RSD	66.34234	283.2672	33.85758
#1	-.000987	-.000117	.0001971
#2	-.002927	-.000313	.0001257
#3	-.004874	.000172	.0001051

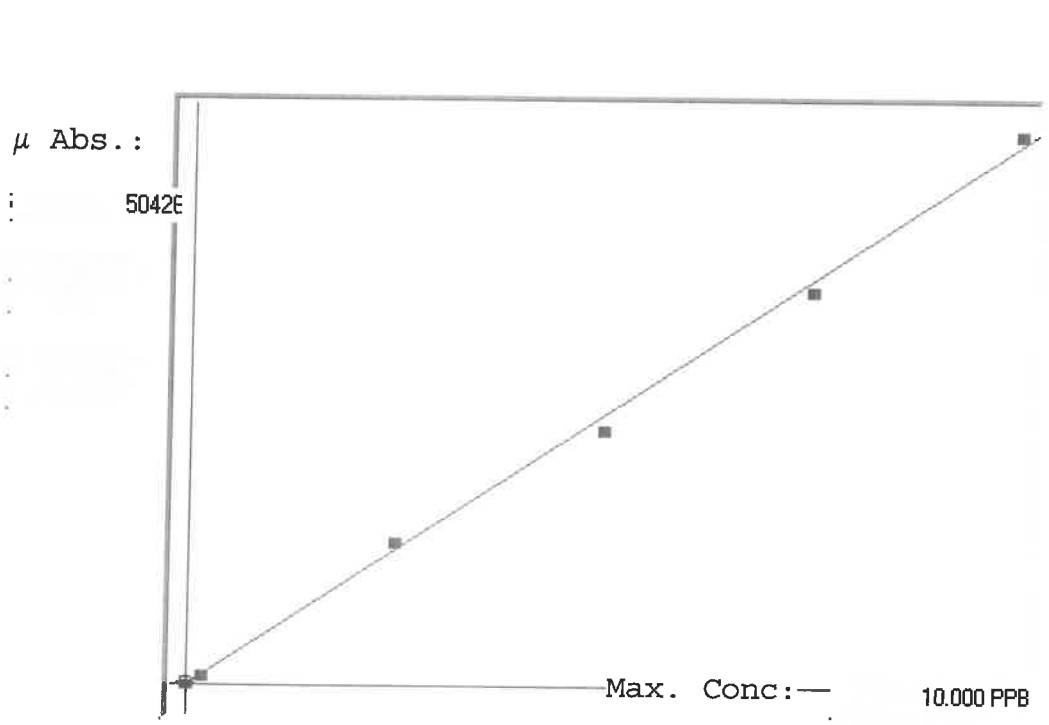
Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2273.914	60683.56	15050.30	1554.469	4374.911
Stddev	6.079	46.51	31.52	3.793	2.523
%RSD	.2673288	.0766476	.2094265	.2440363	.0576791
#1	2273.283	60726.94	15014.90	1550.410	4377.737
#2	2268.176	60689.28	15060.67	1557.924	4372.884
#3	2280.284	60634.44	15075.33	1555.072	4374.111

Reviewed By:mohan
On:10/31/2024
10:29:10 PM
Inst Id :CV1
LB :LB133227

LB133227

7471B

INSTRUMENT ID: CV2



Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	%D
0.0	0.000	0.047	0.047	179	0.000	179					7
0.2	0.200	0.214	0.014	1007	0.0 %	1007					7
2.5	2.500	2.679	0.179	13199	0.0 %	13199					-5
5.0	5.000	4.738	-0.262	23382	0.0 %	23382					-2
7.5	7.500	7.316	-0.184	36133	0.0 %	36133					2
10.0	10.000	10.206	0.206	50426	0.0 %	50426					

Reviewed By:mohan
On:10/31/2024
10:29:10 PM
Inst Id :CV1
LB :LB133227

LB33227 INSTRUMENT ID : CV

Method: 7471B Operator: Admin Date of Analysis: 31 Oct 2024 09:52:15

Sample ID	Extended ID	µ Abs.	Conc.	Stnd Conc	Method	Units	Date	Type	Type
0.0 - 1	S0	179	-	0.00000	7471B	PPB	31 Oct 2024 10:01:16	S	Std
0.2 - 1	S02	1007	-	0.20000	7471B	PPB	31 Oct 2024 10:03:33	S	Std
2.5 - 1	S2.5	13199	-	2.50000	7471B	PPB	31 Oct 2024 10:05:50	S	Std
5.0 - 1	S5	23382	-	5.00000	7471B	PPB	31 Oct 2024 10:08:06	S	Std
7.5 - 1	S7.5	36133	-	7.50000	7471B	PPB	31 Oct 2024 10:10:25	S	Std
10.0 - 1	S20	50426	-	10.00000	7471B	PPB	31 Oct 2024 10:18:13	S	Std
ICV61 - 1	ICV61	18604	3.7720		-7471B	PPB	31 Oct 2024 10:21:00	U	SMPL
ICB61 - 1	ICB61	-150	-0.0198		-7471B	PPB	31 Oct 2024 10:23:16	U	SMPL
CCV04 - 1	CCV04	24081	4.8793		-7471B	PPB	31 Oct 2024 10:25:35	U	SMPL
CCB04 - 1	CCB04	-104	-0.0105		-7471B	PPB	31 Oct 2024 10:27:50	U	SMPL
CRA - 1	CRA	1070	0.2269		-7471B	PPB	31 Oct 2024 10:30:07	U	SMPL
HighStd - 1	HighStd	50688	10.2589		-7471B	PPB	31 Oct 2024 10:32:22	U	SMPL
ChkStd - 1	ChkStd	33977	6.8802		-7471B	PPB	31 Oct 2024 10:34:37	U	SMPL
PB164552BL - 1	PBS	-351	-0.0605		-7471B	PPB	31 Oct 2024 10:36:59	U	SMPL
PB164552BS - 1	LCSS	18082	3.6664		-7471B	PPB	31 Oct 2024 10:39:19	U	SMPL
P4612-03 - 1	MOO-24-00335	971	0.2068		-7471B	PPB	31 Oct 2024 10:46:57	U	SMPL
P4613-01 - 1	ARS20-0001	3415	0.7010		-7471B	PPB	31 Oct 2024 10:49:14	U	SMPL
P4614-01 - 1	NB-07-102924	1858	0.3862		-7471B	PPB	31 Oct 2024 10:51:33	U	SMPL
P4616-01 - 1	BP-F10	503	0.1122		-7471B	PPB	31 Oct 2024 10:53:50	U	SMPL
CCV05 - 1	CCV05	24284	4.9204		-7471B	PPB	31 Oct 2024 10:56:06	U	SMPL
CCB05 - 1	CCB05	-62	-0.0020		-7471B	PPB	31 Oct 2024 11:01:14	U	SMPL
P4616-05 - 1	BP-F9-MOVED	611	0.1340		-7471B	PPB	31 Oct 2024 11:03:28	U	SMPL
P4617-01 - 1	RO-SOIL	7483	1.5235		-7471B	PPB	31 Oct 2024 11:05:44	U	SMPL
P4618-01 - 1	HR-01-102924	2056	0.4262		-7471B	PPB	31 Oct 2024 11:07:59	U	SMPL
P4618-01DUP - 1	HR-01-102924DUP	2385	0.4927		-7471B	PPB	31 Oct 2024 11:10:17	U	SMPL
P4618-01MS - 1	HR-01-102924MS	19791	4.0120		-7471B	PPB	31 Oct 2024 11:12:33	U	SMPL
P4618-01MSD - 1	HR-01-102924MSD	21551	4.3678		-7471B	PPB	31 Oct 2024 11:14:50	U	SMPL
P4618-03 - 1	HR-04-102924	6175	1.2590		-7471B	PPB	31 Oct 2024 11:17:09	U	SMPL
P4619-01 - 1	SU-03-102924	986	0.2099		-7471B	PPB	31 Oct 2024 11:19:28	U	SMPL
P4639-01 - 1	EO-01-103024	3794	0.7776		-7471B	PPB	31 Oct 2024 11:21:47	U	SMPL
P4639-03 - 1	EO-02-103024	4036	0.8265		-7471B	PPB	31 Oct 2024 11:24:02	U	SMPL
CCV06 - 1	CCV06	24426	4.9491		-7471B	PPB	31 Oct 2024 11:26:19	U	SMPL
CCB06 - 1	CCB06	114	0.0336		-7471B	PPB	31 Oct 2024 11:31:45	U	SMPL
P4640-01 - 1	MH-3	10295	2.0920		-7471B	PPB	31 Oct 2024 11:34:00	U	SMPL
P4495-10 - 1	PT-MET-SOIL	775962	HIGH		-7471B	PPB	31 Oct 2024 11:38:05	X	
P4618-01LX5 - 1		340	0.0793		-7471B	PPB	31 Oct 2024 11:43:46	U	SMPL
P4618-01A - 1		20927	4.2417		-7471B	PPB	31 Oct 2024 11:46:01	U	SMPL
P4495-10DLX10 - 1	PT-MET-SOIL	178693	36.1397		-7471B	PPB	31 Oct 2024 11:53:11	U	SMPL
P4495-10DL2X50 - 1	PT-MET-SOIL	33253	6.7338		-7471B	PPB	31 Oct 2024 12:00:37	U	SMPL
CCV07 - 1	CCV07	24337	4.9311		-7471B	PPB	31 Oct 2024 12:02:57	U	SMPL
CCB07 - 1	CCB07	-113	-0.0123		-7471B	PPB	31 Oct 2024 12:05:16	U	SMPL

Alliance TECHNICAL GROUP

Soil/Sludge Metals Preparation Sheet

PB165442

SOP ID : M3050B-Digestion-20, MSFAM01.1-Trace Metals-2

SDG No : MBHKJ1

Matrix : SOIL

Pippete ID: ICP A

Balance ID : M SC-2

Filter paper ID : N/A

pH Strip ID : N/A

Hood ID : #3

Block ID: 1. HOT BLOCK #3 2. N/A

Start Digest Date: 12/06/2024 **Time :** 13:10 **Temp :** 96 °C

End Digest Date: 12/06/2024 **Time :** 15:15 **Temp :** 96 °C

Digestion tube ID: M6054

Block thermometer ID: MET-DIG. # 3

Dig Technician Signature: jgp

Supervisor Signature:

Temp : 1. 96°C 2. N/A

Standared Name	MLS USED	STD REF. # FROM LOG
LCSS	1.00	MP83141
Spike Sol 6	1.00	MP83147
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
1:1 HNO3	10.00	MP83122
Conc. HNO3	5.00	M6126
30% H2O2	3.00	M6125
Conc. HCL	10.00	M6121
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 #3 CELL #35 : 96 C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
12/6/24 15:30	jgp Met dig	[illegible] Lab
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

Soil/Sludge Metals Preparation Sheet

PB165442

Lab Sample ID	Client Sample ID	pH	Initial Weight (g)	Final Vol (ml)	Color Before	Color After	Texture	Artifact	Comment	Prep Pos
P5039-01	MBHKJ1	N/A	1.23	100	Brown	Yellow	Medium	N/A	N/A	1
P5039-02	MBHKJ2	N/A	1.21	100	Brown	Yellow	Medium	N/A	N/A	2
P5039-03	MBHKJ3	N/A	1.16	100	Brown	Yellow	Medium	N/A	N/A	3
P5039-04	MBHKJ4	N/A	1.19	100	Brown	Yellow	Medium	N/A	N/A	4
P5039-05	MBHKJ5	N/A	1.06	100	Brown	Yellow	Medium	N/A	N/A	5
P5039-06	MBHKJ6	N/A	1.11	100	Brown	Yellow	Medium	N/A	N/A	6
P5039-07	MBHKJ7	N/A	1.16	100	Brown	Yellow	Medium	N/A	N/A	7
P5039-08	MBHKJ7D	N/A	1.13	100	Brown	Yellow	Medium	N/A	N/A	8
P5039-09	MBHKJ7S	N/A	1.15	100	Brown	Yellow	Medium	N/A	MP83147	9
P5039-10	MBHKK5	N/A	1.24	100	Brown	Yellow	Medium	N/A	N/A	10
P5039-11	MBHKK6	N/A	1.18	100	Brown	Yellow	Medium	N/A	N/A	11
P5039-12	MBHKK7	N/A	1.22	100	Brown	Yellow	Medium	N/A	N/A	12
P5039-13	MBHKL5	N/A	1.23	100	Brown	Yellow	Medium	N/A	N/A	13
P5039-14	MBHKL6	N/A	1.27	100	Brown	Yellow	Medium	N/A	N/A	14
P5039-15	MBHKL7	N/A	1.11	100	Brown	Yellow	Medium	N/A	N/A	15
P5039-16	MBHKL8	N/A	1.28	100	Brown	Yellow	Medium	N/A	N/A	16
P5039-17	MBHKL9	N/A	1.15	100	Brown	Yellow	Medium	N/A	N/A	17
P5039-18	MBHKM0	N/A	1.18	100	Brown	Yellow	Medium	N/A	N/A	18
P5039-19	MBHKM1	N/A	1.30	100	Brown	Yellow	Medium	N/A	N/A	19
P5039-20	MBHKM3	N/A	1.19	100	Brown	Yellow	Medium	N/A	N/A	20
P5039-21	MBHKM4	N/A	1.22	100	Brown	Yellow	Medium	N/A	N/A	21
PB165442BL	PBS442	N/A	1.00	100	Colorless	Colorless	Fine	N/A	N/A	22
PB165442BS	LCS442	N/A	1.00	100	Colorless	Colorless	Fine	N/A	MP83141	23

WORKLIST(Hardcopy Internal Chain)

WorkList Name : PB165442 **WorkList ID :** 186070 **Department :** Digestion **Date :** 12-06-2024 12:05:32

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P5039-01	MBHKJ1	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C22	11/20/2024	SFAM_AES
P5039-02	MBHKJ2	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C22	11/20/2024	SFAM_AES
P5039-03	MBHKJ3	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C22	11/20/2024	SFAM_AES
P5039-04	MBHKJ4	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C22	11/20/2024	SFAM_AES
P5039-05	MBHKJ5	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C22	11/20/2024	SFAM_AES
P5039-06	MBHKJ6	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C22	11/20/2024	SFAM_AES
P5039-07	MBHKJ7	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C22	11/20/2024	SFAM_AES
P5039-08	MBHKJ7D	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C22	11/20/2024	SFAM_AES
P5039-09	MBHKJ7S	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C22	11/20/2024	SFAM_AES
P5039-10	MBHKK5	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C22	11/20/2024	SFAM_AES
P5039-11	MBHKK6	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C22	11/20/2024	SFAM_AES
P5039-12	MBHKK7	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C22	11/20/2024	SFAM_AES
P5039-13	MBHKL5	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C22	11/20/2024	SFAM_AES
P5039-14	MBHKL6	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C22	11/20/2024	SFAM_AES
P5039-15	MBHKL7	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C22	11/20/2024	SFAM_AES
P5039-16	MBHKL8	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C22	11/20/2024	SFAM_AES
P5039-17	MBHKL9	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C22	11/20/2024	SFAM_AES
P5039-18	MBHKM0	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C22	11/20/2024	SFAM_AES
P5039-19	MBHKM1	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C22	11/20/2024	SFAM_AES
P5039-20	MBHKM3	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C22	11/20/2024	SFAM_AES
P5039-21	MBHKM4	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C22	11/20/2024	SFAM_AES

Date/Time 12/06/24 12:35

Raw Sample Received by: JGP Met dlg

Raw Sample Relinquished by: CP SM

Date/Time 12/06/24 13:05

Raw Sample Received by: CP SM

Raw Sample Relinquished by: JGP/Met dlg

Alliance TECHNICAL GROUP

Soil/Sludge Mercury Preparation Sheet

PB164552

SOP ID : M7471B-Mercury-18

SDG No : N/A

Matrix : SOIL

Pippete ID: HG A

Balance ID : M SC-3

Filter paper ID : NA

pH Strip ID : NA

Hood ID : #1

Block ID: 1. HG HOT BLOCK#3 2. N/A

Start Digest Date: 10/30/2024 **Time :** 16:50 **Temp :** 95 °C

End Digest Date: 10/30/2024 **Time :** 17:20 **Temp :** 94 °C

Digestion tube ID: M5041

Block thermometer ID: HG-DIG#3

Dig Technician Signature: MB

Supervisor Signature: 12

Temp : 1. 95°C 2. N/A

Standared Name	MLS USED	STD REF. # FROM LOG
ICV	30mL	MP82968
CCV	30mL	MP82970
CRA	30mL	MP82972
Blank Spike	0.48mL	MP82961
Matrix Spike	0.48mL	MP82961

Chemical Used	ML/SAMPLE USED	Lot Number
AQUA REGIA	1.5mL	MP82974
KMnO4 (5%)	4.5mL	MP82341
Hydroxylamine HCL	2.0mL	MP82343
PTFE Boiling Stones	----------	M4583
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

LAB SAMPLE ID	CLIENT SAMPLE ID	Wt(g)/Vol(ml)	Comment
0.0 ppb	S0	30mL	MP82962
0.05 ppb	S0.05	N/A	N/A
0.2 ppb	S0.2	30mL	MP82963
2.5 ppb	S2.5	30mL	MP82964
5.0 ppb	S5.0	30mL	MP82965
7.5 ppb	S7.5	30mL	MP82966
10.0 ppb	S10.0	30mL	MP82967
ICV	ICV	30mL	MP82968
ICB	ICB	30mL	MP82969
CCV	CCV	30mL	MP82970
CCB	CCB	30mL	MP82971
CRI	CRI	30mL	MP82972
CHK STD	CHK STD	30mL	MP82973

Extraction Conformance/Non-Conformance Comments:

N/A

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
10/30/2024 17:54	MB - Dig. lab	MB - Metal Lab
	Preparation Group	**Analysis Group**

Alliance TECHNICAL GROUP

Soil/Sludge Mercury Preparation Sheet

PB164552

Lab Sample ID	Client Sample ID	Initial Weight (g)	Final Vol (ml)	pH	Comment	Prep Pos
P4495-10	PT-MET-SOIL	0.54	35	NA	N/A	3-1
P4612-03	MOO-24-00335	0.59	35	NA	N/A	2
P4613-01	ARS20-0001	0.50	35	NA	N/A	3
P4614-01	NB-07-102924	0.53	35	NA	N/A	4
P4616-01	BP-F10	0.60	35	NA	N/A	5
P4616-05	BP-F9-MOVED	0.59	35	NA	N/A	6
P4617-01	RO-SOIL	0.58	35	NA	N/A	7
P4618-01	HR-01-102924	0.52	35	NA	N/A	8
P4618-01DUP	HR-01-102924DUP	0.56	35	NA	N/A	9
P4618-01MS	HR-01-102924MS	0.58	35	NA	MP82961	10
P4618-01MSD	HR-01-102924MSD	0.59	35	NA	MP82961	11
P4618-03	HR-04-102924	0.52	35	NA	N/A	12
P4619-01	SU-03-102924	0.59	35	NA	N/A	13
P4639-01	EO-01-103024	0.51	35	NA	N/A	14
P4639-03	EO-02-103024	0.56	35	NA	N/A	15
P4640-01	MH-3	0.51	35	NA	N/A	16
PB164552BL	PBS552	0.55	35	NA	N/A	17
PB164552BS	LCS552	0.56	35	NA	MP82961	18

WORKLIST(Hardcopy Internal Chain)

WorkList Name : 103024_7471 **WorkList ID :** 184938 **Department :** Digestion **Date :** 10-30-2024 09:14:27

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P4495-10	PT-MET-SOIL	Solid	Mercury	Cool 4 deg C	CHEM02	QA Of	10/21/2024	7471B
P4612-03	MOO-24-00335	Solid	Mercury	Cool 4 deg C	PSEG03	K61	10/29/2024	7471B
P4613-01	ARS20-0001	Solid	Mercury	Cool 4 deg C	PSEG03	K62	10/29/2024	7471B
P4616-01	BP-F10	Solid	Mercury	Cool 4 deg C	PSEG03	K61	10/29/2024	7471B
P4616-05	BP-F9-MOVED	Solid	Mercury	Cool 4 deg C	PSEG03	K61	10/29/2024	7471B
P4617-01	RO-SOIL	Solid	Mercury	Cool 4 deg C	PSEG03	K61	10/29/2024	7471B
P4639-01	EO-01-103024	Solid	Mercury	Cool 4 deg C	PSEG03	K61	10/30/2024	7471B
P4639-03	EO-02-103024	Solid	Mercury	Cool 4 deg C	PSEG03	K61	10/30/2024	7471B
P4640-01	MH-3	Solid	Mercury	Cool 4 deg C	PSEG03	K61	10/30/2024	7471B
P4614-01	NB-07-102924	Solid	Mercury	Cool 4 deg C	PSEG05	K63	10/29/2024	7471B
P4618-01	HR-01-102924	Solid	Mercury	Cool 4 deg C	PSEG05	K61	10/29/2024	7471B
P4618-03	HR-04-102924	Solid	Mercury	Cool 4 deg C	PSEG05	K61	10/29/2024	7471B
P4619-01	SU-03-102924	Solid	Mercury	Cool 4 deg C	PSEG05	K63	10/29/2024	7471B

Date/Time 10/30/24 @ 16:20

Raw Sample Received by: [illegible]

Raw Sample Relinquished by: [illegible]

Date/Time 10/30/24 @ 17:10

Raw Sample Received by: [illegible]

Raw Sample Relinquished by: [illegible]

PERCENT SOLID

Supervisor: Iwona
Analyst: jignesh
Date: 10/25/2024

OVENTEMP IN Celsius(°C): 107
Time IN: 17:25
In Date: 10/23/2024
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 08:20
Out Date: 10/24/2024
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLID- OVEN

QC: LB133085

Lab ID	Client SampleID	Dish #	Dish Wt(g) (A)	Sample Wt(g)	Dish + Sample Wt(g) (B)	Dish+Dry Sample Wt(g) (C)	% Solid	Comments
P4488-09	HCC-1	1	1.00	1.00	2.00	2.00	100.0	oil sample
P4488-10	HCC-2	2	1.00	1.00	2.00	2.00	100.0	oil sample
P4495-01	PT-AN-SOIL	3	1.00	1.00	2.00	2.00	100.0	
P4495-02	PT-CORR-SOIL	4	1.00	1.00	2.00	2.00	100.0	
P4495-03	PT-CN-SOIL	5	1.00	1.00	2.00	2.00	100.0	
P4495-04	PT-CN-SOIL	6	1.00	1.00	2.00	2.00	100.0	
P4495-05	PT-FP-SOIL	7	1.00	1.00	2.00	2.00	100.0	
P4495-06	PT-CR6-SOIL	8	1.00	1.00	2.00	2.00	100.0	
P4495-07	PT-NUT-SOIL	9	1.00	1.00	2.00	2.00	100.0	
P4495-08	PT-NUT-SOIL	10	1.00	1.00	2.00	2.00	100.0	
P4495-09	PT-OGR-SOIL	11	1.00	1.00	2.00	2.00	100.0	
P4495-10	PT-MET-SOIL	12	1.00	1.00	2.00	2.00	100.0	
P4495-11	PT-BNA-SOIL	13	1.00	1.00	2.00	2.00	100.0	
P4495-12	PT-TRIAZINE-SOIL	14	1.00	1.00	2.00	2.00	100.0	
P4495-13	PT-PAH-SOIL	15	1.00	1.00	2.00	2.00	100.0	
P4495-14	PT-DIES-SOIL	16	1.00	1.00	2.00	2.00	100.0	
P4495-15	PT-GAS-SOIL	17	1.00	1.00	2.00	2.00	100.0	
P4495-16	PT-NJEPH-SOIL	18	1.00	1.00	2.00	2.00	100.0	
P4495-17	PT-HERB-SOIL	19	1.00	1.00	2.00	2.00	100.0	
P4495-18	PT-PCB-SOIL	20	1.00	1.00	2.00	2.00	100.0	
P4495-19	PT-PCBO-SOIL	21	1.00	1.00	2.00	2.00	100.0	
P4495-20	PT-PEST-SOIL	22	1.00	1.00	2.00	2.00	100.0	
P4495-21	PT-CHLR-SOIL	23	1.00	1.00	2.00	2.00	100.0	
P4495-22	PT-TXP-SOIL	24	1.00	1.00	2.00	2.00	100.0	
P4495-23	PT-VOA-SOIL	25	1.00	1.00	2.00	2.00	100.0	
P4495-24	PT-SOL-SOIL	26	0.92	8.80	9.72	7.58	75.7	
P4495-25	PT-NO2-SOIL	27	1.00	1.00	2.00	2.00	100.0	
P4508-01	TP-3	28	1.14	8.38	9.52	8.64	89.5	

PERCENT SOLID

Supervisor: Iwona
Analyst: jignesh
Date: 10/25/2024

OVENTEMP IN Celsius(°C): 107
Time IN: 17:25
In Date: 10/23/2024
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 08:20
Out Date: 10/24/2024
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLID- OVEN

QC: LB133085

Lab ID	Client SampleID	Dish #	Dish Wt(g) (A)	Sample Wt(g)	Dish + Sample Wt(g) (B)	Dish+Dry Sample Wt(g) (C)	% Solid	Comments
P4508-02	TP-3-EPH	29	1.15	8.81	9.96	9.22	91.6	
P4508-03	TP-3-VOC	30	1.15	8.66	9.81	8.88	89.3	
P4508-05	BP-F23	31	1.15	8.82	9.97	9.22	91.5	
P4508-06	BP-F23-EPH	32	1.14	8.83	9.97	9.29	92.3	
P4508-07	BP-F23-VOC	33	1.15	8.40	9.55	8.61	88.8	
P4508-09	BP-F22	34	1.18	8.78	9.96	9.15	90.8	
P4508-10	BP-F22-EPH	35	1.15	8.70	9.85	8.98	90.0	
P4508-11	BP-F22-VOC	36	1.16	8.60	9.76	8.68	87.4	
P4509-02	AU-06-10232024	37	1.12	8.82	9.94	9.44	94.3	
P4510-01	FDH119M-1-1	38	1.00	1.00	2.00	2.00	100.0	pilc
P4510-02	FDH119M-1-2	39	1.00	1.00	2.00	2.00	100.0	pilc
P4510-03	BC271327-1-1	40	1.00	1.00	2.00	2.00	100.0	pilc
P4510-04	BC271327-1-2	41	1.00	1.00	2.00	2.00	100.0	pilc
P4510-05	BC271327-2-1	42	1.00	1.00	2.00	2.00	100.0	pilc
P4510-06	BC271327-2-2	43	1.00	1.00	2.00	2.00	100.0	pilc
P4510-07	FDA886K-1-1	44	1.00	1.00	2.00	2.00	100.0	pilc
P4510-08	FDA886K-1-2	45	1.00	1.00	2.00	2.00	100.0	pilc
P4510-09	FDA886K-2-1	46	1.00	1.00	2.00	2.00	100.0	pilc
P4510-10	FDA886K-2-2	47	1.00	1.00	2.00	2.00	100.0	pilc
P4510-11	HID111K-1-1	48	1.00	1.00	2.00	2.00	100.0	pilc
P4510-12	HID111K-1-2	49	1.00	1.00	2.00	2.00	100.0	pilc
P4510-13	HID111K-2-1	50	1.00	1.00	2.00	2.00	100.0	pilc
P4510-14	HID111K-2-2	51	1.00	1.00	2.00	2.00	100.0	pilc
P4510-15	HID111K-3-1	52	1.00	1.00	2.00	2.00	100.0	pilc
P4510-16	HID111K-3-2	53	1.00	1.00	2.00	2.00	100.0	pilc
P4510-17	FDA563W-1-1	54	1.00	1.00	2.00	2.00	100.0	pilc
P4510-18	FDA563W-1-2	55	1.00	1.00	2.00	2.00	100.0	pilc
P4510-19	FDA563W-2-1	56	1.00	1.00	2.00	2.00	100.0	pilc

PERCENT SOLID

Supervisor: Iwona
Analyst: jignesh
Date: 10/25/2024

OVENTEMP IN Celsius(°C): 107
Time IN: 17:25
In Date: 10/23/2024
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 08:20
Out Date: 10/24/2024
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLID- OVEN

QC: LB133085

Lab ID	Client SampleID	Dish #	Dish Wt(g) (A)	Sample Wt(g)	Dish + Sample Wt(g) (B)	Dish+Dry Sample Wt(g) (C)	% Solid	Comments
P4510-20	FDA563W-2-2	57	1.00	1.00	2.00	2.00	100.0	oilc
P4510-21	JEC128C-1-1	58	1.00	1.00	2.00	2.00	100.0	oilc
P4510-22	JEC128C-1-2	59	1.00	1.00	2.00	2.00	100.0	oilc
P4510-23	JEC128C-2-1	60	1.00	1.00	2.00	2.00	100.0	oilc
P4510-24	JEC128C-2-2	61	1.00	1.00	2.00	2.00	100.0	oilc
P4511-02	267	62	1.00	1.00	2.00	2.00	100.0	debris
P4512-03	VNJ-212	63	1.15	8.81	9.96	9.66	96.6	
P4512-04	VNJ-212-E2	64	1.16	8.48	9.64	9.39	97.1	
P4513-01	D3683	65	1.00	1.00	2.00	2.00	100.0	oil sample
P4513-02	D3694	66	1.00	1.00	2.00	2.00	100.0	debris
P4513-03	D3695	67	1.00	1.00	2.00	2.00	100.0	debris
P4514-01	BC274653-1-1	68	1.00	1.00	2.00	2.00	100.0	oilc
P4514-02	BC274653-1-2	69	1.00	1.00	2.00	2.00	100.0	oilc
P4514-03	BC274767-1-1	70	1.00	1.00	2.00	2.00	100.0	oilc
P4514-04	BC274767-1-2	71	1.00	1.00	2.00	2.00	100.0	oilc
P4514-05	BC274767-2-1	72	1.00	1.00	2.00	2.00	100.0	oilc
P4514-06	BC274767-2-2	73	1.00	1.00	2.00	2.00	100.0	oilc
P4515-01	CHVB0783	74	1.15	8.83	9.98	5.28	46.8	
P4516-01	72-11986	75	1.12	8.67	9.79	8.93	90.1	
P4517-01	NASSAU-ST-CO	76	1.00	1.00	2.00	2.00	100.0	CONCRETE sample
P4517-03	S.JEFFERSON-CO-1	77	1.00	1.00	2.00	2.00	100.0	CONCRETE sample
P4517-05	S.JEFFERSON-CO-2	78	1.00	1.00	2.00	2.00	100.0	CONCRETE sample
P4517-07	FOREST-ST-CO	79	1.00	1.00	2.00	2.00	100.0	CONCRETE sample

$$\% \text{ Solid} = \frac{(C-A) * 100}{(B-A)}$$

WORKLIST(Hardcopy Internal Chain)

MB133085

WorkList Name : %1-102324 **WorkList ID :** 184679 **Department :** Wet-Chemistry **Date :** 10-23-2024 08:16:39

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P4488-09	HCC-1	Solid	Percent Solids	Cool 4 deg C	PSEG03	K61	10/22/2024	Chemtech -SO
P4488-10	HCC-2	Solid	Percent Solids	Cool 4 deg C	PSEG03	K61	10/22/2024	Chemtech -SO
P4495-01	PT-AN-SOIL	Solid	Percent Solids	Cool 4 deg C	CHEM02	QA Of	10/21/2024	Chemtech -SO
P4495-02	PT-CORR-SOIL	Solid	Percent Solids	Cool 4 deg C	CHEM02	QA Of	10/21/2024	Chemtech -SO
P4495-03	PT-CN-SOIL	Solid	Percent Solids	Cool 4 deg C	CHEM02	QA Of	10/21/2024	Chemtech -SO
P4495-04	PT-CN-SOIL	Solid	Percent Solids	Cool 4 deg C	CHEM02	QA Of	10/21/2024	Chemtech -SO
P4495-05	PT-FP-SOIL	Solid	Percent Solids	Cool 4 deg C	CHEM02	QA Of	10/21/2024	Chemtech -SO
P4495-06	PT-CR6-SOIL	Solid	Percent Solids	Cool 4 deg C	CHEM02	QA Of	10/21/2024	Chemtech -SO
P4495-07	PT-NUT-SOIL	Solid	Percent Solids	Cool 4 deg C	CHEM02	QA Of	10/21/2024	Chemtech -SO
P4495-08	PT-NUT-SOIL	Solid	Percent Solids	Cool 4 deg C	CHEM02	QA Of	10/21/2024	Chemtech -SO
P4495-09	PT-OGR-SOIL	Solid	Percent Solids	Cool 4 deg C	CHEM02	QA Of	10/21/2024	Chemtech -SO
P4495-10	PT-MET-SOIL	Solid	Percent Solids	Cool 4 deg C	CHEM02	QA Of	10/21/2024	Chemtech -SO
P4495-11	PT-BNA-SOIL	Solid	Percent Solids	Cool 4 deg C	CHEM02	QA Of	10/21/2024	Chemtech -SO
P4495-12	PT-TRIAZINE-SOIL	Solid	Percent Solids	Cool 4 deg C	CHEM02	QA Of	10/21/2024	Chemtech -SO
P4495-13	PT-PAH-SOIL	Solid	Percent Solids	Cool 4 deg C	CHEM02	QA Of	10/21/2024	Chemtech -SO
P4495-14	PT-DIES-SOIL	Solid	Percent Solids	Cool 4 deg C	CHEM02	QA Of	10/21/2024	Chemtech -SO
P4495-15	PT-GAS-SOIL	Solid	Percent Solids	Cool 4 deg C	CHEM02	QA Of	10/21/2024	Chemtech -SO
P4495-16	PT-NJEPH-SOIL	Solid	Percent Solids	Cool 4 deg C	CHEM02	QA Of	10/21/2024	Chemtech -SO
P4495-17	PT-HERB-SOIL	Solid	Percent Solids	Cool 4 deg C	CHEM02	QA Of	10/21/2024	Chemtech -SO
P4495-18	PT-PCB-SOIL	Solid	Percent Solids	Cool 4 deg C	CHEM02	QA Of	10/21/2024	Chemtech -SO
P4495-19	PT-PCBO-SOIL	Solid	Percent Solids	Cool 4 deg C	CHEM02	QA Of	10/21/2024	Chemtech -SO

Date/Time 10/23/24 16:00

Raw Sample Received by: JB (WC)

Raw Sample Relinquished by: [signature]

Date/Time 10/23/24 17:30

Raw Sample Received by: [signature]

Raw Sample Relinquished by: JB (WC)

WORKLIST(Hardcopy Internal Chain)

WB 133085

WorkList Name : %1-102324 **WorkList ID :** 184679 **Department :** Wet-Chemistry **Date :** 10-23-2024 08:16:39

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P4495-20	PT-PEST-SOIL	Solid	Percent Solids	Cool 4 deg C	CHEM02	QA Of	10/21/2024	Chemtech -SO
P4495-21	PT-CHLR-SOIL	Solid	Percent Solids	Cool 4 deg C	CHEM02	QA Of	10/21/2024	Chemtech -SO
P4495-22	PT-TXP-SOIL	Solid	Percent Solids	Cool 4 deg C	CHEM02	QA Of	10/21/2024	Chemtech -SO
P4495-23	PT-VOA-SOIL	Solid	Percent Solids	Cool 4 deg C	CHEM02	QA Of	10/21/2024	Chemtech -SO
P4495-24	PT-SOL-SOIL	Solid	Percent Solids	Cool 4 deg C	CHEM02	QA Of	10/21/2024	Chemtech -SO
P4495-25	PT-NO2-SOIL	Solid	Percent Solids	Cool 4 deg C	CHEM02	QA Of	10/21/2024	Chemtech -SO
P4508-01	TP-3	Solid	Percent Solids	Cool 4 deg C	PSEG03	K63	10/23/2024	Chemtech -SO
P4508-02	TP-3-EPH	Solid	Percent Solids	Cool 4 deg C	PSEG03	K63	10/23/2024	Chemtech -SO
P4508-03	TP-3-VOC	Solid	Percent Solids	Cool 4 deg C	PSEG03	K63	10/23/2024	Chemtech -SO
P4508-05	BP-F23	Solid	Percent Solids	Cool 4 deg C	PSEG03	K63	10/23/2024	Chemtech -SO
P4508-06	BP-F23-EPH	Solid	Percent Solids	Cool 4 deg C	PSEG03	K63	10/23/2024	Chemtech -SO
P4508-07	BP-F23-VOC	Solid	Percent Solids	Cool 4 deg C	PSEG03	K63	10/23/2024	Chemtech -SO
P4508-09	BP-F22	Solid	Percent Solids	Cool 4 deg C	PSEG03	K63	10/23/2024	Chemtech -SO
P4508-10	BP-F22-EPH	Solid	Percent Solids	Cool 4 deg C	PSEG03	K63	10/23/2024	Chemtech -SO
P4508-11	BP-F22-VOC	Solid	Percent Solids	Cool 4 deg C	PSEG03	K63	10/23/2024	Chemtech -SO
P4509-02	AU-06-10232024	Solid	Percent Solids	Cool 4 deg C	PSEG05	K61	10/23/2024	Chemtech -SO
P4510-01	FDH119M-1-1	Solid	Percent Solids	Cool 4 deg C	PSEG03	K61	10/23/2024	Chemtech -SO
P4510-02	FDH119M-1-2	Solid	Percent Solids	Cool 4 deg C	PSEG03	K61	10/23/2024	Chemtech -SO
P4510-03	BC271327-1-1	Solid	Percent Solids	Cool 4 deg C	PSEG03	K61	10/23/2024	Chemtech -SO
P4510-04	BC271327-1-2	Solid	Percent Solids	Cool 4 deg C	PSEG03	K61	10/23/2024	Chemtech -SO
P4510-05	BC271327-2-1	Solid	Percent Solids	Cool 4 deg C	PSEG03	K61	10/23/2024	Chemtech -SO

Date/Time 10/23/24 16:00

Raw Sample Received by: JB (WC)

Raw Sample Relinquished by: CP

Date/Time 10/23/24 17:30

Raw Sample Received by: CP

Raw Sample Relinquished by: JB WC

WORKLIST(Hardcopy Internal Chain)

JD 133085

WorkList Name : %1-102324 **WorkList ID :** 184679 **Department :** Wet-Chemistry **Date :** 10-23-2024 08:16:39

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P4510-06	BC271327-2-2	Solid	Percent Solids	Cool 4 deg C	PSEG03	K61	10/23/2024	Chemtech -SO
P4510-07	FDA886K-1-1	Solid	Percent Solids	Cool 4 deg C	PSEG03	K61	10/23/2024	Chemtech -SO
P4510-08	FDA886K-1-2	Solid	Percent Solids	Cool 4 deg C	PSEG03	K61	10/23/2024	Chemtech -SO
P4510-09	FDA886K-2-1	Solid	Percent Solids	Cool 4 deg C	PSEG03	K61	10/23/2024	Chemtech -SO
P4510-10	FDA886K-2-2	Solid	Percent Solids	Cool 4 deg C	PSEG03	K61	10/23/2024	Chemtech -SO
P4510-11	HID111K-1-1	Solid	Percent Solids	Cool 4 deg C	PSEG03	K61	10/23/2024	Chemtech -SO
P4510-12	HID111K-1-2	Solid	Percent Solids	Cool 4 deg C	PSEG03	K61	10/23/2024	Chemtech -SO
P4510-13	HID111K-2-1	Solid	Percent Solids	Cool 4 deg C	PSEG03	K61	10/23/2024	Chemtech -SO
P4510-14	HID111K-2-2	Solid	Percent Solids	Cool 4 deg C	PSEG03	K61	10/23/2024	Chemtech -SO
P4510-15	HID111K-3-1	Solid	Percent Solids	Cool 4 deg C	PSEG03	K61	10/23/2024	Chemtech -SO
P4510-16	HID111K-3-2	Solid	Percent Solids	Cool 4 deg C	PSEG03	K61	10/23/2024	Chemtech -SO
P4510-17	FDA563W-1-1	Solid	Percent Solids	Cool 4 deg C	PSEG03	K61	10/23/2024	Chemtech -SO
P4510-18	FDA563W-1-2	Solid	Percent Solids	Cool 4 deg C	PSEG03	K61	10/23/2024	Chemtech -SO
P4510-19	FDA563W-2-1	Solid	Percent Solids	Cool 4 deg C	PSEG03	K61	10/23/2024	Chemtech -SO
P4510-20	FDA563W-2-2	Solid	Percent Solids	Cool 4 deg C	PSEG03	K61	10/23/2024	Chemtech -SO
P4510-21	JEC128C-1-1	Solid	Percent Solids	Cool 4 deg C	PSEG03	K61	10/23/2024	Chemtech -SO
P4510-22	JEC128C-1-2	Solid	Percent Solids	Cool 4 deg C	PSEG03	K61	10/23/2024	Chemtech -SO
P4510-23	JEC128C-2-1	Solid	Percent Solids	Cool 4 deg C	PSEG03	K61	10/23/2024	Chemtech -SO
P4510-24	JEC128C-2-2	Solid	Percent Solids	Cool 4 deg C	PSEG03	K61	10/23/2024	Chemtech -SO
P4511-02	267	Solid	Percent Solids	Cool 4 deg C	PSEG03	K61	10/23/2024	Chemtech -SO
P4512-03	VNJ-212	Solid	Percent Solids	Cool 4 deg C	PSEG03	K61	10/23/2024	Chemtech -SO

Date/Time 10/23/24 1610

Raw Sample Received by: JD CWC

Raw Sample Relinquished by: CP

Date/Time 10/23/24 1730

Raw Sample Received by: CP

Raw Sample Relinquished by: JD CWC

WORKLIST(Hardcopy Internal Chain)

WB 133085

WorkList Name : %1-102324 **WorkList ID :** 184679 **Department :** Wet-Chemistry **Date :** 10-23-2024 08:16:39

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P4512-04	VNJ-212-E2	Solid	Percent Solids	Cool 4 deg C	PSEG03	K61	10/23/2024	Chemtech -SO
P4513-01	D3683	Solid	Percent Solids	Cool 4 deg C	PSEG03	K61	10/23/2024	Chemtech -SO
P4513-02	D3694	Solid	Percent Solids	Cool 4 deg C	PSEG03	K61	10/23/2024	Chemtech -SO
P4513-03	D3695	Solid	Percent Solids	Cool 4 deg C	PSEG03	K61	10/23/2024	Chemtech -SO
P4514-01	BC274653-1-1	Solid	Percent Solids	Cool 4 deg C	PSEG03	K31	10/23/2024	Chemtech -SO
P4514-02	BC274653-1-2	Solid	Percent Solids	Cool 4 deg C	PSEG03	K31	10/23/2024	Chemtech -SO
P4514-03	BC274767-1-1	Solid	Percent Solids	Cool 4 deg C	PSEG03	K31	10/23/2024	Chemtech -SO
P4514-04	BC274767-1-2	Solid	Percent Solids	Cool 4 deg C	PSEG03	K31	10/23/2024	Chemtech -SO
P4514-05	BC274767-2-1	Solid	Percent Solids	Cool 4 deg C	PSEG03	K31	10/23/2024	Chemtech -SO
P4514-06	BC274767-2-2	Solid	Percent Solids	Cool 4 deg C	PSEG03	K31	10/23/2024	Chemtech -SO
P4515-01	CHVB0783	Solid	Percent Solids	Cool 4 deg C	PSEG03	K62	10/23/2024	Chemtech -SO
P4516-01	72-11986	Solid	Percent Solids	Cool 4 deg C	PSEG03	K62	10/23/2024	Chemtech -SO
P4517-01	NASSAU-ST-CO	Solid	Percent Solids	Cool 4 deg C	PSEG03	K61	10/23/2024	Chemtech -SO
P4517-03	S.JEFFERSON-CO-1	Solid	Percent Solids	Cool 4 deg C	PSEG03	K61	10/23/2024	Chemtech -SO
P4517-05	S.JEFFERSON-CO-2	Solid	Percent Solids	Cool 4 deg C	PSEG03	K61	10/23/2024	Chemtech -SO
P4517-07	FOREST-ST-CO	Solid	Percent Solids	Cool 4 deg C	PSEG03	K61	10/23/2024	Chemtech -SO

Date/Time 10/23/24 16:00

Raw Sample Received by: [signature]

Raw Sample Relinquished by: [signature]

Date/Time 10/23/24 1730

Raw Sample Received by: [signature]

Raw Sample Relinquished by: [signature]

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Fax : 908 789 8922

Instrument ID: CV1

Daily Analysis Runlog For Sequence/QCBatch ID # LB133227

Review By	jaswal	Review On	10/31/2024 10:27:23 PM
Supervise By	mohan	Supervise On	10/31/2024 10:29:10 PM

STD. NAME	STD REF.#
ICAL Standard	MP82962,MP82963,MP82964,MP82965,MP82966,MP82967
ICV Standard	MP82968
CCV Standard	MP82970
ICSA Standard	
CRI Standard	MP82972
LCS Standard	
Chk Standard	MP82969,MP82971,MP82973,MP82996

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	10/31/24 10:01		Mohan	OK
2	S0.2	S0.2	CAL2	10/31/24 10:03		Mohan	OK
3	S2.5	S2.5	CAL3	10/31/24 10:05		Mohan	OK
4	S5	S5	CAL4	10/31/24 10:08		Mohan	OK
5	S7.5	S7.5	CAL5	10/31/24 10:10		Mohan	OK
6	S10	S10	CAL6	10/31/24 10:18		Mohan	OK
7	ICV61	ICV61	ICV	10/31/24 10:21		Mohan	OK
8	ICB61	ICB61	ICB	10/31/24 10:23		Mohan	OK
9	CCV04	CCV04	CCV	10/31/24 10:25		Mohan	OK
10	CCB04	CCB04	CCB	10/31/24 10:27		Mohan	OK
11	CRA	CRA	CRDL	10/31/24 10:30		Mohan	OK
12	HighStd	HighStd	HIGH STD	10/31/24 10:32		Mohan	OK
13	ChkStd	ChkStd	SAM	10/31/24 10:34		Mohan	OK
14	PB164552BL	PB164552BL	MB	10/31/24 10:36		Mohan	OK
15	PB164552BS	PB164552BS	LCS	10/31/24 10:39		Mohan	OK
16	P4612-03	MOO-24-00335	SAM	10/31/24 10:46		Mohan	OK
17	P4613-01	ARS20-0001	SAM	10/31/24 10:49		Mohan	OK
18	P4614-01	NB-07-102924	SAM	10/31/24 10:51		Mohan	OK

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Instrument ID: CV1

Daily Analysis Runlog For Sequence/QCBatch ID # LB133227

Review By	jaswal	Review On	10/31/2024 10:27:23 PM
Supervise By	mohan	Supervise On	10/31/2024 10:29:10 PM

STD. NAME	STD REF.#
ICAL Standard	MP82962,MP82963,MP82964,MP82965,MP82966,MP82967
ICV Standard	MP82968
CCV Standard	MP82970
ICSA Standard	
CRI Standard	MP82972
LCS Standard	
Chk Standard	MP82969,MP82971,MP82973,MP82996

19	P4616-01	BP-F10	SAM	10/31/24 10:53		Mohan	OK
20	CCV05	CCV05	CCV	10/31/24 10:56		Mohan	OK
21	CCB05	CCB05	CCB	10/31/24 11:01		Mohan	OK
22	P4616-05	BP-F9-MOVED	SAM	10/31/24 11:03		Mohan	OK
23	P4617-01	RO-SOIL	SAM	10/31/24 11:05		Mohan	OK
24	P4618-01	HR-01-102924	SAM	10/31/24 11:07		Mohan	OK
25	P4618-01DUP	HR-01-102924DUP	DUP	10/31/24 11:10		Mohan	OK
26	P4618-01MS	HR-01-102924MS	MS	10/31/24 11:12		Mohan	OK
27	P4618-01MSD	HR-01-102924MSD	MSD	10/31/24 11:14		Mohan	OK
28	P4618-03	HR-04-102924	SAM	10/31/24 11:17		Mohan	OK
29	P4619-01	SU-03-102924	SAM	10/31/24 11:19		Mohan	OK
30	P4639-01	EO-01-103024	SAM	10/31/24 11:21		Mohan	OK
31	P4639-03	EO-02-103024	SAM	10/31/24 11:24		Mohan	OK
32	CCV06	CCV06	CCV	10/31/24 11:26		Mohan	OK
33	CCB06	CCB06	CCB	10/31/24 11:31		Mohan	OK
34	P4640-01	MH-3	SAM	10/31/24 11:34		Mohan	OK
35	P4495-10	PT-MET-SOIL	SAM	10/31/24 11:38	High	Mohan	Dilution
36	P4618-01L	HR-01-102924L	SD	10/31/24 11:43		Mohan	OK
37	P4618-01A	HR-01-102924A	PS	10/31/24 11:46		Mohan	OK
38	P4495-10DL	PT-MET-SOILDL	SAM	10/31/24 11:53	Report 10x,Still high	Mohan	Dilution

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Instrument ID: CV1

Daily Analysis Runlog For Sequence/QCBatch ID # LB133227

Review By	jaswal	Review On	10/31/2024 10:27:23 PM
Supervise By	mohan	Supervise On	10/31/2024 10:29:10 PM

STD. NAME	STD REF.#
ICAL Standard	MP82962,MP82963,MP82964,MP82965,MP82966,MP82967
ICV Standard	MP82968
CCV Standard	MP82970
ICSA Standard	
CRI Standard	MP82972
LCS Standard	
Chk Standard	MP82969,MP82971,MP82973,MP82996

39	P4495-10DL2	PT-MET-SOILDL2	SAM	10/31/24 12:00	Report 50x	Mohan	Confirms
40	CCV07	CCV07	CCV	10/31/24 12:02		Mohan	OK
41	CCB07	CCB07	CCB	10/31/24 12:05		Mohan	OK

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Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB133669

Review By	kareem	Review On	12/3/2024 8:31:38 PM
Supervise By	Jaswal	Supervise On	12/11/2024 2:14:36 AM

STD. NAME	STD REF.#
ICAL Standard	MP83078 MP83079 MP73080 MP83081 MP83082 MP83084
ICV Standard	MP83085
CCV Standard	MP83088
ICSA Standard	MP83086 MP83087
CRI Standard	MP83084
LCS Standard	
Chk Standard	MP83091 MP83092

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	11/27/24 10:06		Kareem	OK
2	S1	S1	CAL2	11/27/24 10:11		Kareem	OK
3	S2	S2	CAL3	11/27/24 10:15		Kareem	OK
4	S3	S3	CAL4	11/27/24 10:19		Kareem	OK
5	S4	S4	CAL5	11/27/24 10:24		Kareem	OK
6	S5	S5	CAL6	11/27/24 10:28		Kareem	OK
7	ICV01	ICV01	ICV	11/27/24 12:25		Kareem	OK
8	LLICV01	LLICV01	LLICV	11/27/24 12:38		Kareem	OK
9	ICB01	ICB01	ICB	11/27/24 12:43		Kareem	OK
10	CRI01	CRI01	CRDL	11/27/24 12:47		Kareem	OK
11	ICSA01	ICSA01	ICSA	11/27/24 13:25		Kareem	OK
12	ICSAB01	ICSAB01	ICSAB	11/27/24 14:03		Kareem	OK
13	CCV01	CCV01	CCV	11/27/24 14:08		Kareem	OK
14	CCB01	CCB01	CCB	11/27/24 14:48		Kareem	OK
15	P4495-10	PT-MET-SOIL	SAM	11/27/24 14:52	Be,Cr,Li,Ti high	Kareem	Dilution
16	P4495-10RE	PT-MET-SOILRE	SAM	11/27/24 15:02	Not use	Kareem	Not Ok
17	P4495-10DL	PT-MET-SOILDL	SAM	11/27/24 15:07	5X for Be,Cr,Li,Ti, Still Be high	Kareem	Dilution
18	PB165242BL	PB165242BL	MB	11/27/24 15:11		Kareem	OK

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Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB133669

Review By	kareem	Review On	12/3/2024 8:31:38 PM
Supervise By	Jaswal	Supervise On	12/11/2024 2:14:36 AM

STD. NAME	STD REF.#
ICAL Standard	MP83078 MP83079 MP73080 MP83081 MP83082 MP83084
ICV Standard	MP83085
CCV Standard	MP83088
ICSA Standard	MP83086 MP83087
CRI Standard	MP83084
LCS Standard	
Chk Standard	MP83091 MP83092

19	PB165242BS	PB165242BS	LCS	11/27/24 15:40	0.1ml of m6010 and m6001 were added to 10ml of the sample	Kareem	OK
20	P4938-04	MH-732	SAM	11/27/24 15:44		Kareem	OK
21	CCV02	CCV02	CCV	11/27/24 15:50		Kareem	OK
22	CCB02	CCB02	CCB	11/27/24 15:54		Kareem	OK
23	P4938-08	MH-734	SAM	11/27/24 15:58		Kareem	OK
24	CCV03	CCV03	CCV	11/27/24 16:03		Kareem	OK
25	CCB03	CCB03	CCB	11/27/24 16:07		Kareem	OK
26	P4938-04DUP	MH-732DUP	DUP	11/27/24 16:11		Kareem	OK
27	P4938-04L	MH-732L	SD	11/27/24 16:16		Kareem	OK
28	P4938-04MS	MH-732MS	MS	11/27/24 16:20	0.1ml of m6010 and m6001 were added to 10ml of the sample	Kareem	OK
29	P4938-04MSD	MH-732MSD	MSD	11/27/24 16:24	0.1ml of m6010 and m6001 were added to 10ml of the sample	Kareem	OK
30	P4938-04A	MH-732A	PS	11/27/24 16:28	0.1ml of m6010 and m6001 were added to 10ml of the sample	Kareem	OK
31	P4971-01	CL-02-112224	SAM	11/27/24 16:35		Kareem	OK
32	CCV04	CCV04	CCV	11/27/24 16:39		Kareem	OK
33	CCB04	CCB04	CCB	11/27/24 16:43		Kareem	OK
34	PB165159TB	PB165159TB	MB	11/27/24 16:49		Kareem	OK

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Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB133669

Review By	kareem	Review On	12/3/2024 8:31:38 PM
Supervise By	Jaswal	Supervise On	12/11/2024 2:14:36 AM

STD. NAME	STD REF.#
ICAL Standard	MP83078 MP83079 MP73080 MP83081 MP83082 MP83084
ICV Standard	MP83085
CCV Standard	MP83088
ICSA Standard	MP83086 MP83087
CRI Standard	MP83084
LCS Standard	
Chk Standard	MP83091 MP83092

35	PB165233BL	PB165233BL	MB	11/27/24 16:54		Kareem	OK
36	PB165233BS	PB165233BS	LCS	11/27/24 16:58	0.1ml of m6010 and m6001 were added to 10ml of the sample	Kareem	OK
37	LR1	LR1	HIGH STD	11/27/24 17:07		Kareem	OK
38	LR2	LR2	HIGH STD	11/27/24 17:12		Kareem	OK
39	P4946-01	BW-1	SAM	11/27/24 17:19		Kareem	OK
40	P4946-02	BW-2	SAM	11/27/24 17:23	Cr high	Kareem	Dilution
41	P4946-02DL	BW-2DL	SAM	11/27/24 17:29	2X for Cr	Kareem	Confirms
42	CCV05	CCV05	CCV	11/27/24 17:34		Kareem	OK
43	CCB05	CCB05	CCB	11/27/24 17:46		Kareem	OK

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Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB133739

Review By	kareem	Review On	12/5/2024 4:29:51 PM
Supervise By	Jaswal	Supervise On	12/11/2024 2:16:21 AM

STD. NAME	STD REF.#
ICAL Standard	MP83078 MP83079 MP73080 MP83081 MP83082 MP83084
ICV Standard	MP83085
CCV Standard	MP83088
ICSA Standard	MP83086 MP83087
CRI Standard	MP83084
LCS Standard	
Chk Standard	MP83091 MP83092

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	12/04/24 12:57		Kareem	OK
2	S1	S1	CAL2	12/04/24 13:01		Kareem	OK
3	S2	S2	CAL3	12/04/24 13:05		Kareem	OK
4	S3	S3	CAL4	12/04/24 13:10		Kareem	OK
5	S4	S4	CAL5	12/04/24 13:14		Kareem	OK
6	S5	S5	CAL6	12/04/24 13:18		Kareem	OK
7	ICV01	ICV01	ICV	12/04/24 13:22		Kareem	OK
8	LLICV01	LLICV01	LLICV	12/04/24 13:34		Kareem	OK
9	ICB01	ICB01	ICB	12/04/24 13:43		Kareem	OK
10	CRI01	CRI01	CRDL	12/04/24 13:52		Kareem	OK
11	ICSA01	ICSA01	ICSA	12/04/24 13:57		Kareem	OK
12	ICSAB01	ICSAB01	ICSAB	12/04/24 14:15		Kareem	OK
13	CCV01	CCV01	CCV	12/04/24 14:20		Kareem	OK
14	CCB01	CCB01	CCB	12/04/24 14:29		Kareem	OK
15	P4495-10DL	PT-MET-SOILDL	SAM	12/04/24 14:33	10X for Be	Kareem	Confirms
16	CCV02	CCV02	CCV	12/04/24 14:37		Kareem	OK
17	CCB02	CCB02	CCB	12/04/24 14:41		Kareem	OK

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Prep Standard - Chemical Standard Summary

Order ID : P4495

Test : Mercury,Metals ICP-Group1

Prepbatch ID : PB164552,PB165242,

Sequence ID/Qc Batch ID: LB133227,LB133669,LB133739,

Standard ID :
MP82961,MP82962,MP82963,MP82964,MP82965,MP82966,MP82967,MP82968,MP82969,MP82970,MP82971,MP829
72,MP82973,MP82996,MP83078 MP83079 MP73080 MP83081 MP83082 MP83084,MP83083,MP83085,MP83086
MP83087,MP83088,MP83091 MP83092,MP83122,

Chemical ID :
M121,M5062,M5192,M5218,M5288,M5295,M5296,M5390,M5394,M5429,M5467,M5498,M5515,M5585,M5658,M5697,
M5698,M5747,M5748,M5769,M5798,M5799,M5800,M5801,M5802,M5806,M5814,M5815,M5816,M5817,M5818,M5819
,M5820,M5875,M5953,M5962,M5970,M5978,M5982,M6000,M6009,M6021,M6023,M6028,M6030,M6033,M6095,M610
4,M6111,M6116,M6117,M6125,M6126,W3112,

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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.	MP82961	10/30/2024	10/31/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 10/31/2024

FROM 1.00000ml of M6104 + 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	MP82962	10/30/2024	10/31/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 10/31/2024

FROM 2.50000ml of M6104 + 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	MP82963	10/30/2024	10/31/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 10/31/2024

FROM 2.50000ml of M6104 + 247.30000ml of W3112 + 0.20000ml of MP82961 = 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	MP82964	10/30/2024	10/31/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 10/31/2024

FROM 2.50000ml of M6104 + 245.00000ml of W3112 + 2.50000ml of MP82961 = 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	MP82965	10/30/2024	10/31/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 10/31/2024

FROM 2.50000ml of M6104 + 242.50000ml of W3112 + 5.00000ml of MP82961 = 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	MP82966	10/30/2024	10/31/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 10/31/2024

FROM 2.50000ml of M6104 + 240.00000ml of W3112 + 7.50000ml of MP82961 = 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	MP82967	10/30/2024	10/31/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 10/31/2024

FROM 2.50000ml of M6104 + 237.50000ml of W3112 + 10.00000ml of MP82961 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1346	Hg ICV SOLUTION	MP82968	10/30/2024	10/31/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 10/31/2024

FROM 2.50000ml of M5953 + 2.50000ml of M6104 + 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)	MP82969	10/30/2024	10/31/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 10/31/2024

FROM 2.50000ml of M6104 + 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)	MP82970	10/30/2024	10/31/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 10/31/2024

FROM 485.00000ml of W3112 + 5.00000ml of M6104 + 10.00000ml of MP82961 = 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)	MP82971	10/30/2024	10/31/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 10/31/2024

FROM 495.00000ml of W3112 + 5.00000ml of M6104 = 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)	MP82972	10/30/2024	10/31/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 10/31/2024

FROM 2.50000ml of M6104 + 247.30000ml of W3112 + 0.20000ml of MP82961 = 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)	MP82973	10/30/2024	10/31/2024	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 10/31/2024

FROM 2.50000ml of M6104 + 240.50000ml of W3112 + 7.00000ml of MP82961 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
104	5% RINSING HCL	MP82996	10/31/2024	04/30/2025	Mohan Bera	None	None	Sarabjit Jaswal 10/31/2024

FROM 100.00000ml of M6095 + 1900.00000ml 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
2950	ICP AES S1/CRI STOCK STD	MP83083	11/06/2024	12/06/2024	Kareem Khairalla	None	None	Sarabjit Jaswal 11/07/2024

FROM 0.03000ml of M5798 + 0.03000ml of M6028 + 0.05000ml of M5515 + 0.05000ml of M5658 + 0.05000ml of M6030 + 0.05000ml of M6033 + 0.06000ml of M5747 + 0.10000ml of M5697 + 0.10000ml of M5698 + 0.10000ml of M5801 + 0.10000ml of M5820 + 0.10000ml of M5962 + 0.10000ml of M5970 + 0.10000ml of M5982 + 0.15000ml of M5800 + 0.20000ml of M5748 + 0.20000ml of M5799 + 0.20000ml of M5819 + 0.20000ml of M6021 + 0.20000ml of M6023 + 0.25000ml of M5467 + 0.25000ml of M5802 + 0.50000ml of M5390 + 0.50000ml of M5814 + 1.00000ml of M5192 + 1.00000ml of M5288 + 1.00000ml of M5498 + 1.00000ml of M5769 + 1.00000ml of M5806 + 1.00000ml of M5978 + 2.00000ml of M5816 + 2.00000ml of M5818 + 77.68000ml of MP83078 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
912	ICP AES ICV SOLN	MP83085	11/06/2024	12/06/2024	Kareem Khairalla	None	None	Sarabjit Jaswal 11/07/2024

FROM 0.02500ml of M5429 + 0.02500ml of M5815 + 0.02500ml of M5817 + 0.25000ml of M5218 + 0.25000ml of M5982 + 10.00000ml of M5295 + 89.77500ml of MP83078 = 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
911	ICP AES CCV SOLN	MP83088	11/06/2024	12/06/2024	Kareem Khairalla	None	None	Sarabjit Jaswal 11/07/2024

FROM 50.00000ml of MP83078 + 50.00000ml of MP83079 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
169	1:1HNO3	MP83122	11/07/2024	12/06/2024	Janvi Patel	None	None	Sarabjit Jaswal 11/07/2024

FROM 1000.00000ml of M6116 + 1000.00000ml 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 #
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.	57042 / Mo, 1000 PPM, 125 ml	051722	05/17/2025	07/01/2022 / bin	06/17/2022 / jaswal	M5192

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CHEM-QC-4 / CHEM-QC-4, Second Source, 1000 ug/ml, B, Mo, Si, Sn, Ti	S2-MEB711674	11/02/2026	07/01/2022 / bin	09/10/2021 / bin	M5218

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	071122	07/11/2025	09/01/2022 / jaswal	07/21/2022 / jaswal	M5288

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	ICV-1 / ICV (ICP/ICPMS) STOCK SOLN	ICV-1014	02/05/2025	08/07/2024 / jaswal	02/20/2020 / bin	M5295

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	Z9651Q / CHEM-CLP-4/.25L	S2-MEB711673	11/02/2026	09/19/2022 / jaswal	08/20/2022 / jaswal	M5296

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57056 / Ba, 1000 PPM, 125 ml	072122	07/21/2025	08/07/2024 / jaswal	09/18/2022 / bin	M5390

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-MEB714159	01/13/2027	11/28/2022 / bin	09/19/2022 / bin	M5394

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57103 / Li, 10000 PPM, 125 ml	070622	07/06/2025	01/30/2023 / bin	01/26/2023 / bin	M5429

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57058 / Cerium, 1000PPM, 100ML	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.	58120 / Ca, 10000 PPM, 500 ml	031523	03/15/2026	08/15/2023 / jaswal	03/17/2023 / bin	M5498

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	092122	09/21/2025	08/01/2024 / Jaswal	03/17/2023 / bin	M5515

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	26397-103 / PTFE BOILING STONES	W126678	02/28/2025	01/20/2024 / jaswal	06/12/2023 / jaswal	M5585

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58024 / Chromium, Cr, 500 ml, 1000 PPM	060523	06/05/2026	08/28/2023 / jaswal	08/25/2023 / jaswal	M5658

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58029 / Cu, 1000 PPM, 500 ml	102523	10/25/2026	04/03/2024 / jaswal	10/27/2023 / jaswal	M5697

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58025 / Mn, 1000 PPM, 500 ml	102623	10/26/2026	04/18/2024 / jaswal	10/27/2023 / jaswal	M5698

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	/ Lead (Pb) 1000PPM	100923	10/09/2026	05/20/2024 / Jaswal	12/20/2023 / jaswal	M5747

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	/ Nickel (Ni) 1000PPM	091223	09/12/2026	01/02/2024 / bin	12/20/2023 / jaswal	M5748

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58112 / Mg, 10000 PPM, 500 ml	091823	09/18/2026	05/24/2024 / Jaswal	01/03/2024 / bin	M5769

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57004 / Be, 1000 PPM, 125 ml	102523	10/25/2026	02/09/2024 / bin	02/09/2024 / bin	M5798

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57050 / Sn, 1000 PPM, 125 ml	071123	07/11/2026	02/09/2024 / bin	02/09/2024 / bin	M5799

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57027 / CO, 1000 PPM, 125 ml	091923	09/19/2026	05/31/2024 / bin	02/09/2024 / bin	M5800

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57033 / As, 1000 PPM, 125 ml	111323	11/13/2026	02/09/2024 / bin	02/09/2024 / bin	M5801

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57051 / Sb, 1000 PPM, 125 ml	120523	12/05/2026	08/07/2024 / jaswal	01/03/2024 / jaswal	M5802

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58111 / Na, 10000 PPM, 500 ml	122223	12/22/2026	08/01/2024 / Jaswal	01/03/2024 / jaswal	M5806

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57005 / B, 1000 PPM, 125 ml	071123	07/11/2026	03/26/2024 / Sohil	01/03/2024 / jaswal	M5814

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57115 / P, 10000 PPM, 125 ml	041723	04/17/2026	05/21/2024 / Jaswal	02/09/2024 / jaswal	M5815

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57016 / S, 1000 PPM, 125 ml	122923	12/29/2026	05/20/2024 / Jaswal	02/09/2024 / jaswal	M5816

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57116 / S, 10000 PPM, 125 ml	071123	07/11/2026	03/01/2024 / jaswal	02/09/2024 / jaswal	M5817

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57014 / Si, 1000 PPM, 125 ml	122023	12/20/2026	03/06/2024 / jaswal	02/09/2024 / jaswal	M5818

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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	111623	11/16/2026	03/20/2024 / jaswal	02/09/2024 / jaswal	M5819

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 #
Inorganic Ventures	CLPP-CAL-1 / CLP CAL SOLUTION #1, 125mL	T2-MEB714417	01/27/2027	04/19/2024 / jaswal	02/22/2024 / jaswal	M5875

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	ICV-5 / ICV (HG) STOCK SOLN	ICV5-0415	01/01/2025	07/01/2024 / mohan	03/30/2023 / mohan	M5953

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

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGTI1-1 / TITANIUM 125mL 1000ug/mL	T2-TI719972	06/17/2027	08/07/2024 / jaswal	02/22/2024 / Jaswal	M5978

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	031524	03/15/2027	07/01/2024 / Jaswal	06/11/2024 / Jaswal	M5982

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	08/30/2026	08/13/2024 / Jaswal	05/14/2024 / Jaswal	M6000

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	08/13/2024 / Jaswal	05/14/2024 / Jaswal	M6009

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57023 / V, 1000 PPM, 125 ml	062424	06/24/2027	09/28/2024 / jaswal	08/05/2024 / Jaswal	M6021

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57081 / Tl, 1000 PPM, 125 ml	0624724	06/27/2027	08/05/2024 / kareem	08/05/2024 / Jaswal	M6023

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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.	57048 / Cd, 1000 PPM, 125 ml	070124	07/01/2027	08/05/2024 / kareem	01/25/2019 / 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.	58113 / Al, 10000 PPM, 500 ml	011623	01/16/2026	08/07/2024 / Jaswal	01/03/2024 / Jaswal	M6033

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)		03/17/2029	10/26/2024 / Janvi	10/21/2024 / Janvi	M6095

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	04/30/2025	10/30/2024 / Eman	09/29/2024 / Janvi	M6104

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)	22F0762009	05/09/2027	11/04/2024 / Eman	09/29/2024 / Janvi	M6111

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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-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	24B1362001	05/03/2025	11/04/2024 / Janvi	09/29/2024 / Eman	M6116

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)	24B1362001	05/06/2025	11/06/2024 / Janvi	09/29/2024 / Eman	M6117

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	1403 / Hydrogen Peroxide, 30% 1 gal	820803	05/25/2025	11/26/2024 / Eman	11/22/2024 / Eman	M6125

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	24D1062002	06/03/2025	12/03/2024 / Janvi	11/12/2024 / Janvi	M6126

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	DIW / DI Water	Daily Lab-Certified	07/03/2029	07/03/2024 / Iwona	07/03/2024 / Iwona	W3112

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M6028

R 8/5/24

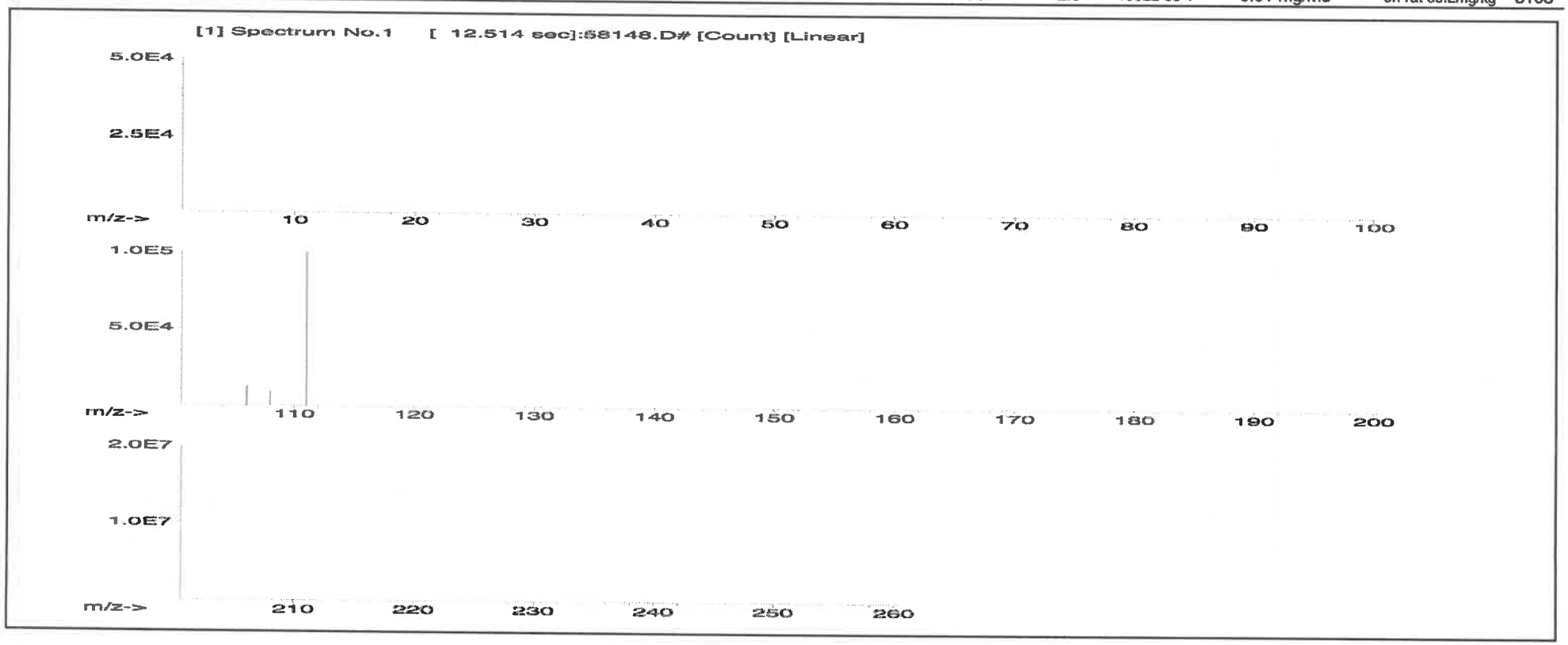
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number:	**57048**		**Lot #**		
Lot Number:	**070124**	**Solvent:**	24002546	Nitric Acid	
Description:	**Cadmium (Cd)**	2%	40.0 (mL)	Nitric Acid	
Expiration Date:	070127				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.07	0.100	Flask Uncertainty		

Aleah O'Brady		
Formulated By:	Aleah O'Brady	070124
Pedro Rentas		
Reviewed By:	Pedro L. Rentas	070124

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Cadmium nitrate tetrahydrate (Cd)	IN024	CDM092021A1	1000	99.999	0.10	36.5	5.4797	5.4804	**1000.1**	**2.0**	10022-68-1	0.01 mg/m3	orl-rat 60.2mg/kg	3108



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).

M5296 OP: 09/19/2022 BH

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inorganicventures.com

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F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 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:	S2-MEB711673
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 ± 6 µg/mL**	**Molybdenum, Mo**	**1 000 ± 6 µg/mL**
Silicon, Si	**1 000 ± 7 µg/mL**	**Tin, Sn**	**1 000 ± 6 µg/mL**
Titanium, Ti	**1 000 ± 7 µg/mL**		

Density: 1.030 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
B	ICP Assay	3107	110830
Mo	ICP Assay	3134	130418
Si	ICP Assay	3150	130912
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	3162a	130925

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**

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

November 02, 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

- **November 02, 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:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CLPP-CAL-1
Lot Number:	T2-MEB714417
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	5 000 µg/mL ea: Calcium, Potassium, Magnesium, Sodium, 2 000 µg/mL ea: Aluminum, Barium, 1 000 µg/mL ea: Iron, 500 µg/mL ea: Nickel, Vanadium, Zinc, Cobalt, Manganese, 250 µg/mL ea: Silver, Copper, 200 µg/mL ea: Chromium, 50 µg/mL ea: Beryllium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	**2 000 ± 7 µg/mL**	**Barium, Ba**	**2 000 ± 9 µg/mL**
Beryllium, Be	**50.00 ± 0.26 µg/mL**	**Calcium, Ca**	**5 000 ± 22 µg/mL**
Chromium, Cr	**200.0 ± 1.0 µg/mL**	**Cobalt, Co**	**500.0 ± 2.4 µg/mL**
Copper, Cu	**250.0 ± 1.0 µg/mL**	**Iron, Fe**	**1 000 ± 4 µg/mL**
Magnesium, Mg	**5 000 ± 20 µg/mL**	**Manganese, Mn**	**500.0 ± 2.0 µg/mL**
Nickel, Ni	**500.0 ± 2.2 µg/mL**	**Potassium, K**	**5 000 ± 19 µg/mL**
Silver, Ag	**250.0 ± 1.1 µg/mL**	**Sodium, Na**	**5 000 ± 18 µg/mL**
Vanadium, V	**499.7 ± 2.2 µg/mL**	**Zinc, Zn**	**500.0 ± 2.2 µg/mL**

Density: 1.118 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cr	Calculated		See Sec. 4.2
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
V	IC Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Note: This solution contains Silver (Ag), please refer to our Sample Preparation Guide for more information.

https://www.inorganicventures.com/sample-preparation-guide/samples-containing-silver

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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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

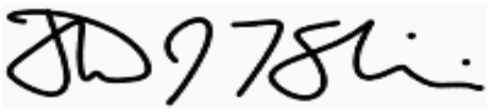
- Sealed TCT Bag Open Date: _____

- 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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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CLPP-CAL-3
Lot Number:	T2-MEB714159
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 ± 8 µg/mL**	**Cadmium, Cd**	**500.0 ± 2.1 µg/mL**
Lead, Pb	**1 000 ± 5 µg/mL**	**Selenium, Se**	**1 000 ± 8 µg/mL**
Thallium, Tl	**1 000 ± 7 µg/mL**		

Density: 1.043 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

- 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**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 13, 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 13, 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

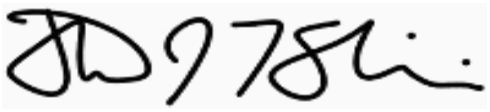
- Sealed TCT Bag Open Date: _____

- 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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RD:05/14/2024

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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 883.01

ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	WW-LFS-1
Lot Number:	T2-MEB723367
Matrix:	5% (v/v) HNO3

Value / Analyte(s):	1 000 µg/mL ea: Potassium,	
	600 µg/mL ea: Phosphorus,	
	300 µg/mL ea: Sodium,	Iron,
	200 µg/mL ea: Magnesium, Cerium, Thallium,	Aluminum, Selenium,
	100 µg/mL ea: Lead,	Calcium,
	80 µg/mL ea: Arsenic,	
	70 µg/mL ea: Mercury,	
	50 µg/mL ea: Nickel,	
	40 µg/mL ea: Chromium,	
	30 µg/mL ea: Copper, Vanadium,	Boron,
	20 µg/mL ea: Zinc, Barium, Cadmium, Manganese,	Strontium, Beryllium, Cobalt, Lithium,
	7.5 µg/mL ea: Silver	

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	200.0 ± 0.7 µg/mL	Arsenic, As	80.0 ± 0.7 µg/mL
Barium, Ba	20.00 ± 0.09 µg/mL	Beryllium, Be	20.00 ± 0.13 µg/mL
Boron, B	30.00 ± 0.18 µg/mL	Cadmium, Cd	20.00 ± 0.09 µg/mL
Calcium, Ca	100.0 ± 0.4 µg/mL	Cerium, Ce	200.0 ± 0.8 µg/mL
Chromium, Cr	40.00 ± 0.30 µg/mL	Cobalt, Co	20.00 ± 0.10 µg/mL
Copper, Cu	30.00 ± 0.13 µg/mL	Iron, Fe	300.0 ± 1.3 µg/mL
Lead, Pb	100.0 ± 0.4 µg/mL	Lithium, Li	20.00 ± 0.08 µg/mL
Magnesium, Mg	200.0 ± 0.8 µg/mL	Manganese, Mn	20.00 ± 0.08 µg/mL
Mercury, Hg	70.0 ± 0.3 µg/mL	Nickel, Ni	50.00 ± 0.22 µg/mL
Phosphorus, P	600.0 ± 2.7 µg/mL	Potassium, K	1 000 ± 4 µg/mL
Selenium, Se	200.0 ± 1.3 µg/mL	Silver, Ag	7.50 ± 0.03 µg/mL
Sodium, Na	300.0 ± 1.4 µg/mL	Strontium, Sr	20.01 ± 0.08 µg/mL
Thallium, Tl	200.0 ± 1.4 µg/mL	Vanadium, V	30.00 ± 0.13 µg/mL
Zinc, Zn	20.00 ± 0.09 µg/mL		

Density: 1.034 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Ag	Calculated		See Sec. 4.2
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
B	ICP Assay	3107	190605
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Ce	ICP Assay	3110	090504
Ce	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
Hg	ICP Assay	3133	160921
Hg	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Li	ICP Assay	3129a	100714
Li	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	Traceable to 3152A	S2-NA700842
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Sr	EDTA	928	928
Sr	ICP Assay	Traceable to 3153a	K2-SR650985
Tl	ICP Assay	3158	151215
V	IC Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 30, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **August 30, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES

Refine your results. Redefine your industry.

Certificate of Analysis

RD:05/14/2024

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 863.01 ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	WW-LFS-2
Lot Number:	U2-MEB731108
Matrix:	5% (v/v) HNO3 tr. HF
Value / Analyte(s):	200 µg/mL ea: Silica, 80 µg/mL ea: Antimony, 70 µg/mL ea: Tin, 40 µg/mL ea: Molybdenum, 20 µg/mL ea: Titanium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	80.1 ± 0.6 µg/mL	Molybdenum, Mo	40.03 ± 0.18 µg/mL
Silica, SiO2	200.2 ± 1.3 µg/mL	Tin, Sn	70.0 ± 0.4 µg/mL
Titanium, Ti	20.01 ± 0.13 µg/mL		

Density: 1.025 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	ICP Assay	3134	130418
Mo	Calculated		See Sec. 4.2
Sb	ICP Assay	3102a	140911
SiO2	ICP Assay	3150	130912
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	3162a	130925
Ti	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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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

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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 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

M5192 R: 06/17/22

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

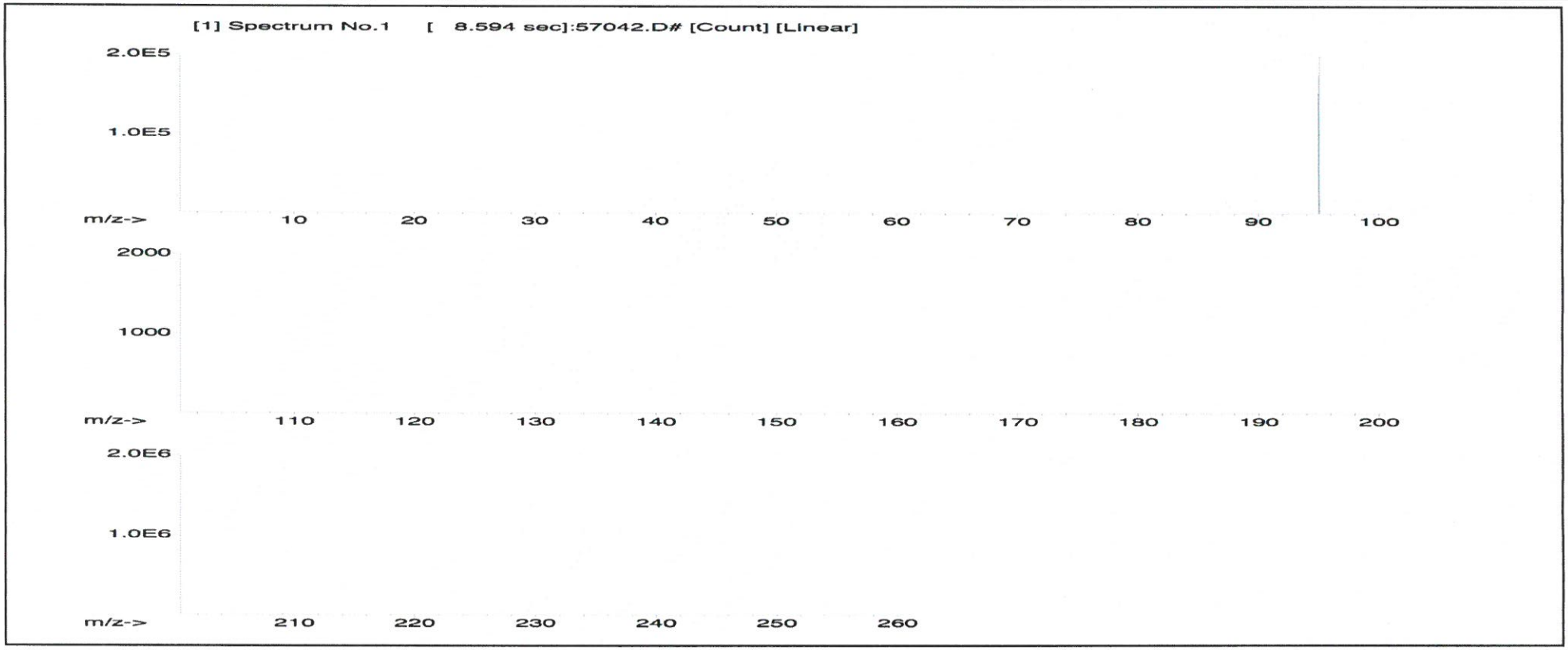
Part Number: 57042
Lot Number: 051722
Description: Molybdenum (Mo)
Expiration Date: 051725
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Volume shown below was diluted to (mL): 3000.41

Lot #	Solvent:		
MKBQ8597V	Ammonium hydroxide		
0.5%	15.0 (mL)	Ammonium hydroxide	
	5E-05	Balance Uncertainty	
	0.058	Flask Uncertainty	

Formulated By: Lawrence Barry 051722

Reviewed By: Pedro L. Rentas 051722

	Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1.	Ammonium molybdate (Mo)	58142	022222	0.1000	300.0	0.084	1000	10001.0	**1000.0**	**2.1**	13106-76-8	5 mg(Mo)/m3	orl-rat 333 mg/kg	3134



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	T	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

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-QC-4
Lot Number:	S2-MEB711674
Matrix:	3% (v/v) HNO3 3% (v/v) HF
Value / Analyte(s):	1 000 µg/mL ea: Boron, Molybdenum, Silicon, Tin, Titanium

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
Boron, B	**1 000 ± 7 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	**1 001 ± 6 µg/mL**		

Density: 1.032 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
B	ICP Assay	3107	110830
Mo	ICP Assay	3134	130418
Si	ICP Assay	3150	130912
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	3162a	130925

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**

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

November 02, 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

- **November 02, 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:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

V15200 R: 04/24/22 (BP)

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 58119
Lot Number: 071122
Description: Potassium (K)

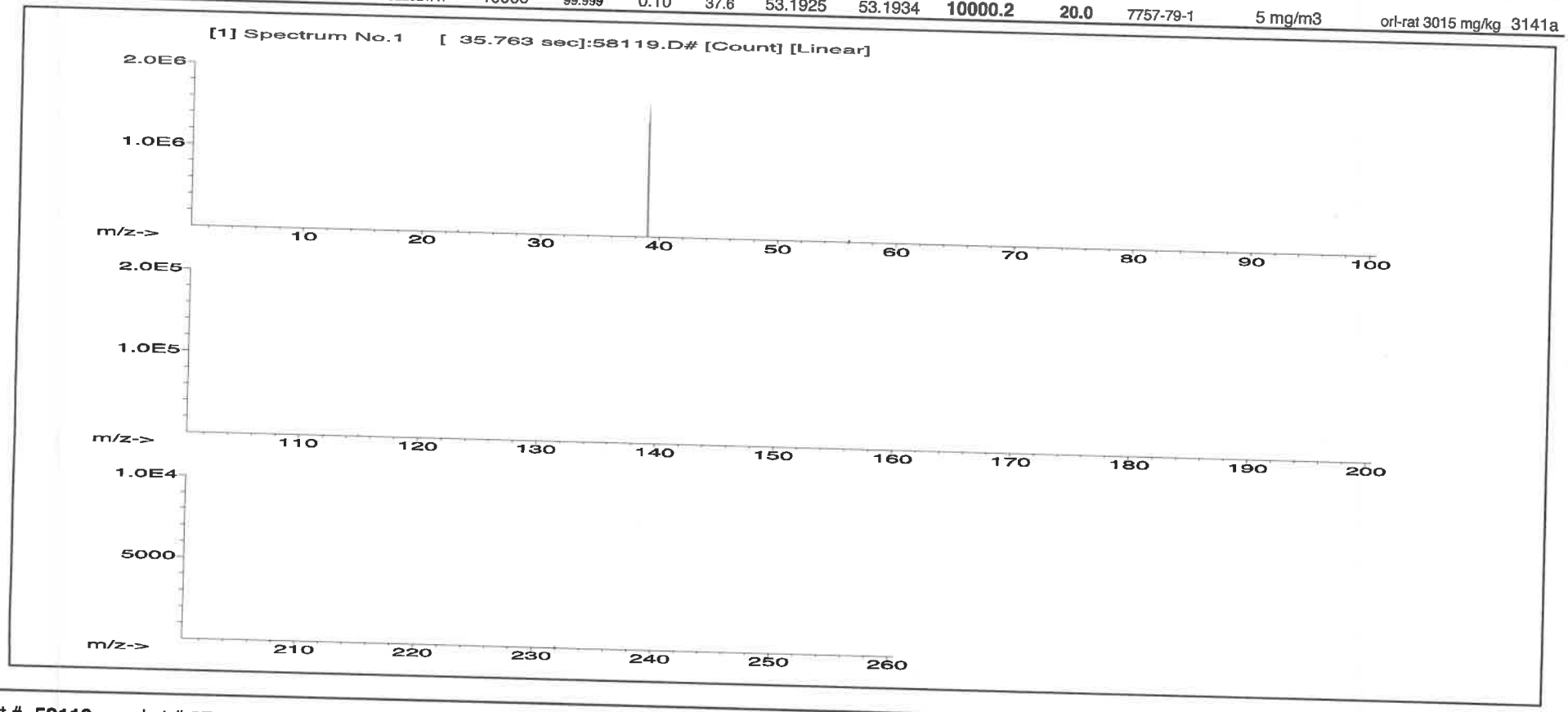
Expiration Date: 071125
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.02

	Lot #		
Solvent:	20510011	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By:	Lawrence Barry	071122
Reviewed By:	Pedro L. Rentas	071122

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	KD022021A1	10000	99.999	0.10	37.6	53.1925	53.1934	**10000.2**	**20.0**	7757-79-1	5 mg/m3	orl-rat 3015 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:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
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* 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).

QATS LABORATORY INORGANIC REFERENCE MATERIAL INITIAL CALIBRATION VERIFICATION SOLUTIONS (ICV1, ICV5, AND ICV6)

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocol or your contract, disregard these instructions.

APPLICATION: For use with the CLP SFAM01.0 SOW and revisions.

CAUTION: Read instructions carefully before opening bottle(s) and proceeding with the analyses.

Contains Metals in Dilute Acidic or Cyanide in Basic Aqueous Solutions
HAZARDOUS MATERIAL

Safety Data Sheets Available Upon Request

M5291
M5292
M5293
M5294
M5295

(A) *SAMPLE DESCRIPTION*

Enclosed is a set of one (1) or more Aqueous Inorganic Reference Materials containing various analyte concentrations. ICV1 and ICV5 are in a matrix of dilute nitric acid. ICV6 is in a matrix of dilute basic solution. **For the reference material source in reporting ICVs use "USEPA". For the reference material lot number for the ICV1, ICV5, and ICV6 solutions use "ICV1-1014", "ICV5-0415", and "ICV6-0400", respectively.**

(B) *BREAKAGE OR MISSING ITEMS*

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain of custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120

(C) *ANALYSIS OF SAMPLES*

The Initial Calibration Verification Solutions (ICVs) are to be used to evaluate the accuracy of the initial calibrations of ICP, AA, and Cyanide colorimetric instruments, and are to be used with the CLP SOWs and revisions. The values for each element in the ICVs are listed below in µg/L (ppb) for the resulting solution(s) after the dilution of the concentrate(s) according to the following instructions. Use Class 'A' glassware to prepare the solution(s).

ICV1-1014 For ICP-AES analysis, use a 10-fold dilution by pipetting 10 mL of the ICV1 concentrate into a 100 mL volumetric flask and dilute to volume with 2% (v/v) nitric acid.

The Quality Assurance Technical Support (QATS) contract is operated by APTIM Federal Services, LLC.

ICV1-1014 For ICP-MS analysis, use a 50-fold dilution by pipetting 2 mL of the ICV1 concentrate into a 100 mL volumetric flask and dilute to volume with 1% (v/v) nitric acid.

ICV5-0415 For the cold vapor analysis of mercury by AA, use a 100-fold dilution by pipetting 1 mL of the ICV5 concentrate into a 100 mL volumetric flask and dilute to volume with 2% (v/v) nitric acid. The ICV5 concentrate is prepared in 0.05% (w/v) $K_2Cr_2O_7$ and 5% (v/v) nitric acid.

ICV6-0400 For the analysis of cyanide, use a 100-fold dilution by pipetting 1 mL of the ICV6 concentrate into a 100 mL volumetric flask and dilute to volume with Type II water. Distill this solution along with the samples before analysis. The cyanide concentrate is prepared from $K_3Fe(CN)_6$, Type II water, and 0.1 % sodium hydroxide, and will decompose rapidly if exposed to light.

NOTE: USE TYPE II WATER AND HIGH-PURITY ACIDS FOR ALL DILUTIONS.

(D) *CERTIFIED CONCENTRATIONS OF QATS ICV1, ICV5, AND ICV6 SOLUTIONS*

ICV1-1014		
Element	**Concentration (µg/L) (after 10-fold dilution)**	**Concentration (µg/L) (after 50-fold dilution)**
Al	2500	500
Sb	1000	200
As	1000	200
Ba	520	100
Be	510	100
Cd	510	100
Ca	10000	2000
Cr	520	100
Co	520	100
Cu	510	100
Fe	10000	2000
Pb	1000	200
Mg	6000	1200
Mn	520	100
Ni	530	110
K	9900	2000
Se	1000	200
Ag	250	50
Na	10000	2000
Tl	1000	210
V	500	100
Zn	1000	200

ICV5-0415		ICV6-0400	
Element	**Concentration (µg/L) (after 100-fold dilution)**	**Analyte**	**Concentration (µg/L) (after 100-fold dilution)**
Hg	4.0	**CN^-**	99

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

R: 09/08/22 (BH)

Certified Reference Material CRM

M5387 . M5389 . M5390 . M5391 . M5392

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

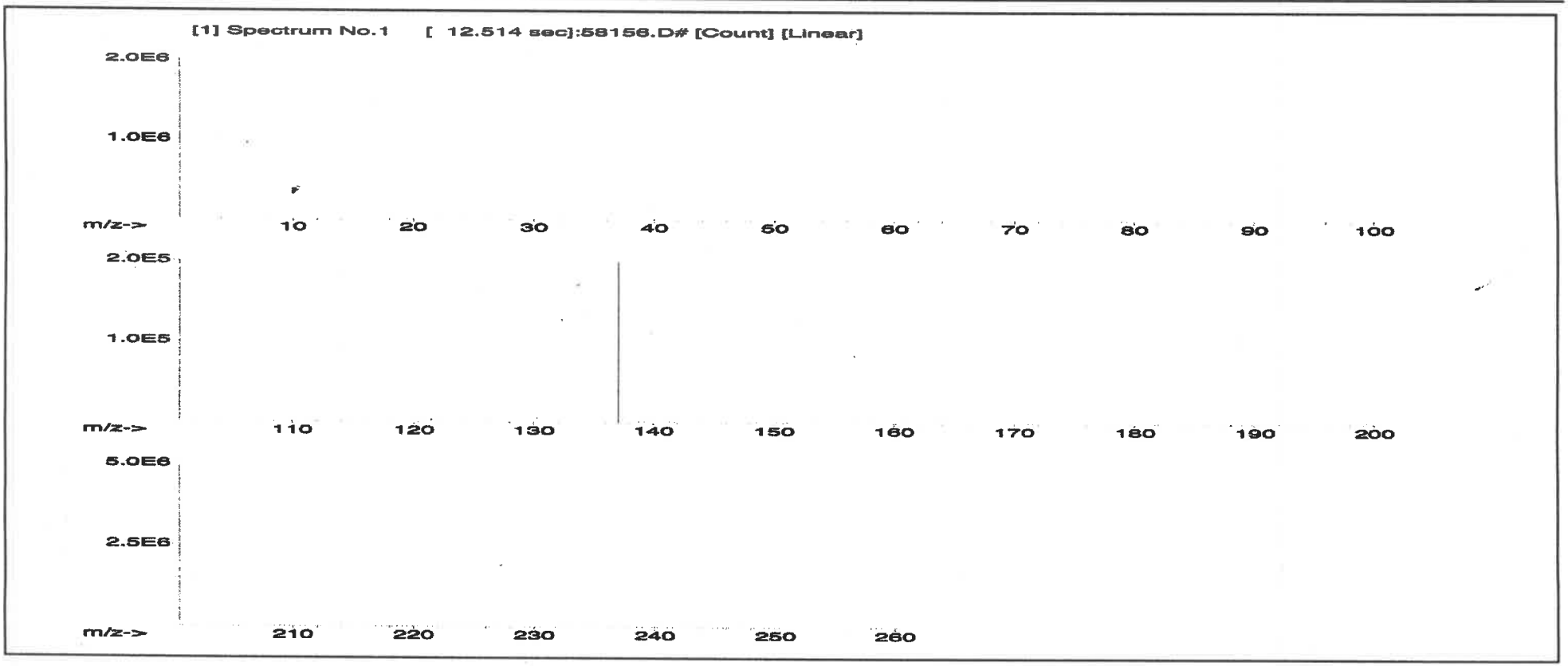
CERTIFIED WEIGHT REPORT:

Part Number:	**57056**		**Lot #**		
Lot Number:	**072122**	**Solvent:**	20510011	Nitric Acid	
Description:	**Barium (Ba)**	2%	40.0 (mL)	Nitric Acid	
Expiration Date:	072125				
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	072122
Reviewed By:	Pedro L. Rentas	072122

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	3.82426	**1000.0**	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:

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

M5429 R1 01/26/23 BH

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 57103
Lot Number: 070622
Description: Lithium (Li)

Expiration Date: 070625
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 1000.12 | 0.058 Flask Uncertainty

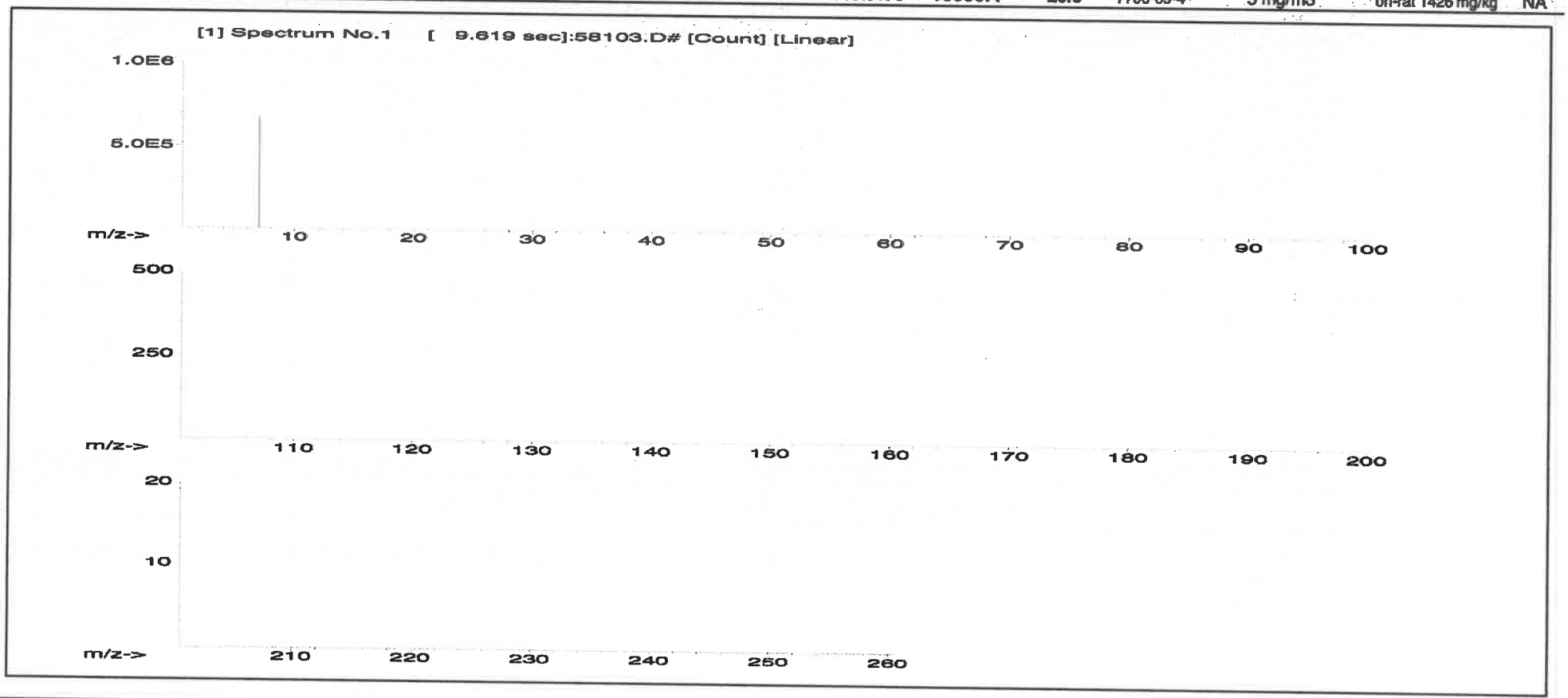
	Lot #		
Solvent:	20510011	Nitric Acid	
2%	20.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

Formulated By: Lawrence Barry 070622

Reviewed By: Pedro L. Rentas 070622

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lithium nitrate (Li)	IN019	LIZ042018A1	10000	99.999	0.10	10.0	100.0134	100.0173	**10000.4**	**20.0**	7790-69-4	5 mg/m3	orl-rat 1426 mg/kg	NA



Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	T	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* 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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M5467 R: 03/01/23 (LA)

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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

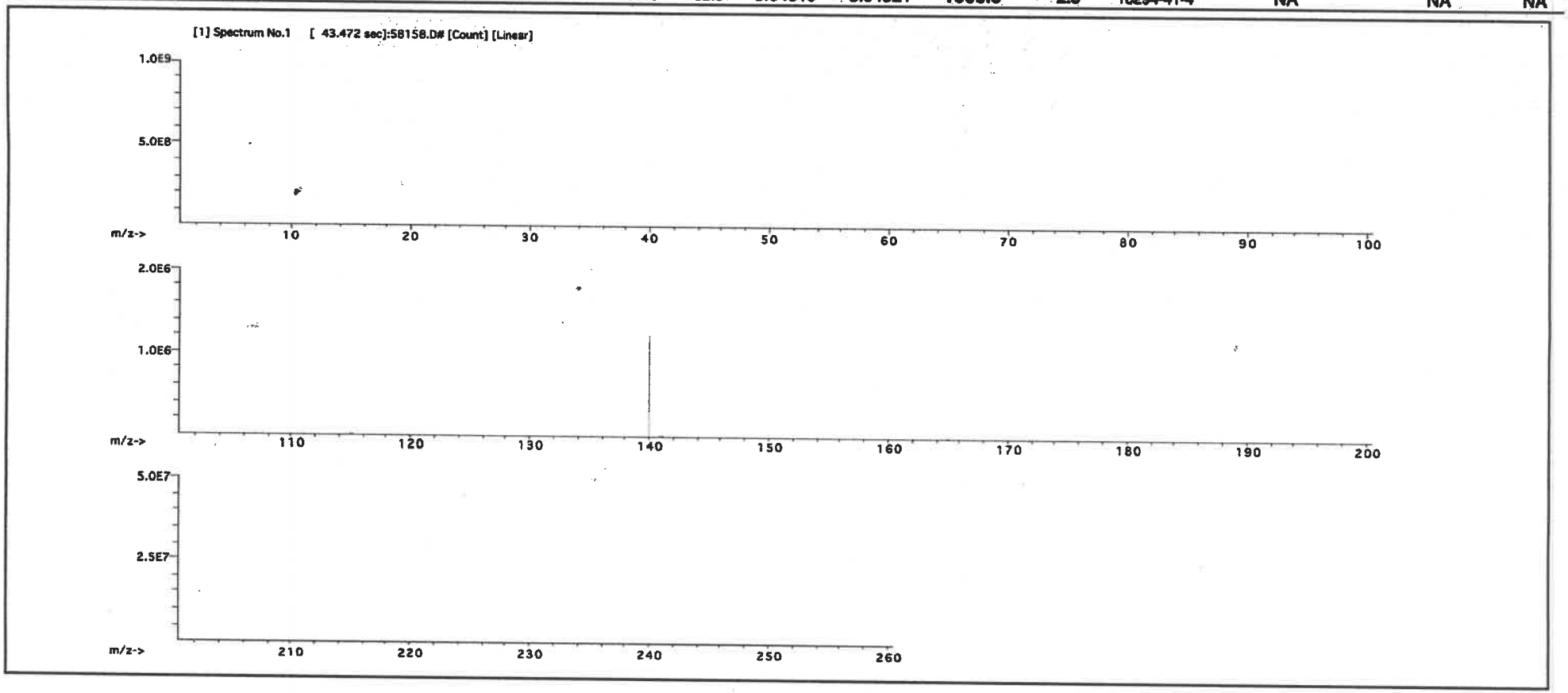
Weight shown below was diluted to (mL): 1000.12 0.058 Flask Uncertainty

		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.

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* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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IN5497 - IN5498 R: 03/17/23 BH

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CERTIFIED WEIGHT REPORT:

Part Number: 58120
Lot Number: 031523
Description: Calcium (Ca)

Expiration Date: 031526
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 3000.41 ± 0.058 Flask Uncertainty

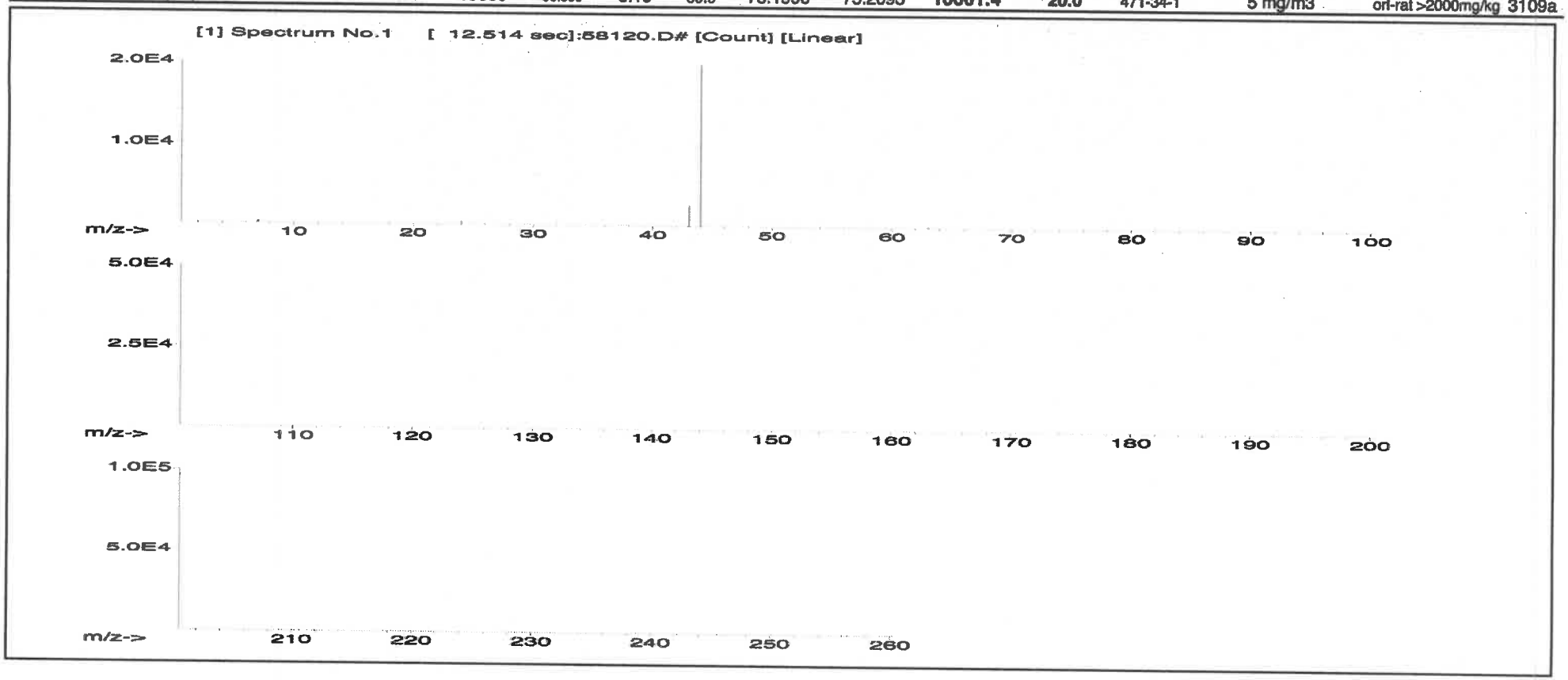
		Lot #	
Solvent:	21110221		Nitric Acid
	2%	60.0 (mL)	Nitric Acid

5E-05 Balance Uncertainty

Giovanni Esposito

Formulated By:	Giovanni Esposito	031523
Reviewed By:	Pedro L. Rentas	031523

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Calcium carbonate (Ca)	IN014	CAD072022A1	10000	99.999	0.10	39.9	75.1990	75.2093	**10001.4**	**20.0**	471-34-1	5 mg/m3	orl-rat >2000mg/kg	3109a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	T	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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M5514 - M5515 R: 03/17/22

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CERTIFIED WEIGHT REPORT:

Part Number: 58126
Lot Number: 092122
Description: Iron (Fe)

Expiration Date: 092125
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 5000.1 ± 0.12 Flask Uncertainty

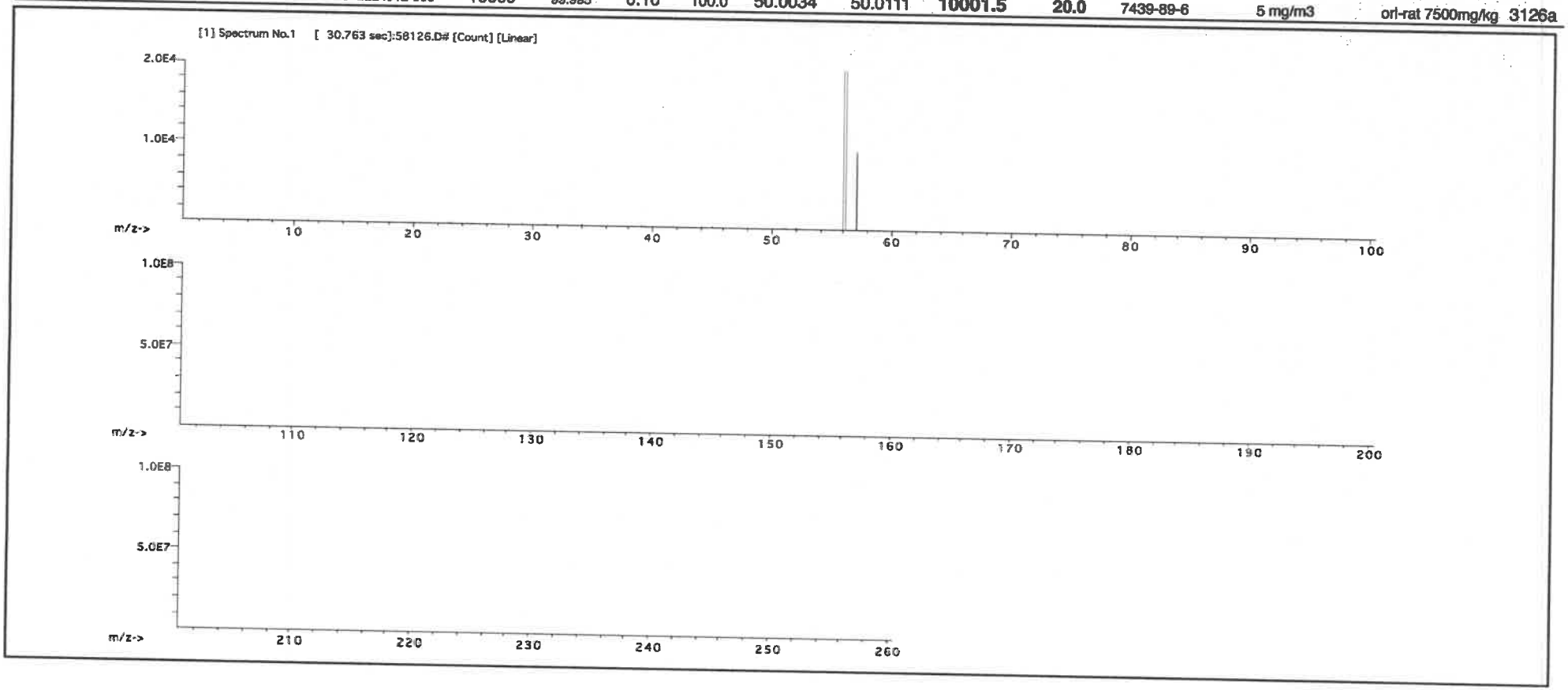
	Lot #		
Solvent:	20510011	Nitric Acid	
7.0%	350.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

Giovanni Esposito

Formulated By:	Giovanni Esposito	092122
Reviewed By:	Pedro L. Rentas	092122

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	2224912-500	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	<0.05
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:

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* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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RD: 06/12/2023, M5581, M5582, M5583, M5584, M5585

JENSEN INERT PRODUCTS

MATERIAL CERTIFICATE OF COMPLIANCE

DATE: JUNE 12, 2023

CUSTOMER:	PCI SCIENTIFIC SUPPLY, INC
PURCHASE ORDER NO.	6054931
CATALOG NO.	BOI5021-450L
PRODUCT DESCRIPTION:	BOILING STONES, TFE, 454GMS
QUANTITY:	10 EACH
LOT NO.	W126678
SPECIFICATION (S):	Made from Virgin PTFE Resin

We certify that we have complied with the terms and conditions of the above Purchase Order and the Part Specifications in the manufacturing of the above product.

Laura Valencia

Laura Valencia
Quality Assurance Inspector

F:U:J:CF:PCISCI:COC-68118-BOI5021-061223

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M5658 R! 8/25/23

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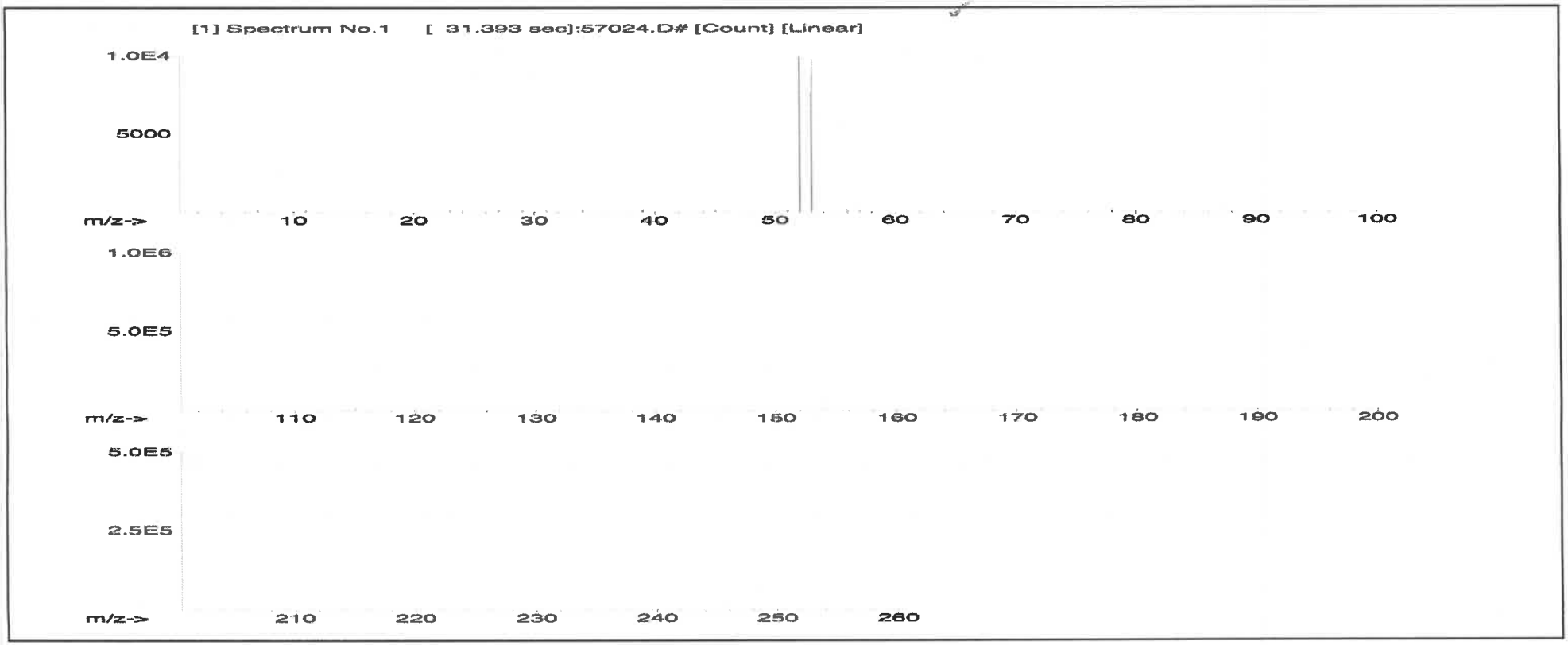
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**58024**	21110221	Nitric Acid	
Lot Number:	**060523**			
Description:	**Chromium (Cr)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	060526			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	060523
Reviewed By:	Pedro L. Rentas	060523

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Chromium(III) nitrate nonahydrate (Cr)	58124	071122	0.1000	200.0	0.084	1000	10000.1	**1000.0**	**2.2**	7789-02-8	0.5 mg(Cr)/m3	orl-rat 3250 mg/kg	3112a



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.

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Certified Reference Material CRM

M5697 R: 10/27/23

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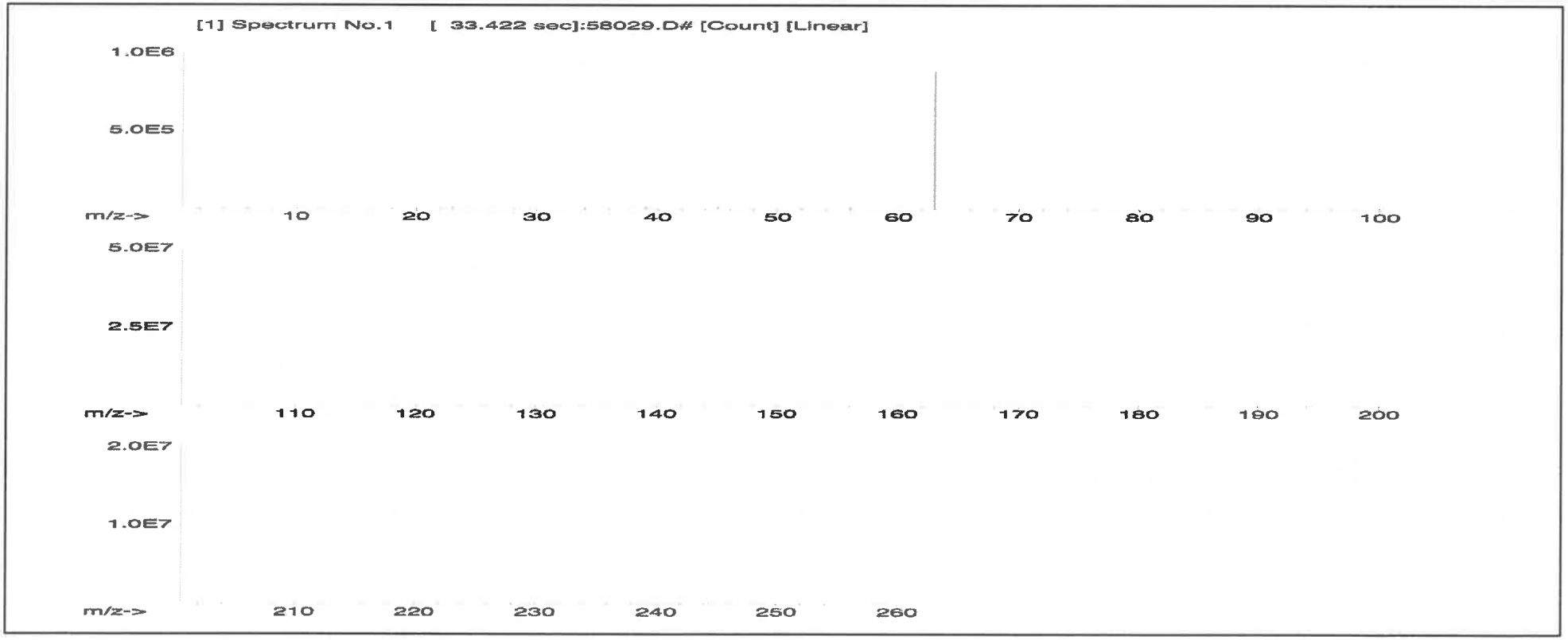
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**58029**	24002546	Nitric Acid	
Lot Number:	**102523**			
Description:	**Copper (Cu)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	102526			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Benson Chan	102523
Reviewed By:	Pedro L. Rentas	102523

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Copper(II) nitrate trihydrate (Cu)	58129	100223	0.1000	200.0	0.084	1000	10000.1	**1000.0**	**2.2**	10031-43-3	1 mg/m3	orl-rat 794 mg/kg	3114



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	T	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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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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M5648 R: 10/27/23

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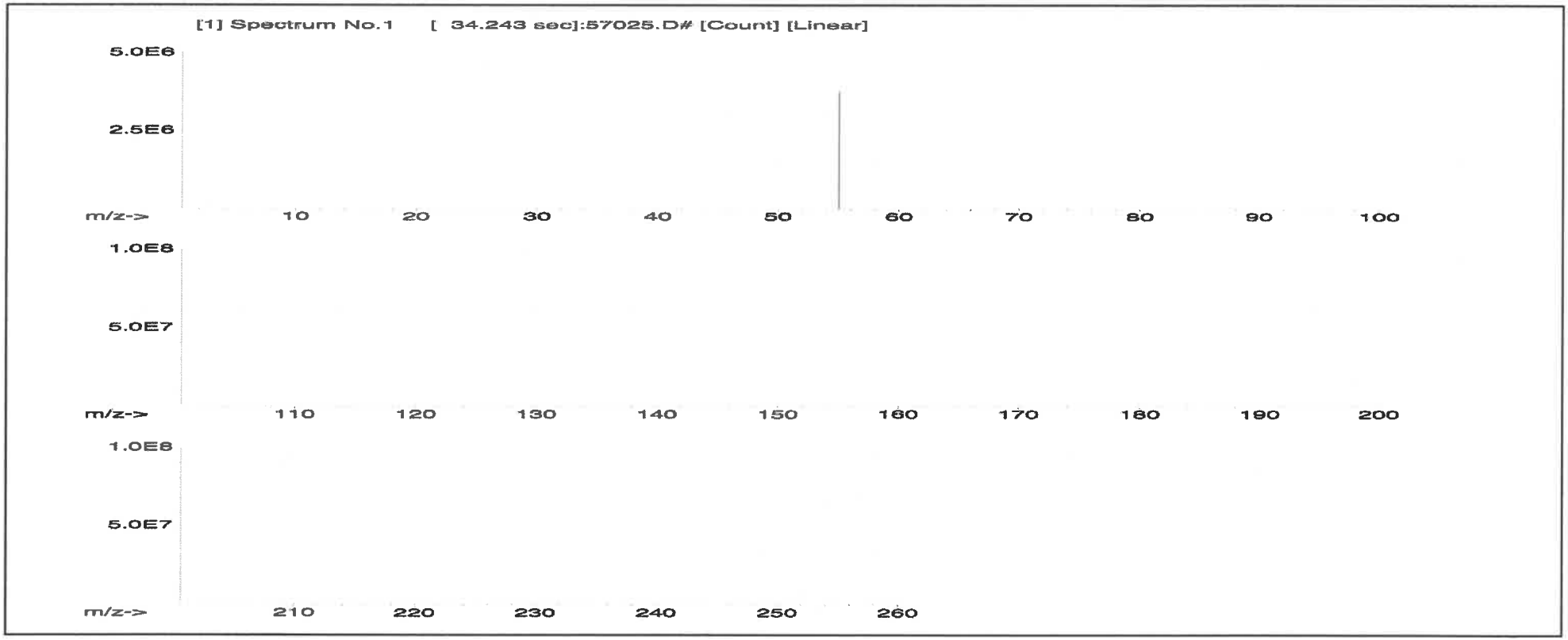
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**58025**	24002546	Nitric Acid	
Lot Number:	**102623**			
Description:	**Manganese (Mn)**			
		2.0%	60.0 (mL)	Nitric Acid
Expiration Date:	102626			
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):	3000.41	0.058	Flask Uncertainty	

Formulated By:	Benson Chan	102623
Reviewed By:	Pedro L. Rentas	102623

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. Manganese(II) nitrate tetrahydrate (Mn)	58125	071123	0.1000	300.0	0.084	1000	10000.1	**1000.0**	**2.1**	20694-39-7	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:

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* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the balances that are calibrated with weights traceable to NIST (see above).
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* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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R: 12/20/23 M5747

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CERTIFIED WEIGHT REPORT:

Part Number: 57082
Lot Number: 100923
Description: Lead (Pb)

Expiration Date: 100926
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

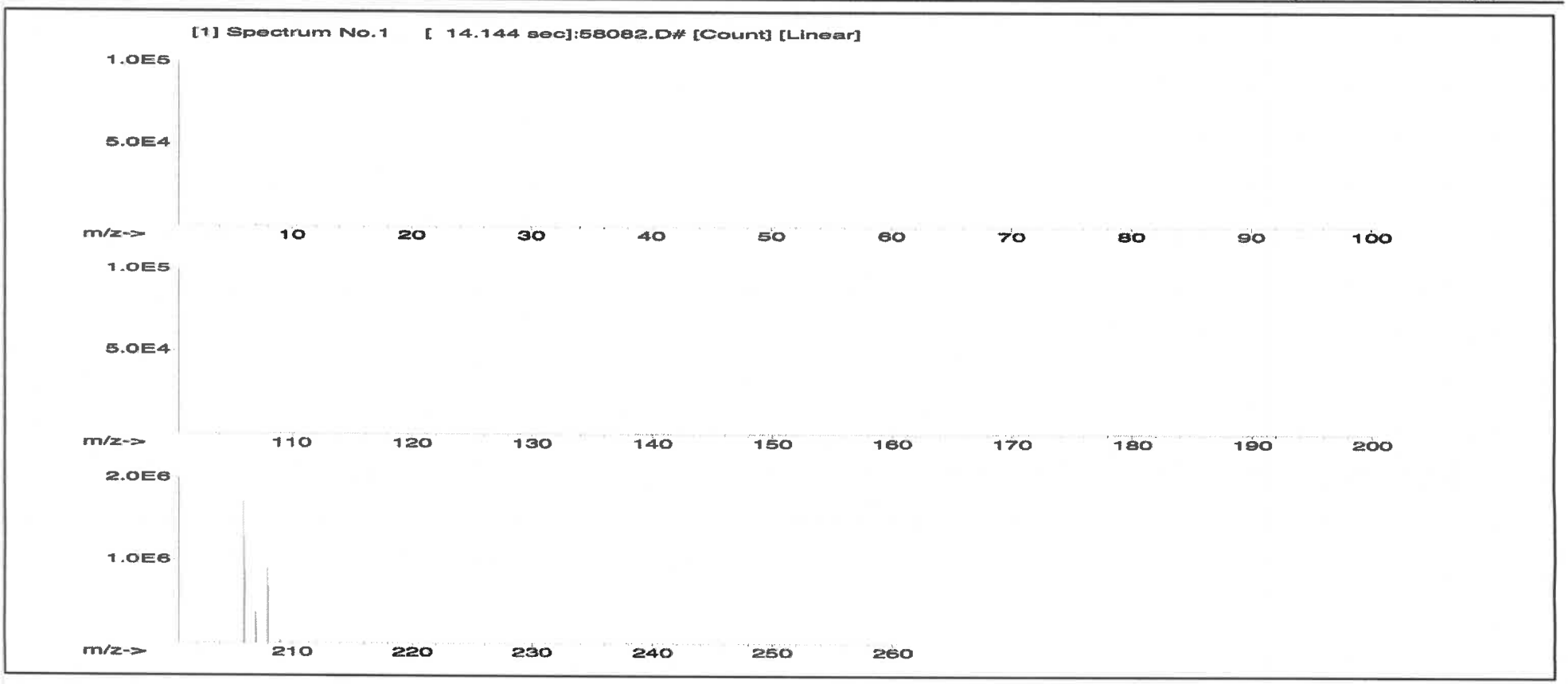
Weight shown below was diluted to (mL): 3000.41 ± 0.06 Flask Uncertainty

	Lot #		
Solvent:	24002546	Nitric Acid	
2%	60.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

Formulated By:	Lawrence Barry	100923
Reviewed By:	Pedro L. Rentas	100923

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lead(II) nitrate (Pb)	IN029	PBD122016A1	1000	99.999	0.10	62.5	4.80071	4.80077	**1000.0**	**2.0**	10099-74-8	0.05 mg/m3	intrvns-rat 93 mg/kg	3128



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:

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R: 12/20/23 M5748

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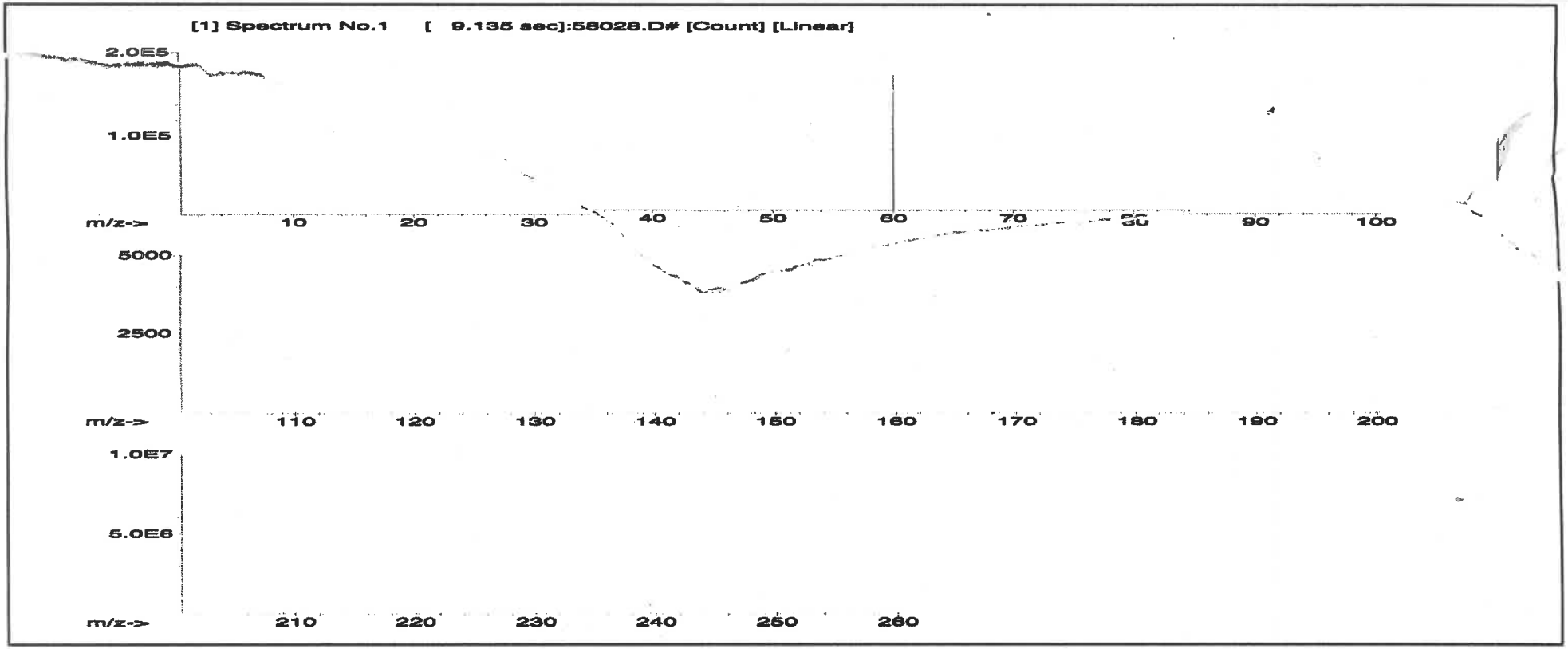
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57028**	24002546	Nitric Acid	
Lot Number:	**091223**			
Description:	**Nickel (Ni)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	091226			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	091223
Reviewed By:	Pedro L. Rentas	091223

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Nickel(II) nitrate hexahydrate (Ni)	58128	062023	0.1000	200.0	0.084	1000	10000.4	**1000.0**	2.2	13478-00-7	1 mg/m3	orl-rat 1620 mg/kg	3136



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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M5768 M5769 (BP) R:1/3/24

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CERTIFIED WEIGHT REPORT:

Part Number: 58112
Lot Number: 091823
Description: Magnesium (Mg)

Expiration Date: 091826
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB

Weight shown below was diluted to (mL): 2000.02 0.058 Flask Uncertainty

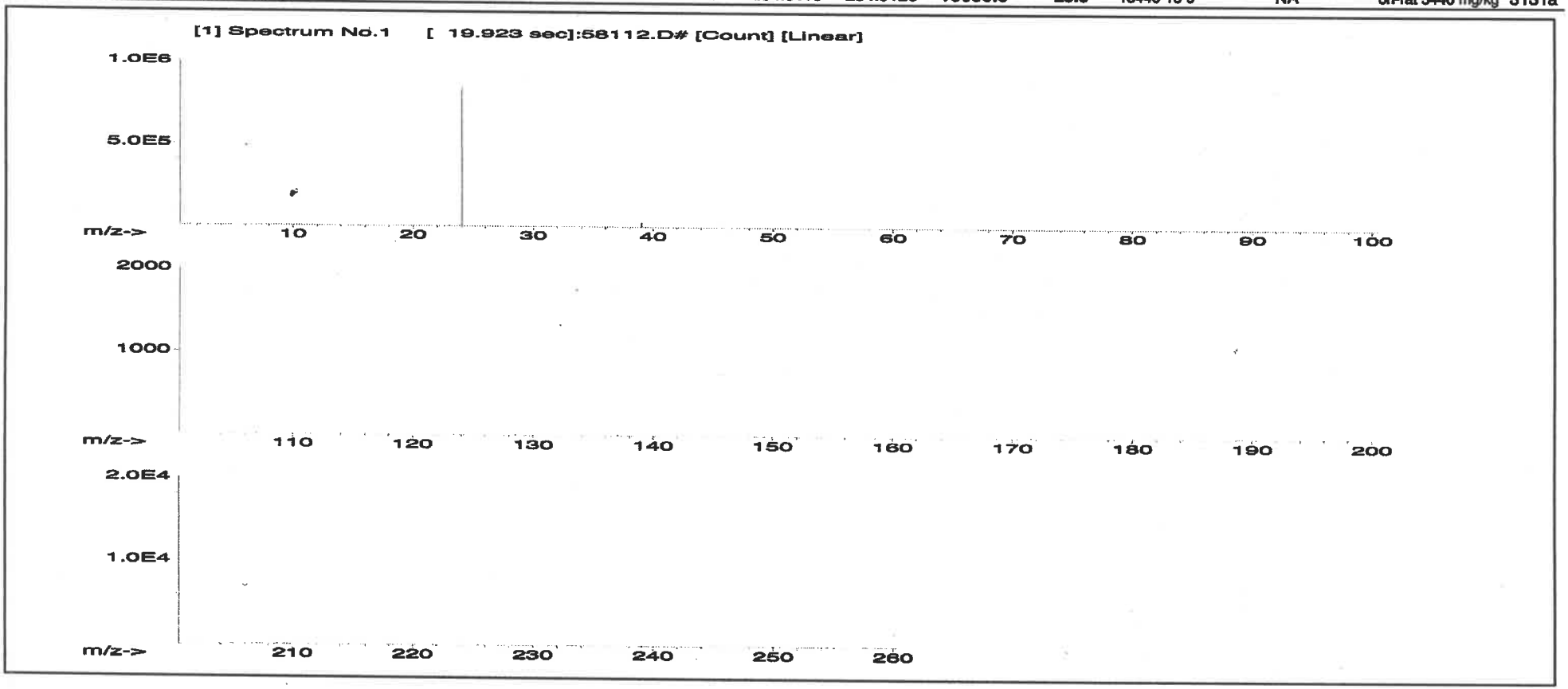
	Lot #		
Solvent:	24002546	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

M5768, M5769 (BP) R: 1/3/24

Formulated By:	Lawrence Barry	091823
Reviewed By:	Pedro L. Rentas	091823

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	234.9118	234.9126	**10000.0**	**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:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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R: 02/09/24 M5798

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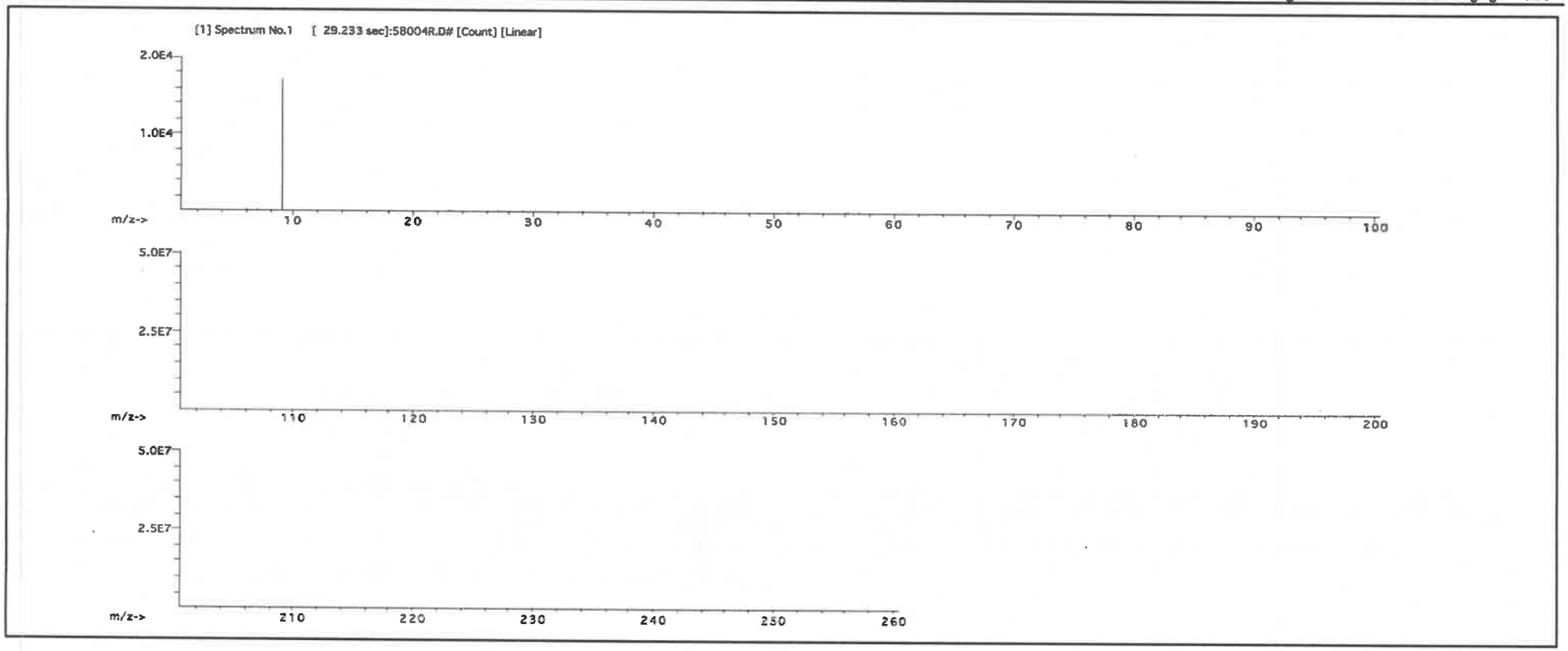
CERTIFIED WEIGHT REPORT:

		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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R? 02/09/24 IV15799

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CERTIFIED WEIGHT REPORT:

Part Number: 57050
Lot Number: 071123
Description: Tin (Sn)

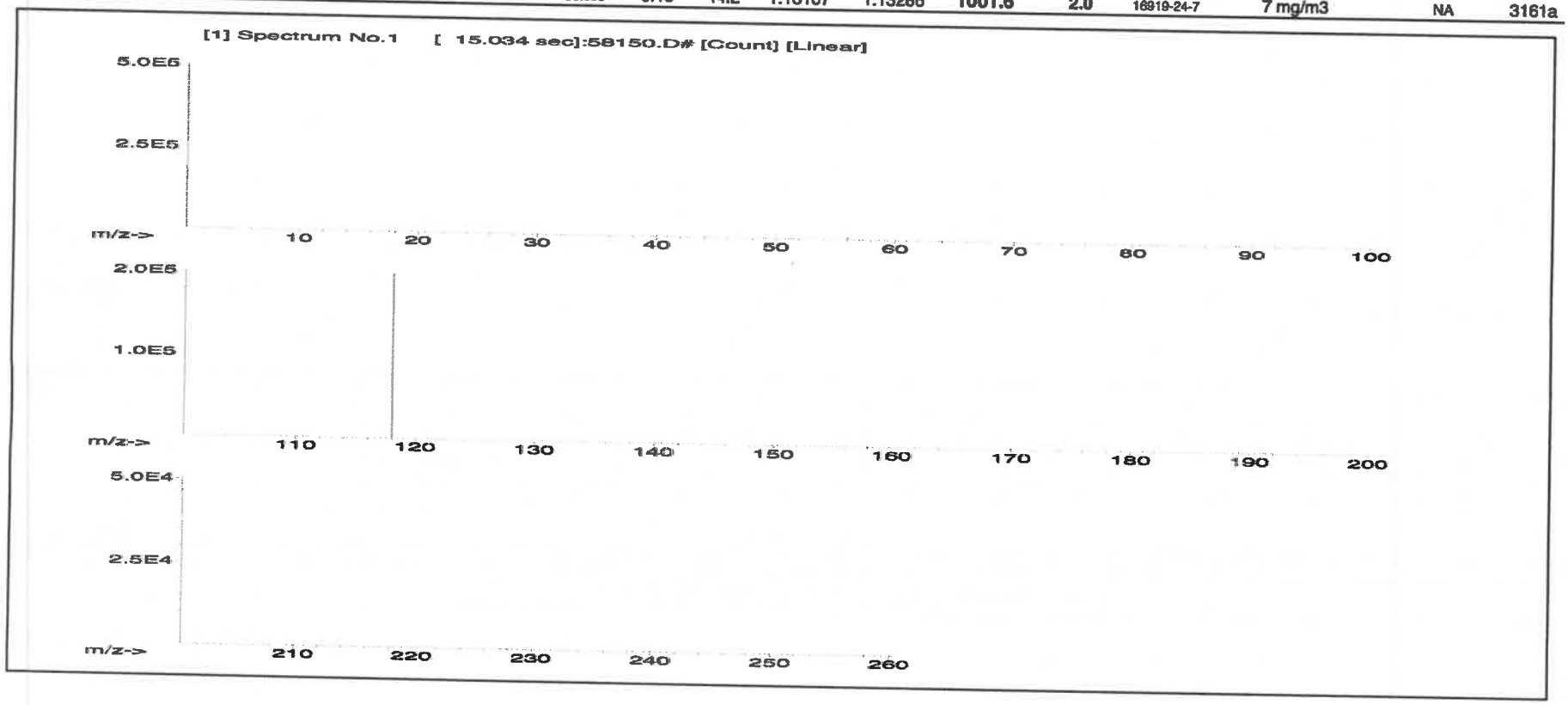
Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 499.93

	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:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
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* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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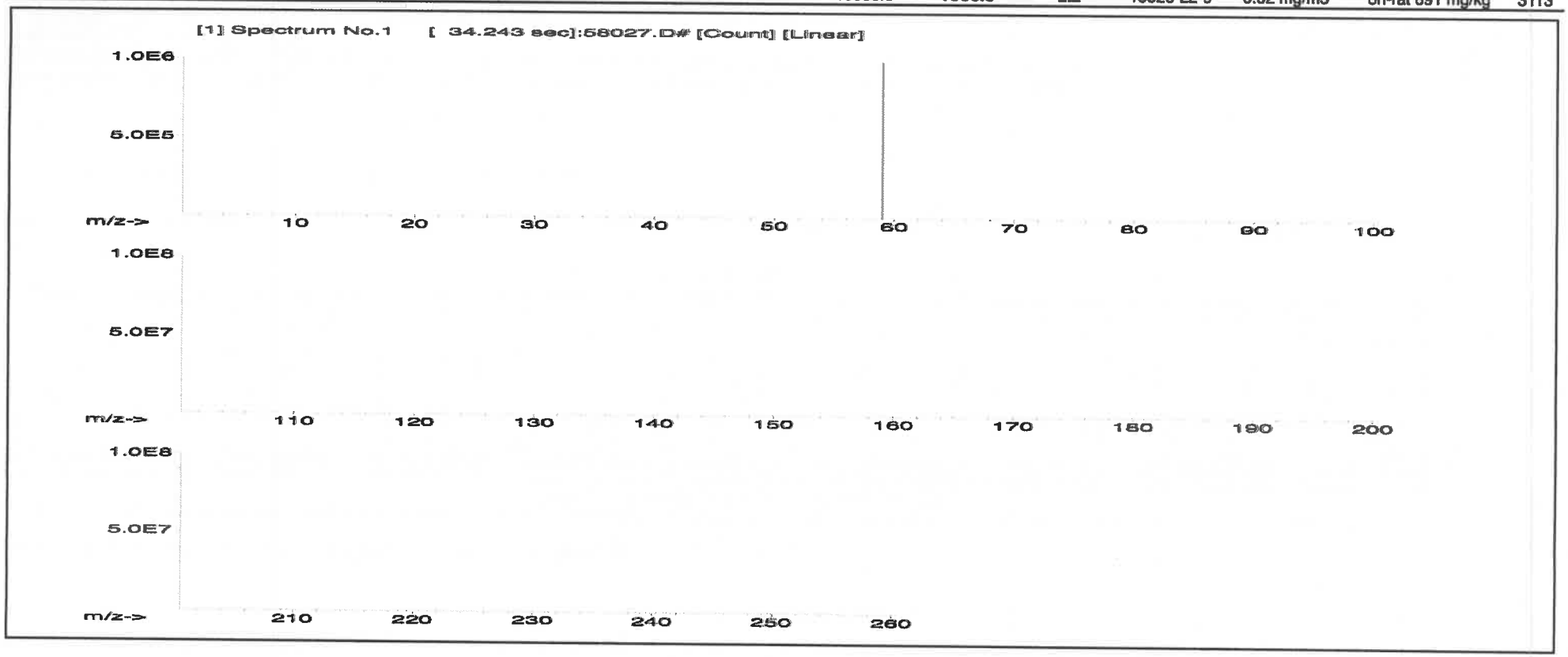
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:		
Part Number:	**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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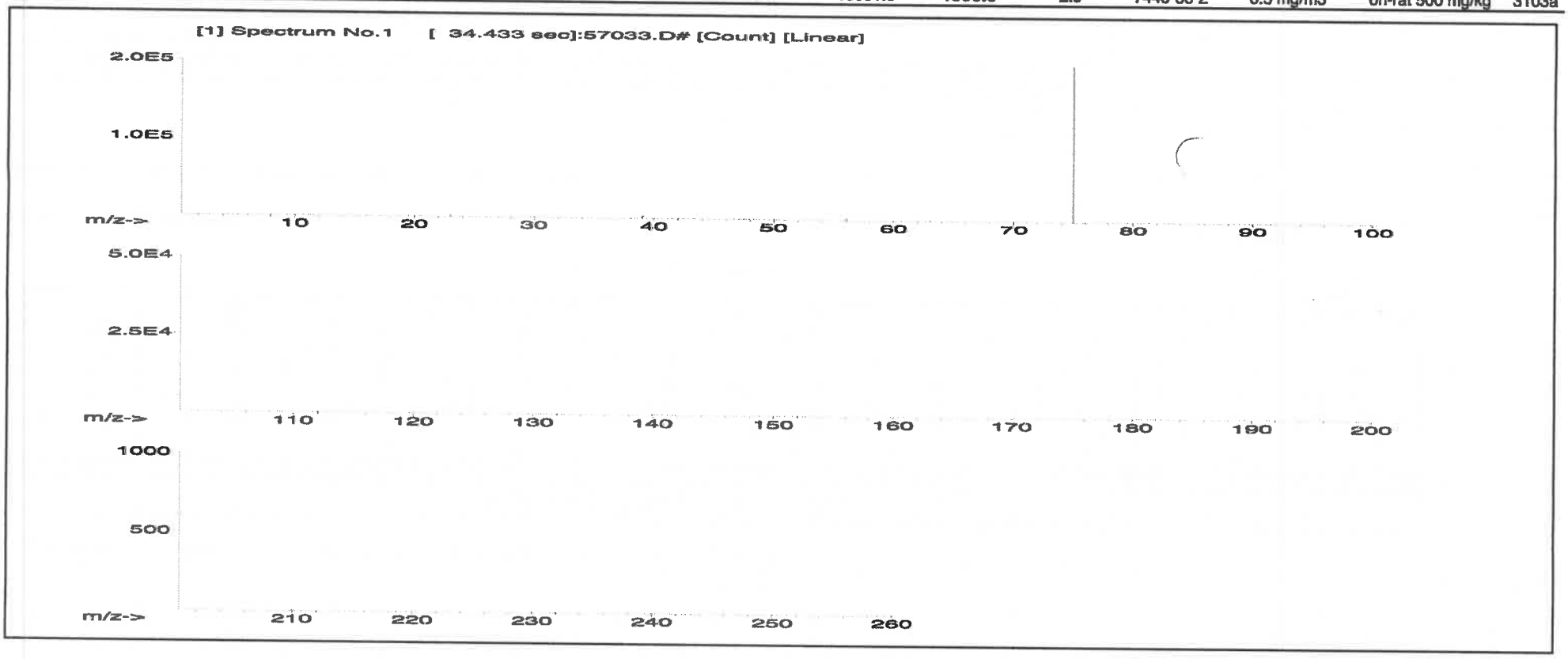
CERTIFIED **WEIGHT** REPORT:

		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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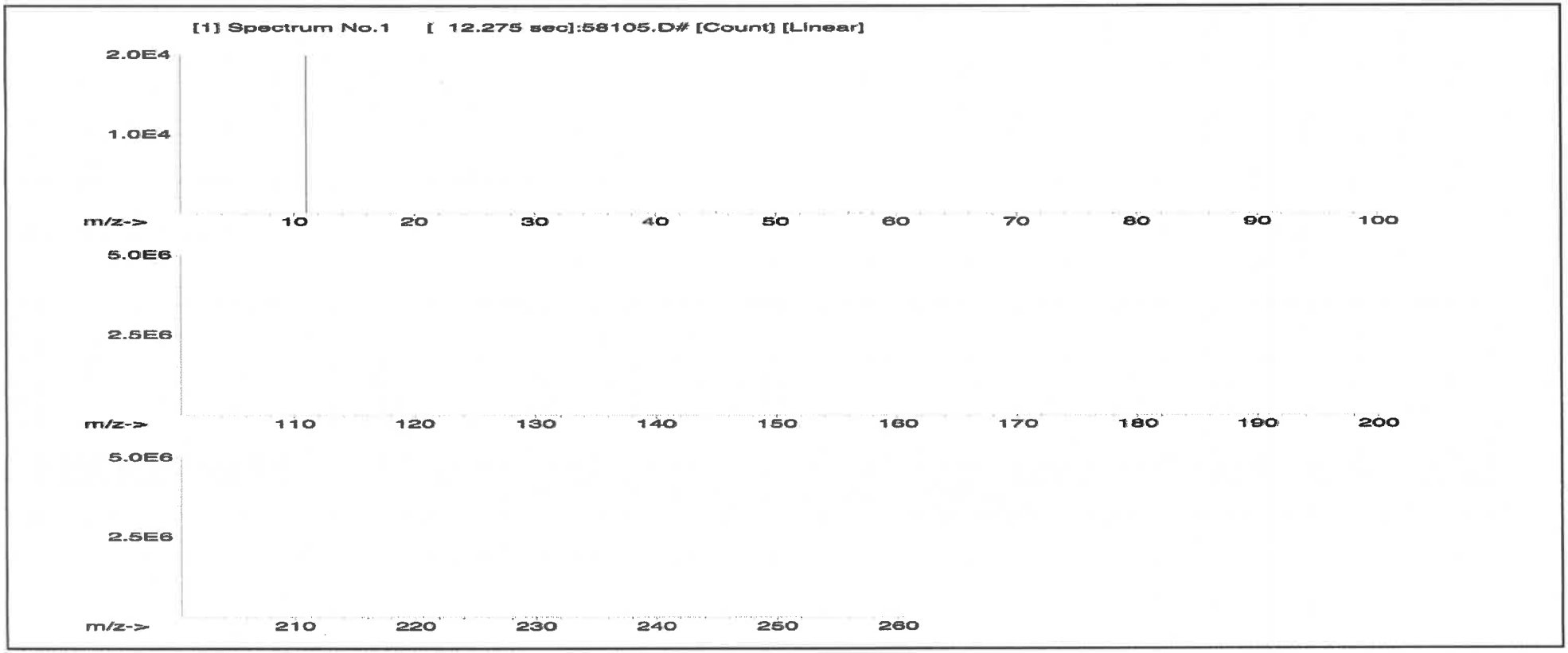
CERTIFIED WEIGHT REPORT:

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:

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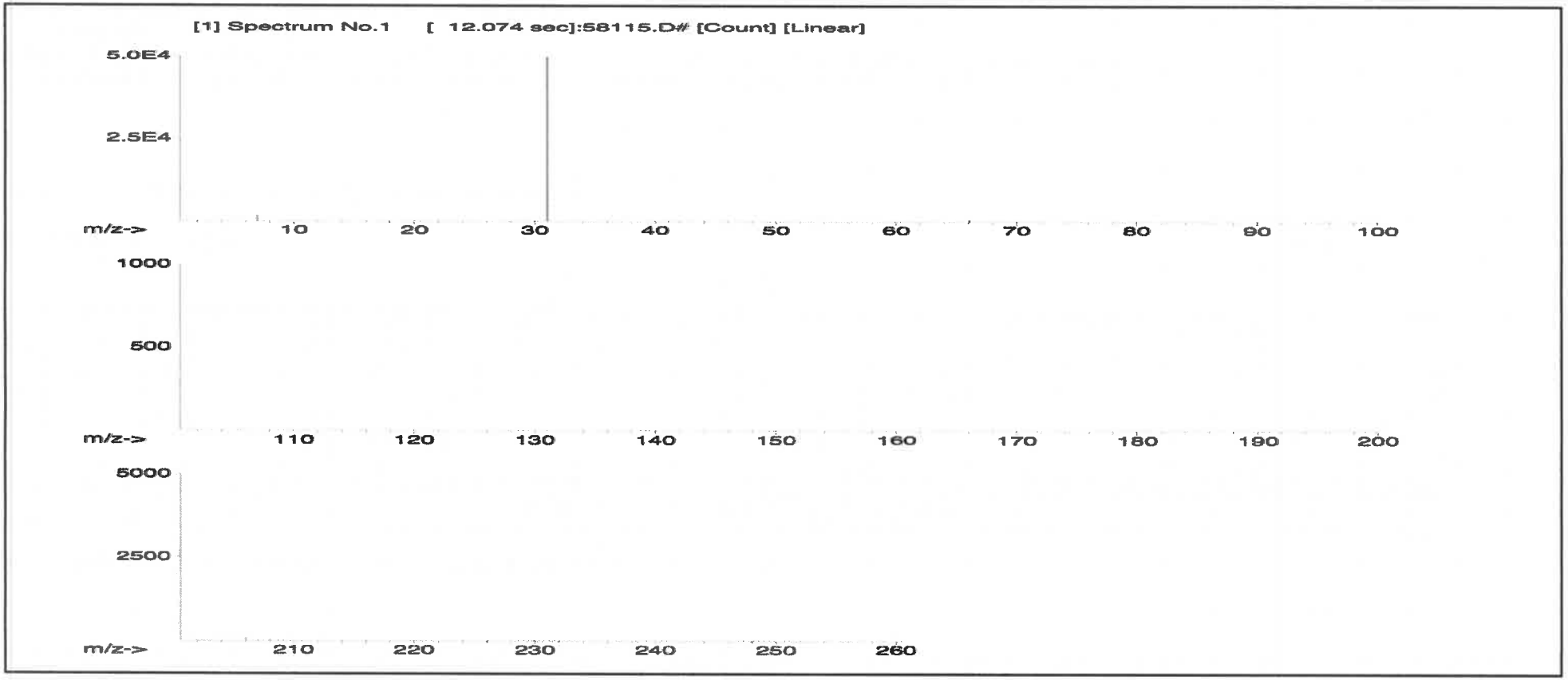
CERTIFIED WEIGHT REPORT:

			Lot #	
Part Number:	**57115**	**Solvent:**	21110221	Nitric Acid
Lot Number:	**041723**			
Description:	**Phosphorous (P)**	2%	40.0 (mL)	Nitric Acid
Expiration Date:	041726			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**10000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	041723
Reviewed By:	Pedro L. Rentas	041723

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium dihydrogen phosphate (P)	IN008	PV082019A1	10000	99.999	0.10	27.5	72.7287	72.7289	**10000.0**	**20.0**	7722-76-1	5 mg/m3	orl-rat >2000mg/kg	3186



Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	T	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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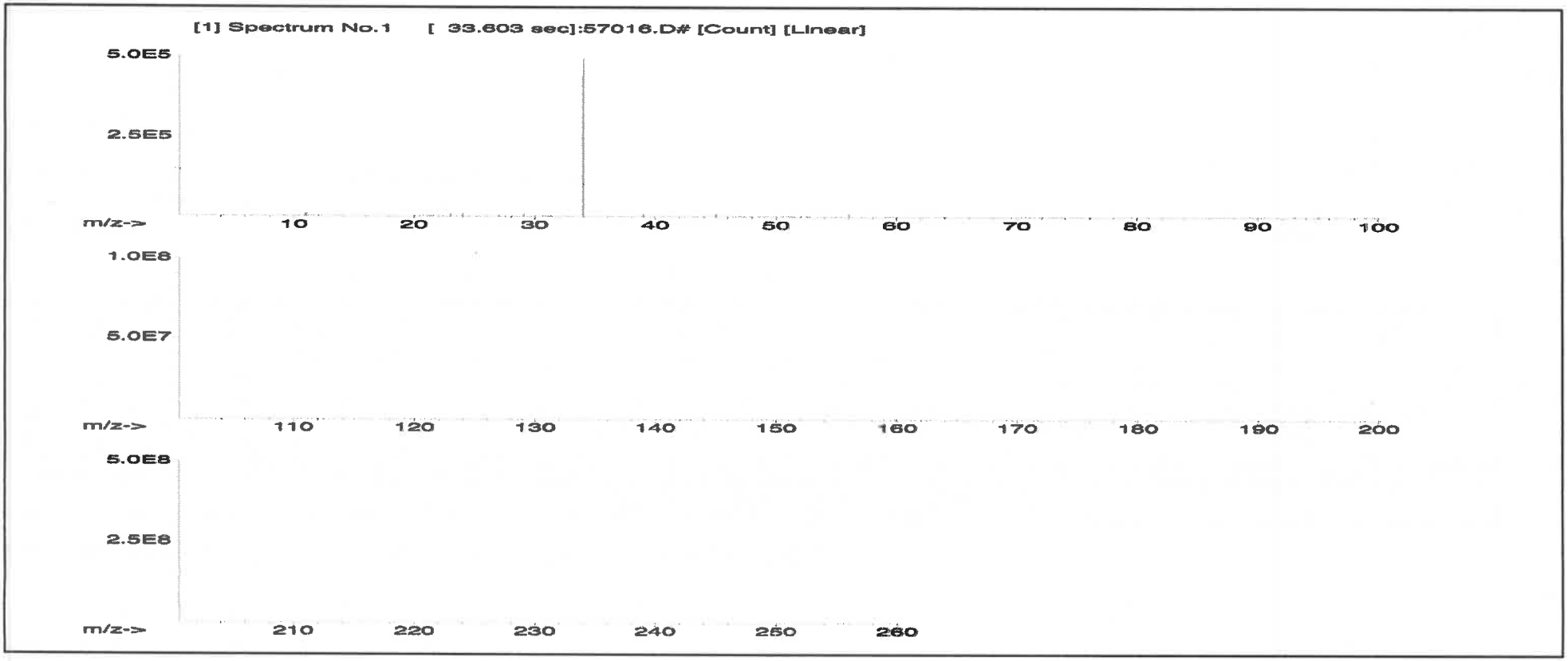
CERTIFIED WEIGHT REPORT:

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:

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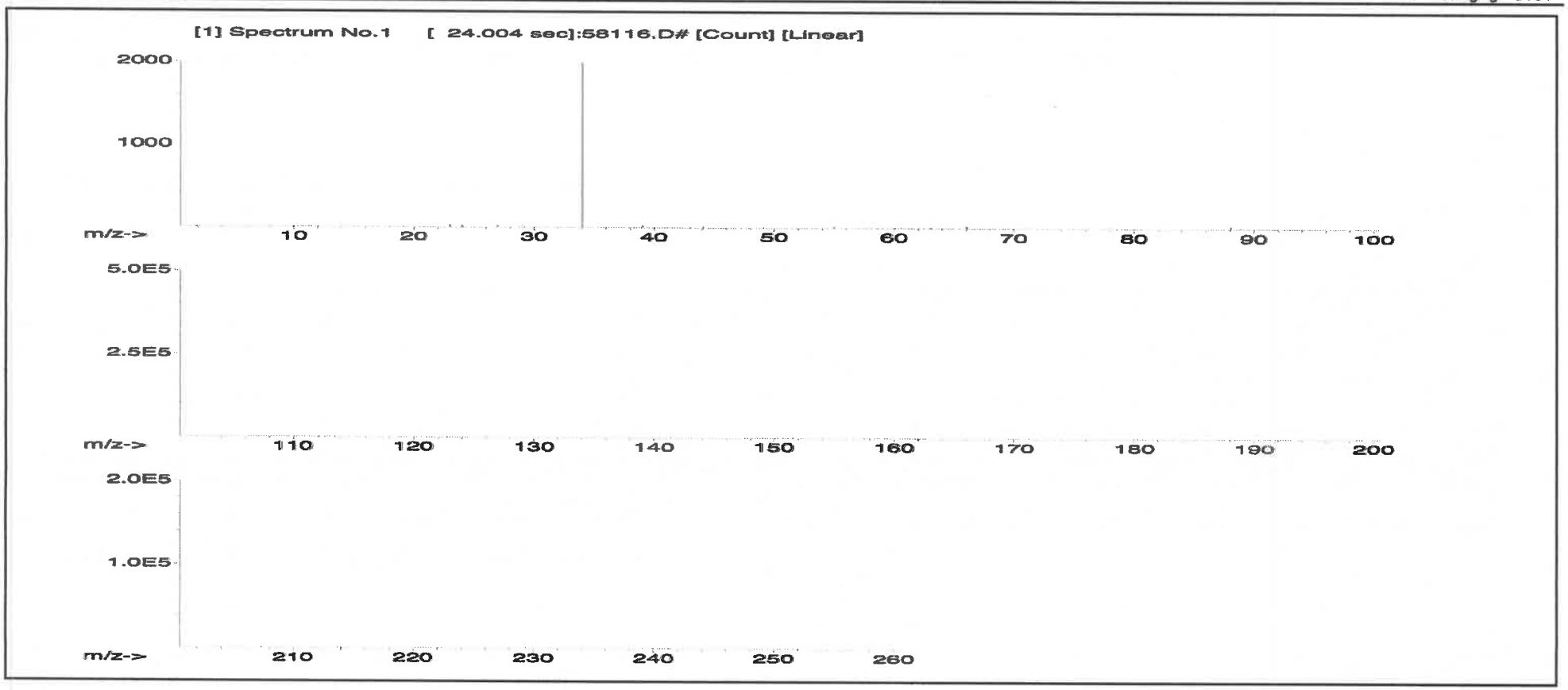
CERTIFIED WEIGHT REPORT:

Part Number:	**57116**			
Lot Number:	**071123**	**Solvent:**	071123	ASTM Type 1 Water
Description:	**Sulfur (S)**			
Expiration Date:	071126			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**10000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	1999.48	0.058	Flask Uncertainty	

Lot #

Formulated By:	Lawrence Barry	071123
Reviewed By:	Pedro L. Rentas	071123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium sulfate (S)	IN117	SLBR7225V	10000	99.9	0.10	24.3	82.4675	82.4682	**10000.1**	**20.0**	7783-20-2	NA	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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R: 02/09/24 M.5818

Lot #

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CERTIFIED WEIGHT REPORT:

Part Number: 57014
Lot Number: 122023
Description: Silicon (Si)

Expiration Date: 122026
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 1999.48 ± 0.058 Flask Uncertainty

Solvent: 24002546 Nitric Acid

2% 40.0 (mL) Nitric Acid

5E-05 Balance Uncertainty

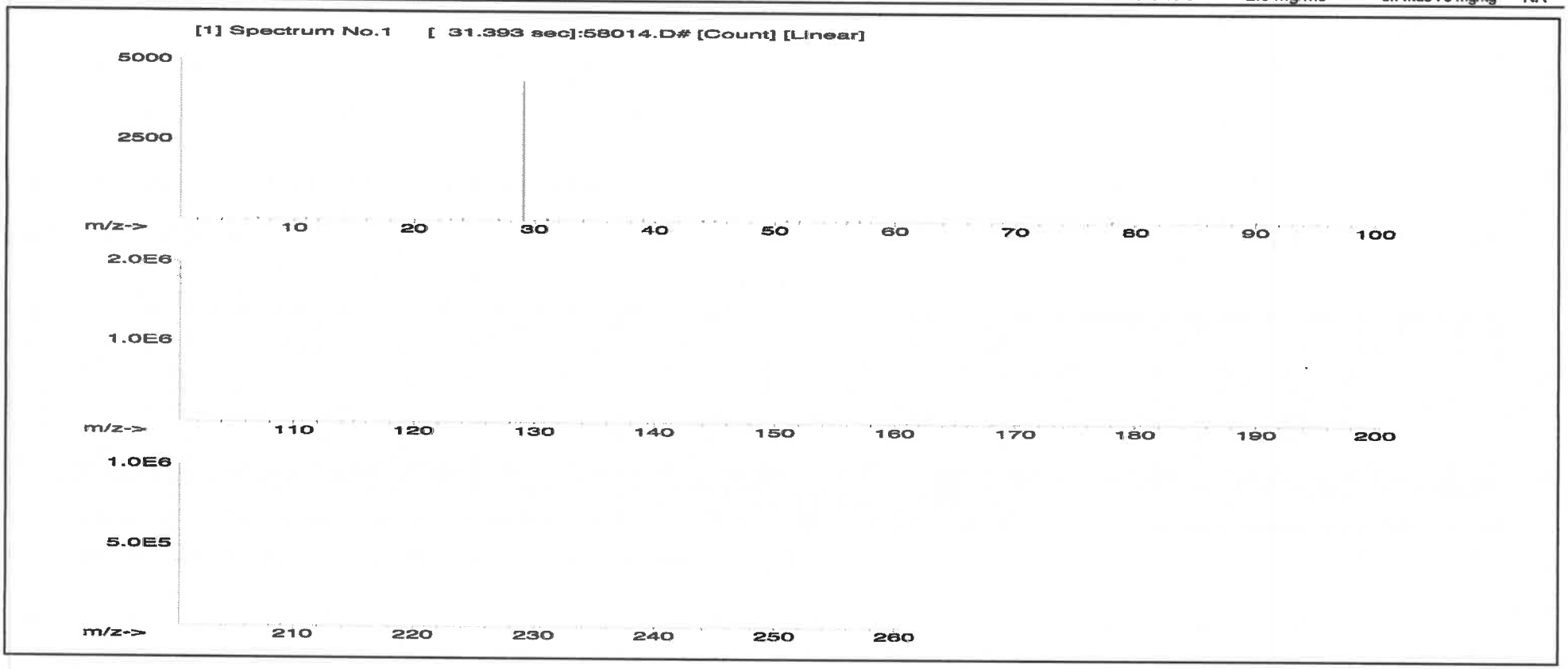
Aleah O'Brady

Formulated By: Aleah O'Brady 122023

Pedro Rentas

Reviewed By: Pedro L. Rentas 122023

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 hexafluorosilicate (Si)	IN009	SID082022A1	1000	99.999	0.10	14.4	13.8854	13.8855	**1000.0**	**2.0**	16919-19-0	2.5 mg/m3	orl-mus 70 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	<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	T	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

R: 02/09/24 M5819

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CERTIFIED WEIGHT REPORT:

Part Number: 58030
Lot Number: 111623
Description: Zinc (Zn)

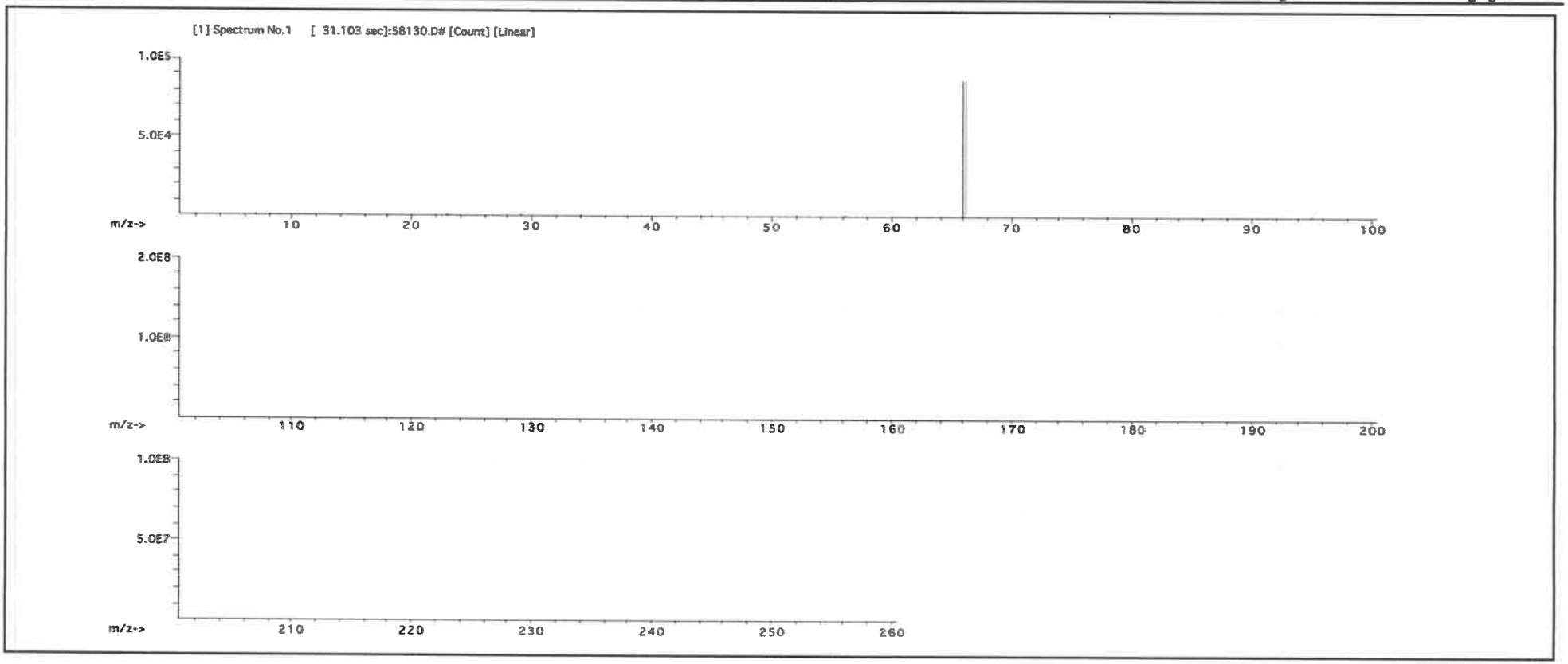
Expiration Date: 111626
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

Weight shown below was diluted to (mL): 3000.4 0.06 Flask Uncertainty

		Lot #		
Solvent:	24002546	Nitric Acid		
2%	60.0 (mL)	Nitric Acid		
			5E-05	Balance Uncertainty

Formulated By:	Benson Chan	111623
Reviewed By:	Pedro L. Rentas	111623

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	12.3475	12.3502	**1000.2**	**2.0**	10196-18-6	1 mg/m3	orl-rat 1190mg/kg	3168



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	T
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
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* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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R: 02/09/24 M5820

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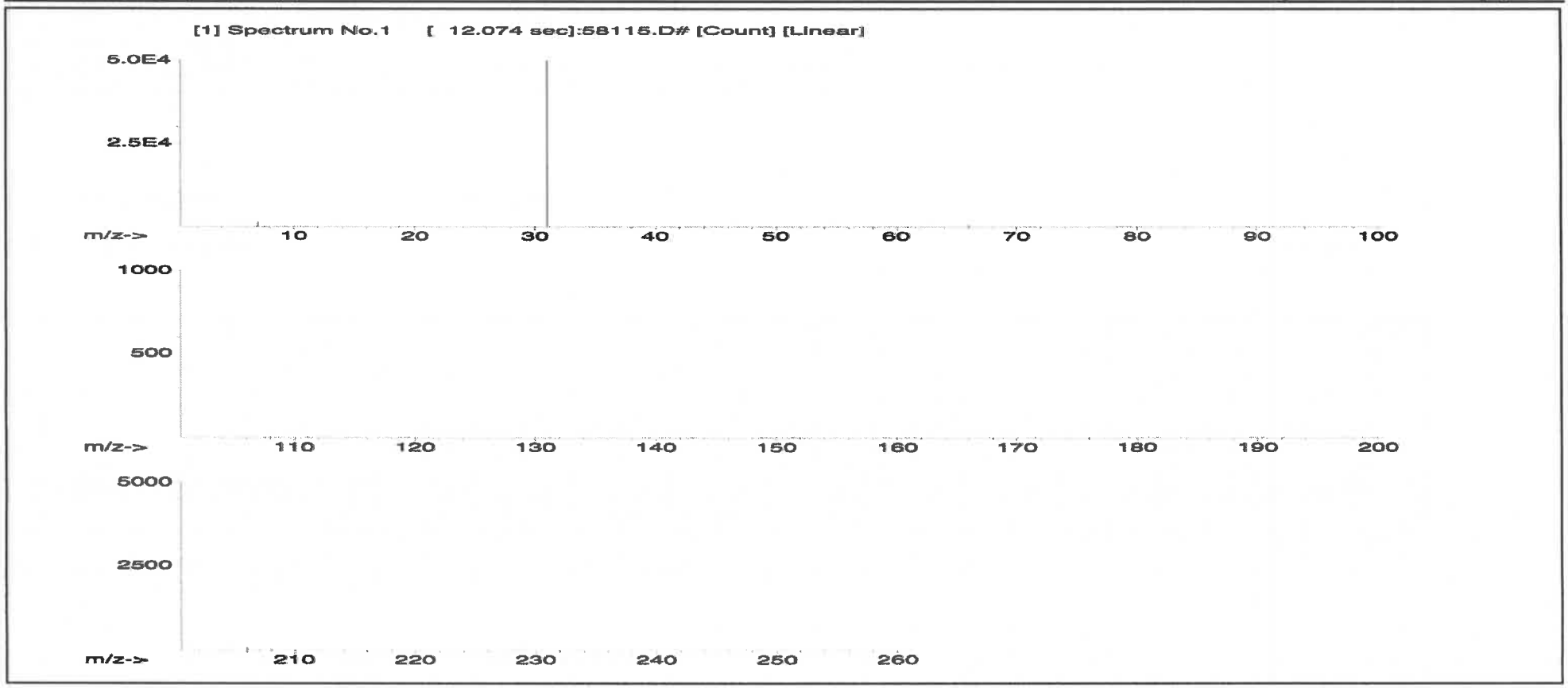
CERTIFIED WEIGHT REPORT:

Part Number:	**57015**		**Lot #**		
Lot Number:	**091123**	**Solvent:**	24002546	Nitric Acid	
Description:	**Phosphorous (P)**	2%	40.0 (mL)	Nitric Acid	
Expiration Date:	091126				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Formulated By:	Lawrence Barry	091123
Reviewed By:	Pedro L. Rentas	091123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium dihydrogen phosphate (P)	IN008	PV082019A1	1000	99.999	0.10	27.5	7.2729	7.2730	**1000.0**	**2.0**	7722-76-1	5 mg/m3	orl-rat >2000mg/k	3186



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	T	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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QATS LABORATORY INORGANIC REFERENCE MATERIAL INITIAL CALIBRATION VERIFICATION SOLUTIONS (ICV1, ICV5, AND ICV6)

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.

MTS28-37 MB
MTS53 MB 3/30/23

Contains Metals in Dilute Acidic or Cyanide in Basic Aqueous Solutions
HAZARDOUS MATERIAL

Safety Data Sheets Available Upon Request

(A) *SAMPLE DESCRIPTION*

Enclosed is a set of one (1) or more Aqueous Inorganic Reference Materials containing various analyte concentrations. ICV1 and ICV5 are in a matrix of dilute nitric acid. ICV6 is in a matrix of dilute basic solution. **For the reference material source in reporting ICVs use "USEPA". For the reference material lot number for the ICV1, ICV5, and ICV6 solutions use "ICV1-1014", "ICV5-0415", and "ICV6-0400", respectively.**

(B) *BREAKAGE OR MISSING ITEMS*

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain of custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120

(C) *ANALYSIS OF SAMPLES*

The Initial Calibration Verification Solutions (ICVs) are to be used to evaluate the accuracy of the initial calibrations of ICP, AA, and Cyanide colorimetric instruments, and are to be used with the CLP SOWs and revisions. The values for each element in the ICVs are listed below in µg/L (ppb) for the resulting solution(s) after the dilution of the concentrate(s) according to the following instructions. Use Class 'A' glassware to prepare the solution(s).

ICV1-1014 For ICP-AES analysis, use a 10-fold dilution by pipetting 10 mL of the ICV1 concentrate into a 100 mL volumetric flask and dilute to volume with 2% (v/v) nitric acid.

The Quality Assurance Technical Support (QATS) contract is operated by APTIM Federal Services, LLC.

Instructions for QATS Reference Material: *Inorganic ICV Solutions*

ICV1-1014 For ICP-MS analysis, use a 50-fold dilution by pipetting 2 mL of the ICV1 concentrate into a 100 mL volumetric flask and dilute to volume with 1% (v/v) nitric acid.

ICV5-0415 For the cold vapor analysis of mercury by AA, use a 100-fold dilution by pipetting 1 mL of the ICV5 concentrate into a 100 mL volumetric flask and dilute to volume with 2% (v/v) nitric acid. The ICV5 concentrate is prepared in 0.05% (w/v) $K_2Cr_2O_7$ and 5% (v/v) nitric acid.

ICV6-0400 For the analysis of cyanide, use a 100-fold dilution by pipetting 1 mL of the ICV6 concentrate into a 100 mL volumetric flask and dilute to volume with Type II water. Distill this solution along with the samples before analysis. The cyanide concentrate is prepared from $K_3Fe(CN)_6$, Type II water, and 0.1 % sodium hydroxide, and will decompose rapidly if exposed to light.

NOTE: USE TYPE II WATER AND HIGH-PURITY ACIDS FOR ALL DILUTIONS.

(D) *CERTIFIED CONCENTRATIONS OF QATS ICV1, ICV5, AND ICV6 SOLUTIONS*

ICV1-1014		
Element	**Concentration (µg/L) (after 10-fold dilution)**	**Concentration (µg/L) (after 50-fold dilution)**
Al	2500	500
Sb	1000	200
As	1000	200
Ba	520	100
Be	510	100
Cd	510	100
Ca	10000	2000
Cr	520	100
Co	520	100
Cu	510	100
Fe	10000	2000
Pb	1000	200
Mg	6000	1200
Mn	520	100
Ni	530	110
K	9900	2000
Se	1000	200
Ag	250	50
Na	10000	2000
Tl	1000	210
V	500	100
Zn	1000	200

ICV5-0415		ICV6-0400	
Element	**Concentration (µg/L) (after 100-fold dilution)**	**Analyte**	**Concentration (µg/L) (after 100-fold dilution)**
Hg	4.0	**CN^-**	99

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M5962 R! 06/14/24.

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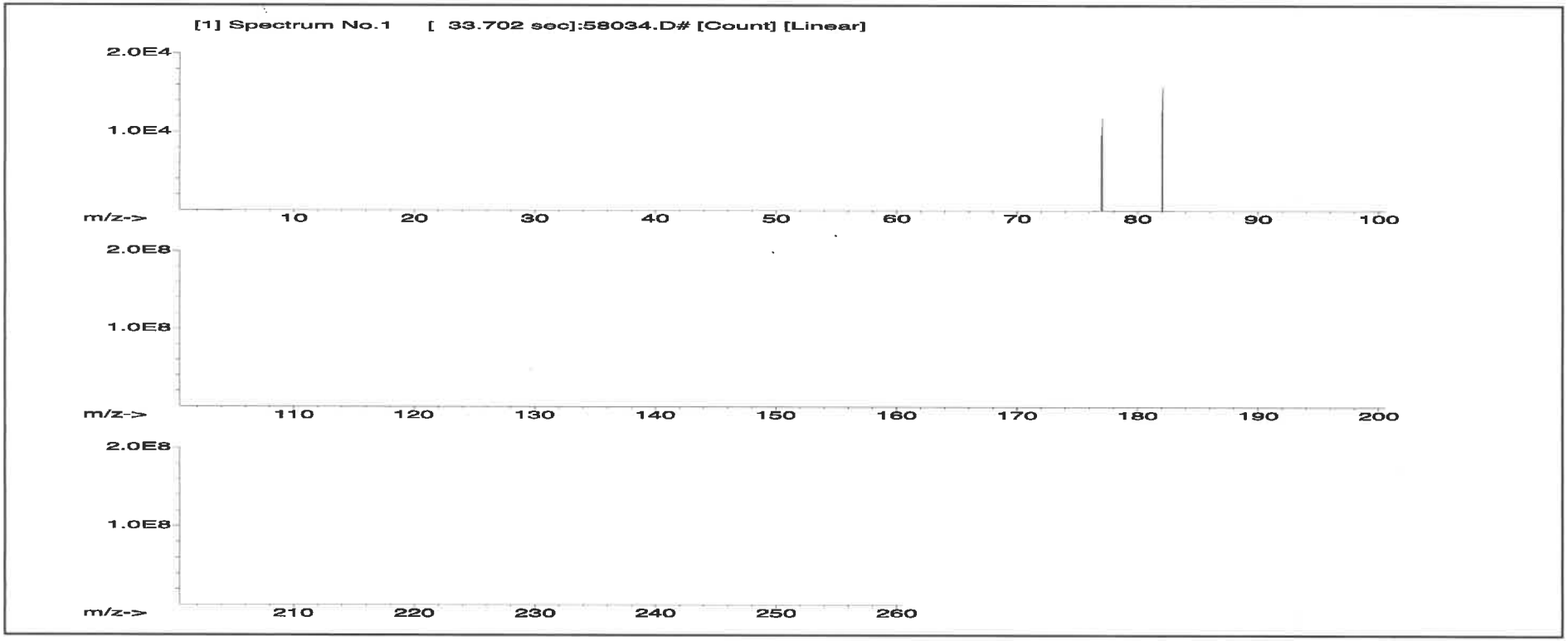
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57034**	24002546	Nitric Acid	
Lot Number:	**060624**			
Description:	**Selenium (Se)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	060627			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.07	0.100	Flask Uncertainty	

Formulated By:	Benson Chan	060624
Reviewed By:	Pedro L. Rentas	060624

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Selenium (Se)	58134	071223	0.1000	200.0	0.084	1000	10002.5	**1000.0**	**2.2**	7782-49-2	0.2 mg/m3	orl-rat 6700 mg/kg	3149



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																		
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	T	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
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B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
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Certified Reference Material CRM

M5970, M5971 R: 7/01/24

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

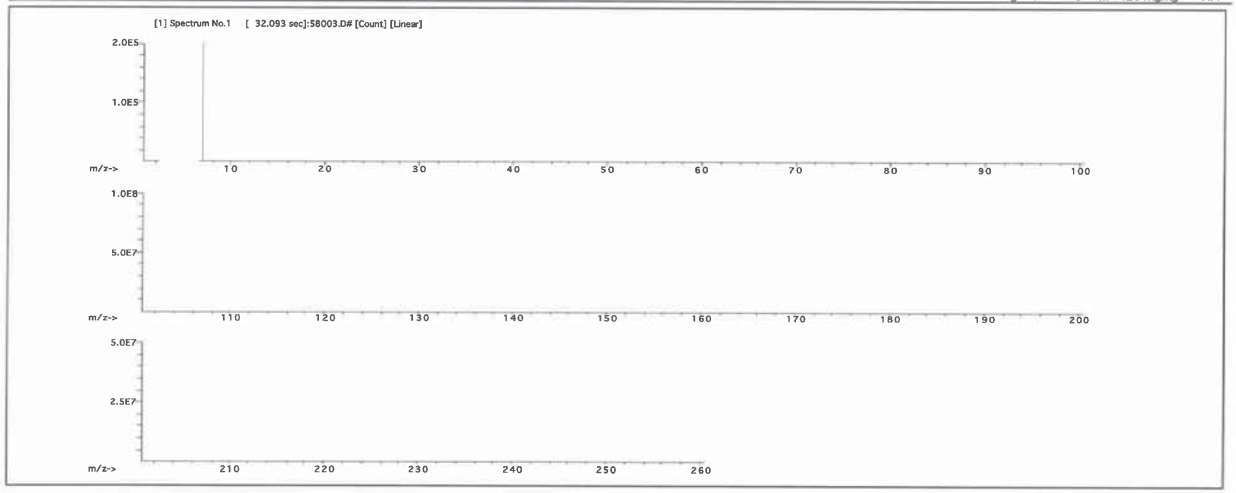
		Lot #	Solvent:
Part Number:	**57003**	24002546	Nitric Acid
Lot Number:	**062124**		
Description:	**Lithium (Li)**		
		2.0%	5.0 (mL) Nitric Acid
Expiration Date:	062127		
Recommended Storage:	Ambient (20 °C)		
Nominal Concentration (µg/mL):	**1000**		
NIST Test Number:	6UTB	5E-05 Balance Uncertainty	
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).

M5978, M5979

INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

R: 2/22/24

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:

$X_{CRM/RM} = \Sigma(w_i)(\bar{x}_i)$

$\bar{x}_i$ = 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:

$X_{CRM/RM} = (\bar{x}_a)\ (u_{char\ a})$

$\bar{x}_a$ = 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	<	0.000536	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

45982 R: 6/11/24

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

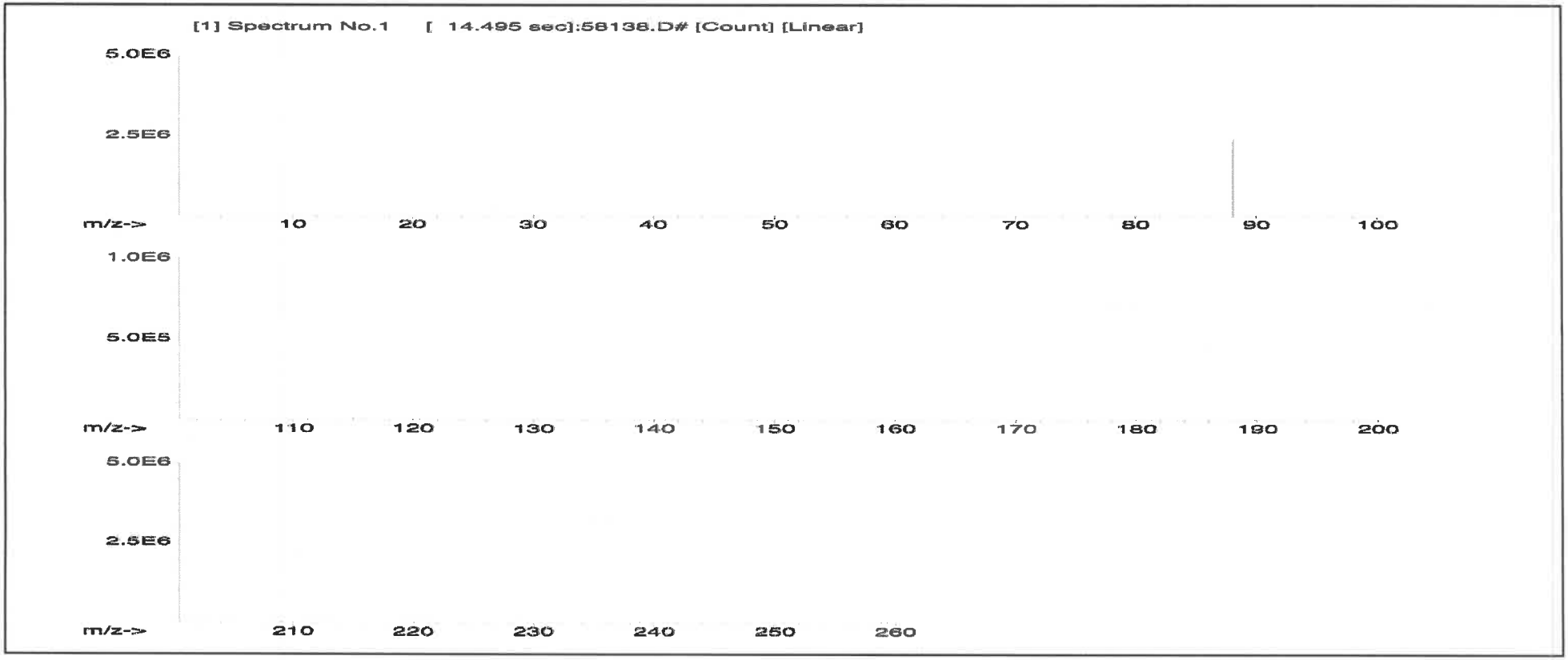
Part Number: 57038
Lot Number: 031524
Description: Strontium (Sr)

Expiration Date: 031527
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.07

	Lot #		
Solvent:	24002546	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	
5E-05	Balance Uncertainty		
0.100	Flask Uncertainty		

Formulated By:	Benson Chan	031524
Reviewed By:	Pedro L. Rentas	031524

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Strontium nitrate (Sr)	IN017	SRZ022018A1	1000	99.997	0.10	41.2	4.85470	4.85502	**1000.1**	**2.0**	10042-76-9	NA	orl-rat >2000mg/kg	3153a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	T	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 01/03/24 M6033

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

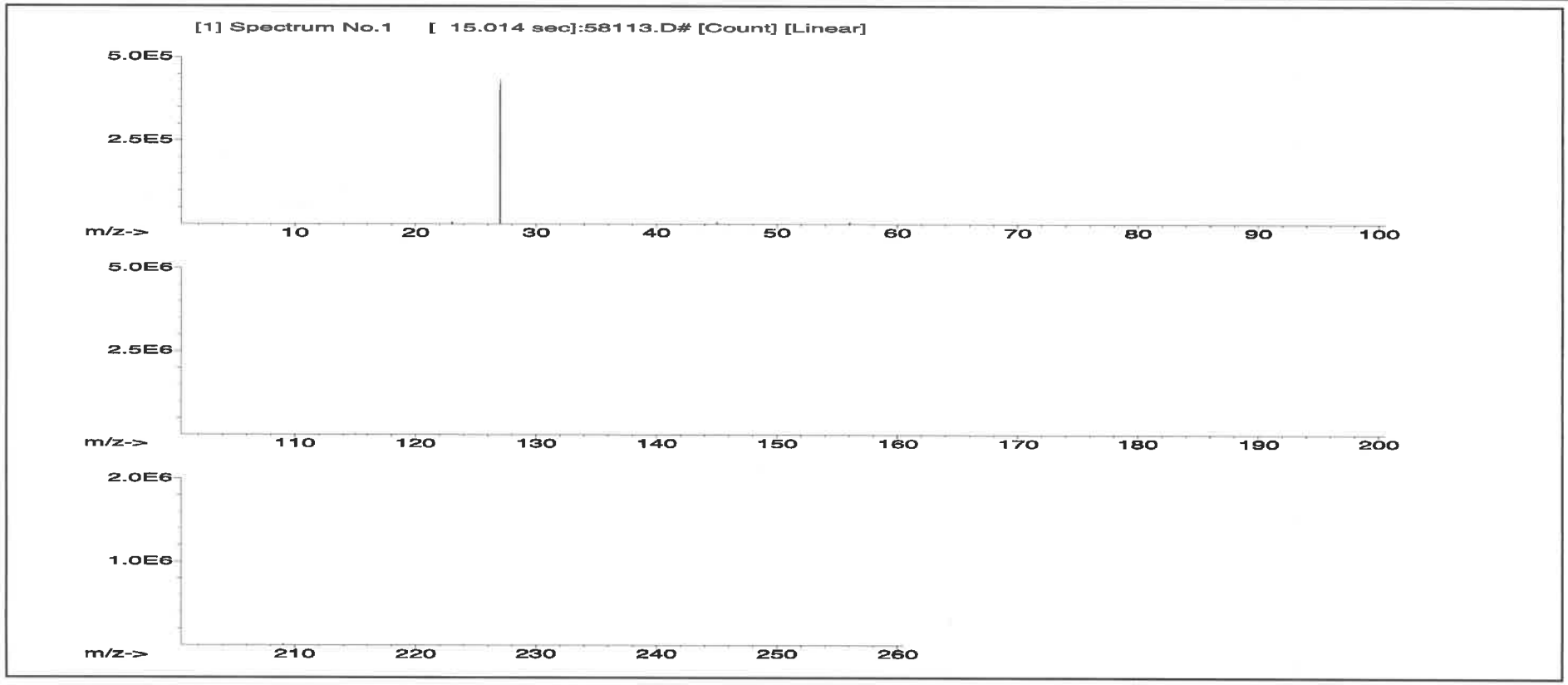
Part Number:	**58113**		**Solvent:**	20510011	Nitric Acid
Lot Number:	**011623**				
Description:	**Aluminum (Al)**				
			2%	40.0 (mL)	Nitric Acid
Expiration Date:	011626				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**10000**				
NIST Test Number:	6UTB	5E-05 Balance Uncertainty			
Weight shown below was diluted to (mL):	2000.02	0.058 Flask Uncertainty			

Lot #

Giovanni Esposito

Formulated By:	Giovanni Esposito	011623
Reviewed By:	Pedro L. Rentas	011623

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. Aluminum nitrate nonahydrate (Al)	IN022	ALM112021A1	10000	99.999	0.10	7.30	273.9779	274.0078	**10001.1**	**20.0**	7784-27-2	2 mg/m3	orl-rat 3671 mg/kg	3101a



Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

M6094
M6095.

metdig
10/21/24.

Material No.: 9530-33
Batch No.: 24D1562005
Manufactured Date: 2024-03-18
Retest Date: 2029-03-17
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
ACS – Assay (as HCl) (by acid-base titrn)	36.5 – 38.0 %	37.6 %
ACS – Color (APHA)	≤ 10	5
ACS – Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS – Specific Gravity at 60°/60°F	1.185 – 1.192	1.192
ACS – Bromide (Br)	≤ 0.005 %	< 0.005 %
ACS – Extractable Organic Substances	≤ 5 ppm	< 1 ppm
ACS – Free Chlorine (as Cl_2)	≤ 0.5 ppm	< 0.5 ppm
Phosphate (PO_4)	≤ 0.05 ppm	0.03 ppm
Sulfate (SO_4)	≤ 0.5 ppm	< 0.3 ppm
Sulfite (SO_3)	≤ 0.8 ppm	0.3 ppm
Ammonium (NH_4)	≤ 3 ppm	< 1 ppm
Trace Impurities – Arsenic (As)	≤ 0.010 ppm	< 0.003 ppm
Trace Impurities – Aluminum (Al)	≤ 10.0 ppb	< 5.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 3.0 ppb
Trace Impurities – Barium (Ba)	≤ 1.0 ppb	< 1.0 ppb
Trace Impurities – Beryllium (Be)	≤ 1.0 ppb	< 1.0 ppb
Trace Impurities – Bismuth (Bi)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities – Boron (B)	≤ 20.0 ppb	2.2 ppb
Trace Impurities – Cadmium (Cd)	≤ 1.0 ppb	< 1.0 ppb
Trace Impurities – Calcium (Ca)	≤ 50.0 ppb	31.0 ppb
Trace Impurities – Chromium (Cr)	≤ 1.0 ppb	0.5 ppb
Trace Impurities – Cobalt (Co)	≤ 1.0 ppb	0.2 ppb
Trace Impurities – Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities – Gallium (Ga)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Germanium (Ge)	≤ 3.0 ppb	< 2.0 ppb
Trace Impurities – Gold (Au)	≤ 4.0 ppb	< 0.2 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities – Iron (Fe)	≤ 15 ppb	3 ppb

>>> Continued on page 2 >>>

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

Material No.: 9530-33
Batch No.: 24D1562005

Test	Specification	Result
Trace Impurities - Lead (Pb)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Lithium (Li)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities - Magnesium (Mg)	≤ 10.0 ppb	2.2 ppb
Trace Impurities - Manganese (Mn)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Mercury (Hg)	≤ 0.5 ppb	< 0.1 ppb
Trace Impurities - Molybdenum (Mo)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities - Nickel (Ni)	≤ 4.0 ppb	0.2 ppb
Trace Impurities - Niobium (Nb)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Potassium (K)	≤ 9.0 ppb	< 1.0 ppb
Trace Impurities - Selenium (Se), For Information Only		< 1.0 ppb
Trace Impurities - Silicon (Si)	≤ 100.0 ppb	< 10.0 ppb
Trace Impurities - Silver (Ag)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities - Sodium (Na)	≤ 100.0 ppb	2.0 ppb
Trace Impurities - Strontium (Sr)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Tantalum (Ta)	≤ 1.0 ppb	< 0.9 ppb
Trace Impurities - Thallium (Tl)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities - Tin (Sn)	≤ 5.0 ppb	< 0.4 ppb
Trace Impurities - Titanium (Ti)	≤ 1.0 ppb	0.2 ppb
Trace Impurities - Vanadium (V)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Zinc (Zn)	≤ 5.0 ppb	< 0.2 ppb
Trace Impurities - Zirconium (Zr)	≤ 1.0 ppb	< 0.1 ppb

>>> Continued on page 3 >>>

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

Material No.: 9530-33
Batch No.: 24D1562005

Test	Specification	Result

For Laboratory,Research,or Manufacturing Use
Product Information (not specifications):
Appearance (clear, fuming liquid)
Meets ACS Specifications
Storage Condition: Store below 25 °C.

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Jamie Croak
Director Quality Operations, Bioscience Production

Nitric Acid 69%
CMOS

M6103
M6104
M6105

Receive date:
9/29/24
Met Sig.

avantor™ | J.T.Baker®

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

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

M6109
M6110
M6111

Received date 9/29/24 Met dig.

avantor™ | J.T.Baker®

Material No.: 9530-33
Batch No.: 22F0762009
Manufactured Date: 2022-05-10
Retest Date: 2027-05-09
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
ACS – Assay (as HCl) (by acid-base titrn)	36.5 – 38.0 %	37.6 %
ACS – Color (APHA)	≤ 10	5
ACS – Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS – Specific Gravity at 60°/60°F	1.185 – 1.192	1.190
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	0.8 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	14.9 ppb
Trace Impurities – Chromium (Cr)	≤ 1.0 ppb	< 0.4 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	0.2 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.: 22F0762009

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	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 - 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	< 0.2 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	1.0 ppb
Trace Impurities - Silver (Ag)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities - Sodium (Na)	≤ 100.0 ppb	0.7 ppb
Trace Impurities - Strontium (Sr)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Tantalum (Ta)	≤ 1.0 ppb	< 0.9 ppb
Trace Impurities - Thallium (Tl)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities - Tin (Sn)	≤ 5.0 ppb	< 0.8 ppb
Trace Impurities - Titanium (Ti)	≤ 1.0 ppb	0.2 ppb
Trace Impurities - Vanadium (V)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Zinc (Zn)	≤ 5.0 ppb	0.8 ppb
Trace Impurities - Zirconium (Zr)	≤ 1.0 ppb	< 0.1 ppb

>>> Continued on page 3 >>>

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

Material No.: 9530-33
Batch No.: 22F0762009

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

M6112
M6113
M6114
M6115
M6116
M6117

Receive:
9/29/24
Met dig

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24B1362001
Manufactured Date: 2024-01-25
Retest Date: 2029-01-23
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (HNO_3)	69.0 - 70.0 %	69.6 %
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	< 0.2 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	< 50 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.: 24B1362001

Test	Specification	Result
Trace Impurities – Niobium (Nb)	≤ 50.0 ppb	< 1.0 ppb
Trace Impurities – Potassium (K)	≤ 50 ppb	< 10 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	3 par/ml
Particle Count – 1.0 µm and greater	≤ 10 par/ml	1 par/ml

>>> Continued on page 3 >>>

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24B1362001

Test	Specification	Result

For Microelectronic Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Ken Koehnlein
Sr. Manager, Quality Assurance

Nitric Acid 69%
CMOS

M6112
M6113
M6114
M6115
M6116
M6117

Receive:
9/29/24
Met dig

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24B1362001
Manufactured Date: 2024-01-25
Retest Date: 2029-01-23
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (HNO_3)	69.0 - 70.0 %	69.6 %
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	< 0.2 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	< 50 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.: 24B1362001

Test	Specification	Result
Trace Impurities – Niobium (Nb)	≤ 50.0 ppb	< 1.0 ppb
Trace Impurities – Potassium (K)	≤ 50 ppb	< 10 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	3 par/ml
Particle Count – 1.0 µm and greater	≤ 10 par/ml	1 par/ml

>>> Continued on page 3 >>>

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24B1362001

Test	Specification	Result

For Microelectronic Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Ken Koehnlein
Sr. Manager, Quality Assurance

M6125 Receive -> 11/22/24

CORCO CHEMICAL CORPORATION

Manufacturers of ACS Reagents and Semiconductor Grade Chemicals

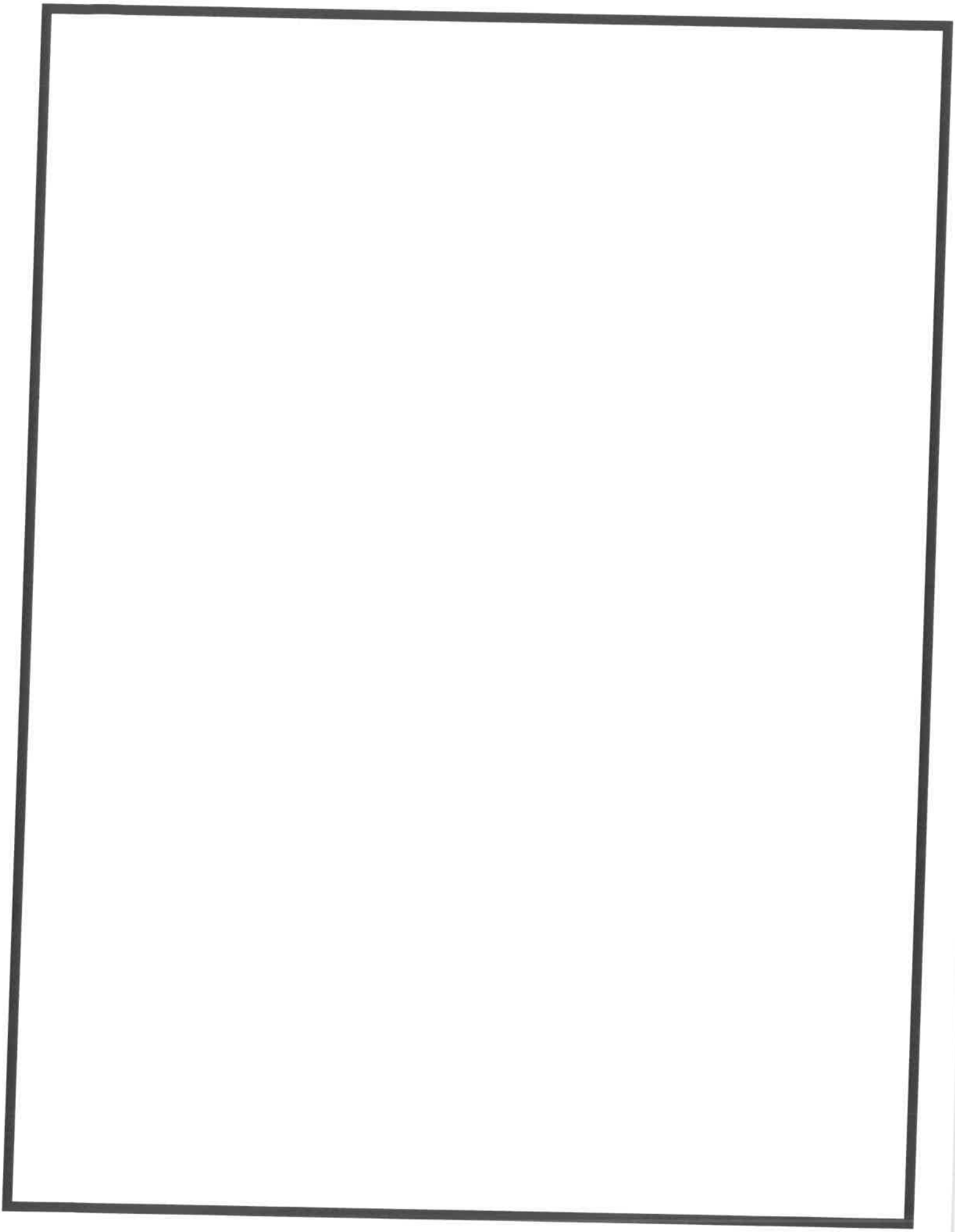
Office and Plant
299 Cedar Lane
Fairless Hills, PA 19030

Phone: 215-295-5006
Fax: 215-295-0781

Hydrogen Peroxide 30%, ACS

Reagent Grade

SPECIFICATION	MAXIMUM LIMITS
Appearance	Colorless and free from suspended matter or sediment
Assay	29-32%
Color (APHA)	10
Residue after Evaporation	0.002%
Titratable Acid	0.0006 meq/g
Chloride (Cl)	3 ppm
Nitrate (NO_3)	2 ppm
Phosphate	2 ppm
Sulfate (SO_4)	5 ppm
Ammonium (NH_4)	5 ppm
Heavy Metals (as Pb)	1 ppm
Iron (Fe)	0.5 ppm



Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

R -> 11/12/24

M6126

Material No.: 9606-03
Batch No.: 24D1062002
Manufactured Date: 2024-03-26
Retest Date: 2029-03-25
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (HNO_3)	69.0 - 70.0 %	69.7 %
Appearance	Passes Test	Passes Test
Color (APHA)	≤ 10	5
Residue after Ignition	≤ 2 ppm	1 ppm
Chloride (Cl)	≤ 0.08 ppm	< 0.03 ppm
Phosphate (PO_4)	≤ 0.10 ppm	< 0.03 ppm
Sulfate (SO_4)	≤ 0.2 ppm	< 0.2 ppm
Trace Impurities - Aluminum (Al)	≤ 40.0 ppb	< 1.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities - Barium (Ba)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Beryllium (Be)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Bismuth (Bi)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Boron (B)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities - Cadmium (Cd)	≤ 50 ppb	< 1 ppb
Trace Impurities - Calcium (Ca)	≤ 50.0 ppb	2.3 ppb
Trace Impurities - Chromium (Cr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities - Cobalt (Co)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Copper (Cu)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Gallium (Ga)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Germanium (Ge)	≤ 20 ppb	< 10 ppb
Trace Impurities - Gold (Au)	≤ 20 ppb	< 5 ppb
Heavy Metals (as Pb)	≤ 100 ppb	100 ppb
Trace Impurities - Iron (Fe)	≤ 40.0 ppb	< 1.0 ppb
Trace Impurities - Lead (Pb)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Lithium (Li)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Magnesium (Mg)	≤ 20 ppb	< 1 ppb
Trace Impurities - Manganese (Mn)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Nickel (Ni)	≤ 20.0 ppb	< 5.0 ppb

>>> Continued on page 2 >>>

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24D1062002

Test	Specification	Result

For Microelectronic Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Jamie Croak
Director Quality Operations, Bioscience Production

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 01/03/24 M5806, M5807

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 58111
Lot Number: 122223
Description: Sodium (Na)

Expiration Date: 122226
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB

Weight shown below was diluted to (mL): 3000.4 0.06 Flask Uncertainty

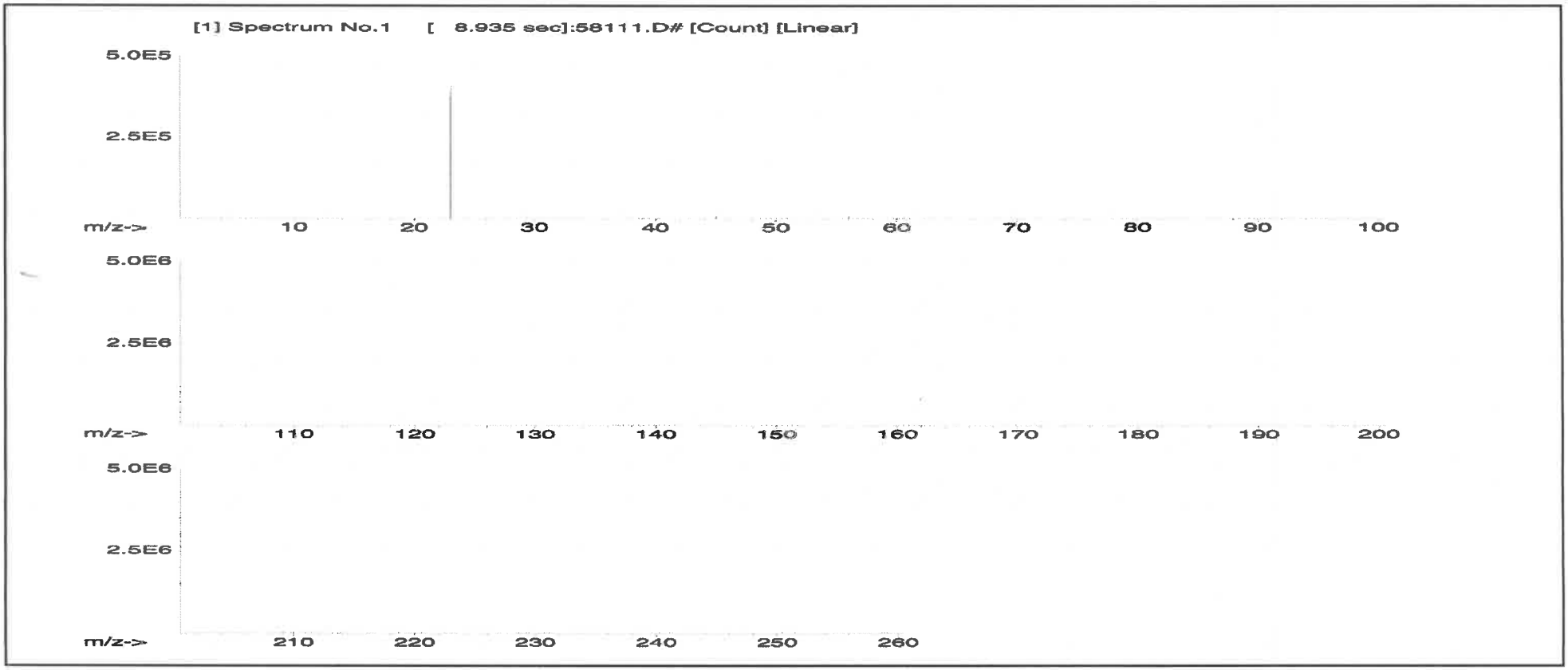
	Lot #		
Solvent:	24002546	Nitric Acid	
2%	60.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

Aleah O'Brady

Formulated By:	Aleah O'Brady	122223
Reviewed By:	Pedro L. Rentas	122223

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Sodium nitrate (Na)	IN036	NAV012015I1	10000	99.999	0.10	26.9	111.5406	111.5479	**10000.7**	**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	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	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:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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R: 01/03/24 M5802, M5803

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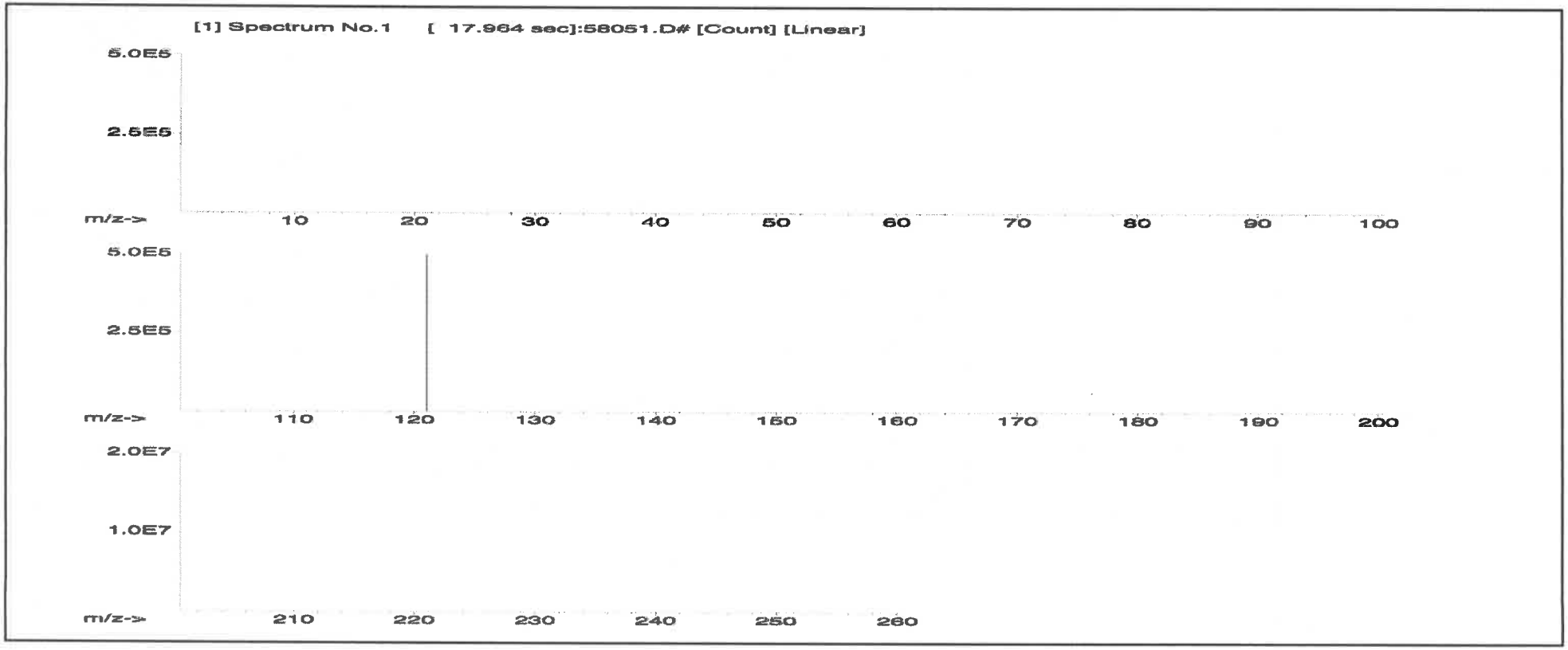
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57051**	24002546	Nitric Acid	
Lot Number:	**120523**			
Description:	**Antimony (Sb)**			
		2.0%	60.0 (mL)	Nitric Acid
Expiration Date:	120526			
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):	3000.41	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	120523
Reviewed By:	Pedro L. Rentas	120523

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	100923	0.1000	300.0	0.084	1000	10001.4	**1000.0**	2.1	7440-36-0	0.5 mg/m3	orl-rat 7000 mg/kg	3102a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	T	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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R: 8/5/24

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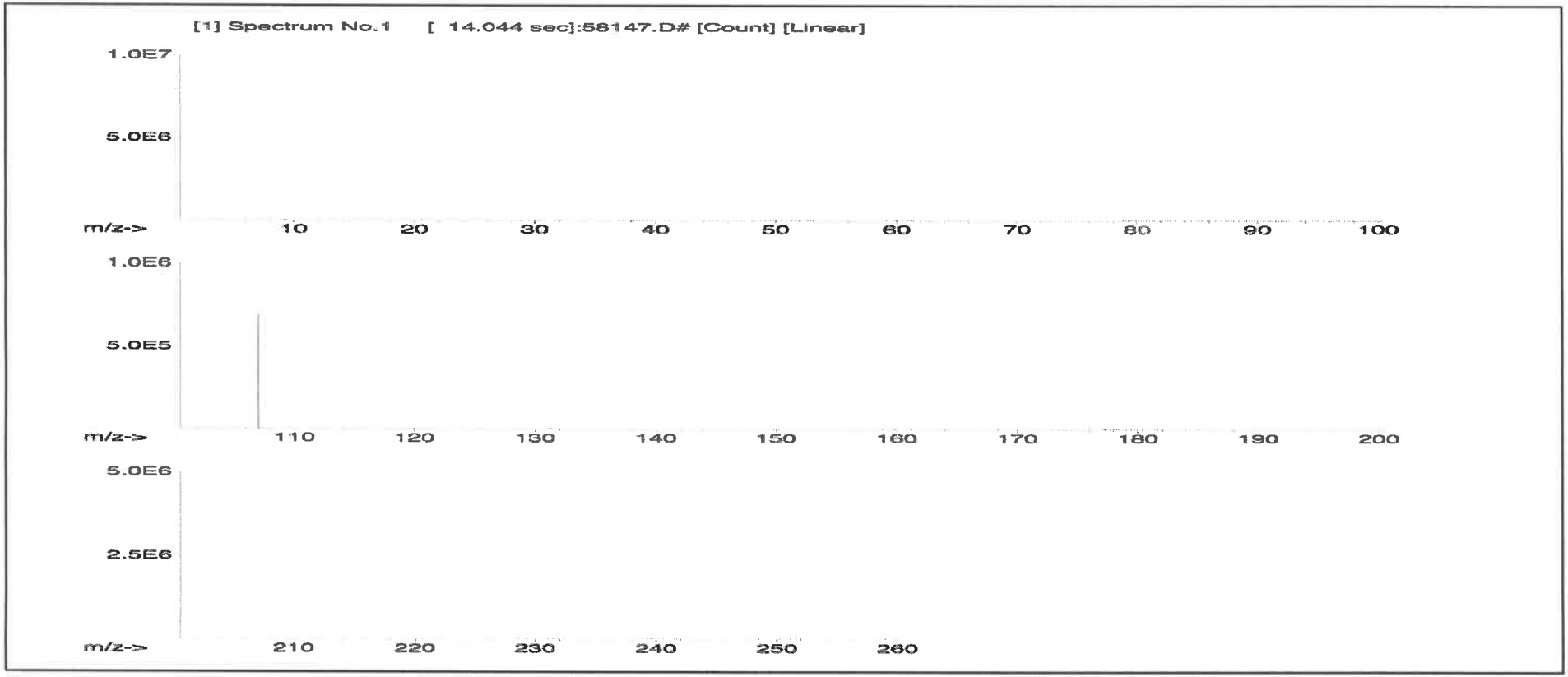
CERTIFIED WEIGHT REPORT:

Part Number:	**57047**			**Lot #**	
Lot Number:	**122823**	**Solvent:**	24002546	Nitric Acid	
Description:	**Silver (Ag)**				
		2%	80.0 (mL)	Nitric Acid	
Expiration Date:	122826				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	4000.30	0.058	Flask Uncertainty		

Formulated By:	Benson Chan	122823
Reviewed By:	Pedro L. Rentas	122823

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Silver nitrate (Ag)	IN035	J0612AGA1	1000.0	99.9999	0.10	63.7	6.27992	6.27998	**1000.0**	**2.0**	7761-88-8	10 ug/m3	NA	3151



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	T	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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R ! 8/5/24

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CERTIFIED WEIGHT REPORT:

Part Number:	**57081**		**Lot #**		
Lot Number:	**062724**	**Solvent:**	24002546	Nitric Acid	
Description:	**Thallium (Tl)**	2%	40.0 (mL)	Nitric Acid	
Expiration Date:	062727				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.1	0.10	Flask Uncertainty		

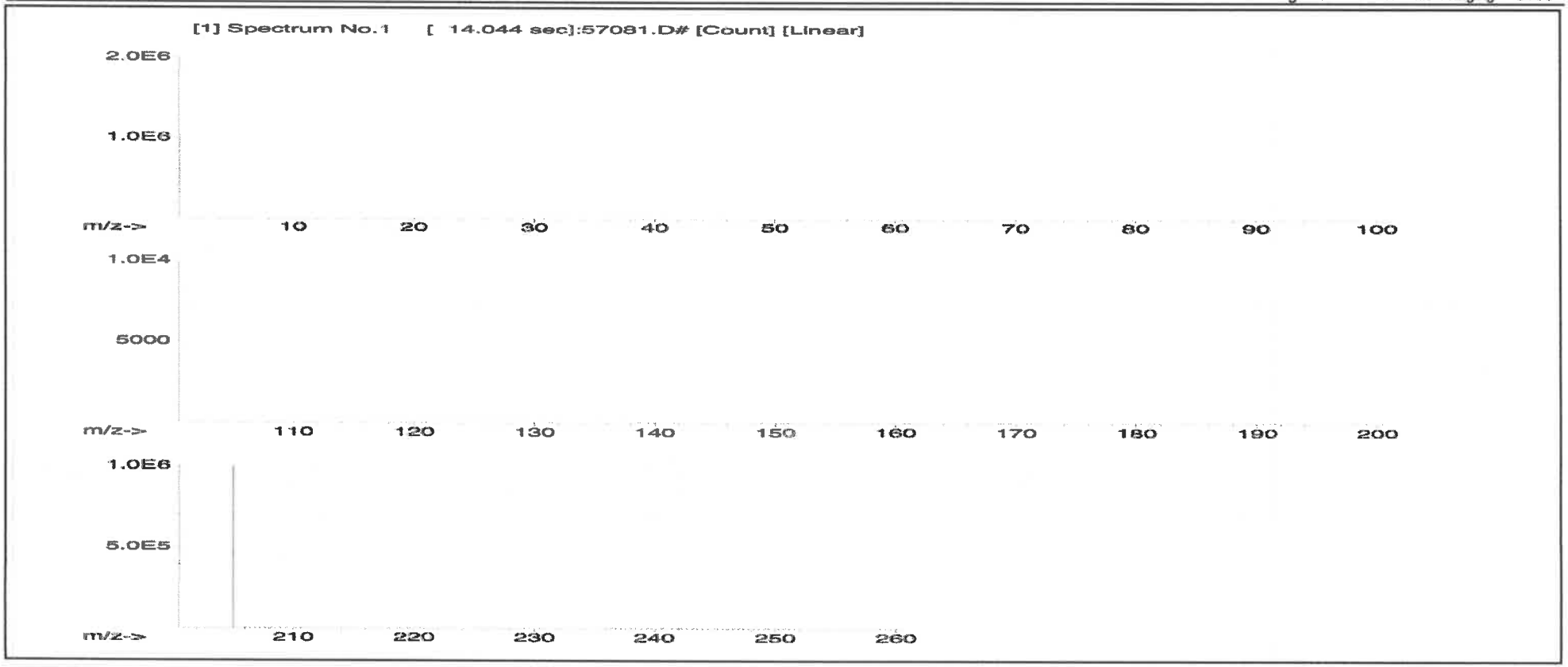
Aleah O'Brady

Formulated By:	Aleah O'Brady	062724

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

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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	

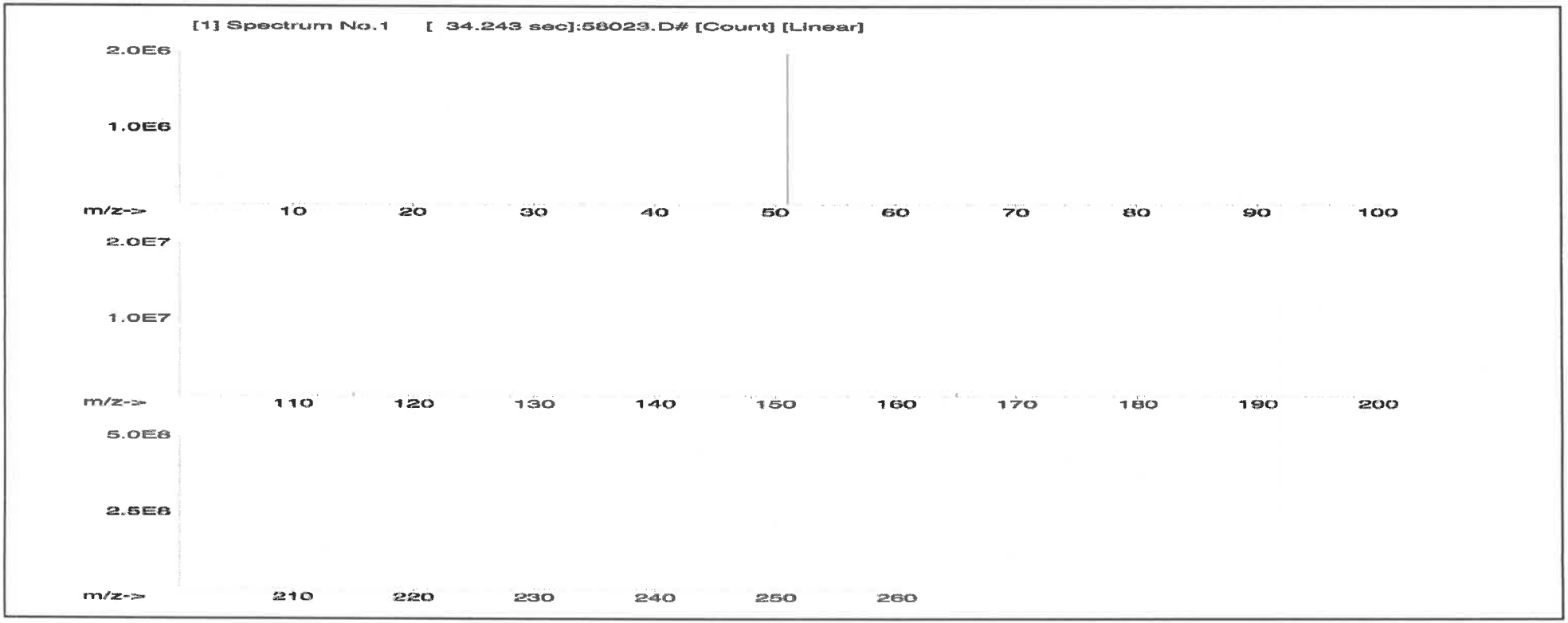
Aleah O'Brady

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
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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

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240903-01	Net 30	ZCM-100	1500470	FedEx 2nd Day	Golden, CO

Qty Ordered	Qty Shipped	Qty Backorder	Part Number	Part Description	Study Number	Lot Number
1	1	0	PT-MET-SOIL	SOIL/HW Trace Metals	HW1024	7098-04
1	1	0	PT-CR6-SOIL	SOIL/HW Hexavalent Chromium ✓	HW1024	7098-05D
1	1	0	PT-CN-SOIL	SOIL/HW Cyanide	HW1024	7098-06
1	1	0	PT-CORR-SOIL	SOIL/HW Corrosivity/pH ✓	HW1024	7098-11
1	1	0	PT-FP-SOIL	SOIL/HW Flash Point	HW1024	7098-10
1	1	0	PT-AN-SOIL	SOIL/HW Anions ✓	HW1024	7098-08
1	1	0	PT-NUT-SOIL	SOIL/HW Nutrients ✓	HW1024	7098-09B
1	1	0	PT-SOL-SOIL	SOIL/HW Solids	HW1024	7098-31
1	1	0	PT-NO2-SOIL	SOIL/HW Nitrite as N	HW1024	7098-71
1	1	0	PT-GAS-SOIL	SOIL/HW Gasoline	HW1024	7098-96
1	1	0	PT-DIES-SOIL	SOIL/HW Diesel in Soil	HW1024	7098-100
1	1	0	PT-OGR-SOIL	SOIL/HW Oil and Grease ✓	HW1024	7098-94
1	1	0	PT-VOA-SOIL	SOIL/HW Volatiles	HW1024	7098-12
1	1	0	PT-BNA-SOIL	SOIL/HW BNAs	HW1024	7098-13
1	1	0	PT-PEST-SOIL	SOIL/HW Pesticides	HW1024	7098-14
1	1	0	PT-CHLR-SOIL	SOIL/HW Chlordane	HW1024	7098-15
1	1	0	PT-TXP-SOIL	SOIL/HW Toxaphene	HW1024	7098-16
1	1	0	PT-PCB-SOIL	SOIL/HW PCBs	HW1024	7098-17
1	1	0	PT-PCBO-SOIL	SOIL/HW PCBs in Oil	HW1024	7098-88
1	1	0	PT-HERB-SOIL	SOIL/HW Herbicides	HW1024	7098-18
1	1	0	PT-PAH-SOIL	SOIL/HW PAHs	HW1024	7098-22
1	1	0	PT-TRIAZINE-SOIL	SOIL/HW Triazine Pesticides	HW1024	7098-106

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284 Sheffield St., #1
Mountainside, NJ 07092
USA

Customer PO #	Terms	PT Acct #	Customer #	Ship Via	F.O.B.
240903-01	Net 30	ZCM-100	1500470	FedEx 2nd Day	Golden, CO

Qty Ordered	Qty Shipped	Qty Backorder	Part Number	Part Description	Study Number	Lot Number
1	1	0	PT-NJEPH-SOIL	NJ EPH in SOIL ✓✓	HW1024	7098-105

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Laboratory Certification

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CAS EPA CLP Contract	68HERH20D0011
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DOD ELAP (ANAB)	L2219
Maine	2024021
Maryland	296
New Hampshire	255424 Rev 1
New Jersey	20012
New York	11376
Pennsylvania	68-00548
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Texas	T104704488