SDG COVER PAGE

Lab Name: Alliance Technical Group, LLC Contract: 68HERH20D0011

Lab Code: ACE Case No.: 51879 MA No.: SDG No.: MBHK78

SOW No. : SFAM01.1

EPA Sample No.	Lab Sample Id	Analysis Method ICP-AES	ICP-MS	Mercury	Cyanide
MBHK78	P5041-01	X			
MBHK78D	P5041-02	X			
MBHK78S	P5041-03	X			

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the SDG Narrative. All edits and manual integrations have been peer-reviewed. Release of the data contained in this hardcopy Complete SDG File and in the electronic data submitted has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Name:

Date: Title:

68HERH20D0011

SDG # MBHK78

USEPA CLP COC (LAB COPY)

DateShipped: 11/26/2024

CarrierName: FedEx

AirbillNo: 7702 6139 4005

CHAIN OF CUSTODY RECORD

Case #: 51879

Cooler #: 4

No: 2-112624-112547-0029

Lab: Alliance Technical Group LLC

Lab Contact: Mohammad Ahmed

Lab Phone: 908-789-8900

2

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
P175-SB-11-Z30-36	MBHK75	Soil/		ICP-AES(35)	4753 (Wet ice < 6 C) (1)	P175-SB-11	11/21/2024 08:40	
P175-SB-12-Z00-02	MBHK76	Soil/		ICP-AES(35)	4754 (Wet ice < 6 C) (1)	P175-SB-12	11/21/2024 08:45	
P175-SB-12-Z02-06	MBHK77	Soil/		ICP-AES(35)	4755 (Wet ice < 6 C) (1)	P175-SB-12	11/21/2024 08:45	
P175-SB-12-Z06-12	MBHK78	Soil/		ICP-AES(35)	4756 (Wet ice < 6 C) (1)	P175-SB-12	11/21/2024 08:45	QC (1)
P175-SB-12-Z12-18	MBHK79	Soil/		ICP-AES(35)	4757 (Wet ice < 6 C) (1)	P175-SB-12	11/21/2024 08:45	
P175-SB-12-Z18-24	MBHK80	Soil/		ICP-AES(35)	4758 (Wet ice < 6 C) (1)	P175-SB-12	11/21/2024 08:45	
P175-SB-12-Z24-30	MBHK81	Soil/		ICP-AES(35)	4759 (Wet ice < 6 C) (1)	P175-SB-12	11/21/2024 08:45	
P175-SB-12-Z30-36	MBHK82	Soil/		ICP-AES(35)	4800 (Wet ice < 6 C) (1)	P175-SB-12	11/21/2024 08:45	
P175-SB-10-Z30-36-FD	MBHKG6	Soil/		ICP-AES(35)	5497 (Wet ice < 6 C) (1)	P175-SB-10	11/21/2024 08:35	
P175-SB-07-Z30-36-FD	MBHKG7	Soil/		ICP-AES(35)	5498 (Wet ice < 6 C) (1)	P175-SB-07	11/21/2024 09:00	
				N/A	11/26/24			

Sample(s) to be used for Lab QC: P175-SB-12-Z06-12 Tag 4756 - Special Instructions: Samples MBHK72 and MBHK78 are MS/MSDs. Sample MBHK70 has limited sample mass.

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #

Analysis Key: ICP-AES=CLP Routine - SFAM01.1/LSASD SOP C-109 Metals

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
1 Cooler	WSP	11/26/24 1700			
			N/A	10:05 11.27.24	IR gun #1 2.5°
			11/26/24		Temp Blank present
					custody seal intact

FORM DC-1

SAMPLE LOG-IN SHEET

Lab Name : Alliance Technical Group, LLC		Page 1 of 1
Received By (Print Name) Cayenara Lore		Log-in Date **11/27/2024**
Received By (Signature)		
Case Number 51879	SDG No. MBHK78	MA No. N/A

Remarks:	
1. Custody Seal (s)	Present, Intact
2. Custody Seal Nos.	n/a
3. Traffic Reports/Chain Of Custody Records	Present
4. Airbill	Present
5. Airbill No. and Shipping Container ID No.	770261394005 1
6. Shipping Container Temperature Indicator Bottle	Present
7. Shipping Container Temperature	2.5 Degree C
8. Sample Condition	Intact
9. Sample Tags Sample Tag Numbers	Absent Listed on Traffic Report
10. Does information on Traffic Reports/Chain of Custody Records and Sample Tags agree ?	Yes
11. Date Received at Lab	11/27/2024
12.Time Received	10:05

	EPA Sample #	Aqueous/ Water Sample pH	Corresponding Sample Tag #	Corresponding Assigned Lab #	Remarks: Condition of Sample Shipment, etc.
1	MBHK78	N/A	4756	P5041-01	Intact
2	MBHK78D	N/A	4756	P5041-02	Intact
3	MBHK78S	N/A	4756	P5041-03	Intact
4	N/A	N/A	N/A	N/A	N/A
5	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
7	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
9	N/A	N/A	N/A	N/A	N/A
10	N/A	N/A	N/A	N/A	N/A
11	N/A	N/A	N/A	N/A	N/A
12	N/A	N/A	N/A	N/A	N/A
13	N/A	N/A	N/A	N/A	N/A
14	N/A	N/A	N/A	N/A	N/A
15	N/A	N/A	N/A	N/A	N/A
16	N/A	N/A	N/A	N/A	N/A
17	N/A	N/A	N/A	N/A	N/A
18	N/A	N/A	N/A	N/A	N/A
19	N/A	N/A	N/A	N/A	N/A
20	N/A	N/A	N/A	N/A	N/A
21	N/A	N/A	N/A	N/A	N/A
22	N/A	N/A	N/A	N/A	N/A
23	N/A	N/A	N/A	N/A	N/A

* Contact SMO and attach record of resolution

Reviewed By		Logbook No.	N/A
Date	11/27/24	Logbook Page No.	N/A

FORM DC-2
COMPLETE SDG FILE (CSF) INVENTORY SHEET

LAB NAME	**Alliance Technical Group, LLC**		
LAB CODE	**ACE**		
CONTRACT NO.	**68HERH20D0011**		
CASE NO.	**51879**	SDG NO.	**MBHK78**
MA NO.		SOW NO.	**SFAM01.1**

All documents delivered in the Complete SDG File must be original documents where possible. (Reference - Exhibit B Section 2.4)

	PAGE NOs: FROM	PAGE NOs: TO	CHECK LAB	CHECK REGION
1. SDG Cover Page	1	1	✓	
2. Traffic Report/Chain of Custody Record(s)	2	2	✓	
3. Sample Log-In Sheet (DC-1)	3	3	✓	
4. CSF Inventory Sheet (DC-2)	4	6	✓	
5. SDG Narrative	7	9	✓	
6. Communication Logs	NA	NA	✓	
7. Percent Solids Log	10	11	✓	
Analysis Forms and Data (ICP-AES)				
8. Sample Analysis Data Forms (1A-OR, 1B-OR, and 1-IN) for each sample or sample analysis, laboratory QC as applicable	12	12	✓	
9. Instrument raw data by instrument in analysis order	13	322	✓	
Other Data				
10. Standard and Reagent Preparation Logs	323	483	✓	
11. Original Preparation and Cleanup forms or copies of Preparation and Cleanup Logbooks	484	485	✓	
12. Original Analysis or Instrument Run forms or copies of Analysis or Instrument Logbooks	486	503	✓	
13. Performance Evaluation (PE)/Proficiency Testing (PT) Sample Instructions	NA	NA	✓	
14. Extraction Logs for TCLP and SPLP	NA	NA	✓	
15. Raw GPC Data	NA	NA	✓	
16. Raw Florisil Data	NA	NA	✓	
Analysis Forms and Data (ICP-MS)				
17. Sample Analysis Data Forms (1A-OR, 1B-OR, and 1-IN) for each sample or sample analysis, laboratory QC as applicable	NA	NA	✓	
18. Instrument raw data by instrument in analysis order	NA	NA	✓	
Other Data				
19. Standard and Reagent Preparation Logs	NA	NA	✓	
20. Original Preparation and Cleanup forms or copies of Preparation and Cleanup Logbooks	NA	NA	✓	
21. Original Analysis or Instrument Run forms or copies of Analysis or Instrument Logbooks	NA	NA	✓	
22. Performance Evaluation (PE)/Proficiency Testing (PT) Sample Instructions	NA	NA	✓	

	PAGE NOs: FROM	TO	CHECK LAB	REGION
23. Extraction Logs for TCLP and SPLP	NA	NA	✓	
24. Raw GPC Data	NA	NA	✓	
25. Raw Florisil Data	NA	NA	✓	
Analysis Forms and Data (Mercury)				
26. Sample Analysis Data Forms (1A-OR, 1B-OR, and 1-IN) for each sample or sample analysis, laboratory QC as applicable	NA	NA	✓	
27. Instrument raw data by instrument in analysis order	NA	NA	✓	
Other Data				
28. Standard and Reagent Preparation Logs	NA	NA	✓	
29. Original Preparation and Cleanup forms or copies of Preparation and Cleanup Logbooks	NA	NA	✓	
30. Original Analysis or Instrument Run forms or copies of Analysis or Instrument Logbooks	NA	NA	✓	
31. Performance Evaluation (PE)/Proficiency Testing (PT) Sample Instructions	NA	NA	✓	
32. Extraction Logs for TCLP and SPLP	NA	NA	✓	
33. Raw GPC Data	NA	NA	✓	
34. Raw Florisil Data	NA	NA	✓	
Analysis Forms and Data (Cyanide)				
35. Sample Analysis Data Forms (1A-OR, 1B-OR, and 1-IN) for each sample or sample analysis, laboratory QC as applicable	NA	NA	✓	
36. Instrument raw data by instrument in analysis order	NA	NA	✓	
Other Data				
37. Standard and Reagent Preparation Logs	NA	NA	✓	
38. Original Preparation and Cleanup forms or copies of Preparation and Cleanup Logbooks	NA	NA	✓	
39. Original Analysis or Instrument Run forms or copies of Analysis or Instrument Logbooks	NA	NA	✓	
40. Performance Evaluation (PE)/Proficiency Testing (PT) Sample Instructions	NA	NA	✓	
41. Extraction Logs for TCLP and SPLP	NA	NA	✓	
42. Raw GPC Data	NA	NA	✓	
43. Raw Florisil Data	NA	NA	✓	

	PAGE NOs: FROM	TO	CHECK LAB	REGION
Additional				
44. EPA Shipping/Receiving Documents				
Airbill (No. of Shipments 1)	504	504	✓	
Sample Tags	NA	NA	✓	
Sample Log-In Sheet (Lab)	505	505	✓	
45. Misc. Shipping/Receiving Records (list all individual records)				
	NA	NA	✓	
46. Internal Lab Sample Transfer Records and Tracking Sheets (describe or list)				
	506	506	✓	
47. Other Records and related Communication Logs (describe or list)				
	NA	NA	✓	

48. Comments:

Completed by:
(CLP Lab) _____ Nimisha Pandya, Document Control Officer _____
(Signature) (Print Name & Title) (Date)

Audited by:
(EPA) _____ _____ _____
(Signature) (Print Name & Title) (Date)

284 Sheffield Street
Mountainside, NJ 07092

SDG NARRATIVE

USEPA
SDG # MBHK78
CASE # 51879
CONTRACT # 68HERH20D0011
SOW# SFAM01.1
LAB NAME: Alliance Technical Group, LLC
LAB CODE: ACE
LAB ORDER ID # P5041

A. Number of Samples and Date of Receipt

01 Soil samples were delivered to the laboratory intact on 11/27/2024.

B. Parameters

Test requested for Metals CLP FULL = Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc.

C. Cooler Temp

Indicator Bottle**: Presence/**Absence

Cooler: 2.5^{o}C

D. Detail Documentation (related to Sample Handling Shipping, Analytical Problem, Temp of Cooler etc):

Issue: A "P" or "M" prefix was listed at the beginning of a CLP sample ID.

E. Corrective Action taken for above:

Resolution: To maintain COC integrity, ASB requests no changes to the Sample IDs. The laboratory will note the issue in the SDG Narrative and proceed with the analysis of the samples.

F. Analytical Techniques:

All analyses were based on CLP Methodology by method SFAM01.1.

Inter Element correction factors (IECs) are determined annually and correction factor are applied during ICP-AES analysis.

G. Calculation:

Calculation for ICP-AES Soil Sample:

Conversion of Results from mg/L or ppm to mg/kg (Dry Weight Basis):

$$\text{Concentration (mg/kg)} = C \times \frac{Vf}{W \times S} \times DF$$

Where,

C = Instrument value in ppm (The average of all replicate exposures)
Vf = Final digestion volume (mL)
W = Initial aliquot amount (g) (Sample amount taken in prep)
S = % Solids / 100 (Fraction of Percent Solids)
DF = Dilution Factor

Example Calculation For Sample MBHK78 For Arsenic:

If C = 0.2394960 ppm
Vf = 100 ml
W = 1.43 g
S = 0.87(87.0/100)
DF = 1

$$\text{Concentration (mg/kg)} = 0.2394960 \times \frac{100}{1.43 \times 0.87} \times 1$$

$$= 19.2505 \text{ mg/kg}$$

= 19 mg/kg (Reported Result with Signification

H. QA/ QC

Calibrations met requirements. Interference check met requirements. Blank analyses did not indicate any presence of contamination. Laboratory Control sample was within control limits. Spike sample did meet requirements except for Antimony, Selenium, Silver. Duplicate sample did meet requirements. Serial Dilution did meet requirements except for Cobalt.

Chemical or physical interference effect was suspected and the data for all affected analytes in the sample received and associated with this serial dilution were flagged.

284 Sheffield Street
Mountainside, NJ 07092

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 Director or his designee, as verified by the following signature.

Signature_____ Name: Nimisha Pandya

Date _____ Title: Document Control Officer

PERCENT SOLID

Supervisor: rubina
Analyst: jignesh
Date: 12/4/2024

OVENTEMP IN Celsius(°C): 107
Time IN: 12:35
In Date: 12/03/2024
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 07:45
Out Date: 12/04/2024
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLID- OVEN

QC: LB133707

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
P5040-01	MBHKD6	1	1.17	8.55	9.72	8.73	88.4	
P5040-02	MBHKD6D	2	1.17	8.55	9.72	8.73	88.4	
P5040-03	MBHKD6S	3	1.17	8.55	9.72	8.73	88.4	
P5041-01	MBHK78	4	1.15	8.44	9.59	8.49	87.0	
P5041-02	MBHK78D	5	1.15	8.44	9.59	8.49	87.0	
P5041-03	MBHK78S	6	1.15	8.44	9.59	8.49	87.0	
P5042-01	MBHKB0	7	1.16	8.72	9.88	8.16	80.3	
P5042-02	MBHKB0D	8	1.16	8.72	9.88	8.16	80.3	
P5042-03	MBHKB0S	9	1.16	8.72	9.88	8.16	80.3	
P5043-01	MBHKM2	10	1.17	8.49	9.66	8.41	85.3	
P5043-02	MBHKM2D	11	1.17	8.49	9.66	8.41	85.3	
P5043-03	MBHKM2S	12	1.17	8.49	9.66	8.41	85.3	

$$\% \text{ Solid} = \frac{(C-A) * 100}{(B-A)}$$

WORKLIST(Hardcopy Internal Chain)

UB 133707

WorkList Name : %1-p5040 **WorkList ID :** 185925 **Department :** Wet-Chemistry **Date :** 12-03-2024 11:53:41

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P5040-01	MBHKD6	Solid	Percent Solids	Cool 4 deg C	USEP01	C11	11/20/2024	Chemtech -SO
P5040-02	MBHKD6D	Solid	Percent Solids	Cool 4 deg C	USEP01	C11	11/20/2024	Chemtech -SO
P5040-03	MBHKD6S	Solid	Percent Solids	Cool 4 deg C	USEP01	C11	11/20/2024	Chemtech -SO
P5041-01	MBHK78	Solid	Percent Solids	Cool 4 deg C	USEP01	C11	11/20/2024	Chemtech -SO
P5041-02	MBHK78D	Solid	Percent Solids	Cool 4 deg C	USEP01	C11	11/21/2024	Chemtech -SO
P5041-03	MBHK78S	Solid	Percent Solids	Cool 4 deg C	USEP01	C11	11/21/2024	Chemtech -SO
P5042-01	MBHKB0	Solid	Percent Solids	Cool 4 deg C	USEP01	C11	11/21/2024	Chemtech -SO
P5042-02	MBHKB0D	Solid	Percent Solids	Cool 4 deg C	USEP01	C21	11/20/2024	Chemtech -SO
P5042-03	MBHKB0S	Solid	Percent Solids	Cool 4 deg C	USEP01	C21	11/20/2024	Chemtech -SO
P5043-01	MBHKM2	Solid	Percent Solids	Cool 4 deg C	USEP01	C21	11/20/2024	Chemtech -SO
P5043-02	MBHKM2D	Solid	Percent Solids	Cool 4 deg C	USEP01	C12	11/20/2024	Chemtech -SO
P5043-03	MBHKM2S	Solid	Percent Solids	Cool 4 deg C	USEP01	C12	11/20/2024	Chemtech -SO

11

Date/Time 12/03/24 12:00

Raw Sample Received by: JB (ULC)

Raw Sample Relinquished by: JD (SM)

Date/Time 12/03/24 12:40

Raw Sample Received by: JD (SM)

Raw Sample Relinquished by: JB ULC

EPA SAMPLE NO.

MBHK78

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Alliance Technical Group, LLC Contract: 68HERH20D0011

Lab Code: ACE Case No.: 51879 MA No. : SDG No.: MBHK78

Matrix: SOIL Lab Sample ID: P5041-01

% Solids: 87 Date Received: 11/27/2024

Analytical Method: ICP_AES

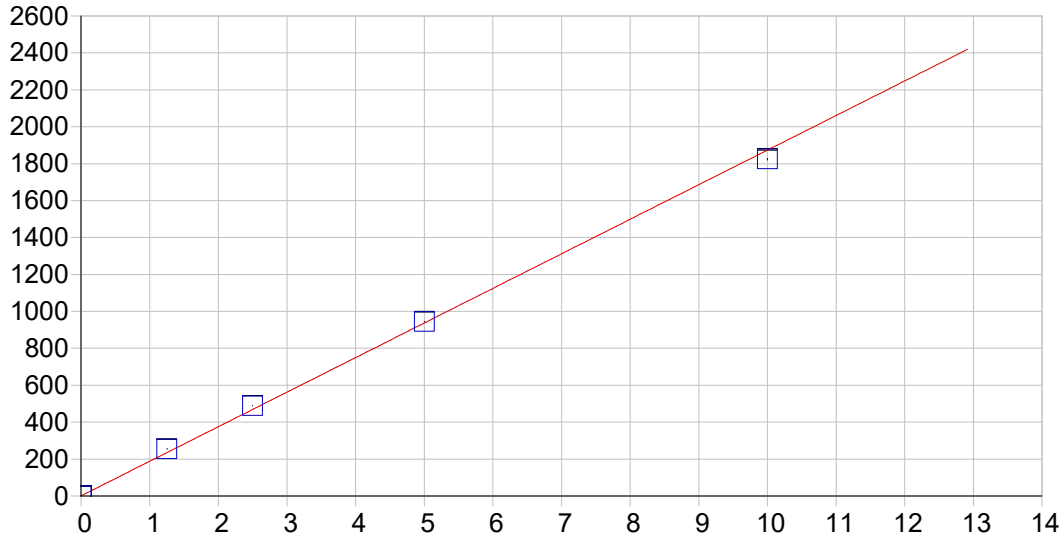
Concentration Units (µg/L, mg/L, mg/kg dry weight, µg, or µg/cm²): mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	5300		12/10/2024	1833
7440-36-0	Antimony	4.8	U*	12/10/2024	1833
7440-38-2	Arsenic	19		12/10/2024	1833
7440-39-3	Barium	200		12/10/2024	1833
7440-41-7	Beryllium	0.55		12/10/2024	1833
7440-43-9	Cadmium	0.92		12/10/2024	1833
7440-70-2	Calcium	14000		12/10/2024	1833
7440-47-3	Chromium	13		12/10/2024	1833
7440-48-4	Cobalt	8.9	*	12/10/2024	1833
7440-50-8	Copper	36		12/10/2024	1833
7439-89-6	Iron	11000		12/10/2024	1833
7439-92-1	Lead	780		12/10/2024	1833
7439-95-4	Magnesium	1900		12/10/2024	1833
7439-96-5	Manganese	760		12/10/2024	1833
7440-02-0	Nickel	15		12/10/2024	1833
7440-09-7	Potassium	640		12/10/2024	1833
7782-49-2	Selenium	2.8	U*	12/10/2024	1833
7440-22-4	Silver	0.80	U*	12/10/2024	1833
7440-23-5	Sodium	90	J	12/10/2024	1833
7440-28-0	Thallium	0.60	J	12/10/2024	1833
7440-62-2	Vanadium	29		12/10/2024	1833
7440-66-6	Zinc	250		12/10/2024	1833

NOTE: Hardness (total) is reported in mg/L

Comments:

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5



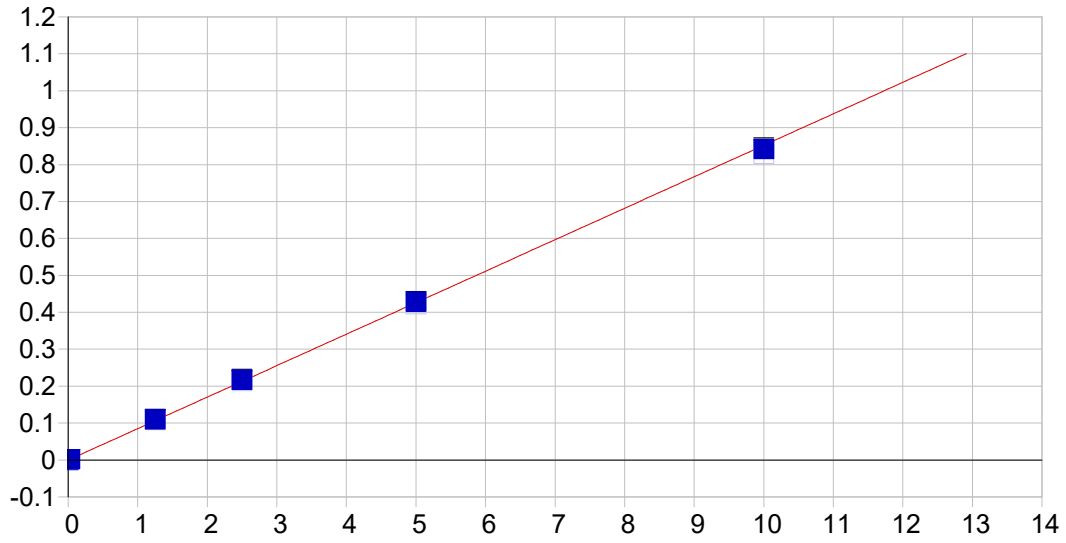
As 189.042 {478}

Date of Fit:	12/10/2024 16:20:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.483678	Re-Slope:	1.000000
A1 (Gain):	187.287728	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999431	Status:	OK.
Std Error of Est:	0.105947		
Predicted MDL:	0.003676		
Predicted MQL:	0.012254		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.48326	.483	1
S1	.01000	.01112	.001	11.2	2.5670	.128	1
S2	1.2500	1.3566	.107	8.53	254.56	.077	1
S3	2.5000	2.6116	.112	4.46	489.60	1.23	1
S4	5.0000	5.0416	.042	.832	944.72	1.80	1
S5	10.000	9.7391	-.261	-2.61	1824.5	4.42	1

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5



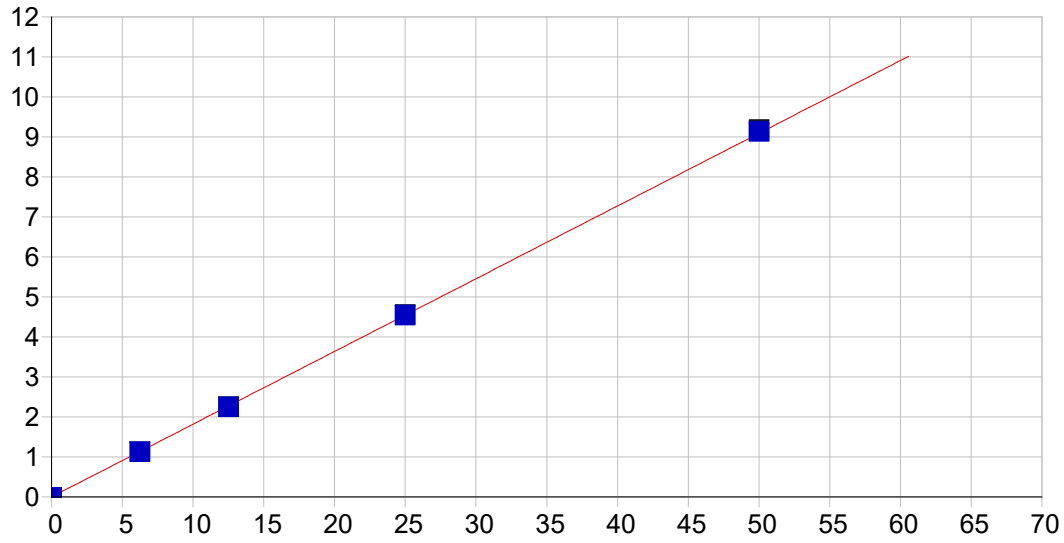
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Date of Fit:	12/10/2024 16:20:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000188	Re-Slope:	1.000000
A1 (Gain):	0.085246	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999885	Status:	OK.
Std Error of Est:	0.000034		
Predicted MDL:	0.002031		
Predicted MQL:	0.006770		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00019	.000	1
S1	.02500	.02555	.001	2.21	.00191	.000	1
S2	1.2500	1.2925	.042	3.40	.10834	.000	1
S3	2.5000	2.5516	.052	2.06	.21402	.002	1
S4	5.0000	5.0277	.028	.555	.42181	.001	1
S5	10.000	9.8777	-.122	-1.22	.82865	.003	1

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5



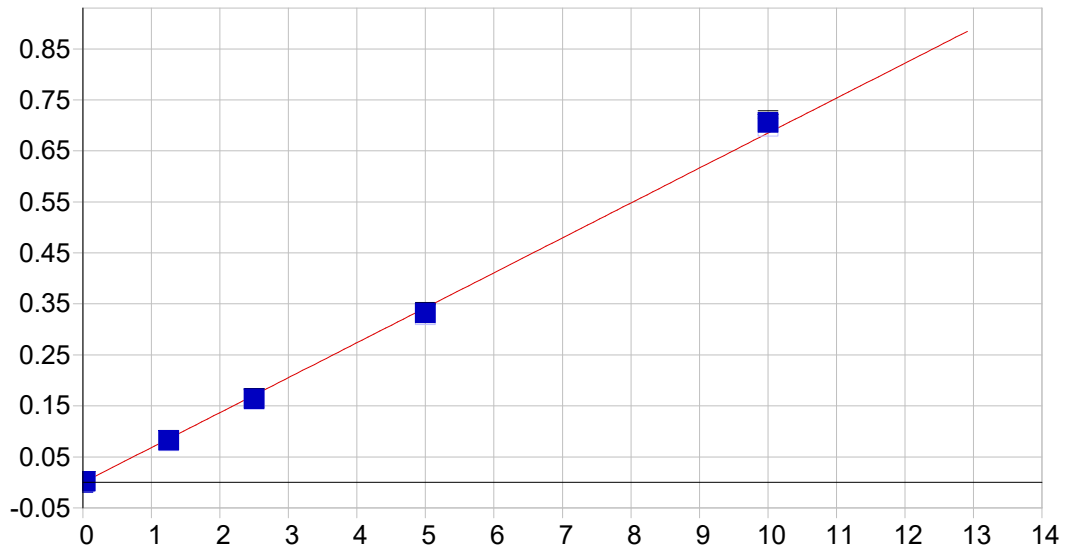
Pb 220.353 {453}

Date of Fit:	12/10/2024 16:20:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000473	Re-Slope:	1.000000
A1 (Gain):	0.181807	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999980	Status:	OK.
Std Error of Est:	0.000043		
Predicted MDL:	0.002159		
Predicted MQL:	0.007197		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00047	.000	1
S1	.01000	.00899	-.001	-10.1	.00210	.001	1
S2	6.2500	6.1915	-.059	-.936	1.1255	.003	1
S3	12.500	12.348	-.152	-1.21	2.2442	.013	1
S4	25.000	24.970	-.030	-.119	4.5376	.008	1
S5	50.000	50.241	.241	.482	9.1294	.038	1

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5



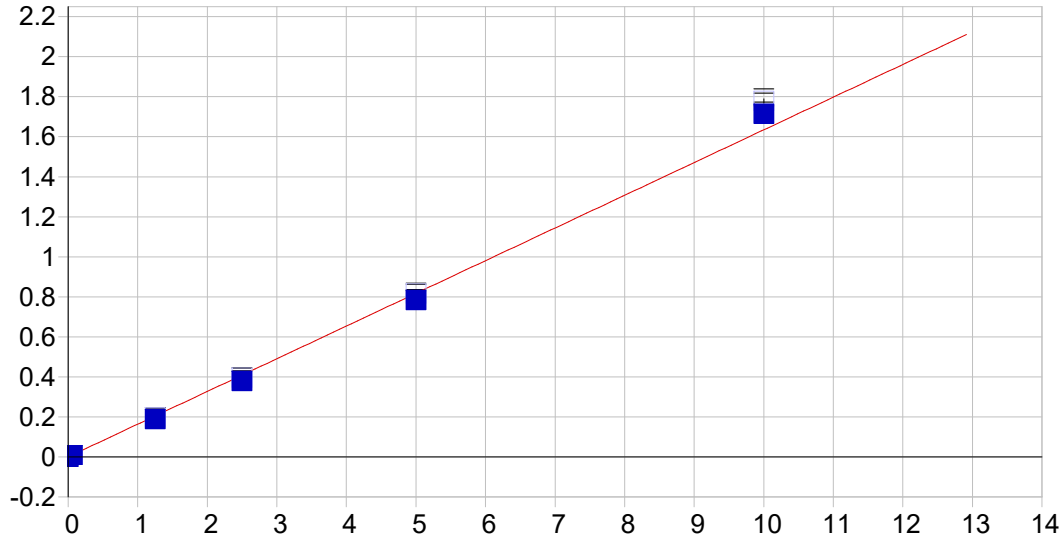
Se 196.090 {472}

Date of Fit:	12/10/2024 16:20:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000213	Re-Slope:	1.000000
A1 (Gain):	0.068510	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999472	Status:	OK.
Std Error of Est:	0.000069		
Predicted MDL:	0.004060		
Predicted MQL:	0.013534		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00021	.000	1
S1	.03500	.03611	.001	3.18	.00226	.000	1
S2	1.2500	1.2034	-.047	-3.73	.08133	.000	1
S3	2.5000	2.3993	-.101	-4.03	.16236	.000	1
S4	5.0000	4.8474	-.153	-3.05	.32829	.001	1
S5	10.000	10.299	.299	2.99	.69817	.004	1

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5



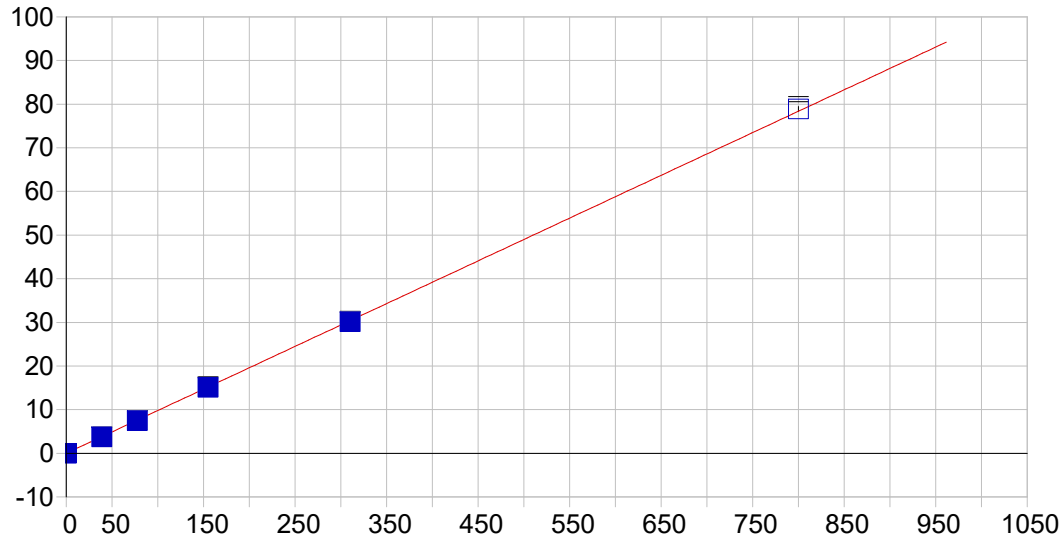
Sb 206.833 {463}

Date of Fit:	12/10/2024 16:20:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000194	Re-Slope:	1.000000
A1 (Gain):	0.163408	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998673	Status:	OK.
Std Error of Est:	0.000360		
Predicted MDL:	0.002321		
Predicted MQL:	0.007735		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00020	.000	1
S1	.06000	.05482	-.005	-8.63	.00916	.000	1
S2	1.2500	1.1529	-.097	-7.77	.19664	.000	1
S3	2.5000	2.3165	-.183	-7.34	.39485	.002	1
S4	5.0000	4.7945	-.206	-4.11	.81586	.003	1
S5	10.000	10.491	.491	4.91	1.7790	.010	1

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5



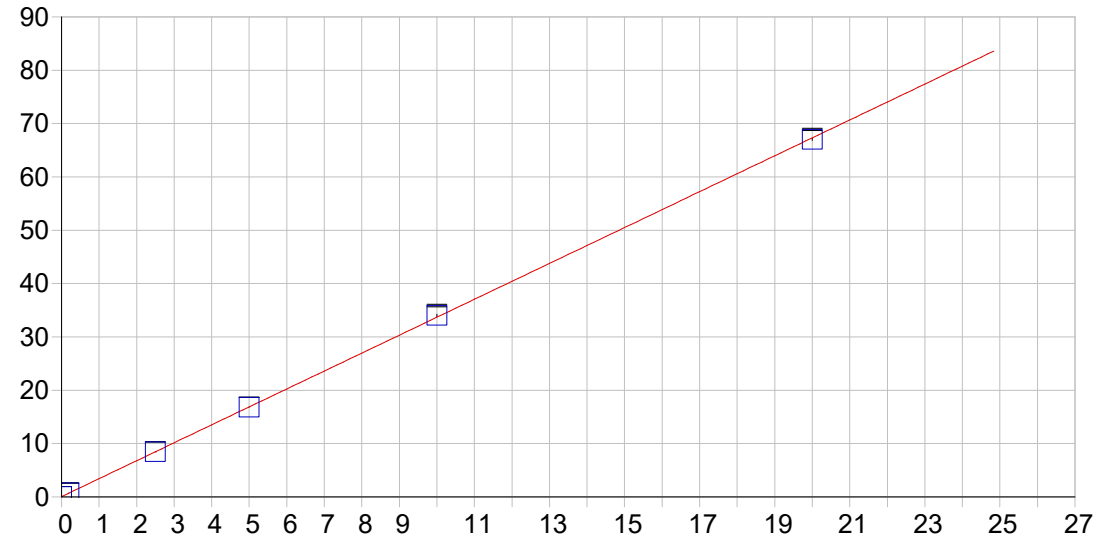
Al 396.152 { 85}

Date of Fit:	12/10/2024 16:20:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000376	Re-Slope:	1.000000
A1 (Gain):	0.097988	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999967	Status:	OK.
Std Error of Est:	0.000492		
Predicted MDL:	0.021243		
Predicted MQL:	0.070810		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00038	.001	1
S1	.20000	.21181	.012	5.90	.02041	.001	1
S2	38.750	38.270	-.480	-1.24	3.7537	.015	1
S3	77.500	76.159	-1.34	-1.73	7.4705	.004	1
S4	155.00	154.25	-.746	-.481	15.131	.123	1
S5	310.00	307.35	-2.65	-.856	30.149	.078	1
S6	800.00	805.21	5.21	.652	78.901	.600	1

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5



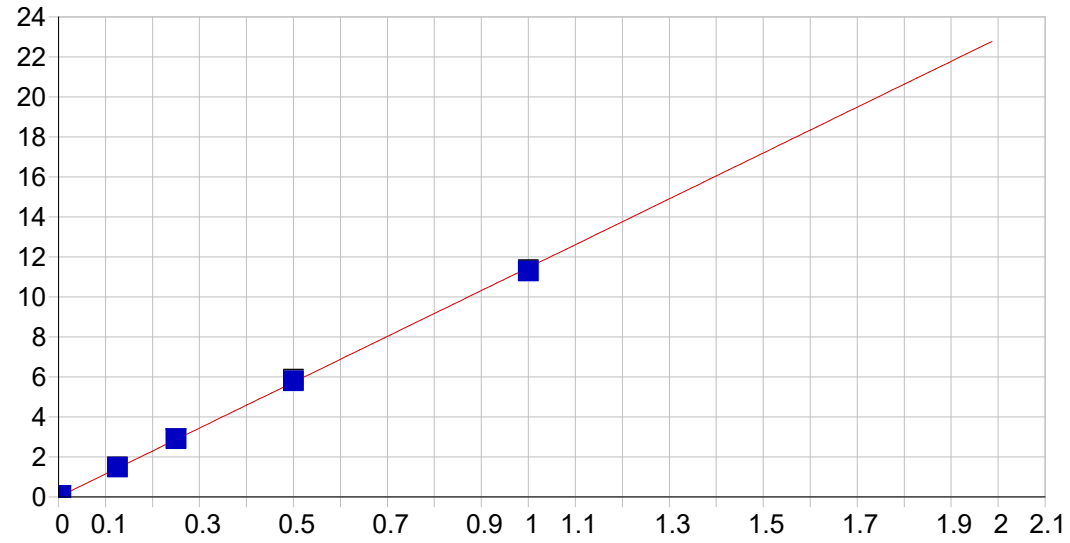
Ba 493.409 { 68}

Date of Fit:	12/10/2024 16:20:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.060901	Re-Slope:	1.000000
A1 (Gain):	3.362920	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999981	Status:	OK.
Std Error of Est:	0.002177		
Predicted MDL:	0.001442		
Predicted MQL:	0.004808		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.06088	.001	1
S1	.20000	.20513	.005	2.56	.75072	.004	1
S2	2.5000	2.4982	-.002	-.072	8.4622	.019	1
S3	5.0000	4.9852	-.015	-.295	16.826	.023	1
S4	10.000	10.094	.094	.939	34.006	.241	1
S5	20.000	19.918	-.082	-.412	67.042	.218	1

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5



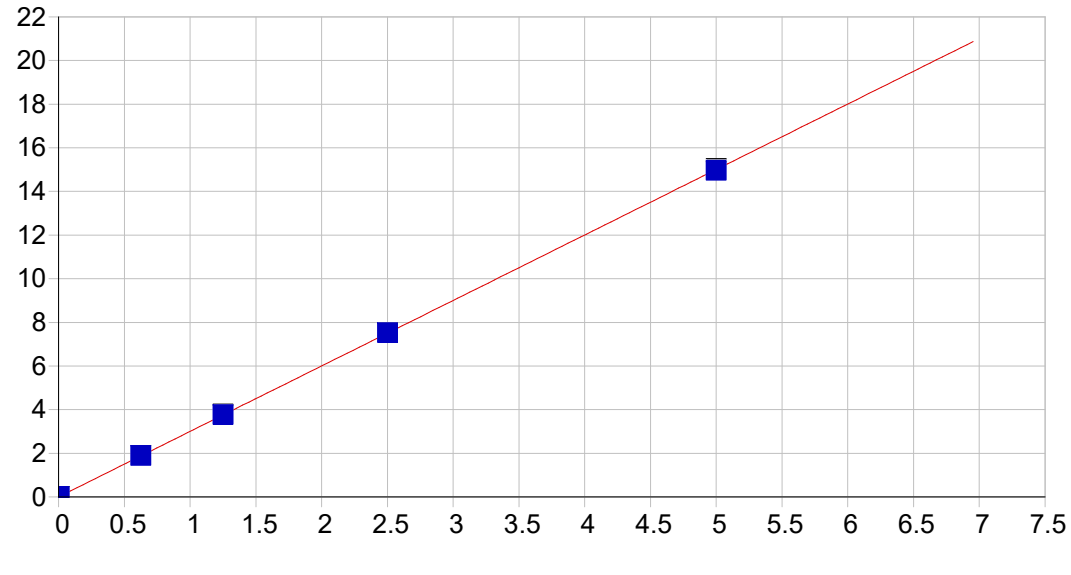
Be 234.861 {144}

Date of Fit:	12/10/2024 16:20:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002662	Re-Slope:	1.000000
A1 (Gain):	11.461841	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999869	Status:	OK.
Std Error of Est:	0.000694		
Predicted MDL:	0.000100		
Predicted MQL:	0.000334		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00266	.001	1
S1	.00500	.00534	.000	6.75	.06379	.001	1
S2	.12500	.12917	.004	3.34	1.4766	.007	1
S3	.25000	.25325	.003	1.30	2.8922	.013	1
S4	.50000	.50646	.006	1.29	5.7813	.076	1
S5	1.0000	.98578	-.014	-1.42	11.249	.057	1

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5



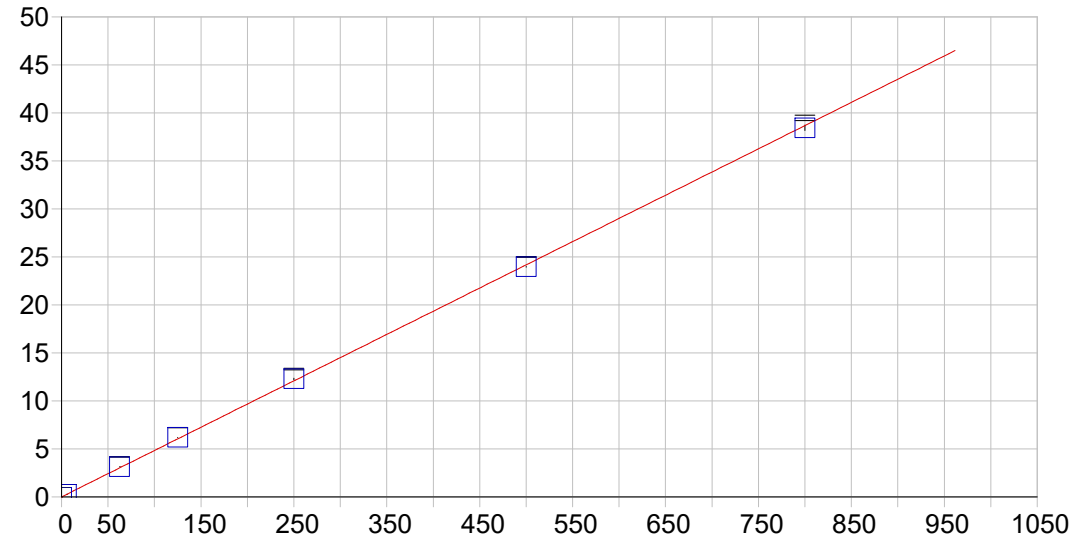
Cd 214.438 {457}

Date of Fit:	12/10/2024 16:20:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000130	Re-Slope:	1.000000
A1 (Gain):	3.001364	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999994	Status:	OK.
Std Error of Est:	0.000089		
Predicted MDL:	0.000089		
Predicted MQL:	0.000295		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00013	.000	1
S1	.00500	.00473	-.000	-5.32	.01439	.000	1
S2	.62500	.63009	.005	.814	1.8941	.004	1
S3	1.2500	1.2542	.004	.335	3.7702	.021	1
S4	2.5000	2.5049	.005	.195	7.5297	.012	1
S5	5.0000	4.9861	-.014	-.278	14.988	.066	1

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5



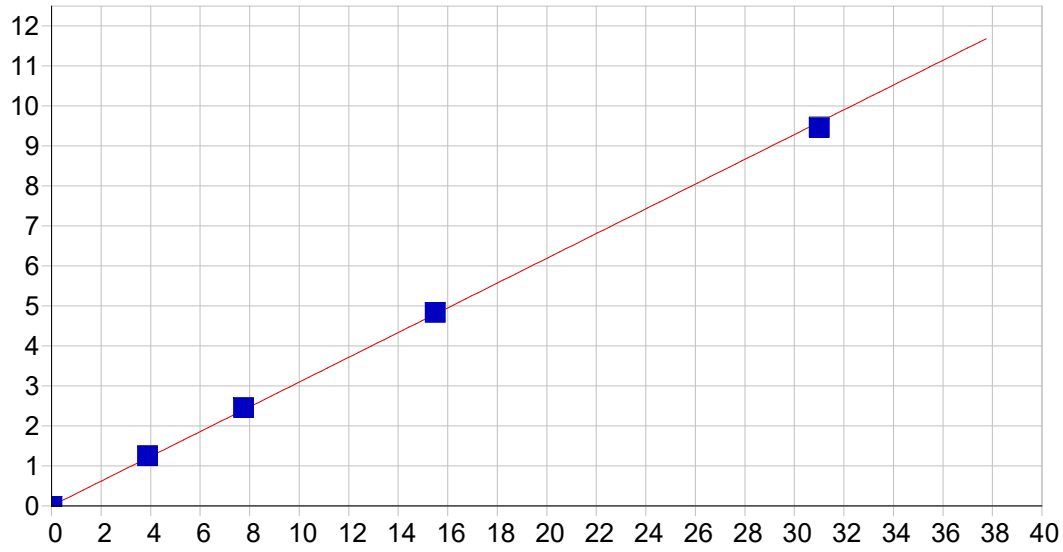
Ca 373.690 { 90}

Date of Fit:	12/10/2024 16:20:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.003495	Re-Slope:	1.000000
A1 (Gain):	0.048343	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999918	Status:	OK.
Std Error of Est:	0.002163		
Predicted MDL:	0.035651		
Predicted MQL:	0.118838		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00050	-.001	.000	.00347	.002	1
S1	5.0000	5.2067	.207	4.13	.25520	.002	1
S2	62.500	64.674	2.17	3.48	3.1300	.011	1
S3	125.00	127.90	2.90	2.32	6.1864	.012	1
S4	250.00	254.05	4.05	1.62	12.285	.093	1
S5	500.00	495.51	-4.49	-.898	23.958	.041	1
S6	800.00	795.17	-4.83	-.604	38.444	.275	1

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5



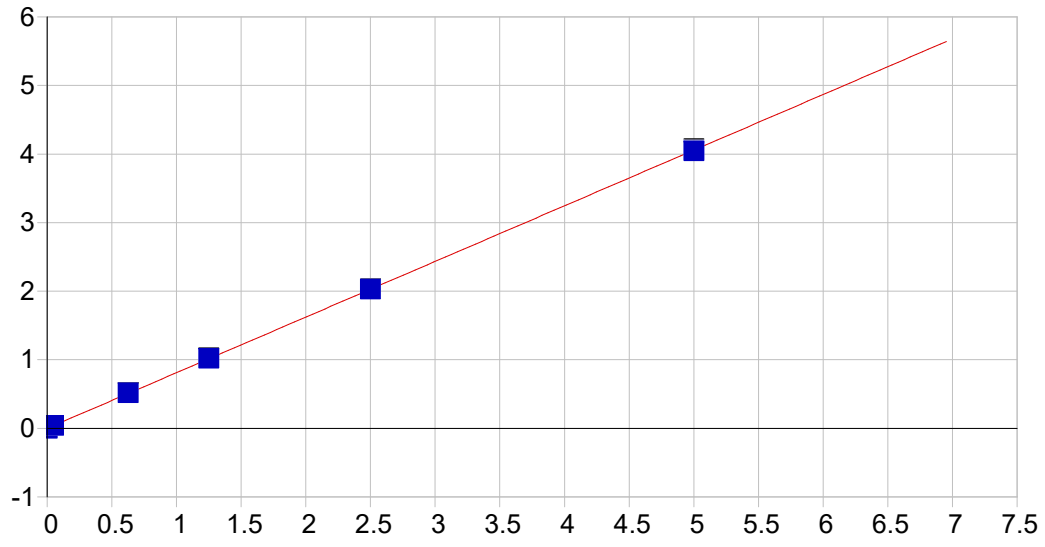
Cr 267.716 {126}

Date of Fit:	12/10/2024 16:20:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000406	Re-Slope:	1.000000
A1 (Gain):	0.309519	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999852	Status:	OK.
Std Error of Est:	0.000157		
Predicted MDL:	0.000691		
Predicted MQL:	0.002304		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00041	.000	1
S1	.01000	.01033	.000	3.29	.00361	.000	1
S2	3.8750	4.0312	.156	4.03	1.2491	.002	1
S3	7.7500	7.9267	.177	2.28	2.4557	.005	1
S4	15.500	15.604	.104	.673	4.8339	.004	1
S5	31.000	30.562	-.438	-1.41	9.4675	.007	1

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5



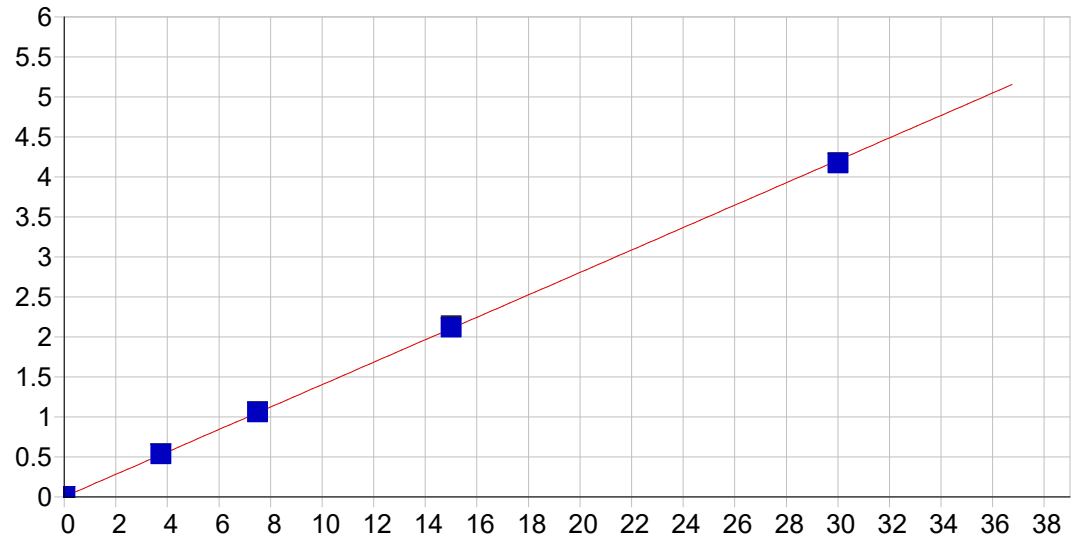
Co 228.616 {448}

Date of Fit:	12/10/2024 16:20:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000165	Re-Slope:	1.000000
A1 (Gain):	0.811374	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999985	Status:	OK.
Std Error of Est:	0.000120		
Predicted MDL:	0.000354		
Predicted MQL:	0.001181		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00017	.000	1
S1	.05000	.05065	.001	1.31	.04107	.000	1
S2	.62500	.63644	.011	1.83	.51786	.001	1
S3	1.2500	1.2556	.006	.446	1.0218	.006	1
S4	2.5000	2.4979	-.002	-.083	2.0331	.005	1
S5	5.0000	4.9844	-.016	-.312	4.0571	.018	1

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5



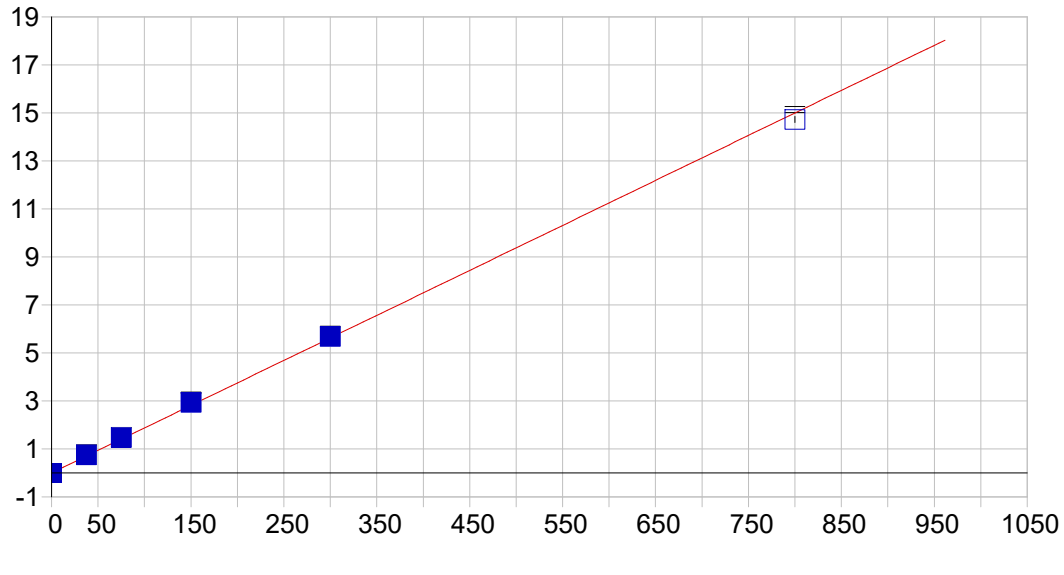
Cu 324.754 {104}

Date of Fit:	12/10/2024 16:20:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001465	Re-Slope:	1.000000
A1 (Gain):	0.140202	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999953	Status:	OK.
Std Error of Est:	0.000062		
Predicted MDL:	0.007512		
Predicted MQL:	0.025039		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00146	.001	1
S1	.02500	.02783	.003	11.3	.00536	.001	1
S2	3.7500	3.8213	.071	1.90	.53716	.001	1
S3	7.5000	7.5637	.064	.849	1.0618	.003	1
S4	15.000	15.117	.117	.779	2.1206	.014	1
S5	30.000	29.745	-.255	-.849	4.1714	.005	1

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5



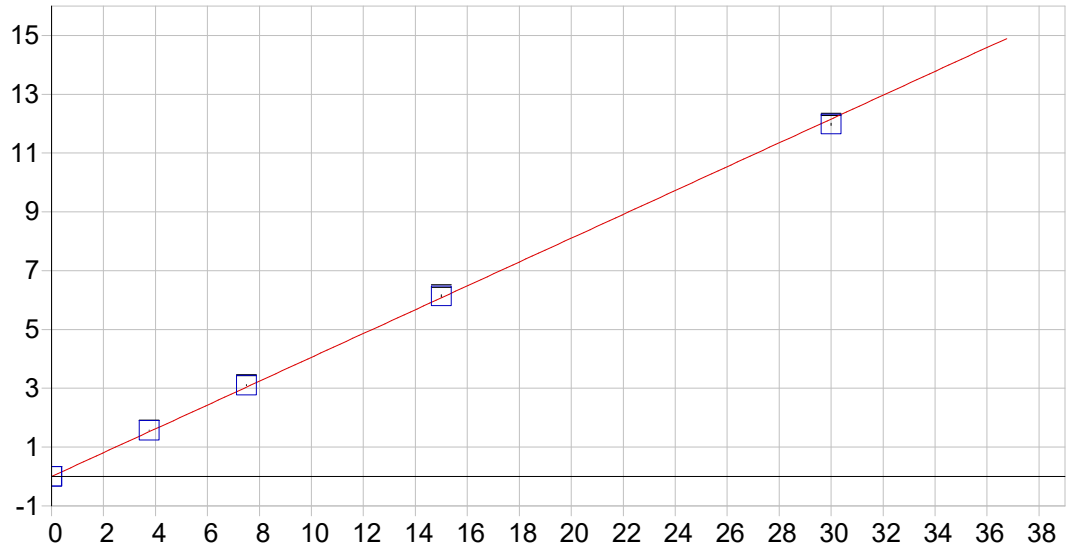
Fe 259.837 {130}

Date of Fit:	12/10/2024 16:20:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000021	Re-Slope:	1.000000
A1 (Gain):	0.018749	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999691	Status:	OK.
Std Error of Est:	0.000203		
Predicted MDL:	0.028072		
Predicted MQL:	0.093573		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00004	-.000	.000	-.00002	.000	1
S1	.10000	.12850	.028	28.5	.00239	.001	1
S2	37.500	39.721	2.22	5.92	.74488	.000	1
S3	75.000	78.460	3.46	4.61	1.4714	.002	1
S4	150.00	156.15	6.15	4.10	2.9284	.024	1
S5	300.00	302.70	2.70	.900	5.6766	.011	1
S6	800.00	785.43	-14.6	-1.82	14.726	.132	1

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5



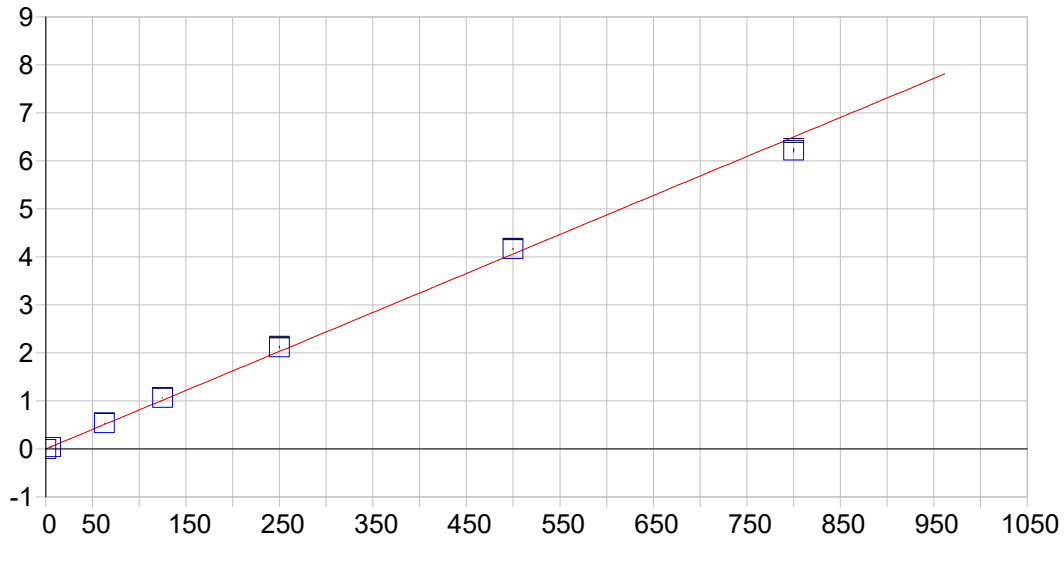
Mn 257.610 {131}

Date of Fit:	12/10/2024 16:20:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000193	Re-Slope:	1.000000
A1 (Gain):	0.405265	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999857	Status:	OK.
Std Error of Est:	0.000244		
Predicted MDL:	0.001362		
Predicted MQL:	0.004539		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00019	.000	1
S1	.01500	.01648	.001	9.90	.00649	.000	1
S2	3.7500	3.8818	.132	3.51	1.5729	.006	1
S3	7.5000	7.6622	.162	2.16	3.1050	.016	1
S4	15.000	15.145	.145	.967	6.1376	.045	1
S5	30.000	29.560	-.440	-1.47	11.979	.034	1

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5



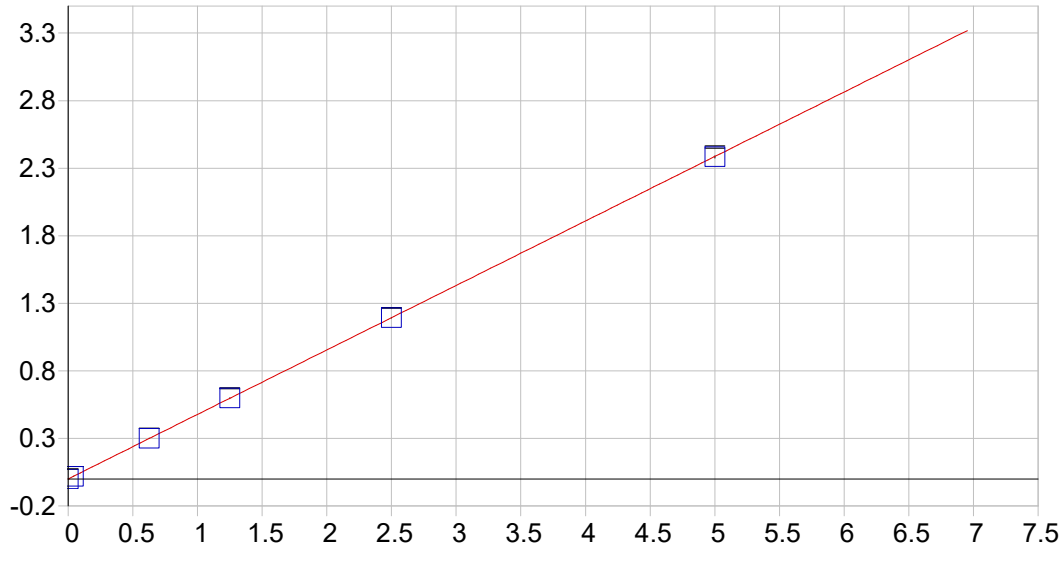
Mg 279.079 {121}

Date of Fit:	12/10/2024 16:20:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000300	Re-Slope:	1.000000
A1 (Gain):	0.008123	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999181	Status:	OK.
Std Error of Est:	0.001148		
Predicted MDL:	0.078006		
Predicted MQL:	0.260019		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00083	-.001	.000	-.00031	.000	1
S1	5.0000	5.1499	.150	3.00	.04153	.000	1
S2	62.500	66.172	3.67	5.87	.53720	.002	1
S3	125.00	131.24	6.24	5.00	1.0658	.003	1
S4	250.00	261.28	11.3	4.51	2.1220	.017	1
S5	500.00	513.03	13.0	2.61	4.1669	.016	1
S6	800.00	765.62	-34.4	-4.30	6.2187	.038	1

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5



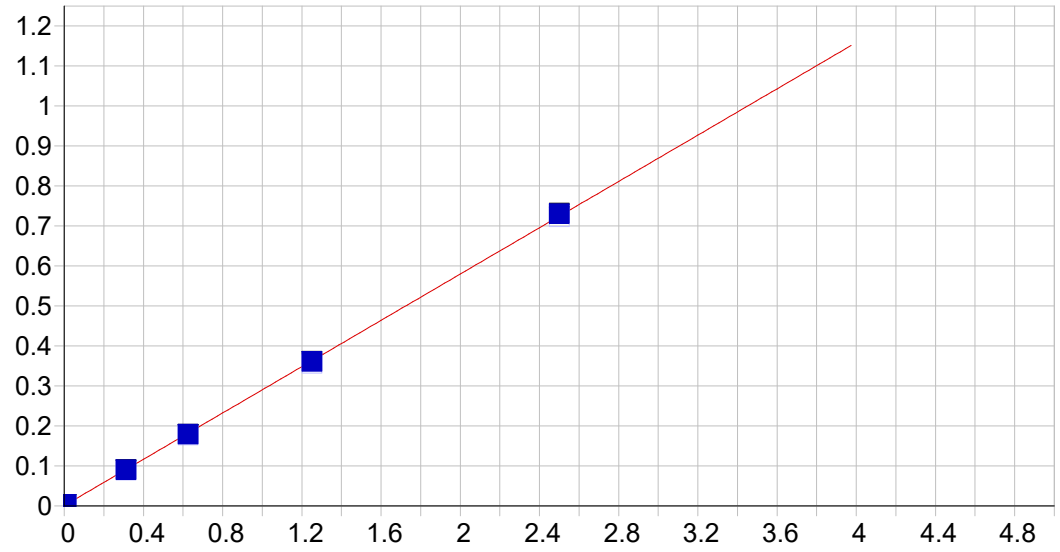
Ni 231.604 {446}

Date of Fit:	12/10/2024 16:20:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000086	Re-Slope:	1.000000
A1 (Gain):	0.477276	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999998	Status:	OK.
Std Error of Est:	0.000024		
Predicted MDL:	0.000621		
Predicted MQL:	0.002069		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00009	.000	1
S1	.04000	.03971	-.000	-.713	.01904	.000	1
S2	.62500	.62917	.004	.666	.30037	.001	1
S3	1.2500	1.2519	.002	.152	.59759	.003	1
S4	2.5000	2.5005	.000	.019	1.1935	.003	1
S5	5.0000	4.9937	-.006	-.125	2.3835	.009	1

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5



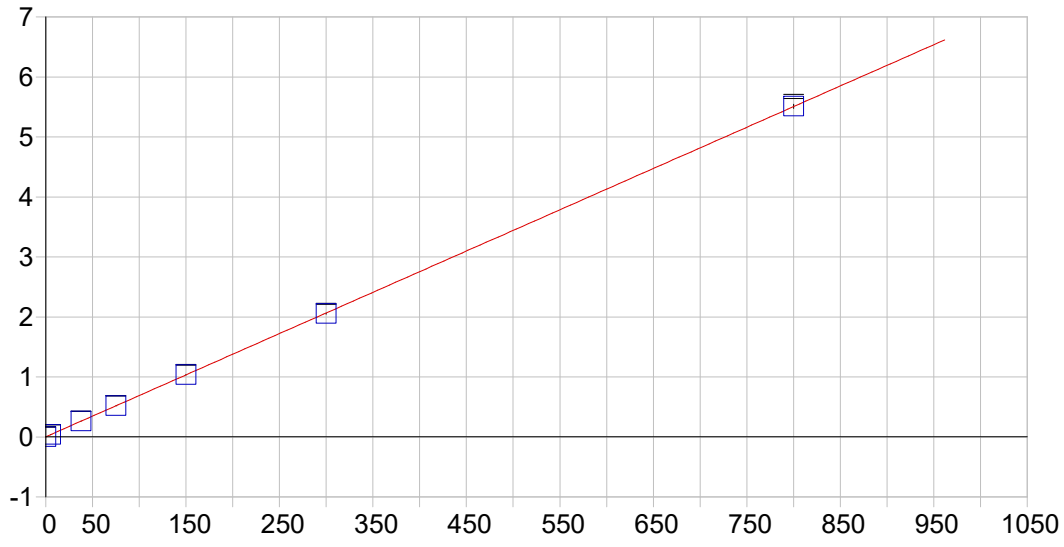
Ag 328.068 {103}

Date of Fit:	12/10/2024 16:20:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000903	Re-Slope:	1.000000
A1 (Gain):	0.289500	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999951	Status:	OK.
Std Error of Est:	0.000024		
Predicted MDL:	0.001258		
Predicted MQL:	0.004193		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00090	.000	1
S1	.01000	.00976	-.000	-2.41	.00372	.000	1
S2	.31250	.30806	-.004	-1.42	.08900	.000	1
S3	.62500	.61547	-.010	-1.52	.17691	.000	1
S4	1.2500	1.2425	-.008	-.604	.35625	.001	1
S5	2.5000	2.5218	.022	.870	.72227	.001	1

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5



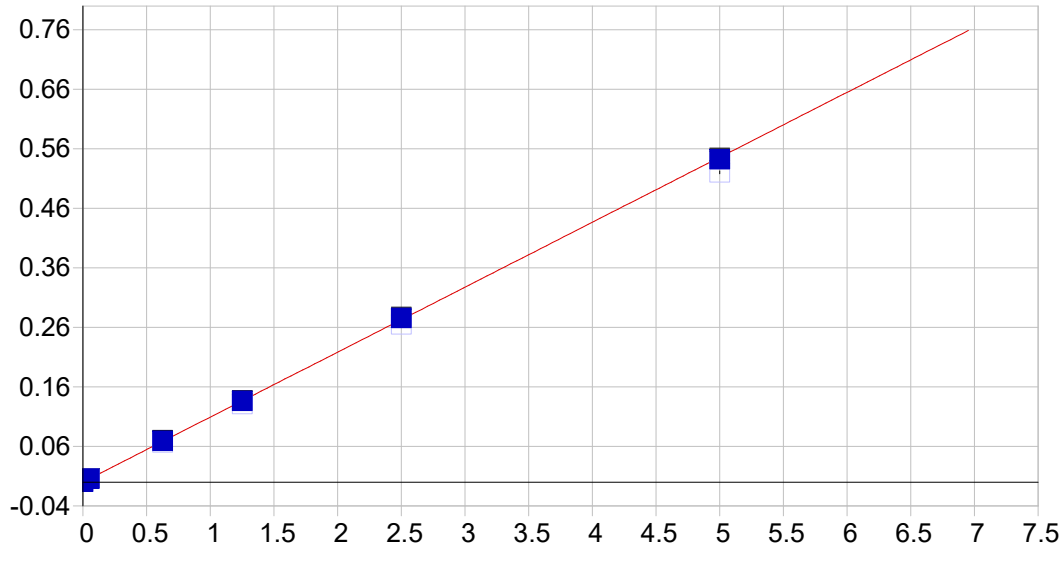
Na 818.326 { 41}

Date of Fit:	12/10/2024 16:20:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002398	Re-Slope:	1.000000
A1 (Gain):	0.006878	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999994	Status:	OK.
Std Error of Est:	0.000072		
Predicted MDL:	0.580706		
Predicted MQL:	1.935687		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00014	-.000	.000	.00240	.003	1
S1	5.0000	5.1035	.103	2.07	.03750	.001	1
S2	37.500	37.849	.349	.932	.26274	.002	1
S3	75.000	75.021	.021	.028	.51841	.001	1
S4	150.00	150.32	.325	.216	1.0364	.004	1
S5	300.00	298.40	-1.60	-.534	2.0549	.008	1
S6	800.00	800.80	.803	.100	5.5105	.036	1

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5



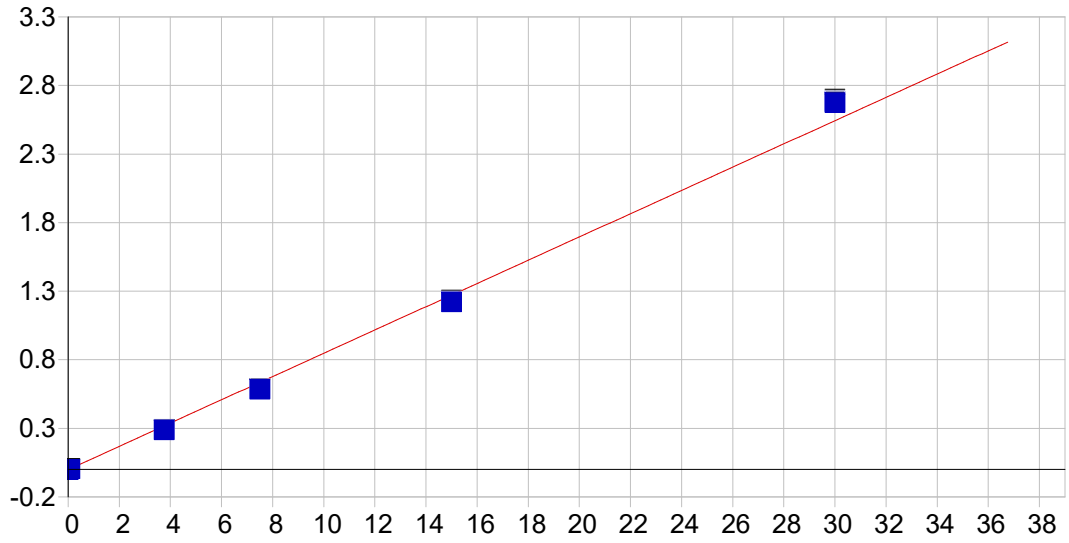
V 292.402 {115}

Date of Fit:	12/10/2024 16:20:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000079	Re-Slope:	1.000000
A1 (Gain):	0.109155	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999958	Status:	OK.
Std Error of Est:	0.000025		
Predicted MDL:	0.007828		
Predicted MQL:	0.026092		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00008	.001	1
S1	.05000	.05329	.003	6.59	.00588	.000	1
S2	.62500	.63092	.006	.946	.06621	.001	1
S3	1.2500	1.2484	-.002	-.126	.13088	.001	1
S4	2.5000	2.5245	.025	.981	.26471	.001	1
S5	5.0000	4.9677	-.032	-.646	.52046	.002	1

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5



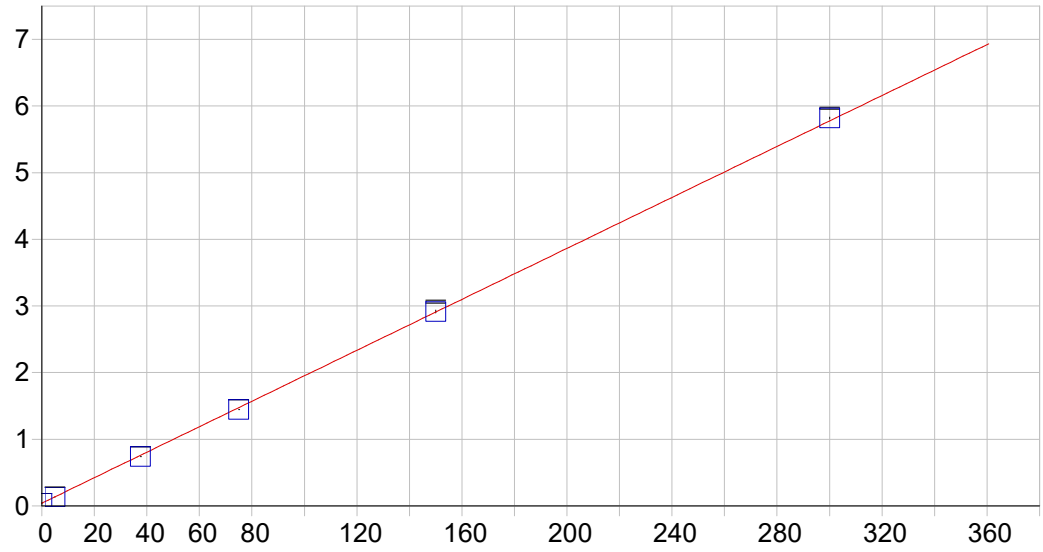
Zn 213.856 {158}

Date of Fit:	12/10/2024 16:20:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000670	Re-Slope:	1.000000
A1 (Gain):	0.084812	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998397	Status:	OK.
Std Error of Est:	0.000344		
Predicted MDL:	0.005228		
Predicted MQL:	0.017426		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	-.00067	.000	1
S1	.06000	.05528	-.005	-7.86	.00403	.000	1
S2	3.7500	3.3986	-.351	-9.37	.28913	.003	1
S3	7.5000	6.9043	-.596	-7.94	.58801	.004	1
S4	15.000	14.412	-.588	-3.92	1.2278	.008	1
S5	30.000	31.540	1.54	5.13	2.6868	.012	1

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5



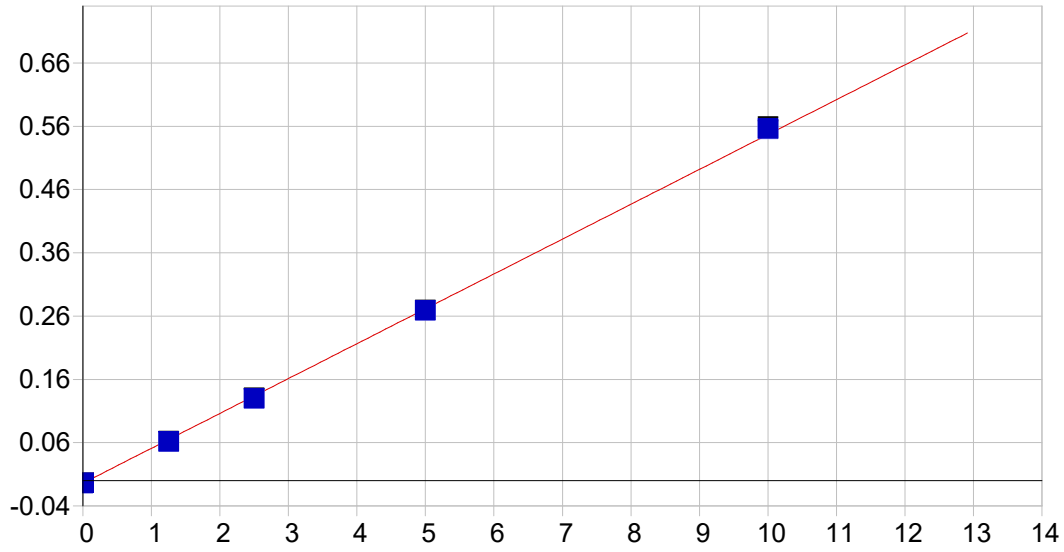
K 769.896 { 44}

Date of Fit:	12/10/2024 16:20:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.041081	Re-Slope:	1.000000
A1 (Gain):	0.019116	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999927	Status:	OK.
Std Error of Est:	0.000475		
Predicted MDL:	0.171709		
Predicted MQL:	0.572365		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00038	.000	.000	.04109	.004	1
S1	5.0000	4.7992	-.201	-4.02	.13282	.002	1
S2	37.500	36.575	-.925	-2.47	.74026	.002	1
S3	75.000	73.427	-1.57	-2.10	1.4447	.001	1
S4	150.00	150.43	.428	.285	2.9167	.020	1
S5	300.00	302.27	2.27	.757	5.8193	.012	1

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5



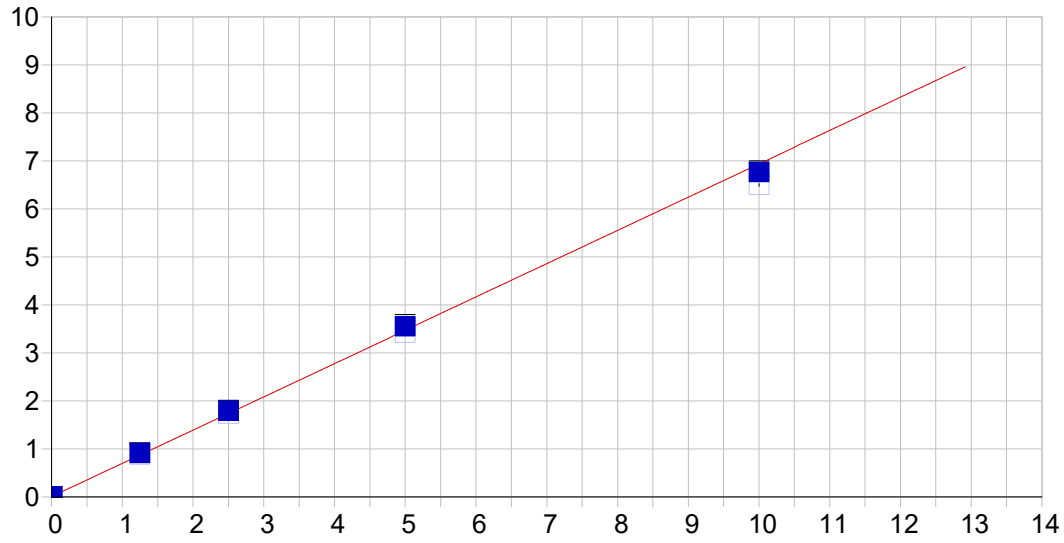
P 177.495 {490}

Date of Fit:	12/10/2024 16:20:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.004009	Re-Slope:	1.000000
A1 (Gain):	0.055095	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999781	Status:	OK.
Std Error of Est:	0.000019		
Predicted MDL:	0.002891		
Predicted MQL:	0.009637		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00401	.000	1
S1	.01000	.00773	-.002	-22.7	-.00358	.000	1
S2	1.2500	1.1959	-.054	-4.33	.06178	.000	1
S3	2.5000	2.4271	-.073	-2.92	.12951	.001	1
S4	5.0000	4.9593	-.041	-.815	.26882	.000	1
S5	10.000	10.170	.170	1.70	.55551	.003	1

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5



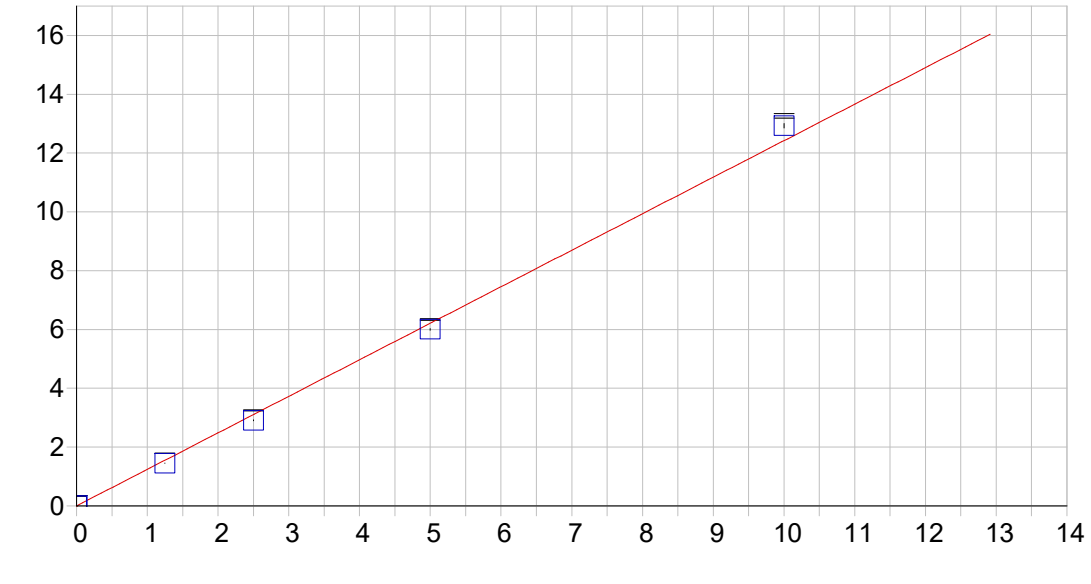
B 249.678 {135}

Date of Fit:	12/10/2024 16:20:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.004316	Re-Slope:	1.000000
A1 (Gain):	0.693479	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999175	Status:	OK.
Std Error of Est:	0.000455		
Predicted MDL:	0.002065		
Predicted MQL:	0.006885		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00432	.001	1
S1	.01000	-.00173	-.012	-117.	.00308	.001	1
S2	1.2500	1.3127	.063	5.02	.88169	.005	1
S3	2.5000	2.5844	.084	3.38	1.7306	.007	1
S4	5.0000	5.1151	.115	2.30	3.4197	.040	1
S5	10.000	9.7498	-.250	-2.50	6.5019	.028	1

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5



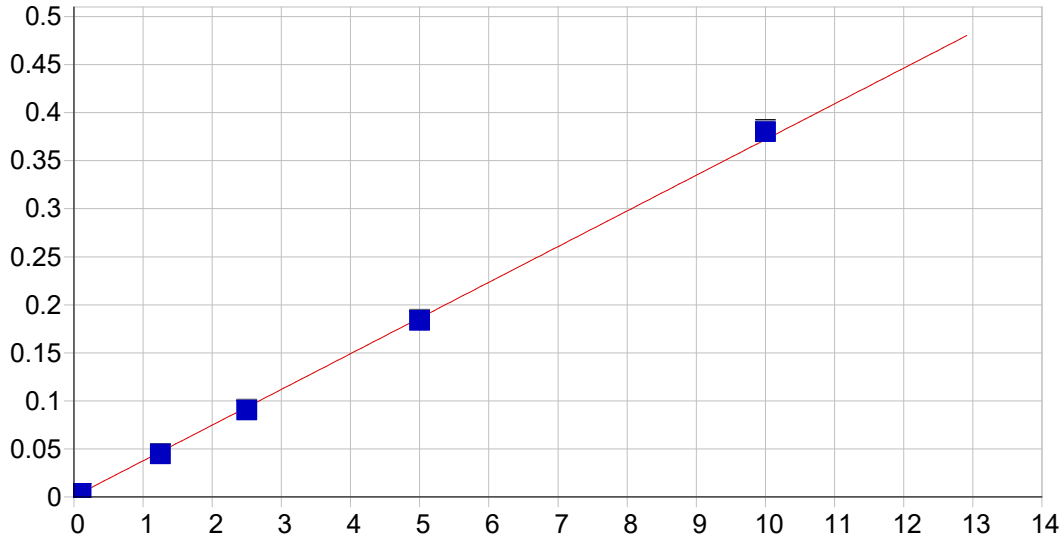
Mo 202.030 {467}

Date of Fit:	12/10/2024 16:20:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001229	Re-Slope:	1.000000
A1 (Gain):	1.242036	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998999	Status:	OK.
Std Error of Est:	0.000932		
Predicted MDL:	0.000304		
Predicted MQL:	0.001014		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00123	.000	1
S1	.01000	.00914	-.001	-8.56	.01259	.000	1
S2	1.2500	1.1685	-.081	-6.52	1.4526	.002	1
S3	2.5000	2.3421	-.158	-6.31	2.9103	.014	1
S4	5.0000	4.8323	-.168	-3.35	6.0031	.023	1
S5	10.000	10.408	.408	4.08	12.928	.077	1

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5



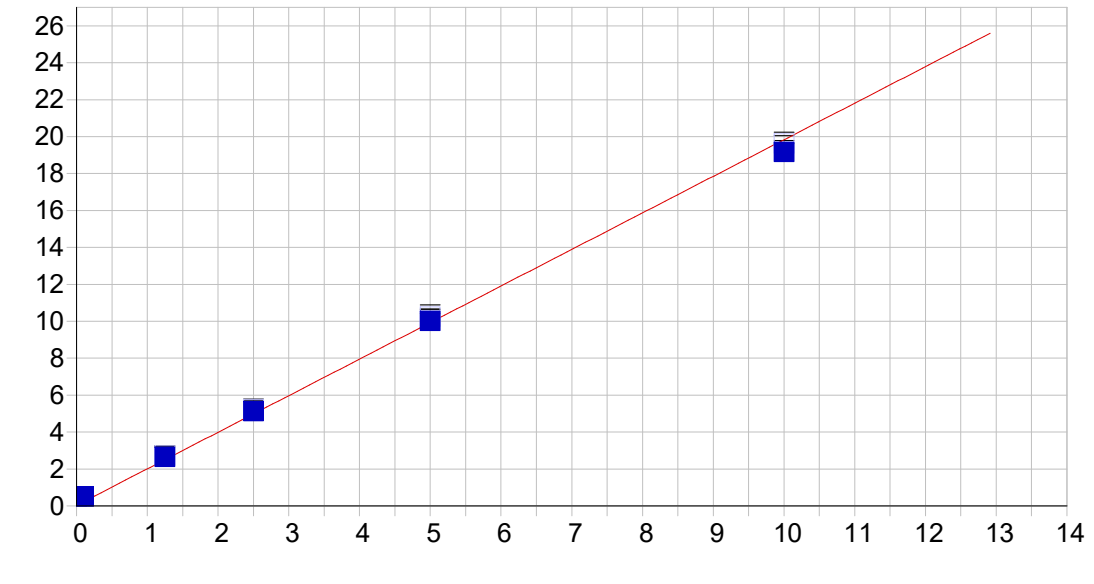
S 182.034 {485}

Date of Fit:	12/10/2024 16:20:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000390	Re-Slope:	1.000000
A1 (Gain):	0.037160	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999673	Status:	OK.
Std Error of Est:	0.000051		
Predicted MDL:	0.003884		
Predicted MQL:	0.012945		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00002	.000	.000	.00039	.000	1
S1	.10000	.08778	-.012	-12.2	.00365	.000	1
S2	1.2500	1.1894	-.061	-4.85	.04474	.000	1
S3	2.5000	2.4230	-.077	-3.08	.09073	.001	1
S4	5.0000	4.9327	-.067	-1.35	.18428	.001	1
S5	10.000	10.217	.217	2.17	.38125	.001	1

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5



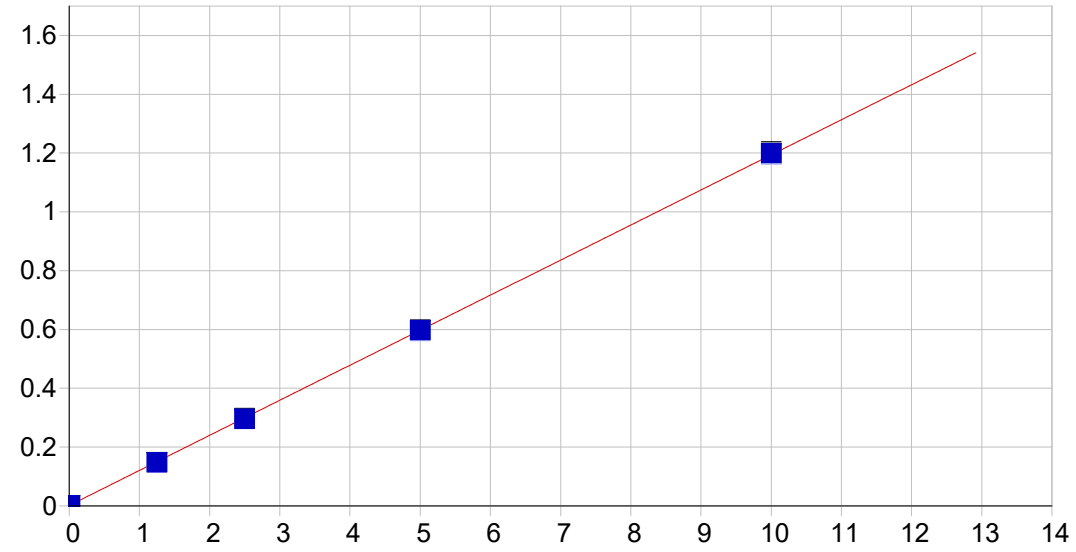
Si 251.611 {134}

Date of Fit:	12/10/2024 16:20:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.028174	Re-Slope:	1.000000
A1 (Gain):	1.980091	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.994455	Status:	OK.
Std Error of Est:	0.011379		
Predicted MDL:	0.000744		
Predicted MQL:	0.002478		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00015	-.000	.000	.02788	.001	1
S1	.10000	.24199	.142	142.	.51014	.005	1
S2	1.2500	1.3283	.078	6.26	2.7145	.004	1
S3	2.5000	2.5731	.073	2.92	5.2355	.024	1
S4	5.0000	5.0424	.042	.847	10.237	.110	1
S5	10.000	9.6655	-.335	-3.35	19.616	.094	1

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5



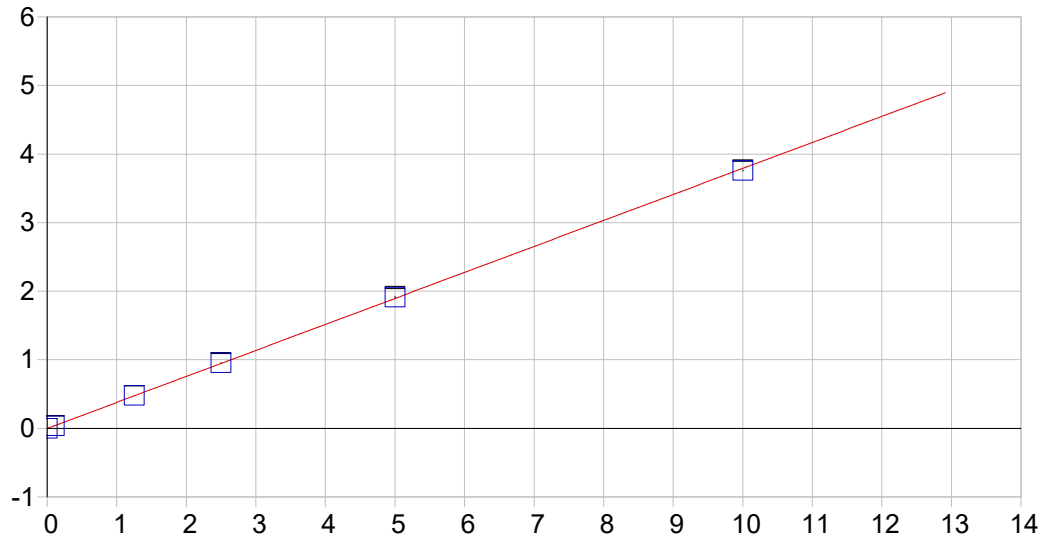
Sn 189.989 {478}

Date of Fit:	12/10/2024 16:20:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001501	Re-Slope:	1.000000
A1 (Gain):	0.119236	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999976	Status:	OK.
Std Error of Est:	0.000012		
Predicted MDL:	0.001129		
Predicted MQL:	0.003765		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00150	.000	1
S1	.00700	.00692	-.000	-1.19	.00229	.000	1
S2	1.2500	1.2281	-.022	-1.75	.14719	.001	1
S3	2.5000	2.4739	-.026	-1.04	.29499	.002	1
S4	5.0000	4.9999	-.000	-.003	.59468	.001	1
S5	10.000	10.048	.048	.482	1.1936	.005	1

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5



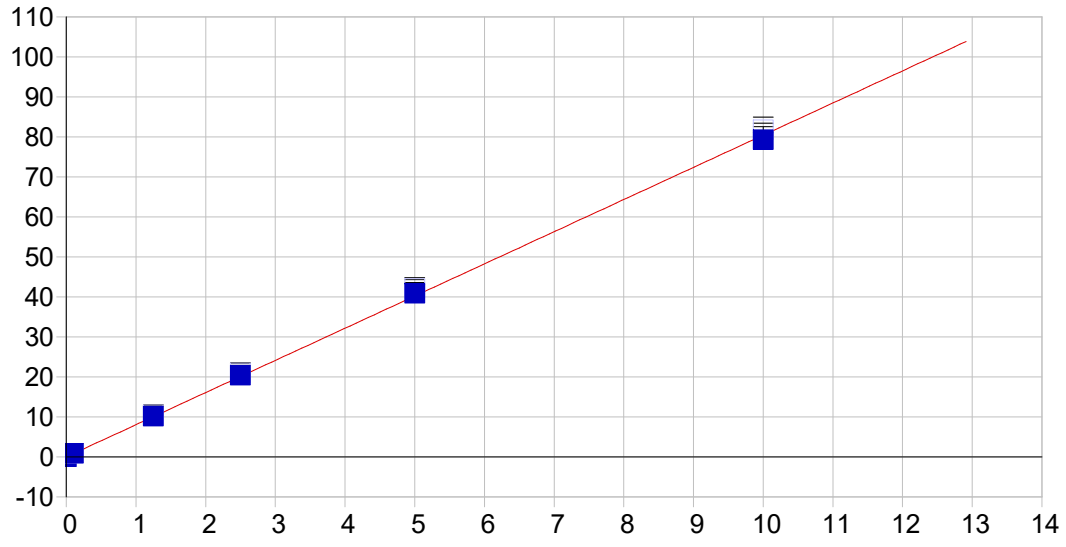
Ti 336.121 {100}

Date of Fit:	12/10/2024 16:20:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001290	Re-Slope:	1.000000
A1 (Gain):	0.379152	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999963	Status:	OK.
Std Error of Est:	0.000172		
Predicted MDL:	0.003264		
Predicted MQL:	0.010878		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00129	.001	1
S1	.10000	.10258	.003	2.58	.03761	.001	1
S2	1.2500	1.2647	.015	1.18	.47822	.002	1
S3	2.5000	2.5203	.020	.812	.95428	.006	1
S4	5.0000	5.0417	.042	.834	1.9103	.015	1
S5	10.000	9.9207	-.079	-.793	3.7602	.011	1

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5



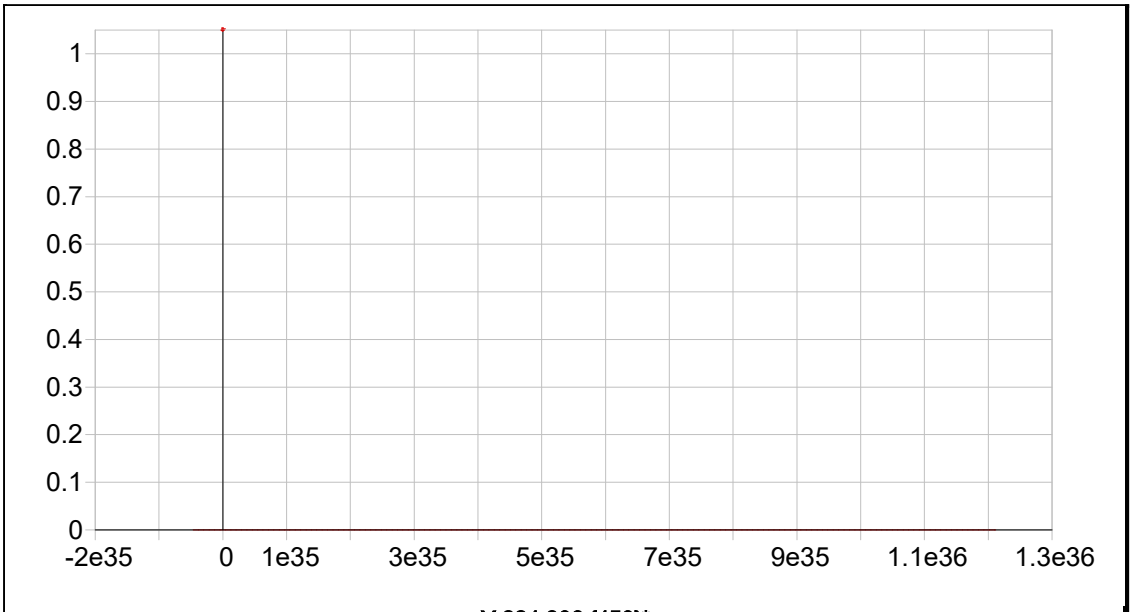
Sr 407.771 { 83}

Date of Fit:	12/10/2024 16:20:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.002779	Re-Slope:	1.000000
A1 (Gain):	8.043023	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999889	Status:	OK.
Std Error of Est:	0.006557		
Predicted MDL:	0.000240		
Predicted MQL:	0.000802		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	-.00286	.001	1
S1	.10000	.10706	.007	7.06	.85911	.002	1
S2	1.2500	1.2671	.017	1.37	10.490	.016	1
S3	2.5000	2.5326	.033	1.31	20.971	.071	1
S4	5.0000	5.0822	.082	1.64	42.080	.278	1
S5	10.000	9.8612	-.139	-1.39	81.724	.747	1

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

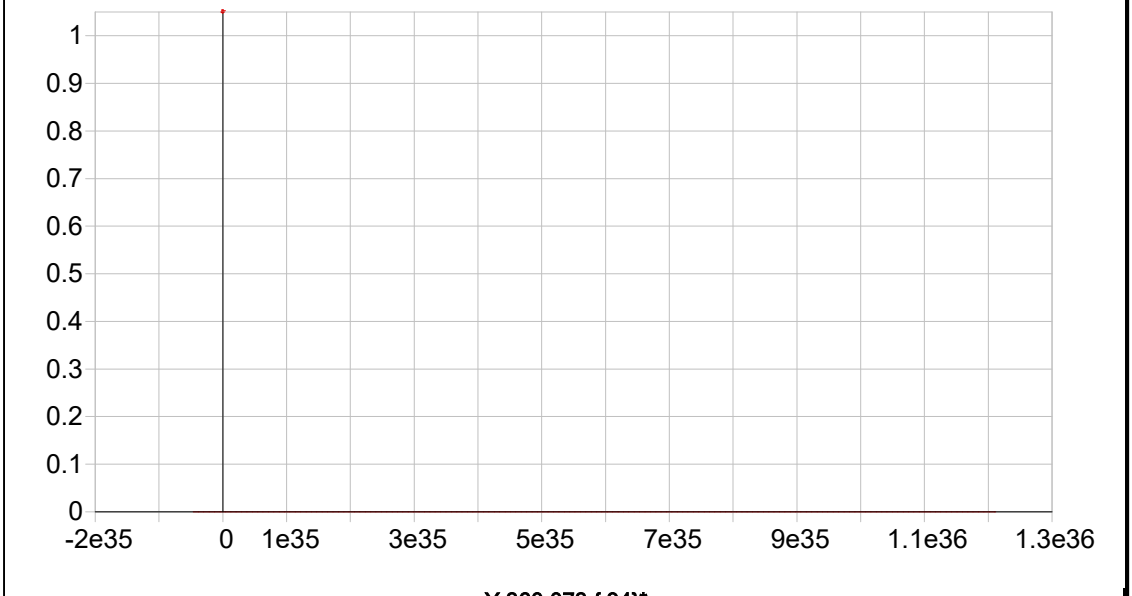


Y 224.306 {450}*

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

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

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



Y 360.073 { 94}*

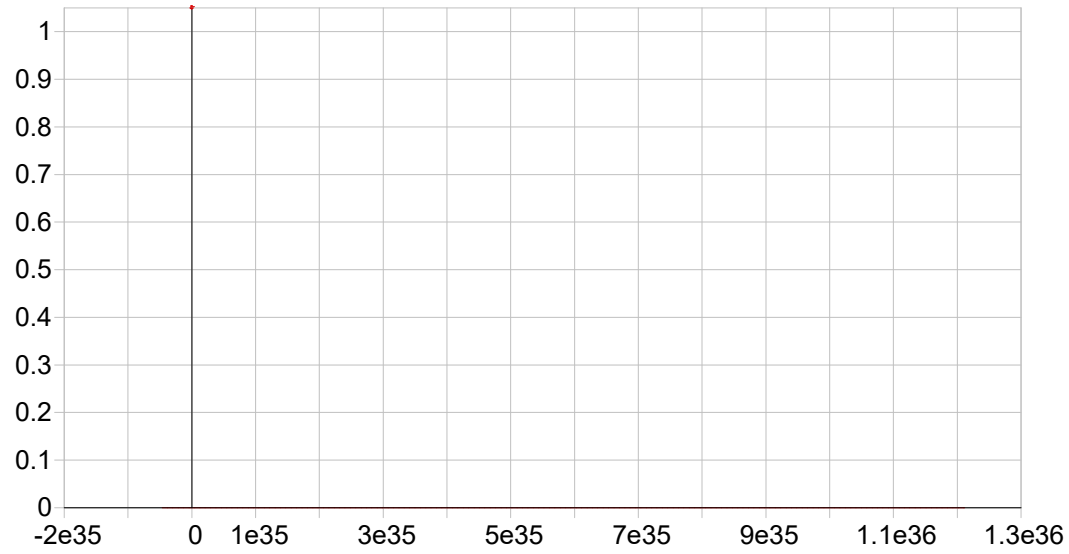
Date of Fit:	<not fit>	Type of Fit:	Linear	Weighting:	1/Conc

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

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

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



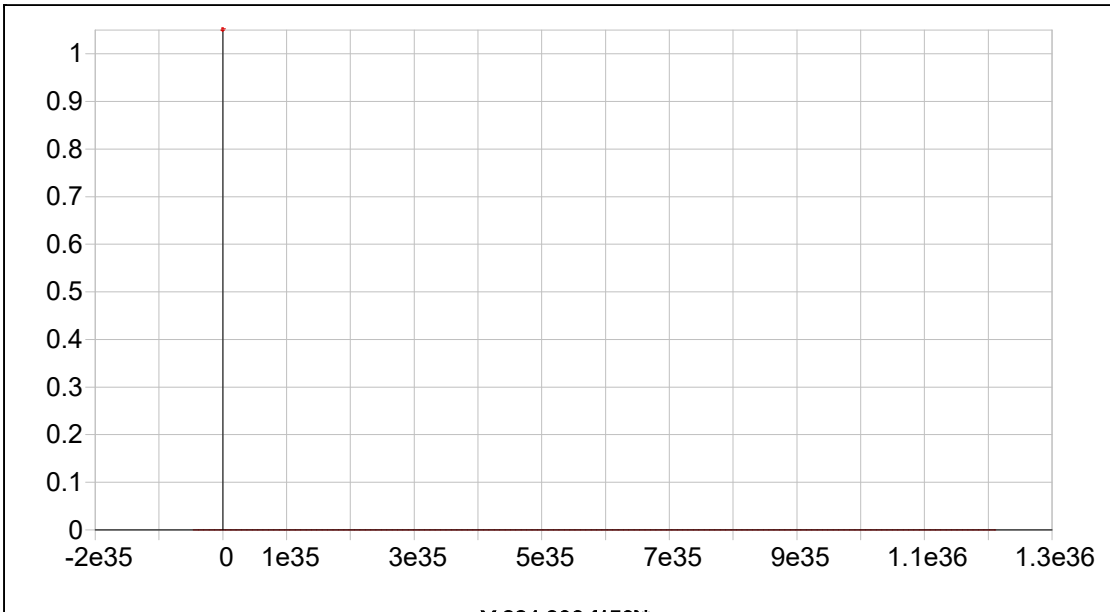
Y 371.030 { 91}*

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

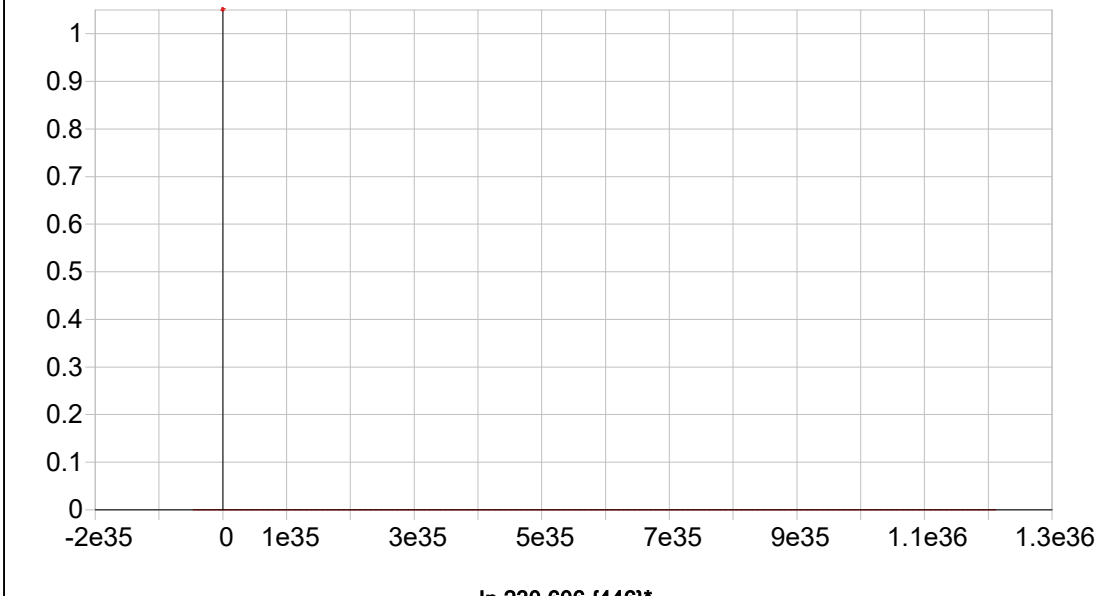
Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5



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



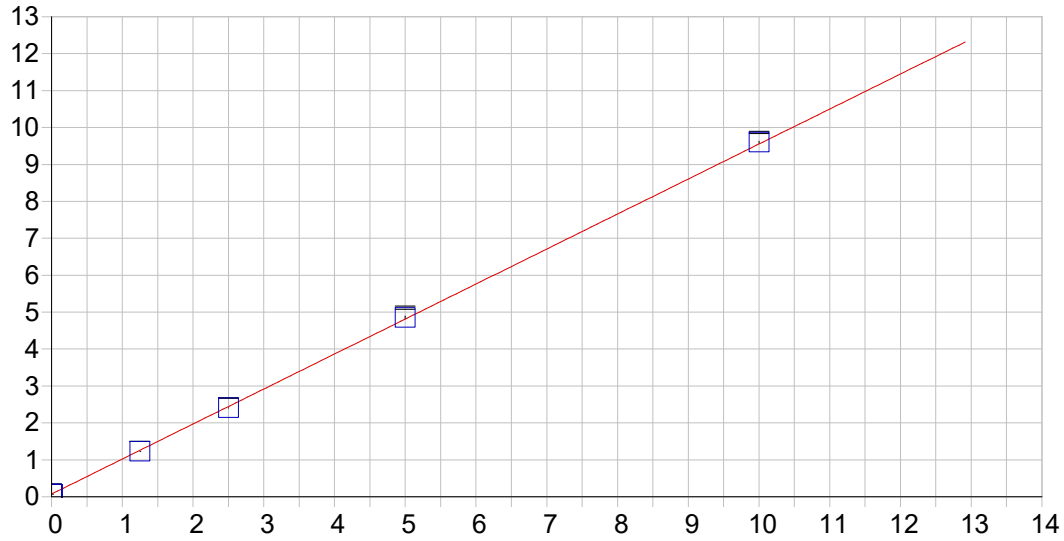
In 230.606 {446}*

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	

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

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



Li 670.784 { 50}

Date of Fit:	12/10/2024 16:20:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.074011	Re-Slope:	1.000000
A1 (Gain):	0.947867	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999335	Status:	OK.
Std Error of Est:	0.000710		
Predicted MDL:	0.004213		
Predicted MQL:	0.014042		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00002	.000	.000	.07403	.002	1
S5	10.000	10.050	.050	.495	9.5996	.030	1
S4	5.0000	5.0395	.039	.790	4.8508	.044	1
S3	2.5000	2.4592	-.041	-1.63	2.4050	.006	1
S2	1.2500	1.2203	-.030	-2.38	1.2307	.003	1
S1	.01500	-.00358	-.019	-124.	.07062	.003	1

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Sample Name: S0 Acquired: 12/10/2024 15:54:09 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S0 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	.48326	-.00019	.00047	-.00021	.00020	-.00038	.06088	.00266
Stddev	.48277	.00012	.00024	.00028	.00037	.00120	.00124	.00106
%RSD	99.900	64.400	49.878	130.58	187.84	318.94	2.0368	39.736
#1	.38681	-.00021	.00071	-.00048	.00061	.00062	.05993	.00380
#2	.05599	-.00029	.00048	.00007	.00009	-.00171	.06229	.00244
#3	1.0070	-.00006	.00023	-.00023	-.00011	-.00004	.06043	.00172

Elem	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00013	.00347	.00041	-.00017	.00146	-.00002	-.00019	-.00031
Stddev	.00004	.00211	.00005	.00005	.00053	.00029	.00035	.00033
%RSD	29.144	60.717	12.041	32.963	36.015	1320.0	179.14	106.80
#1	.00010	.00527	.00044	-.00014	.00200	-.00019	.00020	-.00024
#2	.00012	.00399	.00043	-.00013	.00144	.00031	-.00030	-.00066
#3	.00017	.00115	.00035	-.00023	.00095	-.00019	-.00047	-.00002

Elem	Ni2316	Ag3280	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00009	.00090	.00240	.00008	-.00067	.04109	-.00401	.00432
Stddev	.00026	.00046	.00347	.00115	.00037	.00357	.00011	.00056
%RSD	302.14	50.599	144.62	1459.4	55.189	8.6945	2.6506	13.011
#1	.00036	.00132	-.00155	-.00055	-.00088	.04230	-.00392	.00368
#2	-.00015	.00098	.00493	-.00062	-.00024	.03707	-.00397	.00472
#3	.00005	.00041	.00382	.00140	-.00089	.04390	-.00413	.00457

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077	Li6707
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00123	.00039	.02788	.00150	-.00129	-.00286	.07403
Stddev	.00019	.00008	.00068	.00006	.00111	.00129	.00194
%RSD	15.534	20.405	2.4366	3.6675	85.967	45.259	2.6201
#1	.00131	.00031	.02713	.00152	-.00255	-.00429	.07305
#2	.00101	.00047	.02846	.00155	-.00045	-.00176	.07626
#3	.00137	.00039	.02805	.00144	-.00087	-.00253	.07277

Reviewed By:kareem
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Inst Id :P5

Sample Name: S0 Acquired: 12/10/2024 15:54:09 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S0 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	2501.2	27528.	2637.3	1949.0	3933.2
Stddev	5.6	17.	19.6	5.3	9.5
%RSD	.22584	.06235	.74159	.27279	.24266
#1	2496.9	27508.	2618.9	1953.3	3922.4
#2	2507.6	27536.	2635.0	1950.7	3940.4
#3	2499.0	27539.	2657.9	1943.1	3936.9

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: S1 Acquired: 12/10/2024 15:58:14 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S01 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	2.5670	.00191	.00210	.00226	.00916	.02041	.75072	.06379
Stddev	.1280	.00017	.00063	.00039	.00015	.00122	.00372	.00063
%RSD	4.9858	8.6499	30.037	17.181	1.6841	5.9959	.49558	.99493
#1	2.4793	.00184	.00160	.00271	.00902	.02031	.75343	.06448
#2	2.5077	.00210	.00281	.00202	.00933	.02168	.74648	.06365
#3	2.7138	.00179	.00189	.00205	.00913	.01924	.75225	.06323

Elem	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.01439	.25520	.00361	.04107	.00536	.00239	.00649	.04153
Stddev	.00027	.00157	.00014	.00027	.00083	.00071	.00023	.00040
%RSD	1.8423	.61360	3.8699	.66256	15.416	29.757	3.5387	.96761
#1	.01413	.25359	.00377	.04110	.00575	.00278	.00673	.04199
#2	.01439	.25529	.00351	.04078	.00592	.00157	.00645	.04127
#3	.01466	.25672	.00354	.04132	.00441	.00282	.00628	.04132

Elem	Ni2316	Ag3280	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.01904	.00372	.03750	.00588	.00403	.13282	-.00358	.00308
Stddev	.00019	.00028	.00072	.00036	.00035	.00192	.00007	.00099
%RSD	1.0178	7.4286	1.9223	6.1928	8.7031	1.4425	2.0718	32.208
#1	.01926	.00400	.03793	.00593	.00443	.13153	-.00350	.00370
#2	.01894	.00344	.03667	.00622	.00391	.13191	-.00359	.00194
#3	.01892	.00373	.03790	.00549	.00376	.13502	-.00365	.00360

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077	Li6707
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.01259	.00365	.51014	.00229	.03761	.85911	.07062
Stddev	.00010	.00009	.00508	.00002	.00105	.00190	.00269
%RSD	.75885	2.4433	.99499	1.0777	2.8035	.22084	3.8144
#1	.01260	.00355	.51113	.00228	.03858	.85694	.07035
#2	.01267	.00373	.51465	.00232	.03649	.85993	.07343
#3	.01248	.00367	.50465	.00227	.03774	.86046	.06806

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: S1 Acquired: 12/10/2024 15:58:14 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S01 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	2509.7	27575.	2653.6	1962.1	3927.2
Stddev	.9	123.	7.4	4.7	1.0
%RSD	.03740	.44685	.27852	.23940	.02493
#1	2509.9	27674.	2661.1	1964.0	3928.3
#2	2508.7	27614.	2646.3	1956.7	3926.3
#3	2510.5	27437.	2653.4	1965.5	3927.1

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: S2 Acquired: 12/10/2024 16:02:21 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S02 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	254.56	.10834	1.1255	.08133	.19664	3.7537	8.4622	1.4766
Stddev	.08	.00031	.0030	.00019	.00048	.0149	.0195	.0069
%RSD	.03026	.28234	.26404	.23935	.24642	.39689	.23027	.46815
#1	254.56	.10820	1.1265	.08116	.19652	3.7697	8.4832	1.4707
#2	254.49	.10813	1.1221	.08154	.19623	3.7402	8.4586	1.4749
#3	254.64	.10869	1.1278	.08129	.19717	3.7512	8.4447	1.4842

Elem	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1.8941	3.1300	1.2491	.51786	.53716	.74488	1.5729	.53720
Stddev	.0041	.0111	.0024	.00121	.00113	.00030	.0062	.00204
%RSD	.21689	.35552	.18824	.23459	.21024	.04029	.39649	.38050
#1	1.8978	3.1420	1.2518	.51869	.53774	.74490	1.5795	.53941
#2	1.8897	3.1281	1.2478	.51647	.53586	.74517	1.5671	.53538
#3	1.8949	3.1200	1.2476	.51843	.53788	.74457	1.5722	.53680

Elem	Ni2316	Ag3280	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.30037	.08900	.26274	.06621	.28913	.74026	.06178	.88169
Stddev	.00071	.00019	.00173	.00117	.00279	.00153	.00019	.00504
%RSD	.23769	.20995	.65934	1.7672	.96480	.20698	.30830	.57178
#1	.30078	.08879	.26191	.06489	.28910	.73919	.06199	.88025
#2	.29955	.08910	.26157	.06662	.29193	.74201	.06163	.87753
#3	.30079	.08912	.26473	.06712	.28635	.73956	.06171	.88730

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077	Li6707
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1.4526	.04474	2.7145	.14719	.47822	10.490	1.2307
Stddev	.0016	.00012	.0042	.00060	.00152	.016	.0034
%RSD	.11095	.26988	.15405	.40519	.31731	.15324	.27959
#1	1.4533	.04470	2.7122	.14735	.47700	10.506	1.2335
#2	1.4508	.04464	2.7119	.14653	.47992	10.474	1.2317
#3	1.4538	.04487	2.7193	.14769	.47774	10.490	1.2269

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: S2 Acquired: 12/10/2024 16:02:21 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S02 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	2429.4	26726.	2665.3	1876.0	3609.8
Stddev	4.7	185.	5.8	12.9	11.1
%RSD	.19324	.69151	.21680	.68746	.30805
#1	2428.5	26627.	2668.1	1875.5	3604.0
#2	2434.5	26612.	2658.7	1863.4	3622.6
#3	2425.3	26939.	2669.2	1889.2	3602.7

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: S3 Acquired: 12/10/2024 16:06:12 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S03 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	489.60	.21402	2.2442	.16236	.39485	7.4705	16.826	2.8922
Stddev	1.23	.00182	.0128	.00045	.00171	.0039	.023	.0127
%RSD	.25036	.84884	.56973	.27960	.43185	.05222	.13471	.43786
#1	488.46	.21367	2.2373	.16229	.39417	7.4697	16.852	2.8860
#2	489.44	.21241	2.2363	.16195	.39358	7.4670	16.816	2.9068
#3	490.90	.21599	2.2589	.16285	.39678	7.4747	16.810	2.8839

Elem	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3.7702	6.1864	2.4557	1.0218	1.0618	1.4714	3.1050	1.0658
Stddev	.0215	.0116	.0047	.0058	.0033	.0022	.0165	.0033
%RSD	.56904	.18671	.19022	.56656	.31054	.14865	.53063	.31310
#1	3.7599	6.1996	2.4513	1.0194	1.0652	1.4712	3.1193	1.0696
#2	3.7558	6.1780	2.4553	1.0177	1.0586	1.4736	3.1087	1.0635
#3	3.7948	6.1817	2.4606	1.0285	1.0616	1.4693	3.0870	1.0641

Elem	Ni2316	Ag3280	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.59759	.17691	.51841	.13088	.58801	1.4447	.12951	1.7306
Stddev	.00320	.00035	.00073	.00078	.00369	.0012	.00071	.0073
%RSD	.53621	.19932	.14074	.59814	.62743	.08604	.55161	.42384
#1	.59640	.17650	.51908	.13097	.59190	1.4434	.12947	1.7280
#2	.59515	.17709	.51763	.13162	.58456	1.4459	.12882	1.7389
#3	.60122	.17714	.51852	.13006	.58758	1.4449	.13025	1.7250

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077	Li6707
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2.9103	.09073	5.2355	.29499	.95428	20.971	2.4050
Stddev	.0136	.00063	.0236	.00222	.00638	.071	.0062
%RSD	.46715	.69329	.45143	.75379	.66845	.33931	.25911
#1	2.9058	.09068	5.2162	.29389	.95926	21.051	2.4115
#2	2.8994	.09012	5.2618	.29352	.95650	20.916	2.3991
#3	2.9255	.09137	5.2284	.29754	.94709	20.944	2.4046

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: S3 Acquired: 12/10/2024 16:06:12 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S03 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	2318.5	25853.	2623.8	1790.1	3419.0
Stddev	7.4	115.	2.2	5.1	11.9
%RSD	.31714	.44456	.08393	.28644	.34923
#1	2313.6	25829.	2626.3	1789.0	3413.6
#2	2327.0	25978.	2623.0	1795.7	3432.6
#3	2315.0	25752.	2622.1	1785.7	3410.6

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: S4 Acquired: 12/10/2024 16:09:58 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S04 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	944.72	.42181	4.5376	.32829	.81586	15.131	34.006	5.7813
Stddev	1.80	.00078	.0079	.00128	.00332	.123	.241	.0758
%RSD	.19009	.18552	.17397	.39109	.40704	.81339	.70942	1.3106
#1	944.22	.42100	4.5402	.32831	.81678	15.073	33.908	5.8105
#2	943.22	.42188	4.5288	.32699	.81218	15.048	33.829	5.6953
#3	946.71	.42256	4.5439	.32956	.81863	15.273	34.281	5.8381

Elem	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7.5297	12.285	4.8339	2.0331	2.1206	2.9284	6.1376	2.1220
Stddev	.0122	.093	.0036	.0053	.0140	.0241	.0445	.0173
%RSD	.16215	.75744	.07469	.25818	.65818	.82304	.72550	.81736
#1	7.5269	12.217	4.8381	2.0333	2.1098	2.9152	6.0999	2.1102
#2	7.5192	12.246	4.8322	2.0278	2.1157	2.9138	6.1261	2.1138
#3	7.5431	12.391	4.8315	2.0383	2.1364	2.9562	6.1867	2.1419

Elem	Ni2316	Ag3280	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1.1935	.35625	1.0364	.26471	1.2278	2.9167	.26882	3.4197
Stddev	.0027	.00077	.0039	.00143	.0081	.0201	.00022	.0405
%RSD	.23021	.21729	.37541	.53922	.66355	.68840	.08068	1.1836
#1	1.1920	.35712	1.0354	.26412	1.2205	2.9066	.26861	3.4295
#2	1.1919	.35601	1.0330	.26367	1.2366	2.9036	.26881	3.3752
#3	1.1967	.35563	1.0407	.26634	1.2263	2.9398	.26904	3.4544

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077	Li6707
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6.0031	.18428	10.237	.59468	1.9103	42.080	4.8508
Stddev	.0228	.00050	.110	.00069	.0152	.278	.0442
%RSD	.37948	.27380	1.0782	.11587	.79550	.66176	.91153
#1	6.0066	.18408	10.269	.59472	1.8957	41.839	4.8250
#2	5.9788	.18391	10.114	.59397	1.9092	42.017	4.8255
#3	6.0240	.18486	10.328	.59535	1.9260	42.385	4.9018

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: S4 Acquired: 12/10/2024 16:09:58 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S04 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	2160.1	25097.	2564.8	1657.9	3226.8
Stddev	5.9	53.	25.0	2.4	3.0
%RSD	.27344	.20957	.97288	.14522	.09243
#1	2159.0	25136.	2561.9	1656.6	3228.1
#2	2166.5	25037.	2591.0	1656.4	3228.9
#3	2154.9	25118.	2541.4	1660.6	3223.4

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: S5 Acquired: 12/10/2024 16:13:43 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S05 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	1824.5	.82865	9.1294	.69817	1.7790	30.149	67.042	11.249
Stddev	4.4	.00349	.0383	.00366	.0097	.078	.218	.057
%RSD	.24207	.42158	.41963	.52426	.54637	.25954	.32471	.51089
#1	1819.6	.82569	9.1000	.69554	1.7715	30.064	66.792	11.297
#2	1828.2	.82776	9.1155	.69661	1.7754	30.165	67.141	11.185
#3	1825.7	.83250	9.1728	.70235	1.7900	30.218	67.193	11.265

Elem	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	14.988	23.958	9.4675	4.0571	4.1714	5.6766	11.979	4.1669
Stddev	.066	.041	.0072	.0180	.0049	.0114	.034	.0162
%RSD	.43785	.16921	.07595	.44320	.11775	.20046	.28573	.38795
#1	14.946	23.914	9.4617	4.0482	4.1714	5.6658	11.966	4.1572
#2	14.955	23.967	9.4755	4.0454	4.1664	5.6885	11.954	4.1580
#3	15.064	23.993	9.4653	4.0778	4.1762	5.6756	12.018	4.1856

Elem	Ni2316	Ag3280	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2.3835	.72227	2.0549	.52046	2.6868	5.8193	.55551	6.5019
Stddev	.0089	.00114	.0081	.00239	.0125	.0124	.00299	.0278
%RSD	.37178	.15762	.39595	.45981	.46420	.21307	.53850	.42746
#1	2.3771	.72140	2.0455	.51920	2.6743	5.8050	.55315	6.5259
#2	2.3798	.72356	2.0587	.51895	2.6992	5.8257	.55450	6.4714
#3	2.3936	.72184	2.0604	.52322	2.6869	5.8271	.55888	6.5084

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077	Li6707
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	12.928	.38125	19.616	1.1936	3.7602	81.724	9.5996
Stddev	.077	.00110	.094	.0054	.0110	.747	.0304
%RSD	.59938	.28814	.47952	.45322	.29362	.91465	.31670
#1	12.870	.38067	19.703	1.1906	3.7488	80.861	9.5696
#2	12.898	.38056	19.516	1.1904	3.7610	82.178	9.5989
#3	13.016	.38252	19.629	1.1999	3.7708	82.133	9.6304

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: S5 Acquired: 12/10/2024 16:13:43 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S05 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	1917.4	23987.	2548.4	1454.2	3021.2
Stddev	7.9	79.	7.0	7.0	11.6
%RSD	.41027	.33048	.27597	.48294	.38335
#1	1919.9	24074.	2550.2	1460.7	3021.7
#2	1923.8	23918.	2554.4	1446.8	3032.5
#3	1908.6	23968.	2540.7	1455.1	3009.4

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: S6 Acquired: 12/10/2024 16:17:38 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S06 Custom ID2: Custom ID3:
Comment:

Elem	Al3961	Ca3736	Fe2598	Mg2790	Na8183
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	78.901	38.444	14.726	6.2187	5.5105
Stddev	.600	.275	.132	.0382	.0361
%RSD	.76102	.71542	.89793	.61446	.65461
#1	79.325	38.635	14.824	6.2443	5.5264
#2	79.164	38.569	14.779	6.2370	5.5360
#3	78.214	38.129	14.576	6.1748	5.4692

Int. Std.	Y_3710
Units	Cts/S
Avg	2542.7
Stddev	25.0
%RSD	.98291
#1	2519.0
#2	2540.2
#3	2568.8

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: ICV014 Acquired: 12/10/2024 16:45:51 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICV014 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.038133	.9821663	.9687233	.9324097	.9126922	2.427014
Stddev	.003284	.0023432	.0045070	.0012098	.0034750	.018037
%RSD	.3163694	.2385762	.4652488	.1297539	.3807459	.7431855
#1	1.039430	.9848588	.9739237	.9331766	.9166857	2.440929
#2	1.040570	.9810507	.9659509	.9310150	.9103560	2.406636
#3	1.034398	.9805892	.9662952	.9330375	.9110350	2.433478

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5185802	.5224039	.4768094	10.23094	.5496085	.5007285
Stddev	.0058810	.0066120	.0012909	.15363	.0016435	.0021732
%RSD	1.134059	1.265693	.2707446	1.501665	.2990242	.4340026
#1	.5238998	.5298136	.4782849	10.37058	.5511777	.5032208
#2	.5195760	.5202931	.4762546	10.25588	.5478997	.4992289
#3	.5122649	.5171050	.4758886	10.06637	.5497482	.4997360

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4977854	10.55741	.5266008	6.041075	.5100435	.2462849
Stddev	.0095474	.10428	.0038743	.030635	.0025162	.0009478
%RSD	1.917968	.9877732	.7357243	.5071099	.4933254	.3848486
#1	.5063483	10.64908	.5308768	6.063743	.5128012	.2473081
#2	.4874907	10.57920	.5256019	6.053260	.5094570	.2454368
#3	.4995171	10.44395	.5233238	6.006222	.5078724	.2461099

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.08662	.5069642	1.096831	9.429420	F -.002359	F -.032586
Stddev	.21868	.0050430	.007212	.422215	.003502	.003140
%RSD	2.168017	.9947489	.6575075	4.477633	148.4288	9.636940
#1	10.32729	.5104400	1.101781	9.662287	-.003575	-.034815
#2	10.03248	.5092724	1.088556	9.683924	-.005092	-.028994
#3	9.90010	.5011801	1.100155	8.942048	.001589	-.033948

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: ICV014 Acquired: 12/10/2024 16:45:51 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICV014 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F -.001069	F .0074127	F .0013432	F -.000939	F -.000027	F -.008887
Stddev	.000175	.0018892	.0010893	.000678	.002017	.000126
%RSD	16.33394	25.48625	81.10183	72.20485	7465.555	1.414808
#1	-.001079	.0088792	.0016550	-.001691	-.002324	-.008741
#2	-.001238	.0080781	.0022425	-.000373	.001455	-.008964
#3	-.000890	.0052808	.0001319	-.000754	.000788	-.008955

Elem	Li6707
Units	ppm
Avg	F -.020373
Stddev	.002664
%RSD	13.07509
#1	-.021425
#2	-.017344
#3	-.022349

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2503.473	27477.17	2700.638	1949.679	3878.282
Stddev	8.473	90.58	32.112	3.045	14.101
%RSD	.3384453	.3296673	1.189054	.1562011	.3635926
#1	2495.289	27463.81	2666.152	1951.649	3863.485
#2	2512.208	27394.02	2706.083	1946.171	3891.565
#3	2502.923	27573.70	2729.679	1951.217	3879.797

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: ICB014 Acquired: 12/10/2024 16:51:34 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICB014 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.003241	.0020314	.0002477	.0024117	.0018835	-.000223
Stddev	.000633	.0009655	.0017467	.0014332	.0012952	.004033
%RSD	19.52907	47.52791	705.1504	59.42922	68.76438	1808.974
#1	-.002783	.0031231	-.000308	.0037043	.0004089	-.004538
#2	-.003963	.0012898	-.001154	.0008704	.0024045	.000417
#3	-.002977	.0016814	.002205	.0026603	.0028370	.003452

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013678	.0000193	.0000879	.0315601	-.000789	.0002502
Stddev	.0005705	.0001003	.0001202	.0289310	.000210	.0000890
%RSD	41.71269	518.8848	136.6633	91.66958	26.65738	35.55627
#1	.0016396	.0000016	.0001057	.0621562	-.000884	.0001642
#2	.0007121	.0001273	-.000040	.0046469	-.000935	.0003419
#3	.0017515	-.000071	.000198	.0278773	-.000548	.0002446

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0045260	-.011721	-.000646	-.041575	-.000543	-.000931
Stddev	.0069477	.003501	.000286	.071860	.000488	.000539
%RSD	153.5059	29.86797	44.26562	172.8446	89.99307	57.86898
#1	.0124126	-.011515	-.000376	-.113639	-.000055	-.000598
#2	.0018565	-.015321	-.000946	.030079	-.001032	-.001553
#3	-.000691	-.008328	-.000617	-.041165	-.000541	-.000643

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.016806	-.003525	-.001431	-.192227	-.000198	-.002333
Stddev	.604295	.002094	.003271	.138058	.001506	.002204
%RSD	3595.704	59.40579	228.5216	71.82033	761.3906	94.49567
#1	.334283	-.002884	-.005076	-.044874	-.000964	-.004217
#2	.329880	-.005865	-.000466	-.318586	-.001167	.000091
#3	-.714581	-.001827	.001249	-.213221	.001538	-.002873

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: ICB014 Acquired: 12/10/2024 16:51:34 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICB014 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000676	-.000294	-.001849	F -.008014	.0031709	.0000491
Stddev	.000228	.002736	.000877	.000142	.0026107	.0000706
%RSD	33.76338	930.2102	47.45976	1.777056	82.33172	143.8092
#1	-.000918	.002141	-.001891	-.007879	.0002788	.0001303
#2	-.000644	.000231	-.002704	-.007999	.0053533	.0000150
#3	-.000465	-.003255	-.000951	-.008163	.0038807	.0000020

Elem	Li6707
Units	ppm
Avg	F -.024117
Stddev	.003376
%RSD	13.99680
#1	-.020908
#2	-.027637
#3	-.023805

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2501.749	27688.72	2662.750	1960.673	3920.342
Stddev	4.228	292.82	23.298	21.041	8.536
%RSD	.1690122	1.057560	.8749723	1.073135	.2177482
#1	2506.097	27659.44	2635.934	1960.227	3928.756
#2	2501.499	27411.63	2674.285	1939.858	3911.688
#3	2497.651	27995.08	2678.030	1981.932	3920.582

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: ICSA014 Acquired: 12/10/2024 17:21:53 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSA014 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.009316	.0076976	-.009899	-.016151	-.006777	243.0741
Stddev	.003449	.0012353	.002492	.004140	.002821	.8857
%RSD	37.02249	16.04818	25.16986	25.63269	41.62276	.3643856
#1	-.011812	.0063986	-.011192	-.018481	-.004179	242.5953
#2	-.005380	.0078368	-.007027	-.011371	-.009777	242.5309
#3	-.010755	.0088575	-.011478	-.018600	-.006376	244.0962

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0073104	.0013640	.0008535	248.9195	.0521792	.0315269
Stddev	.0012721	.0000257	.0001104	1.0867	.0006842	.0007397
%RSD	17.40106	1.880227	12.93146	.4365838	1.311195	2.346152
#1	.0058416	.0013426	.0009203	248.3768	.0513991	.0307627
#2	.0080531	.0013571	.0007261	248.2110	.0524612	.0315786
#3	.0080366	.0013924	.0009142	250.1707	.0526773	.0322393

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.007006	102.7715	.0101976	254.7028	.0051102	-.007578
Stddev	.001301	.2110	.0003556	.8693	.0009110	.001531
%RSD	18.57211	.2052721	3.486808	.3412996	17.82628	20.19669
#1	-.008457	102.7065	.0098677	253.9026	.0048110	-.008383
#2	-.005945	102.6006	.0105743	254.5780	.0043865	-.008538
#3	-.006615	103.0073	.0101509	255.6277	.0061331	-.005813

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.050593	.0004836	-.036147	-.287852	.0016573	F -.315832
Stddev	.719102	.0103535	.003477	.185939	.0011819	.002925
%RSD	1421.348	2141.135	9.617872	64.59545	71.31401	.9262440
#1	.426291	.0055576	-.040154	-.352057	.0030209	-.318752
#2	-.877715	-.011428	-.034344	-.433180	.0010258	-.312901
#3	.299645	.007321	-.033942	-.078319	.0009254	-.315843

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: ICSA014 Acquired: 12/10/2024 17:21:53 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSA014 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001618	.0119570	-.003369	F .0089128	-.000210	.0043013
Stddev	.000511	.0020568	.000647	.0006501	.001872	.0007235
%RSD	31.59322	17.20135	19.19310	7.294546	893.0594	16.82058
#1	-.002053	.0140509	-.003276	.0095751	.001284	.0039491
#2	-.001747	.0118807	-.004058	.0082755	.000397	.0038214
#3	-.001055	.0099395	-.002774	.0088880	-.002309	.0051335

Elem	Li6707
Units	ppm
Avg	F -.016973
Stddev	.002948
%RSD	17.36849
#1	-.015819
#2	-.014776
#3	-.020323

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2375.929	25459.86	2607.909	1840.195	3392.310
Stddev	6.242	138.51	19.170	9.240	12.531
%RSD	.2627059	.5440241	.7350772	.5020954	.3694004
#1	2377.524	25476.80	2596.429	1842.839	3394.255
#2	2381.219	25313.66	2630.040	1829.921	3403.756
#3	2369.045	25589.12	2597.259	1847.824	3378.920

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: ICSAB014 Acquired: 12/10/2024 17:27:39 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSAB014 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0891728	.1087786	.0423905	.0265995	.5579911	249.8614
Stddev	.0067044	.0010827	.0012290	.0097367	.0022440	1.7789
%RSD	7.518399	.9953717	2.899192	36.60468	.4021630	.7119633
#1	.0877906	.1075284	.0422049	.0154523	.5592903	250.6155
#2	.0832672	.1094143	.0437017	.0334410	.5553999	251.1390
#3	.0964605	.1093931	.0412648	.0309052	.5592831	247.8296

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5452643	.5455295	1.006569	256.5595	.6214702	.5421223
Stddev	.0049155	.0034723	.001172	1.6677	.0021124	.0008119
%RSD	.9014851	.6365099	.1163851	.6500155	.3399078	.1497692
#1	.5466557	.5490588	1.007736	257.7763	.6217123	.5427626
#2	.5493341	.5454128	1.006577	257.2437	.6192472	.5412091
#3	.5398031	.5421171	1.005393	254.6586	.6234512	.5423953

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4862811	105.4551	.5456926	263.6768	1.077633	.1879370
Stddev	.0019497	.6025	.0043311	1.6630	.003101	.0008020
%RSD	.4009344	.5713349	.7936939	.6306788	.2877647	.4267580
#1	.4841677	105.8760	.5493320	265.2499	1.081047	.1887921
#2	.4880096	105.7243	.5468434	263.8438	1.076864	.1878175
#3	.4866659	104.7649	.5409022	261.9366	1.074989	.1872014

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.093579	.5298564	1.051819	-.602558	.0039692	F -.331678
Stddev	.007023	.0056390	.008499	.138229	.0035359	.003578
%RSD	7.504433	1.064243	.8080560	22.94032	89.08212	1.078629
#1	-.099572	.5360212	1.061352	-.492280	.0000736	-.334358
#2	-.085852	.5285888	1.049075	-.757628	.0069756	-.333062
#3	-.095313	.5249591	1.045031	-.557766	.0048586	-.327616

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: ICSAB014 Acquired: 12/10/2024 17:27:39 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSAB014 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001313	.0239760	-.003112	.0036819	-.000539	.0053830
Stddev	.000361	.0070270	.000627	.0022167	.000950	.0001514
%RSD	27.52287	29.30848	20.15251	60.20648	176.1873	2.812137
#1	-.001089	.0276575	-.002651	.0051198	-.000095	.0053309
#2	-.001729	.0283975	-.003826	.0047969	.000107	.0055536
#3	-.001120	.0158732	-.002858	.0011290	-.001631	.0052646

Elem	Li6707
Units	ppm
Avg	F -.026064
Stddev	.001522
%RSD	5.840480
#1	-.027769
#2	-.025584
#3	-.024840

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2369.146	25424.04	2633.137	1830.951	3388.944
Stddev	4.628	94.91	24.592	10.345	10.549
%RSD	.1953609	.3733066	.9339431	.5650087	.3112649
#1	2367.599	25343.40	2613.974	1824.406	3380.424
#2	2365.490	25400.09	2624.570	1825.569	3385.665
#3	2374.350	25528.63	2660.867	1842.877	3400.742

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: CCV089 Acquired: 12/10/2024 17:48:20 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV089 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.991993	4.977525	25.34109	4.866938	4.910743	408.5371
Stddev	.026604	.014577	.11977	.021693	.022669	.6877
%RSD	.5329291	.2928587	.4726404	.4457152	.4616207	.1683439
#1	5.009469	4.976587	25.33609	4.856169	4.908401	409.0718
#2	4.961376	4.963440	25.22389	4.852738	4.889336	408.7782
#3	5.005135	4.992549	25.46328	4.891909	4.934493	407.7612

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.37154	.5133734	2.549659	414.0573	15.83214	2.559715
Stddev	.02294	.0022107	.011833	.6444	.00855	.013648
%RSD	.2212014	.4306144	.4641113	.1556227	.0540188	.5331948
#1	10.39374	.5150288	2.547661	414.7970	15.82783	2.558332
#2	10.37296	.5142286	2.538952	413.7565	15.82660	2.546810
#3	10.34793	.5108629	2.562364	413.6183	15.84199	2.574002

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.31721	417.3631	15.23792	418.6660	2.563457	1.275541
Stddev	.04715	.1071	.05449	1.5947	.011859	.002021
%RSD	.3078058	.0256521	.3575927	.3809035	.4626150	.1584532
#1	15.37163	417.2907	15.29868	420.5049	2.564398	1.276291
#2	15.28870	417.4861	15.22172	417.6624	2.551155	1.273252
#3	15.29130	417.3125	15.19338	417.8308	2.574817	1.277080

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	408.5916	2.554473	14.81280	156.0263	5.086167	F 4.226022
Stddev	1.1883	.011428	.12595	.3582	.014121	.023726
%RSD	.2908174	.4473669	.8502770	.2295867	.2776317	.5614330
#1	409.8295	2.557102	14.71816	156.2850	5.089795	4.239805
#2	407.4601	2.541959	14.76450	156.1765	5.070585	4.239636
#3	408.4854	2.564357	14.95576	155.6174	5.098119	4.198626

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: CCV089 Acquired: 12/10/2024 17:48:20 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV089 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.894306	5.124721	5.026223	5.125622	5.109005	4.953363
Stddev	.022312	.022990	.027103	.026836	.031662	.016681
%RSD	.4558737	.4486075	.5392328	.5235562	.6197334	.3367529
#1	4.891604	5.128011	5.052912	5.121586	5.145476	4.971744
#2	4.873467	5.100264	5.027031	5.101033	5.088563	4.949157
#3	4.917845	5.145890	4.998724	5.154247	5.092975	4.939188

Elem	Li6707
Units	ppm
Avg	5.144013
Stddev	.010066
%RSD	.1956768
#1	5.146953
#2	5.152282
#3	5.132805

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2096.438	24130.05	2572.861	1607.681	3084.730
Stddev	5.036	54.17	7.733	5.502	8.610
%RSD	.2402341	.2244934	.3005530	.3422302	.2791210
#1	2097.682	24190.52	2567.616	1613.500	3087.687
#2	2100.736	24113.65	2569.226	1606.979	3091.472
#3	2090.896	24085.97	2581.742	1602.564	3075.031

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: CCB089 Acquired: 12/10/2024 17:52:04 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB089 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001876	.0011680	-.000496	.0075643	.0014785	.1281478
Stddev	.000596	.0013684	.001029	.0013682	.0021895	.0102046
%RSD	31.76451	117.1628	207.3751	18.08823	148.0887	7.963108
#1	-.002241	.0024866	.000611	.0086013	.0034289	.1194935
#2	-.002199	.0012626	-.001422	.0080781	-.000890	.1255497
#3	-.001189	-.000245	-.000678	.0060135	.001896	.1394003

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006440	-.000041	.0001051	.0344954	-.000462	-.000044
Stddev	.0011869	.000007	.0000298	.0330769	.000445	.000346
%RSD	184.3157	16.08311	28.33003	95.88787	96.26976	780.2851
#1	-.000016	-.000037	.0001084	-.000015	-.000909	-.000414
#2	.002014	-.000037	.0000738	.065923	-.000459	.000270
#3	-.000066	-.000049	.0001331	.037579	-.000019	.000011

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0148986	.0212159	.0016826	.0081215	-.000212	.0012962
Stddev	.0004585	.0442502	.0015387	.0477296	.000141	.0009381
%RSD	3.077181	208.5703	91.44977	587.6961	66.39710	72.37855
#1	.0147313	-.028564	.0012678	.0218834	-.000215	.0010166
#2	.0145473	.056082	.0003938	.0474581	-.000352	.0023423
#3	.0154172	.036131	.0033861	-.044977	-.000070	.0005296

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1500822	-.000528	.0045388	.0101803	-.000088	.0090417
Stddev	.4824192	.011110	.0071969	.0685011	.000732	.0003024
%RSD	321.4367	2102.754	158.5647	672.8780	828.3142	3.344104
#1	.5282789	-.007628	-.003561	-.027028	-.000425	.0090425
#2	.3151782	-.006232	.006979	-.031665	-.000591	.0093437
#3	-.393211	.012274	.010199	.089233	.000751	.0087389

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: CCB089 Acquired: 12/10/2024 17:52:04 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB089 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000430	-.005065	-.000315	F -.010061	.0024069	.0005013
Stddev	.000411	.000892	.000528	.000663	.0017968	.0001766
%RSD	95.59016	17.60920	167.7286	6.586545	74.65220	35.22525
#1	-.000414	-.004358	-.000063	-.010304	.0013342	.0005624
#2	-.000849	-.006067	-.000921	-.010568	.0014053	.0003023
#3	-.000027	-.004769	.000040	-.009311	.0044813	.0006392

Elem	Li6707
Units	ppm
Avg	-.012063
Stddev	.001306
%RSD	10.82358
#1	-.012340
#2	-.013208
#3	-.010641

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2492.338	27540.93	2653.489	1948.224	3902.794
Stddev	5.289	90.95	11.207	11.329	12.610
%RSD	.2122107	.3302512	.4223583	.5815167	.3230959
#1	2486.469	27436.25	2649.511	1935.153	3888.277
#2	2496.735	27585.90	2644.813	1955.220	3909.070
#3	2493.810	27600.64	2666.142	1954.299	3911.033

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: PB165364BL Acquired: 12/10/2024 17:56:11 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS364 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002282	.0011688	-.001368	.0034675	.0012701	-.014200
Stddev	.001178	.0021536	.001440	.0032092	.0024412	.024124
%RSD	51.63063	184.2509	105.2834	92.55255	192.1987	169.8851
#1	-.001092	.0033931	-.001472	-.000238	.0038592	-.020082
#2	-.003449	-.000906	-.002754	.005284	.0009408	-.034840
#3	-.002306	.001020	.000121	.005357	-.000990	.012321

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002252	-.000053	.0000491	-.004716	-.000894	.0000845
Stddev	.0009271	.000127	.0000451	.035547	.000443	.0002964
%RSD	411.6797	239.3480	91.71720	753.8192	49.56872	350.9064
#1	-.000682	-.000199	.0000502	.035815	-.001000	-.000086
#2	.001171	.000012	.0000937	-.019364	-.000407	.000427
#3	.000187	.000028	.0000035	-.030598	-.001274	-.000088

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002356	.0369219	.0008714	-.104887	.0001321	-.000511
Stddev	.005100	.0295119	.0007710	.056998	.0006330	.001252
%RSD	216.4920	79.93058	88.48255	54.34208	479.1607	244.8343
#1	-.007556	.0141646	.0014722	-.042880	-.000582	.000594
#2	.002639	.0263340	.0000020	-.154998	.000623	-.000258
#3	-.002151	.0702671	.0011400	-.116782	.000356	-.001871

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.152182	.0101984	-.004549	-.205403	-.000021	.0031030
Stddev	.670882	.0026232	.002497	.120645	.003215	.0008571
%RSD	440.8408	25.72200	54.89227	58.73580	15269.95	27.62070
#1	.407482	.0083635	-.005136	-.109416	.003628	.0025147
#2	.031843	.0090287	-.006700	-.165960	-.002438	.0040863
#3	-.895872	.0132030	-.001811	-.340833	-.001254	.0027079

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: PB165364BL Acquired: 12/10/2024 17:56:11 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS364 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000597	-.005492	-.000774	F -.011151	.0055051	-.000172
Stddev	.000208	.001950	.000581	.000769	.0039116	.000102
%RSD	34.91264	35.51499	74.97986	6.894168	71.05440	58.92804
#1	-.000619	-.007455	-.001398	-.011074	.0069994	-.000097
#2	-.000793	-.003554	-.000676	-.011956	.0010666	-.000288
#3	-.000378	-.005465	-.000250	-.010424	.0084492	-.000132

Elem	Li6707
Units	ppm
Avg	F -.028936
Stddev	.003091
%RSD	10.68193
#1	-.031788
#2	-.029367
#3	-.025651

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2491.912	27969.30	2648.790	1974.589	3907.403
Stddev	6.496	163.78	9.040	16.089	12.902
%RSD	.2607002	.5855805	.3413026	.8148132	.3301865
#1	2495.368	27869.98	2659.073	1959.424	3920.400
#2	2484.418	27879.58	2645.202	1972.878	3894.599
#3	2495.949	28158.34	2642.094	1991.465	3907.208

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: PB165351BL Acquired: 12/10/2024 18:04:22 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS351 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000955	.0016947	.0001522	.0084685	.0016027	.0190964
Stddev	.000878	.0022935	.0012219	.0011783	.0006423	.0216212
%RSD	91.92039	135.3376	802.8487	13.91328	40.07817	113.2211
#1	-.000994	.0007742	.0015394	.0071090	.0010384	.0175347
#2	-.001813	.0000044	-.000765	.0091025	.0023017	.0414561
#3	-.000058	.0043055	-.000318	.0091940	.0014680	-.001702

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006454	-.000023	.0000150	.0208534	-.001009	.0001633
Stddev	.0008413	.000070	.0000366	.0219433	.000361	.0001840
%RSD	130.3596	304.5415	243.7628	105.2263	35.78412	112.7195
#1	-.000316	.000020	.0000573	.0417489	-.001388	.0002782
#2	.001246	-.000104	-.000006	.0228170	-.000969	.0002606
#3	.001006	.000015	-.000006	-.002006	-.000669	-.000049

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0017960	.0084394	.0005919	-.093523	-.000722	.0001757
Stddev	.0026163	.0090155	.0009738	.066089	.000488	.0005393
%RSD	145.6787	106.8267	164.5372	70.66629	67.60812	307.0196
#1	-.000271	-.001832	.0000445	-.162441	-.000174	.0007698
#2	.000922	.012107	.0017162	-.087445	-.001110	-.000283
#3	.004737	.015043	.0000149	-.030683	-.000882	.000040

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1355961	.0016909	-.000355	-.243204	-.001316	-.000647
Stddev	.7739738	.0079338	.002893	.174543	.000305	.001816
%RSD	570.7936	469.1979	814.2156	71.76808	23.17813	280.6754
#1	-.022330	.0020530	.002682	-.228092	-.001037	-.000150
#2	.976353	-.006418	-.003079	-.076708	-.001269	-.002660
#3	-.547235	.009438	-.000669	-.424811	-.001642	.000869

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: PB165351BL Acquired: 12/10/2024 18:04:22 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS351 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000749	-.002116	-.000915	F -.010793	.0039613	-.000047
Stddev	.000220	.001477	.000161	.000749	.0039275	.000091
%RSD	29.40945	69.79352	17.54871	6.940391	99.14677	195.2248
#1	-.000965	-.001338	-.001077	-.010844	.0083476	-.000036
#2	-.000756	-.003819	-.000756	-.010019	.0027654	-.000142
#3	-.000525	-.001191	-.000912	-.011515	.0007707	.000038

Elem	Li6707
Units	ppm
Avg	F -.039209
Stddev	.004555
%RSD	11.61764
#1	-.043110
#2	-.040314
#3	-.034203

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2514.464	27794.45	2685.244	1967.978	3924.405
Stddev	1.358	68.50	14.786	10.889	2.716
%RSD	.0539909	.2464408	.5506477	.5533327	.0692141
#1	2513.629	27721.37	2700.804	1955.443	3922.076
#2	2516.030	27804.80	2671.378	1973.398	3923.752
#3	2513.733	27857.18	2683.551	1975.095	3927.389

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: PB165364BS Acquired: 12/10/2024 18:09:57 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS364 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0218092	.0501499	.0168783	.0646998	.1060886	.4137468
Stddev	.0033094	.0005867	.0011623	.0029418	.0008854	.0262463
%RSD	15.17415	1.169948	6.886599	4.546774	.8346200	6.343576
#1	.0254436	.0497308	.0171129	.0654433	.1051337	.3965479
#2	.0189695	.0498985	.0179053	.0614577	.1068825	.4439568
#3	.0210147	.0508205	.0156165	.0671985	.1062496	.4007355

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4093234	.0103618	.0093700	10.22390	.0208632	.1002937
Stddev	.0024665	.0000884	.0000599	.03919	.0005266	.0003230
%RSD	.6025693	.8536094	.6388721	.3833481	2.524091	.3220006
#1	.4105440	.0102745	.0093462	10.21896	.0208304	.1005760
#2	.4064847	.0103597	.0094381	10.18741	.0203538	.1003635
#3	.4109415	.0104513	.0093257	10.26533	.0214055	.0999415

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0550138	.2193668	.0316028	10.14897	.0778661	.0188729
Stddev	.0044244	.0168486	.0015614	.02646	.0003908	.0002442
%RSD	8.042311	7.680543	4.940705	.2606893	.5018919	1.293688
#1	.0587329	.2024169	.0329311	10.17713	.0779452	.0190549
#2	.0501209	.2361121	.0298829	10.14516	.0782113	.0185954
#3	.0561876	.2195715	.0319944	10.12463	.0774418	.0189683

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.24193	.1025421	.1084216	9.775685	.0174045	F -.000890
Stddev	.16312	.0028401	.0075804	.093843	.0013003	.002326
%RSD	1.592717	2.769645	6.991631	.9599684	7.470963	261.2638
#1	10.11731	.1000702	.0996972	9.758308	.0187656	-.000716
#2	10.18191	.1019116	.1133977	9.877003	.0172729	.001344
#3	10.42656	.1056444	.1121698	9.691746	.0161750	-.003298

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: PB165364BS Acquired: 12/10/2024 18:09:57 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS364 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0177020	.1749439	F .4706532	.0126482	.2026342	.2109831
Stddev	.0002406	.0005311	.0030757	.0003718	.0012433	.0002639
%RSD	1.359136	.3035613	.6534882	2.939563	.6135597	.1250705
#1	.0176900	.1745130	.4684243	.0130774	.2019728	.2112876
#2	.0179484	.1755372	.4693732	.0124241	.2040684	.2108397
#3	.0174677	.1747816	.4741622	.0124432	.2018615	.2108219

Elem	Li6707
Units	ppm
Avg	F -.006820
Stddev	.004276
%RSD	62.70046
#1	-.009947
#2	-.008567
#3	-.001947

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2514.042	27545.77	2694.050	1954.770	3898.074
Stddev	3.818	197.41	12.537	18.603	11.922
%RSD	.1518512	.7166540	.4653668	.9516599	.3058376
#1	2510.485	27573.02	2708.343	1960.741	3884.662
#2	2513.565	27336.15	2688.898	1933.915	3902.093
#3	2518.076	27728.13	2684.910	1969.654	3907.467

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: PB165351BS Acquired: 12/10/2024 18:13:58 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS351 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0180158	.0478752	.0161490	.0641013	.1061401	.3915164
Stddev	.0022161	.0004967	.0017847	.0024542	.0014898	.0024781
%RSD	12.30088	1.037427	11.05142	3.828632	1.403576	.6329419
#1	.0183318	.0483982	.0140883	.0648185	.1044358	.3888815
#2	.0200570	.0478177	.0171706	.0613684	.1067899	.3938002
#3	.0156587	.0474098	.0171882	.0661170	.1071945	.3918674

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4063930	.0103646	.0093516	10.16508	.0210271	.0995727
Stddev	.0000211	.0000542	.0000121	.03299	.0002544	.0000713
%RSD	.0051958	.5233914	.1297329	.3245826	1.209691	.0716467
#1	.4063800	.0103510	.0093609	10.14696	.0213122	.0994913
#2	.4063817	.0103184	.0093559	10.20317	.0209453	.0996245
#3	.4064174	.0104243	.0093379	10.14513	.0208236	.0996023

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0619444	.2263148	.0333637	10.07216	.0771604	.0200963
Stddev	.0017299	.0239746	.0013193	.09581	.0002714	.0014192
%RSD	2.792618	10.59348	3.954370	.9512248	.3517122	7.061884
#1	.0618650	.2071104	.0318646	10.13777	.0772415	.0198870
#2	.0637126	.2531848	.0338784	10.11651	.0768578	.0187934
#3	.0602556	.2186493	.0343481	9.96222	.0773821	.0216085

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.757025	.1059081	.1107055	9.364334	.0186681	F -.001706
Stddev	.375311	.0021702	.0083731	.048857	.0016554	.000460
%RSD	3.846576	2.049111	7.563364	.5217329	8.867529	26.98960
#1	9.976256	.1064706	.1109588	9.331583	.0173758	-.002200
#2	9.971156	.1035120	.1189490	9.420490	.0180945	-.001289
#3	9.323663	.1077416	.1022086	9.340929	.0205340	-.001628

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: PB165351BS Acquired: 12/10/2024 18:13:58 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS351 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0179941	.1737289	F .4733749	.0131819	.2000800	.2099483
Stddev	.0004035	.0025405	.0038842	.0003639	.0023169	.0006641
%RSD	2.242588	1.462339	.8205377	2.760914	1.157988	.3163205
#1	.0183129	.1764854	.4766442	.0128112	.2018489	.2104727
#2	.0181291	.1732199	.4743993	.0135387	.1974574	.2101707
#3	.0175404	.1714815	.4690811	.0131957	.2009337	.2092016

Elem	Li6707
Units	ppm
Avg	F -.011335
Stddev	.004071
%RSD	35.91962
#1	-.013720
#2	-.006634
#3	-.013651

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2482.952	27250.63	2653.928	1931.773	3863.191
Stddev	3.917	12.16	10.195	2.610	9.436
%RSD	.1577585	.0446216	.3841528	.1351267	.2442596
#1	2483.966	27245.81	2646.682	1933.360	3865.799
#2	2486.262	27241.62	2649.516	1933.199	3871.049
#3	2478.627	27264.46	2665.586	1928.760	3852.726

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: PB165350BL Acquired: 12/10/2024 18:17:59 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS350 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000526	.0012202	-.001306	.0016929	.0016674	.0278021
Stddev	.001609	.0017605	.000713	.0019551	.0012097	.0046085
%RSD	305.8720	144.2802	54.63499	115.4932	72.54836	16.57607
#1	-.000443	.0024829	-.000966	.0034970	.0021836	.0230784
#2	-.002175	-.000791	-.002126	-.000385	.0025334	.0280419
#3	.001040	.001969	-.000826	.001966	.0002853	.0322861

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0020912	-.000076	.0000854	-.048580	-.001257	.0002826
Stddev	.0013316	.000057	.0000432	.024389	.000572	.0003157
%RSD	63.67714	74.34177	50.56318	50.20447	45.48476	111.7133
#1	.0036198	-.000141	.0000591	-.029527	-.001900	.0004327
#2	.0011825	-.000041	.0001353	-.076066	-.001063	-.000080
#3	.0014714	-.000046	.0000619	-.040146	-.000807	.000495

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004174	.0073270	.0004953	-.000541	-.000709	.0005378
Stddev	.0035233	.0108406	.0014011	.107363	.000374	.0003733
%RSD	844.1248	147.9536	282.8742	19858.56	52.71445	69.40593
#1	-.000225	-.004897	-.001113	.011469	-.000501	.0009581
#2	.004218	.015774	.001451	-.113403	-.000485	.0002449
#3	-.002741	.011104	.001149	.100313	-.001140	.0004104

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3181083	-.002985	-.002789	-.334348	-.000925	-.003109
Stddev	.1592376	.006685	.003674	.017912	.001639	.002477
%RSD	50.05766	223.9251	131.7386	5.357154	177.2205	79.67655
#1	.2165882	.004625	.001081	-.333921	-.000272	-.005718
#2	.5016345	-.007909	-.006230	-.316654	-.002789	-.002821
#3	.2361021	-.005672	-.003218	-.352469	.000287	-.000789

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: PB165350BL Acquired: 12/10/2024 18:17:59 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS350 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000778	-.003173	-.000757	F -.010418	.0016708	.0001307
Stddev	.000154	.001098	.000172	.000363	.0019980	.0002157
%RSD	19.86266	34.59157	22.75327	3.488684	119.5875	164.9867
#1	-.000873	-.002718	-.000622	-.009999	.0013449	-.000114
#2	-.000599	-.004426	-.000951	-.010649	-.000144	.000212
#3	-.000860	-.002377	-.000698	-.010606	.003812	.000294

Elem	Li6707
Units	ppm
Avg	F -.040814
Stddev	.003089
%RSD	7.567428
#1	-.044372
#2	-.038828
#3	-.039242

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2508.071	27615.50	2655.583	1947.989	3929.348
Stddev	2.732	182.05	16.573	13.453	10.928
%RSD	.1089375	.6592327	.6240879	.6905966	.2781068
#1	2507.375	27443.94	2653.649	1935.103	3925.933
#2	2511.083	27596.08	2640.062	1946.920	3941.576
#3	2505.753	27806.48	2673.038	1961.945	3920.536

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: PB165350BS Acquired: 12/10/2024 18:22:04 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS350 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0198793	.0480192	.0166842	.0627768	.1051420	.4005138
Stddev	.0029917	.0009951	.0019704	.0015509	.0007845	.0014707
%RSD	15.04946	2.072233	11.81012	2.470543	.7461092	.3671917
#1	.0192531	.0477948	.0152591	.0612046	.1046675	.3988457
#2	.0172503	.0471555	.0189328	.0643055	.1047111	.4016230
#3	.0231346	.0491073	.0158608	.0628202	.1060475	.4010728

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4082904	.0104674	.0093320	10.21888	.0207430	.1006185
Stddev	.0006520	.0001034	.0000668	.02404	.0001587	.0002395
%RSD	.1596977	.9881879	.7159520	.2352077	.7652365	.2379941
#1	.4090371	.0104638	.0093718	10.19791	.0205842	.1003478
#2	.4080005	.0103657	.0092549	10.21362	.0207433	.1007050
#3	.4078336	.0105725	.0093694	10.24511	.0209017	.1008027

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0532367	.2152129	.0331077	10.11124	.0785051	.0191622
Stddev	.0049239	.0310621	.0010755	.11884	.0001641	.0013433
%RSD	9.249079	14.43317	3.248506	1.175321	.2090621	7.009927
#1	.0589208	.1795739	.0320996	10.20960	.0786656	.0180623
#2	.0502828	.2295330	.0329836	10.14493	.0783375	.0206593
#3	.0505064	.2365319	.0342399	9.97919	.0785121	.0187652

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.836501	.0991553	.1079875	9.627275	.0160050	F -.004365
Stddev	.062424	.0024963	.0016207	.090884	.0031418	.002708
%RSD	.6346109	2.517554	1.500859	.9440239	19.63023	62.04891
#1	9.778896	.0977919	.1077836	9.566303	.0137213	-.002033
#2	9.902826	.1020363	.1064784	9.583792	.0147056	-.007335
#3	9.827781	.0976375	.1097006	9.731732	.0195881	-.003725

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: PB165350BS Acquired: 12/10/2024 18:22:04 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS350 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0179937	.1759469	F .4739915	.0122529	.1985120	.2101155
Stddev	.0003542	.0005816	.0008987	.0011685	.0044624	.0008087
%RSD	1.968675	.3305804	.1895959	9.536603	2.247949	.3848859
#1	.0183734	.1761481	.4729539	.0120719	.1988629	.2093282
#2	.0176721	.1764012	.4744986	.0111854	.2027886	.2109441
#3	.0179355	.1752914	.4745221	.0135013	.1938845	.2100742

Elem	Li6707
Units	ppm
Avg	F -.009215
Stddev	.001419
%RSD	15.39640
#1	-.010445
#2	-.007663
#3	-.009536

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2493.475	27480.27	2659.990	1945.496	3876.824
Stddev	10.464	8.33	7.810	5.765	13.732
%RSD	.4196398	.0303161	.2936001	.2963023	.3542195
#1	2483.626	27472.49	2651.592	1950.720	3862.168
#2	2504.461	27489.06	2667.034	1939.311	3889.395
#3	2492.338	27479.26	2661.343	1946.457	3878.909

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: CCV090 Acquired: 12/10/2024 18:26:03 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV090 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.928887	4.901433	24.93959	4.760284	4.839254	399.5872
Stddev	.023847	.020221	.09706	.024082	.016021	1.4996
%RSD	.4838223	.4125565	.3891860	.5058902	.3310555	.3752917
#1	4.923919	4.889471	24.86718	4.742673	4.824509	400.7595
#2	4.907915	4.890048	24.90172	4.750453	4.836953	397.8974
#3	4.954826	4.924780	25.04988	4.787726	4.856301	400.1048

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.12509	.5041438	2.508260	405.2378	15.60971	2.526815
Stddev	.04109	.0046286	.009799	1.1623	.01204	.010544
%RSD	.4058083	.9181016	.3906888	.2868120	.0771256	.4172752
#1	10.15170	.5085485	2.499341	406.2728	15.60749	2.517898
#2	10.07777	.4993199	2.506687	403.9804	15.59893	2.524096
#3	10.14580	.5045630	2.518750	405.4601	15.62270	2.538453

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.06968	406.8036	14.96942	406.1755	2.521291	1.252044
Stddev	.02058	1.7643	.04752	.5961	.008692	.000792
%RSD	.1365661	.4337083	.3174660	.1467603	.3447259	.0632414
#1	15.06344	408.2259	15.01648	405.7619	2.514600	1.251154
#2	15.05294	404.8292	14.92144	405.9058	2.518160	1.252669
#3	15.09265	407.3556	14.97036	406.8588	2.531115	1.252310

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	400.4574	2.518448	14.77530	152.5548	5.002156	F 4.165039
Stddev	.6264	.011870	.15856	.4888	.024410	.037151
%RSD	.1564176	.4713101	1.073122	.3204097	.4879895	.8919611
#1	400.6778	2.531473	14.68154	152.5408	4.980813	4.197484
#2	399.7506	2.515629	14.95837	152.0732	4.996883	4.124513
#3	400.9438	2.508242	14.68600	153.0505	5.028771	4.173120

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: CCV090 Acquired: 12/10/2024 18:26:03 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV090 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.825736	5.033655	4.935018	5.032312	5.017230	4.847350
Stddev	.016000	.029110	.054995	.023357	.007957	.007006
%RSD	.3315603	.5783125	1.114388	.4641330	.1585933	.1445345
#1	4.811335	5.002915	4.984253	5.009445	5.023850	4.849892
#2	4.822913	5.037249	4.875667	5.031362	5.019438	4.839427
#3	4.842960	5.060801	4.945132	5.056129	5.008402	4.852729

Elem	Li6707
Units	ppm
Avg	5.053269
Stddev	.024428
%RSD	.4834179
#1	5.074454
#2	5.026548
#3	5.058804

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2110.666	24155.30	2585.029	1607.210	3106.505
Stddev	4.720	56.27	20.282	11.454	7.579
%RSD	.2236070	.2329499	.7845796	.7126760	.2439583
#1	2116.115	24218.05	2566.253	1611.626	3115.243
#2	2108.027	24109.32	2606.539	1594.205	3102.557
#3	2107.855	24138.54	2582.294	1615.799	3101.716

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: CCB090 Acquired: 12/10/2024 18:29:44 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB090 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001496	.0017547	-.000025	.0067262	.0002541	.0057372
Stddev	.002335	.0010944	.001330	.0033896	.0005715	.0240778
%RSD	156.0426	62.37322	5304.558	50.39481	224.9386	419.6764
#1	.000115	.0028461	-.000027	.0094100	-.000130	-.017977
#2	-.000430	.0006573	-.001355	.0029170	.000911	.005027
#3	-.004174	.0017605	.001306	.0078516	-.000019	.030163

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003336	-.000035	.0000794	.0602072	-.001083	.0001745
Stddev	.0012691	.000104	.0000422	.0198071	.000493	.0000915
%RSD	380.4373	298.1970	53.17854	32.89821	45.53038	52.43496
#1	-.000912	.000059	.0001232	.0507472	-.001341	.0002793
#2	.000287	-.000146	.0000760	.0469039	-.001394	.0001103
#3	.001625	-.000017	.0000390	.0829706	-.000514	.0001341

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010158	.0221267	.0010530	-.019814	-.000212	-.000942
Stddev	.0012131	.0400294	.0017237	.127146	.000611	.001234
%RSD	119.4257	180.9096	163.7035	641.6850	288.3008	131.0000
#1	-.000050	.0600912	-.000836	.054139	.000353	-.002157
#2	.000761	-.019689	.002540	-.166629	-.000861	-.000981
#3	.002336	.025978	.001456	.053046	-.000127	.000311

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.198652	.0011064	.0001775	-.035395	-.002861	.0117732
Stddev	.478711	.0050230	.0060336	.195654	.002162	.0003786
%RSD	240.9798	453.9808	3399.177	552.7672	75.54715	3.215806
#1	-.607849	-.004232	-.006494	-.186749	-.002376	.0120204
#2	-.315897	.005739	.001776	.185539	-.005224	.0113374
#3	.327789	.001812	.005251	-.104976	-.000984	.0119619

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: CCB090 Acquired: 12/10/2024 18:29:44 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB090 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000513	-.006070	-.000356	F -.010088	.0042525	.0002400
Stddev	.000193	.004857	.000450	.000282	.0035783	.0002583
%RSD	37.71562	80.01954	126.5313	2.796533	84.14578	107.6251
#1	-.000481	-.001032	-.000726	-.009767	.0007006	.0004886
#2	-.000337	-.006453	-.000486	-.010203	.0078567	.0002587
#3	-.000720	-.010723	.000145	-.010295	.0042002	-.000027

Elem	Li6707
Units	ppm
Avg	F -.022281
Stddev	.002152
%RSD	9.657544
#1	-.022728
#2	-.019941
#3	-.024174

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2529.547	27820.01	2688.185	1968.046	3941.010
Stddev	15.361	49.98	4.735	6.863	22.852
%RSD	.6072625	.1796422	.1761558	.3487096	.5798599
#1	2530.031	27762.36	2691.221	1960.576	3943.271
#2	2544.660	27851.04	2690.605	1974.072	3962.648
#3	2513.949	27846.63	2682.728	1969.491	3917.111

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: P5041-01 Acquired: 12/10/2024 18:33:50 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHK78 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2394960	.0074021	9.663514	.0034025	-.005291	65.59257
Stddev	.0036207	.0025113	.025281	.0031466	.000868	.17505
%RSD	1.511810	33.92628	.2616155	92.47965	16.40689	.2668757
#1	.2434550	.0092437	9.638658	-.000129	-.004930	65.62083
#2	.2386801	.0045415	9.662684	.004430	-.006282	65.75177
#3	.2363528	.0084212	9.689200	.005907	-.004662	65.40510

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.475690	.0067769	.0114871	172.8325	.1614559	.1107733
Stddev	.010073	.0000810	.0000319	.4137	.0018697	.0007578
%RSD	.4068748	1.194772	.2776449	.2393439	1.158041	.6840959
#1	2.472467	.0066838	.0115236	173.1189	.1611983	.1101468
#2	2.486979	.0068159	.0114650	173.0204	.1597284	.1105575
#3	2.467622	.0068311	.0114726	172.3582	.1634411	.1116156

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4421211	133.5144	9.472684	23.59242	.1888673	-.007249
Stddev	.0033218	.2355	.030617	.07932	.0005789	.001090
%RSD	.7513399	.1763752	.3232161	.3362240	.3065350	15.03764
#1	.4421052	133.5844	9.496777	23.57610	.1886465	-.007049
#2	.4454508	133.7069	9.483046	23.67864	.1884312	-.006272
#3	.4388072	133.2518	9.438231	23.52253	.1895241	-.008425

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.124758	.3563445	3.079255	7.987114	F 18.47128	-.338955
Stddev	.282646	.0049433	.021587	.152292	.03534	.006419
%RSD	25.12948	1.387219	.7010469	1.906720	.1913014	1.893888
#1	.899451	.3575977	3.077556	7.993373	18.44257	-.342255
#2	1.032921	.3605406	3.058568	7.831788	18.46052	-.331557
#3	1.441902	.3508953	3.101641	8.136179	18.51074	-.343054

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: P5041-01 Acquired: 12/10/2024 18:33:50 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHK78 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0212035	3.458861	4.905383	.2101124	.8283080	.6221564
Stddev	.0001649	.013347	.002529	.0003207	.0030113	.0024813
%RSD	.7777195	.3858788	.0515471	.1526083	.3635523	.3988297
#1	.0213242	3.443680	4.904763	.2098061	.8286774	.6240185
#2	.0212706	3.464150	4.908164	.2104457	.8311176	.6231112
#3	.0210156	3.468753	4.903222	.2100854	.8251290	.6193395

Elem	Li6707
Units	ppm
Avg	.0911111
Stddev	.0043257
%RSD	4.747737
#1	.0883201
#2	.0889191
#3	.0960940

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2927.112	31689.08	3172.789	2268.878	3813.693
Stddev	7.914	349.13	10.630	27.179	18.200
%RSD	.2703830	1.101747	.3350223	1.197917	.4772242
#1	2934.536	31948.02	3184.735	2282.887	3829.451
#2	2928.016	31827.20	3169.257	2286.195	3817.857
#3	2918.785	31292.02	3164.375	2237.552	3793.773

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: P5041-02 Acquired: 12/10/2024 18:37:40 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHK78D Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2312064	.0059890	9.560599	.0029381	-.003994	65.53130
Stddev	.0035231	.0007677	.046451	.0051157	.001969	.15461
%RSD	1.523794	12.81808	.4858538	174.1197	49.29545	.2359321
#1	.2308943	.0058351	9.590432	-.002632	-.003166	65.56120
#2	.2348751	.0053099	9.584285	.004020	-.002575	65.36393
#3	.2278497	.0068219	9.507080	.007426	-.006242	65.66879

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.453205	.0067272	.0114550	171.8328	.1583459	.1098403
Stddev	.002098	.0000407	.0001111	.4116	.0003159	.0007823
%RSD	.0855049	.6043810	.9702341	.2395441	.1995243	.7121918
#1	2.454939	.0067318	.0115593	172.0433	.1580010	.1103990
#2	2.450873	.0066844	.0114674	171.3585	.1584154	.1101757
#3	2.453803	.0067653	.0113381	172.0966	.1586213	.1089463

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4379902	132.3762	9.462725	23.62938	.1875676	-.006985
Stddev	.0076794	.4436	.029987	.12781	.0010868	.000266
%RSD	1.753326	.3351277	.3168997	.5409027	.5794308	3.802452
#1	.4298476	132.3216	9.488471	23.75641	.1885970	-.007291
#2	.4390208	131.9624	9.429800	23.63093	.1876746	-.006822
#3	.4451023	132.8446	9.469905	23.50080	.1864312	-.006840

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6967740	.3525237	3.053755	7.948310	F 18.21283	-.338265
Stddev	.6714712	.0037073	.003885	.182515	.08816	.001865
%RSD	96.36858	1.051659	.1272086	2.296271	.4840340	.5512225
#1	.9678575	.3568039	3.049568	7.796693	18.27565	-.336430
#2	1.190326	.3504482	3.057243	7.897347	18.25078	-.340158
#3	-.067861	.3503191	3.054455	8.150889	18.11205	-.338208

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: P5041-02 Acquired: 12/10/2024 18:37:40 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHK78D Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0211180	3.392633	4.876054	.2072082	.8297093	.6242348
Stddev	.0001344	.020719	.019206	.0010451	.0051540	.0027929
%RSD	.6364508	.6107062	.3938822	.5043873	.6211764	.4474148
#1	.0212718	3.411758	4.870651	.2060309	.8356603	.6271561
#2	.0210231	3.395518	4.860128	.2080267	.8266793	.6215910
#3	.0210591	3.370623	4.897382	.2075669	.8267884	.6239575

Elem	Li6707
Units	ppm
Avg	.0900102
Stddev	.0016495
%RSD	1.832570
#1	.0914886
#2	.0882310
#3	.0903110

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2890.768	31584.35	3116.520	2252.510	3786.376
Stddev	9.721	35.45	15.768	3.797	15.791
%RSD	.3362808	.1122413	.5059419	.1685568	.4170570
#1	2886.887	31607.67	3122.430	2256.410	3781.342
#2	2883.586	31543.55	3128.479	2252.295	3773.716
#3	2901.830	31601.83	3098.651	2248.825	3804.071

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: P5041-01LX5 Acquired: 12/10/2024 18:41:28 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHK78L Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0480449	.0021125	1.984514	.0054391	-.002851	14.94117	.5656299
Stddev	.0031876	.0011559	.002557	.0014450	.000414	.04999	.0028004
%RSD	6.634574	54.71421	.1288386	26.56699	14.53237	.3345956	.4950989
#1	.0513175	.0019220	1.986683	.0048473	-.003123	14.88715	.5636429
#2	.0478674	.0033518	1.985162	.0070860	-.003055	14.95057	.5644141
#3	.0449498	.0010638	1.981695	.0043839	-.002374	14.98580	.5688328

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015834	.0022981	39.63291	.0351345	.0331792	.0988898	30.66144
Stddev	.0001408	.0001080	.08785	.0007395	.0005109	.0056262	.08445
%RSD	8.893621	4.701456	.2216628	2.104757	1.539798	5.689407	.2754116
#1	.0014436	.0024181	39.57734	.0351773	.0334443	.0946320	30.68492
#2	.0015813	.0022676	39.73419	.0358517	.0325903	.0967692	30.56774
#3	.0017252	.0022086	39.58720	.0343745	.0335031	.1052682	30.73167

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.181671	5.358811	.0373478	-.002630	.4552964	.0779713	.6902641
Stddev	.007057	.080061	.0010120	.001542	.5407217	.0087086	.0087114
%RSD	.3234862	1.493998	2.709689	58.61925	118.7626	11.16898	1.262043
#1	2.175456	5.334859	.0373985	-.001856	-.109236	.0706589	.6985061
#2	2.189343	5.448113	.0383334	-.004405	.506570	.0756494	.6811490
#3	2.180213	5.293460	.0363113	-.001629	.968555	.0876055	.6911372

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.568746	3.718199	-.080254	.0040837	.6839369	1.134186	.0345187
Stddev	.086944	.004487	.000633	.0002351	.0021807	.003163	.0006358
%RSD	5.542269	.1206899	.7882227	5.756649	.3188388	.2788811	1.841768
#1	1.468552	3.722841	-.080420	.0039652	.6857207	1.130542	.0347995
#2	1.624328	3.713884	-.079555	.0039315	.6815059	1.136214	.0337908
#3	1.613358	3.717871	-.080788	.0043545	.6845841	1.135803	.0349656

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: P5041-01LX5 Acquired: 12/10/2024 18:41:28 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHK78L Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.1867954	.1424149	-.002460
Stddev	.0040717	.0010537	.004661
%RSD	2.179752	.7398631	189.4717
#1	.1872423	.1416273	.002826
#2	.1906252	.1436118	-.004226
#3	.1825187	.1420055	-.005981

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2582.949	28469.79	2754.704	2012.852	3850.310
Stddev	5.370	113.23	15.805	6.056	5.980
%RSD	.2078849	.3977122	.5737304	.3008870	.1553011
#1	2578.543	28451.21	2770.983	2012.739	3845.922
#2	2588.930	28591.16	2739.421	2018.964	3857.121
#3	2581.373	28367.00	2753.710	2006.853	3847.888

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: P5041-03 Acquired: 12/10/2024 18:45:24 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHK78S Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3182951	.0981249	9.494938	.1507188	.1529614	69.14714
Stddev	.0026020	.0027555	.056698	.0011682	.0009796	2.63245
%RSD	.8174961	2.808192	.5971349	.7751115	.6404248	3.807022
#1	.3156196	.0996914	9.557741	.1505873	.1530117	72.18658
#2	.3184488	.0997401	9.479551	.1496218	.1519575	67.66095
#3	.3208169	.0949432	9.447522	.1519472	.1539148	67.59388

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.096958	.0974655	.1039023	171.8238	.5249846	1.086831
Stddev	.217635	.0031448	.0006352	6.4375	.0107018	.007009
%RSD	3.569570	3.226622	.6113100	3.746589	2.038504	.6449085
#1	6.348260	.1010482	.1046156	179.2526	.5127969	1.094208
#2	5.971944	.0951610	.1036935	168.3357	.5328459	1.086026
#3	5.970668	.0961873	.1033979	167.8831	.5293111	1.080259

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8669256	134.7619	10.29128	23.42294	1.172917	.0740759
Stddev	.0392467	5.2682	.35234	.90772	.008709	.0001488
%RSD	4.527110	3.909299	3.423669	3.875366	.7424753	.2008809
#1	.9116518	140.8302	10.69793	24.46731	1.182039	.0740098
#2	.8382397	132.0958	10.07718	22.97772	1.172023	.0739716
#3	.8508854	131.3595	10.09872	22.82378	1.164690	.0742463

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9006630	1.266608	3.753619	8.052604	F 17.99994	-.330767
Stddev	.6871720	.056620	.062363	.262596	.09551	.011340
%RSD	76.29625	4.470186	1.661397	3.261009	.5306182	3.428275
#1	.7465166	1.331300	3.684660	8.354610	18.10450	-.342592
#2	.3036556	1.242450	3.806059	7.878129	17.97804	-.319985
#3	1.651817	1.226075	3.770137	7.925072	17.91728	-.329726

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: P5041-03 Acquired: 12/10/2024 18:45:24 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHK78S Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0209460	3.383938	4.806402	.2049373	.8222690	.6163751
Stddev	.0001743	.017572	.150459	.0027520	.0274326	.0203945
%RSD	.8319475	.5192637	3.130394	1.342856	3.336203	3.308775
#1	.0209128	3.399463	4.976164	.2075368	.8536505	.6398604
#2	.0207906	3.387490	4.689528	.2052204	.8028437	.6031278
#3	.0211344	3.364862	4.753514	.2020547	.8103128	.6061371

Elem	Li6707
Units	ppm
Avg	.0900121
Stddev	.0073629
%RSD	8.179896
#1	.0972064
#2	.0903384
#3	.0824915

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2923.196	32354.17	3135.787	2294.206	3839.623
Stddev	9.698	466.63	109.773	31.426	19.813
%RSD	.3317564	1.442260	3.500663	1.369781	.5160267
#1	2915.191	32859.17	3010.081	2329.611	3819.916
#2	2920.417	31938.96	3212.736	2269.616	3839.412
#3	2933.980	32264.39	3184.545	2283.392	3859.541

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: P5042-01 Acquired: 12/10/2024 18:49:13 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHKB0 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1284278	.0072712	2.500005	-.001371	-.002788	68.96950	1.497378
Stddev	.0015994	.0007306	.036268	.003693	.004879	1.00226	.023163
%RSD	1.245375	10.04760	1.450723	269.3792	175.0115	1.453188	1.546881
#1	.1293541	.0077421	2.480720	-.005348	-.008378	69.48077	1.505848
#2	.1293483	.0064296	2.541841	-.000714	.000613	67.81472	1.471173
#3	.1265809	.0076420	2.477454	.001949	-.000598	69.61302	1.515114

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0072107	.0084479	133.2050	.1171192	.1257808	.4904064	173.2357
Stddev	.0000873	.0001017	1.9199	.0007401	.0015443	.0139856	2.3778
%RSD	1.210971	1.203335	1.441340	.6319437	1.227727	2.851835	1.372605
#1	.0072795	.0084770	134.1903	.1173508	.1247044	.4980386	174.5500
#2	.0072401	.0085318	130.9924	.1177159	.1275502	.4742652	170.4908
#3	.0071124	.0083349	134.4321	.1162910	.1250878	.4989154	174.6663

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	13.37916	38.44643	.1971514	-.011429	.8740198	.1570916	1.661234
Stddev	.20132	.40923	.0019440	.000419	.6916265	.0031173	.014887
%RSD	1.504739	1.064405	.9860301	3.663329	79.13168	1.984406	.8961693
#1	13.47756	38.74188	.1965034	-.011720	1.200717	.1581122	1.659446
#2	13.14756	37.97934	.1993366	-.011619	.079562	.1535919	1.647322
#3	13.51234	38.61809	.1956142	-.010949	1.341780	.1595706	1.676935

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.459074	8.663444	-.460350	.0059322	2.754918	5.828430	.3464366
Stddev	.156874	.124066	.002676	.0002050	.045025	.047354	.0059447
%RSD	1.658447	1.432062	.5812980	3.455954	1.634361	.8124656	1.715967
#1	9.430450	8.605680	-.461060	.0057527	2.724742	5.878723	.3469719
#2	9.318483	8.805859	-.457391	.0058883	2.806672	5.784700	.3520955
#3	9.628288	8.578792	-.462600	.0061556	2.733342	5.821867	.3402423

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: P5042-01 Acquired: 12/10/2024 18:49:13 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHKB0 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.6196112	.9512900	.0385422
Stddev	.0105070	.0158011	.0044963
%RSD	1.695742	1.661013	11.66580
#1	.6204938	.9594490	.0406038
#2	.6086907	.9330774	.0333848
#3	.6296490	.9613437	.0416380

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2989.100	32574.78	3264.621	2321.097	3726.991
Stddev	24.880	122.15	14.544	5.455	42.280
%RSD	.8323669	.3749706	.4455028	.2350074	1.134415
#1	2996.495	32711.81	3248.533	2327.197	3748.018
#2	2961.361	32477.34	3276.838	2316.688	3678.320
#3	3009.445	32535.20	3268.491	2319.406	3754.634

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: P5042-02 Acquired: 12/10/2024 18:53:02 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHKB0D Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1287286	.0072564	2.491583	-.000657	-.003992	69.04628	1.508956
Stddev	.0011875	.0008990	.004015	.001615	.000722	.61159	.009107
%RSD	.9224953	12.38934	.1611304	245.7596	18.08776	.8857624	.6035320
#1	.1279456	.0068121	2.491863	.001183	-.004346	68.60917	1.504070
#2	.1281452	.0066660	2.495450	-.001841	-.004467	68.78448	1.503334
#3	.1300950	.0082910	2.487436	-.001313	-.003161	69.74518	1.519463

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0071765	.0083805	133.9119	.1165361	.1244751	.5014670	174.2288
Stddev	.0001950	.0001311	1.1960	.0019817	.0003093	.0080319	1.4948
%RSD	2.716550	1.564828	.8931553	1.700496	.2484470	1.601672	.8579558
#1	.0070522	.0084815	133.1699	.1175168	.1241470	.4933870	173.1481
#2	.0070762	.0084278	133.2742	.1142553	.1245170	.5094498	173.6035
#3	.0074012	.0082323	135.2917	.1178362	.1247612	.5015643	175.9347

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	13.38729	38.39321	.1945308	-.010049	.8509782	.1665441	1.641094
Stddev	.13591	.47782	.0010745	.000809	.4227719	.0022895	.026162
%RSD	1.015246	1.244535	.5523289	8.050461	49.68070	1.374695	1.594206
#1	13.31380	38.25545	.1954610	-.009962	1.117258	.1689645	1.656924
#2	13.30395	37.99941	.1947767	-.009287	1.072179	.1644131	1.610896
#3	13.54413	38.92478	.1933547	-.010898	.363497	.1662546	1.655463

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.494141	8.644209	-.463560	.0060098	2.747731	5.802488	.3471474
Stddev	.176594	.012872	.012528	.0002148	.009979	.116631	.0011658
%RSD	1.860032	.1489099	2.702520	3.574785	.3631891	2.010017	.3358099
#1	9.318739	8.640905	-.458666	.0060022	2.755970	5.746154	.3476830
#2	9.491779	8.658411	-.454218	.0057989	2.736635	5.724718	.3458101
#3	9.671904	8.633311	-.477796	.0062283	2.750589	5.936592	.3479491

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: P5042-02 Acquired: 12/10/2024 18:53:02 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHKB0D Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.6248292	.9515195	.0379391
Stddev	.0047785	.0097704	.0021149
%RSD	.7647750	1.026824	5.574424
#1	.6202262	.9478598	.0403633
#2	.6244956	.9441072	.0369828
#3	.6297658	.9625914	.0364712

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3019.799	32905.82	3285.676	2351.826	3762.324
Stddev	8.130	396.52	50.358	29.943	9.016
%RSD	.2692397	1.205024	1.532653	1.273160	.2396466
#1	3012.354	32770.50	3309.574	2349.318	3751.944
#2	3018.568	33352.29	3319.635	2382.944	3766.814
#3	3028.475	32594.67	3227.818	2323.216	3768.214

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: P5042-01LX5 Acquired: 12/10/2024 18:56:51 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHKB0L Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0241831	.0028728	.4962245	.0004008	-.001211	15.82763	.3478329
Stddev	.0010472	.0011334	.0057135	.0023017	.001806	.02190	.0012219
%RSD	4.330419	39.45128	1.151388	574.2424	149.1140	.1383808	.3512970
#1	.0246696	.0023939	.5015312	.0012413	-.002292	15.80418	.3486038
#2	.0229811	.0041670	.4969657	-.002203	.000874	15.83114	.3484709
#3	.0248987	.0020575	.4901766	.002164	-.002215	15.84757	.3464240

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0016763	.0016867	30.88387	.0258782	.0331510	.1153704	40.28345
Stddev	.0001230	.0000045	.03725	.0013073	.0001367	.0037585	.06975
%RSD	7.335398	.2685833	.1206252	5.051759	.4124349	3.257770	.1731386
#1	.0018179	.0016868	30.85901	.0270430	.0331989	.1196276	40.35897
#2	.0016144	.0016912	30.86589	.0244643	.0332574	.1139724	40.26994
#3	.0015965	.0016822	30.92670	.0261275	.0329968	.1125112	40.22145

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.110861	8.874163	.0383027	-.003026	.1901624	.0412734	.3813697
Stddev	.008797	.064238	.0006507	.000598	.5528979	.0056571	.0055297
%RSD	.2827947	.7238772	1.698756	19.77565	290.7505	13.70642	1.449958
#1	3.111187	8.809738	.0385812	-.003438	-.427903	.0440385	.3858685
#2	3.101906	8.938213	.0387678	-.003299	.360657	.0450161	.3751962
#3	3.119492	8.874539	.0375591	-.002339	.637733	.0347655	.3830443

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.877256	1.692451	-.113003	.0006976	.5357538	1.404674	.0589650
Stddev	.086719	.014187	.001793	.0002669	.0059965	.003340	.0014701
%RSD	4.619479	.8382520	1.586924	38.25490	1.119257	.2377944	2.493224
#1	1.912112	1.708403	-.113231	.0009973	.5423831	1.406890	.0594036
#2	1.941124	1.687701	-.114671	.0004856	.5307080	1.406300	.0573255
#3	1.778532	1.681248	-.111107	.0006100	.5341702	1.400832	.0601659

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: P5042-01LX5 Acquired: 12/10/2024 18:56:51 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHKB0L Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.1435485	.2201422	-.024976
Stddev	.0028228	.0007407	.003522
%RSD	1.966429	.3364738	14.09993
#1	.1408574	.2205652	-.024463
#2	.1464867	.2192869	-.028726
#3	.1433015	.2205746	-.021739

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2613.962	28879.13	2803.304	2049.178	3845.175
Stddev	14.834	135.52	19.267	13.026	29.014
%RSD	.5674795	.4692698	.6872932	.6356926	.7545684
#1	2596.923	28772.75	2801.635	2035.115	3811.820
#2	2620.967	29031.71	2784.927	2060.831	3859.128
#3	2623.996	28832.93	2823.352	2051.589	3864.576

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: P5042-03 Acquired: 12/10/2024 19:00:46 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHKB0S Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2088738	.0965660	2.449293	.1429665	.1485082	70.40306	4.864656
Stddev	.0036036	.0014167	.022883	.0055797	.0036991	.38372	.023451
%RSD	1.725257	1.467120	.9342577	3.902808	2.490833	.5450399	.4820618
#1	.2062010	.0955819	2.439630	.1373071	.1483574	69.96485	4.837640
#2	.2074483	.0981898	2.432828	.1431293	.1448868	70.56541	4.876576
#3	.2129721	.0959263	2.475423	.1484630	.1522803	70.67893	4.879753

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0933524	.1022395	129.1797	.4840034	1.116597	.8841488	169.1462
Stddev	.0009647	.0007842	.7380	.0011454	.011198	.0066528	1.0804
%RSD	1.033368	.7670429	.5713260	.2366506	1.002849	.7524565	.6387241
#1	.0922398	.1018224	128.4515	.4852567	1.111209	.8829309	167.9222
#2	.0939545	.1017520	129.1603	.4837426	1.109112	.8781891	169.5490
#3	.0938630	.1031442	129.9272	.4830108	1.129471	.8913265	169.9673

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	13.81748	37.36702	1.196208	.0689656	.6873765	1.031279	2.365487
Stddev	.10443	.11396	.009255	.0006211	.4020434	.002571	.012002
%RSD	.7557667	.3049776	.7737255	.9005418	58.48954	.2492662	.5073890
#1	13.71746	37.27073	1.191008	.0682589	.2247923	1.029723	2.376904
#2	13.80917	37.33750	1.190723	.0692133	.9525912	1.034246	2.352975
#3	13.92582	37.49284	1.206894	.0694245	.8847461	1.029868	2.366582

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.966198	8.335409	-.458427	.0061559	2.653700	5.928839	.3341879
Stddev	.135207	.070221	.003204	.0001773	.029956	.063632	.0021489
%RSD	1.507960	.8424394	.6989479	2.879740	1.128828	1.073259	.6430261
#1	8.845989	8.293933	-.454753	.0063462	2.639808	5.855824	.3321357
#2	8.940029	8.295808	-.460641	.0061258	2.633213	5.958238	.3340060
#3	9.112577	8.416486	-.459887	.0059955	2.688080	5.972456	.3364220

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: P5042-03 Acquired: 12/10/2024 19:00:46 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHKB0S Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.6181173	.9176298	.0313650
Stddev	.0032964	.0077689	.0015543
%RSD	.5332974	.8466299	4.955488
#1	.6144889	.9098644	.0295721
#2	.6189353	.9176226	.0323334
#3	.6209277	.9254023	.0321893

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2970.309	32696.43	3281.037	2323.296	3746.581
Stddev	14.640	31.43	33.976	2.406	24.874
%RSD	.4928839	.0961322	1.035514	.1035758	.6639088
#1	2980.398	32679.30	3320.197	2325.489	3757.446
#2	2977.011	32732.70	3263.514	2323.679	3764.175
#3	2953.517	32677.28	3259.401	2320.722	3718.123

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: P5043-01 Acquired: 12/10/2024 19:04:34 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHKM2 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0468702	-.002836	.2504523	.0018773	.0013268	70.07477	.6247701
Stddev	.0031431	.002183	.0007550	.0042499	.0003088	.18127	.0031678
%RSD	6.705963	76.96988	.3014393	226.3877	23.27412	.2586819	.5070369
#1	.0450814	-.001039	.2512597	-.002785	.0011059	70.25900	.6278076
#2	.0504994	-.005266	.2503334	.005535	.0016796	69.89661	.6214864
#3	.0450298	-.002204	.2497638	.002881	.0011948	70.06870	.6250162

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0060278	.0023003	37.35375	.0827810	.0746474	.1270341	150.5426
Stddev	.0001490	.0001089	.16095	.0012778	.0004766	.0033214	.6672
%RSD	2.472310	4.734375	.4308888	1.543562	.6384178	2.614562	.4432188
#1	.0060283	.0022122	37.49809	.0825036	.0744427	.1248261	151.2654
#2	.0058785	.0022667	37.18019	.0841747	.0743073	.1308538	149.9502
#3	.0061766	.0024221	37.38296	.0816648	.0751921	.1254223	150.4122

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.297124	17.80525	.1025876	-.013897	.7169306	.1623280	.3244434
Stddev	.012362	.02163	.0005502	.000313	.4560405	.0051725	.0096491
%RSD	.3749233	.1214818	.5363207	2.254127	63.61013	3.186441	2.974061
#1	3.310312	17.78029	.1025591	-.013990	.7477897	.1655011	.3354787
#2	3.285800	17.81854	.1020521	-.013547	1.156758	.1563593	.3175949
#3	3.295260	17.81693	.1031514	-.014152	.246244	.1651236	.3202565

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.466233	3.385891	-.427399	.0023911	.8940549	6.137211	.0125612
Stddev	.084290	.017726	.007688	.0001440	.0094077	.019433	.0006883
%RSD	3.417774	.5235360	1.798725	6.023090	1.052250	.3166503	5.479513
#1	2.372343	3.376551	-.424442	.0024349	.8890833	6.136175	.0131544
#2	2.490965	3.374788	-.436127	.0022303	.8881761	6.157142	.0127228
#3	2.535390	3.406334	-.421630	.0025082	.9049054	6.118316	.0118065

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: P5043-01 Acquired: 12/10/2024 19:04:34 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHKM2 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.7646850	-.057937	.0520618
Stddev	.0074394	.000524	.0019422
%RSD	.9728670	.9045836	3.730543
#1	.7661187	-.058388	.0513013
#2	.7566331	-.058060	.0542691
#3	.7713031	-.057362	.0506149

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2861.773	31449.88	3057.875	2225.932	3868.589
Stddev	12.132	126.04	12.109	3.874	19.559
%RSD	.4239495	.4007617	.3959782	.1740310	.5055768
#1	2863.148	31407.27	3048.544	2221.770	3872.526
#2	2873.159	31350.67	3053.523	2229.433	3885.880
#3	2849.011	31591.70	3071.558	2226.594	3847.361

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: P5043-02 Acquired: 12/10/2024 19:08:25 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHKM2D Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0467148	-.001754	.2496880	-.002476	.0021646	70.03459	.6276288
Stddev	.0024427	.000491	.0017528	.003028	.0007055	.14002	.0012399
%RSD	5.229007	28.01092	.7019970	122.3175	32.59332	.1999231	.1975479
#1	.0440390	-.001196	.2487697	-.004970	.0015148	69.87487	.6262121
#2	.0472799	-.002122	.2485852	.000894	.0020640	70.13617	.6281587
#3	.0488254	-.001944	.2517092	-.003350	.0029151	70.09273	.6285157

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0060370	.0023366	37.23224	.0837481	.0747448	.1305523	150.7711
Stddev	.0001517	.0001237	.05859	.0011437	.0001461	.0078955	.3703
%RSD	2.513177	5.294022	.1573697	1.365679	.1954835	6.047786	.2456259
#1	.0059298	.0023387	37.20082	.0824374	.0748839	.1221445	150.3435
#2	.0059707	.0022119	37.29984	.0845440	.0747578	.1378092	150.9890
#3	.0062106	.0024592	37.19606	.0842627	.0745926	.1317031	150.9808

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.294371	17.71818	.1032219	-.013207	1.040113	.1590573	.3176123
Stddev	.011895	.02203	.0002114	.000567	.112743	.0104113	.0051212
%RSD	.3610657	.1243504	.2047581	4.294430	10.83945	6.545624	1.612407
#1	3.290918	17.70877	.1030610	-.013541	1.169273	.1470799	.3163768
#2	3.307611	17.74336	.1031433	-.012552	.989648	.1641506	.3232382
#3	3.284585	17.70242	.1034612	-.013527	.961418	.1659415	.3132218

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.467511	3.412450	-.424268	.0021655	.8982200	6.118127	.0141735
Stddev	.103507	.022934	.002709	.0001713	.0043514	.023889	.0001916
%RSD	4.194793	.6720706	.6384593	7.910969	.4844435	.3904621	1.351606
#1	2.568630	3.401798	-.421864	.0020743	.9008790	6.120779	.0142926
#2	2.361771	3.396778	-.423738	.0020590	.8931984	6.093023	.0142754
#3	2.472131	3.438773	-.427203	.0023631	.9005827	6.140580	.0139525

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: P5043-02 Acquired: 12/10/2024 19:08:25 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHKM2D Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.7591919	-.057967	.0494344
Stddev	.0074457	.000426	.0036033
%RSD	.9807377	.7348833	7.289032
#1	.7560149	-.057503	.0535875
#2	.7676991	-.058059	.0475758
#3	.7538617	-.058340	.0471399

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2875.936	31717.68	3088.501	2245.841	3873.752
Stddev	7.600	284.46	6.310	14.547	12.244
%RSD	.2642514	.8968561	.2043155	.6477428	.3160733
#1	2877.114	31959.94	3088.752	2254.992	3874.715
#2	2882.878	31404.45	3082.069	2229.067	3885.487
#3	2867.816	31788.64	3094.682	2253.465	3861.056

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: P5043-01LX5 Acquired: 12/10/2024 19:12:17 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHKM2L Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0108586	-.001458	.0507955	.0022038	.0005621	15.62458	.1400574
Stddev	.0046896	.001805	.0018775	.0010499	.0018358	.05686	.0020346
%RSD	43.18763	123.7882	3.696210	47.64220	326.6292	.3639123	1.452672
#1	.0076725	-.001785	.0495517	.0020094	-.000176	15.58372	.1390412
#2	.0162436	.000488	.0498796	.0033374	-.000790	15.68951	.1423999
#3	.0086597	-.003077	.0529551	.0012646	.002652	15.60050	.1387312

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013235	.0005125	8.392441	.0180676	.0170827	.0275839	33.71058
Stddev	.0000310	.0000192	.037117	.0011014	.0001237	.0022234	.08290
%RSD	2.340339	3.743545	.4422621	6.096129	.7240222	8.060497	.2459106
#1	.0013033	.0005337	8.435284	.0180973	.0171528	.0300077	33.69930
#2	.0013592	.0005075	8.370034	.0169516	.0171554	.0271051	33.79854
#3	.0013081	.0004963	8.372004	.0191538	.0169399	.0256389	33.63390

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7469713	3.958011	.0203066	-.003619	.2161651	.0386551	.0698225
Stddev	.0036190	.086919	.0001180	.000167	.2866416	.0030342	.0048767
%RSD	.4844929	2.196017	.5811117	4.621929	132.6031	7.849360	6.984379
#1	.7494726	4.057779	.0202189	-.003557	-.062271	.0352381	.0733776
#2	.7428215	3.917593	.0202601	-.003491	.510362	.0396931	.0718269
#3	.7486197	3.898661	.0204408	-.003808	.200404	.0410340	.0642630

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1065655	.6975489	-.101973	-.000233	.1818661	1.423573	-.005961
Stddev	.1574021	.0020302	.001603	.000293	.0034128	.013114	.000820
%RSD	147.7046	.2910548	1.572324	125.6204	1.876561	.9211734	13.75752
#1	.0061630	.6978177	-.103631	-.000471	.1794361	1.429265	-.005056
#2	.2879724	.6953976	-.101858	-.000323	.1857679	1.432880	-.006172
#3	.0255610	.6994314	-.100430	.000094	.1803944	1.408576	-.006654

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: P5043-01LX5 Acquired: 12/10/2024 19:12:17 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHKM2L Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.1729576	-.012775	-.020273
Stddev	.0032859	.000202	.002436
%RSD	1.899812	1.584319	12.01670
#1	.1695033	-.012764	-.022890
#2	.1733255	-.012579	-.019858
#3	.1760441	-.012983	-.018071

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2613.850	28979.69	2799.739	2052.676	3930.678
Stddev	7.963	291.59	20.765	24.980	10.851
%RSD	.3046618	1.006177	.7416635	1.216966	.2760592
#1	2606.331	28876.55	2793.180	2049.850	3921.785
#2	2622.194	29308.83	2783.047	2078.949	3942.769
#3	2613.025	28753.69	2822.992	2029.228	3927.481

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: P5043-03 Acquired: 12/10/2024 19:16:14 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHKM2S Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1312930	.0891965	.2894326	.1529458	.1608943	72.97117	4.315334
Stddev	.0010919	.0018836	.0015882	.0020275	.0023773	.24265	.014711
%RSD	.8316584	2.111769	.5487259	1.325614	1.477543	.3325253	.3409120
#1	.1324403	.0901015	.2908303	.1532199	.1595382	72.76570	4.303869
#2	.1311721	.0870312	.2897620	.1507951	.1636393	73.23887	4.331922
#3	.1302666	.0904568	.2877055	.1548222	.1595055	72.90895	4.310213

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0977499	.0968166	37.38537	.4753820	1.073400	.5666482	151.9548
Stddev	.0008757	.0006294	.15908	.0016524	.004504	.0050811	.5119
%RSD	.8958856	.6500565	.4255200	.3475920	.4195606	.8966975	.3368732
#1	.0973748	.0974850	37.24617	.4766572	1.078005	.5719976	151.6345
#2	.0971242	.0967296	37.55877	.4735153	1.073188	.5660606	152.5451
#3	.0987507	.0962353	37.35117	.4759736	1.069006	.5618865	151.6847

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.249494	17.67094	1.122833	.0703476	.5334384	1.087667	1.102634
Stddev	.023977	.07158	.005945	.0002216	.2096579	.009853	.011752
%RSD	.5642391	.4050573	.5294875	.3150233	39.30311	.9058827	1.065800
#1	4.241762	17.60674	1.128538	.0704358	.3912619	1.086755	1.105867
#2	4.276383	17.74812	1.123287	.0705115	.7742199	1.097945	1.112432
#3	4.230336	17.65796	1.116673	.0700954	.4348334	1.078302	1.089605

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.397137	3.433001	-.442048	.0019320	.9269723	6.161765	.0134899
Stddev	.170859	.019624	.003149	.0000741	.0027161	.029936	.0016774
%RSD	7.127610	.5716269	.7124052	3.837365	.2930087	.4858306	12.43437
#1	2.218380	3.452292	-.445244	.0019764	.9298730	6.159772	.0140624
#2	2.558814	3.433653	-.441952	.0019732	.9265548	6.132875	.0148061
#3	2.414217	3.413060	-.438948	.0018464	.9244892	6.192647	.0116013

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: P5043-03 Acquired: 12/10/2024 19:16:14 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHKM2S Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.7636629	-.058845	.0485860
Stddev	.0087466	.000444	.0019226
%RSD	1.145345	.7541782	3.957171
#1	.7584118	-.058439	.0484767
#2	.7737598	-.058778	.0467203
#3	.7588169	-.059319	.0505609

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2890.268	31948.82	3114.283	2278.155	3889.673
Stddev	10.977	91.89	10.120	10.370	16.298
%RSD	.3797932	.2876019	.3249635	.4551965	.4190008
#1	2879.755	31842.83	3110.625	2268.385	3871.368
#2	2901.656	32005.97	3125.724	2289.036	3902.610
#3	2889.392	31997.66	3106.500	2277.044	3895.040

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: P4977-03 Acquired: 12/10/2024 19:20:03 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29F8 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0138540	.0122074	.0328907	-.037477	-.017691	14.20222
Stddev	.0017275	.0016874	.0013319	.003650	.000201	.17264
%RSD	12.46944	13.82258	4.049467	9.738504	1.135882	1.215574
#1	.0118888	.0116933	.0343988	-.038793	-.017706	14.30954
#2	.0151331	.0140921	.0323982	-.033352	-.017483	14.29405
#3	.0145400	.0108369	.0318753	-.040286	-.017884	14.00307

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0649781	.0013763	.0009147	F 1296.241	.0393410	.0659914
Stddev	.0017659	.0001342	.0000303	18.561	.0005649	.0006834
%RSD	2.717656	9.750539	3.316009	1.431913	1.435892	1.035576
#1	.0666441	.0013887	.0009408	1308.604	.0388784	.0666070
#2	.0651632	.0015039	.0008814	1305.223	.0399706	.0652560
#3	.0631269	.0012363	.0009221	1274.898	.0391740	.0661113

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0486635	41.86525	2.387758	191.1119	.0730500	-.003593
Stddev	.0094139	.52253	.031352	2.4529	.0004896	.001951
%RSD	19.34488	1.248125	1.313030	1.283503	.6702653	54.29680
#1	.0462483	42.25641	2.404106	191.8862	.0728470	-.005803
#2	.0406925	42.06752	2.407556	193.0842	.0726945	-.002867
#3	.0590497	41.27182	2.351610	188.3652	.0736085	-.002109

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6119801	.0621205	.1395470	.7332986	2.028418	-.092208
Stddev	.2534865	.0044583	.0024535	.0433736	.007547	.003566
%RSD	41.42072	7.176814	1.758212	5.914862	.3720479	3.867078
#1	.3575348	.0655817	.1423801	.7808112	2.032569	-.093156
#2	.6139088	.0570897	.1381233	.7232604	2.032979	-.088264
#3	.8644968	.0636902	.1381375	.6958243	2.019707	-.095204

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: P4977-03 Acquired: 12/10/2024 19:20:03 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29F8 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0045780	2.819679	1.859659	.0357120	.4522572	1.042790
Stddev	.0008396	.011336	.015799	.0028119	.0075886	.015057
%RSD	18.33906	.4020144	.8495628	7.873895	1.677929	1.443910
#1	.0039565	2.828230	1.853576	.0387079	.4569943	1.051380
#2	.0042444	2.823987	1.877596	.0331299	.4562727	1.051587
#3	.0055330	2.806821	1.847807	.0352983	.4435046	1.025405

Elem	Li6707
Units	ppm
Avg	-.026160
Stddev	.002283
%RSD	8.726485
#1	-.023538
#2	-.027705
#3	-.027237

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2419.958	26351.86	2786.971	1876.958	3232.122
Stddev	5.697	192.62	19.547	12.617	13.396
%RSD	.2354350	.7309570	.7013658	.6722123	.4144497
#1	2414.512	26138.86	2777.601	1865.653	3217.682
#2	2419.485	26513.83	2773.874	1890.569	3234.541
#3	2425.877	26402.88	2809.439	1874.651	3244.144

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: P4977-04 Acquired: 12/10/2024 19:23:55 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29F8D Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0086500	.0120320	.0320997	-.033496	-.018392	14.29031
Stddev	.0031408	.0011305	.0004921	.003073	.001437	.07181
%RSD	36.30982	9.395885	1.532908	9.172698	7.812466	.5024993
#1	.0116589	.0113645	.0320521	-.030104	-.017606	14.35284
#2	.0053921	.0133373	.0316332	-.036091	-.017520	14.30622
#3	.0088991	.0113943	.0326139	-.034294	-.020050	14.21189

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0646136	.0014580	.0008677	F 1298.225	.0391374	.0664910
Stddev	.0005551	.0000415	.0000575	5.076	.0007132	.0006278
%RSD	.8591475	2.843831	6.625906	.3910134	1.822384	.9441153
#1	.0639727	.0015038	.0009173	1300.324	.0399561	.0658664
#2	.0649209	.0014230	.0008047	1301.915	.0386507	.0664848
#3	.0649471	.0014472	.0008812	1292.436	.0388054	.0671219

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0529879	41.96544	2.401117	193.4014	.0716415	-.004520
Stddev	.0021220	.05856	.010759	.6977	.0006375	.000395
%RSD	4.004755	.1395316	.4480771	.3607302	.8898026	8.742314
#1	.0536149	42.00922	2.406999	193.9314	.0716441	-.004225
#2	.0547258	41.98818	2.407653	193.6617	.0710028	-.004368
#3	.0506230	41.89893	2.388700	192.6110	.0722777	-.004969

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7702172	.0563929	.1310328	.9476001	2.002600	-.086222
Stddev	.2680462	.0078771	.0041262	.1651489	.008275	.000614
%RSD	34.80138	13.96819	3.148965	17.42812	.4132027	.7124039
#1	.4616336	.0474716	.1352814	1.052446	1.994018	-.085767
#2	.9037511	.0593182	.1307759	1.033125	2.003252	-.086921
#3	.9452669	.0623887	.1270410	.757229	2.010529	-.085979

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: P4977-04 Acquired: 12/10/2024 19:23:55 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29F8D Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0044236	2.785631	1.870576	.0353324	.4587017	1.048950
Stddev	.0000991	.017467	.009321	.0003133	.0069787	.002904
%RSD	2.240649	.6270536	.4982806	.8867385	1.521409	.2768760
#1	.0044731	2.765587	1.875380	.0353728	.4598597	1.050252
#2	.0043095	2.797603	1.876514	.0350009	.4650289	1.050975
#3	.0044883	2.793702	1.859833	.0356236	.4512163	1.045622

Elem	Li6707
Units	ppm
Avg	-.025368
Stddev	.001537
%RSD	6.060621
#1	-.026546
#2	-.025928
#3	-.023629

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2405.551	26166.17	2729.981	1859.511	3224.383
Stddev	3.019	106.51	23.387	8.760	9.264
%RSD	.1254861	.4070653	.8566729	.4710664	.2873020
#1	2404.301	26086.46	2710.170	1849.426	3231.944
#2	2408.994	26124.90	2723.995	1865.216	3227.155
#3	2403.358	26287.14	2755.780	1863.893	3214.050

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: P4977-03LX5 Acquired: 12/10/2024 19:27:47 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29F8L Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0028671	.0079843	.0037898	-.020107	-.012362	2.899261	.0130660
Stddev	.0016478	.0011916	.0010555	.001722	.004092	.027042	.0017794
%RSD	57.47361	14.92396	27.85155	8.566080	33.10395	.9327233	13.61884
#1	.0045171	.0081962	.0033278	-.021139	-.012146	2.909738	.0113450
#2	.0028627	.0067010	.0030440	-.018118	-.008382	2.919497	.0148986
#3	.0012215	.0090557	.0049975	-.021063	-.016558	2.868548	.0129544

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002742	.0002201	272.0228	.0078855	.0349498	.0313635	8.947834
Stddev	.0000930	.0000287	1.7995	.0011278	.0006425	.0012593	.111933
%RSD	33.92048	13.04228	.6615197	14.30203	1.838224	4.015119	1.250955
#1	.0001775	.0002274	273.5614	.0091372	.0350273	.0301414	9.049587
#2	.0002822	.0002445	272.4630	.0075711	.0355501	.0326570	8.965979
#3	.0003630	.0001885	270.0441	.0069483	.0342722	.0312921	8.827937

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5065541	40.56664	.0141856	-.000795	.1634799	.0093692	.0361974
Stddev	.0040413	.28545	.0003321	.000611	.3709517	.0012023	.0036632
%RSD	.7978040	.7036519	2.340924	76.80176	226.9097	12.83224	10.11994
#1	.5099851	40.85340	.0145071	-.001250	.5827314	.0105520	.0394450
#2	.5075778	40.56401	.0142058	-.000101	-.122148	.0081483	.0322266
#3	.5020994	40.28252	.0138438	-.001034	.029856	.0094074	.0369205

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.139623	.3792637	-.019776	-.000781	.5189821	.3914192	-.002669
Stddev	.086421	.0007413	.000847	.000396	.0041879	.0005903	.000405
%RSD	61.89600	.1954568	4.280677	50.70920	.8069485	.1508091	15.18862
#1	-.136649	.3800710	-.018802	-.000324	.5144996	.3911482	-.002939
#2	-.227493	.3786136	-.020196	-.001031	.5196519	.3920963	-.002203
#3	-.054727	.3791064	-.020332	-.000988	.5227947	.3910130	-.002866

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: P4977-03LX5 Acquired: 12/10/2024 19:27:47 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29F8L Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.0945555	.2148845	-.037308
Stddev	.0024405	.0016491	.003828
%RSD	2.581063	.7674359	10.26010
#1	.0973698	.2156094	-.035677
#2	.0932761	.2160470	-.034566
#3	.0930208	.2129972	-.041681

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2456.756	26879.14	2688.953	1908.141	3610.063
Stddev	5.999	131.89	7.888	12.474	12.082
%RSD	.2441969	.4906729	.2933602	.6537072	.3346783
#1	2449.830	26809.48	2684.490	1906.937	3596.433
#2	2460.099	27031.26	2684.308	1921.172	3619.456
#3	2460.339	26796.70	2698.061	1896.312	3614.300

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: P4977-05 Acquired: 12/10/2024 19:31:47 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29F8S Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0953931	.1048117	.0717050	.1346839	.1643813	18.09933
Stddev	.0015185	.0029982	.0036049	.0080156	.0059456	.07626
%RSD	1.591873	2.860559	5.027374	5.951391	3.616982	.4213142
#1	.0945407	.1051849	.0697461	.1341974	.1638043	18.07030
#2	.0944922	.1076059	.0758652	.1429316	.1705944	18.04184
#3	.0971463	.1016444	.0695038	.1269227	.1587452	18.18583

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.003864	.1010746	.0992275	F 1285.531	.4451658	1.090208
Stddev	.007830	.0004166	.0062730	1.640	.0031568	.069191
%RSD	.1955726	.4122085	6.321872	.1275982	.7091230	6.346604
#1	4.000335	.1013605	.0977139	1284.796	.4475955	1.077211
#2	3.998420	.1012667	.1061189	1284.386	.4463042	1.164976
#3	4.012838	.1005966	.0938498	1287.410	.4415977	1.028437

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5192062	43.68773	3.317240	189.0780	1.101692	.0901801
Stddev	.0057488	.14154	.013728	.0810	.072001	.0010649
%RSD	1.107236	.3239830	.4138242	.0428313	6.535483	1.180894
#1	.5205707	43.54443	3.303924	189.1479	1.085614	.0889505
#2	.5128979	43.69132	3.331345	189.0969	1.180373	.0908012
#3	.5241501	43.82744	3.316450	188.9893	1.039090	.0907887

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3904774	1.062655	.9957305	.9366562	2.036975	-.089005
Stddev	.6174638	.001744	.0111885	.3665443	.133602	.001235
%RSD	158.1305	.1641127	1.123649	39.13328	6.558823	1.387783
#1	-.303687	1.063222	1.002478	.7601443	2.012950	-.087978
#2	.878497	1.064044	1.001898	1.358060	2.180959	-.090375
#3	.596622	1.060698	.982815	.691765	1.917016	-.088662

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: P4977-05 Acquired: 12/10/2024 19:31:47 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29F8S Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0045718	2.867857	1.969741	.0385081	.4577228	1.027613
Stddev	.0002357	.180153	.012974	.0022260	.0017377	.001163
%RSD	5.155181	6.281802	.6586439	5.780521	.3796328	.1132121
#1	.0043474	2.822129	1.973506	.0392401	.4594505	1.026451
#2	.0045507	3.066468	1.980415	.0402760	.4577426	1.028778
#3	.0048173	2.714975	1.955301	.0360084	.4559753	1.027611

Elem	Li6707
Units	ppm
Avg	-.029137
Stddev	.001706
%RSD	5.854324
#1	-.027625
#2	-.030986
#3	-.028800

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2400.234	26561.20	2761.474	1883.737	3208.356
Stddev	121.652	58.96	4.779	16.718	181.039
%RSD	5.068320	.2219837	.1730702	.8874659	5.642728
#1	2422.296	26519.03	2756.235	1871.379	3237.647
#2	2269.061	26535.99	2762.593	1877.073	3014.458
#3	2509.344	26628.57	2765.595	1902.758	3372.963

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: P4976-09 Acquired: 12/10/2024 19:35:35 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29E4D Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1392199	.0093157	.0373771	-.037828	-.015700	19.00518
Stddev	.0022868	.0017875	.0018947	.004583	.001838	.20222
%RSD	1.642603	19.18824	5.069050	12.11588	11.70924	1.064024
#1	.1385691	.0072539	.0357747	-.039965	-.017404	19.08505
#2	.1373290	.0102627	.0394683	-.032566	-.013751	18.77523
#3	.1417615	.0104304	.0368883	-.040952	-.015944	19.15528

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0893084	.0017511	.0010623	F 1212.068	.0504120	.0791808
Stddev	.0013535	.0001137	.0000423	14.348	.0006177	.0001254
%RSD	1.515542	6.491889	3.977931	1.183801	1.225363	.1583639
#1	.0896525	.0018730	.0011101	1217.172	.0500151	.0791108
#2	.0878160	.0016480	.0010300	1195.865	.0511237	.0791060
#3	.0904566	.0017322	.0010468	1223.166	.0500971	.0793255

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0710250	61.89210	2.599354	183.0021	.0920637	-.006246
Stddev	.0034643	.68861	.036410	2.4549	.0003150	.000912
%RSD	4.877598	1.112591	1.400724	1.341458	.3421622	14.60814
#1	.0723682	62.08657	2.614571	184.3675	.0917227	-.007296
#2	.0736167	61.12718	2.557804	180.1680	.0923437	-.005650
#3	.0670903	62.46256	2.625687	184.4707	.0921249	-.005792

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5537688	.0635562	.1803677	.9710127	1.857735	-.149678
Stddev	.5633796	.0084901	.0031118	.0751315	.003959	.001071
%RSD	101.7355	13.35832	1.725256	7.737438	.2131044	.7155910
#1	.0944023	.0612909	.1771772	1.057401	1.862223	-.150581
#2	1.182367	.0564286	.1805316	.934717	1.856244	-.149958
#3	.384537	.0729492	.1833943	.920921	1.854738	-.148495

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: P4976-09 Acquired: 12/10/2024 19:35:35 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29E4D Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0131714	14.60892	2.227650	.0041016	.7002656	1.068431
Stddev	.0003380	.06204	.027326	.0002746	.0088778	.015922
%RSD	2.566233	.4246618	1.226672	6.694788	1.267779	1.490259
#1	.0134173	14.67051	2.251919	.0042931	.7074711	1.073323
#2	.0127860	14.54644	2.198052	.0042247	.6903481	1.050637
#3	.0133108	14.60982	2.232979	.0037870	.7029777	1.081333

Elem	Li6707
Units	ppm
Avg	-.022022
Stddev	.004115
%RSD	18.68359
#1	-.018938
#2	-.020435
#3	-.026694

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2435.940	26559.29	2793.445	1895.680	3248.364
Stddev	15.333	37.93	30.440	5.034	19.996
%RSD	.6294577	.1428265	1.089689	.2655492	.6155668
#1	2418.625	26590.80	2775.047	1893.345	3225.622
#2	2441.397	26569.89	2828.581	1901.458	3256.283
#3	2447.799	26517.19	2776.707	1892.238	3263.188

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: P4976-08L Acquired: 12/10/2024 19:39:26 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29E4L Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0271997	.0095381	.0054718	-.021720	-.014047	3.930555	.0177175
Stddev	.0004531	.0020508	.0008835	.002614	.001223	.044991	.0016462
%RSD	1.666018	21.50131	16.14712	12.03461	8.706200	1.144636	9.291431
#1	.0274666	.0087407	.0054730	-.023049	-.012990	3.958310	.0161447
#2	.0266765	.0118679	.0063548	-.023403	-.015387	3.878646	.0175794
#3	.0274560	.0080058	.0045877	-.018709	-.013766	3.954709	.0194284

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004014	.0002545	255.2171	.0108906	.0365831	.0156652	13.22677
Stddev	.0000180	.0000363	2.4736	.0004460	.0003948	.0050020	.14107
%RSD	4.475709	14.25539	.9692157	4.095489	1.079224	31.93090	1.066581
#1	.0004196	.0002871	256.4484	.0106440	.0361583	.0163141	13.28814
#2	.0003837	.0002610	252.3695	.0114055	.0366523	.0103704	13.06540
#3	.0004007	.0002154	256.8335	.0106223	.0369387	.0203111	13.32676

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5539006	38.72186	.0177013	-.001231	-.299703	.0141863	.0396995
Stddev	.0058126	.44593	.0004787	.001067	.578087	.0084096	.0016995
%RSD	1.049392	1.151619	2.704468	86.73947	192.8867	59.28020	4.280911
#1	.5582569	38.98114	.0171501	-.002380	.312051	.0238386	.0395366
#2	.5473005	38.20695	.0179406	-.000271	-.374275	.0084403	.0414745
#3	.5561443	38.97748	.0180132	-.001040	-.836885	.0102799	.0380872

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.187912	.3468666	-.035053	.0005316	2.702554	.5547748	-.008374
Stddev	.138274	.0020003	.001232	.0001848	.010360	.0013667	.000592
%RSD	73.58461	.5766760	3.514015	34.75415	.3833260	.2463610	7.073884
#1	-.267659	.3449184	-.035035	.0007032	2.690616	.5551051	-.008927
#2	-.267831	.3489152	-.036294	.0005556	2.707864	.5559460	-.008445
#3	-.028247	.3467660	-.033831	.0003360	2.709182	.5532731	-.007749

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: P4976-08L Acquired: 12/10/2024 19:39:26 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29E4L Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.1502225	.2213202	-.044604
Stddev	.0032046	.0018057	.003432
%RSD	2.133260	.8158564	7.693187
#1	.1521457	.2220801	-.043004
#2	.1465231	.2192587	-.048544
#3	.1519987	.2226216	-.042265

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2486.079	27252.27	2742.320	1935.509	3643.266
Stddev	16.682	228.28	15.613	13.279	25.791
%RSD	.6710306	.8376548	.5693428	.6860491	.7079123
#1	2502.359	27291.48	2739.508	1936.825	3669.275
#2	2486.857	27458.40	2759.148	1948.081	3642.824
#3	2469.021	27006.92	2728.304	1921.622	3617.699

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: P4976-10 Acquired: 12/10/2024 19:43:23 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29E4S Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2156361	.1021860	.0795526	.1308681	.1600943	22.90204
Stddev	.0023484	.0014030	.0024362	.0042514	.0030968	.19884
%RSD	1.089041	1.373011	3.062347	3.248611	1.934364	.8682239
#1	.2172839	.1033811	.0779464	.1309319	.1568841	23.12685
#2	.2129472	.1025357	.0823557	.1265852	.1630637	22.83006
#3	.2166773	.1006412	.0783557	.1350873	.1603352	22.74921

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.032282	.1019428	.0967985	F 1203.479	.4680124	1.075608
Stddev	.022877	.0004756	.0006863	7.537	.0101362	.008014
%RSD	.5673390	.4665630	.7089716	.6262759	2.165791	.7450647
#1	4.057363	.1024415	.0961497	1211.545	.4624293	1.069836
#2	4.026922	.1014942	.0967289	1202.275	.4618952	1.072230
#3	4.012561	.1018925	.0975169	1196.616	.4797125	1.084758

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5286961	63.32057	3.572638	183.0764	1.095572	.0890700
Stddev	.0017038	.42166	.026222	1.2507	.008367	.0012199
%RSD	.3222706	.6659110	.7339669	.6831316	.7636861	1.369553
#1	.5271331	63.79466	3.592209	184.4235	1.087838	.0881404
#2	.5284429	63.17954	3.582861	182.8535	1.094424	.0886183
#3	.5305124	62.98750	3.542845	181.9522	1.104453	.0904513

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.249673	1.075830	1.059341	.9759569	1.811119	-.155561
Stddev	.283825	.009638	.022004	.0154624	.020969	.001551
%RSD	22.71197	.8958450	2.077100	1.584329	1.157792	.9970905
#1	1.576232	1.081466	1.050170	.9586422	1.800136	-.157340
#2	1.062392	1.081322	1.043406	.9808410	1.797922	-.154852
#3	1.110394	1.064701	1.084446	.9883874	1.835298	-.154491

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: P4976-10 Acquired: 12/10/2024 19:43:23 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29E4S Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0129732	14.11294	2.469358	.0052995	.7083326	1.062306
Stddev	.0002777	.07169	.002592	.0004695	.0058738	.006861
%RSD	2.140636	.5079843	.1049708	8.859124	.8292483	.6458462
#1	.0132594	14.05673	2.467802	.0051969	.7148946	1.068191
#2	.0129553	14.08842	2.472351	.0048898	.7065375	1.063957
#3	.0127048	14.19368	2.467922	.0058118	.7035659	1.054770

Elem	Li6707
Units	ppm
Avg	-.022993
Stddev	.003628
%RSD	15.77903
#1	-.023867
#2	-.019007
#3	-.026104

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2442.782	26035.18	2745.866	1852.264	3267.087
Stddev	16.424	457.07	12.635	34.517	20.720
%RSD	.6723371	1.755600	.4601323	1.863514	.6342091
#1	2458.953	26249.18	2731.795	1867.083	3289.432
#2	2443.274	26346.00	2749.562	1876.898	3263.318
#3	2426.117	25510.37	2756.240	1812.812	3248.509

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: P5040-01 Acquired: 12/10/2024 19:47:11 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHKD6 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0247386	.0076033	.2486966	-.018645	-.011294	53.50545	.8876287
Stddev	.0024365	.0032107	.0010958	.004747	.001588	.56028	.0108418
%RSD	9.848812	42.22781	.4406059	25.46024	14.05765	1.047153	1.221432
#1	.0226172	.0039136	.2498760	-.023445	-.009502	53.13623	.8846709
#2	.0241989	.0091350	.2485038	-.018539	-.011858	54.15014	.8996424
#3	.0273996	.0097614	.2477101	-.013953	-.012524	53.22998	.8785727

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0040868	.0030742	568.8245	.0852587	.1002602	.1534119	132.4700
Stddev	.0001680	.0000408	5.9765	.0021060	.0001826	.0038113	1.4016
%RSD	4.109938	1.325597	1.050681	2.470134	.1821097	2.484345	1.058077
#1	.0039767	.0030925	565.9645	.0828298	.1000675	.1498527	132.0756
#2	.0042801	.0030275	575.6936	.0863692	.1004307	.1574331	134.0265
#3	.0040037	.0031026	564.8153	.0865771	.1002824	.1529498	131.3078

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.741337	132.5268	.1538312	-.011679	1.050359	.1482565	.4260388
Stddev	.069099	1.1151	.0018995	.000930	.695771	.0059319	.0129188
%RSD	.8925924	.8414454	1.234791	7.959327	66.24129	4.001082	3.032305
#1	7.703128	131.9785	.1546533	-.010644	.470660	.1414091	.4137065
#2	7.821102	133.8100	.1516591	-.011950	1.821934	.1518261	.4394734
#3	7.699782	131.7921	.1551812	-.012442	.858482	.1515344	.4249364

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.696525	8.564021	-.342769	.0021918	1.152232	3.678304	.0452870
Stddev	.210099	.037371	.006745	.0003018	.005371	.051151	.0014018
%RSD	3.688189	.4363773	1.967931	13.77163	.4661135	1.390627	3.095459
#1	5.739646	8.604098	-.334992	.0018497	1.156549	3.628611	.0463064
#2	5.881718	8.530127	-.347033	.0023049	1.146218	3.730799	.0436884
#3	5.468211	8.557837	-.346282	.0024208	1.153929	3.675502	.0458662

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: P5040-01 Acquired: 12/10/2024 19:47:11 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHKD6 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.9655599	.5371474	.0473804
Stddev	.0080162	.0043158	.0036156
%RSD	.8302146	.8034585	7.631065
#1	.9563230	.5345508	.0475611
#2	.9706982	.5421293	.0509023
#3	.9696583	.5347620	.0436778

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2720.235	29573.13	3007.952	2103.364	3442.572
Stddev	3.690	291.77	23.996	23.513	12.691
%RSD	.1356401	.9865963	.7977578	1.117857	.3686448
#1	2715.975	29909.45	3027.556	2129.882	3428.896
#2	2722.326	29422.09	2981.192	2085.062	3453.969
#3	2722.404	29387.84	3015.108	2095.149	3444.852

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: CCV091 Acquired: 12/10/2024 19:51:01 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV091 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.848926	4.883780	24.70205	4.718395	4.806889	395.8415
Stddev	.006798	.008294	.11882	.015009	.025770	3.6940
%RSD	.1402032	.1698235	.4810066	.3180895	.5361032	.9332115
#1	4.850054	4.878343	24.64044	4.703757	4.780642	397.9580
#2	4.841635	4.879670	24.62669	4.717677	4.807871	397.9904
#3	4.855090	4.893326	24.83902	4.733749	4.832154	391.5760

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.03114	.5018246	2.485248	399.6508	15.42519	2.516646
Stddev	.10286	.0079700	.010912	3.7093	.04208	.008880
%RSD	1.025368	1.588195	.4390797	.9281331	.2727954	.3528471
#1	10.09389	.5061761	2.480279	401.9091	15.47249	2.513939
#2	10.08710	.5066716	2.477705	401.6734	15.39191	2.509436
#3	9.91244	.4926261	2.497761	395.3698	15.41117	2.526565

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	14.85878	402.4583	14.60206	397.2928	2.505510	1.236762
Stddev	.11838	3.7706	.12521	3.0912	.009672	.004837
%RSD	.7966844	.9368800	.8574752	.7780626	.3860421	.3911266
#1	14.92747	405.0449	14.66217	399.1020	2.502324	1.242320
#2	14.92677	404.1980	14.68588	399.0530	2.497832	1.234466
#3	14.72209	398.1320	14.45813	393.7236	2.516373	1.233500

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	394.6370	2.509915	14.20221	150.2906	4.966641	F 4.137039
Stddev	3.4621	.033989	.09791	1.3518	.019807	.073046
%RSD	.8772924	1.354195	.6894249	.8994345	.3988023	1.765671
#1	396.5745	2.524869	14.16067	151.1444	4.958845	4.184189
#2	396.6966	2.533862	14.13190	150.9952	4.951918	4.174031
#3	390.6399	2.471012	14.31404	148.7321	4.989160	4.052896

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: CCV091 Acquired: 12/10/2024 19:51:01 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV091 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.793485	4.978112	4.860699	4.980226	4.923233	4.741233
Stddev	.019881	.027473	.077998	.018114	.041211	.036453
%RSD	.4147604	.5518824	1.604663	.3637251	.8370658	.7688548
#1	4.774779	4.982775	4.910865	4.978512	4.960405	4.759060
#2	4.791313	4.948606	4.900394	4.963029	4.930377	4.765343
#3	4.814364	5.002956	4.770838	4.999136	4.878917	4.699297

Elem	Li6707
Units	ppm
Avg	4.998456
Stddev	.050452
%RSD	1.009349
#1	5.027081
#2	5.028084
#3	4.940202

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2093.720	24164.31	2581.307	1599.809	3084.021
Stddev	7.459	73.11	35.130	9.097	8.293
%RSD	.3562463	.3025442	1.360943	.5686558	.2689021
#1	2102.244	24127.47	2563.231	1598.501	3089.129
#2	2090.526	24248.50	2558.896	1609.490	3088.482
#3	2088.391	24116.95	2621.795	1591.437	3074.452

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

Sample Name: CCB091 Acquired: 12/10/2024 19:54:39 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB091 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001422	.0016286	.0012843	.0023636	.0008839	.0418470
Stddev	.002345	.0009893	.0007954	.0066752	.0016915	.0155014
%RSD	164.8568	60.74406	61.93790	282.4186	191.3668	37.04301
#1	-.004103	.0025885	.0017825	.0016944	.0023648	.0241768
#2	-.000409	.0006123	.0003669	.0093482	.0012464	.0482089
#3	.000246	.0016852	.0017034	-.003952	-.000959	.0531553

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004034	-.000003	.0001326	.0271364	-.000507	.0000797
Stddev	.0014549	.000072	.0000585	.0445572	.000261	.0000932
%RSD	360.7009	2098.089	44.09545	164.1973	51.44774	116.9419
#1	-.001277	-.000069	.0000708	.0784247	-.000599	-.000021
#2	.001256	.000073	.0001870	.0050244	-.000710	.000163
#3	.001231	-.000014	.0001399	-.002040	-.000213	.000098

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0017463	.0238855	.0009725	-.078008	-.000877	-.000221
Stddev	.0054830	.0218527	.0009907	.060726	.000614	.000680
%RSD	313.9826	91.48931	101.8653	77.84624	70.06030	307.6914
#1	.0080710	.0487224	-.000148	-.101477	-.001006	-.000287
#2	-.001168	.0153252	.001733	-.123496	-.001416	-.000866
#3	-.001664	.0076089	.001332	-.009049	-.000208	.000489

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0060779	-.004064	.0022649	-.102331	.0004357	.0111053
Stddev	.8275941	.008523	.0052654	.160693	.0011264	.0011455
%RSD	13616.41	209.7105	232.4723	157.0316	258.5512	10.31509
#1	-.426155	-.013382	.0031652	-.286239	.0011738	.0124261
#2	-.515906	-.002148	.0070221	-.031728	-.000861	.0103832
#3	.960295	.003337	-.003393	.010972	.000994	.0105065

Reviewed By:kareem
On:12/13/2024 7:24:03 PM
Inst Id :P5

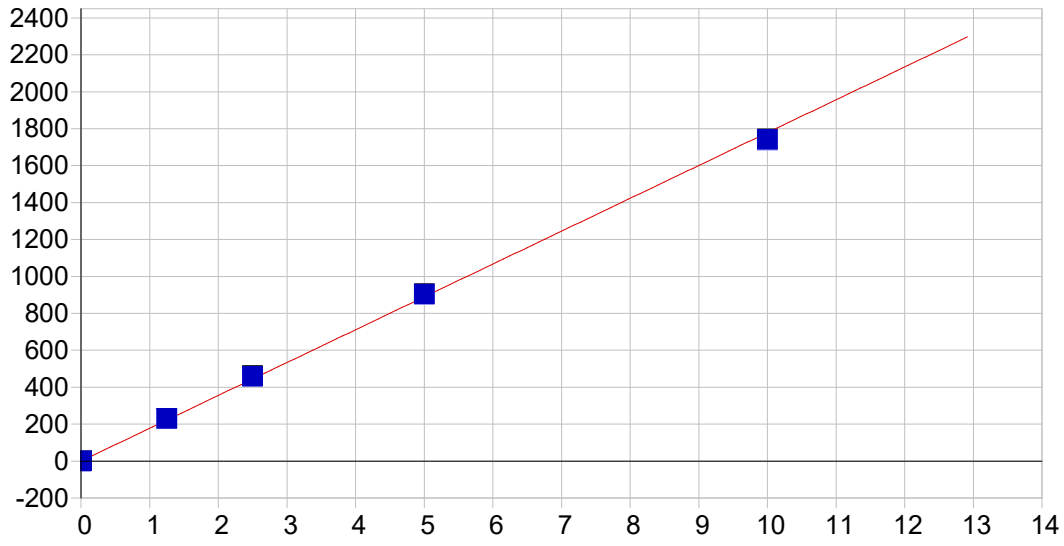
Sample Name: CCB091 Acquired: 12/10/2024 19:54:39 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v6) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB091 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000318	-.002639	-.000471	F -.010386	.0058498	.0001982
Stddev	.000383	.002423	.000231	.000905	.0024694	.0001963
%RSD	120.1443	91.80611	49.11425	8.710425	42.21377	99.00858
#1	-.000371	-.002823	-.000662	-.010741	.0034970	.0001452
#2	-.000672	-.000130	-.000537	-.011059	.0084213	.0004155
#3	.000088	-.004964	-.000214	-.009357	.0056311	.0000339

Elem	Li6707
Units	ppm
Avg	F -.033566
Stddev	.004619
%RSD	13.75977
#1	-.034644
#2	-.028503
#3	-.037550

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2516.498	27786.29	2695.770	1961.358	3937.028
Stddev	17.777	158.43	25.067	7.852	24.139
%RSD	.7064354	.5701837	.9298504	.4003159	.6131316
#1	2517.050	27959.51	2689.628	1969.921	3939.174
#2	2498.451	27750.65	2723.337	1959.653	3911.888
#3	2533.993	27648.71	2674.345	1954.498	3960.023

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5



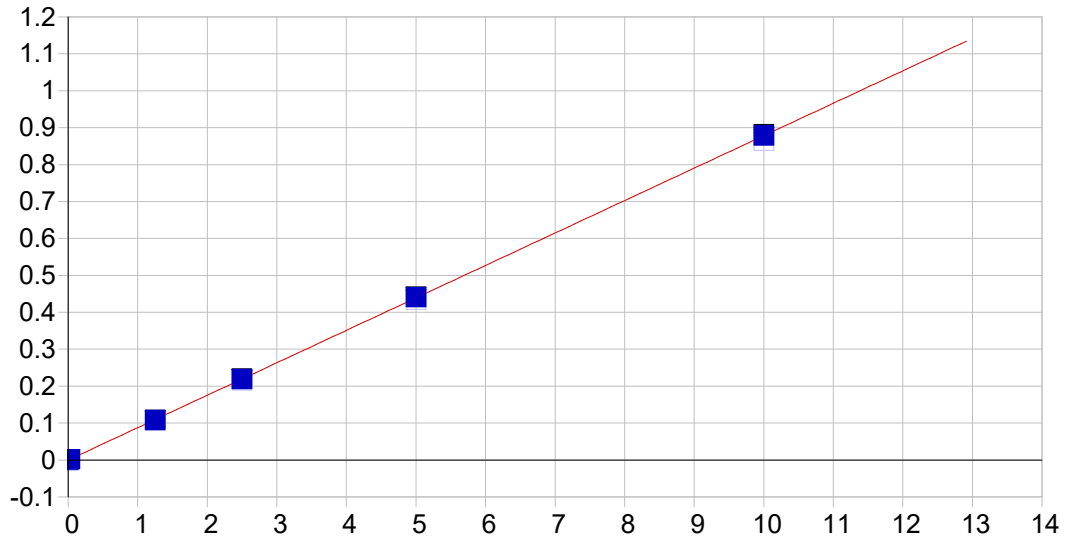
As 189.042 {478}

Date of Fit:	12/13/2024 12:00:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.433338	Re-Slope:	1.000000
A1 (Gain):	177.910618	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999711	Status:	OK.
Std Error of Est:	0.071441		
Predicted MDL:	0.004256		
Predicted MQL:	0.014187		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.43397	.404	1
S1	.01000	.01293	.003	29.3	1.8638	.759	1
S2	1.2500	1.2912	.041	3.30	228.35	.925	1
S3	2.5000	2.5830	.083	3.32	457.23	2.40	1
S4	5.0000	5.0830	.083	1.66	900.15	1.08	1
S5	10.000	9.7899	-.210	-2.10	1733.8	4.03	1

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5



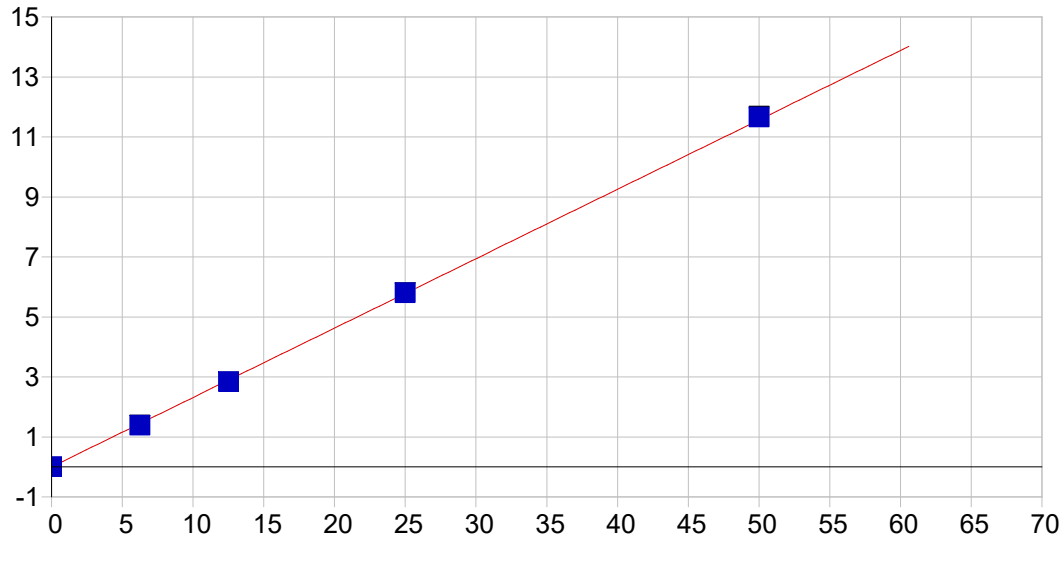
Tl 190.856 {477}

Date of Fit:	12/13/2024 12:00:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000296	Re-Slope:	1.000000
A1 (Gain):	0.087854	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999986	Status:	OK.
Std Error of Est:	0.000012		
Predicted MDL:	0.002471		
Predicted MQL:	0.008236		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00030	.000	1
S1	.02500	.02572	.001	2.86	.00188	.000	1
S2	1.2500	1.2286	-.021	-1.71	.10594	.001	1
S3	2.5000	2.4958	-.004	-.167	.21557	.001	1
S4	5.0000	5.0236	.024	.471	.43425	.000	1
S5	10.000	10.001	.001	.013	.86476	.003	1

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5



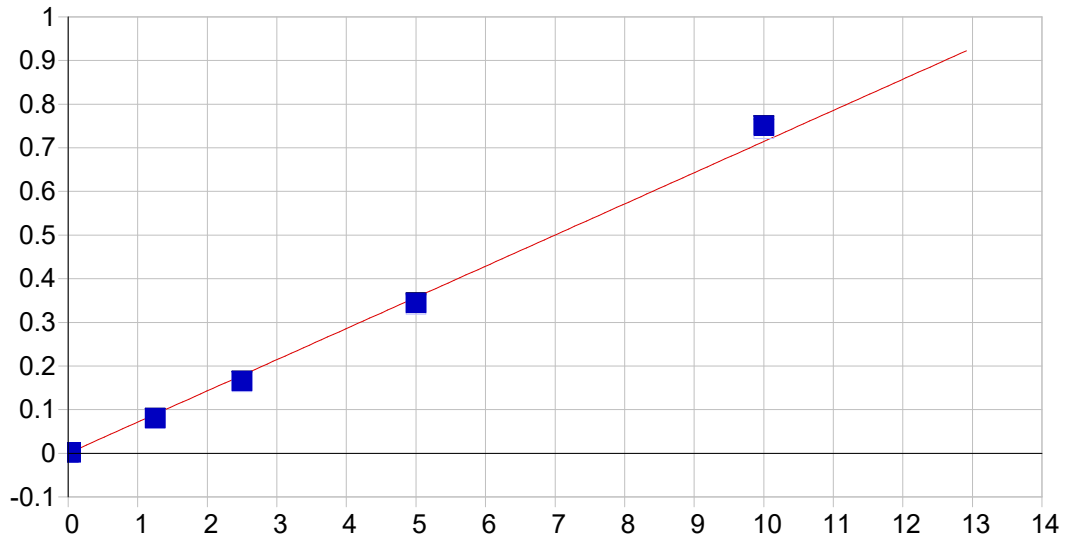
Pb 220.353 {453}

Date of Fit:	12/13/2024 12:00:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000222	Re-Slope:	1.000000
A1 (Gain):	0.231335	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999895	Status:	OK.
Std Error of Est:	0.000126		
Predicted MDL:	0.002135		
Predicted MQL:	0.007117		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00022	.000	1
S1	.01000	.00827	-.002	-17.3	.00212	.000	1
S2	6.2500	5.9837	-.266	-4.26	1.3831	.001	1
S3	12.500	12.269	-.231	-1.85	2.8357	.003	1
S4	25.000	25.081	.081	.324	5.7969	.005	1
S5	50.000	50.418	.418	.837	11.653	.026	1

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5



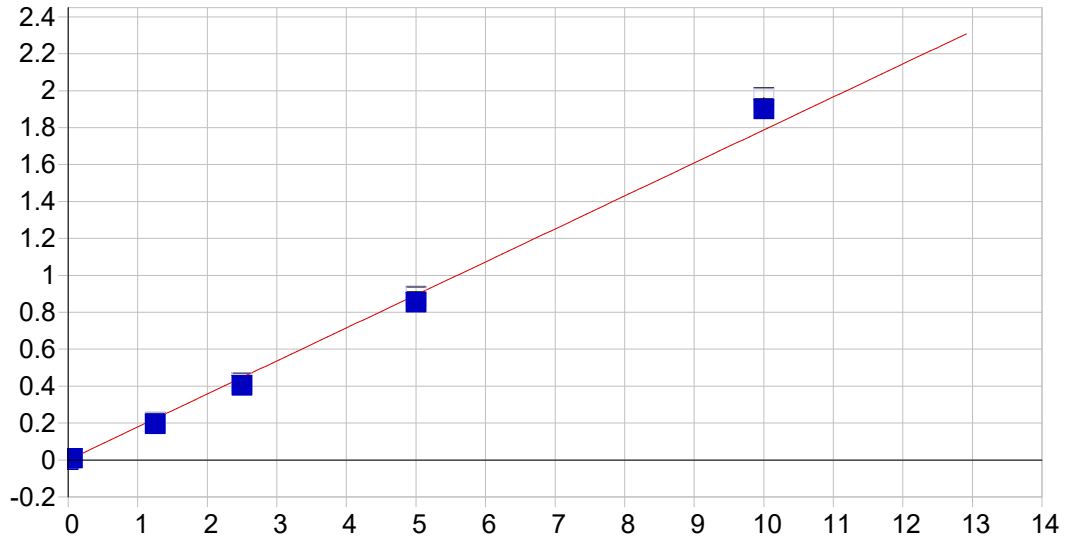
Se 196.090 {472}

Date of Fit:	12/13/2024 12:00:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000185	Re-Slope:	1.000000
A1 (Gain):	0.071410	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998311	Status:	OK.
Std Error of Est:	0.000129		
Predicted MDL:	0.004136		
Predicted MQL:	0.013785		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00019	.000	1
S1	.03500	.02623	-.009	-25.1	.00206	.000	1
S2	1.2500	1.1187	-.131	-10.5	.07913	.001	1
S3	2.5000	2.3108	-.189	-7.57	.16332	.001	1
S4	5.0000	4.8226	-.177	-3.55	.34082	.001	1
S5	10.000	10.507	.507	5.07	.74297	.000	1

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5



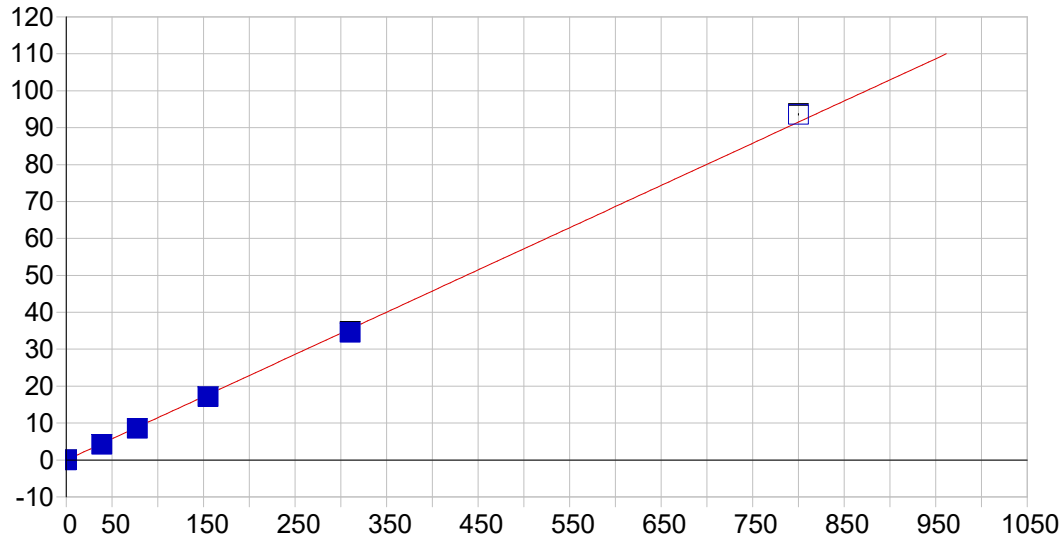
Sb 206.833 {463}

Date of Fit:	12/13/2024 12:00:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000261	Re-Slope:	1.000000
A1 (Gain):	0.178719	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.997660	Status:	OK.
Std Error of Est:	0.000520		
Predicted MDL:	0.002308		
Predicted MQL:	0.007695		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00002	.000	.000	.00026	.000	1
S1	.06000	.05200	-.008	-13.3	.00956	.000	1
S2	1.2500	1.0940	-.156	-12.5	.20324	.000	1
S3	2.5000	2.2563	-.244	-9.75	.41843	.001	1
S4	5.0000	4.7756	-.224	-4.49	.88362	.003	1
S5	10.000	10.632	.632	6.32	1.9601	.003	1

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5



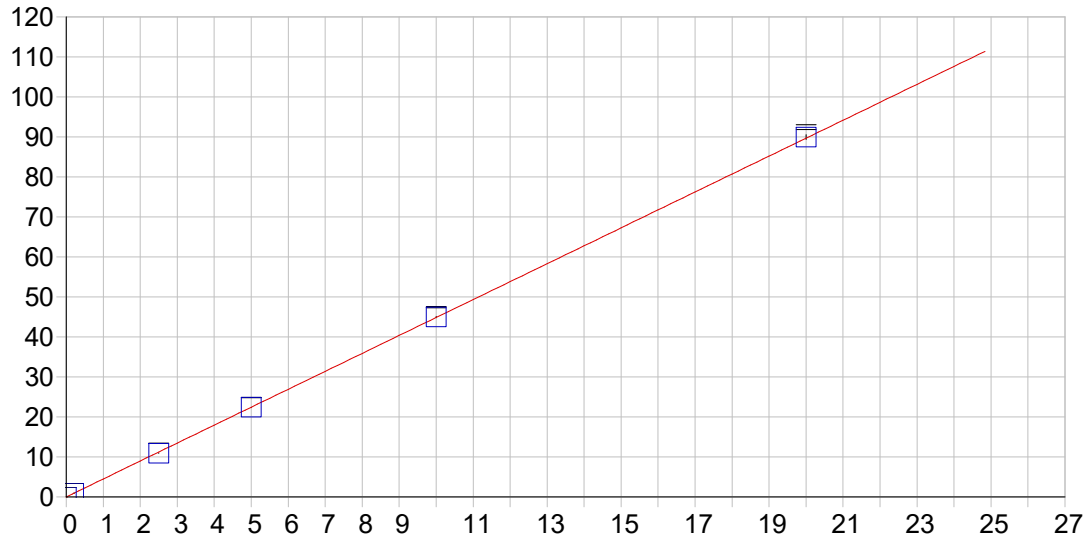
Al 396.152 { 85}

Date of Fit:	12/13/2024 12:00:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001247	Re-Slope:	1.000000
A1 (Gain):	0.114392	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999629	Status:	OK.
Std Error of Est:	0.001939		
Predicted MDL:	0.021525		
Predicted MQL:	0.071751		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00004	.000	.000	-.00124	.002	1
S1	.20000	.18492	-.015	-7.54	.01994	.002	1
S2	38.750	36.661	-2.09	-5.39	4.1973	.012	1
S3	77.500	74.643	-2.86	-3.69	8.5469	.020	1
S4	155.00	149.86	-5.14	-3.32	17.160	.059	1
S5	310.00	301.80	-8.20	-2.65	34.560	.208	1
S6	800.00	818.33	18.3	2.29	93.609	.214	1

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5



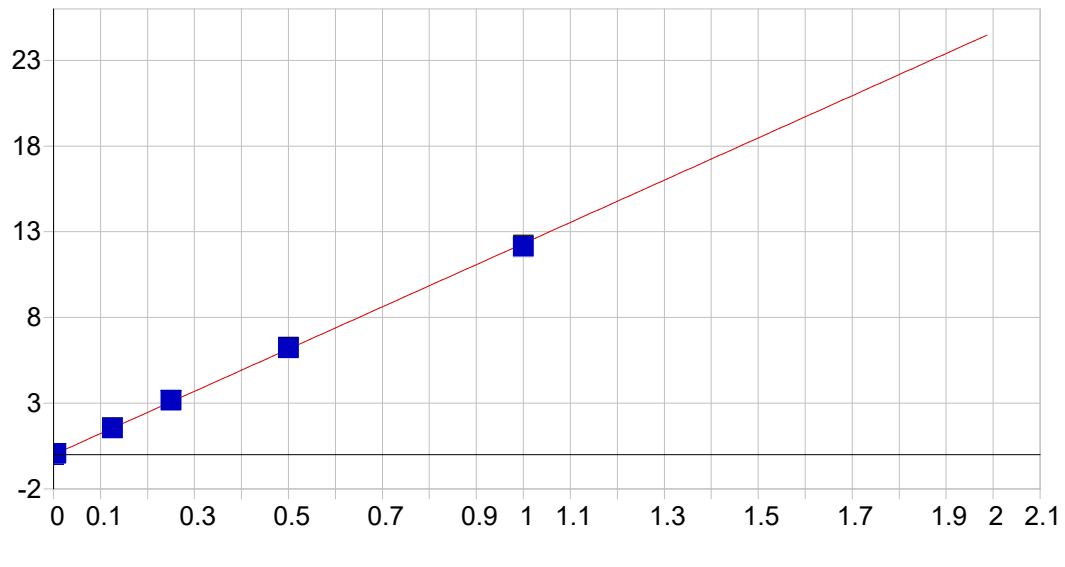
Ba 493.409 { 68}

Date of Fit:	12/13/2024 12:00:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.007200	Re-Slope:	1.000000
A1 (Gain):	4.483920	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999969	Status:	OK.
Std Error of Est:	0.003743		
Predicted MDL:	0.000989		
Predicted MQL:	0.003295		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00720	.003	1
S1	.20000	.20481	.005	2.40	.92554	.001	1
S2	2.5000	2.4296	-.070	-2.82	10.901	.036	1
S3	5.0000	4.9887	-.011	-.227	22.376	.063	1
S4	10.000	10.020	.020	.198	44.935	.146	1
S5	20.000	20.057	.057	.285	89.942	.585	1

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5



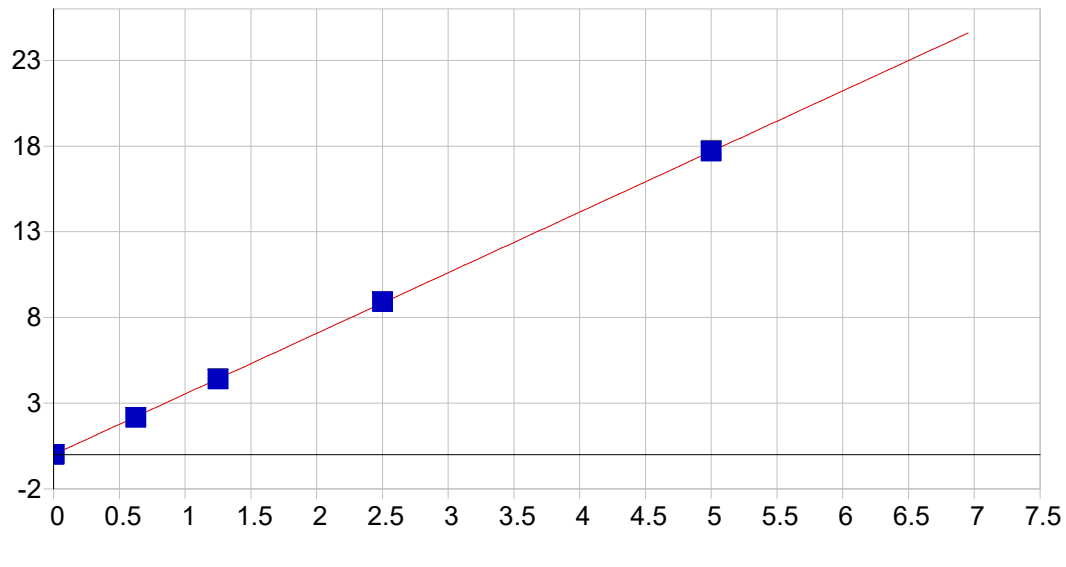
Be 234.861 {144}

Date of Fit:	12/13/2024 12:00:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001415	Re-Slope:	1.000000
A1 (Gain):	12.316497	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999874	Status:	OK.
Std Error of Est:	0.000732		
Predicted MDL:	0.000109		
Predicted MQL:	0.000363		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00142	.000	1
S1	.00500	.00524	.000	4.90	.06313	.000	1
S2	.12500	.12613	.001	.900	1.5449	.020	1
S3	.25000	.25693	.007	2.77	3.1489	.012	1
S4	.50000	.50562	.006	1.12	6.1978	.046	1
S5	1.0000	.98608	-.014	-1.39	12.087	.087	1

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5



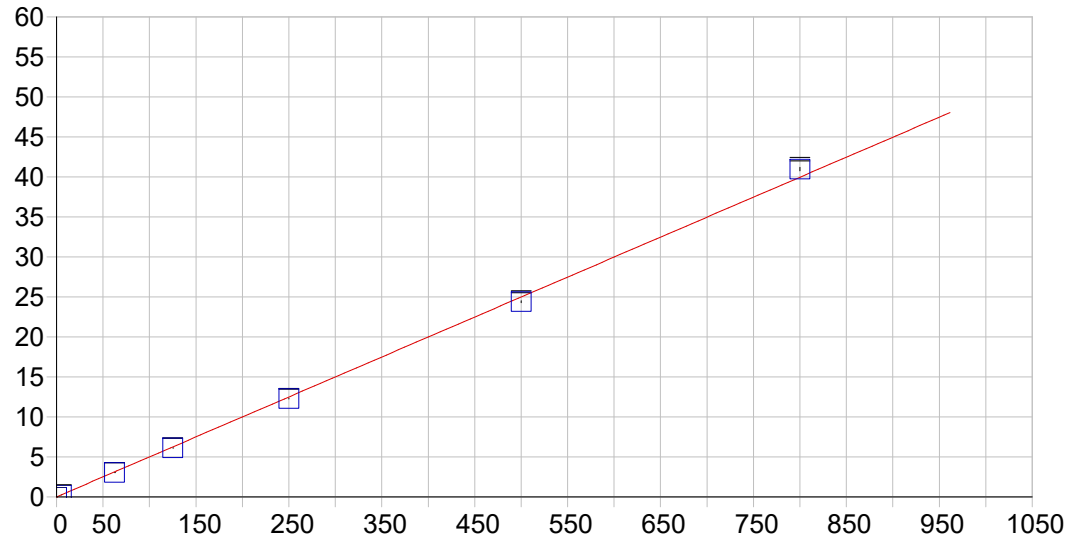
Cd 214.438 {457}

Date of Fit:	12/13/2024 12:00:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000174	Re-Slope:	1.000000
A1 (Gain):	3.536725	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999968	Status:	OK.
Std Error of Est:	0.000239		
Predicted MDL:	0.000093		
Predicted MQL:	0.000311		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00018	.000	1
S1	.00500	.00476	-.000	-4.82	.01707	.000	1
S2	.62500	.60928	-.016	-2.52	2.1584	.005	1
S3	1.2500	1.2437	-.006	-.503	4.4056	.005	1
S4	2.5000	2.5207	.021	.826	8.9286	.008	1
S5	5.0000	5.0016	.002	.032	17.717	.037	1

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5



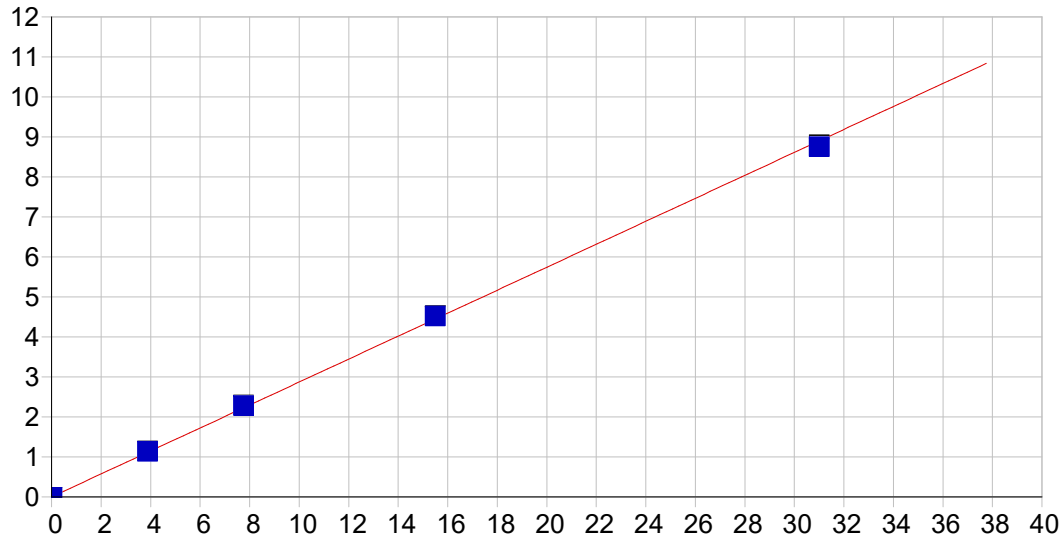
Ca 373.690 { 90}

Date of Fit:	12/13/2024 12:00:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.006986	Re-Slope:	1.000000
A1 (Gain):	0.049949	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999724	Status:	OK.
Std Error of Est:	0.004099		
Predicted MDL:	0.038572		
Predicted MQL:	0.128575		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00032	.000	.000	.00700	.001	1
S1	5.0000	5.0111	.011	.223	.25729	.004	1
S2	62.500	60.557	-1.94	-3.11	3.0318	.007	1
S3	125.00	122.62	-2.38	-1.90	6.1320	.003	1
S4	250.00	245.66	-4.34	-1.74	12.278	.025	1
S5	500.00	488.39	-11.6	-2.32	24.402	.125	1
S6	800.00	820.25	20.3	2.53	40.978	.226	1

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

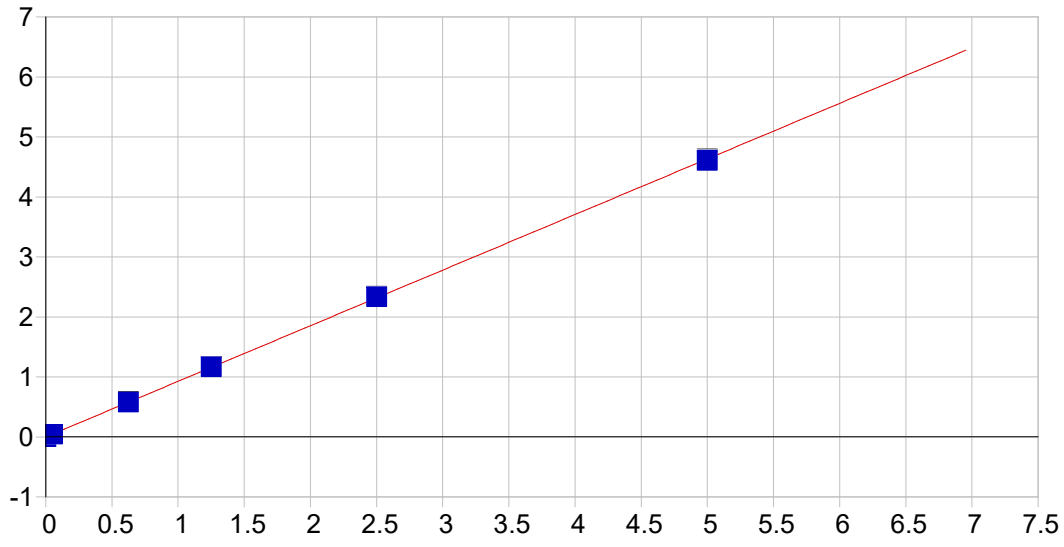


Cr 267.716 {126}

Date of Fit:	12/13/2024 12:00:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000325	Re-Slope:	1.000000
A1 (Gain):	0.287082	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999836	Status:	OK.
Std Error of Est:	0.000154		
Predicted MDL:	0.000786		
Predicted MQL:	0.002620		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00033	.000	1
S1	.01000	.00990	-.000	-.989	.00317	.000	1
S2	3.8750	3.9692	.094	2.43	1.1407	.004	1
S3	7.7500	7.9423	.192	2.48	2.2821	.011	1
S4	15.500	15.731	.231	1.49	4.5199	.011	1
S5	31.000	30.482	-.518	-1.67	8.7581	.044	1



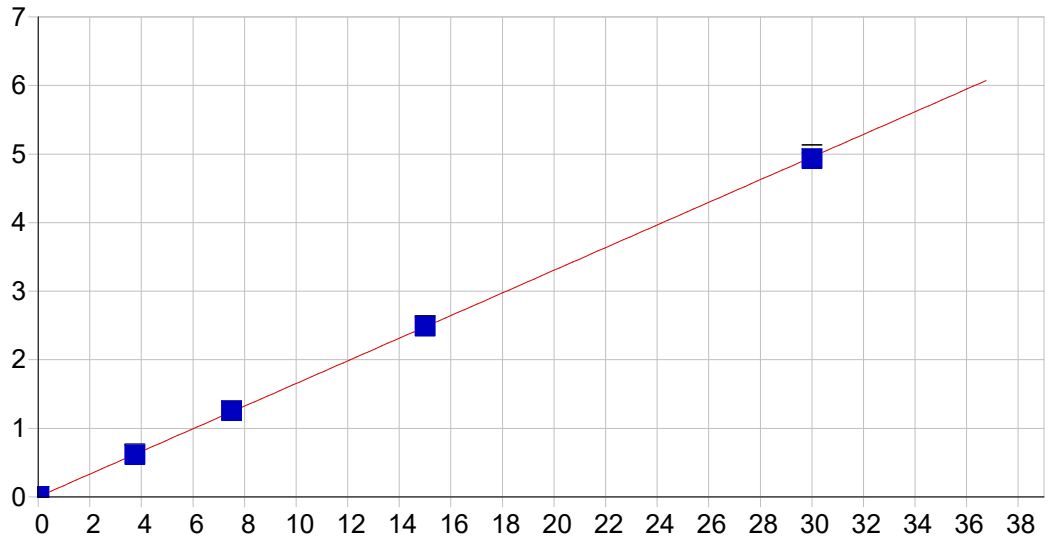
Co 228.616 {448}

Date of Fit:	12/13/2024 12:00:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000347	Re-Slope:	1.000000
A1 (Gain):	0.926704	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999981	Status:	OK.
Std Error of Est:	0.000151		
Predicted MDL:	0.000385		
Predicted MQL:	0.001285		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00035	.000	1
S1	.05000	.05076	.001	1.53	.04685	.001	1
S2	.62500	.62565	.001	.104	.58131	.001	1
S3	1.2500	1.2588	.009	.700	1.1699	.003	1
S4	2.5000	2.5177	.018	.706	2.3402	.002	1
S5	5.0000	4.9722	-.028	-.557	4.6223	.008	1

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5



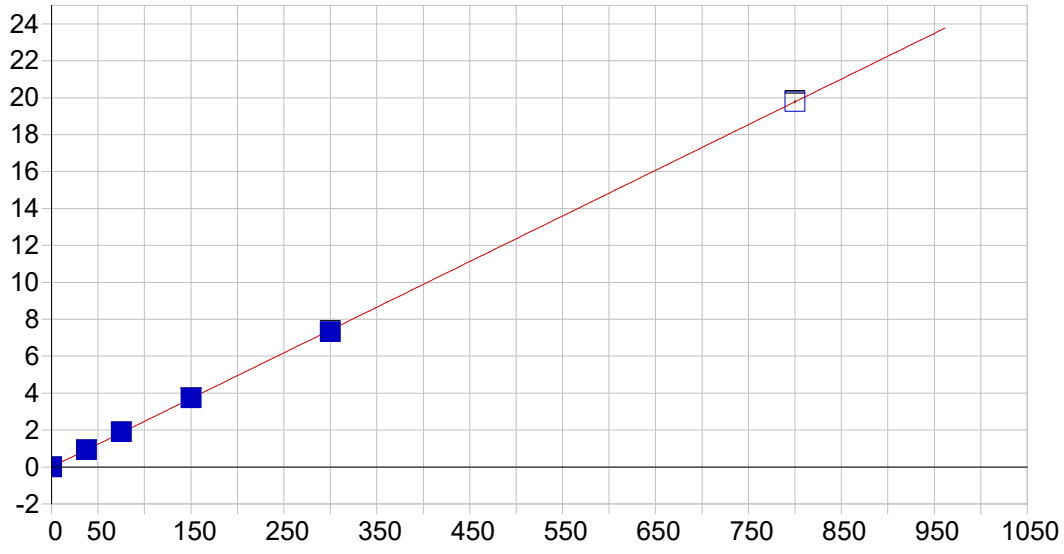
Cu 324.754 {104}

Date of Fit:	12/13/2024 12:00:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002480	Re-Slope:	1.000000
A1 (Gain):	0.165126	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999975	Status:	OK.
Std Error of Est:	0.000054		
Predicted MDL:	0.007437		
Predicted MQL:	0.024791		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00248	.001	1
S1	.02500	.02937	.004	17.5	.00733	.000	1
S2	3.7500	3.7284	-.022	-.577	.61806	.005	1
S3	7.5000	7.5899	.090	1.20	1.2556	.005	1
S4	15.000	15.062	.062	.411	2.4893	.009	1
S5	30.000	29.866	-.134	-.448	4.9335	.057	1

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5



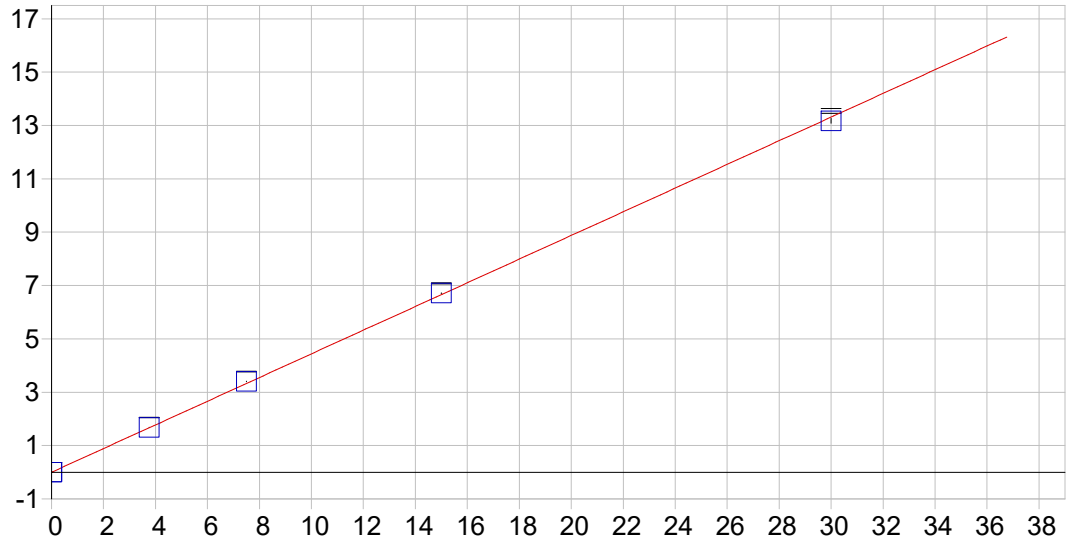
Fe 259.837 {130}

Date of Fit:	12/13/2024 12:00:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000175	Re-Slope:	1.000000
A1 (Gain):	0.024718	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999965	Status:	OK.
Std Error of Est:	0.000090		
Predicted MDL:	0.031201		
Predicted MQL:	0.104002		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00018	.001	1
S1	.10000	.08774	-.012	-12.3	.00234	.000	1
S2	37.500	37.618	.118	.316	.93022	.003	1
S3	75.000	76.578	1.58	2.10	1.8934	.010	1
S4	150.00	151.39	1.39	.924	3.7429	.012	1
S5	300.00	296.30	-3.70	-1.23	7.3256	.052	1
S6	800.00	800.63	.633	.079	19.790	.070	1

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5



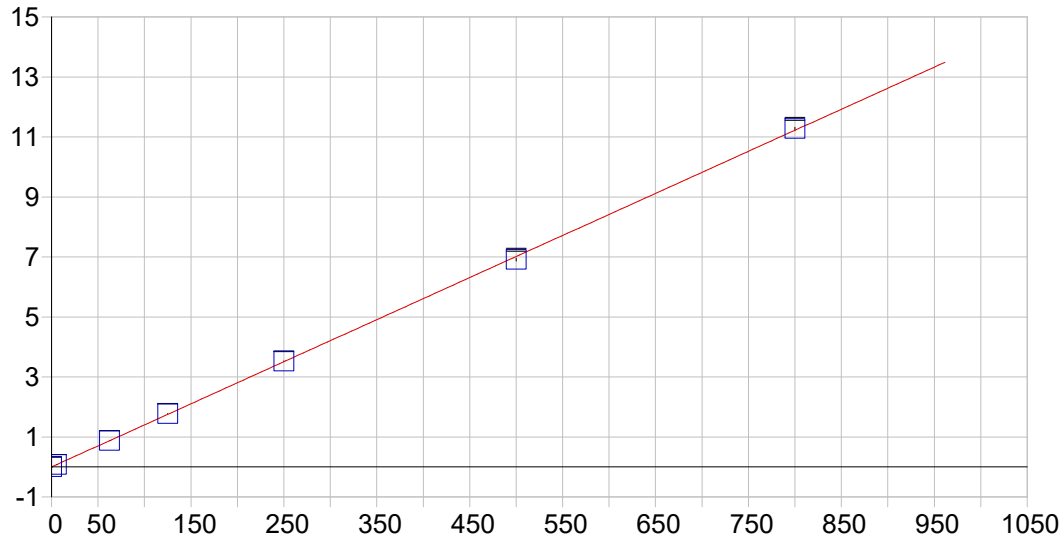
Mn 257.610 {131}

Date of Fit:	12/13/2024 12:00:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000333	Re-Slope:	1.000000
A1 (Gain):	0.443879	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999923	Status:	OK.
Std Error of Est:	0.000196		
Predicted MDL:	0.001440		
Predicted MQL:	0.004801		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00033	.000	1
S1	.01500	.01679	.002	11.9	.00712	.001	1
S2	3.7500	3.7840	.034	.906	1.6793	.005	1
S3	7.5000	7.6698	.170	2.26	3.4041	.013	1
S4	15.000	15.116	.116	.773	6.7093	.017	1
S5	30.000	29.678	-.322	-1.07	13.173	.088	1

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5



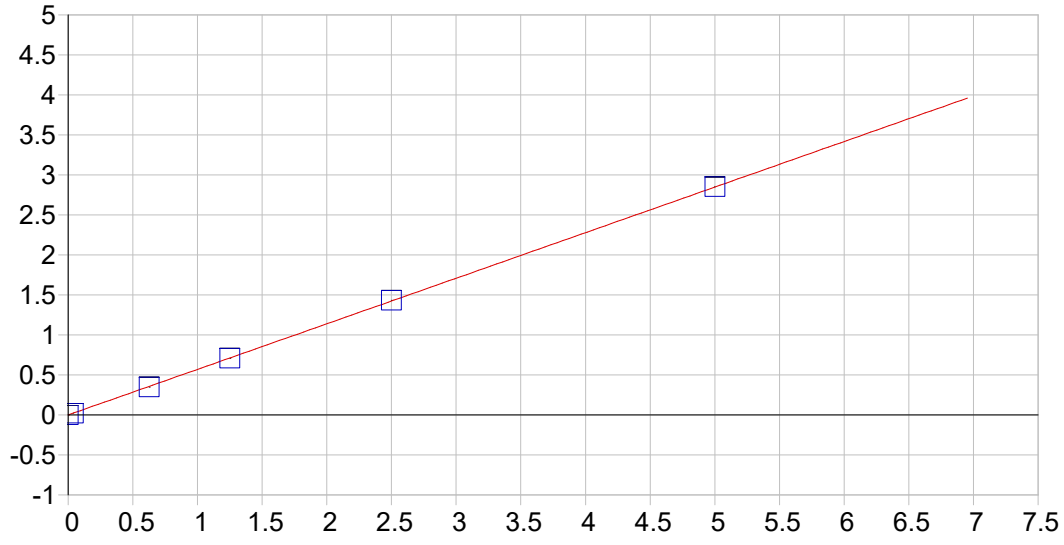
Mg 279.079 {121}

Date of Fit:	12/13/2024 12:00:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001611	Re-Slope:	1.000000
A1 (Gain):	0.014029	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999953	Status:	OK.
Std Error of Est:	0.000477		
Predicted MDL:	0.062027		
Predicted MQL:	0.206757		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00037	-.000	.000	-.00162	.000	1
S1	5.0000	5.3123	.312	6.25	.07291	.001	1
S2	62.500	62.706	.206	.330	.87808	.004	1
S3	125.00	126.76	1.76	1.40	1.7766	.005	1
S4	250.00	251.06	1.06	.424	3.5204	.008	1
S5	500.00	492.97	-7.03	-1.41	6.9142	.048	1
S6	800.00	803.69	3.69	.462	11.273	.050	1

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5



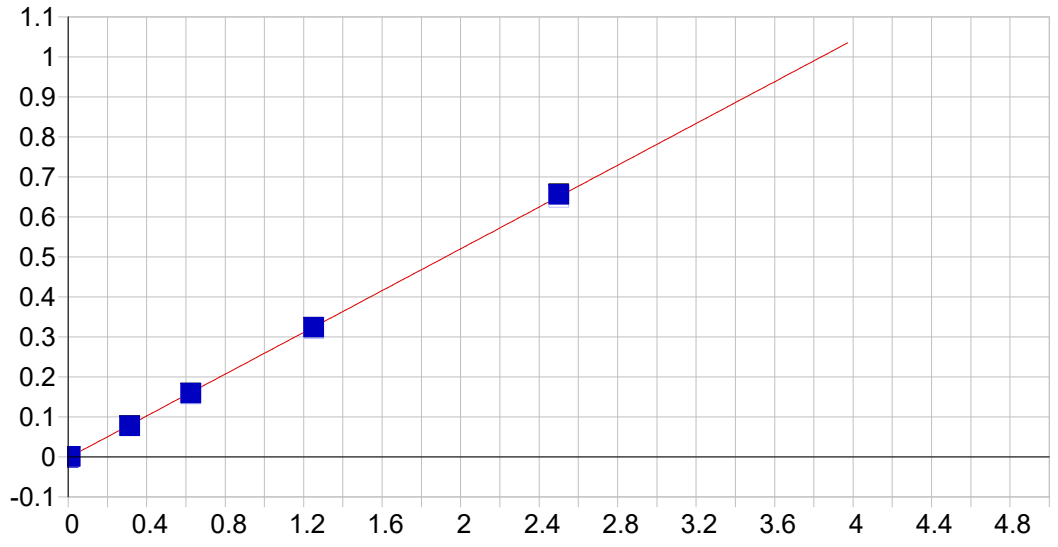
Ni 231.604 {446}

Date of Fit:	12/13/2024 12:00:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000258	Re-Slope:	1.000000
A1 (Gain):	0.569559	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999969	Status:	OK.
Std Error of Est:	0.000106		
Predicted MDL:	0.000655		
Predicted MQL:	0.002183		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00026	.000	1
S1	.04000	.03874	-.001	-3.16	.02181	.000	1
S2	.62500	.60939	-.016	-2.50	.34683	.001	1
S3	1.2500	1.2432	-.007	-.543	.70782	.002	1
S4	2.5000	2.5161	.016	.643	1.4328	.001	1
S5	5.0000	5.0076	.008	.152	2.8519	.004	1

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5



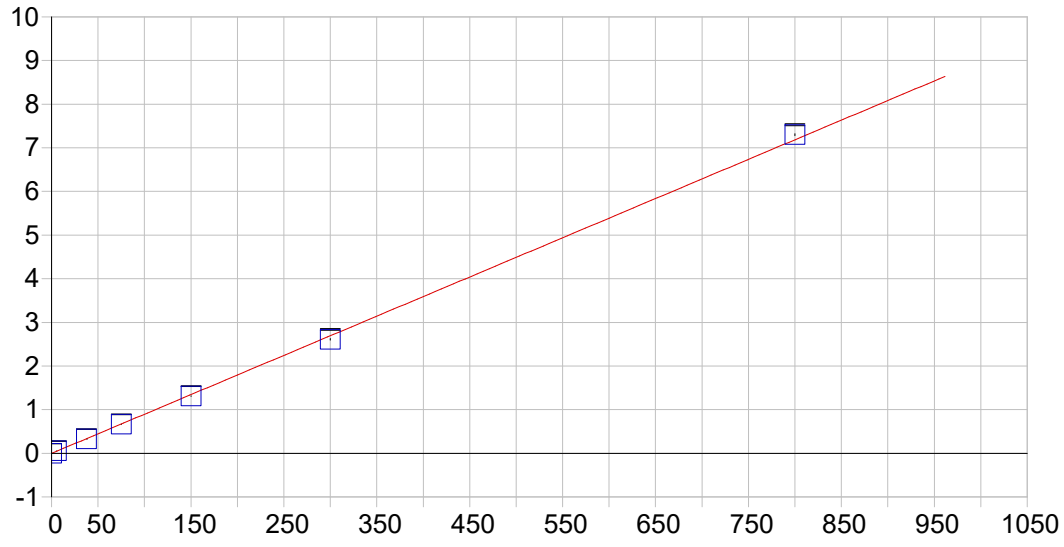
Ag 328.068 {103}

Date of Fit:	12/13/2024 12:00:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001984	Re-Slope:	1.000000
A1 (Gain):	0.261098	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999951	Status:	OK.
Std Error of Est:	0.000021		
Predicted MDL:	0.001200		
Predicted MQL:	0.004000		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00198	.000	1
S1	.01000	.00961	-.000	-3.87	.00052	.000	1
S2	.31250	.30498	-.008	-2.41	.07667	.000	1
S3	.62500	.61691	-.008	-1.29	.15713	.000	1
S4	1.2500	1.2472	-.003	-.226	.31973	.001	1
S5	2.5000	2.5188	.019	.753	.64784	.002	1

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5



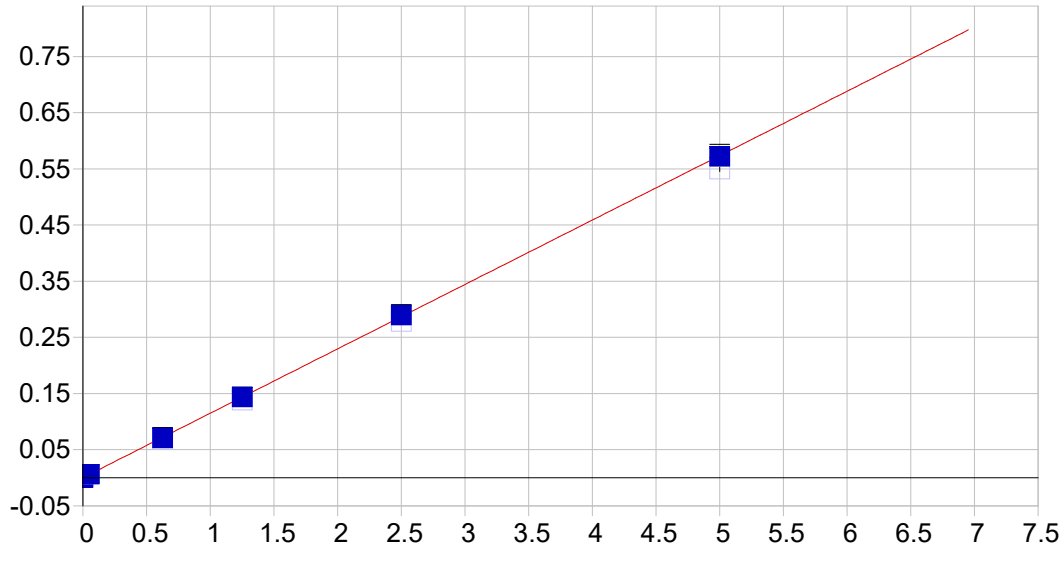
Na 818.326 { 41}

Date of Fit:	12/13/2024 12:00:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.003609	Re-Slope:	1.000000
A1 (Gain):	0.008986	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999643	Status:	OK.
Std Error of Est:	0.000743		
Predicted MDL:	0.608237		
Predicted MQL:	2.027456		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00102	-.001	.000	-.00362	.006	1
S1	5.0000	6.3542	1.35	27.1	.05349	.006	1
S2	37.500	36.853	-.647	-1.73	.32754	.003	1
S3	75.000	74.360	-.640	-.853	.66457	.006	1
S4	150.00	146.15	-3.85	-2.56	1.3097	.005	1
S5	300.00	290.77	-9.23	-3.08	2.6091	.019	1
S6	800.00	813.01	13.0	1.63	7.3019	.025	1

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5



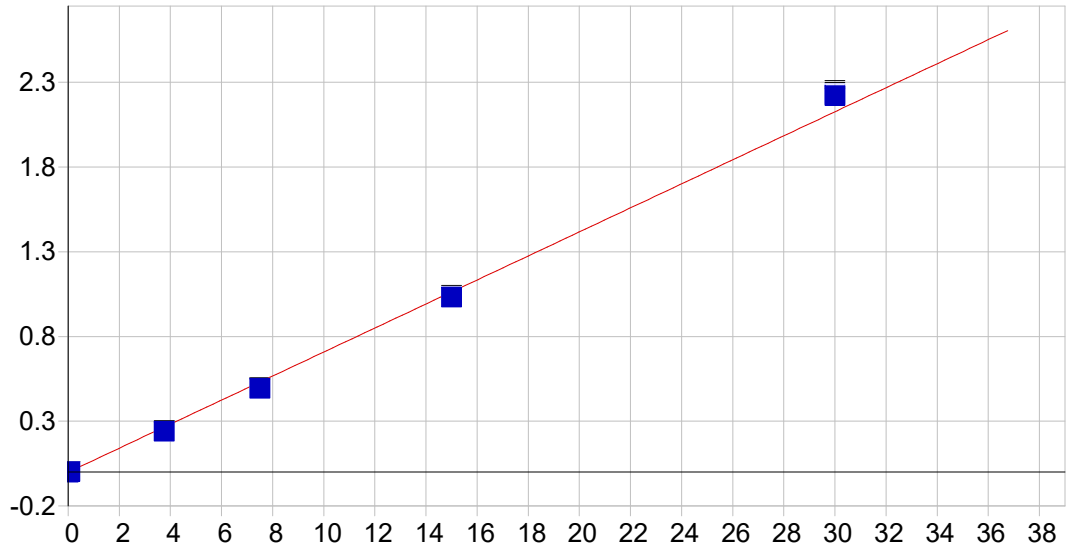
V 292.402 {115}

Date of Fit:	12/13/2024 12:00:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000310	Re-Slope:	1.000000
A1 (Gain):	0.114665	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999970	Status:	OK.
Std Error of Est:	0.000023		
Predicted MDL:	0.008378		
Predicted MQL:	0.027928		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00031	.001	1
S1	.05000	.05172	.002	3.45	.00622	.000	1
S2	.62500	.61283	-.012	-1.95	.06771	.001	1
S3	1.2500	1.2491	-.001	-.072	.13779	.000	1
S4	2.5000	2.5227	.023	.907	.27808	.001	1
S5	5.0000	4.9886	-.011	-.228	.54935	.004	1

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5



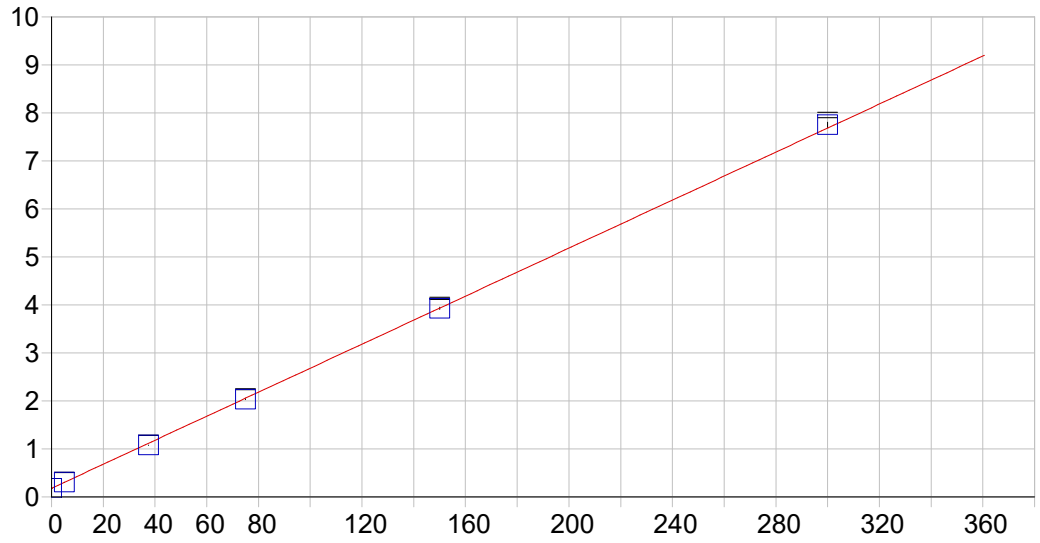
Zn 213.856 {158}

Date of Fit:	12/13/2024 12:00:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000973	Re-Slope:	1.000000
A1 (Gain):	0.070908	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998692	Status:	OK.
Std Error of Est:	0.000260		
Predicted MDL:	0.007531		
Predicted MQL:	0.025103		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00002	.000	.000	-.00097	.000	1
S1	.06000	.04974	-.010	-17.1	.00257	.001	1
S2	3.7500	3.3870	-.363	-9.68	.24049	.003	1
S3	7.5000	6.9657	-.534	-7.12	.49555	.003	1
S4	15.000	14.556	-.444	-2.96	1.0364	.006	1
S5	30.000	31.352	1.35	4.51	2.2325	.019	1

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5



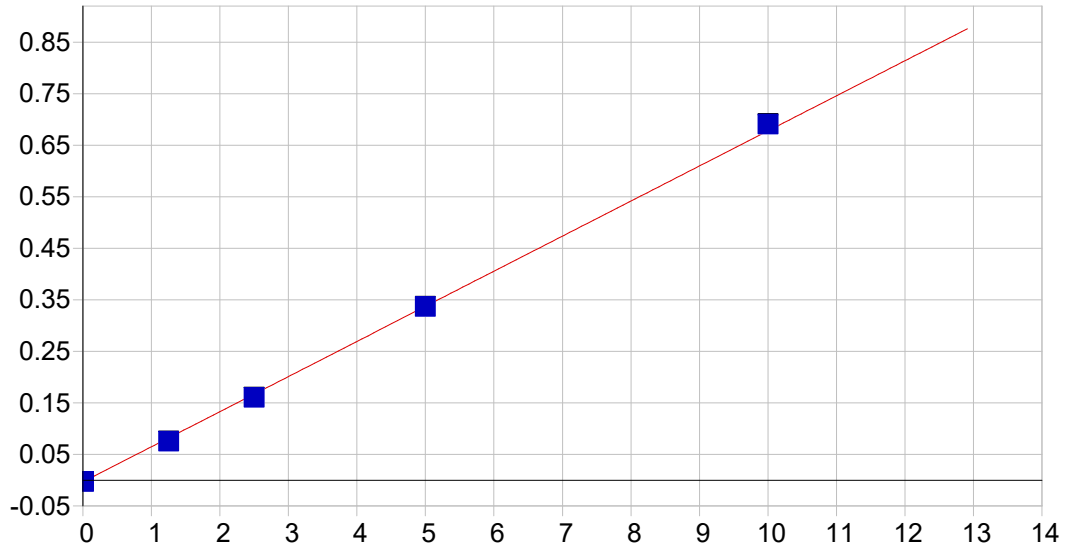
K 769.896 { 44}

Date of Fit:	12/13/2024 12:00:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.180518	Re-Slope:	1.000000
A1 (Gain):	0.025012	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999906	Status:	OK.
Std Error of Est:	0.000709		
Predicted MDL:	0.161071		
Predicted MQL:	0.536904		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00030	.000	.000	.18053	.003	1
S1	5.0000	4.9410	-.059	-1.18	.30410	.003	1
S2	37.500	35.841	-1.66	-4.42	1.0770	.006	1
S3	75.000	74.168	-.832	-1.11	2.0356	.011	1
S4	150.00	149.88	-.123	-.082	3.9292	.021	1
S5	300.00	302.67	2.67	.891	7.7509	.055	1

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5



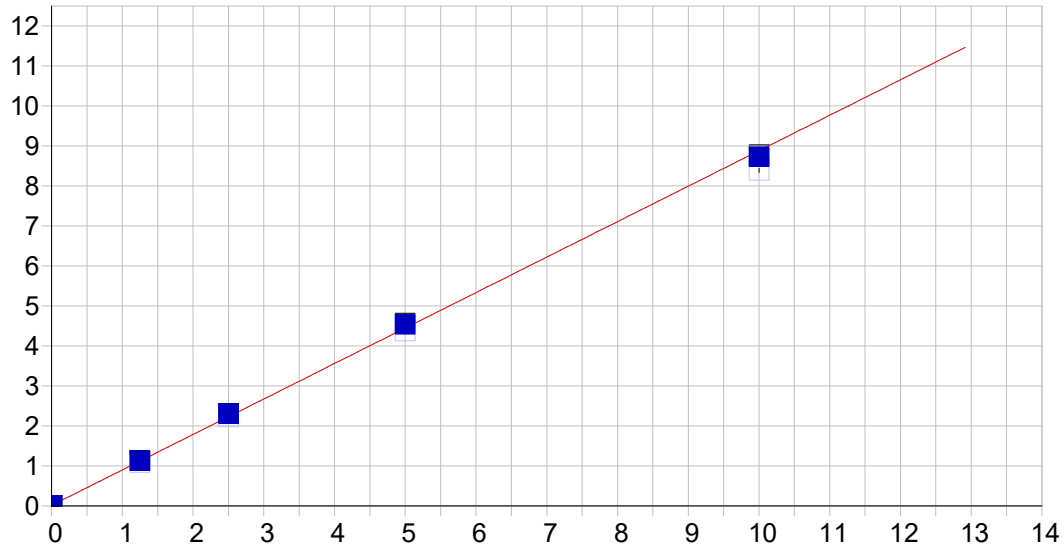
P 177.495 {490}

Date of Fit:	12/13/2024 12:00:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.003168	Re-Slope:	1.000000
A1 (Gain):	0.068100	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999585	Status:	OK.
Std Error of Est:	0.000033		
Predicted MDL:	0.002270		
Predicted MQL:	0.007568		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00317	.000	1
S1	.01000	.00685	-.003	-31.5	-.00270	.000	1
S2	1.2500	1.1546	-.095	-7.64	.07533	.000	1
S3	2.5000	2.4084	-.092	-3.66	.16060	.000	1
S4	5.0000	4.9925	-.007	-.149	.33633	.001	1
S5	10.000	10.198	.198	1.98	.69030	.001	1

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5



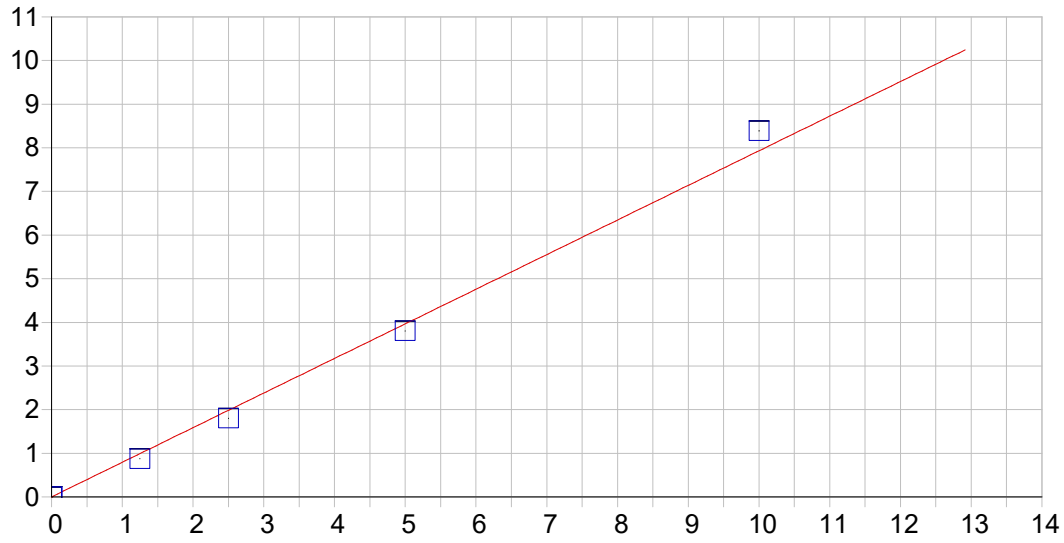
B 249.678 {135}

Date of Fit:	12/13/2024 12:00:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.012960	Re-Slope:	1.000000
A1 (Gain):	0.887014	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998999	Status:	OK.
Std Error of Est:	0.000641		
Predicted MDL:	0.001909		
Predicted MQL:	0.006363		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00002	.000	.000	.01297	.001	1
S1	.01000	-.00630	-.016	-163.	.00732	.001	1
S2	1.2500	1.2546	.005	.366	1.0836	.011	1
S3	2.5000	2.5879	.088	3.52	2.2241	.005	1
S4	5.0000	5.1002	.100	2.00	4.3682	.033	1
S5	10.000	9.8242	-.176	-1.76	8.3899	.052	1

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5



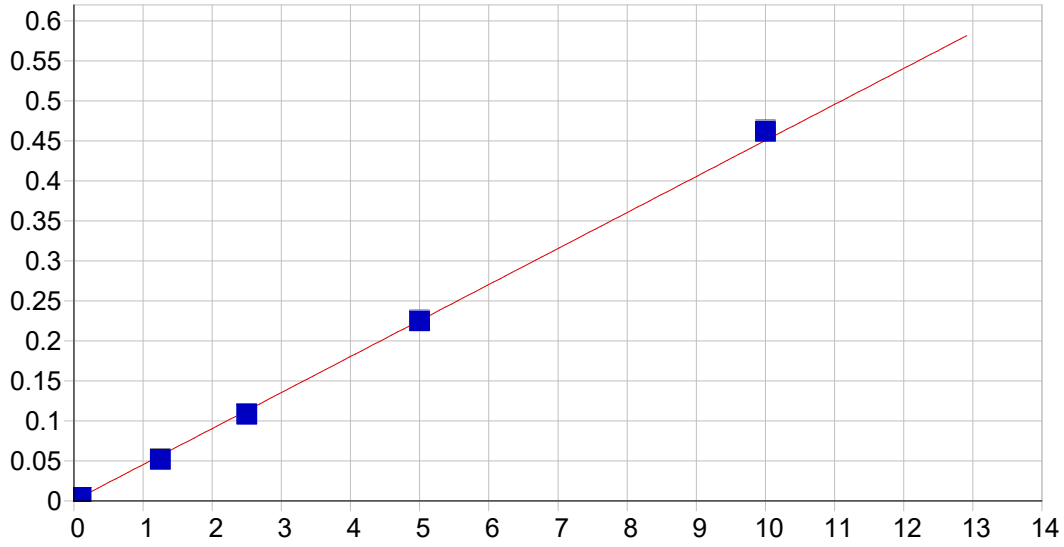
Mo 202.030 {467}

Date of Fit:	12/13/2024 12:00:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000404	Re-Slope:	1.000000
A1 (Gain):	0.793174	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.997876	Status:	OK.
Std Error of Est:	0.000868		
Predicted MDL:	0.000423		
Predicted MQL:	0.001409		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00041	.000	1
S1	.01000	.00901	-.001	-9.90	.00755	.000	1
S2	1.2500	1.1036	-.146	-11.7	.87575	.001	1
S3	2.5000	2.2713	-.229	-9.15	1.8019	.002	1
S4	5.0000	4.7971	-.203	-4.06	3.8053	.004	1
S5	10.000	10.579	.579	5.79	8.3914	.009	1

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5



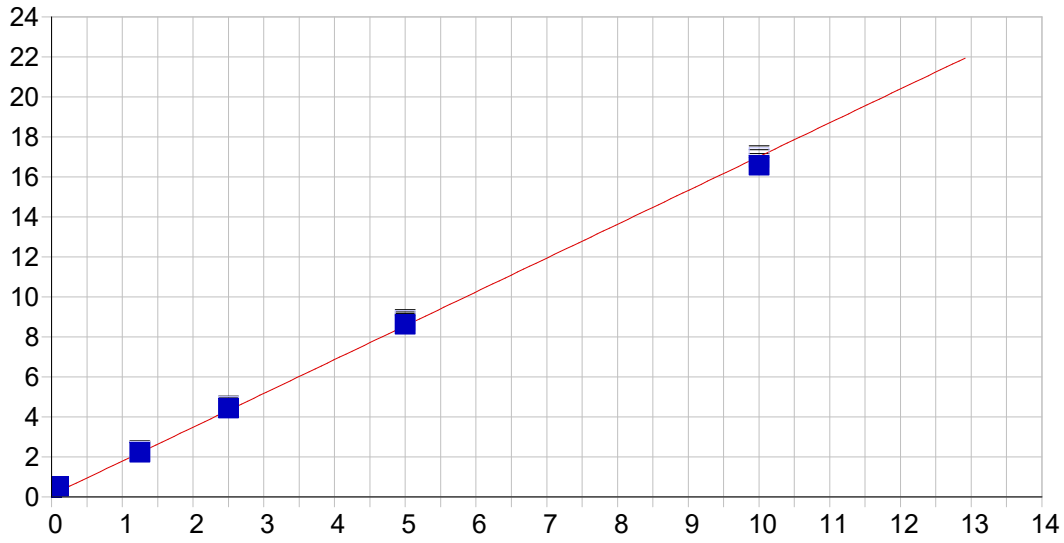
S 182.034 {485}

Date of Fit:	12/13/2024 12:00:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000466	Re-Slope:	1.000000
A1 (Gain):	0.045004	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999418	Status:	OK.
Std Error of Est:	0.000082		
Predicted MDL:	0.004015		
Predicted MQL:	0.013383		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00002	.000	.000	.00047	.000	1
S1	.10000	.08877	-.011	-11.2	.00446	.000	1
S2	1.2500	1.1388	-.111	-8.90	.05190	.000	1
S3	2.5000	2.3893	-.111	-4.43	.10835	.000	1
S4	5.0000	4.9880	-.012	-.240	.22567	.000	1
S5	10.000	10.245	.245	2.45	.46298	.001	1

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5



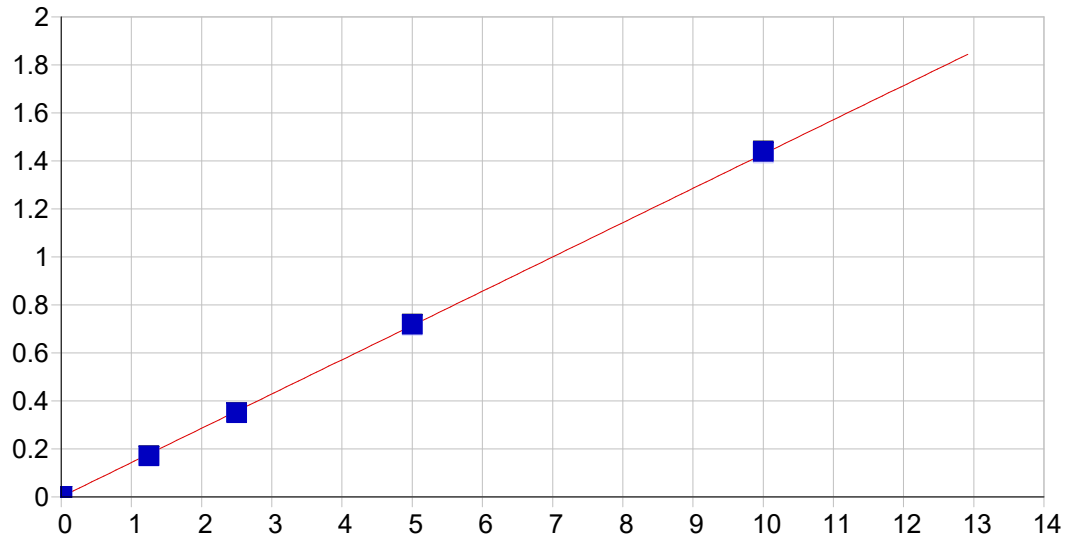
Si 251.611 {134}

Date of Fit:	12/13/2024 12:00:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.097402	Re-Slope:	1.000000
A1 (Gain):	1.691746	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.993900	Status:	OK.
Std Error of Est:	0.010201		
Predicted MDL:	0.000947		
Predicted MQL:	0.003157		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00015	-.000	.000	.09714	.001	1
S1	.10000	.25292	.153	153.	.52768	.003	1
S2	1.2500	1.2608	.011	.864	2.2784	.026	1
S3	2.5000	2.5613	.061	2.45	4.5264	.019	1
S4	5.0000	5.0360	.036	.720	8.8090	.062	1
S5	10.000	9.7403	-.260	-2.60	16.960	.102	1

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5



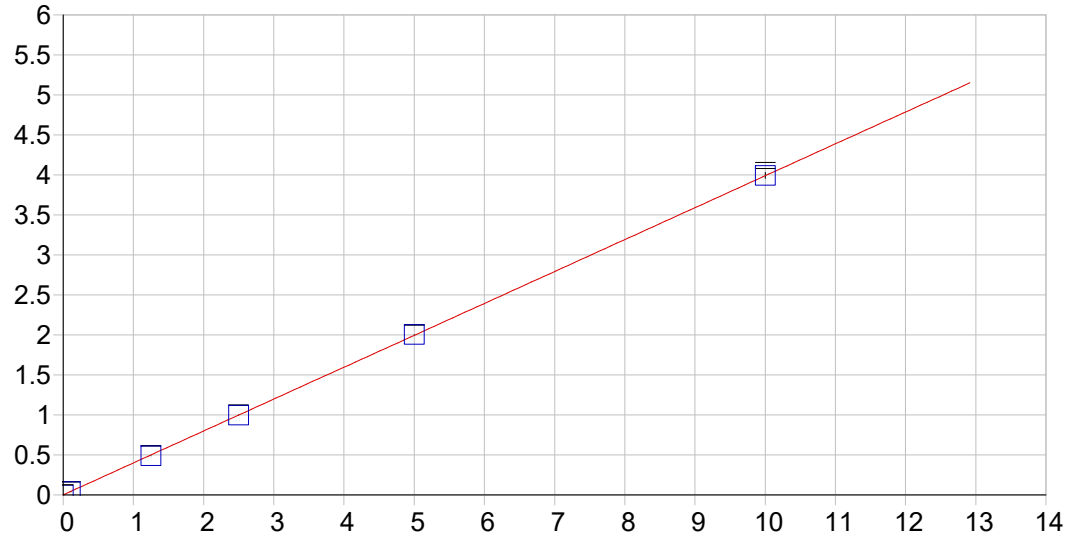
Sn 189.989 {478}

Date of Fit:	12/13/2024 12:00:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000178	Re-Slope:	1.000000
A1 (Gain):	0.142809	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999882	Status:	OK.
Std Error of Est:	0.000031		
Predicted MDL:	0.001161		
Predicted MQL:	0.003870		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00018	.000	1
S1	.00700	.00625	-.001	-10.7	.00103	.000	1
S2	1.2500	1.1906	-.059	-4.76	.16931	.000	1
S3	2.5000	2.4566	-.043	-1.74	.34922	.000	1
S4	5.0000	5.0293	.029	.585	.71483	.001	1
S5	10.000	10.074	.074	.743	1.4317	.003	1

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5



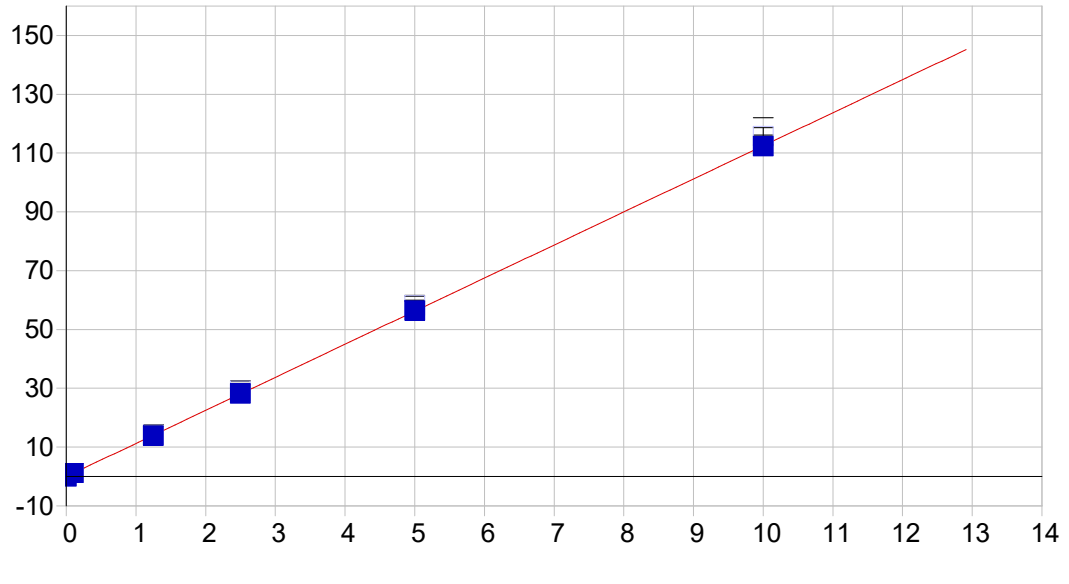
Ti 336.121 {100}

Date of Fit:	12/13/2024 12:00:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001097	Re-Slope:	1.000000
A1 (Gain):	0.398778	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999981	Status:	OK.
Std Error of Est:	0.000130		
Predicted MDL:	0.003541		
Predicted MQL:	0.011804		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00110	.001	1
S1	.10000	.09873	-.001	-1.27	.04047	.000	1
S2	1.2500	1.2223	-.028	-2.22	.48851	.002	1
S3	2.5000	2.4988	-.001	-.048	.99756	.002	1
S4	5.0000	5.0181	.018	.363	2.0022	.002	1
S5	10.000	10.012	.012	.121	3.9937	.038	1

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5



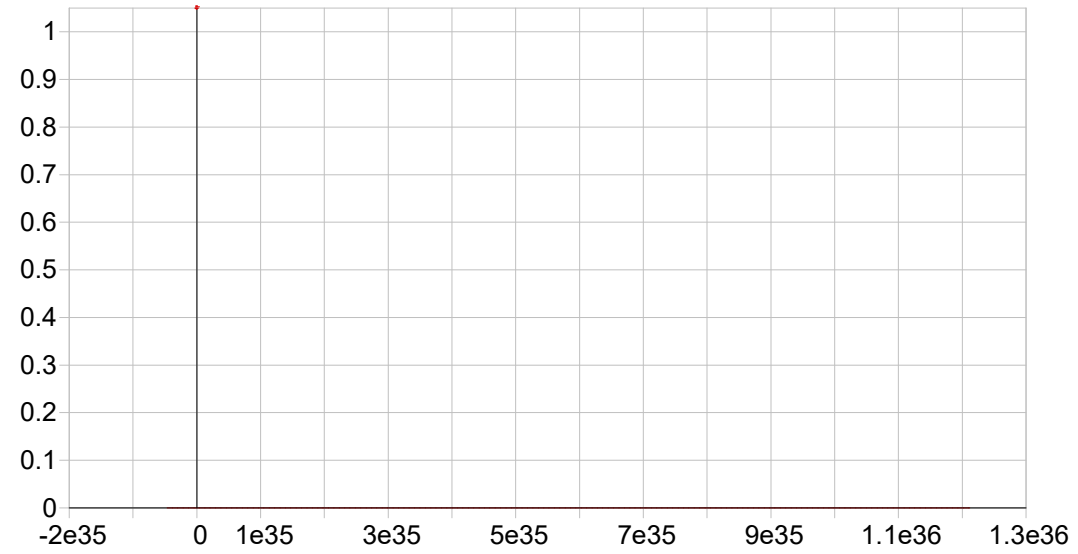
Sr 407.771 { 83}

Date of Fit:	12/13/2024 12:00:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.004133	Re-Slope:	1.000000
A1 (Gain):	11.247076	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999978	Status:	OK.
Std Error of Est:	0.004039		
Predicted MDL:	0.000211		
Predicted MQL:	0.000704		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00418	.002	1
S1	.10000	.10553	.006	5.53	1.1839	.001	1
S2	1.2500	1.2264	-.024	-1.89	14.211	.072	1
S3	2.5000	2.5102	.010	.407	29.071	.110	1
S4	5.0000	5.0171	.017	.341	58.110	.158	1
S5	10.000	9.9910	-.009	-.090	115.74	2.93	1

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

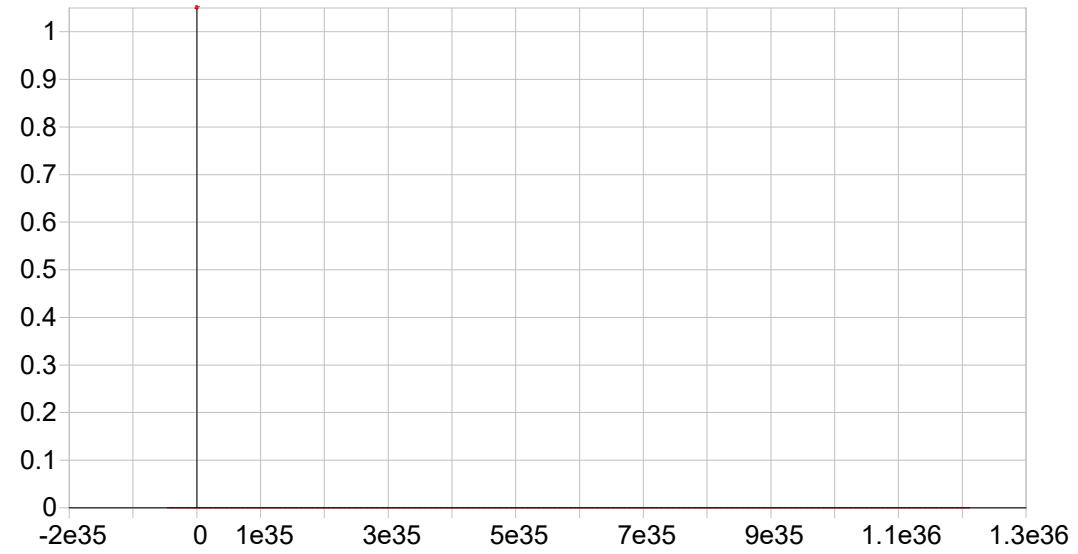


Y 224.306 {450}*

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

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

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



Y 360.073 { 94}*

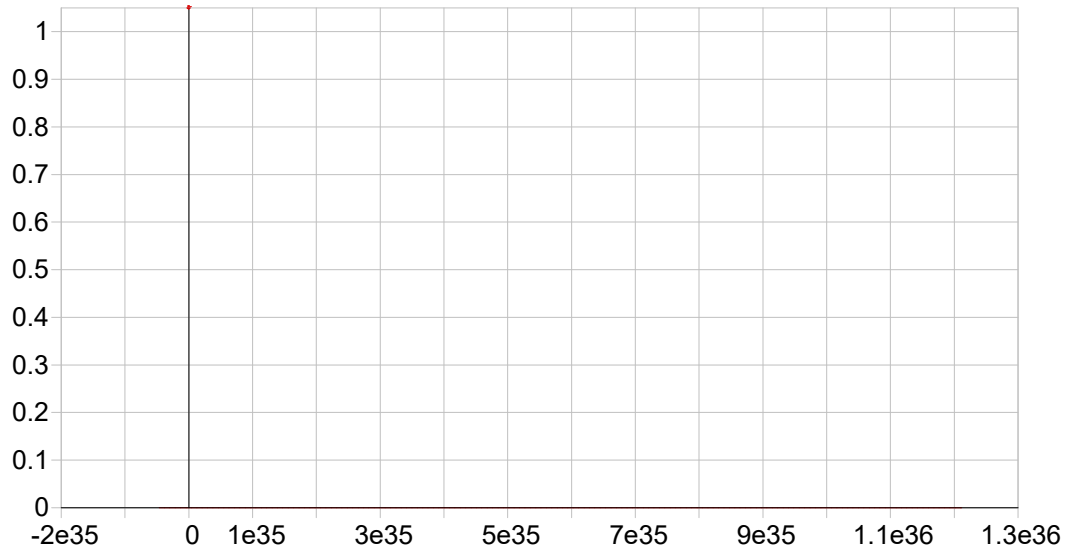
Date of Fit:	<not fit>	Type of Fit:	Linear	Weighting:	1/Conc

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

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

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

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



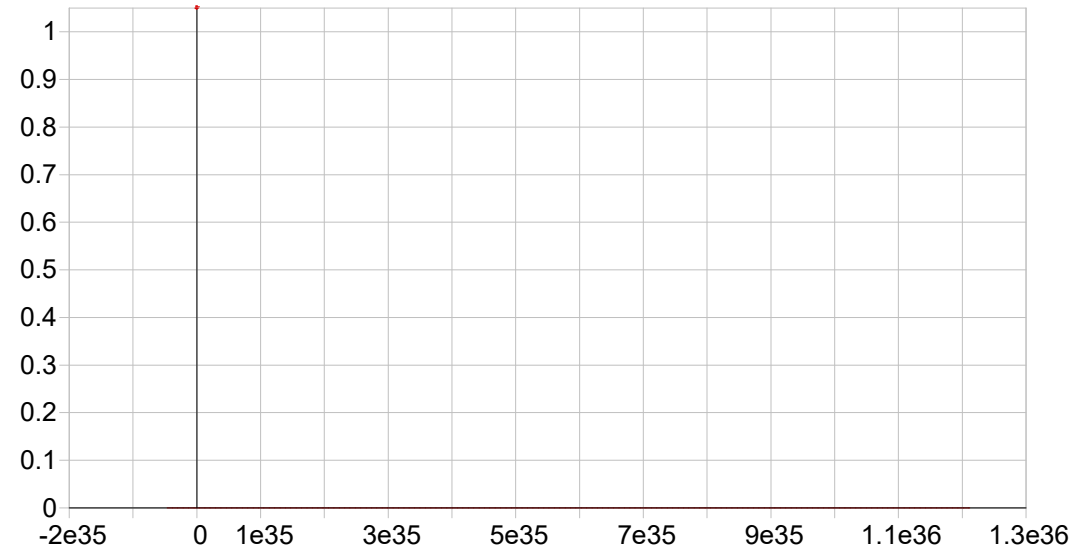
Y 371.030 { 91}*

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

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

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

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

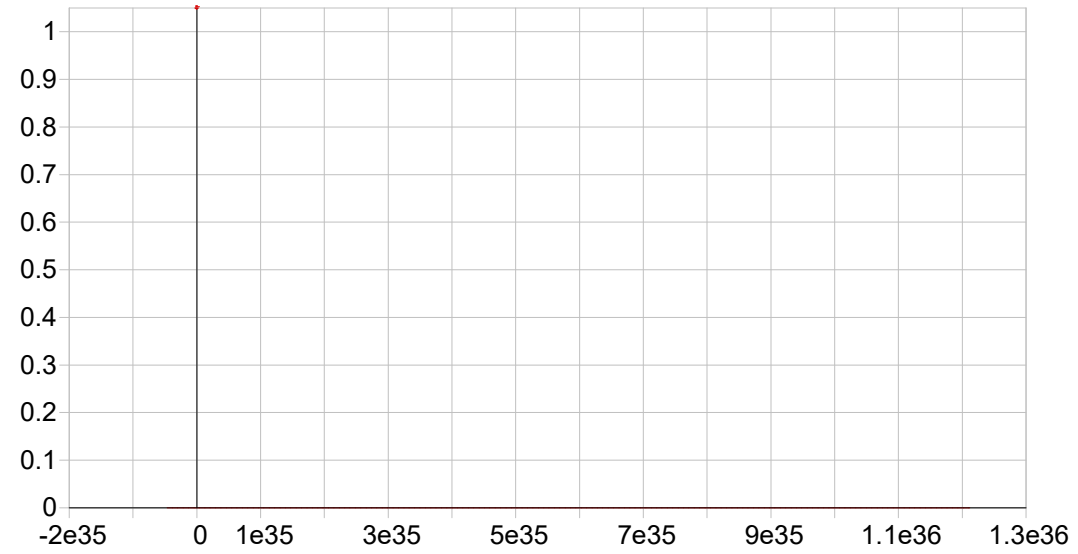


Y 224.306 {150}*

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

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

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



In 230.606 {446}*

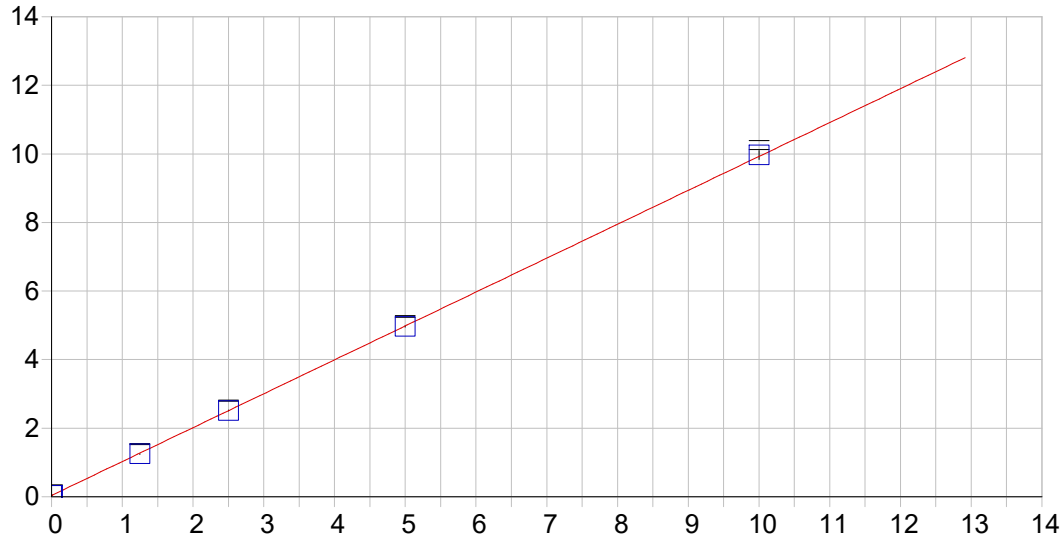
Date of Fit:	<not fit>	Type of Fit:	Linear	Weighting:	1/Conc

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

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

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



Li 670.784 { 50}

Date of Fit:	12/13/2024 12:00:28	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.038365	Re-Slope:	1.000000
A1 (Gain):	0.988674	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999891	Status:	OK.
Std Error of Est:	0.000300		
Predicted MDL:	0.004887		
Predicted MQL:	0.016289		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.03837	.004	1
S5	10.000	10.046	.046	.461	9.9706	.130	1
S4	5.0000	4.9844	-.016	-.311	4.9663	.023	1
S3	2.5000	2.5040	.004	.161	2.5140	.017	1
S2	1.2500	1.2224	-.028	-2.21	1.2469	.013	1
S1	.01500	.00806	-.007	-46.3	.04633	.008	1

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: S0 Acquired: 12/13/2024 11:23:34 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S0 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	-.43397	-.00030	.00022	.00019	.00026	-.00124	.00720	-.00142
Stddev	.40424	.00013	.00024	.00026	.00028	.00220	.00322	.00032
%RSD	93.150	43.123	106.22	141.32	106.12	177.40	44.662	22.460
#1	.02750	-.00019	.00049	.00049	.00014	-.00378	.00684	-.00106
#2	-.60390	-.00044	.00013	.00003	.00007	.00010	.00418	-.00155
#3	-.72551	-.00027	.00005	.00004	.00059	-.00004	.01058	-.00165

Elem	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00018	.00700	.00033	-.00035	.00248	.00018	-.00033	-.00162
Stddev	.00019	.00083	.00022	.00016	.00064	.00105	.00048	.00038
%RSD	109.90	11.908	68.783	45.181	25.959	600.29	143.70	23.374
#1	.00007	.00655	.00008	-.00031	.00305	-.00099	-.00083	-.00200
#2	.00040	.00796	.00051	-.00022	.00178	.00048	.00013	-.00161
#3	.00006	.00649	.00039	-.00052	.00261	.00104	-.00031	-.00124

Elem	Ni2316	Ag3280	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-.00026	-.00198	-.00362	.00031	-.00097	.18053	-.00317	.01297
Stddev	.00024	.00015	.00635	.00062	.00006	.00338	.00004	.00118
%RSD	95.036	7.5467	175.40	201.81	6.5136	1.8739	1.2668	9.1227
#1	-.00049	-.00209	-.01089	.00023	-.00090	.18088	-.00313	.01274
#2	-.00000	-.00205	.00082	.00097	-.00101	.17698	-.00321	.01193
#3	-.00028	-.00181	-.00079	-.00027	-.00101	.18372	-.00316	.01426

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077	Li6707
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00041	.00047	.09714	.00018	.00110	-.00418	.03837
Stddev	.00024	.00023	.00126	.00012	.00109	.00171	.00403
%RSD	58.827	49.596	1.2973	68.795	99.497	40.822	10.503
#1	.00067	.00072	.09570	.00005	.00047	-.00603	.04249
#2	.00020	.00041	.09769	.00020	.00236	-.00384	.03444
#3	.00035	.00027	.09803	.00029	.00047	-.00267	.03818

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: S0 Acquired: 12/13/2024 11:23:34 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S0 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	2340.5	25508.	2246.9	1896.0	3122.3
Stddev	2.8	111.	9.8	13.8	4.8
%RSD	.12133	.43622	.43544	.72779	.15386
#1	2341.9	25468.	2237.5	1892.6	3118.8
#2	2337.2	25634.	2246.3	1911.2	3120.3
#3	2342.2	25423.	2257.0	1884.2	3127.8

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: S1 Acquired: 12/13/2024 11:27:42 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S01 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	1.8638	.00188	.00212	.00206	.00956	.01994	.92554	.06313
Stddev	.7591	.00013	.00045	.00021	.00013	.00164	.00103	.00035
%RSD	40.732	6.8021	21.227	10.012	1.3781	8.2474	.11172	.54762
#1	2.3730	.00182	.00259	.00221	.00953	.01895	.92637	.06273
#2	.99123	.00203	.00208	.00213	.00944	.02184	.92438	.06330
#3	2.2270	.00180	.00169	.00182	.00970	.01904	.92587	.06335

Elem	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.01707	.25729	.00317	.04685	.00733	.00234	.00712	.07291
Stddev	.00043	.00369	.00011	.00058	.00022	.00039	.00092	.00064
%RSD	2.5206	1.4353	3.4269	1.2357	3.0149	16.670	12.863	.87090
#1	.01740	.26120	.00305	.04683	.00714	.00273	.00773	.07343
#2	.01658	.25680	.00320	.04628	.00757	.00236	.00607	.07311
#3	.01723	.25386	.00326	.04743	.00727	.00195	.00756	.07221

Elem	Ni2316	Ag3280	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.02181	.00052	.05349	.00622	.00257	.30410	-.00270	.00732
Stddev	.00025	.00026	.00569	.00046	.00050	.00269	.00002	.00118
%RSD	1.1547	49.103	10.630	7.3759	19.483	.88356	.76845	16.078
#1	.02179	.00066	.05503	.00608	.00283	.30719	-.00268	.00629
#2	.02156	.00069	.04719	.00674	.00288	.30231	-.00270	.00861
#3	.02206	.00023	.05824	.00585	.00199	.30280	-.00272	.00707

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077	Li6707
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00755	.00446	.52768	.00103	.04047	1.1839	.04633
Stddev	.00025	.00007	.00252	.00002	.00033	.0011	.00818
%RSD	3.3454	1.5997	.47842	2.1934	.82307	.09245	17.648
#1	.00774	.00454	.52551	.00105	.04083	1.1852	.04018
#2	.00765	.00442	.53045	.00101	.04017	1.1835	.04320
#3	.00726	.00442	.52707	.00102	.04040	1.1832	.05561

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: S1 Acquired: 12/13/2024 11:27:42 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S01 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	2341.2	25656.	2235.1	1895.6	3134.7
Stddev	3.3	21.	7.5	2.3	3.6
%RSD	.14186	.08102	.33669	.12277	.11638
#1	2345.1	25680.	2243.6	1897.3	3138.8
#2	2339.5	25645.	2229.3	1892.9	3133.3
#3	2339.2	25642.	2232.5	1896.5	3132.0

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: S2 Acquired: 12/13/2024 11:31:49 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S02 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	228.35	.10594	1.3831	.07913	.20324	4.1973	10.901	1.5449
Stddev	.92	.00075	.0010	.00056	.00011	.0116	.036	.0196
%RSD	.40489	.70424	.07111	.70187	.05517	.27586	.33316	1.2678
#1	227.40	.10533	1.3821	.07885	.20327	4.1865	10.860	1.5238
#2	228.42	.10572	1.3832	.07878	.20334	4.1959	10.926	1.5625
#3	229.24	.10678	1.3841	.07977	.20312	4.2095	10.918	1.5485

Elem	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2.1584	3.0318	1.1407	.58131	.61806	.93022	1.6793	.87808
Stddev	.0049	.0072	.0037	.00108	.00537	.00252	.0053	.00448
%RSD	.22574	.23581	.32821	.18551	.86920	.27042	.31739	.51054
#1	2.1540	3.0258	1.1364	.58022	.61307	.92732	1.6735	.87465
#2	2.1576	3.0299	1.1422	.58135	.61736	.93157	1.6805	.87643
#3	2.1636	3.0397	1.1434	.58237	.62375	.93178	1.6839	.88315

Elem	Ni2316	Ag3280	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.34683	.07667	.32754	.06771	.24049	1.0770	.07533	1.0836
Stddev	.00064	.00037	.00259	.00122	.00334	.0063	.00017	.0113
%RSD	.18417	.47757	.78952	1.7969	1.3896	.58565	.21914	1.0460
#1	.34609	.07640	.32456	.06630	.24135	1.0713	.07518	1.0709
#2	.34713	.07652	.32925	.06842	.23680	1.0759	.07532	1.0927
#3	.34726	.07708	.32879	.06840	.24332	1.0838	.07551	1.0873

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077	Li6707
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.87575	.05190	2.2784	.16931	.48851	14.211	1.2469
Stddev	.00100	.00046	.0260	.00031	.00190	.072	.0134
%RSD	.11364	.89132	1.1415	.18562	.38810	.50801	1.0764
#1	.87489	.05166	2.2488	.16895	.48697	14.131	1.2320
#2	.87684	.05160	2.2976	.16955	.48794	14.230	1.2510
#3	.87552	.05243	2.2888	.16942	.49063	14.271	1.2578

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: S2 Acquired: 12/13/2024 11:31:49 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S02 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	2245.8	24945.	2250.6	1808.4	2873.7
Stddev	4.1	83.	17.5	9.2	3.1
%RSD	.18385	.33181	.77981	.50938	.10943
#1	2245.5	24926.	2270.8	1806.3	2873.0
#2	2241.8	25035.	2242.0	1818.4	2871.0
#3	2250.0	24873.	2239.0	1800.4	2877.2

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: S3 Acquired: 12/13/2024 11:35:39 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S03 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	457.23	.21557	2.8357	.16332	.41843	8.5469	22.376	3.1489
Stddev	2.40	.00083	.0030	.00057	.00089	.0202	.063	.0122
%RSD	.52556	.38398	.10630	.35174	.21215	.23671	.28275	.38746
#1	455.34	.21506	2.8384	.16397	.41943	8.5326	22.376	3.1543
#2	456.42	.21653	2.8361	.16287	.41814	8.5700	22.439	3.1575
#3	459.94	.21513	2.8324	.16313	.41773	8.5380	22.313	3.1349

Elem	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4.4056	6.1320	2.2821	1.1699	1.2556	1.8934	3.4041	1.7766
Stddev	.0051	.0032	.0107	.0027	.0046	.0095	.0134	.0051
%RSD	.11518	.05216	.46848	.23150	.36840	.50316	.39341	.28603
#1	4.4112	6.1354	2.2945	1.1726	1.2548	1.8870	3.3956	1.7721
#2	4.4042	6.1291	2.2759	1.1699	1.2606	1.9044	3.4196	1.7821
#3	4.4014	6.1314	2.2760	1.1672	1.2515	1.8889	3.3972	1.7757

Elem	Ni2316	Ag3280	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.70782	.15713	.66457	.13779	.49555	2.0356	.16060	2.2241
Stddev	.00177	.00021	.00596	.00047	.00269	.0108	.00026	.0048
%RSD	.25019	.13526	.89723	.33942	.54215	.52884	.16315	.21476
#1	.70967	.15732	.66414	.13746	.49401	2.0267	.16031	2.2283
#2	.70765	.15717	.67074	.13759	.49865	2.0476	.16082	2.2252
#3	.70615	.15690	.65883	.13833	.49400	2.0325	.16067	2.2189

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077	Li6707
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1.8019	.10835	4.5264	.34922	.99756	29.071	2.5140
Stddev	.0025	.00030	.0186	.00022	.00219	.110	.0173
%RSD	.13698	.27624	.41125	.06294	.21943	.37684	.68821
#1	1.8043	.10844	4.5420	.34910	.99601	29.007	2.5104
#2	1.8020	.10860	4.5315	.34947	1.0001	29.198	2.5329
#3	1.7994	.10802	4.5058	.34908	.99661	29.009	2.4988

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: S3 Acquired: 12/13/2024 11:35:39 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S03 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	2155.6	24683.	2210.6	1746.6	2757.7
Stddev	7.1	74.	8.8	2.8	8.8
%RSD	.32905	.29802	.39638	.15911	.32061
#1	2152.8	24604.	2205.3	1743.8	2755.2
#2	2150.3	24695.	2205.7	1746.5	2750.3
#3	2163.6	24749.	2220.7	1749.4	2767.5

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: S4 Acquired: 12/13/2024 11:39:25 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S04 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	900.15	.43425	5.7969	.34082	.88362	17.160	44.935	6.1978
Stddev	1.08	.00045	.0052	.00081	.00265	.059	.146	.0459
%RSD	.11993	.10399	.09002	.23808	.30040	.34292	.32425	.74085
#1	898.91	.43463	5.8028	.34137	.88357	17.093	44.784	6.1490
#2	900.86	.43375	5.7950	.33989	.88100	17.188	44.947	6.2401
#3	900.68	.43436	5.7929	.34119	.88630	17.200	45.075	6.2043

Elem	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	8.9286	12.278	4.5199	2.3402	2.4893	3.7429	6.7093	3.5204
Stddev	.0078	.025	.0113	.0020	.0093	.0123	.0172	.0079
%RSD	.08707	.20465	.24950	.08707	.37531	.32808	.25663	.22451
#1	8.9366	12.249	4.5083	2.3426	2.4801	3.7294	6.6911	3.5137
#2	8.9211	12.295	4.5308	2.3390	2.4889	3.7459	6.7116	3.5184
#3	8.9281	12.289	4.5207	2.3391	2.4988	3.7534	6.7253	3.5292

Elem	Ni2316	Ag3280	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1.4328	.31973	1.3097	.27808	1.0364	3.9292	.33633	4.3682
Stddev	.0007	.00062	.0050	.00125	.0060	.0209	.00070	.0331
%RSD	.04850	.19404	.37764	.44933	.57582	.53199	.20735	.75865
#1	1.4335	.32030	1.3042	.27681	1.0425	3.9109	.33607	4.3311
#2	1.4327	.31907	1.3110	.27812	1.0360	3.9248	.33712	4.3948
#3	1.4321	.31983	1.3139	.27931	1.0306	3.9520	.33579	4.3789

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077	Li6707
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3.8053	.22567	8.8090	.71483	2.0022	58.110	4.9663
Stddev	.0040	.00027	.0622	.00115	.0016	.158	.0227
%RSD	.10446	.11749	.70567	.16080	.08028	.27258	.45665
#1	3.8085	.22557	8.7407	.71601	2.0010	57.982	4.9418
#2	3.8009	.22547	8.8621	.71371	2.0016	58.062	4.9706
#3	3.8066	.22597	8.8243	.71477	2.0040	58.287	4.9866

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: S4 Acquired: 12/13/2024 11:39:25 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S04 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	1989.2	24158.	2201.5	1637.9	2609.8
Stddev	6.9	37.	9.2	6.1	6.5
%RSD	.34486	.15464	.41986	.37481	.24774
#1	1982.6	24116.	2211.6	1632.7	2602.6
#2	1996.3	24168.	2193.4	1636.4	2615.0
#3	1988.8	24189.	2199.6	1644.7	2611.8

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: S5 Acquired: 12/13/2024 11:43:10 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S05 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	1733.8	.86476	11.653	.74297	1.9601	34.560	89.942	12.087
Stddev	4.0	.00327	.026	.00042	.0027	.208	.585	.087
%RSD	.23261	.37769	.21982	.05684	.13915	.60115	.65042	.71605
#1	1737.6	.86418	11.648	.74315	1.9633	34.724	90.432	12.147
#2	1729.6	.86182	11.630	.74249	1.9587	34.326	89.294	11.988
#3	1734.3	.86827	11.681	.74328	1.9584	34.630	90.098	12.127

Elem	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	17.717	24.402	8.7581	4.6223	4.9335	7.3256	13.173	6.9142
Stddev	.037	.125	.0436	.0082	.0568	.0521	.088	.0482
%RSD	.21145	.51424	.49777	.17726	1.1508	.71175	.66667	.69698
#1	17.721	24.480	8.7221	4.6301	4.9822	7.3760	13.242	6.9533
#2	17.677	24.257	8.8066	4.6231	4.8711	7.2719	13.074	6.8603
#3	17.752	24.469	8.7457	4.6138	4.9473	7.3290	13.203	6.9290

Elem	Ni2316	Ag3280	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2.8519	.64784	2.6091	.54935	2.2325	7.7509	.69030	8.3899
Stddev	.0044	.00180	.0194	.00376	.0186	.0547	.00097	.0522
%RSD	.15454	.27792	.74361	.68497	.83404	.70592	.14053	.62272
#1	2.8569	.64829	2.6295	.55082	2.2330	7.7986	.69067	8.4229
#2	2.8496	.64937	2.5909	.54508	2.2509	7.6912	.68919	8.3296
#3	2.8490	.64586	2.6070	.55216	2.2137	7.7630	.69102	8.4170

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077	Li6707
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	8.3914	.46298	16.960	1.4317	3.9937	115.74	9.9706
Stddev	.0085	.00080	.102	.0028	.0375	2.93	.1296
%RSD	.10171	.17222	.60415	.19670	.93934	2.5276	1.2999
#1	8.3992	.46383	17.031	1.4318	4.0274	118.17	10.088
#2	8.3823	.46224	16.842	1.4289	3.9532	112.49	9.8316
#3	8.3927	.46289	17.006	1.4345	4.0004	116.55	9.9922

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: S5 Acquired: 12/13/2024 11:43:10 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S05 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	1711.5	23454.	2186.6	1469.5	2440.6
Stddev	.6	23.	19.1	9.8	2.1
%RSD	.03538	.09939	.87465	.66978	.08505
#1	1712.2	23459.	2173.7	1475.4	2443.0
#2	1711.1	23428.	2208.5	1458.2	2439.9
#3	1711.3	23474.	2177.5	1475.1	2439.0

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: S6 Acquired: 12/13/2024 11:47:02 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S06 Custom ID2: Custom ID3:
Comment:

Elem	Al3961	Ca3736	Fe2598	Mg2790	Na8183
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	93.609	40.978	19.790	11.273	7.3019
Stddev	.214	.226	.070	.050	.0250
%RSD	.22876	.55054	.35551	.44171	.34300
#1	93.421	40.999	19.796	11.274	7.2945
#2	93.842	41.192	19.857	11.323	7.3297
#3	93.564	40.743	19.717	11.223	7.2813

Int. Std.	Y_3710
Units	Cts/S
Avg	2099.0
Stddev	10.2
%RSD	.48419
#1	2110.3
#2	2090.6
#3	2096.1

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: ICV002 Acquired: 12/13/2024 12:40:49 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICV002 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.094649	1.039634	.9749123	.9423884	.9155053	2.364064
Stddev	.005427	.007896	.0017426	.0034728	.0006991	.010469
%RSD	.4957406	.7595287	.1787481	.3685139	.0763655	.4428426
#1	1.089232	1.039823	.9732777	.9422262	.9149745	2.362978
#2	1.094629	1.031645	.9767459	.9389996	.9152441	2.375034
#3	1.100085	1.047434	.9747135	.9459396	.9162975	2.354180

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5256808	.5246798	.4970665	10.23992	.5556413	.5015232
Stddev	.0006623	.0011910	.0005209	.10942	.0029357	.0009687
%RSD	.1259900	.2270052	.1047949	1.068548	.5283373	.1931497
#1	.5262516	.5246595	.4967457	10.27995	.5589170	.5004166
#2	.5249546	.5258810	.4967864	10.11612	.5532481	.5022177
#3	.5258362	.5234991	.4976676	10.32368	.5547590	.5019354

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5117796	10.50067	.5406480	6.233443	.5111628	.2574343
Stddev	.0014640	.06673	.0015937	.009754	.0009115	.0002833
%RSD	.2860513	.6354913	.2947728	.1564791	.1783218	.1100611
#1	.5117722	10.55802	.5407585	6.242243	.5114037	.2572022
#2	.5103193	10.42743	.5390019	6.235133	.5101550	.2577500
#3	.5132472	10.51655	.5421835	6.222955	.5119297	.2573507

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.57204	.5148573	1.099773	9.487001	F -.001533	F -.013319
Stddev	.36533	.0033918	.002258	.178182	.002111	.001356
%RSD	3.455632	.6587790	.2052799	1.878172	137.6809	10.18415
#1	10.43603	.5172128	1.100630	9.689811	.000381	-.014882
#2	10.98587	.5109698	1.097213	9.355596	-.001183	-.012617
#3	10.29423	.5163891	1.101477	9.415595	-.003796	-.012457

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: ICV002 Acquired: 12/13/2024 12:40:49 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICV002 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F -.000322	F .0086468	F -.039133	F -.000445	F -.002165	F -.009339
Stddev	.000059	.0015968	.000695	.000780	.004817	.000183
%RSD	18.28091	18.46702	1.776069	175.2398	222.4634	1.961470
#1	-.000271	.0068380	-.039912	-.000182	-.005163	-.009155
#2	-.000308	.0092415	-.038909	-.001322	-.004725	-.009339
#3	-.000386	.0098609	-.038578	.000170	.003391	-.009522

Elem	Li6707
Units	ppm
Avg	F -.006253
Stddev	.004123
%RSD	65.94738
#1	-.005215
#2	-.002747
#3	-.010796

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2369.353	26096.78	2315.240	1917.725	3171.046
Stddev	3.416	122.51	2.309	14.102	5.878
%RSD	.1441847	.4694291	.0997453	.7353251	.1853531
#1	2366.179	26008.00	2312.914	1909.143	3164.579
#2	2372.969	26236.54	2317.532	1933.999	3176.062
#3	2368.911	26045.78	2315.273	1910.031	3172.498

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: ICB002 Acquired: 12/13/2024 13:14:14 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICB002 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0025312	-.000989	-.002357	.0000133	.0021548	.0106393	.0011165
Stddev	.0016104	.001894	.000546	.0029279	.0019956	.0035871	.0009997
%RSD	63.62407	191.4352	23.15931	22015.28	92.61316	33.71583	89.54045
#1	.0036582	.000635	-.001795	.0006542	.0009566	.0065320	.0022172
#2	.0006867	-.003069	-.002390	.0025677	.0010492	.0122290	.0008677
#3	.0032486	-.000533	-.002885	-.003182	.0044585	.0131568	.0002647

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000297	.0000273	.0524202	-.000618	.0001079	.0019600	-.002651
Stddev	.0000761	.0000241	.0518368	.000696	.0002186	.0019445	.032656
%RSD	255.9147	88.27384	98.88713	112.6103	202.6627	99.20986	1232.010
#1	.0001175	.0000107	.0604802	-.000033	.0000109	.0011854	-.029278
#2	-.000016	.0000163	-.002975	-.000434	.0003582	.0041725	.033786
#3	-.000012	.0000550	.099755	-.001387	-.000045	.0005222	-.012459

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001376	.0674244	-.000815	.0006437	1.265602	-.010526	.0027720
Stddev	.0003858	.0373653	.000441	.0011016	.697567	.008053	.0047678
%RSD	280.2816	55.41812	54.13014	171.1212	55.11741	76.50012	171.9994
#1	.0005288	.0370409	-.000316	.0016718	.461190	-.003192	-.002365
#2	-.000243	.0560869	-.001154	.0007784	1.631878	-.019144	.003626
#3	.000127	.1091454	-.000975	-.000519	1.703738	-.009244	.007055

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3705117	-.002009	-.012484	.0000461	-.000807	-.039623	-.000390
Stddev	.2425584	.000966	.001750	.0003746	.003832	.001107	.001156
%RSD	65.46579	48.10860	14.02140	812.1557	474.6298	2.794167	296.4080
#1	.1719614	-.003045	-.014267	.0004780	.003061	-.040319	-.001606
#2	.6408655	-.001132	-.010768	-.000150	-.004602	-.038346	.000696
#3	.2987082	-.001849	-.012418	-.000189	-.000880	-.040203	-.000260

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: ICB002 Acquired: 12/13/2024 13:14:14 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICB002 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	-.002476	-.000108	-.010521
Stddev	.001696	.000414	.001112
%RSD	68.50440	384.6732	10.56989
#1	-.000548	.000099	-.011508
#2	-.003740	-.000584	-.010739
#3	-.003140	.000163	-.009316

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2366.379	25909.99	2228.443	1903.365	3207.271
Stddev	2.031	234.88	65.915	19.962	1.723
%RSD	.0858097	.9065283	2.957889	1.048765	.0537366
#1	2365.681	25646.62	2277.686	1883.763	3208.112
#2	2364.790	26097.76	2153.561	1923.668	3205.288
#3	2368.667	25985.60	2254.082	1902.664	3208.412

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: ICSA002 Acquired: 12/13/2024 13:18:17 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSA002 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0033037	.0168856	.0006046	-.021777	.0144171	235.9905
Stddev	.0058586	.0012703	.0033355	.001839	.0023126	.2148
%RSD	177.3325	7.523115	551.7332	8.446673	16.04095	.0910332
#1	.0100673	.0182028	-.002963	-.020469	.0162418	236.0478
#2	-.000195	.0167858	.003645	-.020982	.0151934	235.7529
#3	.000039	.0156681	.001132	-.023881	.0118162	236.1709

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0089166	.0014900	.0010214	241.9880	.0508922	.0302403
Stddev	.0006947	.0000980	.0000702	.2860	.0009110	.0003588
%RSD	7.790645	6.577361	6.876672	.1181677	1.790061	1.186630
#1	.0097160	.0015585	.0010909	242.3175	.0510201	.0305715
#2	.0085749	.0015336	.0010229	241.8410	.0517325	.0298591
#3	.0084590	.0013777	.0009505	241.8053	.0499240	.0302902

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.013717	100.6993	.0105133	254.5722	.0078310	-.009913
Stddev	.001516	.2339	.0016552	.3898	.0010613	.000935
%RSD	11.05126	.2323096	15.74394	.1531266	13.55297	9.434849
#1	-.013986	100.6205	.0091834	254.5950	.0078713	-.009574
#2	-.015081	100.5149	.0099893	254.1716	.0067501	-.010971
#3	-.012085	100.9624	.0123670	254.9502	.0088716	-.009195

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.506252	.0041326	-.025667	-1.03779	.0022272	F -.030707
Stddev	.877109	.0115058	.004786	.05700	.0002017	.000246
%RSD	58.23123	278.4157	18.64500	5.492051	9.058050	.8013045
#1	.703117	.0044059	-.020254	-1.09955	.0021374	-.030844
#2	2.442188	-.007507	-.029337	-.98721	.0024582	-.030423
#3	1.373449	.015499	-.027411	-1.02662	.0020859	-.030854

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: ICSA002 Acquired: 12/13/2024 13:18:17 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSA002 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006024	.0094679	-.045553	F .0087311	-.005424	.0040660
Stddev	.0004246	.0025367	.000068	.0006243	.001594	.0001660
%RSD	70.48892	26.79239	.1502750	7.150683	29.38296	4.082788
#1	.0002198	.0113395	-.045500	.0092801	-.006919	.0039790
#2	.0010592	.0065808	-.045528	.0080520	-.005605	.0042574
#3	.0005280	.0104835	-.045630	.0088612	-.003747	.0039616

Elem	Li6707
Units	ppm
Avg	-.008610
Stddev	.000735
%RSD	8.534696
#1	-.008035
#2	-.008358
#3	-.009438

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2266.747	24728.19	2262.140	1824.676	2809.381
Stddev	5.006	52.01	7.038	11.423	4.805
%RSD	.2208310	.2103323	.3111017	.6260340	.1710174
#1	2270.148	24668.93	2269.194	1813.711	2814.842
#2	2260.999	24749.33	2255.119	1836.508	2805.803
#3	2269.095	24766.30	2262.108	1823.810	2807.498

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: ICSAB002 Acquired: 12/13/2024 13:22:14 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSAB002 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1048030	.1218471	.0499588	.0211340	.5307868	235.2262
Stddev	.0068593	.0048616	.0036921	.0073664	.0026413	.5365
%RSD	6.544913	3.989895	7.390305	34.85579	.4976246	.2280901
#1	.1082097	.1258073	.0505612	.0128108	.5338361	234.8814
#2	.0969073	.1164213	.0533127	.0268147	.5293189	234.9528
#3	.1092920	.1233126	.0460025	.0237765	.5292055	235.8443

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5295335	.5153808	.9745996	242.8592	.5810026	.5043351
Stddev	.0016342	.0010065	.0048774	.9100	.0003464	.0030255
%RSD	.3086063	.1953030	.5004521	.3747084	.0596178	.5999041
#1	.5283776	.5142189	.9802229	242.8272	.5813742	.5078036
#2	.5288198	.5159853	.9720579	241.9656	.5806887	.5022388
#3	.5314031	.5159383	.9715180	243.7848	.5809450	.5029629

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4655042	100.6357	.5266891	253.0537	.9802044	.1837031
Stddev	.0025364	.1107	.0034153	.1292	.0037464	.0012281
%RSD	.5448801	.1099973	.6484452	.0510478	.3822072	.6685246
#1	.4646781	100.5891	.5231945	253.1249	.9844787	.1837107
#2	.4634837	100.5558	.5268536	252.9045	.9786448	.1849273
#3	.4683506	100.7620	.5300191	253.1315	.9774897	.1824712

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.671346	.5263606	.8956275	-1.83497	.0005936	F -.030927
Stddev	.230854	.0049825	.0074238	.05419	.0025674	.003513
%RSD	13.81245	.9465868	.8288910	2.952919	432.5017	11.35913
#1	1.427727	.5311844	.8917228	-1.83851	.0010094	-.027236
#2	1.886861	.5266639	.8909711	-1.77910	.0029278	-.031316
#3	1.699449	.5212334	.9041888	-1.88730	-.002156	-.034230

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: ICSAB002 Acquired: 12/13/2024 13:22:14 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSAB002 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005449	.0102045	-.044864	F .0084639	-.005179	.0042779
Stddev	.0004612	.0039600	.000740	.0019725	.003148	.0003576
%RSD	84.63353	38.80710	1.648476	23.30426	60.79272	8.360185
#1	.0000843	.0056354	-.044718	.0100662	-.008743	.0044021
#2	.0010066	.0123324	-.045665	.0062610	-.004015	.0038747
#3	.0005439	.0126457	-.044208	.0090646	-.002778	.0045568

Elem	Li6707
Units	ppm
Avg	F -.022058
Stddev	.004940
%RSD	22.39730
#1	-.018783
#2	-.027741
#3	-.019651

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2262.453	24753.21	2274.824	1831.753	2815.641
Stddev	7.281	29.57	8.017	3.175	5.708
%RSD	.3218380	.1194549	.3524070	.1733375	.2027265
#1	2254.495	24740.02	2283.993	1829.108	2810.632
#2	2268.781	24732.52	2271.338	1835.274	2821.856
#3	2264.084	24787.07	2269.140	1830.876	2814.435

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: CCV007 Acquired: 12/13/2024 13:45:23 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV007 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.736477	4.848990	23.49551	4.505487	4.587134	377.5410	9.712883
Stddev	.018483	.013910	.03340	.009604	.011655	.6654	.013120
%RSD	.3902256	.2868690	.1421641	.2131588	.2540773	.1762480	.1350821
#1	4.728404	4.861050	23.51563	4.500508	4.590903	377.0960	9.709870
#2	4.723403	4.833773	23.45695	4.499395	4.574061	378.3059	9.727248
#3	4.757623	4.852148	23.51394	4.516558	4.596438	377.2209	9.701532

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4769488	2.350155	392.5557	14.76073	2.341785	14.62638	392.1255
Stddev	.0016946	.005686	.5501	.02175	.006890	.01032	1.1641
%RSD	.3552936	.2419248	.1401388	.1473555	.2942126	.0705558	.2968713
#1	.4774141	2.354094	392.5091	14.75956	2.342449	14.61452	390.8588
#2	.4783622	2.343637	393.1276	14.73959	2.334587	14.63129	393.1483
#3	.4750703	2.352734	392.0303	14.78305	2.348319	14.63333	392.3695

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	14.65741	380.3257	2.386826	1.224124	380.5217	2.429562	13.95728
Stddev	.01981	.6320	.005141	.004390	1.2836	.014195	.04999
%RSD	.1351266	.1661681	.2154111	.3586338	.3373140	.5842530	.3581447
#1	14.65642	380.2837	2.391317	1.229113	379.2406	2.426237	13.99796
#2	14.67769	380.9776	2.381218	1.222404	381.8077	2.445123	13.90148
#3	14.63812	379.7158	2.387943	1.220853	380.5168	2.417324	13.97240

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	143.7935	4.709993	4.665184	4.569891	4.694771	4.728707	4.783962
Stddev	.0809	.001942	.009519	.004426	.018132	.018973	.013719
%RSD	.0562416	.0412312	.2040471	.0968534	.3862104	.4012322	.2867681
#1	143.8462	4.712201	4.658453	4.574013	4.711787	4.706802	4.796593
#2	143.8339	4.708552	4.676075	4.565214	4.675699	4.739334	4.769367
#3	143.7004	4.709225	4.661024	4.570447	4.696826	4.739985	4.785925

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: CCV007 Acquired: 12/13/2024 13:45:23 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV007 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	4.910711	4.584252	4.916906
Stddev	.004334	.002638	.010851
%RSD	.0882500	.0575427	.2206889
#1	4.910679	4.586512	4.904797
#2	4.915061	4.584891	4.920174
#3	4.906393	4.581353	4.925749

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1935.383	23352.32	2194.106	1611.459	2531.931
Stddev	4.662	88.07	13.332	5.660	4.594
%RSD	.2408774	.3771458	.6076186	.3512330	.1814461
#1	1931.177	23326.69	2200.859	1606.367	2527.147
#2	1934.578	23279.90	2178.749	1610.456	2532.337
#3	1940.396	23450.36	2202.710	1617.553	2536.308

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: CCB007 Acquired: 12/13/2024 13:49:01 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB007 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0032029	.0013195	.0056961	.0004668	.0033745	.0184343
Stddev	.0012614	.0009026	.0024697	.0047166	.0010794	.0039260
%RSD	39.38308	68.40324	43.35835	1010.467	31.98571	21.29715
#1	.0038137	.0012833	.0074183	-.002166	.0021499	.0180533
#2	.0017524	.0022397	.0068033	-.002346	.0041877	.0225369
#3	.0040426	.0004355	.0028665	.005912	.0037860	.0147127

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0016786	.0002171	.0002610	-.001048	.0020296	.0001217
Stddev	.0008769	.0000983	.0000153	.018362	.0004603	.0001123
%RSD	52.24009	45.27286	5.850080	1752.427	22.67949	92.24920
#1	.0008242	.0001092	.0002781	-.019639	.0015711	.0002320
#2	.0016353	.0003014	.0002489	.017076	.0020261	.0000075
#3	.0025764	.0002406	.0002558	-.000580	.0024917	.0001257

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0022249	.0278615	.0020399	.1092355	.0006856	.0003124
Stddev	.0018441	.0265829	.0014616	.0499786	.0007084	.0009580
%RSD	82.88573	95.41074	71.65044	45.75306	103.3329	306.6177
#1	.0014406	.0517156	.0032757	.1664780	-.000084	.0007108
#2	.0043316	-.000795	.0004266	.0869643	.000831	-.000780
#3	.0009026	.032664	.0024174	.0742641	.001310	.001007

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.410537	-.003995	.0080438	-.386495	.0007601	.0056553
Stddev	.459735	.001962	.0099596	.229612	.0021719	.0023584
%RSD	19.07191	49.10252	123.8173	59.40875	285.7284	41.70341
#1	1.924552	-.006152	.0189038	-.611563	-.000392	.0081257
#2	2.468542	-.002319	-.000663	-.152594	.003265	.0034276
#3	2.838518	-.003514	.005891	-.395327	-.000593	.0054125

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: CCB007 Acquired: 12/13/2024 13:49:01 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB007 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005815	-.003677	-.038462	.0012734	-.003624	.0003265
Stddev	.0000485	.001475	.000797	.0006362	.002666	.0002142
%RSD	8.341421	40.09970	2.071725	49.95804	73.56853	65.60496
#1	.0005404	-.004943	-.039147	.0018185	-.002862	.0001206
#2	.0006350	-.002058	-.037588	.0014272	-.006587	.0003108
#3	.0005691	-.004031	-.038651	.0005744	-.001422	.0005480

Elem	Li6707
Units	ppm
Avg	F -.026268
Stddev	.003040
%RSD	11.57115
#1	-.029724
#2	-.024012
#3	-.025068

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2356.226	25692.56	2257.693	1901.545	3189.496
Stddev	6.446	124.45	6.274	9.698	2.509
%RSD	.2735842	.4843640	.2778817	.5100109	.0786650
#1	2362.094	25602.99	2253.436	1895.297	3191.887
#2	2357.256	25834.65	2254.745	1912.717	3189.717
#3	2349.326	25640.03	2264.898	1896.621	3186.883

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4976-01DLX2 Acquired: 12/13/2024 13:53:03 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29D7 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0142646	.0251786	.0318617	-.035799	-.006776	7.594028	.0314147
Stddev	.0016518	.0026623	.0006559	.002152	.001781	.055463	.0004066
%RSD	11.57983	10.57367	2.058666	6.011452	26.29002	.7303446	1.294174
#1	.0153566	.0244221	.0317082	-.035525	-.006059	7.640404	.0316871
#2	.0123643	.0229765	.0325808	-.038075	-.005465	7.609091	.0309474
#3	.0150729	.0281373	.0312962	-.033797	-.008804	7.532590	.0316096

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009885	.0006990	534.2363	.0201737	.0512022	.0303797	30.75563
Stddev	.0001689	.0000292	1.3531	.0010030	.0003533	.0070922	.12581
%RSD	17.08771	4.169756	.2532746	4.972056	.6900641	23.34541	.4090764
#1	.0008707	.0006929	535.3335	.0212028	.0513209	.0383840	30.87721
#2	.0009127	.0006734	534.6510	.0201194	.0508049	.0248782	30.76372
#3	.0011820	.0007307	532.7244	.0191989	.0514810	.0278768	30.62597

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.152336	142.2486	.0418257	-.003959	2.241468	.0322348	.0644350
Stddev	.001409	.6795	.0005648	.000247	.292551	.0059910	.0133854
%RSD	.1222898	.4777009	1.350313	6.235777	13.05177	18.58538	20.77343
#1	1.153740	142.8610	.0424777	-.003951	2.541722	.0343762	.0763470
#2	1.152345	142.3671	.0415106	-.004209	1.957282	.0368609	.0670083
#3	1.150922	141.5176	.0414887	-.003716	2.225399	.0254674	.0499499

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-1.98923	.8113007	.0085807	.0040438	.4711634	1.962539	.0102476
Stddev	.08779	.0048073	.0034804	.0006093	.0076191	.004748	.0021611
%RSD	4.413448	.5925396	40.56021	15.06643	1.617078	.2419233	21.08888
#1	-1.89871	.8057904	.0075097	.0043958	.4623656	1.957475	.0117099
#2	-2.07401	.8146365	.0057617	.0033403	.4755471	1.963251	.0077653
#3	-1.99498	.8134753	.0124707	.0043954	.4755774	1.966890	.0112677

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4976-01DLX2 Acquired: 12/13/2024 13:53:03 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29D7 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.2302917	.3528123	.0033913
Stddev	.0011676	.0008968	.0041291
%RSD	.5070026	.2541815	121.7544
#1	.2316315	.3538322	.0074583
#2	.2297518	.3521472	.0035128
#3	.2294918	.3524576	-.000797

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2281.969	25288.23	2294.616	1845.478	2784.025
Stddev	4.952	72.91	4.333	4.027	3.986
%RSD	.2169909	.2883013	.1888466	.2181854	.1431576
#1	2278.756	25280.26	2289.832	1845.882	2780.153
#2	2287.672	25219.64	2298.278	1841.265	2788.115
#3	2279.480	25364.80	2295.737	1849.287	2783.806

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4976-02DLX2 Acquired: 12/13/2024 13:56:59 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29D8 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0119656	.0252613	.0285495	-.037015	-.005697	6.675788	.0360961
Stddev	.0055471	.0014267	.0038452	.000528	.001577	.013801	.0005257
%RSD	46.35837	5.647918	13.46842	1.425230	27.68062	.2067302	1.456416
#1	.0161329	.0268300	.0256326	-.036937	-.005170	6.691446	.0356484
#2	.0056695	.0240411	.0329069	-.037577	-.004451	6.665394	.0366750
#3	.0140945	.0249127	.0271090	-.036531	-.007470	6.670524	.0359650

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008492	.0006375	640.9263	.0202919	.0478600	.0356557	29.06100
Stddev	.0000967	.0001455	1.4476	.0005528	.0003473	.0044505	.11217
%RSD	11.38562	22.82849	.2258651	2.724307	.7255925	12.48189	.3859919
#1	.0008031	.0007848	642.0196	.0208965	.0474590	.0306557	29.15823
#2	.0007842	.0004938	639.2846	.0201672	.0480585	.0371277	28.93827
#3	.0009603	.0006340	641.4747	.0198121	.0480625	.0391837	29.08649

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.146216	96.94499	.0333193	-.002233	1.843186	.0396528	.0703366
Stddev	.002521	.18621	.0003412	.000843	.267325	.0083623	.0105335
%RSD	.2199443	.1920810	1.023952	37.75943	14.50342	21.08874	14.97582
#1	1.148518	96.83724	.0330830	-.002326	1.588162	.0301328	.0599512
#2	1.143522	96.83772	.0331644	-.003026	1.820084	.0458110	.0700464
#3	1.146608	97.16001	.0337104	-.001347	2.121312	.0430147	.0810122

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-2.26512	.8802534	.0011039	.0037574	.5562056	2.114038	.0084248
Stddev	.13727	.0010872	.0007343	.0005348	.0047118	.007175	.0010530
%RSD	6.060092	.1235084	66.52282	14.23286	.8471398	.3394049	12.49921
#1	-2.25997	.8798928	.0002737	.0042923	.5608448	2.111569	.0096374
#2	-2.13050	.8793924	.0013694	.0032227	.5514244	2.122122	.0078972
#3	-2.40489	.8814751	.0016685	.0037572	.5563476	2.108424	.0077399

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4976-02DLX2 Acquired: 12/13/2024 13:56:59 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29D8 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.2778096	.4821998	-.003324
Stddev	.0028473	.0008654	.002480
%RSD	1.024905	.1794707	74.61063
#1	.2802094	.4829476	-.002172
#2	.2785560	.4812518	-.006171
#3	.2746635	.4824000	-.001630

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2311.781	25521.20	2307.346	1866.951	2810.172
Stddev	5.374	92.05	11.167	6.786	5.023
%RSD	.2324457	.3606780	.4839620	.3634647	.1787259
#1	2313.706	25604.55	2295.702	1873.152	2814.108
#2	2305.709	25536.66	2308.372	1867.999	2804.515
#3	2315.926	25422.40	2317.965	1859.702	2811.893

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4976-03DLX2 Acquired: 12/13/2024 14:00:53 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29D9 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0313676	.0246110	.0302762	-.036566	-.005871	9.635334	.0445697
Stddev	.0035581	.0023224	.0016128	.003139	.001009	.016588	.0005869
%RSD	11.34342	9.436450	5.326954	8.585755	17.18792	.1721557	1.316761
#1	.0312744	.0242278	.0294155	-.033174	-.005632	9.640278	.0440147
#2	.0278569	.0225041	.0292763	-.039369	-.006979	9.616836	.0445106
#3	.0349714	.0271012	.0321367	-.037156	-.005003	9.648887	.0451839

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008171	.0004853	533.4386	.0310276	.0499722	.0345278	29.45714
Stddev	.0000868	.0000376	1.2802	.0007501	.0002232	.0023134	.07227
%RSD	10.61820	7.749494	.2399971	2.417450	.4466868	6.700123	.2453461
#1	.0008790	.0004931	532.5390	.0318152	.0497864	.0362789	29.37448
#2	.0007179	.0005184	534.9043	.0309458	.0499104	.0353993	29.48853
#3	.0008543	.0004444	532.8725	.0303217	.0502198	.0319052	29.50841

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.539961	131.6919	.0444167	-.002602	2.594886	.0412536	.0849572
Stddev	.001953	.4035	.0010263	.000512	.301603	.0130697	.0039170
%RSD	.0768747	.3064024	2.310512	19.67936	11.62300	31.68138	4.610544
#1	2.540135	131.3186	.0449170	-.002851	2.857953	.0439343	.0805632
#2	2.541821	132.1200	.0432362	-.002942	2.265713	.0527751	.0880826
#3	2.537927	131.6370	.0450968	-.002013	2.660992	.0270514	.0862260

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-2.26992	.9065638	.0014954	.0016308	2.492326	1.899491	.0070175
Stddev	.12282	.0049997	.0011294	.0000979	.007624	.009443	.0004832
%RSD	5.410701	.5515039	75.52420	6.000361	.3059015	.4971237	6.884908
#1	-2.35274	.9050540	.0016055	.0017415	2.497253	1.888959	.0075475
#2	-2.32820	.9024929	.0003150	.0015951	2.483544	1.907202	.0066016
#3	-2.12881	.9121444	.0025659	.0015558	2.496181	1.902311	.0069034

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4976-03DLX2 Acquired: 12/13/2024 14:00:53 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29D9 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.3422775	.3852989	-.003925
Stddev	.0016520	.0005785	.005547
%RSD	.4826434	.1501422	141.3177
#1	.3405799	.3851084	-.003976
#2	.3438798	.3859486	-.009447
#3	.3423727	.3848397	.001647

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2320.536	25415.44	2317.421	1856.149	2809.097
Stddev	1.765	196.78	12.241	6.132	2.283
%RSD	.0760652	.7742466	.5282290	.3303718	.0812553
#1	2322.105	25188.23	2331.196	1849.096	2811.612
#2	2320.879	25531.14	2313.278	1860.221	2807.156
#3	2318.625	25526.95	2307.789	1859.129	2808.524

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4976-05DLX2 Acquired: 12/13/2024 14:04:47 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29E1 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0138640	.0227871	.0353623	-.033172	-.004257	10.12952	.0446821
Stddev	.0039175	.0014241	.0003056	.000899	.000345	.04119	.0007495
%RSD	28.25698	6.249613	.8642783	2.708873	8.092683	.4065966	1.677403
#1	.0097143	.0234755	.0354874	-.032135	-.004519	10.12093	.0454502
#2	.0143792	.0211496	.0355855	-.033733	-.003867	10.17433	.0446434
#3	.0174984	.0237362	.0350140	-.033646	-.004385	10.09331	.0439527

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010961	.0006497	488.8715	.0252236	.0496737	.0296072	31.36380
Stddev	.0000388	.0000694	.5709	.0005927	.0002962	.0076261	.08570
%RSD	3.535442	10.67342	.1167830	2.349747	.5962662	25.75758	.2732568
#1	.0010867	.0005914	489.3846	.0253258	.0498309	.0353377	31.38132
#2	.0011387	.0007264	488.2565	.0245865	.0493320	.0325324	31.27069
#3	.0010629	.0006314	488.9733	.0257586	.0498581	.0209516	31.43939

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.086494	115.3171	.0403176	-.004115	2.515561	.0448848	.0799448
Stddev	.002624	.0696	.0011017	.001171	.572598	.0100616	.0029076
%RSD	.2415097	.0603633	2.732556	28.46675	22.76224	22.41643	3.636988
#1	1.084684	115.2715	.0390989	-.004128	3.127476	.0455187	.0832609
#2	1.085296	115.3972	.0406110	-.002937	2.426487	.0345213	.0778320
#3	1.089504	115.2825	.0412429	-.005279	1.992720	.0546145	.0787416

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-1.21267	.8836365	.0090388	.0041237	.5455806	4.840290	.0085180
Stddev	.13153	.0018021	.0010903	.0002060	.0051173	.028387	.0002109
%RSD	10.84662	.2039452	12.06204	4.994522	.9379502	.5864752	2.476198
#1	-1.09991	.8845033	.0085212	.0041930	.5405023	4.824812	.0086262
#2	-1.35717	.8815648	.0083038	.0038920	.5507360	4.873052	.0086529
#3	-1.18093	.8848415	.0102915	.0042860	.5455037	4.823006	.0082750

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4976-05DLX2 Acquired: 12/13/2024 14:04:47 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29E1 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.4152220	.3651743	-.013369
Stddev	.0076016	.0006214	.003560
%RSD	1.830737	.1701538	26.62763
#1	.4236579	.3653548	-.009382
#2	.4131044	.3644827	-.016230
#3	.4089038	.3656855	-.014496

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2345.899	25718.20	2332.729	1880.045	2873.137
Stddev	8.021	65.52	9.343	8.346	10.852
%RSD	.3419047	.2547574	.4005053	.4438998	.3777162
#1	2353.053	25652.95	2343.464	1870.554	2882.257
#2	2347.417	25717.67	2326.437	1883.347	2876.019
#3	2337.228	25783.98	2328.285	1886.234	2861.134

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4976-06DLX2 Acquired: 12/13/2024 14:08:42 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29E2 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0131606	.0272996	.0308618	-.042270	-.007273	7.015029	.0298609
Stddev	.0013036	.0018018	.0010095	.002329	.000127	.020024	.0009278
%RSD	9.905678	6.599907	3.270978	5.510329	1.751091	.2854425	3.107162
#1	.0118847	.0293580	.0303666	-.040493	-.007255	7.037266	.0305403
#2	.0144903	.0260082	.0301956	-.041410	-.007156	6.998424	.0288038
#3	.0131069	.0265328	.0320233	-.044907	-.007409	7.009397	.0302385

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010091	.0006086	698.5695	.0190986	.0507997	.0304095	28.80866
Stddev	.0001721	.0000769	2.9896	.0009870	.0002961	.0039830	.26531
%RSD	17.05495	12.63916	.4279626	5.167776	.5828424	13.09798	.9209247
#1	.0009067	.0006827	701.9294	.0179803	.0505537	.0262728	29.08470
#2	.0012078	.0005291	696.2034	.0194672	.0507169	.0307369	28.55558
#3	.0009128	.0006140	697.5756	.0198482	.0511283	.0342187	28.78571

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.146522	240.7386	.0378026	-.003916	2.364625	.0282548	.0588484
Stddev	.006806	1.1630	.0002880	.000882	.246507	.0100217	.0052762
%RSD	.5936394	.4831138	.7618264	22.51965	10.42478	35.46907	8.965777
#1	1.154320	242.0715	.0379651	-.002948	2.633212	.0376370	.0527574
#2	1.141779	240.2143	.0379726	-.004673	2.311952	.0294304	.0620094
#3	1.143467	239.9299	.0374701	-.004127	2.148713	.0176972	.0617783

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-2.21719	.8517133	.0045204	.0026996	.6870118	1.512358	.0082106
Stddev	.18059	.0013536	.0011223	.0001047	.0068266	.009881	.0008425
%RSD	8.144834	.1589228	24.82648	3.878541	.9936717	.6533218	10.26176
#1	-2.25408	.8528003	.0046730	.0025934	.6933768	1.523353	.0078649
#2	-2.02100	.8501972	.0033296	.0028027	.6798021	1.504224	.0091710
#3	-2.37647	.8521424	.0055585	.0027027	.6878566	1.509496	.0075958

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4976-06DLX2 Acquired: 12/13/2024 14:08:42 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29E2 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.2366191	.4563420	-.005598
Stddev	.0014674	.0006965	.004124
%RSD	.6201601	.1526241	73.65944
#1	.2375221	.4570481	-.003859
#2	.2374092	.4556555	-.002629
#3	.2349259	.4563226	-.010307

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2245.535	24933.24	2268.391	1814.574	2707.229
Stddev	.584	94.86	9.943	5.655	4.743
%RSD	.0260164	.3804533	.4383292	.3116687	.1752070
#1	2246.138	25042.44	2257.018	1821.090	2710.640
#2	2244.972	24886.12	2275.438	1810.942	2701.812
#3	2245.494	24871.17	2272.717	1811.690	2709.234

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4976-07DLX2 Acquired: 12/13/2024 14:12:37 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29E3 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0117292	.0289720	.0291805	-.037967	-.007469	6.553457	.0319637
Stddev	.0019402	.0016170	.0035308	.008105	.000392	.054115	.0009329
%RSD	16.54171	5.581098	12.10001	21.34796	5.241974	.8257507	2.918789
#1	.0138197	.0273072	.0253264	-.029328	-.007130	6.558443	.0329273
#2	.0099862	.0290723	.0322593	-.045404	-.007897	6.604907	.0310648
#3	.0113817	.0305364	.0299557	-.039170	-.007380	6.497022	.0318989

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007985	.0005599	671.1030	.0203014	.0487337	.0209845	29.63436
Stddev	.0000283	.0001078	3.7034	.0007763	.0005210	.0069511	.13439
%RSD	3.540673	19.25387	.5518319	3.824076	1.069127	33.12485	.4534894
#1	.0007725	.0006840	672.8188	.0195157	.0488679	.0238691	29.53470
#2	.0007945	.0004901	673.6373	.0203204	.0481587	.0130555	29.78720
#3	.0008286	.0005055	666.8529	.0210681	.0491745	.0260288	29.58118

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.338259	161.8817	.0320589	-.004966	2.082497	.0323412	.0590961
Stddev	.005344	.7924	.0006990	.001079	.119655	.0109338	.0102370
%RSD	.3993056	.4895007	2.180362	21.71937	5.745752	33.80760	17.32264
#1	1.341000	162.6049	.0323146	-.005510	1.973459	.0441802	.0681944
#2	1.341676	162.0055	.0325941	-.005664	2.210503	.0302198	.0480115
#3	1.332101	161.0347	.0312681	-.003724	2.063529	.0226236	.0610825

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-2.73342	.9215601	.0028480	.0018950	.8293762	1.319342	.0090735
Stddev	.08186	.0049144	.0005407	.0004552	.0011301	.014463	.0019092
%RSD	2.994913	.5332692	18.98556	24.02057	.1362580	1.096254	21.04138
#1	-2.76311	.9184207	.0034677	.0020608	.8297483	1.330114	.0071393
#2	-2.79630	.9190360	.0026038	.0013801	.8281069	1.325009	.0091245
#3	-2.64086	.9272236	.0024724	.0022440	.8302732	1.302904	.0109566

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4976-07DLX2 Acquired: 12/13/2024 14:12:37 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29E3 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.2749349	.4133281	-.011457
Stddev	.0021880	.0021238	.001712
%RSD	.7958374	.5138399	14.94068
#1	.2773488	.4141623	-.009506
#2	.2743741	.4149083	-.012160
#3	.2730819	.4109139	-.012705

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2267.883	24980.99	2284.065	1815.211	2749.017
Stddev	4.734	108.20	16.604	10.588	5.352
%RSD	.2087418	.4331281	.7269548	.5832762	.1947001
#1	2270.033	25087.74	2271.855	1826.479	2754.418
#2	2271.162	24983.82	2277.369	1813.684	2748.917
#3	2262.456	24871.40	2302.972	1805.470	2743.715

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4976-08DLX2 Acquired: 12/13/2024 14:16:32 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29E4 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0755144	.0259267	.0332744	-.040531	-.005456	9.965038	.0496741
Stddev	.0028605	.0023350	.0007612	.001603	.002005	.046662	.0012783
%RSD	3.787962	9.006100	2.287572	3.954082	36.75678	.4682521	2.573428
#1	.0724643	.0232782	.0334283	-.038725	-.006911	9.990658	.0511382
#2	.0759419	.0268137	.0339468	-.041784	-.006289	9.993277	.0487800
#3	.0781371	.0276883	.0324480	-.041084	-.003168	9.911179	.0491040

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011146	.0006516	617.7110	.0271310	.0536114	.0285016	32.26200
Stddev	.0001105	.0001746	1.7704	.0001209	.0003370	.0029265	.04630
%RSD	9.914800	26.79147	.2866072	.4456845	.6286497	10.26765	.1435002
#1	.0010274	.0004606	619.6109	.0270360	.0536907	.0315132	32.30658
#2	.0010775	.0006913	617.4146	.0270898	.0532418	.0256685	32.26524
#3	.0012388	.0008030	616.1075	.0272671	.0539017	.0283231	32.21416

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.381965	96.55666	.0463672	-.003416	1.906436	.0415836	.0830394
Stddev	.003274	.30337	.0003498	.001249	.390766	.0025845	.0034579
%RSD	.2369175	.3141876	.7543974	36.56891	20.49722	6.215238	4.164215
#1	1.378727	96.21000	.0467086	-.003551	1.762210	.0436062	.0802970
#2	1.385274	96.77366	.0463833	-.002104	2.348816	.0424727	.0869239
#3	1.381895	96.68631	.0460096	-.004591	1.608282	.0386719	.0818973

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-2.07232	.8801039	-.002965	.0072201	6.775738	2.236304	.0087582
Stddev	.19138	.0028042	.000759	.0001103	.030613	.028317	.0004644
%RSD	9.235320	.3186193	25.59577	1.527994	.4518034	1.266236	5.302188
#1	-2.28442	.8769159	-.002089	.0073405	6.746177	2.205138	.0083903
#2	-2.02001	.8812070	-.003414	.0071238	6.773732	2.260452	.0092800
#3	-1.91252	.8821888	-.003393	.0071961	6.807304	2.243321	.0086042

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4976-08DLX2 Acquired: 12/13/2024 14:16:32 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29E4 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.3967174	.5432156	-.000594
Stddev	.0035408	.0023558	.003412
%RSD	.8925246	.4336789	574.8337
#1	.3934867	.5405672	-.004046
#2	.3961627	.5440023	-.000512
#3	.4005028	.5450775	.002777

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2315.666	25612.22	2315.389	1863.677	2818.283
Stddev	4.311	92.75	14.756	7.950	2.506
%RSD	.1861575	.3621197	.6372864	.4265957	.0889173
#1	2310.751	25505.48	2332.190	1855.241	2815.424
#2	2317.443	25673.13	2304.536	1871.031	2820.099
#3	2318.804	25658.04	2309.440	1864.760	2819.326

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4976-09DLX2 Acquired: 12/13/2024 14:20:24 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29E4D Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0771557	.0259619	.0323999	-.038265	-.008515	9.784698	.0492768
Stddev	.0020516	.0014802	.0010929	.002304	.004049	.019614	.0007261
%RSD	2.658985	5.701294	3.373210	6.020155	47.55033	.2004535	1.473434
#1	.0751255	.0245953	.0336611	-.039312	-.008610	9.807332	.0500983
#2	.0792280	.0257562	.0318099	-.035624	-.004419	9.772690	.0487212
#3	.0771138	.0275341	.0317289	-.039860	-.012515	9.774073	.0490108

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010264	.0005491	614.4584	.0268152	.0534151	.0315050	32.05268
Stddev	.0000518	.0001195	.8765	.0004529	.0008646	.0025000	.13625
%RSD	5.043667	21.75463	.1426380	1.688968	1.618668	7.935127	.4250864
#1	.0010861	.0004149	615.4703	.0265674	.0535019	.0343910	32.16265
#2	.0009946	.0006439	613.9377	.0273379	.0542331	.0300095	31.90026
#3	.0009984	.0005886	613.9673	.0265402	.0525104	.0301144	32.09515

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.374130	95.08181	.0464416	-.003276	2.502885	.0346578	.0944843
Stddev	.003139	.36097	.0005278	.001706	.477842	.0098093	.0064004
%RSD	.2284092	.3796440	1.136519	52.09198	19.09164	28.30338	6.773994
#1	1.377691	95.49689	.0467202	-.002032	2.339222	.0298955	.0898639
#2	1.371766	94.84138	.0458329	-.002574	3.041053	.0459392	.0917990
#3	1.372932	94.90715	.0467718	-.005221	2.128379	.0281388	.1017898

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-2.02336	.8642001	-.003139	.0070260	6.664110	2.153544	.0081204
Stddev	.05423	.0035898	.001784	.0001352	.011354	.009657	.0005503
%RSD	2.680186	.4153901	56.83750	1.924753	.1703736	.4484023	6.776912
#1	-1.96104	.8624561	-.002124	.0071794	6.673470	2.150541	.0087038
#2	-2.04921	.8618156	-.005199	.0069240	6.651480	2.164345	.0080470
#3	-2.05983	.8683287	-.002094	.0069746	6.667381	2.145745	.0076105

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4976-09DLX2 Acquired: 12/13/2024 14:20:24 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29E4D Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.3871567	.5387951	.0033242
Stddev	.0013605	.0014448	.0022781
%RSD	.3514172	.2681496	68.52916
#1	.3880588	.5403855	.0009204
#2	.3878195	.5375636	.0036010
#3	.3855918	.5384361	.0054512

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2310.869	25525.61	2318.365	1862.789	2834.148
Stddev	2.721	106.23	14.410	9.217	4.303
%RSD	.1177629	.4161886	.6215472	.4948062	.1518373
#1	2311.965	25553.59	2309.200	1866.757	2834.975
#2	2312.871	25408.18	2310.921	1852.252	2837.978
#3	2307.770	25615.05	2334.974	1869.358	2829.491

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4976-08LDLX10 Acquired: 12/13/2024 14:24:18 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29E4L Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0131955	.0170799	.0104596	-.021526	-.004826	2.009906	.0113304
Stddev	.0035438	.0015440	.0013396	.004316	.002484	.010132	.0008909
%RSD	26.85610	9.039569	12.80733	20.04939	51.47178	.5041121	7.862801
#1	.0169739	.0182522	.0105026	-.026510	-.004643	2.011102	.0104568
#2	.0126666	.0176569	.0117771	-.018976	-.007396	2.019386	.0122376
#3	.0099458	.0153305	.0090989	-.019093	-.002438	1.999228	.0112969

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002502	.0001363	126.1804	.0053189	.0286409	.0045750	6.784619
Stddev	.0000870	.0001132	.4203	.0007937	.0002541	.0058029	.046998
%RSD	34.77773	83.02360	.3331152	14.92184	.8872630	126.8398	.6927137
#1	.0002291	.0001225	126.5811	.0044218	.0289211	.0004361	6.837612
#2	.0001757	.0002558	125.7429	.0056049	.0285763	.0020809	6.768255
#3	.0003459	.0000307	126.2173	.0059299	.0284254	.0112079	6.747991

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2889153	19.94959	.0079831	-.000002	2.498912	.0088786	.0261381
Stddev	.0038530	.22487	.0001148	.000707	.189960	.0020265	.0067666
%RSD	1.333594	1.127180	1.438046	41891.60	7.601711	22.82443	25.88801
#1	.2925010	20.13214	.0078508	-.000794	2.384586	.0096132	.0272836
#2	.2848416	19.69840	.0080561	.000224	2.393958	.0065873	.0322588
#3	.2894035	20.01822	.0080424	.000565	2.718192	.0104354	.0188718

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.701339	.1617173	-.008865	.0018764	1.255046	.4308936	.0011218
Stddev	.130869	.0024595	.001529	.0000801	.003001	.0023889	.0003420
%RSD	18.65987	1.520852	17.25286	4.270267	.2390995	.5544072	30.49197
#1	-.603611	.1637569	-.007404	.0019049	1.258322	.4335812	.0007549
#2	-.850021	.1589860	-.010455	.0017859	1.254386	.4300882	.0011785
#3	-.650385	.1624088	-.008737	.0019383	1.252430	.4290116	.0014319

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4976-08LDLX10 Acquired: 12/13/2024 14:24:18 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29E4L Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.0768611	.1102401	-.036431
Stddev	.0031262	.0004021	.000657
%RSD	4.067331	.3647467	1.802789
#1	.0775998	.1107015	-.037182
#2	.0734318	.1099650	-.035963
#3	.0795519	.1100536	-.036148

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2358.847	25953.73	2308.127	1908.833	3098.411
Stddev	5.180	36.17	10.060	7.711	3.130
%RSD	.2196004	.1393506	.4358463	.4039544	.1010148
#1	2357.776	25990.74	2299.741	1914.862	3097.217
#2	2364.478	25951.97	2319.281	1900.145	3101.962
#3	2354.285	25918.47	2305.359	1911.493	3096.053

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4976-10DLX2 Acquired: 12/13/2024 14:28:18 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29E4S Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1164446	.0762637	.0506031	.0500173	.0781496	11.54945	2.008972
Stddev	.0029385	.0017427	.0003512	.0043112	.0019841	.02315	.005921
%RSD	2.523479	2.285035	.6939689	8.619366	2.538825	.2004190	.2947361
#1	.1130807	.0781463	.0508252	.0540721	.0797727	11.52348	2.006214
#2	.1185108	.0759375	.0501983	.0504909	.0787383	11.56792	2.015769
#3	.1177423	.0747071	.0507858	.0454889	.0759378	11.55694	2.004933

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0498160	.0479962	604.8237	.2291961	.5206578	.2599428	32.58963
Stddev	.0002661	.0000504	.9788	.0013052	.0004554	.0067962	.12705
%RSD	.5342695	.1049951	.1618244	.5694528	.0874730	2.614496	.3898610
#1	.0499231	.0479615	604.6482	.2306218	.5211726	.2575903	32.59316
#2	.0500119	.0480540	605.8784	.2289064	.5204933	.2546354	32.71489
#3	.0495130	.0479732	603.9447	.2280601	.5203074	.2676027	32.46085

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.842680	93.74917	.5262088	.0373484	1.900902	.5440144	.5163453
Stddev	.003215	.38440	.0012565	.0002945	.600165	.0062975	.0052401
%RSD	.1744769	.4100332	.2387876	.7885087	31.57263	1.157604	1.014850
#1	1.841528	93.64994	.5269938	.0376094	1.208880	.5508999	.5203397
#2	1.846313	94.17345	.5268730	.0374068	2.214862	.5385465	.5182842
#3	1.840201	93.42411	.5247596	.0370291	2.278963	.5425968	.5104120

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-2.26808	.8387321	-.005118	.0067320	6.454861	2.162972	.0087402
Stddev	.10056	.0005587	.001035	.0001446	.008450	.010304	.0013376
%RSD	4.433837	.0666159	20.21290	2.147475	.1309110	.4763653	15.30379
#1	-2.25005	.8383552	-.006145	.0065750	6.462067	2.159968	.0095569
#2	-2.37644	.8393740	-.004076	.0067615	6.445561	2.174444	.0094671
#3	-2.17776	.8384671	-.005133	.0068596	6.456956	2.154504	.0071966

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4976-10DLX2 Acquired: 12/13/2024 14:28:18 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29E4S Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.3821561	.5254286	-.004824
Stddev	.0058339	.0012384	.005308
%RSD	1.526567	.2357006	110.0229
#1	.3875595	.5240676	-.009922
#2	.3829380	.5264891	-.005221
#3	.3759707	.5257292	.000671

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2291.805	25529.40	2308.033	1861.540	2823.382
Stddev	4.721	41.63	11.297	7.445	7.224
%RSD	.2059978	.1630667	.4894486	.3999475	.2558601
#1	2287.244	25571.33	2309.573	1858.710	2819.262
#2	2291.500	25488.07	2296.045	1869.985	2819.160
#3	2296.672	25528.79	2318.480	1855.925	2831.723

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4976-11DLX2 Acquired: 12/13/2024 14:32:08 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29E5 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0085282	.0274606	.0327110	-.039844	-.004163	8.220543	.0495964
Stddev	.0043875	.0019574	.0003455	.003973	.002525	.040516	.0011315
%RSD	51.44750	7.128135	1.056183	9.970837	60.65472	.4928602	2.281365
#1	.0102375	.0295351	.0330897	-.042797	-.004572	8.256545	.0505608
#2	.0035432	.0272005	.0326301	-.035327	-.001459	8.228417	.0498775
#3	.0118037	.0256463	.0324131	-.041408	-.006459	8.176669	.0483509

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008811	.0008059	757.5884	.0240410	.0515609	.0303164	34.90334
Stddev	.0001038	.0000891	3.8029	.0005485	.0002620	.0076913	.28188
%RSD	11.77649	11.05827	.5019802	2.281483	.5081644	25.36997	.8075979
#1	.0008561	.0008885	761.9671	.0246715	.0517304	.0330966	35.22489
#2	.0007921	.0007114	755.1114	.0236739	.0512591	.0216216	34.78627
#3	.0009950	.0008176	755.6867	.0237777	.0516932	.0362309	34.69887

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.471941	231.2073	.0384943	-.003367	2.560393	.0269118	.0629267
Stddev	.019743	.9900	.0002335	.000508	.974839	.0120948	.0042167
%RSD	.7986641	.4281771	.6065543	15.09202	38.07380	44.94246	6.700939
#1	2.494737	232.2642	.0382589	-.003950	3.358981	.0394697	.0629442
#2	2.460639	231.0560	.0387258	-.003012	1.474074	.0153405	.0671347
#3	2.460446	230.3017	.0384981	-.003141	2.848125	.0259251	.0587013

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-2.09726	1.006069	.0063602	.0038518	1.759891	1.896108	.0091926
Stddev	.09628	.007610	.0032609	.0007605	.006963	.020992	.0016372
%RSD	4.590553	.7564432	51.27067	19.74495	.3956363	1.107100	17.80961
#1	-2.00708	.999819	.0101082	.0033155	1.751853	1.919554	.0109266
#2	-2.08604	1.003844	.0041737	.0035177	1.763767	1.879059	.0089778
#3	-2.19865	1.014544	.0047986	.0047222	1.764054	1.889712	.0076735

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4976-11DLX2 Acquired: 12/13/2024 14:32:08 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29E5 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.2076161	.4704281	.0083621
Stddev	.0042742	.0024855	.0056525
%RSD	2.058711	.5283505	67.59705
#1	.2054987	.4730635	.0033834
#2	.2048139	.4681261	.0145067
#3	.2125357	.4700948	.0071962

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2238.467	24938.20	2264.346	1796.811	2666.763
Stddev	3.902	96.16	16.737	7.090	3.263
%RSD	.1743027	.3856071	.7391459	.3946146	.1223428
#1	2240.882	24993.66	2247.604	1793.079	2669.389
#2	2233.965	24827.16	2264.356	1792.366	2663.110
#3	2240.553	24993.79	2281.078	1804.988	2667.790

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4976-12DLX2 Acquired: 12/13/2024 14:36:03 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29E6 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0188990	.0247484	.0382740	-.034207	-.003539	11.24867	.0485855
Stddev	.0028985	.0019090	.0013775	.004016	.001171	.03721	.0006484
%RSD	15.33705	7.713597	3.598935	11.73910	33.09388	.3308230	1.334522
#1	.0164782	.0233208	.0396436	-.030637	-.003172	11.21503	.0478949
#2	.0181077	.0240076	.0382897	-.033431	-.004849	11.28864	.0486806
#3	.0221109	.0269167	.0368888	-.038555	-.002595	11.24234	.0491811

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013886	.0008683	575.2010	.0404995	.0558820	.0334981	48.24217
Stddev	.0001432	.0001106	1.7532	.0005453	.0005259	.0010909	.12508
%RSD	10.30954	12.74147	.3047990	1.346391	.9410818	3.256559	.2592737
#1	.0012781	.0008694	574.7315	.0400661	.0561304	.0326692	48.16721
#2	.0013375	.0007571	577.1411	.0411118	.0562376	.0330912	48.38656
#3	.0015504	.0009784	573.7303	.0403208	.0552779	.0347340	48.17273

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.299820	132.6021	.0625653	-.004886	2.583062	.0537913	.0999537
Stddev	.001347	.3010	.0002231	.001409	.708938	.0052986	.0029147
%RSD	.1036043	.2269727	.3565479	28.82952	27.44566	9.850205	2.916067
#1	1.301119	132.3993	.0624499	-.005712	2.977111	.0545141	.1021181
#2	1.299911	132.9479	.0624237	-.003260	1.764637	.0586914	.1011035
#3	1.298430	132.4592	.0628225	-.005687	3.007437	.0481685	.0966394

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-1.96843	1.371671	.0013914	.0037426	.6036114	1.797932	.0092835
Stddev	.20500	.001936	.0019935	.0006092	.0078663	.010962	.0013729
%RSD	10.41447	.1411062	143.2786	16.27685	1.303212	.6097180	14.78899
#1	-2.06195	1.372388	.0036768	.0041087	.5955090	1.801049	.0077478
#2	-1.73335	1.373146	.0000110	.0040798	.6112182	1.806999	.0097104
#3	-2.10999	1.369479	.0004862	.0030394	.6041070	1.785749	.0103923

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4976-12DLX2 Acquired: 12/13/2024 14:36:03 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29E6 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.4523248	.3747319	.0056627
Stddev	.0022206	.0012279	.0049350
%RSD	.4909246	.3276630	87.15068
#1	.4498008	.3738907	.0026908
#2	.4531959	.3741640	.0029377
#3	.4539778	.3761409	.0113594

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2301.059	25506.64	2309.463	1852.254	2794.999
Stddev	1.061	51.79	9.380	7.387	3.398
%RSD	.0461034	.2030307	.4061539	.3988037	.1215698
#1	2300.472	25463.28	2308.914	1850.219	2791.131
#2	2302.284	25563.98	2300.369	1860.445	2797.506
#3	2300.422	25492.66	2319.105	1846.098	2796.358

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4976-13DLX2 Acquired: 12/13/2024 14:39:57 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29E7 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0114809	.0243317	.0309435	-.036645	-.005688	6.418380	.0357136
Stddev	.0010403	.0018890	.0014920	.001162	.003824	.021995	.0000735
%RSD	9.060772	7.763612	4.821549	3.170454	67.22948	.3426851	.2059129
#1	.0123913	.0243708	.0296702	-.036553	-.009953	6.434252	.0357709
#2	.0117043	.0262008	.0305753	-.037851	-.004545	6.393273	.0357392
#3	.0103471	.0224234	.0325851	-.035533	-.002566	6.427614	.0356307

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008502	.0005708	499.3104	.0183341	.0452591	.0263491	25.75451
Stddev	.0000503	.0000670	2.0839	.0003681	.0008555	.0021670	.19539
%RSD	5.920781	11.73090	.4173626	2.007930	1.890257	8.224174	.7586816
#1	.0007935	.0004978	501.7157	.0183737	.0459629	.0262370	25.95670
#2	.0008673	.0006294	498.1676	.0179477	.0455074	.0285700	25.74010
#3	.0008897	.0005852	498.0479	.0186808	.0443069	.0242404	25.56671

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.550509	136.6648	.0312667	-.002429	2.048268	.0259579	.0614416
Stddev	.010243	.9378	.0007637	.001026	.835525	.0087143	.0085246
%RSD	.6606395	.6861890	2.442654	42.23523	40.79177	33.57088	13.87441
#1	1.561480	137.7410	.0315946	-.003541	3.012477	.0348308	.0516107
#2	1.548852	136.2301	.0318117	-.002225	1.537396	.0174113	.0659271
#3	1.541195	136.0233	.0303938	-.001520	1.594932	.0256316	.0667869

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-2.15673	.7512583	.0063598	.0023305	.5390219	1.428579	.0065594
Stddev	.11455	.0047431	.0031927	.0002845	.0018969	.014940	.0001361
%RSD	5.311196	.6313482	50.20053	12.20630	.3519213	1.045823	2.074937
#1	-2.03496	.7459572	.0074275	.0024325	.5401067	1.445696	.0064125
#2	-2.26235	.7551006	.0088818	.0020091	.5401274	1.421880	.0065844
#3	-2.17288	.7527170	.0027701	.0025499	.5368315	1.418160	.0066812

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4976-13DLX2 Acquired: 12/13/2024 14:39:57 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29E7 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.1842792	.4008843	-.002216
Stddev	.0040404	.0018726	.003776
%RSD	2.192521	.4671247	170.4354
#1	.1854229	.4029140	-.003759
#2	.1876244	.4005151	-.004976
#3	.1797902	.3992237	.002088

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2320.740	25669.80	2342.375	1863.067	2828.690
Stddev	9.401	47.96	16.068	9.362	8.949
%RSD	.4051007	.1868221	.6859809	.5024994	.3163685
#1	2327.206	25724.90	2326.930	1873.504	2833.650
#2	2325.059	25637.46	2341.193	1855.409	2834.062
#3	2309.955	25647.05	2359.001	1860.290	2818.360

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4976-14DLX2 Acquired: 12/13/2024 14:43:52 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29E8 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0167227	.0294232	.0381796	-.034905	-.001462	11.38037	.0541580
Stddev	.0030868	.0026260	.0008322	.005719	.001432	.07709	.0006266
%RSD	18.45850	8.924887	2.179777	16.38512	97.95822	.6774076	1.156886
#1	.0179360	.0304780	.0383074	-.030745	-.001340	11.35485	.0547457
#2	.0190184	.0264338	.0389405	-.041427	-.002950	11.31927	.0534987
#3	.0132136	.0313577	.0372908	-.032543	-.000095	11.46698	.0542297

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013163	.0006777	640.0508	.0386425	.0537325	.0320144	40.37883
Stddev	.0002384	.0000816	1.1502	.0004000	.0000686	.0085950	.11212
%RSD	18.10947	12.04429	.1797087	1.035232	.1276997	26.84717	.2776746
#1	.0013735	.0006236	641.3784	.0382345	.0536655	.0356261	40.49894
#2	.0010545	.0007716	639.4205	.0386590	.0537293	.0222029	40.36062
#3	.0015208	.0006379	639.3536	.0390341	.0538026	.0382142	40.27693

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.510437	105.9647	.0533270	-.004306	2.027300	.0483557	.1184442
Stddev	.001553	.3612	.0004785	.001493	.669220	.0085283	.0010390
%RSD	.1028441	.3409015	.8972753	34.67760	33.01041	17.63663	.8771623
#1	1.509486	105.5476	.0536182	-.005260	1.332710	.0579279	.1172827
#2	1.512230	106.1773	.0527748	-.005073	2.667876	.0455726	.1187648
#3	1.509596	106.1693	.0535881	-.002585	2.081314	.0415667	.1192851

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-1.77318	1.193661	-.001856	.0014121	2.092742	3.095237	.0098180
Stddev	.08035	.002938	.001627	.0007265	.009014	.035524	.0011275
%RSD	4.531445	.2461651	87.66537	51.44613	.4307295	1.147714	11.48449
#1	-1.82115	1.190476	-.000738	.0021174	2.101268	3.054789	.0086032
#2	-1.68042	1.194240	-.001108	.0014528	2.083308	3.109547	.0108310
#3	-1.81797	1.196267	-.003723	.0006661	2.093649	3.121375	.0100197

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4976-14DLX2 Acquired: 12/13/2024 14:43:52 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29E8 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.5055650	.4419070	.0027381
Stddev	.0103436	.0006425	.0039974
%RSD	2.045942	.1453861	145.9927
#1	.5143451	.4411732	.0055075
#2	.5081872	.4421798	-.001845
#3	.4941627	.4423681	.004551

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2302.428	25495.74	2334.810	1858.927	2785.142
Stddev	2.285	26.46	1.927	4.542	5.134
%RSD	.0992476	.1037862	.0825404	.2443520	.1843312
#1	2300.787	25475.64	2336.986	1857.000	2784.490
#2	2305.038	25485.87	2334.126	1855.666	2790.571
#3	2301.459	25525.72	2333.318	1864.115	2780.365

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4976-15DLX2 Acquired: 12/13/2024 14:47:46 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29E9 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0527370	.0225593	.0421047	-.035860	-.001199	9.873962	.0532967
Stddev	.0002316	.0038311	.0016838	.002144	.001736	.020650	.0005288
%RSD	.4392647	16.98219	3.999126	5.978756	144.7536	.2091318	.9920843
#1	.0524894	.0181482	.0410043	-.038275	.000657	9.896573	.0535765
#2	.0527731	.0250541	.0412667	-.034182	-.002783	9.856101	.0526869
#3	.0529484	.0244757	.0440431	-.035122	-.001471	9.869214	.0536268

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015956	.0009112	513.2995	.0259717	.0576167	.0451198	46.16695
Stddev	.0000240	.0000930	1.9114	.0009803	.0002034	.0043116	.25761
%RSD	1.502854	10.20352	.3723710	3.774534	.3530515	9.555974	.5580007
#1	.0015834	.0009868	515.4954	.0251014	.0575789	.0430712	46.45279
#2	.0015802	.0008074	512.0101	.0257799	.0578364	.0422144	46.09535
#3	.0016233	.0009394	512.3928	.0270337	.0574349	.0500738	45.95271

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.309381	102.4761	.0647897	-.004128	2.273350	.0675717	.1086212
Stddev	.007520	.3505	.0007001	.000231	.462584	.0082698	.0065277
%RSD	.5742978	.3420481	1.080584	5.596628	20.34813	12.23861	6.009553
#1	1.318059	102.8627	.0644225	-.003863	1.809905	.0705859	.1072241
#2	1.304791	102.3866	.0643496	-.004288	2.275078	.0739116	.1029052
#3	1.305293	102.1790	.0655970	-.004233	2.735068	.0582175	.1157343

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-2.03626	.9106752	-.003683	.0069874	5.456206	2.338913	.0082466
Stddev	.08258	.0011805	.001098	.0006922	.022376	.012491	.0011225
%RSD	4.055276	.1296336	29.81412	9.906161	.4101070	.5340547	13.61136
#1	-2.12520	.9115565	-.003861	.0077391	5.470740	2.353067	.0072139
#2	-2.02157	.9093339	-.004681	.0068467	5.430439	2.329433	.0094412
#3	-1.96201	.9111353	-.002507	.0063763	5.467440	2.334237	.0080846

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4976-15DLX2 Acquired: 12/13/2024 14:47:46 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29E9 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.4524635	.4408509	-.006553
Stddev	.0067796	.0024918	.006123
%RSD	1.498370	.5652236	93.44476
#1	.4590895	.4437277	-.000695
#2	.4527610	.4394570	-.006052
#3	.4455401	.4393680	-.012911

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2309.106	25739.74	2330.451	1872.882	2826.984
Stddev	4.433	97.28	6.692	3.972	4.082
%RSD	.1919839	.3779298	.2871468	.2120931	.1443844
#1	2305.284	25840.43	2323.161	1875.299	2823.199
#2	2308.069	25646.28	2336.314	1875.050	2831.309
#3	2313.966	25732.49	2331.880	1868.298	2826.445

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4976-16DLX2 Acquired: 12/13/2024 14:51:40 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29F0 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0189553	.0242091	.0321744	-.039122	-.006387	7.692188	.0493907
Stddev	.0042631	.0013193	.0009226	.001775	.002004	.090643	.0010190
%RSD	22.49003	5.449450	2.867587	4.536729	31.37895	1.178375	2.063187
#1	.0228770	.0248805	.0311641	-.041166	-.005672	7.757005	.0502323
#2	.0144179	.0250576	.0329722	-.038225	-.008650	7.588609	.0482577
#3	.0195710	.0226892	.0323870	-.037974	-.004838	7.730950	.0496820

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010481	.0005435	437.6197	.0205295	.0475433	.0328097	30.64942
Stddev	.0001455	.0000567	5.0847	.0006393	.0002632	.0035124	.37906
%RSD	13.88686	10.43183	1.161899	3.114130	.5535760	10.70552	1.236753
#1	.0010296	.0006049	442.4081	.0201937	.0474602	.0287620	31.02060
#2	.0009127	.0005323	432.2831	.0201280	.0478380	.0346119	30.26295
#3	.0012020	.0004932	438.1677	.0212667	.0473317	.0350553	30.66471

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.042680	102.6314	.0400235	-.003047	1.661228	.0341700	.0769561
Stddev	.006236	1.1470	.0008628	.000539	.444398	.0096597	.0033059
%RSD	.5980459	1.117617	2.155606	17.69778	26.75121	28.26958	4.295868
#1	1.049548	103.5500	.0397954	-.003363	1.595119	.0235576	.0737698
#2	1.037373	101.3458	.0409773	-.002424	2.134977	.0424499	.0767286
#3	1.041118	102.9985	.0392976	-.003353	1.253587	.0365024	.0803699

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-2.44545	.7971072	-.002123	.0037208	.4889631	1.488945	.0078993
Stddev	.10542	.0012846	.001748	.0003183	.0063547	.019157	.0015693
%RSD	4.310777	.1611633	82.36291	8.553586	1.299625	1.286585	19.86655
#1	-2.36922	.7968594	-.003568	.0039619	.4831505	1.507439	.0096392
#2	-2.56575	.7959645	-.000180	.0033600	.4879910	1.469188	.0074677
#3	-2.40137	.7984977	-.002620	.0038404	.4957478	1.490209	.0065909

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4976-16DLX2 Acquired: 12/13/2024 14:51:40 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29F0 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.2634164	.3491803	-.009297
Stddev	.0019715	.0031490	.004302
%RSD	.7484513	.9018116	46.26733
#1	.2616015	.3519294	-.010129
#2	.2631336	.3457448	-.004641
#3	.2655140	.3498669	-.013123

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2324.437	25797.57	2327.688	1870.081	2867.379
Stddev	4.702	12.51	29.616	3.141	4.646
%RSD	.2022847	.0484984	1.272326	.1679731	.1620157
#1	2320.251	25811.89	2299.213	1872.781	2863.045
#2	2323.536	25788.79	2358.326	1866.633	2866.809
#3	2329.525	25792.02	2325.526	1870.829	2872.284

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4976-17DLX2 Acquired: 12/13/2024 14:55:34 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29F1 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0184531	.0226001	.0319801	-.034399	-.005274	6.708565	.0471278
Stddev	.0030853	.0031753	.0011189	.002236	.001293	.013957	.0006899
%RSD	16.71980	14.04984	3.498734	6.499206	24.51302	.2080455	1.463970
#1	.0217839	.0238401	.0307123	-.035466	-.004376	6.704934	.0470481
#2	.0156929	.0249683	.0328294	-.035901	-.004691	6.696782	.0478541
#3	.0178825	.0189920	.0323985	-.031830	-.006756	6.723978	.0464811

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010110	.0005315	435.9201	.0182291	.0462706	.0247324	29.87933
Stddev	.0000463	.0000822	1.0206	.0015010	.0004107	.0050354	.05515
%RSD	4.583144	15.45973	.2341364	8.234258	.8875410	20.35937	.1845806
#1	.0009735	.0005581	434.7495	.0166317	.0466273	.0220108	29.82810
#2	.0009969	.0005971	436.6237	.0196103	.0463629	.0305428	29.93770
#3	.0010628	.0004393	436.3870	.0184452	.0458216	.0216435	29.87219

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9272842	124.0904	.0365416	-.003479	2.405587	.0311140	.0669354
Stddev	.0004847	.3349	.0006020	.001138	.632019	.0026358	.0025138
%RSD	.0522665	.2698535	1.647526	32.70846	26.27296	8.471543	3.755553
#1	.9277500	123.7105	.0371179	-.002847	2.953113	.0280797	.0640373
#2	.9273199	124.2181	.0365900	-.002798	2.549687	.0328370	.0682440
#3	.9267826	124.3426	.0359168	-.004793	1.713961	.0324252	.0685250

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-1.83120	.7149780	-.000876	.0034673	.4671884	1.916343	.0088354
Stddev	.10225	.0027271	.001190	.0007018	.0049495	.006746	.0011115
%RSD	5.583575	.3814259	135.8801	20.23956	1.059420	.3520370	12.57975
#1	-1.75438	.7120285	-.002250	.0030817	.4724840	1.919833	.0096622
#2	-1.79198	.7174079	-.000240	.0042774	.4664021	1.908567	.0075719
#3	-1.94725	.7154976	-.000139	.0030429	.4626792	1.920630	.0092722

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4976-17DLX2 Acquired: 12/13/2024 14:55:34 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29F1 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.2955867	.2984984	-.005830
Stddev	.0020326	.0008231	.002473
%RSD	.6876364	.2757428	42.41590
#1	.2970465	.2980043	-.003169
#2	.2964484	.2980424	-.006264
#3	.2932653	.2994486	-.008057

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2296.804	25421.05	2294.157	1845.503	2827.057
Stddev	5.754	42.22	5.453	7.697	8.895
%RSD	.2505050	.1661019	.2376906	.4170922	.3146237
#1	2292.382	25464.46	2292.126	1853.542	2821.678
#2	2303.309	25418.57	2300.333	1838.200	2837.324
#3	2294.720	25380.12	2290.010	1844.767	2822.169

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4976-18DLX2 Acquired: 12/13/2024 14:59:30 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29F2 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0130879	.0240918	.0410852	-.030563	-.005995	10.60076	.0506487
Stddev	.0021151	.0015478	.0017331	.004753	.001890	.03022	.0008296
%RSD	16.16104	6.424803	4.218365	15.55113	31.51904	.2850572	1.637869
#1	.0106470	.0256984	.0424911	-.028959	-.007185	10.56596	.0516013
#2	.0143824	.0226103	.0391488	-.026819	-.006984	10.62042	.0502601
#3	.0142342	.0239667	.0416156	-.035910	-.003816	10.61590	.0500848

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0012797	.0008356	566.4273	.0313114	.0520927	.0460509	37.88715
Stddev	.0000291	.0000103	1.5146	.0008142	.0004427	.0013120	.08356
%RSD	2.269995	1.228434	.2673935	2.600287	.8497702	2.849119	.2205447
#1	.0012464	.0008444	565.7515	.0309359	.0518550	.0450242	37.88493
#2	.0012998	.0008379	568.1621	.0322456	.0518196	.0475290	37.97179
#3	.0012928	.0008243	565.3682	.0307528	.0526034	.0455994	37.80472

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.129385	128.7065	.0600191	-.005428	1.501755	.0406109	.1172274
Stddev	.008322	.4481	.0007846	.000722	.488348	.0077605	.0075311
%RSD	.7368916	.3481588	1.307208	13.31092	32.51846	19.10938	6.424347
#1	1.124576	128.4804	.0592842	-.006007	1.792396	.0430052	.1085689
#2	1.138995	129.2226	.0599278	-.004618	1.774919	.0319354	.1208569
#3	1.124584	128.4166	.0608453	-.005657	.937950	.0468922	.1222566

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-1.69480	1.573609	-.000360	.0035414	.8131618	2.392058	.0085297
Stddev	.04827	.005440	.000447	.0000824	.0035104	.017425	.0018343
%RSD	2.848398	.3456848	124.1152	2.327072	.4316989	.7284464	21.50491
#1	-1.74057	1.567555	.000017	.0034548	.8092042	2.373078	.0069862
#2	-1.64436	1.575183	-.000854	.0036189	.8158998	2.407332	.0105576
#3	-1.69947	1.578087	-.000243	.0035504	.8143813	2.395763	.0080454

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4976-18DLX2 Acquired: 12/13/2024 14:59:30 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29F2 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.3666141	.4280895	.0049120
Stddev	.0019766	.0020853	.0012818
%RSD	.5391508	.4871120	26.09532
#1	.3644962	.4258407	.0044792
#2	.3684098	.4299592	.0063542
#3	.3669363	.4284687	.0039026

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2339.545	25907.67	2358.684	1886.562	2807.650
Stddev	.991	76.76	17.289	10.436	6.337
%RSD	.0423429	.2962656	.7330112	.5531730	.2256955
#1	2340.224	25914.43	2376.658	1879.986	2813.360
#2	2340.002	25827.76	2342.172	1881.104	2808.759
#3	2338.408	25980.83	2357.221	1898.595	2800.832

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4976-19DLX2 Acquired: 12/13/2024 15:03:22 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29F3 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0079428	.0228944	.0327258	-.031042	-.001770	10.87437	.0589973
Stddev	.0036728	.0038402	.0016967	.003803	.000077	.02157	.0013140
%RSD	46.24000	16.77343	5.184748	12.25116	4.357313	.1983497	2.227191
#1	.0120892	.0185083	.0345629	-.028979	-.001739	10.86354	.0582284
#2	.0050983	.0245233	.0312175	-.035431	-.001714	10.89921	.0605145
#3	.0066410	.0256516	.0323971	-.028716	-.001858	10.86036	.0582490

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011766	.0005340	440.4468	.0280604	.0534998	.0222132	40.99614
Stddev	.0000978	.0000305	.7373	.0004745	.0003429	.0047716	.12778
%RSD	8.309219	5.716063	.1674038	1.690916	.6409647	21.48088	.3116799
#1	.0012729	.0005329	439.7371	.0277677	.0531272	.0275987	40.84997
#2	.0010774	.0005041	441.2090	.0286079	.0535698	.0185129	41.08661
#3	.0011795	.0005651	440.3945	.0278057	.0538023	.0205281	41.05185

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.125505	86.43481	.0477455	-.004438	2.030719	.0425703	.0930566
Stddev	.004268	.21766	.0005025	.000219	.170379	.0108207	.0065738
%RSD	.3791837	.2518240	1.052542	4.938077	8.390088	25.41835	7.064263
#1	1.124361	86.20689	.0481570	-.004678	2.087744	.0537494	.0904443
#2	1.130229	86.45703	.0471854	-.004249	1.839142	.0418139	.0881904
#3	1.121927	86.64052	.0478941	-.004387	2.165272	.0321477	.1005349

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-2.20240	1.173461	-.008503	.0026512	.7201396	2.167079	.0077064
Stddev	.14261	.002157	.003257	.0007969	.0098400	.010067	.0006205
%RSD	6.475329	.1837960	38.30481	30.05788	1.366400	.4645206	8.051706
#1	-2.29896	1.173380	-.005304	.0025944	.7164445	2.177068	.0081259
#2	-2.26964	1.171346	-.011816	.0018842	.7312923	2.167234	.0069936
#3	-2.03860	1.175657	-.008390	.0034749	.7126820	2.156936	.0079997

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4976-19DLX2 Acquired: 12/13/2024 15:03:22 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29F3 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.4198207	.3660749	-.002338
Stddev	.0035322	.0016156	.002916
%RSD	.8413629	.4413224	124.7323
#1	.4206199	.3646412	-.005309
#2	.4159573	.3657579	.000520
#3	.4228848	.3678254	-.002225

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2351.624	25984.57	2351.892	1903.407	2889.873
Stddev	3.849	79.76	10.277	8.396	6.561
%RSD	.1636661	.3069549	.4369833	.4410988	.2270400
#1	2348.519	25964.80	2348.254	1899.681	2883.105
#2	2355.930	25916.56	2343.927	1897.518	2896.205
#3	2350.423	26072.36	2363.493	1913.021	2890.309

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4976-20DLX2 Acquired: 12/13/2024 15:07:16 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29F4 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0127113	.0275911	.0342882	-.037177	-.007606	8.698381	.0371943
Stddev	.0042769	.0049062	.0010413	.004390	.000808	.023827	.0009785
%RSD	33.64616	17.78196	3.036812	11.80825	10.62002	.2739259	2.630654
#1	.0081576	.0330044	.0335173	-.039456	-.008128	8.681669	.0382051
#2	.0133331	.0234375	.0354727	-.039958	-.006675	8.687810	.0371260
#3	.0166433	.0263314	.0338746	-.032116	-.008013	8.725665	.0362518

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009398	.0007211	586.5193	.0236631	.0524828	.0338992	32.48963
Stddev	.0000888	.0000551	1.0606	.0000976	.0002403	.0006016	.12476
%RSD	9.444111	7.638634	.1808319	.4126175	.4579253	1.774556	.3840024
#1	.0009224	.0006602	586.6652	.0236238	.0522571	.0343839	32.34565
#2	.0010360	.0007673	587.4994	.0235913	.0524558	.0332260	32.56576
#3	.0008611	.0007358	585.3933	.0237743	.0527355	.0340878	32.55749

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.227925	142.1656	.0432864	-.002717	1.370047	.0397274	.0754564
Stddev	.003468	.3397	.0011694	.000825	.660024	.0072869	.0036931
%RSD	.2823926	.2389121	2.701595	30.38004	48.17527	18.34227	4.894352
#1	1.224001	141.9778	.0445779	-.002249	.948893	.0402800	.0778625
#2	1.230576	142.5577	.0422993	-.003670	1.030530	.0321800	.0712042
#3	1.229198	141.9613	.0429819	-.002232	2.130718	.0467223	.0773023

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-1.93571	1.110054	.0017006	.0035090	.5667071	2.205335	.0073381
Stddev	.09348	.001711	.0007901	.0010753	.0056743	.003870	.0001417
%RSD	4.829224	.1541776	46.45827	30.64543	1.001280	.1754831	1.930864
#1	-1.85420	1.111900	.0009018	.0045474	.5686951	2.208954	.0072516
#2	-1.91518	1.108520	.0024817	.0035793	.5603063	2.205795	.0072610
#3	-2.03775	1.109743	.0017185	.0024002	.5711199	2.201255	.0075016

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4976-20DLX2 Acquired: 12/13/2024 15:07:16 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29F4 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.2927272	.4365598	-.000052
Stddev	.0012662	.0015010	.003315
%RSD	.4325615	.3438279	6433.527
#1	.2918254	.4355662	.001785
#2	.2941748	.4382865	-.003878
#3	.2921814	.4358266	.001938

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2290.293	25449.14	2312.381	1850.000	2787.438
Stddev	4.297	25.04	1.733	4.168	1.332
%RSD	.1876109	.0983835	.0749573	.2252916	.0477740
#1	2290.437	25454.67	2313.463	1854.317	2788.468
#2	2285.926	25421.79	2310.382	1849.685	2785.934
#3	2294.516	25470.94	2313.298	1845.999	2787.911

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: CCV008 Acquired: 12/13/2024 15:20:57 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV008 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.832434	4.835211	23.67267	4.613296	4.607277	376.3629	9.699976
Stddev	.013923	.014717	.02161	.007961	.009293	.5789	.011377
%RSD	.2881253	.3043751	.0912724	.1725683	.2017111	.1538094	.1172929
#1	4.816386	4.829859	23.67405	4.604391	4.612543	376.9062	9.712547
#2	4.841307	4.823920	23.65040	4.619724	4.596546	375.7540	9.690386
#3	4.839608	4.851856	23.69354	4.615772	4.612741	376.4286	9.696996

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4755117	2.368083	387.9585	14.68204	2.356428	14.58705	386.6692
Stddev	.0013204	.002849	.9223	.02635	.002509	.04669	1.4768
%RSD	.2776852	.1203236	.2377363	.1794614	.1064633	.3200519	.3819229
#1	.4761577	2.367969	389.0083	14.67781	2.359304	14.60008	388.2148
#2	.4739927	2.365292	387.2783	14.71025	2.354691	14.53523	385.2726
#3	.4763848	2.370987	387.5888	14.65807	2.355288	14.62583	386.5202

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	14.43774	377.1037	2.398116	1.211351	378.0306	2.413966	13.90199
Stddev	.03927	1.2178	.001694	.000949	1.0084	.009919	.10853
%RSD	.2720269	.3229440	.0706454	.0783110	.2667450	.4108969	.7806819
#1	14.46603	378.0054	2.400070	1.211618	378.5477	2.421040	13.96411
#2	14.39290	375.7183	2.397065	1.210297	376.8685	2.402628	13.77667
#3	14.45430	377.5872	2.397212	1.212137	378.6755	2.418229	13.96519

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	143.7481	4.744579	4.621142	4.580716	4.755141	4.685386	4.798433
Stddev	.5833	.005730	.004957	.003049	.010388	.005226	.005675
%RSD	.4057937	.1207717	.1072693	.0665665	.2184514	.1115459	.1182580
#1	144.3305	4.744865	4.626866	4.578752	4.745127	4.690942	4.804933
#2	143.1639	4.738711	4.618287	4.579168	4.754429	4.680569	4.795899
#3	143.7499	4.750161	4.618272	4.584229	4.765866	4.684646	4.794468

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: CCV008 Acquired: 12/13/2024 15:20:57 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV008 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	4.878999	4.570867	4.874411
Stddev	.011671	.012690	.026360
%RSD	.2392050	.2776231	.5407899
#1	4.887904	4.578953	4.865840
#2	4.865786	4.556241	4.853403
#3	4.883306	4.577407	4.903990

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1961.960	23792.11	2241.483	1635.787	2562.312
Stddev	3.285	54.47	12.386	12.751	6.126
%RSD	.1674207	.2289269	.5525603	.7794873	.2390757
#1	1958.176	23818.57	2238.075	1633.320	2555.863
#2	1964.085	23828.29	2255.216	1649.591	2568.053
#3	1963.618	23729.47	2231.158	1624.450	2563.021

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: CCB008 Acquired: 12/13/2024 15:24:35 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB008 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0012549	-.000223	.0072482	-.001176	.0051597	.0743604
Stddev	.0023877	.002230	.0015070	.006136	.0016319	.0360020
%RSD	190.2664	1001.247	20.79063	521.9016	31.62789	48.41547
#1	.0036223	.001862	.0089430	.005897	.0037576	.0851436
#2	.0012952	-.002574	.0060592	-.005082	.0069510	.0341991
#3	-.001153	.000044	.0067424	-.004342	.0047705	.1037386

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0034417	.0002209	.0005323	.0847939	.0047214	.0006758
Stddev	.0013515	.0000885	.0000723	.0214262	.0010869	.0001929
%RSD	39.26981	40.06897	13.58257	25.26850	23.02064	28.54859
#1	.0037537	.0001640	.0005433	.1051438	.0034683	.0004530
#2	.0019614	.0003228	.0005984	.0624333	.0052882	.0007841
#3	.0046099	.0001758	.0004551	.0868047	.0054078	.0007902

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0041507	.0713477	.0030163	.1516880	.0000081	-.000346
Stddev	.0056571	.0021885	.0006245	.0229099	.0003082	.000679
%RSD	136.2929	3.067420	20.70341	15.10332	3793.534	195.9562
#1	-.002250	.0688321	.0037325	.1548353	-.000192	.000192
#2	.006224	.0723963	.0025852	.1728616	-.000146	-.000122
#3	.008479	.0728146	.0027314	.1273672	.000363	-.001109

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.325076	-.007286	.0100989	-.169086	.0002063	.0075800
Stddev	.959088	.006071	.0029224	.161148	.0021979	.0011106
%RSD	41.24972	83.32581	28.93773	95.30566	1065.372	14.65192
#1	3.366854	-.000277	.0067683	-.309859	.0027311	.0077351
#2	2.129570	-.010905	.0112943	.006686	-.000832	.0064000
#3	1.478805	-.010676	.0122340	-.204084	-.001280	.0086050

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: CCB008 Acquired: 12/13/2024 15:24:35 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB008 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010885	-.001874	-.037754	.0031265	.0003509	.0007248
Stddev	.0002056	.002019	.000490	.0006828	.0029208	.0003489
%RSD	18.88571	107.7618	1.296819	21.84020	832.3456	48.13780
#1	.0008603	-.000022	-.037355	.0038998	.0027168	.0005244
#2	.0012592	-.001572	-.037607	.0028732	-.002914	.0005224
#3	.0011459	-.004027	-.038301	.0026065	.001250	.0011277

Elem	Li6707
Units	ppm
Avg	F -.022323
Stddev	.002922
%RSD	13.08829
#1	-.019196
#2	-.022790
#3	-.024983

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2383.836	26126.76	2304.102	1932.243	3222.572
Stddev	6.946	181.48	.746	14.654	6.552
%RSD	.2913820	.6946191	.0323885	.7583850	.2033206
#1	2376.321	26111.28	2304.893	1936.114	3217.126
#2	2385.166	25953.51	2303.411	1916.042	3220.746
#3	2390.021	26315.49	2304.003	1944.572	3229.843

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4976-21DLX2 Acquired: 12/13/2024 15:28:37 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29F5 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0151275	.0271677	.0376705	-.034871	-.003743	9.339418	.0441138
Stddev	.0011894	.0020979	.0033248	.000842	.000967	.022464	.0005166
%RSD	7.862424	7.721934	8.825923	2.414955	25.83026	.2405258	1.171081
#1	.0138487	.0266835	.0414956	-.035662	-.003039	9.358062	.0446135
#2	.0162007	.0294653	.0354741	-.034966	-.003345	9.314478	.0435818
#3	.0153331	.0253542	.0360418	-.033986	-.004845	9.345714	.0441463

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013049	.0007038	562.1336	.0265154	.0537278	.0441575	36.27063
Stddev	.0000696	.0000558	1.6947	.0006024	.0007202	.0007313	.14871
%RSD	5.334021	7.927512	.3014742	2.271721	1.340493	1.656069	.4100067
#1	.0012253	.0007074	563.9288	.0267299	.0535230	.0444734	36.37846
#2	.0013543	.0006463	560.5616	.0269812	.0531321	.0433214	36.33246
#3	.0013352	.0007578	561.9105	.0258352	.0545282	.0446778	36.10098

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.304850	127.1227	.0485383	-.003538	2.244361	.0407761	.0866877
Stddev	.002630	.3492	.0004295	.000995	.206690	.0066648	.0023154
%RSD	.2015293	.2746843	.8847999	28.11180	9.209321	16.34491	2.670928
#1	1.307885	127.5147	.0489845	-.002506	2.424974	.0433769	.0883264
#2	1.303410	127.0087	.0481279	-.003617	2.018943	.0457485	.0840389
#3	1.303255	126.8448	.0485024	-.004491	2.289165	.0332031	.0876978

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-1.63052	1.031527	.0115127	.0060090	.6358630	1.866127	.0082737
Stddev	.03484	.001384	.0011769	.0006883	.0036089	.010316	.0013020
%RSD	2.136979	.1342163	10.22257	11.45415	.5675552	.5528169	15.73633
#1	-1.67066	1.033070	.0123541	.0068021	.6368325	1.874912	.0071903
#2	-1.60807	1.030393	.0120162	.0055682	.6318683	1.868701	.0079127
#3	-1.61284	1.031117	.0101678	.0056567	.6388880	1.854767	.0097181

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4976-21DLX2 Acquired: 12/13/2024 15:28:37 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29F5 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.3246161	.4309692	.0040971
Stddev	.0061067	.0001778	.0055567
%RSD	1.881204	.0412556	135.6272
#1	.3310391	.4309784	-.001832
#2	.3239249	.4307870	.009186
#3	.3188845	.4311423	.004937

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2310.326	25660.90	2306.177	1869.633	2813.833
Stddev	8.049	77.80	8.420	1.641	7.448
%RSD	.3483828	.3032027	.3651026	.0877747	.2646986
#1	2317.902	25586.73	2300.862	1867.770	2822.283
#2	2311.201	25741.89	2301.784	1870.266	2808.223
#3	2301.876	25654.08	2315.884	1870.864	2810.991

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4977-01DLX2 Acquired: 12/13/2024 15:32:31 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29F6 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0118438	.0246431	.0295035	-.035636	-.005508	9.005872	.0421867
Stddev	.0006725	.0007439	.0017921	.002420	.003237	.018704	.0007155
%RSD	5.678467	3.018636	6.074329	6.790934	58.77586	.2076874	1.695967
#1	.0114774	.0252630	.0275789	-.038063	-.003017	9.024730	.0422184
#2	.0126200	.0238182	.0311243	-.035622	-.009168	8.987325	.0414559
#3	.0114340	.0248481	.0298072	-.033223	-.004340	9.005562	.0428857

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009944	.0007233	572.8045	.0307929	.0493420	.0269066	32.09810
Stddev	.0001619	.0000190	1.6456	.0001617	.0004449	.0054173	.09269
%RSD	16.27867	2.626288	.2872821	.5249565	.9017291	20.13374	.2887619
#1	.0011423	.0007015	574.7028	.0309195	.0488594	.0325078	32.20493
#2	.0008214	.0007363	571.7828	.0306108	.0494305	.0216941	32.03904
#3	.0010195	.0007321	571.9278	.0308485	.0497360	.0265179	32.05034

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.125374	130.3002	.0426167	-.002838	2.241678	.0325942	.0836134
Stddev	.002692	.1857	.0005272	.000789	.147028	.0012692	.0042320
%RSD	.2391979	.1425207	1.237047	27.81065	6.558833	3.893844	5.061403
#1	1.127851	130.5006	.0430451	-.003745	2.075514	.0340497	.0832884
#2	1.122509	130.1339	.0420280	-.002465	2.294608	.0317185	.0879985
#3	1.125761	130.2661	.0427770	-.002305	2.354914	.0320144	.0795532

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-1.80942	1.053792	.0049506	.0016973	.5547321	1.730350	.0282713
Stddev	.10296	.003944	.0017765	.0002365	.0025863	.008293	.0010681
%RSD	5.690011	.3742456	35.88378	13.93335	.4662213	.4792606	3.778108
#1	-1.69056	1.051065	.0051101	.0019682	.5542346	1.731539	.0294036
#2	-1.86655	1.051996	.0030998	.0015317	.5575310	1.721527	.0272817
#3	-1.87114	1.058314	.0066419	.0015921	.5524308	1.737984	.0281288

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4977-01DLX2 Acquired: 12/13/2024 15:32:31 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29F6 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.2414894	.5336422	.0125145
Stddev	.0023927	.0025694	.0048987
%RSD	.9907976	.4814909	39.14436
#1	.2434919	.5363586	.0092786
#2	.2421365	.5333173	.0101143
#3	.2388397	.5312506	.0181504

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2293.192	25541.53	2311.514	1848.734	2794.689
Stddev	1.768	28.68	9.229	4.095	.912
%RSD	.0770789	.1122846	.3992500	.2215134	.0326380
#1	2294.820	25515.42	2303.280	1844.112	2793.904
#2	2291.312	25572.22	2321.489	1850.184	2794.475
#3	2293.442	25536.95	2309.772	1851.907	2795.690

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4977-02DLX2 Acquired: 12/13/2024 15:36:26 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29F7 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0399562	.0306876	.0420121	-.035778	-.003663	10.65855	.1373482
Stddev	.0047301	.0019958	.0018149	.004460	.000517	.03729	.0005466
%RSD	11.83820	6.503547	4.319854	12.46661	14.11505	.3498845	.3979412
#1	.0367131	.0285417	.0428342	-.040303	-.003231	10.69301	.1376763
#2	.0377719	.0324882	.0399316	-.031386	-.003523	10.61896	.1376511
#3	.0453838	.0310328	.0432703	-.035644	-.004236	10.66368	.1367173

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010287	.0015424	591.8005	.0318427	.0586353	.0450321	50.28686
Stddev	.0001848	.0000470	2.0367	.0003841	.0003195	.0045536	.07087
%RSD	17.96469	3.048521	.3441456	1.206107	.5448198	10.11194	.1409256
#1	.0012418	.0015056	594.1398	.0322541	.0584821	.0420987	50.36852
#2	.0009302	.0015262	590.8402	.0317806	.0584213	.0502779	50.24151
#3	.0009139	.0015954	590.4216	.0314935	.0590025	.0427196	50.25055

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.365905	140.6940	.0847452	-.005053	2.330810	.0536939	.1163709
Stddev	.020230	.4049	.0007150	.000453	.563610	.0069132	.0099630
%RSD	.4633592	.2877910	.8436835	8.961468	24.18085	12.87526	8.561422
#1	4.384302	141.1571	.0851358	-.005022	1.886007	.0491635	.1232348
#2	4.369174	140.5182	.0851799	-.005520	2.964634	.0616512	.1209343
#3	4.344240	140.4067	.0839201	-.004616	2.141789	.0502672	.1049435

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-1.72134	1.331567	.0043299	.0052259	.6211125	1.911506	.0117469
Stddev	.08672	.005435	.0033611	.0003033	.0047549	.019441	.0005244
%RSD	5.038036	.4081345	77.62492	5.804029	.7655516	1.017046	4.464088
#1	-1.78615	1.335330	.0019729	.0054954	.6192587	1.930396	.0111414
#2	-1.75503	1.325337	.0028382	.0048975	.6265152	1.912564	.0120425
#3	-1.62282	1.334036	.0081788	.0052848	.6175638	1.891558	.0120566

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4977-02DLX2 Acquired: 12/13/2024 15:36:26 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29F7 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.4477197	.4615444	.0069334
Stddev	.0025990	.0018441	.0020170
%RSD	.5804879	.3995549	29.09138
#1	.4501168	.4630561	.0054870
#2	.4480847	.4620874	.0092375
#3	.4449575	.4594898	.0060757

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2339.190	25971.00	2355.707	1888.052	2814.935
Stddev	5.902	42.54	19.026	2.321	7.481
%RSD	.2522943	.1637889	.8076376	.1229417	.2657618
#1	2335.633	26004.86	2340.098	1887.065	2806.336
#2	2346.003	25923.25	2350.123	1890.703	2818.520
#3	2335.935	25984.89	2376.900	1886.386	2819.948

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4977-03DLX2 Acquired: 12/13/2024 15:40:21 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29F8 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0103175	.0282171	.0272731	-.036582	-.010062	7.302943	.0375682
Stddev	.0018448	.0032647	.0016612	.002983	.002446	.035144	.0007096
%RSD	17.88036	11.56998	6.091074	8.153335	24.30626	.4812264	1.888922
#1	.0081900	.0255452	.0262392	-.034455	-.012033	7.331751	.0367968
#2	.0114737	.0318561	.0263907	-.035300	-.010829	7.313291	.0381933
#3	.0112889	.0272499	.0291893	-.039992	-.007325	7.263787	.0377146

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009031	.0004932	642.5023	.0198882	.0468505	.0197496	21.44758
Stddev	.0000281	.0000113	1.4267	.0005296	.0007513	.0056373	.15084
%RSD	3.111518	2.282726	.2220594	2.662943	1.603683	28.54374	.7032940
#1	.0009106	.0004913	643.5935	.0202934	.0461399	.0178081	21.59944
#2	.0009267	.0004829	643.0256	.0200822	.0467749	.0153397	21.29778
#3	.0008720	.0005052	640.8878	.0192889	.0476368	.0261011	21.44551

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.227888	97.40049	.0360224	-.002032	1.638617	.0288128	.0656471
Stddev	.006832	.61399	.0001408	.001274	.737085	.0053672	.0078861
%RSD	.5563895	.6303795	.3908975	62.70654	44.98212	18.62797	12.01291
#1	1.234139	97.51002	.0360859	-.000601	2.269591	.0245148	.0634581
#2	1.220595	97.95234	.0361203	-.003043	1.817800	.0270950	.0743965
#3	1.228929	96.73910	.0358610	-.002453	.828461	.0348287	.0590868

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-2.12549	.9528544	.0053813	.0027898	1.271944	1.845400	.0226226
Stddev	.13177	.0034713	.0011306	.0008684	.003388	.013550	.0013036
%RSD	6.199394	.3643040	21.00902	31.12670	.2663391	.7342593	5.762145
#1	-2.27757	.9506043	.0050371	.0025046	1.268417	1.857019	.0212141
#2	-2.05339	.9511067	.0044629	.0020999	1.272243	1.848664	.0228673
#3	-2.04550	.9568522	.0066440	.0037649	1.275173	1.830516	.0237865

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4977-03DLX2 Acquired: 12/13/2024 15:40:21 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29F8 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.2514654	.5138564	.0045741
Stddev	.0035847	.0017985	.0039704
%RSD	1.425527	.3500090	86.79998
#1	.2517880	.5156778	.0001987
#2	.2477303	.5138096	.0079473
#3	.2548779	.5120816	.0055765

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2329.921	25831.73	2359.689	1881.107	2846.952
Stddev	1.710	63.13	6.862	9.429	2.455
%RSD	.0734032	.2443990	.2908004	.5012668	.0862455
#1	2330.512	25764.73	2351.940	1870.279	2844.903
#2	2331.257	25890.11	2364.998	1885.535	2846.280
#3	2327.993	25840.34	2362.128	1887.507	2849.674

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4977-04DLX2 Acquired: 12/13/2024 15:44:16 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29F8D Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0100784	.0271316	.0281371	-.039230	-.007708	7.146416	.0353950
Stddev	.0021418	.0015679	.0030116	.001565	.001299	.023190	.0001695
%RSD	21.25102	5.778878	10.70347	3.988983	16.84979	.3244997	.4787460
#1	.0097109	.0253251	.0249632	-.037638	-.006835	7.144915	.0352170
#2	.0081441	.0281380	.0284933	-.039285	-.009201	7.124013	.0355543
#3	.0123801	.0279318	.0309548	-.040766	-.007089	7.170320	.0354138

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008588	.0005455	634.2412	.0200611	.0462938	.0238234	21.10013
Stddev	.0000760	.0000956	1.7518	.0006469	.0007048	.0027215	.05581
%RSD	8.844116	17.51522	.2762054	3.224606	1.522470	11.42350	.2644922
#1	.0009273	.0004423	636.1637	.0206871	.0464922	.0209463	21.13470
#2	.0007771	.0005633	632.7351	.0201011	.0468782	.0263565	21.03575
#3	.0008721	.0006309	633.8249	.0193952	.0455111	.0241674	21.12995

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.211892	95.59771	.0353313	-.001214	1.801681	.0266739	.0665558
Stddev	.000963	.17597	.0008418	.000404	.242495	.0056512	.0044857
%RSD	.0794211	.1840742	2.382626	33.30531	13.45936	21.18621	6.739753
#1	1.211368	95.77474	.0350569	-.001104	1.900966	.0214175	.0659643
#2	1.211305	95.42282	.0362761	-.000876	1.525299	.0259535	.0713079
#3	1.213003	95.59557	.0346610	-.001662	1.978777	.0326508	.0623952

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-2.20911	.9269981	.0039476	.0021611	1.239466	1.740728	.0229743
Stddev	.09168	.0022410	.0022790	.0009365	.001892	.002426	.0010438
%RSD	4.150072	.2417463	57.73048	43.33452	.1526567	.1393719	4.543115
#1	-2.24526	.9293825	.0055176	.0014828	1.237322	1.743525	.0227341
#2	-2.10487	.9249353	.0013337	.0032296	1.240904	1.739467	.0241172
#3	-2.27721	.9266765	.0049916	.0017708	1.240171	1.739192	.0220716

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4977-04DLX2 Acquired: 12/13/2024 15:44:16 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29F8D Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.2455888	.5045623	-.001784
Stddev	.0063766	.0014530	.002877
%RSD	2.596470	.2879654	161.2862
#1	.2500518	.5055462	-.000144
#2	.2484291	.5028934	-.000102
#3	.2382855	.5052472	-.005105

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2333.278	26023.88	2364.415	1902.362	2853.504
Stddev	3.807	39.20	8.489	8.669	2.444
%RSD	.1631761	.1506155	.3590353	.4556793	.0856512
#1	2337.303	26038.97	2357.433	1899.606	2856.277
#2	2332.799	25979.38	2373.864	1895.406	2851.663
#3	2329.733	26053.29	2361.947	1912.073	2852.573

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4977-03LDLX10 Acquired: 12/13/2024 15:48:11 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29F8L Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004683	.0155151	.0101151	-.027601	-.006046	1.486082	.0091730
Stddev	.0021502	.0029157	.0017384	.001916	.002625	.018798	.0004717
%RSD	459.1712	18.79292	17.18587	6.941116	43.42014	1.264918	5.141842
#1	.0029467	.0174941	.0095037	-.025394	-.005237	1.495489	.0089037
#2	-.000643	.0121667	.0087651	-.028580	-.008980	1.464437	.0097177
#3	-.000899	.0168844	.0120766	-.028831	-.003920	1.498319	.0088977

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002956	.0001258	126.9824	.0043341	.0276636	.0130651	4.339230
Stddev	.0000527	.0000135	.7302	.0008046	.0001935	.0028096	.050570
%RSD	17.81487	10.76044	.5750628	18.56355	.6996041	21.50490	1.165407
#1	.0002643	.0001191	127.8175	.0051595	.0275888	.0145455	4.382587
#2	.0002661	.0001169	126.4638	.0042909	.0278834	.0098248	4.283678
#3	.0003564	.0001414	126.6660	.0035521	.0275187	.0148249	4.351424

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2493968	20.08644	.0053018	-.000423	2.387513	.0115162	.0109142
Stddev	.0025919	.25049	.0005276	.000647	.428369	.0052521	.0036628
%RSD	1.039275	1.247071	9.950281	153.0428	17.94205	45.60591	33.55976
#1	.2501516	20.35781	.0051154	-.001133	2.020173	.0102641	.0145667
#2	.2515276	20.03746	.0048928	.000134	2.858055	.0070034	.0109345
#3	.2465113	19.86406	.0058973	-.000270	2.284310	.0172812	.0072413

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-1.02794	.1721474	-.009476	.0006784	.2372606	.4109437	.0041422
Stddev	.06051	.0011633	.001288	.0005240	.0076960	.0129538	.0013297
%RSD	5.886065	.6757446	13.59259	77.23397	3.243670	3.152202	32.10205
#1	-1.09776	.1734224	-.008785	.0010169	.2284217	.4247184	.0028663
#2	-.99530	.1718762	-.010962	.0000749	.2408846	.3990072	.0040405
#3	-.99078	.1711438	-.008681	.0009434	.2424756	.4091054	.0055199

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4977-03LDLX10 Acquired: 12/13/2024 15:48:11 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29F8L Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.0494335	.1022255	-.025443
Stddev	.0037492	.0004197	.002504
%RSD	7.584247	.4105904	9.843076
#1	.0487308	.1027100	-.028333
#2	.0460855	.1019927	-.023930
#3	.0534843	.1019737	-.024065

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2366.362	26180.59	2315.367	1914.176	3099.952
Stddev	13.038	84.84	10.618	7.347	12.110
%RSD	.5509516	.3240389	.4585948	.3838396	.3906448
#1	2379.831	26145.40	2303.803	1917.232	3113.648
#2	2353.804	26119.02	2317.620	1905.794	3090.661
#3	2365.450	26277.36	2324.678	1919.502	3095.547

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4977-05DLX2 Acquired: 12/13/2024 15:52:11 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29F8S Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0502515	.0737929	.0443836	.0409598	.0768947	9.914608	1.955332
Stddev	.0037380	.0024166	.0002691	.0023592	.0024341	.074869	.007555
%RSD	7.438559	3.274877	.6062087	5.759844	3.165561	.7551370	.3863573
#1	.0518098	.0758521	.0440884	.0424133	.0784513	9.977073	1.960425
#2	.0459865	.0711324	.0446151	.0382377	.0781432	9.935132	1.958918
#3	.0529582	.0743944	.0444473	.0422284	.0740897	9.831617	1.946652

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0483693	.0472119	633.4194	.2198952	.5104889	.2520380	22.31041
Stddev	.0004960	.0001130	3.4279	.0011176	.0017857	.0090213	.10645
%RSD	1.025489	.2393703	.5411662	.5082383	.3497916	3.579362	.4771399
#1	.0488725	.0472207	635.5844	.2201221	.5084460	.2422263	22.27956
#2	.0483547	.0470948	635.2065	.2186816	.5112682	.2539136	22.42888
#3	.0478808	.0473203	629.4673	.2208819	.5117523	.2599741	22.22279

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.699580	97.25008	.5088636	.0367306	2.017057	.5268035	.4876943
Stddev	.008148	.50557	.0015388	.0007809	.268041	.0024268	.0020597
%RSD	.4794385	.5198650	.3023897	2.126141	13.28872	.4606728	.4223432
#1	1.706638	97.37395	.5100400	.0362911	1.983298	.5240060	.4883989
#2	1.701439	97.68219	.5071222	.0362684	2.300378	.5283428	.4893093
#3	1.690662	96.69408	.5094286	.0376322	1.767495	.5280619	.4853747

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-1.66751	.9365930	.0069859	.0024867	1.258972	2.872096	.0228106
Stddev	.13391	.0036875	.0017702	.0003333	.007792	.029118	.0018665
%RSD	8.030793	.3937196	25.33887	13.40242	.6189303	1.013837	8.182505
#1	-1.55238	.9339529	.0089246	.0022568	1.250046	2.905650	.0215264
#2	-1.81447	.9350199	.0065775	.0023343	1.264418	2.853443	.0249516
#3	-1.63567	.9408062	.0054557	.0028689	1.262451	2.857196	.0219538

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4977-05DLX2 Acquired: 12/13/2024 15:52:11 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29F8S Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.2912509	.5075092	.0060085
Stddev	.0010147	.0021138	.0033634
%RSD	.3483954	.4164985	55.97782
#1	.2901869	.5081946	.0092887
#2	.2922078	.5091952	.0061693
#3	.2913581	.5051378	.0025676

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2303.843	25720.61	2320.215	1864.278	2819.203
Stddev	6.183	96.47	17.704	8.404	6.131
%RSD	.2683953	.3750716	.7630276	.4507935	.2174825
#1	2300.571	25720.97	2307.306	1865.813	2820.635
#2	2299.983	25623.96	2312.942	1855.212	2812.482
#3	2310.975	25816.90	2340.397	1871.808	2824.492

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4977-06DLX2 Acquired: 12/13/2024 15:56:02 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29F9 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0128784	.0263256	.0288225	-.037561	-.005709	6.563623	.0286784
Stddev	.0028649	.0019019	.0016731	.005159	.000476	.013213	.0009009
%RSD	22.24620	7.224669	5.804763	13.73606	8.332996	.2013060	3.141507
#1	.0154280	.0284737	.0271197	-.043466	-.006128	6.560917	.0283926
#2	.0134291	.0256474	.0304642	-.035286	-.005192	6.577979	.0279551
#3	.0097780	.0248557	.0288837	-.033929	-.005808	6.551972	.0296876

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008415	.0006078	549.3433	.0173689	.0466571	.0181139	28.98569
Stddev	.0000807	.0000362	1.4061	.0003249	.0005721	.0032123	.12707
%RSD	9.594640	5.963599	.2559653	1.870456	1.226184	17.73379	.4383816
#1	.0009048	.0006493	547.8513	.0174151	.0471038	.0144280	28.84305
#2	.0007506	.0005913	550.6439	.0170235	.0468551	.0195972	29.08680
#3	.0008690	.0005827	549.5348	.0176683	.0460122	.0203164	29.02721

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.494114	176.5579	.0313214	-.002179	2.252485	.0285666	.0725941
Stddev	.007260	.1831	.0001690	.000796	.364898	.0058441	.0044652
%RSD	.2910986	.1037265	.5394780	36.50730	16.19979	20.45793	6.150903
#1	2.490209	176.3551	.0315079	-.001906	2.673517	.0352891	.0776348
#2	2.502491	176.7112	.0312779	-.001556	2.056105	.0246952	.0710126
#3	2.489641	176.6074	.0311784	-.003076	2.027834	.0257155	.0691349

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-2.40638	.7886532	.0032192	.0012361	.6070450	1.275733	.0070206
Stddev	.04331	.0023232	.0025169	.0003163	.0070923	.004740	.0013545
%RSD	1.799989	.2945847	78.18523	25.58592	1.168337	.3715807	19.29275
#1	-2.36494	.7870712	.0052319	.0012928	.6051816	1.270543	.0083561
#2	-2.45135	.7875681	.0040285	.0008953	.6010703	1.279835	.0070577
#3	-2.40285	.7913205	.0003971	.0015201	.6148829	1.276821	.0056479

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4977-06DLX2 Acquired: 12/13/2024 15:56:02 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29F9 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.3029743	.3563058	-.002504
Stddev	.0012506	.0009308	.004822
%RSD	.4127600	.2612499	192.5355
#1	.3034055	.3554101	.002239
#2	.3039522	.3562391	-.007401
#3	.3015652	.3572683	-.002352

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2315.240	25752.87	2335.091	1869.030	2806.672
Stddev	3.289	49.13	5.768	6.336	1.293
%RSD	.1420773	.1907584	.2470328	.3389927	.0460853
#1	2318.983	25705.53	2335.788	1875.923	2807.937
#2	2313.928	25749.48	2340.480	1863.460	2806.729
#3	2312.808	25803.60	2329.006	1867.707	2805.352

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4977-07DLX2 Acquired: 12/13/2024 15:59:58 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29G0 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0195667	.0296402	.0366510	-.039611	-.005601	6.822297	.0403344
Stddev	.0007153	.0042546	.0021274	.002367	.000680	.052311	.0012725
%RSD	3.655543	14.35433	5.804400	5.974688	12.14602	.7667664	3.154950
#1	.0203694	.0257052	.0390163	-.042261	-.006379	6.877560	.0409478
#2	.0189969	.0341550	.0360425	-.037709	-.005309	6.815784	.0411840
#3	.0193339	.0290604	.0348942	-.038862	-.005116	6.773548	.0388713

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009707	.0007272	678.0196	.0205012	.0500682	.0423292	31.47986
Stddev	.0000344	.0000645	2.0565	.0004569	.0001630	.0050482	.11014
%RSD	3.540710	8.867049	.3033075	2.228448	.3255883	11.92599	.3498843
#1	.0009537	.0007799	680.2906	.0210226	.0500675	.0480578	31.60704
#2	.0010103	.0007463	677.4850	.0201712	.0499055	.0385314	31.41551
#3	.0009482	.0006553	676.2832	.0203097	.0502315	.0403983	31.41703

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.612908	182.1707	.0415633	-.003329	2.206129	.0261262	.0869838
Stddev	.008912	.9986	.0003965	.001229	.558665	.0043190	.0017439
%RSD	.5525360	.5481595	.9540193	36.91858	25.32333	16.53142	2.004878
#1	1.616426	183.1590	.0419474	-.002895	2.101092	.0239186	.0849837
#2	1.619524	182.1908	.0415871	-.004717	1.707437	.0233571	.0881860
#3	1.602774	181.1622	.0411554	-.002377	2.809857	.0311028	.0877818

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-2.20223	.8474659	.0141938	.0027097	.6848332	1.539760	.0078098
Stddev	.19189	.0009103	.0021824	.0003389	.0032260	.022964	.0012923
%RSD	8.713522	.1074116	15.37597	12.50555	.4710579	1.491433	16.54681
#1	-2.08751	.8485139	.0139946	.0030864	.6821834	1.565812	.0063177
#2	-2.42376	.8468725	.0121177	.0026128	.6838909	1.522454	.0085464
#3	-2.09542	.8470112	.0164690	.0024298	.6884255	1.531013	.0085654

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4977-07DLX2 Acquired: 12/13/2024 15:59:58 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29G0 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.1948086	.4859716	.0026396
Stddev	.0039517	.0021871	.0026194
%RSD	2.028508	.4500426	99.23119
#1	.1949888	.4874178	.0016738
#2	.1907698	.4870415	.0056048
#3	.1986671	.4834555	.0006404

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2301.143	25539.22	2328.531	1856.961	2778.425
Stddev	4.761	41.94	30.211	.285	7.349
%RSD	.2068995	.1642126	1.297437	.0153251	.2645005
#1	2297.394	25527.40	2293.717	1857.047	2769.991
#2	2299.535	25504.45	2347.857	1856.643	2781.830
#3	2306.500	25585.79	2344.020	1857.193	2783.454

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4977-08DLX2 Acquired: 12/13/2024 16:03:51 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29G1 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0102042	.0243149	.0251109	-.031810	-.004011	5.847284	.0337586
Stddev	.0018983	.0011117	.0006501	.003363	.001330	.019822	.0005717
%RSD	18.60280	4.572004	2.588714	10.57372	33.16275	.3390034	1.693570
#1	.0116637	.0233842	.0254458	-.035391	-.005154	5.825358	.0332585
#2	.0108907	.0240145	.0243617	-.028718	-.004329	5.852558	.0336354
#3	.0080582	.0255459	.0255252	-.031319	-.002551	5.863936	.0343819

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007193	.0003972	396.7686	.0178920	.0416023	.0184390	18.45005
Stddev	.0000388	.0000174	.7091	.0003569	.0007898	.0061192	.01485
%RSD	5.388222	4.383576	.1787298	1.994698	1.898478	33.18624	.0804755
#1	.0007443	.0004101	396.2809	.0177999	.0411644	.0128335	18.46597
#2	.0006746	.0003774	396.4429	.0182859	.0411284	.0175164	18.44760
#3	.0007389	.0004042	397.5821	.0175901	.0425141	.0249672	18.43658

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8271732	89.52885	.0290054	-.001841	1.813380	.0310770	.0534784
Stddev	.0033274	.38343	.0005147	.000893	.866378	.0056909	.0065793
%RSD	.4022587	.4282807	1.774372	48.50353	47.77695	18.31223	12.30276
#1	.8233342	89.49118	.0287013	-.001125	2.789096	.0267068	.0491107
#2	.8292268	89.16564	.0287152	-.002842	1.134227	.0375121	.0610455
#3	.8289586	89.92973	.0295996	-.001556	1.516816	.0290122	.0502789

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-2.65037	.7484847	-.001722	.0009535	.8882792	1.211996	.0056670
Stddev	.07565	.0021854	.001073	.0003593	.0037630	.005798	.0008801
%RSD	2.854344	.2919805	62.32312	37.68663	.4236277	.4784111	15.52991
#1	-2.73773	.7497355	-.000530	.0005599	.8924523	1.205666	.0048328
#2	-2.60635	.7459612	-.002611	.0010363	.8872410	1.213273	.0065867
#3	-2.60705	.7497573	-.002026	.0012641	.8851443	1.217050	.0055815

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4977-08DLX2 Acquired: 12/13/2024 16:03:51 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29G1 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.3038520	.3174913	-.013178
Stddev	.0019035	.0022122	.000333
%RSD	.6264655	.6967874	2.528068
#1	.3016681	.3155503	-.012837
#2	.3047282	.3170234	-.013194
#3	.3051596	.3199000	-.013503

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2367.161	26337.03	2377.880	1922.594	2937.793
Stddev	2.316	93.39	16.852	12.563	1.620
%RSD	.0978435	.3546013	.7087036	.6534494	.0551437
#1	2369.481	26229.53	2384.069	1910.254	2936.669
#2	2367.153	26398.17	2390.762	1935.369	2937.059
#3	2364.849	26383.40	2358.808	1922.159	2939.650

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4977-09DLX2 Acquired: 12/13/2024 16:07:48 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29G2 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0163829	.0303984	.0255141	-.039182	-.009409	6.610674	.0350764
Stddev	.0029937	.0034201	.0021616	.001368	.002223	.028324	.0007215
%RSD	18.27350	11.25095	8.472194	3.492699	23.63165	.4284555	2.056952
#1	.0194559	.0271174	.0243964	-.037855	-.011627	6.588688	.0353354
#2	.0162174	.0301353	.0280057	-.040589	-.009420	6.642636	.0342611
#3	.0134753	.0339424	.0241402	-.039101	-.007180	6.600698	.0356327

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007633	.0005091	698.1530	.0212927	.0478522	.0178869	20.30073
Stddev	.0000244	.0000844	2.5947	.0001565	.0004774	.0028975	.11725
%RSD	3.194484	16.57785	.3716531	.7349041	.9976423	16.19870	.5775863
#1	.0007726	.0005910	695.9754	.0212084	.0478865	.0189956	20.27169
#2	.0007357	.0004224	701.0239	.0211964	.0473586	.0145989	20.42978
#3	.0007817	.0005140	697.4596	.0214732	.0483115	.0200663	20.20073

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8832467	157.7989	.0324696	-.001482	1.712244	.0383538	.0617432
Stddev	.0014231	.4614	.0008796	.001414	.627619	.0082688	.0035752
%RSD	.1611178	.2923732	2.708991	95.38688	36.65476	21.55915	5.790491
#1	.8830712	157.5114	.0331769	-.002575	1.041050	.0293735	.0632016
#2	.8847494	158.3310	.0314847	-.001986	2.284547	.0400356	.0643587
#3	.8819196	157.5541	.0327472	.000115	1.811137	.0456524	.0576693

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-2.65901	.6580300	.0032782	.0011690	.9713061	1.323930	.0075702
Stddev	.22070	.0053378	.0013697	.0005139	.0080390	.014609	.0010078
%RSD	8.300109	.8111778	41.78039	43.96343	.8276448	1.103434	13.31274
#1	-2.80804	.6539949	.0022350	.0011481	.9785606	1.308075	.0067710
#2	-2.76353	.6560127	.0027704	.0006659	.9626635	1.336846	.0072372
#3	-2.40547	.6640825	.0048292	.0016931	.9726944	1.326867	.0087023

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4977-09DLX2 Acquired: 12/13/2024 16:07:48 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME29G2 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.2971897	.3885240	.0028362
Stddev	.0035830	.0020340	.0034921
%RSD	1.205632	.5235072	123.1263
#1	.2976480	.3868481	.0064812
#2	.3005216	.3907869	-.000480
#3	.2933996	.3879370	.002507

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2284.307	25431.14	2316.630	1847.019	2781.211
Stddev	5.188	174.55	13.952	20.264	5.566
%RSD	.2271257	.6863625	.6022745	1.097110	.2001207
#1	2289.740	25241.24	2327.478	1826.304	2787.035
#2	2279.404	25467.60	2300.891	1847.952	2780.652
#3	2283.780	25584.58	2321.522	1866.800	2775.946

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4981-10 Acquired: 12/13/2024 16:11:44 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJA7 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0885396	.0268221	.4616946	-.025506	.0232852	76.38994
Stddev	.0032100	.0017543	.0052183	.002226	.0027143	.12395
%RSD	3.625471	6.540599	1.130243	8.725485	11.65699	.1622643
#1	.0914107	.0248002	.4677164	-.027971	.0253743	76.53010
#2	.0850739	.0279409	.4585006	-.024900	.0202171	76.29472
#3	.0891342	.0277252	.4588668	-.023646	.0242640	76.34501

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9573116	.0064955	.0111794	F 1129.647	.1153431	.1142169
Stddev	.0011884	.0000291	.0000372	1.813	.0013134	.0009319
%RSD	.1241408	.4486175	.3324500	.1605246	1.138721	.8159024
#1	.9573403	.0064719	.0111708	1128.639	.1168529	.1151146
#2	.9584854	.0064866	.0111472	1131.741	.1144636	.1132542
#3	.9561090	.0065281	.0112201	1128.563	.1147129	.1142819

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1729033	175.3167	7.953573	503.5395	.2067502	-.018036
Stddev	.0022028	.2477	.011467	.6317	.0017406	.001014
%RSD	1.274019	.1412951	.1441693	.1254456	.8419055	5.622504
#1	.1736887	175.4399	7.965277	504.2674	.2086683	-.019207
#2	.1704155	175.4786	7.942360	503.2162	.2063115	-.017438
#3	.1746059	175.0315	7.953081	503.1350	.2052709	-.017463

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.382048	.1578592	2.088430	8.462312	4.491223	.0272663
Stddev	.262659	.0044141	.012952	.205419	.026308	.0009907
%RSD	11.02660	2.796232	.6202009	2.427451	.5857725	3.633564
#1	2.365562	.1629559	2.100804	8.473901	4.519639	.0278682
#2	2.128021	.1552633	2.089517	8.661691	4.467714	.0261228
#3	2.652561	.1553585	2.074968	8.251345	4.486315	.0278079

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4981-10 Acquired: 12/13/2024 16:11:44 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJA7 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0030644	10.29722	9.292894	.0306189	.8940405	.6455075
Stddev	.0004996	.05231	.039511	.0009898	.0014290	.0008817
%RSD	16.30450	.5080368	.4251763	3.232622	.1598312	.1365953
#1	.0031012	10.35701	9.332759	.0314295	.8935010	.6464712
#2	.0025474	10.25987	9.253746	.0309113	.8956607	.6453100
#3	.0035447	10.27477	9.292177	.0295158	.8929599	.6447412

Elem	Li6707
Units	ppm
Avg	.1452507
Stddev	.0023379
%RSD	1.609566
#1	.1464108
#2	.1467817
#3	.1425597

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2371.137	26758.09	2500.661	1918.651	2513.999
Stddev	11.459	71.48	5.910	4.322	15.432
%RSD	.4832530	.2671155	.2363572	.2252688	.6138256
#1	2358.174	26681.76	2496.458	1915.612	2496.195
#2	2375.323	26769.08	2507.420	1916.741	2522.255
#3	2379.913	26823.44	2498.106	1923.599	2523.546

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4981-11 Acquired: 12/13/2024 16:15:42 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJA8 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0949936	.0148471	.3170916	-.011891	.0529816	139.3440	1.774817
Stddev	.0011525	.0034226	.0041984	.006186	.0031943	1.0686	.014556
%RSD	1.213283	23.05230	1.324024	52.02082	6.029111	.7668989	.8201462
#1	.0941955	.0181972	.3171666	-.011730	.0525931	138.8391	1.767939
#2	.0963149	.0113563	.3128562	-.005787	.0499992	138.6213	1.764976
#3	.0944704	.0149877	.3212520	-.018156	.0563523	140.5715	1.791538

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0120912	.0097146	573.0356	.2041137	.1700174	.2946670	298.5031
Stddev	.0000940	.0001652	3.8492	.0004028	.0008269	.0123008	2.5565
%RSD	.7770975	1.700078	.6717130	.1973526	.4863479	4.174461	.8564306
#1	.0120352	.0098980	571.7521	.2037532	.1697497	.2890842	296.8740
#2	.0120387	.0096683	569.9922	.2045485	.1693575	.2861477	297.1858
#3	.0121997	.0095775	577.3626	.2040392	.1709449	.3087692	301.4496

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.432935	169.6004	.3775125	-.030593	2.882347	.2789920	1.440107
Stddev	.045152	1.6623	.0043743	.000589	.593775	.0100109	.011311
%RSD	.8310770	.9801295	1.158724	1.926011	20.60039	3.588237	.7854541
#1	5.404170	168.7622	.3759139	-.031032	3.350849	.2755460	1.437965
#2	5.409660	168.5241	.3741623	-.029924	2.214566	.2711593	1.430019
#3	5.484975	171.5150	.3824613	-.030825	3.081625	.2902708	1.452336

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.863924	5.457119	-.017654	.0070911	2.777214	9.867589	.0369221
Stddev	.087696	.052060	.002368	.0001087	.030306	.074551	.0008711
%RSD	1.115164	.9539749	13.41586	1.532421	1.091234	.7555140	2.359401
#1	7.808331	5.432218	-.015339	.0071260	2.758675	9.790992	.0361711
#2	7.818422	5.422186	-.020073	.0071780	2.760780	9.871863	.0367182
#3	7.965018	5.516952	-.017549	.0069692	2.812187	9.939911	.0378771

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4981-11 Acquired: 12/13/2024 16:15:42 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJA8 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	1.222937	1.012641	.2211000
Stddev	.008937	.008150	.0013262
%RSD	.7307517	.8048389	.5997996
#1	1.225388	1.007239	.2209307
#2	1.213031	1.008669	.2198667
#3	1.230393	1.022016	.2225028

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2545.853	28570.87	2589.058	2062.175	2695.766
Stddev	12.255	60.39	12.996	7.974	17.952
%RSD	.4813743	.2113548	.5019735	.3866848	.6659464
#1	2552.635	28519.46	2600.840	2054.289	2706.700
#2	2553.217	28637.36	2591.216	2070.235	2705.550
#3	2531.706	28555.77	2575.117	2062.001	2675.047

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4981-12 Acquired: 12/13/2024 16:19:32 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJA9 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0678815	.0308587	.3682630	-.030434	.0202253	69.49700
Stddev	.0018342	.0026897	.0016728	.005349	.0010089	.08666
%RSD	2.702018	8.716258	.4542420	17.57671	4.988153	.1246944
#1	.0682718	.0303372	.3683007	-.033730	.0213902	69.56712
#2	.0658837	.0337710	.3699166	-.033311	.0196297	69.40012
#3	.0694892	.0284680	.3665717	-.024262	.0196561	69.52375

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9276108	.0061586	.0184973	F 1391.470	.1076471	.1201951
Stddev	.0010015	.0001587	.0001543	9.702	.0008002	.0005154
%RSD	.1079629	2.577175	.8339054	.6972448	.7433652	.4288334
#1	.9287004	.0062401	.0183679	1391.461	.1072896	.1200695
#2	.9274017	.0059757	.0186680	1381.773	.1070881	.1197540
#3	.9267305	.0062600	.0184560	1401.177	.1085638	.1207617

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1529273	179.6780	7.879112	624.5595	.2030605	-.016885
Stddev	.0083290	.5863	.030061	2.2791	.0007203	.000497
%RSD	5.446351	.3263299	.3815326	.3649168	.3546998	2.942776
#1	.1457153	180.3073	7.913551	626.5429	.2033900	-.017445
#2	.1510230	179.5798	7.858131	622.0698	.2022345	-.016500
#3	.1620435	179.1470	7.865654	625.0657	.2035571	-.016709

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.843327	.1465579	3.261979	6.157144	3.479446	.0351524
Stddev	.738437	.0063738	.012733	.095918	.019358	.0015446
%RSD	25.97089	4.348990	.3903553	1.557839	.5563627	4.394099
#1	3.524068	.1448442	3.266416	6.103075	3.466559	.0340784
#2	2.058284	.1536133	3.247621	6.100465	3.470073	.0369226
#3	2.947628	.1412161	3.271900	6.267890	3.501707	.0344563

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4981-12 Acquired: 12/13/2024 16:19:32 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJA9 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0029505	23.68952	10.55006	.0309172	.7261900	.8395712
Stddev	.0004226	.13572	.03239	.0007425	.0082856	.0025597
%RSD	14.32390	.5728975	.3070080	2.401540	1.140972	.3048825
#1	.0024760	23.66156	10.55311	.0317689	.7357497	.8421907
#2	.0030890	23.56996	10.51625	.0304064	.7217425	.8370758
#3	.0032865	23.83704	10.58081	.0305762	.7210777	.8394471

Elem	Li6707
Units	ppm
Avg	.1372174
Stddev	.0010770
%RSD	.7848622
#1	.1359802
#2	.1379449
#3	.1377271

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2355.119	26514.70	2492.678	1897.558	2463.184
Stddev	8.662	114.17	7.229	9.079	9.471
%RSD	.3677846	.4306010	.2900176	.4784386	.3845155
#1	2350.119	26484.23	2484.709	1891.444	2458.862
#2	2365.121	26641.01	2498.816	1907.989	2474.046
#3	2350.118	26418.85	2494.509	1893.239	2456.645

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4981-13 Acquired: 12/13/2024 16:23:30 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJC4 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1668089	.0271721	3.987815	.0051181	.0283525	63.70548	1.073975
Stddev	.0027825	.0009233	.004578	.0026936	.0016145	.03966	.001153
%RSD	1.668045	3.397887	.1148112	52.62921	5.694326	.0622488	.1073685
#1	.1653167	.0265301	3.993100	.0070348	.0271087	63.73939	1.072666
#2	.1700192	.0282302	3.985287	.0062812	.0277717	63.71517	1.074421
#3	.1650909	.0267560	3.985059	.0020384	.0301770	63.66187	1.074839

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0062281	.0097932	136.9870	.1349965	.1167932	.3492815	160.2654
Stddev	.0000989	.0000386	.3032	.0010458	.0006580	.0010746	.1443
%RSD	1.587385	.3945774	.2213432	.7747112	.5634117	.3076698	.0900243
#1	.0061223	.0098338	137.0266	.1338561	.1174217	.3504752	160.1661
#2	.0063181	.0097569	136.6659	.1359108	.1161091	.3489785	160.4309
#3	.0062438	.0097890	137.2684	.1352225	.1168487	.3483909	160.1993

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	13.35744	34.33418	.2617010	-.012347	2.474719	.1755063	2.015612
Stddev	.03481	.16693	.0009716	.000363	.250360	.0058684	.012816
%RSD	.2606310	.4861979	.3712749	2.937134	10.11672	3.343699	.6358171
#1	13.34762	34.37823	.2628165	-.012649	2.681377	.1786791	2.013810
#2	13.39611	34.47468	.2612471	-.012447	2.546461	.1791054	2.003792
#3	13.32859	34.14965	.2610394	-.011944	2.196320	.1687346	2.029233

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.398740	8.808665	.0072680	.0068427	3.978253	9.761060	.1054973
Stddev	.042832	.016727	.0027077	.0002483	.004295	.080397	.0008726
%RSD	1.785602	.1898963	37.25465	3.629120	.1079741	.8236493	.8270888
#1	2.426809	8.825571	.0053744	.0068287	3.978495	9.719782	.1055235
#2	2.419972	8.792122	.0060603	.0070977	3.973842	9.853711	.1046120
#3	2.349440	8.808302	.0103694	.0066017	3.982422	9.709687	.1063565

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4981-13 Acquired: 12/13/2024 16:23:30 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJC4 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	1.297445	.0187748	.0483039
Stddev	.006354	.0005712	.0039172
%RSD	.4897395	3.042325	8.109510
#1	1.296933	.0185662	.0528138
#2	1.304040	.0194210	.0463490
#3	1.291363	.0183373	.0457490

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2811.550	31372.58	2806.306	2298.759	3031.061
Stddev	7.497	135.76	21.221	11.779	9.426
%RSD	.2666445	.4327345	.7562004	.5123965	.3109952
#1	2813.548	31230.77	2797.498	2285.173	3031.310
#2	2817.846	31501.35	2790.906	2304.999	3040.361
#3	2803.257	31385.63	2830.512	2306.104	3021.513

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4981-14 Acquired: 12/13/2024 16:27:19 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJC5 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2028838	.0299539	4.582953	-.001657	.0354451	72.89626
Stddev	.0003607	.0012037	.011642	.003128	.0002583	.30378
%RSD	.1777630	4.018555	.2540380	188.7444	.7286744	.4167306
#1	.2029090	.0306782	4.571390	.001191	.0351857	73.02310
#2	.2032312	.0285644	4.594673	-.005005	.0357022	72.54962
#3	.2025112	.0306192	4.582796	-.001158	.0354474	73.11607

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.219930	.0074174	.0119371	227.1709	.1456312	.1347131
Stddev	.003965	.0001705	.0001691	.8069	.0016629	.0011746
%RSD	.3250505	2.299131	1.417021	.3551965	1.141870	.8719520
#1	1.223001	.0076065	.0117422	227.2976	.1471575	.1334516
#2	1.215453	.0072751	.0120246	226.3081	.1438590	.1357753
#3	1.221336	.0073707	.0120447	227.9069	.1458771	.1349124

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3875291	198.4240	15.37106	41.38895	.3004898	-.015530
Stddev	.0049539	.6186	.04598	.17660	.0006937	.000750
%RSD	1.278328	.3117653	.2991566	.4266724	.2308630	4.832622
#1	.3914941	198.5499	15.40130	41.54174	.3001189	-.016175
#2	.3819759	197.7521	15.31814	41.19560	.3000604	-.015708
#3	.3891173	198.9699	15.39373	41.42950	.3012902	-.014706

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.724625	.2073651	2.259737	3.280604	F 10.01762	.0053818
Stddev	.117893	.0085706	.026090	.057311	.02293	.0008118
%RSD	4.326961	4.133075	1.154560	1.746974	.2289010	15.08386
#1	2.815529	.2044609	2.283488	3.248045	9.99308	.0046513
#2	2.591417	.2006241	2.231811	3.346779	10.03850	.0052385
#3	2.766930	.2170104	2.263912	3.246988	10.02129	.0062557

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4981-14 Acquired: 12/13/2024 16:27:19 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJC5 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0072622	4.370548	8.809354	.1186022	1.400652	.0608863
Stddev	.0001139	.003529	.082815	.0008843	.003455	.0005831
%RSD	1.568019	.0807512	.9400797	.7456208	.2466883	.9576795
#1	.0073717	4.368675	8.903980	.1180046	1.403916	.0615015
#2	.0072704	4.368350	8.750091	.1196181	1.397033	.0608155
#3	.0071444	4.374619	8.773992	.1181839	1.401008	.0603418

Elem	Li6707
Units	ppm
Avg	.0728189
Stddev	.0007350
%RSD	1.009407
#1	.0721359
#2	.0735968
#3	.0727239

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2849.260	31781.54	2853.395	2326.331	2953.398
Stddev	14.498	294.89	19.631	21.569	15.842
%RSD	.5088334	.9278627	.6879788	.9271786	.5363938
#1	2865.984	31558.24	2831.006	2305.189	2971.175
#2	2840.245	32115.82	2867.659	2348.303	2940.773
#3	2841.551	31670.56	2861.521	2325.499	2948.246

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4981-15 Acquired: 12/13/2024 16:31:07 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJC6 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7434267	.0260065	2.164674	.0116435	.0610695	74.76611	1.316677
Stddev	.0025420	.0027701	.020133	.0027564	.0021138	1.24816	.018675
%RSD	.3419340	10.65167	.9300789	23.67326	3.461301	1.669426	1.418327
#1	.7440972	.0230612	2.148639	.0146966	.0586434	74.63800	1.316837
#2	.7406166	.0263985	2.158113	.0108960	.0625145	76.07340	1.335271
#3	.7455663	.0285597	2.187269	.0093380	.0620506	73.58695	1.297922

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0088804	.0117366	148.4850	.1342790	.1582901	1.782074	318.6053
Stddev	.0001974	.0003492	2.2865	.0035025	.0015507	.032523	5.0926
%RSD	2.223249	2.975527	1.539907	2.608371	.9796438	1.825036	1.598398
#1	.0087883	.0116197	148.7065	.1302702	.1570443	1.782614	318.3962
#2	.0091071	.0114609	150.6528	.1358201	.1577993	1.814324	323.7992
#3	.0087459	.0121293	146.0958	.1367467	.1600268	1.749284	313.6205

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	17.99661	31.57825	.2454793	.8466737	2.135234	.2166474	1.040015
Stddev	.28547	.58737	.0029232	.0185299	.199529	.0040775	.017921
%RSD	1.586224	1.860031	1.190795	2.188549	9.344616	1.882079	1.723141
#1	18.00645	31.55058	.2429968	.8257167	1.977075	.2139437	1.022155
#2	18.27703	32.17895	.2447400	.8534160	2.359404	.2213374	1.057996
#3	17.70635	31.00520	.2487012	.8608884	2.069223	.2146612	1.039893

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.115054	7.174442	-.017810	.0207970	7.063363	8.492528	.0769786
Stddev	.215755	.087488	.003891	.0003219	.075335	.117418	.0009250
%RSD	4.218044	1.219434	21.84598	1.547763	1.066564	1.382607	1.201637
#1	5.092796	7.122173	-.013776	.0204488	7.007728	8.440863	.0759106
#2	5.341075	7.125711	-.018116	.0210837	7.033268	8.626920	.0774994
#3	4.911290	7.275444	-.021539	.0208585	7.149094	8.409802	.0775258

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4981-15 Acquired: 12/13/2024 16:31:07 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJC6 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	1.086226	-.137213	.0703013
Stddev	.013202	.002168	.0025084
%RSD	1.215368	1.579778	3.568058
#1	1.087541	-.136651	.0674160
#2	1.098721	-.139606	.0719638
#3	1.072416	-.135381	.0715240

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2943.681	33553.75	2952.854	2437.042	2926.045
Stddev	18.455	650.85	32.215	48.882	31.558
%RSD	.6269516	1.939718	1.090978	2.005803	1.078512
#1	2955.039	34299.57	2952.198	2493.485	2945.272
#2	2953.617	33260.90	2920.972	2409.130	2943.239
#3	2922.386	33100.76	2985.392	2408.512	2889.624

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4981-16 Acquired: 12/13/2024 16:34:55 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJC7 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1186859	.0358978	1.042120	-.024260	.0216015	65.61576
Stddev	.0034294	.0043652	.006092	.005652	.0020370	.41461
%RSD	2.889491	12.16011	.5846060	23.29682	9.429731	.6318746
#1	.1191551	.0347508	1.037845	-.028967	.0200780	65.14606
#2	.1150461	.0322206	1.039420	-.025823	.0239151	65.93085
#3	.1218566	.0407220	1.049096	-.017992	.0208112	65.77036

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8077113	.0064295	.0056825	F 1014.984	.1015322	.1452961
Stddev	.0040540	.0001363	.0001367	11.954	.0005292	.0014086
%RSD	.5019094	2.120297	2.406542	1.177708	.5212416	.9694521
#1	.8031797	.0063478	.0057138	1001.294	.1013733	.1442241
#2	.8109937	.0065869	.0055328	1020.301	.1011006	.1447729
#3	.8089605	.0063539	.0058009	1023.356	.1021226	.1468915

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3353916	175.1657	12.10921	40.47235	.1957628	-.016591
Stddev	.0041620	.9233	.05334	.18654	.0012952	.001073
%RSD	1.240922	.5271040	.4404721	.4609081	.6616225	6.467644
#1	.3358751	174.2229	12.04810	40.27415	.1942990	-.016189
#2	.3392906	176.0682	12.14642	40.64449	.1962292	-.017806
#3	.3310090	175.2061	12.13311	40.49842	.1967602	-.015776

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.373905	.1581974	.6136011	8.041244	6.573670	.0276120
Stddev	.474384	.0054238	.0077308	.075283	.039441	.0037785
%RSD	19.98326	3.428498	1.259903	.9362168	.5999842	13.68423
#1	2.889162	.1637490	.6050468	7.955345	6.542592	.0314543
#2	2.277281	.1579320	.6200881	8.095753	6.560379	.0239007
#3	1.955272	.1529112	.6156685	8.072634	6.618040	.0274810

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4981-16 Acquired: 12/13/2024 16:34:55 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJC7 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015821	1.578691	8.482216	.0467174	.8198913	.5052471
Stddev	.0005142	.003004	.052395	.0004102	.0053370	.0023832
%RSD	32.49998	.1903112	.6176988	.8779698	.6509383	.4716838
#1	.0017457	1.579464	8.436274	.0462738	.8144995	.5025571
#2	.0010060	1.581234	8.539278	.0470830	.8200026	.5070947
#3	.0019945	1.575376	8.471096	.0467953	.8251717	.5060894

Elem	Li6707
Units	ppm
Avg	.1063137
Stddev	.0032517
%RSD	3.058584
#1	.1100313
#2	.1049112
#3	.1039986

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2614.015	29243.68	2683.900	2116.831	2642.280
Stddev	2.315	23.61	14.832	3.814	5.610
%RSD	.0885509	.0807346	.5526386	.1801766	.2123057
#1	2616.043	29251.72	2700.888	2118.049	2646.222
#2	2614.510	29217.10	2673.519	2119.888	2644.760
#3	2611.493	29262.21	2677.294	2112.557	2635.858

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4981-17 Acquired: 12/13/2024 16:38:55 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJC9 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1173866	.0517056	1.091355	-.024788	.0206179	42.90831
Stddev	.0048546	.0048199	.005025	.004127	.0017630	.18715
%RSD	4.135549	9.321769	.4604110	16.65003	8.551028	.4361561
#1	.1205013	.0570939	1.096435	-.022470	.0222687	43.04756
#2	.1198654	.0502176	1.086388	-.022340	.0208242	42.98180
#3	.1117930	.0478051	1.091241	-.029553	.0187608	42.69557

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6630355	.0040757	.0047819	F 1276.064	.0778002	.1150321
Stddev	.0037763	.0001533	.0001253	8.902	.0002709	.0006291
%RSD	.5695482	3.762174	2.620320	.6975825	.3481859	.5469279
#1	.6665682	.0042486	.0046520	1266.094	.0775510	.1157584
#2	.6634830	.0039564	.0047916	1283.213	.0780886	.1146554
#3	.6590554	.0040221	.0049020	1278.886	.0777610	.1146824

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4431627	154.9894	17.60960	25.24991	.1433180	-.012812
Stddev	.0052322	.6584	.05589	.19974	.0006131	.001252
%RSD	1.180658	.4247892	.3174093	.7910489	.4278088	9.768672
#1	.4450501	155.5373	17.67093	25.39514	.1433450	-.012776
#2	.4471894	155.1720	17.59635	25.33247	.1439172	-.011579
#3	.4372487	154.2591	17.56153	25.02213	.1426919	-.014081

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.599626	.1211388	.5619785	3.408281	6.343069	.0033326
Stddev	.320751	.0067324	.0079428	.128399	.006196	.0032739
%RSD	12.33836	5.557593	1.413371	3.767271	.0976754	98.23607
#1	2.915610	.1158800	.5679556	3.462282	6.344378	.0068955
#2	2.608956	.1287264	.5650144	3.261701	6.348506	.0026457
#3	2.274311	.1188099	.5529654	3.500860	6.336324	.0004568

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4981-17 Acquired: 12/13/2024 16:38:55 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJC9 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0028820	1.210752	8.505267	.0359152	.7513005	.6658165
Stddev	.0000069	.003697	.070878	.0011234	.0072821	.0031408
%RSD	.2397979	.3053431	.8333412	3.127931	.9692678	.4717269
#1	.0028767	1.206759	8.568782	.0360025	.7554261	.6692914
#2	.0028898	1.214056	8.518208	.0347507	.7555831	.6649783
#3	.0028795	1.211440	8.428810	.0369924	.7428923	.6631798

Elem	Li6707
Units	ppm
Avg	.0698573
Stddev	.0042075
%RSD	6.023013
#1	.0731486
#2	.0713065
#3	.0651167

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2596.500	29002.88	2677.708	2108.366	2654.211
Stddev	6.214	35.55	14.629	6.137	2.952
%RSD	.2393049	.1225732	.5463305	.2910735	.1112107
#1	2594.130	28989.89	2662.050	2101.281	2653.978
#2	2591.821	29043.09	2680.046	2112.033	2651.383
#3	2603.550	28975.65	2691.027	2111.783	2657.273

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4981-21 Acquired: 12/13/2024 16:42:54 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJD0 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1014884	.0321521	1.089302	-.026427	.0206199	56.25520
Stddev	.0026391	.0036451	.004389	.003463	.0036413	.12884
%RSD	2.600356	11.33709	.4029026	13.10303	17.65900	.2290277
#1	.1035696	.0363088	1.086173	-.028374	.0246669	56.32684
#2	.1023755	.0306465	1.087415	-.022429	.0195838	56.10646
#3	.0985201	.0295008	1.094319	-.028478	.0176089	56.33230

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6372931	.0048556	.0047844	F 1086.373	.0879211	.1250871
Stddev	.0015437	.0001231	.0000448	12.841	.0003982	.0006321
%RSD	.2422321	2.535479	.9363373	1.181972	.4528806	.5053616
#1	.6390014	.0049258	.0048087	1078.542	.0883803	.1256381
#2	.6359980	.0047134	.0048118	1079.385	.0876721	.1252261
#3	.6368800	.0049275	.0047327	1101.192	.0877109	.1243970

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3911097	151.1524	11.74155	31.66365	.1694854	-.013649
Stddev	.0092639	.2297	.02757	.07104	.0011013	.000216
%RSD	2.368625	.1519635	.2347664	.2243715	.6497884	1.579580
#1	.3869608	151.3645	11.75758	31.72991	.1701562	-.013898
#2	.4017229	150.9084	11.70972	31.58863	.1682144	-.013516
#3	.3846454	151.1843	11.75735	31.67239	.1700856	-.013533

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.169369	.1261486	.7607174	3.843447	7.848289	.0002160
Stddev	.578667	.0018264	.0020280	.199544	.009589	.0006766
%RSD	26.67441	1.447784	.2665961	5.191797	.1221822	313.3010
#1	2.791121	.1265658	.7621850	3.649719	7.837248	.0009280
#2	2.070444	.1277303	.7584032	3.832282	7.854542	-.000419
#3	1.646542	.1241498	.7615640	4.048338	7.853075	.000139

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4981-21 Acquired: 12/13/2024 16:42:54 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJD0 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005526	1.412478	8.820281	.0387471	.9491434	.4892244
Stddev	.0003931	.009252	.053909	.0005675	.0023502	.0011499
%RSD	71.13544	.6550326	.6111982	1.464694	.2476120	.2350482
#1	.0010027	1.408607	8.834127	.0381370	.9465665	.4894475
#2	.0003778	1.405790	8.865917	.0388449	.9511688	.4879792
#3	.0002772	1.423037	8.760799	.0392594	.9496948	.4902464

Elem	Li6707
Units	ppm
Avg	.0842264
Stddev	.0069683
%RSD	8.273302
#1	.0888483
#2	.0762115
#3	.0876196

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2571.279	28742.53	2652.190	2090.157	2706.010
Stddev	1.224	150.37	2.860	10.527	.735
%RSD	.0476143	.5231714	.1078213	.5036294	.0271780
#1	2571.663	28648.87	2649.845	2081.012	2706.859
#2	2569.909	28915.98	2651.350	2101.664	2705.553
#3	2572.265	28662.74	2655.376	2087.797	2705.620

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: CCV009 Acquired: 12/13/2024 17:02:01 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV009 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.832007	4.841248	23.64655	4.509461	4.683642	376.8997	9.682058
Stddev	.018108	.032212	.10035	.017782	.027966	1.8433	.033959
%RSD	.3747598	.6653616	.4243561	.3943166	.5971010	.4890582	.3507372
#1	4.814102	4.809838	23.59355	4.489441	4.655727	376.1112	9.667780
#2	4.831606	4.839699	23.58381	4.515524	4.683542	379.0061	9.720824
#3	4.850312	4.874206	23.76228	4.523419	4.711659	375.5819	9.657570

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4808017	2.366246	387.1792	14.56216	2.350240	14.59267	386.3524
Stddev	.0005072	.008684	2.1386	.02232	.008134	.00977	.9197
%RSD	.1054950	.3669958	.5523570	.1532397	.3460989	.0669641	.2380381
#1	.4807037	2.361216	385.8997	14.53690	2.346030	14.58472	385.8922
#2	.4813507	2.361249	389.6481	14.57035	2.345074	14.60358	387.4113
#3	.4803505	2.376274	385.9898	14.57922	2.359616	14.58972	385.7536

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	14.44298	376.8928	2.390707	1.206703	377.0150	2.436928	13.70697
Stddev	.02273	1.1325	.009501	.002737	2.2271	.018842	.01485
%RSD	.1573981	.3004733	.3974156	.2268564	.5907168	.7731697	.1083277
#1	14.42349	376.2683	2.385914	1.204481	376.4671	2.452263	13.72396
#2	14.46795	378.2000	2.384558	1.209761	379.4649	2.442626	13.69649
#3	14.43749	376.2101	2.401650	1.205869	375.1130	2.415895	13.70045

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	143.3968	4.718178	4.634120	4.586733	4.707523	4.733634	4.782256
Stddev	.4631	.023444	.017272	.016905	.029575	.007696	.020635
%RSD	.3229310	.4968915	.3727213	.3685635	.6282586	.1625852	.4314871
#1	143.2233	4.710081	4.616553	4.569159	4.683623	4.725034	4.766443
#2	143.9216	4.699856	4.651082	4.588165	4.698346	4.739873	4.774728
#3	143.0455	4.744598	4.634724	4.602878	4.740599	4.735996	4.805598

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: CCV009 Acquired: 12/13/2024 17:02:01 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV009 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	4.871255	4.570714	4.900104
Stddev	.004700	.010519	.016200
%RSD	.0964868	.2301394	.3305952
#1	4.871086	4.564287	4.910238
#2	4.876037	4.582853	4.881421
#3	4.866641	4.565001	4.908654

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1966.041	24040.16	2226.227	1641.556	2571.868
Stddev	3.244	113.51	8.851	8.182	6.765
%RSD	.1649780	.4721584	.3975869	.4984124	.2630379
#1	1969.049	23909.32	2216.320	1632.199	2571.756
#2	1966.468	24112.16	2229.003	1645.102	2578.688
#3	1962.604	24099.02	2233.357	1647.366	2565.160

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: CCB009 Acquired: 12/13/2024 17:05:39 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB009 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0039612	.0012782	.0032165	-.001954	.0029694	-.016198
Stddev	.0030390	.0007619	.0016756	.002986	.0019756	.003947
%RSD	76.71936	59.60694	52.09261	152.7808	66.53094	24.36943
#1	.0071832	.0019004	.0051510	.000906	.0052226	-.012234
#2	.0011461	.0004285	.0022809	-.001717	.0021516	-.016233
#3	.0035544	.0015055	.0022177	-.005052	.0015340	-.020129

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0026786	.0001228	.0000715	.0306852	-.000878	.0002707
Stddev	.0004085	.0001041	.0000941	.0249583	.000356	.0002278
%RSD	15.25090	84.80605	131.6103	81.33683	40.52462	84.13877
#1	.0025575	.0000026	.0001756	.0265145	-.000864	.0004271
#2	.0031340	.0001843	-.000007	.0574661	-.000529	.0003758
#3	.0023443	.0001814	.000046	.0080749	-.001240	.0000094

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000987	.0014988	.0006398	.0142825	-.000116	.0010360
Stddev	.008574	.0320760	.0002455	.0951731	.000080	.0008694
%RSD	868.9109	2140.155	38.37887	666.3626	69.44075	83.92043
#1	-.000399	-.007507	.0008472	.0673118	-.000208	.0016020
#2	.007278	.037115	.0007035	-.095592	-.000079	.0014711
#3	-.009839	-.025112	.0003687	.071128	-.000060	.0000349

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.738052	-.001241	.0016904	-.088599	-.001534	.0027001
Stddev	.225441	.008983	.0004840	.101470	.000955	.0002381
%RSD	12.97090	723.9117	28.63000	114.5273	62.23670	8.818961
#1	1.941398	-.008657	.0013286	.027422	-.000865	.0029689
#2	1.777134	.008748	.0015024	-.160771	-.002627	.0025156
#3	1.495626	-.003813	.0022401	-.132447	-.001109	.0026158

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: CCB009 Acquired: 12/13/2024 17:05:39 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB009 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001177	-.003999	-.038175	.0000872	-.000857	-.000013
Stddev	.0002763	.003873	.000561	.0003702	.002759	.000186
%RSD	234.7664	96.85603	1.470094	424.7811	321.9270	1409.313
#1	.0004126	-.008469	-.037540	-.000340	.001601	.000042
#2	-.000135	-.001865	-.038604	.000279	-.000330	.000139
#3	.000075	-.001662	-.038380	.000322	-.003842	-.000220

Elem	Li6707
Units	ppm
Avg	F -.023690
Stddev	.000346
%RSD	1.460557
#1	-.023578
#2	-.023414
#3	-.024078

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2416.170	26541.62	2353.732	1964.187	3271.424
Stddev	4.256	34.19	4.589	1.116	9.934
%RSD	.1761550	.1288346	.1949871	.0568032	.3036473
#1	2411.302	26580.77	2348.588	1963.075	3260.392
#2	2418.017	26517.61	2357.407	1965.307	3279.660
#3	2419.190	26526.48	2355.201	1964.179	3274.219

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4981-22 Acquired: 12/13/2024 17:09:42 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJE8 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0626964	.0298477	1.704691	-.020259	.0237945	70.59400	.9369422
Stddev	.0056124	.0039864	.007800	.002029	.0033460	.08004	.0011776
%RSD	8.951625	13.35589	.4575371	10.01430	14.06218	.1133750	.1256888
#1	.0685853	.0324659	1.701244	-.020986	.0276391	70.68431	.9374550
#2	.0574090	.0318174	1.699208	-.021825	.0215402	70.56586	.9377766
#3	.0620949	.0252598	1.713620	-.017967	.0222042	70.53184	.9355951

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0052240	.0072104	676.2243	.0968775	.1124356	.3212414	158.2455
Stddev	.0001865	.0001165	1.3515	.0005234	.0008603	.0040374	.2761
%RSD	3.570815	1.615789	.1998538	.5402470	.7651349	1.256799	.1744796
#1	.0054383	.0071394	677.2123	.0962792	.1118038	.3171678	158.3198
#2	.0050978	.0071468	676.7764	.0972504	.1120876	.3213148	157.9398
#3	.0051360	.0073448	674.6842	.0971029	.1134154	.3252415	158.4768

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.539306	261.4737	.1802159	-.012416	2.411430	.1554155	1.364864
Stddev	.023190	.3428	.0007766	.001278	.357343	.0075565	.006183
%RSD	.2715652	.1310929	.4309141	10.29556	14.81871	4.862136	.4530198
#1	8.564888	261.8654	.1796577	-.013837	2.089347	.1617401	1.357998
#2	8.519663	261.2289	.1798872	-.012053	2.795834	.1470474	1.366601
#3	8.533367	261.3267	.1811028	-.011359	2.349109	.1574589	1.369992

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.141521	9.671671	.0128860	.0012209	4.803761	8.861985	.0833749
Stddev	.041921	.030949	.0025352	.0002126	.012387	.049591	.0010623
%RSD	.5870063	.3199990	19.67390	17.41589	.2578625	.5595906	1.274146
#1	7.189819	9.647585	.0108401	.0012338	4.799376	8.901580	.0838930
#2	7.120171	9.660850	.0157222	.0014269	4.794162	8.806363	.0840788
#3	7.114573	9.706578	.0120958	.0010022	4.817744	8.878013	.0821530

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4981-22 Acquired: 12/13/2024 17:09:42 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJE8 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	1.353943	.4001173	.1316781
Stddev	.008857	.0007362	.0037190
%RSD	.6541507	.1839849	2.824322
#1	1.348986	.4009673	.1358351
#2	1.348674	.3996842	.1286668
#3	1.364168	.3997005	.1305323

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2536.468	28438.15	2642.159	2060.273	2654.991
Stddev	9.517	117.26	9.730	5.688	11.407
%RSD	.3752094	.4123509	.3682512	.2761013	.4296353
#1	2540.626	28572.98	2637.526	2066.549	2662.808
#2	2543.198	28381.60	2653.340	2058.815	2660.263
#3	2525.579	28359.88	2635.612	2055.456	2641.902

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4983-01 Acquired: 12/13/2024 17:13:33 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJ97 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0474795	.0410663	.2642133	-.027043	.0056721	31.88042
Stddev	.0038202	.0032277	.0044206	.003899	.0013002	.08644
%RSD	8.045988	7.859629	1.673124	14.41794	22.92220	.2711358
#1	.0432645	.0441185	.2683246	-.031345	.0068358	31.97985
#2	.0507137	.0413925	.2647777	-.026044	.0059117	31.82315
#3	.0484604	.0376880	.2595375	-.023741	.0042688	31.83826

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3021289	.0027968	.0037143	F 1026.554	.0538413	.0967367
Stddev	.0004739	.0000321	.0000882	2.378	.0004808	.0001561
%RSD	.1568645	1.148519	2.373307	.2316569	.8928955	.1613939
#1	.3020762	.0028276	.0037752	1028.915	.0537440	.0968001
#2	.3016835	.0027993	.0036133	1026.588	.0543633	.0968512
#3	.3026269	.0027635	.0037546	1024.159	.0534166	.0965589

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1623015	100.1988	12.68257	289.0779	.1034838	-.007456
Stddev	.0036142	.3941	.02062	.0883	.0001526	.001295
%RSD	2.226859	.3932800	.1625773	.0305323	.1474337	17.37027
#1	.1581383	100.3398	12.67020	289.0102	.1036572	-.008903
#2	.1641316	100.5029	12.70637	289.1777	.1033702	-.007063
#3	.1646346	99.7536	12.67112	289.0457	.1034239	-.006403

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.017322	.0694112	.3702991	3.404737	5.360169	.0211397
Stddev	.329563	.0084917	.0048330	.124191	.006136	.0008734
%RSD	8.203542	12.23396	1.305156	3.647605	.1144726	4.131732
#1	4.394467	.0730769	.3743723	3.284114	5.353089	.0218944
#2	3.872712	.0597023	.3715663	3.532214	5.363933	.0213416
#3	3.784786	.0754544	.3649588	3.397884	5.363486	.0201829

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4983-01 Acquired: 12/13/2024 17:13:33 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJ97 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000079	6.939224	9.087051	.0220172	.4526755	.5885582
Stddev	.000221	.010418	.034307	.0007060	.0027306	.0012466
%RSD	281.4243	.1501309	.3775337	3.206478	.6032176	.2118040
#1	-.000318	6.950581	9.051384	.0215449	.4517827	.5894621
#2	-.000037	6.930111	9.119812	.0216780	.4557407	.5871361
#3	.000119	6.936979	9.089959	.0228288	.4505030	.5890764

Elem	Li6707
Units	ppm
Avg	.0600533
Stddev	.0023571
%RSD	3.925055
#1	.0590160
#2	.0583927
#3	.0627512

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2430.549	27573.92	2536.862	1988.498	2554.025
Stddev	4.587	140.36	8.504	10.339	2.725
%RSD	.1887419	.5090387	.3352100	.5199220	.1066952
#1	2430.611	27562.68	2542.422	1988.259	2554.365
#2	2425.932	27719.56	2541.091	1998.954	2551.146
#3	2435.106	27439.51	2527.072	1978.280	2556.564

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4983-02 Acquired: 12/13/2024 17:17:24 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJC3 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1382591	.0517480	.9301430	-.009655	.0284585	58.36595
Stddev	.0022758	.0007628	.0017506	.002160	.0030569	.15438
%RSD	1.646029	1.474000	.1882085	22.37461	10.74148	.2644964
#1	.1396206	.0510921	.9281948	-.007340	.0309231	58.29945
#2	.1395249	.0515668	.9306502	-.011618	.0294146	58.25596
#3	.1356318	.0525850	.9315841	-.010006	.0250379	58.54243

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.314914	.0062801	.0084996	760.5095	.0924107	.1370405
Stddev	.002433	.0000564	.0000887	1.9861	.0006717	.0010109
%RSD	.1850361	.8973368	1.043035	.2611602	.7268629	.7376589
#1	1.314526	.0062319	.0083994	760.6146	.0919665	.1377042
#2	1.312699	.0063420	.0085678	758.4730	.0931834	.1358771
#3	1.317518	.0062663	.0085316	762.4411	.0920821	.1375402

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4266489	194.9651	21.97634	81.95704	.2073613	-.015402
Stddev	.0045382	.1981	.01217	.24496	.0008250	.000224
%RSD	1.063677	.1016136	.0553760	.2988877	.3978702	1.452574
#1	.4214798	195.1144	21.97776	82.09684	.2079298	-.015419
#2	.4284882	194.7404	21.96353	81.67420	.2077391	-.015171
#3	.4299787	195.0407	21.98774	82.10010	.2064151	-.015617

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.643422	.1544349	.6778001	6.414794	F 12.82796	.0054345
Stddev	.245213	.0049628	.0018740	.093209	.03784	.0031932
%RSD	9.276331	3.213525	.2764883	1.453029	.2949533	58.75768
#1	2.903710	.1577462	.6788988	6.515213	12.87165	.0087779
#2	2.416754	.1568297	.6788654	6.331046	12.80600	.0051094
#3	2.609803	.1487288	.6756363	6.398123	12.80622	.0024163

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4983-02 Acquired: 12/13/2024 17:17:24 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJC3 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0062927	3.262157	8.601565	.2264125	1.003184	.4387189
Stddev	.0005169	.005271	.015464	.0007561	.001248	.0009770
%RSD	8.214391	.1615839	.1797776	.3339436	.1243885	.2226856
#1	.0068476	3.259672	8.587071	.2266425	1.001931	.4383390
#2	.0062056	3.268211	8.599781	.2270269	1.004427	.4379890
#3	.0058248	3.258588	8.617844	.2255681	1.003193	.4398288

Elem	Li6707
Units	ppm
Avg	.0781996
Stddev	.0018174
%RSD	2.324098
#1	.0775360
#2	.0768073
#3	.0802556

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2728.539	30498.92	2775.447	2209.720	2643.281
Stddev	3.578	146.96	7.500	10.238	6.324
%RSD	.1311291	.4818627	.2702380	.4633313	.2392606
#1	2727.252	30515.09	2778.921	2212.428	2637.041
#2	2725.783	30637.13	2780.581	2218.332	2643.115
#3	2732.583	30344.54	2766.840	2198.400	2649.687

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4983-03 Acquired: 12/13/2024 17:21:11 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJE5 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0853496	.0444316	.3213224	-.012167	.0271957	74.71466	.7529320
Stddev	.0036354	.0013744	.0052944	.002718	.0009877	.16122	.0019910
%RSD	4.259389	3.093398	1.647683	22.34240	3.631844	.2157783	.2644389
#1	.0852124	.0428699	.3235072	-.011574	.0263140	74.82086	.7552212
#2	.0817848	.0454574	.3251746	-.015133	.0282631	74.52915	.7519710
#3	.0890517	.0449674	.3152852	-.009794	.0270101	74.79397	.7516037

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0057507	.0050235	562.9271	.0852553	.1457667	.2273681	176.2941
Stddev	.0000541	.0001170	1.0997	.0029598	.0026510	.0051198	.3368
%RSD	.9408440	2.328096	.1953586	3.471636	1.818678	2.251775	.1910349
#1	.0056894	.0051243	563.8196	.0873326	.1466004	.2236479	176.2817
#2	.0057917	.0050509	561.6986	.0865670	.1479007	.2252492	176.6369
#3	.0057711	.0048953	563.2632	.0818664	.1427990	.2332073	175.9637

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	19.26943	74.39196	.1813879	-.012797	2.152452	.1419190	.2892302
Stddev	.03619	.14698	.0023574	.001720	.440634	.0033830	.0073038
%RSD	.1877980	.1975757	1.299648	13.44000	20.47123	2.383754	2.525253
#1	19.28052	74.49961	.1825021	-.012233	1.656407	.1456028	.2911823
#2	19.29877	74.45177	.1829818	-.014728	2.302433	.1412028	.2953596
#3	19.22899	74.22451	.1786800	-.011430	2.498517	.1389515	.2811487

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.690783	6.580317	-.018058	.0009112	1.289460	8.314698	.0250180
Stddev	.057190	.122279	.002525	.0005328	.024933	.043446	.0013906
%RSD	2.125403	1.858261	13.98337	58.47411	1.933578	.5225216	5.558515
#1	2.685940	6.618724	-.016804	.0014828	1.296134	8.347495	.0234170
#2	2.636168	6.678782	-.020965	.0004283	1.310376	8.331176	.0257107
#3	2.750240	6.443445	-.016405	.0008225	1.261869	8.265424	.0259261

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4983-03 Acquired: 12/13/2024 17:21:11 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJE5 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	1.075375	.2917700	.0737401
Stddev	.001416	.0012559	.0038206
%RSD	.1316602	.4304443	5.181131
#1	1.076982	.2928721	.0713257
#2	1.074834	.2920353	.0781449
#3	1.074310	.2904027	.0717497

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2857.542	32449.55	2908.717	2353.722	2732.401
Stddev	34.348	771.72	10.239	54.933	45.215
%RSD	1.202017	2.378220	.3520103	2.333865	1.654787
#1	2853.681	31824.83	2899.341	2310.540	2723.213
#2	2825.288	32211.60	2919.642	2335.074	2692.486
#3	2893.658	33312.23	2907.167	2415.551	2781.505

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4983-04 Acquired: 12/13/2024 17:24:58 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJE6 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0688488	.0576566	.3475251	-.022814	.0133340	30.24417
Stddev	.0038570	.0010258	.0018852	.005260	.0006912	.03634
%RSD	5.602088	1.779180	.5424644	23.05494	5.184053	.1201716
#1	.0649733	.0585789	.3468439	-.026708	.0137387	30.24017
#2	.0688860	.0565518	.3496562	-.024903	.0137274	30.28234
#3	.0726870	.0578393	.3460752	-.016831	.0125358	30.20999

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6329940	.0031124	.0051361	F 1543.572	.0466341	.0932529
Stddev	.0026812	.0000217	.0000514	3.694	.0005876	.0008663
%RSD	.4235783	.6971410	1.001747	.2393162	1.259930	.9289856
#1	.6358672	.0031322	.0051546	1541.206	.0468454	.0942267
#2	.6325564	.0031157	.0051757	1547.829	.0470869	.0929641
#3	.6305586	.0030892	.0050780	1541.682	.0459702	.0925678

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2790922	141.9605	21.43973	121.0162	.1093173	-.011246
Stddev	.0079257	.1047	.01804	.1061	.0011574	.000909
%RSD	2.839828	.0737460	.0841423	.0876834	1.058779	8.080419
#1	.2880360	142.0008	21.46049	121.1387	.1098354	-.010205
#2	.2729398	141.8416	21.42788	120.9551	.1101253	-.011884
#3	.2763009	142.0390	21.43081	120.9548	.1079914	-.011648

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.911882	.0830776	.3944861	1.922732	7.419913	-.003658
Stddev	.445588	.0041040	.0055316	.134986	.077613	.002026
%RSD	15.30241	4.939938	1.402238	7.020553	1.046009	55.38936
#1	2.620087	.0791334	.3882396	2.000474	7.443242	-.001709
#2	2.690779	.0827747	.3964538	1.766863	7.483185	-.005754
#3	3.424782	.0873246	.3987648	2.000858	7.333311	-.003513

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4983-04 Acquired: 12/13/2024 17:24:58 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJE6 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0087806	3.380756	9.414950	.0344899	.4406646	.7150823
Stddev	.0002571	.039528	.062704	.0012471	.0027944	.0006215
%RSD	2.927998	1.169193	.6660027	3.615745	.6341236	.0869159
#1	.0088542	3.379295	9.467519	.0353168	.4380995	.7155793
#2	.0089929	3.420994	9.431784	.0350974	.4402521	.7143854
#3	.0084948	3.341979	9.345548	.0330555	.4436424	.7152821

Elem	Li6707
Units	ppm
Avg	.0595537
Stddev	.0017280
%RSD	2.901531
#1	.0582556
#2	.0588904
#3	.0615150

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2497.042	27847.56	2588.906	2025.302	2542.202
Stddev	23.189	52.51	13.661	8.158	28.675
%RSD	.9286605	.1885780	.5276658	.4027928	1.127942
#1	2485.945	27803.69	2578.833	2017.711	2528.204
#2	2481.487	27833.24	2583.430	2024.266	2523.214
#3	2523.695	27905.75	2604.455	2033.928	2575.187

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4983-05 Acquired: 12/13/2024 17:28:56 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJB6 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3096676	.0637331	.4467487	-.003159	.0355414	58.55702
Stddev	.0021994	.0003663	.0030399	.003442	.0017835	.07822
%RSD	.7102510	.5747209	.6804459	108.9478	5.018186	.1335714
#1	.3120115	.0637587	.4500262	-.006413	.0335741	58.59478
#2	.3076489	.0640859	.4440216	-.003508	.0359975	58.46708
#3	.3093422	.0633546	.4461983	.000444	.0370525	58.60918

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9299893	.0071939	.0071610	F 918.7234	.0936226	.2233926
Stddev	.0014939	.0001745	.0000514	12.3566	.0007903	.0006362
%RSD	.1606331	2.425959	.7178264	1.344970	.8441130	.2847947
#1	.9306501	.0073915	.0071056	924.6719	.0930157	.2239525
#2	.9282790	.0070609	.0072071	904.5177	.0945162	.2227008
#3	.9310388	.0071293	.0071703	926.9806	.0933359	.2235246

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.050240	230.9429	29.01495	97.74089	.2579650	-.016963
Stddev	.005708	.5174	.10675	.23990	.0012985	.000386
%RSD	.5435139	.2240201	.3679271	.2454415	.5033475	2.278227
#1	1.047051	230.6029	28.94772	97.83695	.2594189	-.017167
#2	1.046838	230.6875	28.95910	97.46784	.2575550	-.017204
#3	1.056830	231.5383	29.13805	97.91786	.2569210	-.016517

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.308787	.1607352	.5531128	8.859006	F 18.23585	.0119255
Stddev	.133573	.0002944	.0039328	.039078	.06700	.0021101
%RSD	4.036931	.1831810	.7110240	.4411118	.3673820	17.69404
#1	3.447080	.1604761	.5511140	8.884934	18.27437	.0134652
#2	3.180496	.1606742	.5505808	8.814059	18.15849	.0095202
#3	3.298786	.1610554	.5576435	8.878025	18.27469	.0127910

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4983-05 Acquired: 12/13/2024 17:28:56 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJB6 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007147	4.361242	10.06966	.0451932	.5732294	.6347217
Stddev	.0004071	.019153	.04727	.0003711	.0039820	.0021105
%RSD	56.96845	.4391699	.4694142	.8211102	.6946577	.3325075
#1	.0011847	4.377960	10.10536	.0448710	.5757518	.6338684
#2	.0004892	4.340344	10.08757	.0455989	.5686389	.6331714
#3	.0004701	4.365423	10.01606	.0451096	.5752975	.6371252

Elem	Li6707
Units	ppm
Avg	.0748801
Stddev	.0024485
%RSD	3.269881
#1	.0720634
#2	.0760766
#3	.0765002

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2731.786	30484.52	2829.240	2218.349	2638.915
Stddev	7.313	99.80	14.529	7.181	8.948
%RSD	.2676964	.3273890	.5135345	.3237220	.3390726
#1	2729.645	30439.42	2813.608	2217.685	2631.144
#2	2739.931	30598.92	2842.331	2225.840	2648.698
#3	2725.783	30415.23	2831.782	2211.523	2636.904

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4983-06 Acquired: 12/13/2024 17:32:47 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJE7 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2103651	.0258578	.3995902	.0068310	.0335609	64.96557	.6951371
Stddev	.0036354	.0022256	.0021527	.0045047	.0018801	.15951	.0021677
%RSD	1.728144	8.606921	.5387333	65.94552	5.602070	.2455228	.3118362
#1	.2108660	.0246975	.4020595	.0026169	.0314888	65.02043	.6955955
#2	.2137241	.0284237	.3986032	.0115788	.0351579	65.09040	.6970389
#3	.2065052	.0244521	.3981080	.0062972	.0340361	64.78587	.6927768

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0068046	.0046649	106.8915	.0842705	.1492267	.6339461	200.4452
Stddev	.0001494	.0000796	.2101	.0004678	.0003944	.0033408	.2725
%RSD	2.196215	1.706491	.1965548	.5551407	.2643123	.5269790	.1359263
#1	.0066363	.0047526	106.7983	.0838540	.1487716	.6360236	200.1747
#2	.0068555	.0046447	107.1321	.0847767	.1494680	.6357223	200.7195
#3	.0069219	.0045973	106.7441	.0841807	.1494406	.6300925	200.4413

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.80456	45.34167	.1608480	-.014968	2.334324	.1609490	.3815323
Stddev	.00145	.19050	.0007082	.000447	.339640	.0019392	.0053457
%RSD	.0091882	.4201376	.4403033	2.987681	14.54984	1.204881	1.401103
#1	15.80595	45.44767	.1611134	-.014597	2.354712	.1625553	.3765634
#2	15.80468	45.45558	.1600455	-.014843	1.984949	.1614970	.3808452
#3	15.80306	45.12175	.1613853	-.015465	2.663311	.1587947	.3871882

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.007880	8.964412	-.032974	.0043144	1.370380	9.315659	.0315565
Stddev	.113745	.010740	.004086	.0003520	.003794	.013930	.0012289
%RSD	2.271326	.1198090	12.39235	8.159543	.2768272	.1495382	3.894192
#1	5.070965	8.962499	-.028568	.0040843	1.372238	9.299629	.0301390
#2	4.876571	8.954756	-.036639	.0041393	1.366016	9.322513	.0322099
#3	5.076103	8.975980	-.033715	.0047197	1.372888	9.324834	.0323207

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4983-06 Acquired: 12/13/2024 17:32:47 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJE7 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.9367501	.0941600	.0320809
Stddev	.0055554	.0009228	.0025232
%RSD	.5930503	.9800463	7.865268
#1	.9422369	.0951205	.0298005
#2	.9368848	.0940793	.0347916
#3	.9311285	.0932802	.0316506

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2894.606	32355.53	2857.096	2371.818	2987.885
Stddev	1.870	108.82	10.486	11.479	1.348
%RSD	.0646019	.3363166	.3670041	.4839763	.0451251
#1	2896.044	32456.18	2866.831	2384.144	2989.343
#2	2892.492	32240.07	2845.993	2361.433	2987.629
#3	2895.282	32370.33	2858.463	2369.878	2986.683

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4983-07 Acquired: 12/13/2024 17:37:00 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJF9 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0624293	.0283201	.4619532	-.032398	.0157229	60.86786
Stddev	.0030706	.0043166	.0079487	.001148	.0035818	.04082
%RSD	4.918554	15.24212	1.720673	3.542814	22.78079	.0670694
#1	.0658302	.0233719	.4578631	-.033708	.0125156	60.86600
#2	.0598605	.0313130	.4568825	-.031569	.0195881	60.82800
#3	.0615972	.0302754	.4711141	-.031917	.0150652	60.90958

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8404452	.0055311	.0074202	F 1424.961	.1037137	.1077946
Stddev	.0027519	.0002287	.0001253	16.754	.0009406	.0021712
%RSD	.3274283	4.135274	1.688269	1.175756	.9068995	2.014161
#1	.8425902	.0054620	.0073112	1421.411	.1045683	.1071660
#2	.8373425	.0057864	.0073922	1443.206	.1038671	.1060072
#3	.8414030	.0053449	.0075571	1410.267	.1027059	.1102108

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1580107	158.5201	8.829531	651.7531	.1908696	-.014638
Stddev	.0040045	.2390	.008583	.6200	.0036388	.000757
%RSD	2.534333	.1507938	.0972081	.0951229	1.906451	5.174092
#1	.1614028	158.7020	8.835731	651.5564	.1899677	-.015043
#2	.1535932	158.2494	8.833127	651.2552	.1877665	-.015107
#3	.1590360	158.6090	8.819735	652.4475	.1948745	-.013765

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.654413	.1319177	1.150346	6.649384	5.299212	.0285642
Stddev	.071253	.0007864	.005673	.080935	.099465	.0007450
%RSD	2.684311	.5961178	.4931145	1.217182	1.876977	2.608133
#1	2.717878	.1321156	1.154219	6.742605	5.241454	.0285658
#2	2.577336	.1310513	1.143835	6.608505	5.242118	.0278184
#3	2.668024	.1325863	1.152985	6.597042	5.414063	.0293084

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4983-07 Acquired: 12/13/2024 17:37:00 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJF9 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0030959	17.44984	11.27565	.0352871	.6821825	.8744734
Stddev	.0006007	.31961	.09454	.0011360	.0023797	.0004701
%RSD	19.40225	1.831574	.8384844	3.219400	.3488303	.0537615
#1	.0024059	17.24910	11.25691	.0354969	.6808998	.8745056
#2	.0033803	17.28201	11.37816	.0363036	.6849283	.8739880
#3	.0035016	17.81840	11.19187	.0340608	.6807193	.8749266

Elem	Li6707
Units	ppm
Avg	.1316859
Stddev	.0042179
%RSD	3.203027
#1	.1279180
#2	.1362425
#3	.1308970

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2249.788	25878.74	2403.701	1855.491	2397.997
Stddev	29.081	129.15	10.562	9.968	38.076
%RSD	1.292603	.4990741	.4394065	.5372317	1.587822
#1	2263.656	25788.48	2407.135	1847.867	2419.451
#2	2269.338	25821.05	2391.849	1851.835	2420.506
#3	2216.369	26026.68	2412.118	1866.771	2354.035

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4880-14A Acquired: 12/13/2024 17:40:56 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHH91A Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1029969	.0214450	4.035667	.0334171	.0201397	55.36489
Stddev	.0017755	.0022604	.006528	.0012913	.0016084	.24664
%RSD	1.723876	10.54026	.1617517	3.864197	7.986161	.4454858
#1	.1043846	.0211959	4.034547	.0321287	.0190276	55.35290
#2	.1036102	.0193196	4.029772	.0334114	.0219839	55.12446
#3	.1009961	.0238196	4.042682	.0347113	.0194076	55.61731

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.268657	.0049560	.0082416	261.2672	.1413234	.0903762
Stddev	.008770	.0000723	.0000806	1.0916	.0010720	.0001464
%RSD	.3865613	1.459848	.9779546	.4178257	.7585629	.1619771
#1	2.272312	.0049519	.0082824	261.1337	.1405765	.0902080
#2	2.258651	.0048858	.0082936	260.2485	.1408420	.0904457
#3	2.275008	.0050303	.0081488	262.4195	.1425518	.0904749

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6194541	120.2991	5.677627	98.06267	.1715508	-.008015
Stddev	.0107528	.4215	.023199	.26832	.0001852	.000926
%RSD	1.735846	.3503654	.4085954	.2736216	.1079581	11.55172
#1	.6276095	120.2261	5.681945	98.16197	.1714662	-.008064
#2	.6072685	119.9188	5.652573	97.75885	.1714229	-.007065
#3	.6234845	120.7523	5.698363	98.26718	.1717632	-.008915

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.012793	.1578652	2.521365	3.217050	F 10.47477	.0169153
Stddev	.626301	.0127504	.021800	.137223	.02042	.0010950
%RSD	20.78806	8.076735	.8646004	4.265482	.1948979	6.473372
#1	3.194291	.1695444	2.542824	3.374996	10.47175	.0179682
#2	3.528301	.1597890	2.499240	3.127131	10.45604	.0157826
#3	2.315787	.1442623	2.522030	3.149023	10.49653	.0169950

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4880-14A Acquired: 12/13/2024 17:40:56 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHH91A Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0051811	3.635375	9.718738	.1557843	.9177012	.2760410
Stddev	.0001762	.010346	.046762	.0019173	.0049197	.0005211
%RSD	3.400405	.2845898	.4811499	1.230730	.5360921	.1887803
#1	.0049905	3.626560	9.664839	.1537859	.9205623	.2756083
#2	.0052147	3.632799	9.742900	.1576085	.9120205	.2758951
#3	.0053380	3.646765	9.748476	.1559585	.9205209	.2766195

Elem	Li6707
Units	ppm
Avg	.0714966
Stddev	.0023883
%RSD	3.340472
#1	.0727698
#2	.0687414
#3	.0729785

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2550.397	28485.75	2535.436	2065.502	2853.744
Stddev	5.461	152.14	10.208	9.756	1.644
%RSD	.2141053	.5341029	.4026190	.4723237	.0576120
#1	2550.166	28412.23	2537.308	2056.072	2852.235
#2	2545.056	28660.69	2544.578	2075.554	2853.502
#3	2555.969	28384.34	2524.421	2064.881	2855.496

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P5042-01A Acquired: 12/13/2024 17:44:43 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHKB0A Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1217906	.0246661	1.803092	.0454298	.0256708	55.17306	1.308790
Stddev	.0010342	.0011073	.004508	.0024794	.0018815	.10101	.000149
%RSD	.8491187	4.489136	.2500017	5.457589	7.329520	.1830696	.0113772
#1	.1206488	.0252625	1.798226	.0425774	.0238181	55.26492	1.308940
#2	.1226643	.0253475	1.807126	.0470690	.0275799	55.18936	1.308789
#3	.1220586	.0233885	1.803923	.0466429	.0256143	55.06490	1.308642

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0058287	.0074171	111.7739	.0938506	.1020455	.4254714	145.0262
Stddev	.0000602	.0000217	.2030	.0009201	.0002594	.0070170	.1205
%RSD	1.032679	.2923067	.1815957	.9804194	.2542153	1.649223	.0830592
#1	.0057642	.0074402	112.0039	.0947332	.1017861	.4332284	144.9807
#2	.0058834	.0074141	111.6201	.0928970	.1023049	.4236199	145.1628
#3	.0058385	.0073971	111.6975	.0939216	.1020455	.4195658	144.9351

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.48705	28.52270	.1475244	-.008965	1.875592	.1429437	1.267985
Stddev	.00837	.12108	.0005850	.000576	.142010	.0087991	.010877
%RSD	.0729068	.4244987	.3965595	6.423607	7.571501	6.155653	.8578523
#1	11.47789	28.52784	.1480386	-.008619	2.014990	.1444791	1.279509
#2	11.49431	28.39914	.1468879	-.009630	1.880679	.1334779	1.257897
#3	11.48894	28.64113	.1476468	-.008646	1.731106	.1508741	1.266549

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.110503	6.525670	-.001200	.0063633	1.909481	7.903867	.0925148
Stddev	.084158	.011813	.004859	.0002636	.003634	.067583	.0019368
%RSD	2.047391	.1810161	405.0198	4.143059	.1902954	.8550581	2.093551
#1	4.063813	6.512282	.003805	.0063286	1.907891	7.835480	.0940924
#2	4.060040	6.530104	-.001507	.0061186	1.906913	7.970616	.0930988
#3	4.207656	6.534624	-.005897	.0066425	1.913639	7.905505	.0903531

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P5042-01A Acquired: 12/13/2024 17:44:43 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHKB0A Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.6804737	.8350444	.0398410
Stddev	.0032294	.0014591	.0012383
%RSD	.4745835	.1747279	3.108054
#1	.6806533	.8367070	.0384577
#2	.6836096	.8344488	.0402192
#3	.6771582	.8339773	.0408460

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2780.645	30853.81	2725.749	2263.514	3108.763
Stddev	6.441	162.27	9.896	15.826	8.046
%RSD	.2316317	.5259457	.3630469	.6991785	.2588070
#1	2787.215	30668.04	2733.357	2245.291	3113.742
#2	2774.342	30967.95	2714.562	2271.437	3099.480
#3	2780.378	30925.42	2729.328	2273.813	3113.065

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P5041-01A Acquired: 12/13/2024 17:48:32 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHK78A Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2564434	.0205741	9.100652	.0486026	.0187550	61.93128
Stddev	.0034666	.0014272	.015153	.0015209	.0005282	.06853
%RSD	1.351818	6.936841	.1665096	3.129316	2.816221	.1106536
#1	.2603903	.0221111	9.083960	.0502834	.0190366	61.85446
#2	.2538921	.0192907	9.113543	.0473212	.0181457	61.95326
#3	.2550478	.0203206	9.104452	.0482033	.0190828	61.98612

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.373906	.0065807	.0117319	162.5325	.1514980	.1031291
Stddev	.004381	.0000346	.0000666	.1523	.0006963	.0002923
%RSD	.1845686	.5251570	.5675393	.0936963	.4596164	.2833995
#1	2.369354	.0065468	.0117308	162.4247	.1517005	.1031591
#2	2.374270	.0065795	.0117990	162.4660	.1520706	.1034052
#3	2.378094	.0066159	.0116658	162.7067	.1507229	.1028229

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4172107	126.2487	9.136997	22.85099	.1810309	-.006233
Stddev	.0079384	.3754	.010472	.08015	.0003326	.000292
%RSD	1.902736	.2973366	.1146073	.3507702	.1837513	4.682921
#1	.4108073	125.8171	9.130069	22.81636	.1811360	-.006140
#2	.4260927	126.4993	9.149043	22.94263	.1812983	-.006561
#3	.4147321	126.4297	9.131878	22.79396	.1806584	-.006000

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.846038	.3257497	2.960134	2.848838	F 17.03937	.0196251
Stddev	.150868	.0095251	.017556	.198376	.02589	.0027865
%RSD	5.301000	2.924041	.5930865	6.963387	.1519556	14.19845
#1	2.681625	.3153514	2.950313	3.011109	17.01414	.0184675
#2	2.878370	.3340525	2.949686	2.907717	17.06588	.0176040
#3	2.978121	.3278453	2.980403	2.627689	17.03810	.0228037

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P5041-01A Acquired: 12/13/2024 17:48:32 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHK78A Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0208344	3.170107	7.553159	.2027583	.8334742	.5888331
Stddev	.0002310	.007623	.058501	.0004546	.0031345	.0004921
%RSD	1.108909	.2404743	.7745179	.2242221	.3760816	.0835697
#1	.0208801	3.162219	7.567016	.2022739	.8299167	.5893915
#2	.0210392	3.177435	7.603487	.2031757	.8358302	.5884628
#3	.0205840	3.170667	7.488974	.2028253	.8346759	.5886451

Elem	Li6707
Units	ppm
Avg	.1140212
Stddev	.0041982
%RSD	3.681985
#1	.1162269
#2	.1091799
#3	.1166569

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2787.672	30926.90	2756.164	2271.539	3193.582
Stddev	3.303	144.08	9.422	8.175	3.158
%RSD	.1184985	.4658766	.3418366	.3598833	.0988914
#1	2786.435	31023.97	2760.236	2277.839	3190.880
#2	2791.415	30995.39	2745.392	2274.476	3197.054
#3	2785.165	30761.36	2762.865	2262.301	3192.813

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P5040-01A Acquired: 12/13/2024 17:52:19 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHKD6A Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0433767	.0286726	.2605444	.0237479	.0132912	50.15156	.8616390
Stddev	.0016492	.0019214	.0027755	.0023374	.0005324	.08836	.0021881
%RSD	3.802102	6.701073	1.065260	9.842449	4.005726	.1761875	.2539486
#1	.0427727	.0308709	.2621988	.0211333	.0134465	50.16810	.8601568
#2	.0452427	.0278329	.2620943	.0256352	.0137287	50.05609	.8606080
#3	.0421146	.0273140	.2573402	.0244750	.0126984	50.23048	.8641521

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0041353	.0038102	540.9203	.0810219	.0956075	.1458113	125.5485
Stddev	.0000754	.0000232	.9312	.0008645	.0006205	.0067211	.0897
%RSD	1.822297	.6095941	.1721534	1.067028	.6490428	4.609417	.0714718
#1	.0042153	.0037880	541.8385	.0809819	.0962801	.1465755	125.4807
#2	.0040656	.0038083	539.9766	.0819058	.0954851	.1521177	125.5145
#3	.0041249	.0038343	540.9460	.0801782	.0950572	.1387409	125.6502

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.547430	127.7011	.1507610	-.011534	2.394339	.1407997	.4243262
Stddev	.012877	.3520	.0009460	.000724	.388463	.0161381	.0060041
%RSD	.1706156	.2756562	.6275083	6.274648	16.22421	11.46173	1.414981
#1	7.548131	127.9182	.1516960	-.011616	2.786328	.1520504	.4290122
#2	7.534217	127.2950	.1507826	-.012213	2.387188	.1480393	.4175582
#3	7.559943	127.8902	.1498043	-.010772	2.009501	.1223095	.4264083

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7844230	8.089087	-.005901	.0027212	1.055691	6.154296	.0531884
Stddev	.1284205	.016740	.002114	.0005288	.004160	.016341	.0004101
%RSD	16.37133	.2069443	35.82633	19.43082	.3940963	.2655152	.7709705
#1	.6594437	8.105986	-.007989	.0022681	1.060371	6.169450	.0536220
#2	.7777972	8.072511	-.005951	.0025934	1.052412	6.136983	.0528068
#3	.9160282	8.088764	-.003762	.0033022	1.054291	6.156455	.0531365

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P5040-01A Acquired: 12/13/2024 17:52:19 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHKD6A Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.9852240	.5157749	.0862689
Stddev	.0052853	.0022652	.0029159
%RSD	.5364601	.4391860	3.380055
#1	.9854475	.5139360	.0885955
#2	.9798304	.5150836	.0829978
#3	.9903940	.5183053	.0872135

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2600.503	28874.85	2642.432	2112.908	2886.651
Stddev	5.332	46.78	5.794	7.718	6.282
%RSD	.2050542	.1620183	.2192613	.3652951	.2176212
#1	2594.561	28831.53	2641.086	2119.818	2879.397
#2	2602.077	28868.56	2648.781	2104.578	2890.246
#3	2604.871	28924.46	2637.430	2114.328	2890.309

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4905-02A Acquired: 12/13/2024 17:56:08 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHA6A Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3720331	.0225526	3.265793	.0493031	.1125509	70.29521
Stddev	.0060743	.0037193	.007651	.0023972	.0023009	.16485
%RSD	1.632723	16.49175	.2342716	4.862176	2.044305	.2345168
#1	.3744808	.0249139	3.271335	.0520496	.1105062	70.46807
#2	.3651169	.0244787	3.257064	.0482283	.1121041	70.13974
#3	.3765017	.0182653	3.268980	.0476313	.1150425	70.27782

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.101665	.0064339	.0108782	147.2969	.1519988	.1140095
Stddev	.015451	.0000571	.0000810	.3671	.0014494	.0005563
%RSD	.2532301	.8879176	.7447742	.2492390	.9535841	.4879346
#1	6.114374	.0064475	.0107923	147.7198	.1534475	.1145496
#2	6.084466	.0063712	.0109533	147.0601	.1520004	.1140408
#3	6.106155	.0064830	.0108891	147.1109	.1505486	.1134383

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.185332	182.8893	12.17538	36.18179	.2120554	.0039434
Stddev	.007235	.4788	.03601	.25457	.0004655	.0002434
%RSD	.6103742	.2617852	.2957566	.7035789	.2195326	6.173010
#1	1.181021	183.2919	12.18205	36.34414	.2123802	.0041626
#2	1.181290	182.3599	12.13651	35.88839	.2115221	.0039862
#3	1.193685	183.0162	12.20759	36.31283	.2122640	.0036814

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.776082	.1771131	5.389650	10.48600	F 21.61427	.0187959
Stddev	.334745	.0037893	.015620	.17845	.07562	.0028724
%RSD	12.05817	2.139504	.2898209	1.701752	.3498724	15.28204
#1	2.429449	.1814546	5.407523	10.33988	21.69855	.0194189
#2	3.097514	.1744703	5.382812	10.43325	21.59192	.0156631
#3	2.801283	.1754143	5.378615	10.68488	21.55234	.0213056

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4905-02A Acquired: 12/13/2024 17:56:08 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHA6A Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0067519	4.577939	9.478952	.1828291	1.337784	.1914517
Stddev	.0005160	.015425	.032604	.0021455	.002467	.0008322
%RSD	7.642591	.3369476	.3439625	1.173478	.1844273	.4346659
#1	.0072189	4.594120	9.478748	.1840452	1.334949	.1923782
#2	.0061979	4.576297	9.446450	.1840903	1.338957	.1912092
#3	.0068389	4.563401	9.511657	.1803519	1.339445	.1907677

Elem	Li6707
Units	ppm
Avg	.0650976
Stddev	.0030346
%RSD	4.661597
#1	.0632347
#2	.0634588
#3	.0685992

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2845.302	31614.30	2839.222	2316.629	2994.445
Stddev	2.919	46.24	6.963	8.940	3.073
%RSD	.1025798	.1462777	.2452402	.3859051	.1026296
#1	2848.032	31560.91	2833.455	2309.893	2991.624
#2	2842.225	31640.13	2846.957	2313.222	2993.990
#3	2845.649	31641.85	2837.255	2326.771	2997.720

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4907-01A Acquired: 12/13/2024 17:59:55 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHE1A Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1301036	.0224529	1.426422	.0361382	.0259700	88.77963
Stddev	.0005190	.0007222	.002845	.0031399	.0025924	.70626
%RSD	.3988822	3.216662	.1994798	8.688742	9.982250	.7955233
#1	.1301410	.0226978	1.428053	.0397606	.0252370	89.01045
#2	.1306029	.0230208	1.423136	.0344607	.0238231	87.98683
#3	.1295670	.0216400	1.428076	.0341932	.0288500	89.34160

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.870033	F 2.825185	.0102115	270.2270	.1516808	.1227911
Stddev	.014597	.017361	.0001279	2.2532	.0009516	.0003646
%RSD	.7805847	.6145234	1.252397	.8338359	.6273442	.2969098
#1	1.878492	2.835126	.0103514	270.9462	.1524263	.1232023
#2	1.853178	2.805138	.0101823	267.7019	.1520071	.1225075
#3	1.878430	2.835290	.0101007	272.0328	.1506090	.1226634

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.536327	166.5496	10.00794	78.00625	.2208566	-.010921
Stddev	.012552	1.3723	.08628	.61668	.0009667	.000372
%RSD	.8169848	.8239464	.8620886	.7905535	.4377180	3.402322
#1	1.550762	167.2143	10.07235	78.42724	.2215876	-.010697
#2	1.527979	164.9716	9.90992	77.29839	.2212218	-.011350
#3	1.530241	167.4630	10.04156	78.29311	.2197605	-.010716

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.280596	.2000136	4.138669	9.677424	F 16.44950	.0186930
Stddev	.393916	.0089647	.014896	.171531	.04483	.0021913
%RSD	17.27251	4.482067	.3599115	1.772484	.2725218	11.72278
#1	1.858597	.1922152	4.154104	9.819599	16.50061	.0211639
#2	2.344599	.2098082	4.137524	9.486911	16.43109	.0169856
#3	2.638591	.1980175	4.124378	9.725762	16.41681	.0179294

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4907-01A Acquired: 12/13/2024 17:59:55 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHE1A Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0044675	4.234892	8.983939	.1019545	.9568737	.2452715
Stddev	.0003649	.023756	.034804	.0019205	.0082323	.0019389
%RSD	8.168105	.5609662	.3874016	1.883653	.8603330	.7905030
#1	.0048634	4.262304	9.013444	.1011478	.9655779	.2471915
#2	.0043945	4.222096	8.945556	.1005690	.9492127	.2433143
#3	.0041446	4.220277	8.992815	.1041468	.9558306	.2453086

Elem	Li6707
Units	ppm
Avg	.1149643
Stddev	.0045420
%RSD	3.950829
#1	.1145948
#2	.1106183
#3	.1196798

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2834.157	31720.10	2862.401	2305.202	2814.720
Stddev	3.987	26.05	21.816	3.770	3.793
%RSD	.1406800	.0821158	.7621598	.1635534	.1347725
#1	2836.059	31690.09	2851.953	2306.350	2813.212
#2	2829.575	31736.72	2887.476	2308.265	2811.913
#3	2836.837	31733.50	2847.773	2300.991	2819.036

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4932-02A Acquired: 12/13/2024 18:03:42 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHQ2A Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1528657	.0264803	3.711174	-.002660	.0361723	63.05863
Stddev	.0025003	.0030416	.005537	.001926	.0007326	.26502
%RSD	1.635603	11.48611	.1492063	72.41850	2.025292	.4202703
#1	.1528479	.0288032	3.705480	-.002239	.0355840	62.98105
#2	.1503744	.0230376	3.711503	-.004762	.0359401	62.84106
#3	.1553748	.0276001	3.716540	-.000979	.0369929	63.35378

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.580918	.0062350	.0200610	178.6938	.1579569	.1159552
Stddev	.004844	.0001030	.0001438	.7360	.0008734	.0005954
%RSD	.3063774	1.651869	.7166547	.4118637	.5529544	.5134395
#1	1.580476	.0063137	.0199040	178.8190	.1577778	.1166073
#2	1.576311	.0061184	.0201863	177.9033	.1589060	.1158177
#3	1.585968	.0062728	.0200925	179.3592	.1571869	.1154406

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8178790	172.3765	12.01442	41.45245	.2046117	-.009851
Stddev	.0057238	.4889	.02596	.31713	.0009015	.000236
%RSD	.6998313	.2836295	.2160986	.7650478	.4405997	2.391348
#1	.8236684	172.4436	12.03614	41.46959	.2054579	-.009674
#2	.8122232	171.8575	11.98566	41.12710	.2047135	-.010118
#3	.8177454	172.8284	12.02145	41.76067	.2036636	-.009760

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.578629	.1695707	6.362461	6.538287	F 12.44803	.0114273
Stddev	.351495	.0064361	.006963	.114307	.02682	.0019879
%RSD	13.63107	3.795523	.1094447	1.748272	.2154908	17.39634
#1	2.579363	.1632404	6.362990	6.617027	12.42769	.0119304
#2	2.226767	.1761076	6.355248	6.407178	12.43798	.0092361
#3	2.929755	.1693643	6.369145	6.590657	12.47843	.0131153

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4932-02A Acquired: 12/13/2024 18:03:42 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHQ2A Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0058498	2.239676	9.195384	.2448857	1.069457	.1700065
Stddev	.0002222	.007205	.043784	.0012949	.004567	.0008159
%RSD	3.799109	.3217154	.4761510	.5287688	.4270751	.4799395
#1	.0061016	2.234262	9.225862	.2438101	1.073103	.1695163
#2	.0056810	2.247854	9.215078	.2445240	1.064334	.1695547
#3	.0057668	2.236911	9.145211	.2463229	1.070933	.1709483

Elem	Li6707
Units	ppm
Avg	.0633284
Stddev	.0037816
%RSD	5.971468
#1	.0603238
#2	.0675748
#3	.0620866

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2700.770	29959.13	2677.969	2179.885	2924.029
Stddev	12.972	38.37	16.353	8.576	10.786
%RSD	.4802959	.1280794	.6106502	.3934118	.3688892
#1	2687.243	29914.84	2660.228	2170.316	2912.955
#2	2701.963	29982.40	2681.240	2182.460	2924.632
#3	2713.104	29980.15	2692.439	2186.878	2934.502

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4933-20A Acquired: 12/13/2024 18:07:29 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHX4A Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1788730	.0161254	7.159508	.0630692	.0318662	56.27057
Stddev	.0007378	.0000937	.015270	.0009695	.0034707	.18429
%RSD	.4124772	.5809679	.2132795	1.537203	10.89155	.3275051
#1	.1792010	.0160975	7.146244	.0638371	.0286926	56.44569
#2	.1793899	.0160489	7.156078	.0619798	.0313336	56.07831
#3	.1780280	.0162299	7.176200	.0633907	.0355724	56.28770

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.876161	.0056915	.0086416	33.18014	.1825904	.1005438
Stddev	.006341	.0000572	.0000695	.06876	.0008150	.0005289
%RSD	.3379864	1.005088	.8046279	.2072336	.4463332	.5260451
#1	1.882389	.0057068	.0085688	33.21089	.1828794	.0999582
#2	1.869713	.0057394	.0086486	33.10137	.1832214	.1006862
#3	1.876380	.0056282	.0087073	33.22816	.1816703	.1009868

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5291413	141.9343	12.43002	14.86252	.2010525	-.002596
Stddev	.0041450	.4711	.04660	.01930	.0006201	.000356
%RSD	.7833363	.3319256	.3749067	.1298632	.3084461	13.69700
#1	.5291827	142.0810	12.44856	14.84063	.2008640	-.002791
#2	.5249758	141.4073	12.37701	14.86982	.2017450	-.002186
#3	.5332654	142.3146	12.46450	14.87710	.2005485	-.002811

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.488923	.1504526	4.974233	5.161644	F 11.70034	-.007124
Stddev	.131509	.0073460	.014792	.135924	.02587	.001397
%RSD	5.283782	4.882573	.2973789	2.633345	.2210778	19.60590
#1	2.635580	.1532135	4.965925	5.078523	11.67048	-.008531
#2	2.449702	.1421262	4.965461	5.318502	11.71460	-.007102
#3	2.381486	.1560181	4.991311	5.087908	11.71594	-.005738

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4933-20A Acquired: 12/13/2024 18:07:29 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHX4A Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0112249	3.127835	9.851193	.3366772	1.182287	-.001265
Stddev	.0001830	.014065	.043793	.0002171	.005944	.000092
%RSD	1.630138	.4496760	.4445448	.0644902	.5027152	7.291008
#1	.0110897	3.111772	9.839734	.3364275	1.184544	-.001300
#2	.0114331	3.133791	9.814269	.3367823	1.175546	-.001335
#3	.0111518	3.137942	9.899576	.3368217	1.186773	-.001161

Elem	Li6707
Units	ppm
Avg	.0341400
Stddev	.0049461
%RSD	14.48764
#1	.0394164
#2	.0333946
#3	.0296089

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2730.553	30251.26	2637.097	2209.891	3108.113
Stddev	2.409	165.42	16.222	13.686	4.601
%RSD	.0882408	.5468173	.6151299	.6193149	.1480212
#1	2732.149	30131.91	2618.366	2202.729	3109.144
#2	2727.782	30181.79	2646.309	2201.273	3103.084
#3	2731.730	30440.09	2646.614	2225.672	3112.111

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4983-08 Acquired: 12/13/2024 18:11:17 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJG0 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0634755	.0541542	.4997264	-.006163	.0363001	96.66659	2.527213
Stddev	.0016646	.0020444	.0065633	.003376	.0022576	.87162	.024318
%RSD	2.622492	3.775206	1.313377	54.78378	6.219336	.9016735	.9622603
#1	.0628094	.0523000	.4930994	-.004858	.0339932	97.22888	2.540147
#2	.0622471	.0538159	.4998559	-.003634	.0385050	95.66254	2.499161
#3	.0653701	.0563467	.5062240	-.009997	.0364020	97.10833	2.542332

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0081105	.0233154	785.5191	.1608489	.2205243	.2310907	234.9635
Stddev	.0000310	.0005036	6.2351	.0119402	.0039078	.0061819	2.0187
%RSD	.3822916	2.159963	.7937598	7.423212	1.772050	2.675116	.8591760
#1	.0080790	.0227424	789.1685	.1737730	.2160452	.2316867	236.0040
#2	.0081113	.0235161	778.3196	.1502283	.2232371	.2246323	232.6367
#3	.0081410	.0236878	789.0691	.1585453	.2222906	.2369530	236.2497

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	28.75557	236.6009	.3516946	-.018797	2.616964	.2069055	1.315733
Stddev	.26232	1.5061	.0060194	.003626	.248665	.0002178	.074778
%RSD	.9122322	.6365384	1.711536	19.29175	9.502042	.1052668	5.683348
#1	28.90911	237.6023	.3449761	-.022684	2.838117	.2066657	1.395690
#2	28.45268	234.8689	.3535111	-.015505	2.347791	.2069596	1.247526
#3	28.90491	237.3315	.3565965	-.018203	2.664984	.2070911	1.303983

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.184651	4.764528	-.016650	.0056584	6.042859	11.51572	.0350034
Stddev	.184692	.091334	.004803	.0003343	.126569	.26045	.0012279
%RSD	5.799451	1.916956	28.84620	5.907963	2.094522	2.261731	3.507944
#1	3.340282	4.659519	-.022131	.0052824	5.896923	11.79186	.0343419
#2	2.980560	4.808559	-.013174	.0059220	6.108988	11.27447	.0364202
#3	3.233111	4.825505	-.014647	.0057707	6.122665	11.48083	.0342481

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4983-08 Acquired: 12/13/2024 18:11:17 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJG0 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.8695118	1.435449	.1538628
Stddev	.0081511	.012898	.0003442
%RSD	.9374278	.8985377	.2237107
#1	.8740155	1.443476	.1535105
#2	.8601027	1.420571	.1541983
#3	.8744173	1.442300	.1538797

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2510.145	27509.35	2571.930	2000.174	2662.049
Stddev	33.894	1521.98	30.093	105.923	46.798
%RSD	1.350284	5.532604	1.170040	5.295699	1.757983
#1	2548.701	25861.53	2538.957	1888.105	2715.951
#2	2485.045	28862.36	2597.911	2098.637	2631.777
#3	2496.690	27804.16	2578.922	2013.781	2638.419

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4983-09 Acquired: 12/13/2024 18:15:04 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJG1 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0322374	.0191630	.2081420	-.017133	.0297585	99.40617	1.543755
Stddev	.0045262	.0012906	.0009221	.003764	.0004149	.41774	.003432
%RSD	14.04037	6.734682	.4429910	21.96722	1.394085	.4202345	.2222948
#1	.0322752	.0205592	.2085841	-.018047	.0296715	99.08898	1.540997
#2	.0367447	.0189158	.2087599	-.020356	.0302100	99.25004	1.542670
#3	.0276924	.0180138	.2070822	-.012997	.0293941	99.87949	1.547598

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0086076	.0080447	583.7717	.1445857	.1358684	.2101292	198.2020
Stddev	.0001066	.0000387	1.9836	.0007846	.0004471	.0064782	.4192
%RSD	1.238810	.4810186	.3397857	.5426303	.3290914	3.082980	.2115258
#1	.0085293	.0080874	582.9076	.1438712	.1356258	.2158267	198.1776
#2	.0085644	.0080120	582.3667	.1444605	.1355950	.2114781	197.7956
#3	.0087291	.0080348	586.0407	.1454253	.1363844	.2030827	198.6330

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.296670	81.41379	.2536075	-.018009	1.995977	.1919521	.9618992
Stddev	.013462	.49998	.0009013	.001171	.364997	.0054734	.0043784
%RSD	.2541536	.6141202	.3554129	6.501041	18.28662	2.851436	.4551831
#1	5.282762	81.05148	.2529556	-.019338	1.574655	.1980339	.9584793
#2	5.297614	81.20569	.2546361	-.017130	2.197233	.1874223	.9603845
#3	5.309635	81.98421	.2532310	-.017560	2.216044	.1904000	.9668338

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.907255	3.896529	-.026304	.0048577	1.852795	12.31799	.0287266
Stddev	.043771	.005070	.001574	.0005184	.015491	.05481	.0006367
%RSD	2.294981	.1301091	5.982171	10.67214	.8361041	.4449788	2.216365
#1	1.862933	3.897036	-.025773	.0052893	1.834912	12.34848	.0286066
#2	1.950454	3.891226	-.025064	.0042827	1.862114	12.25471	.0281586
#3	1.908378	3.901327	-.028074	.0050012	1.861358	12.35078	.0294148

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4983-09 Acquired: 12/13/2024 18:15:04 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJG1 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	1.027171	1.515805	.1445141
Stddev	.007496	.004118	.0017401
%RSD	.7297646	.2716589	1.204108
#1	1.020956	1.513533	.1428403
#2	1.025061	1.513322	.1463137
#3	1.035496	1.520558	.1443882

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2472.944	27721.64	2509.253	2015.639	2787.403
Stddev	3.109	27.47	7.762	3.314	4.055
%RSD	.1257322	.0991021	.3093539	.1643949	.1454877
#1	2471.370	27753.30	2510.978	2011.858	2786.429
#2	2470.937	27707.49	2516.007	2018.039	2783.923
#3	2476.526	27704.12	2500.773	2017.020	2791.856

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4983-13 Acquired: 12/13/2024 18:18:52 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJG3 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0404039	.0253719	.3350630	-.030353	.0285205	101.1419
Stddev	.0027518	.0032843	.0056133	.006759	.0014237	.1984
%RSD	6.810641	12.94478	1.675299	22.26722	4.991836	.1961943
#1	.0390598	.0277184	.3403290	-.035867	.0273009	101.3597
#2	.0385825	.0216185	.3357028	-.032380	.0281757	101.0944
#3	.0435694	.0267787	.3291572	-.022813	.0300849	100.9715

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.484141	.0085974	.0097633	F 1214.946	.1516195	.1442684
Stddev	.004739	.0001083	.0000634	5.206	.0007097	.0005202
%RSD	.3193253	1.259955	.6497772	.4285227	.4680563	.3605760
#1	1.489177	.0085901	.0098344	1220.911	.1519078	.1448481
#2	1.483480	.0087092	.0097429	1212.606	.1508111	.1438424
#3	1.479768	.0084929	.0097126	1211.319	.1521397	.1441146

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2125471	210.8963	7.376397	453.7781	.2730719	-.018680
Stddev	.0058827	.4015	.016296	.5755	.0020221	.000501
%RSD	2.767707	.1904009	.2209151	.1268211	.7404846	2.682251
#1	.2150727	211.3579	7.394980	454.4175	.2748168	-.018765
#2	.2058234	210.7043	7.364545	453.6149	.2708559	-.018142
#3	.2167454	210.6269	7.369667	453.3018	.2735431	-.019133

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.910370	.1837002	1.458538	3.901360	4.178525	-.003419
Stddev	.569230	.0052739	.013620	.085858	.013330	.003190
%RSD	19.55868	2.870908	.9338242	2.200716	.3190015	93.28734
#1	3.509188	.1826796	1.449659	3.988172	4.189063	-.003805
#2	2.845661	.1790112	1.451735	3.816489	4.182972	-.000054
#3	2.376259	.1894097	1.474219	3.899418	4.163541	-.006399

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4983-13 Acquired: 12/13/2024 18:18:52 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJG3 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0040507	9.556459	11.51110	.0366500	.9188303	1.594703
Stddev	.0002394	.044071	.04340	.0010908	.0042090	.004731
%RSD	5.909499	.4611672	.3770147	2.976139	.4580766	.2966856
#1	.0039366	9.606168	11.56076	.0373064	.9215351	1.599413
#2	.0043258	9.541040	11.49207	.0372527	.9209748	1.594747
#3	.0038898	9.522169	11.48047	.0353909	.9139810	1.589951

Elem	Li6707
Units	ppm
Avg	.1823691
Stddev	.0049017
%RSD	2.687793
#1	.1813747
#2	.1780408
#3	.1876918

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2312.604	25919.26	2440.045	1877.581	2474.510
Stddev	7.519	138.76	16.750	9.788	4.480
%RSD	.3251279	.5353379	.6864616	.5213067	.1810640
#1	2321.285	25809.36	2421.960	1873.702	2477.173
#2	2308.346	26075.17	2455.026	1888.714	2469.338
#3	2308.179	25873.24	2443.148	1870.328	2477.021

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4983-14 Acquired: 12/13/2024 18:22:48 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJG4 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0368451	.0322387	.4594240	-.037481	.0047220	18.97166
Stddev	.0018394	.0013281	.0024369	.004434	.0011913	.00922
%RSD	4.992209	4.119600	.5304176	11.82868	25.22919	.0486121
#1	.0383625	.0323043	.4613400	-.037000	.0060857	18.96124
#2	.0347994	.0335329	.4602506	-.033307	.0038833	18.97499
#3	.0373735	.0308791	.4566813	-.042135	.0041971	18.97876

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1715348	.0028360	.0059765	F 1365.029	.0505906	.0771337
Stddev	.0000642	.0000849	.0001054	11.197	.0005438	.0005944
%RSD	.0374221	2.992571	1.763073	.8202468	1.074983	.7705743
#1	.1715002	.0027549	.0058624	1376.703	.0501207	.0764475
#2	.1714953	.0029242	.0060701	1364.003	.0504648	.0774867
#3	.1716089	.0028290	.0059970	1354.380	.0511863	.0774670

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1766754	89.71418	7.758857	720.5492	.0844714	-.006489
Stddev	.0039187	.30863	.025529	1.7691	.0010717	.000771
%RSD	2.218031	.3440141	.3290343	.2455279	1.268683	11.88889
#1	.1811980	89.79947	7.742776	718.8283	.0841232	-.007314
#2	.1742878	89.37188	7.745503	720.4563	.0836171	-.006365
#3	.1745404	89.97120	7.788294	722.3629	.0856739	-.005786

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.184703	.0496494	1.022391	9.847265	2.466443	.0813497
Stddev	.194154	.0032261	.009923	.131015	.002061	.0022856
%RSD	6.096453	6.497726	.9705523	1.330466	.0835582	2.809623
#1	3.400488	.0531028	1.014379	9.899055	2.468718	.0831013
#2	3.129473	.0491325	1.033490	9.944468	2.465907	.0787642
#3	3.024148	.0467130	1.019303	9.698272	2.464703	.0821835

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: P4983-14 Acquired: 12/13/2024 18:22:48 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJG4 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001303	24.68342	8.704825	.0551952	.1746524	.5418887
Stddev	.000407	.07224	.045405	.0013106	.0025832	.0012337
%RSD	31.21995	.2926664	.5216050	2.374542	1.479069	.2276648
#1	-.001096	24.76359	8.757020	.0540115	.1716817	.5415023
#2	-.001041	24.62337	8.674445	.0566037	.1763705	.5408945
#3	-.001772	24.66331	8.683010	.0549705	.1759051	.5432693

Elem	Li6707
Units	ppm
Avg	.0627083
Stddev	.0020601
%RSD	3.285245
#1	.0640523
#2	.0637362
#3	.0603365

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2197.560	24910.67	2325.484	1784.641	2447.931
Stddev	1.085	96.40	8.993	5.725	1.683
%RSD	.0493565	.3869979	.3867240	.3208155	.0687330
#1	2197.070	24967.84	2316.607	1779.377	2449.094
#2	2196.807	24799.37	2334.589	1783.810	2446.002
#3	2198.803	24964.81	2325.255	1790.737	2448.698

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: CCV010 Acquired: 12/13/2024 18:32:32 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV010 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.813776	4.949035	23.72527	4.517203	4.616963	382.4420	9.738916
Stddev	.006047	.018769	.05322	.009058	.022767	1.8883	.045976
%RSD	.1256269	.3792396	.2242993	.2005165	.4931114	.4937541	.4720815
#1	4.809861	4.938247	23.70245	4.512067	4.610509	384.6205	9.790694
#2	4.810726	4.938150	23.68728	4.511880	4.598121	381.4318	9.723178
#3	4.820741	4.970707	23.78609	4.527661	4.642261	381.2736	9.702876

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4818012	2.370615	394.3218	14.60725	2.336108	14.91390	394.7957
Stddev	.0054980	.005747	2.1776	.08538	.003857	.06989	1.8918
%RSD	1.141131	.2424380	.5522322	.5844727	.1650896	.4686337	.4791801
#1	.4865982	2.369943	396.7545	14.57638	2.335590	14.97876	396.9240
#2	.4758014	2.365233	392.5546	14.54161	2.332536	14.92305	394.1579
#3	.4830039	2.376668	393.6564	14.70377	2.340197	14.83988	393.3053

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	14.72782	379.4505	2.393647	1.224453	383.4285	2.456351	13.70404
Stddev	.07325	2.5109	.003441	.008043	2.7568	.011746	.05786
%RSD	.4973364	.6617281	.1437750	.6568750	.7189807	.4782022	.4221818
#1	14.80598	382.1286	2.394387	1.226783	386.2366	2.465281	13.64267
#2	14.71671	379.0738	2.389896	1.215503	383.3229	2.460727	13.75758
#3	14.66076	377.1493	2.396658	1.231074	380.7261	2.443044	13.71186

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	142.6892	4.724129	4.669166	4.634931	4.663444	4.836362	4.806605
Stddev	.3400	.009809	.043264	.017398	.005868	.040522	.007361
%RSD	.2383078	.2076261	.9265979	.3753614	.1258193	.8378580	.1531427
#1	143.0791	4.727676	4.706850	4.624087	4.661175	4.873653	4.803283
#2	142.4539	4.713040	4.621921	4.625706	4.659049	4.793241	4.801491
#3	142.5347	4.731670	4.678727	4.654998	4.670107	4.842192	4.815042

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: CCV010 Acquired: 12/13/2024 18:32:32 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV010 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	4.966945	4.603634	5.033048
Stddev	.046413	.019556	.028507
%RSD	.9344355	.4247878	.5663955
#1	5.020502	4.624478	5.065073
#2	4.938464	4.600734	5.023625
#3	4.941869	4.585691	5.010445

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1950.289	23958.18	2201.525	1643.009	2564.802
Stddev	4.315	14.42	15.285	3.462	1.994
%RSD	.2212571	.0601993	.6942840	.2107199	.0777311
#1	1952.825	23953.00	2183.911	1644.569	2564.004
#2	1952.734	23974.48	2209.355	1639.041	2567.071
#3	1945.306	23947.06	2211.308	1645.417	2563.330

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: CCB010 Acquired: 12/13/2024 18:45:21 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB010 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001048	.0015622	-.000063	-.001501	.0023237	-.005267
Stddev	.003591	.0017781	.002139	.004861	.0035446	.006589
%RSD	342.4958	113.8195	3384.740	323.8174	152.5364	125.0934
#1	-.001557	.0002186	.002110	-.003817	.0030964	.001013
#2	.002770	.0035784	-.000132	.004085	.0054182	-.012127
#3	-.004358	.0008894	-.002167	-.004772	-.001543	-.004687

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011479	.0000530	-.000036	-.022312	-.000413	.0005170
Stddev	.0006824	.0000686	.000028	.018443	.000237	.0003642
%RSD	59.44674	129.2768	78.19773	82.65857	57.32248	70.44407
#1	.0003609	.0000038	-.000058	-.029729	-.000326	.0007926
#2	.0015080	.0001314	-.000004	-.035891	-.000233	.0001041
#3	.0015747	.0000240	-.000046	-.001315	-.000682	.0006543

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.004542	-.012112	.0004299	-.005828	-.000420	.0011318
Stddev	.006074	.012182	.0006923	.113012	.000460	.0021146
%RSD	133.7303	100.5771	161.0574	1939.144	109.3856	186.8322
#1	-.009471	-.006201	.0002645	.039204	-.000508	.0026222
#2	-.006400	-.004014	.0011899	.077726	.000077	-.001288
#3	.002244	-.026123	-.000165	-.134414	-.000830	.002062

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.050937	-.013714	.0019596	-.498972	-.002359	-.007139
Stddev	.718059	.005394	.0087051	.100986	.000574	.001122
%RSD	35.01126	39.32982	444.2326	20.23884	24.32173	15.72183
#1	2.723765	-.008377	.0101126	-.517880	-.001733	-.006019
#2	2.134147	-.013603	-.007209	-.589169	-.002860	-.008263
#3	1.294898	-.019163	.002975	-.389869	-.002484	-.007135

Reviewed By:Mohan
On:12/16/2024
12:49:43 AM
Inst Id :P5

Sample Name: CCB010 Acquired: 12/13/2024 18:45:21 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v19) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB010 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000090	-.004184	-.040186	-.000640	-.002991	-.000192
Stddev	.000276	.003357	.000765	.001109	.003707	.000122
%RSD	306.5233	80.23703	1.902533	173.2073	123.9496	63.81632
#1	-.000404	-.004570	-.040106	.000226	.000745	-.000160
#2	.000115	-.007330	-.039465	-.001891	-.003049	-.000088
#3	.000019	-.000650	-.040988	-.000256	-.006668	-.000327

Elem	Li6707
Units	ppm
Avg	F -.045068
Stddev	.005451
%RSD	12.09515
#1	-.046078
#2	-.039183
#3	-.049944

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2403.826	26512.75	2320.467	1958.268	3294.821
Stddev	4.656	71.17	13.738	7.268	8.487
%RSD	.1936966	.2684400	.5920305	.3711534	.2575722
#1	2401.282	26478.98	2313.794	1953.840	3285.022
#2	2400.995	26594.52	2311.340	1954.309	3299.630
#3	2409.199	26464.74	2336.267	1966.657	3299.810

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Prep Standard - Chemical Standard Summary

Order ID : P5041

Test : Metals CLP Full

Prepbatch ID : PB165364,

Sequence ID/Qc Batch ID: LB133883,LB133949,

Standard ID :
MP83014,MP83122,MP83134,MP83141,MP83147,MP83500,MP83501,MP83502,MP83503,MP83504,MP83505,MP835
06,MP83507,MP83508,MP83509,MP83510,MP83511,MP83513,MP83514,MP83567,

Chemical ID :
M5130,M5218,M5223,M5289,M5295,M5296,M5390,M5393,M5429,M5473,M5476,M5496,M5497,M5498,M5513,M5515
,M5519,M5658,M5697,M5698,M5751,M5768,M5769,M5798,M5799,M5800,M5801,M5802,M5806,M5815,M5816,M581
7,M5818,M5819,M5820,M5875,M5959,M5960,M5962,M5970,M5976,M5978,M5982,M5985,M5990,M5999,M6021,M60
23,M6025,M6028,M6030,M6033,M6095,M6111,M6115,M6116,M6117,M6121,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
1122	ICPMS CALIB BLANK(S0/ICB/CCB)	MP83014	11/02/2024	12/14/2024	Sarabjit Jaswal	None	None	Mohan Bera 11/04/2024

FROM 25.00000ml of M6095 + 4925.00000ml of W3112 + 50.00000ml of M6115 = Final Quantity: 5000.000 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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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
902	ICP AES CAL BLK (SO/ICB/CCB)	MP83134	10/30/2024	12/06/2024	Kareem Khairalla	None	None	Mohan Bera 11/08/2024

FROM 125.00000ml of M6111 + 2350.00000ml of W3112 + 25.00000ml of M6117 = Final Quantity: 2500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
994	ICPAES ISM01.2 S1 (CONC.)	MP83141	10/30/2024	12/06/2024	Kareem Khairalla	None	None	Mohan Bera 11/08/2024

FROM 0.02000ml of M5815 + 0.03000ml of M5429 + 0.10000ml of M5798 + 0.10000ml of M6028 + 0.14000ml of M5799 + 0.20000ml of M5476 + 0.20000ml of M5515 + 0.20000ml of M5658 + 0.20000ml of M5801 + 0.20000ml of M5817 + 0.20000ml of M5976 + 0.20000ml of M6025 + 0.20000ml of M6030 + 0.30000ml of M5698 + 0.40000ml of M6033 + 0.50000ml of M5751 + 0.50000ml of M6023 + 0.70000ml of M5962 + 0.80000ml of M5960 + 1.00000ml of M5800 + 1.00000ml of M6021 + 1.20000ml of M5802 + 1.20000ml of M5819 + 10.00000ml of M5498 + 10.00000ml of M5519 + 10.00000ml of M5768 + 10.00000ml of M5806 + 10.00000ml of M5818 + 2.00000ml of M5978 + 4.00000ml of M5390 + 34.24000ml of MP83134 = 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
921	ICPAES SPIKE SOL#6	MP83147	10/30/2024	12/06/2024	Kareem Khairalla	None	None	Mohan Bera 11/08/2024

FROM 2.50000ml of M5962 + 50.00000ml of M5990 + 50.00000ml of M5999 + 147.50000ml of MP83134 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
902	ICP AES CAL BLK (SO/ICB/CCB)	MP83500	12/06/2024	01/06/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 12/09/2024

FROM 125.00000ml of M6121 + 2350.00000ml of W3112 + 25.00000ml of M6126 = Final Quantity: 2500.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2480	ICP AES STD 6 ISM01.3	MP83501	12/06/2024	01/06/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 12/09/2024

FROM 4.00000ml of M5289 + 4.00000ml of M5498 + 4.00000ml of M5515 + 4.00000ml of M5768 + 4.00000ml of M5806 + 30.00000ml of MP83500 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1004	ICPAES ISM01.2 (S5)	MP83502	12/06/2024	01/06/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 12/09/2024

FROM 0.25000ml of M5798 + 0.50000ml of M5429 + 0.50000ml of M5473 + 0.50000ml of M5815 + 0.50000ml of M5817 + 12.50000ml of M5519 + 12.50000ml of M5698 + 12.50000ml of M5806 + 12.50000ml of M5819 + 13.75000ml of M5697 + 14.50000ml of M5496 + 14.50000ml of M5515 + 14.50000ml of M5658 + 2.00000ml of M5513 + 22.50000ml of M5497 + 22.50000ml of M5768 + 5.00000ml of M5296 + 5.00000ml of M5393 + 5.00000ml of M5802 + 5.00000ml of M5818 + 5.00000ml of M5875 + 303.50000ml of MP83500 = 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
1005	ICPAES ISM01.2(S4)	MP83503	12/09/2024	01/06/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 12/09/2024

FROM 250.00000ml of MP83500 + 250.00000ml of MP83502 = Final Quantity: 500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1007	ICPAES ISM01.2(S3)	MP83504	12/09/2024	01/06/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 12/09/2024

FROM 25.00000ml of MP83502 + 75.00000ml of MP83500 = 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
1008	ICPAES ISM01.2(S2)	MP83505	12/09/2024	01/06/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 12/09/2024

FROM 12.50000ml of MP83502 + 87.50000ml of MP83500 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
994	ICPAES ISM01.2 S1 (CONC.)	MP83506	12/09/2024	01/06/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 12/09/2024

FROM 0.02000ml of M5815 + 0.03000ml of M5429 + 0.10000ml of M5798 + 0.10000ml of M6028 + 0.14000ml of M5799 + 0.20000ml of M5473 + 0.20000ml of M5515 + 0.20000ml of M5658 + 0.20000ml of M5801 + 0.20000ml of M5817 + 0.20000ml of M5976 + 0.20000ml of M6025 + 0.20000ml of M6030 + 0.30000ml of M5698 + 0.40000ml of M5496 + 0.50000ml of M5697 + 0.50000ml of M6023 + 0.70000ml of M5962 + 0.80000ml of M5960 + 1.00000ml of M5800 + 1.00000ml of M6021 + 1.20000ml of M5802 + 1.20000ml of M5819 + 10.00000ml of M5498 + 10.00000ml of M5519 + 10.00000ml of M5769 + 10.00000ml of M5806 + 10.00000ml of M5818 + 2.00000ml of M5978 + 4.00000ml of M5390 + 34.24000ml of MP83500 = Final Quantity: 100.000 ml

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Fax : 908 789 8922

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1003	ICPAES ISM01.2 S1	MP83507	12/09/2024	01/06/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 12/09/2024

FROM 0.50000ml of MP83506 + 99.50000ml of MP83500 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2054	ICV-ICPAES	MP83508	12/09/2024	01/06/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 12/09/2024

FROM 0.50000ml of M5218 + 0.50000ml of M5816 + 0.50000ml of M5820 + 0.50000ml of M5970 + 0.50000ml of M5982 + 10.00000ml of M5295 + 87.50000ml of MP83500 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
904	ICP AES ICSA SOLN	MP83509	12/09/2024	01/06/2025	Kareem Khairalla	None	METALS_PIPETTE_3 (A)	Sarabjit Jaswal 12/09/2024

FROM 10.00000ml of M5130 + 90.00000ml of MP83500 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
905	ICP AES ICSAB SOLN	MP83510	12/09/2024	01/06/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 12/09/2024

FROM 10.00000ml of M5130 + 10.00000ml of M5223 + 80.00000ml of MP83500 = 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
1119	ICPAES ISM01.2(CCV)	MP83511	12/09/2024	01/06/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 12/09/2024

FROM 0.75000ml of M5497 + 0.75000ml of M5769 + 1.22500ml of M5496 + 1.25000ml of M5515 + 1.25000ml of M5806 + 19.77500ml of MP83500 + 25.00000ml of MP83502 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
919	ICP AES INTERNAL STD	MP83513	12/09/2024	01/06/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 12/09/2024

FROM 1.00000ml of M5959 + 10.00000ml of M5985 + 1969.00000ml of W3112 + 20.00000ml of M6126 = 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
513	RINSE SOLN	MP83514	12/09/2024	01/06/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 12/09/2024

FROM 200.00000ml of M6126 + 9800.00000ml of W3112 = Final Quantity: 10000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1883	SE 10PPM	MP83567	12/09/2024	12/13/2024	Sarabjit Jaswal	None	None	Mohan Bera 12/13/2024

FROM 0.10000ml of M5962 + 9.90000ml of MP83014 = Final Quantity: 10.000 ml

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Fax : 908 789 8922

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	PART A / ICSA (ICP) STOCK SOLN	ICSA-1211	12/28/2024	05/20/2024 / jaswal	04/20/2021 / bin	M5130

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 #
EPA	PART B / ICSAB (ICP) STOCK SOLN	ICSB-0710	12/28/2024	05/20/2024 / jaswal	04/20/2021 / bin	M5223

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58113 / Aluminum (Al) 10,000PPM	070622	07/06/2025	09/02/2022 / jaswal	07/12/2022 / jaswal	M5289

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	04/20/2021 / 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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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	10/12/2022 / bin	09/19/2022 / bin	M5393

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.	57138 / Sr, 10000 PPM, 125 ml	082922	08/29/2025	03/16/2023 / jaswal	03/16/2023 / jaswal	M5473

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57138 / Sr, 10000 PPM, 125 ml	082922	08/09/2025	07/29/2024 / jaswal	03/16/2023 / jaswal	M5476

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	08/15/2023 / jaswal	03/17/2023 / bin	M5496

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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	03/18/2023 / bin	03/17/2023 / bin	M5497

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.	57182 / Pb, 10000 PPM, 125 ml	061522	06/15/2025	03/19/2023 / bin	03/17/2023 / bin	M5513

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57119 / Potassium (K) 10,000PPM	120822	12/08/2025	01/08/2024 / bin	03/17/2023 / bin	M5519

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

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58029 / Cu, 1000 PPM, 500 ml	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.	58029 / Cu, 1000 PPM, 500 ml	071723	07/17/2026	10/01/2024 / Jaswal	08/25/2023 / jaswal	M5751

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58112 / Mg, 10000 PPM, 500 ml	091823	09/18/2026	01/08/2024 / bin	01/03/2024 / bin	M5768

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

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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

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.	57115 / P, 10000 PPM, 125 ml	041723	04/17/2026	05/21/2024 / Jaswal	02/09/2024 / jaswal	M5815

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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

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

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGY10-1 / YTTRIUM 125mL 10,000ug/mL	V2-Y740548	02/20/2029	07/01/2024 / Jaswal	06/14/2024 / Jaswal	M5959

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57028 / Ni, 1000 PPM, 125 ml	041124	04/11/2027	07/03/2024 / kareem	06/11/2024 / kareem	M5960

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57034 / Se, 1000 PPM, 125 ml	060624	06/06/2027	07/02/2024 / Jaswal	06/14/2024 / Jaswal	M5962

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57003 / Li, 1000 PPM, 125 ml	061224	06/21/2027	07/01/2024 / Jaswal	07/01/2024 / Jaswal	M5970

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGMO1-1 / MOLYBDENUM 125mL 1000ug/mL	T2-MO720876	07/17/2027	08/07/2024 / jaswal	02/22/2024 / Jaswal	M5976

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

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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	CGIN10-5 / INDIUM 1 x 500 ml	U2-IN729349	02/21/2028	10/08/2024 / Jaswal	06/14/2024 / Jaswal	M5985

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CLPP-SPK-5 / CLP Spike Standard 5	V2-MEB742037	03/12/2029	10/04/2024 / Jaswal	02/22/2024 / Jaswal	M5990

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CLPP-SPK-1 / SOIL/WATER SPIKE SOLN 1, 125mL	T2-MEB721963	07/27/2027	09/04/2024 / Jaswal	02/22/2024 / kareem	M5999

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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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57082 / Pb, 1000 PPM, 125 ml	061224	11/09/2026	08/05/2024 / Jaswal	08/05/2024 / Jaswal	M6025

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57048 / Cd, 1000 PPM, 125 ml	070124	07/01/2027	08/05/2024 / kareem	08/05/2024 / Jaswal	M6028

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57047 / Ag, 1000 PPM, 125 ml	122823	12/28/2026	08/05/2024 / kareem	08/05/2024 / Jaswal	M6030

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	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-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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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	05/04/2025	11/02/2024 / Janvi	09/29/2024 / Eman	M6115

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 #
Seidler Chemical	BA-9530-33 / Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L)	0000275677	05/13/2025	11/13/2024 / Eman	10/13/2024 / Eman	M6121

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

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	DIW / DI Water	Daily Lab-Certified	07/03/2029	07/03/2024 / Iwona	07/03/2024 / Iwona	W3112

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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-SPK-5
Lot Number:	V2-MEB742037
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	100 µg/mL ea: Antimony,
	50 µg/mL ea: Selenium, Cadmium, Thallium,
	40 µg/mL ea: Arsenic,
	20 µg/mL ea: Lead

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	100.0 ± 0.7 µg/mL	Arsenic, As	40.00 ± 0.26 µg/mL
Cadmium, Cd	49.99 ± 0.22 µg/mL	Lead, Pb	19.99 ± 0.09 µg/mL
Selenium, Se	50.00 ± 0.23 µg/mL	Thallium, Tl	50.00 ± 0.22 µg/mL

Density: 1.025 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
As	ICP Assay	3103a	100818
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Cd	Calculated		See Sec. 4.2
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Pb	Calculated		See Sec. 4.2
Sb	ICP Assay	3102a	140911
Se	ICP Assay	3149	100901
Se	Calculated		See Sec. 4.2
Tl	ICP Assay	3158	151215
Tl	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)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 12, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- March 12, 2029

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Joseph Burns
Custom VS Manager



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M6028

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

R 8/5/24

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CERTIFIED WEIGHT REPORT:

Part Number:	**57048**			**Lot #**	
Lot Number:	**070124**		**Solvent:**	24002546	Nitric Acid
Description:	**Cadmium (Cd)**				
			2%	40.0 (mL)	Nitric Acid
Expiration Date:	070127				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.07	0.100	Flask Uncertainty		

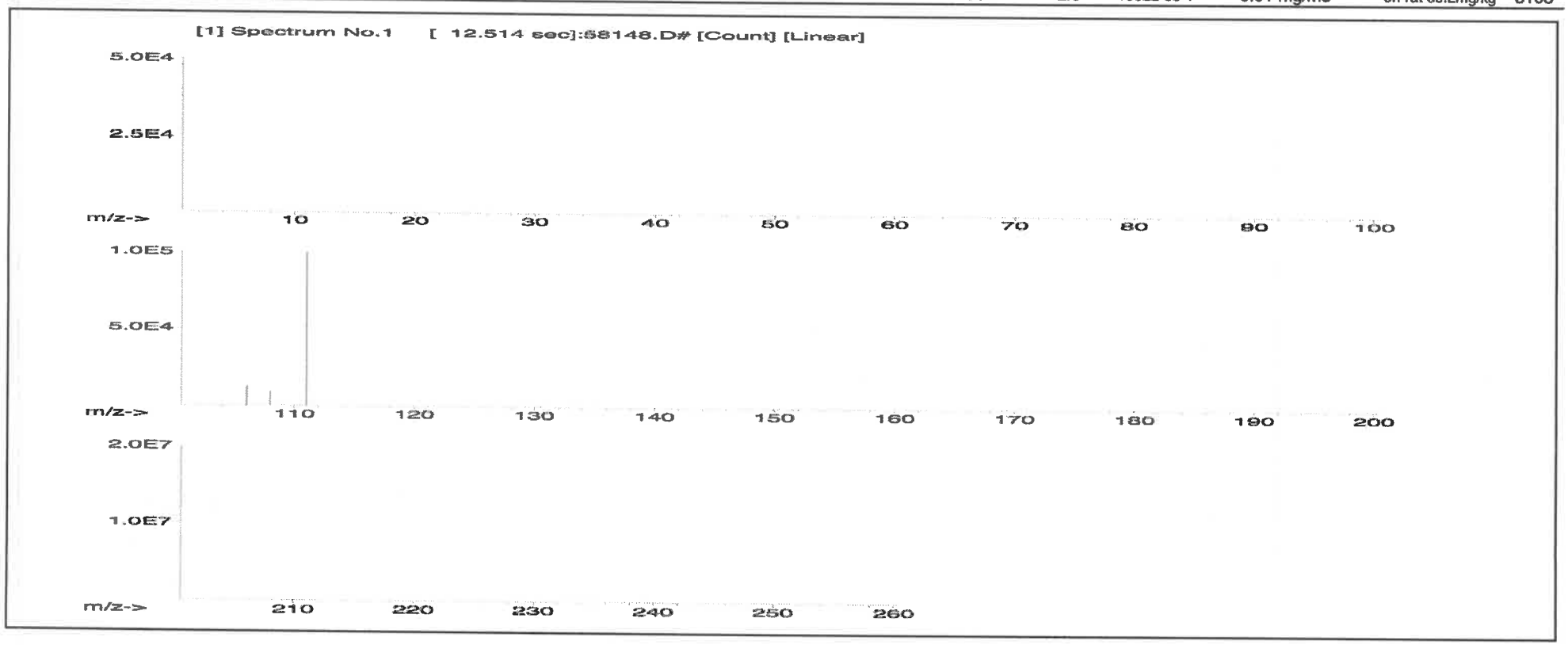
Aleah O'Brady

Formulated By:	Aleah O'Brady	070124

Pedro Rentas

Reviewed By:	Pedro L. Rentas	070124

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Cadmium nitrate tetrahydrate (Cd)	IN024	CDM092021A1	1000	99.999	0.10	36.5	5.4797	5.4804	**1000.1**	**2.0**	10022-68-1	0.01 mg/m3	orl-rat 60.2mg/kg	3108



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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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Certificate of Analysis

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	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.

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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

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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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Certificate of Analysis

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CLPP-CAL-1
Lot Number:	T2-MEB714417
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	5 000 µg/mL ea: Calcium, Potassium, Magnesium, Sodium, 2 000 µg/mL ea: Aluminum, Barium, 1 000 µg/mL ea: Iron, 500 µg/mL ea: Nickel, Vanadium, Zinc, Cobalt, Manganese, 250 µg/mL ea: Silver, Copper, 200 µg/mL ea: Chromium, 50 µg/mL ea: Beryllium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	**2 000 ± 7 µg/mL**	**Barium, Ba**	**2 000 ± 9 µg/mL**
Beryllium, Be	**50.00 ± 0.26 µg/mL**	**Calcium, Ca**	**5 000 ± 22 µg/mL**
Chromium, Cr	**200.0 ± 1.0 µg/mL**	**Cobalt, Co**	**500.0 ± 2.4 µg/mL**
Copper, Cu	**250.0 ± 1.0 µg/mL**	**Iron, Fe**	**1 000 ± 4 µg/mL**
Magnesium, Mg	**5 000 ± 20 µg/mL**	**Manganese, Mn**	**500.0 ± 2.0 µg/mL**
Nickel, Ni	**500.0 ± 2.2 µg/mL**	**Potassium, K**	**5 000 ± 19 µg/mL**
Silver, Ag	**250.0 ± 1.1 µg/mL**	**Sodium, Na**	**5 000 ± 18 µg/mL**
Vanadium, V	**499.7 ± 2.2 µg/mL**	**Zinc, Zn**	**500.0 ± 2.2 µg/mL**

Density: 1.118 g/mL (measured at 20 ± 4 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:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

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"

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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

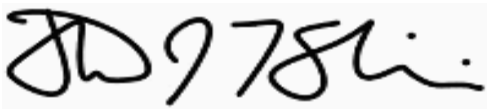
- Sealed TCT Bag Open Date: _____

- 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:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

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"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 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

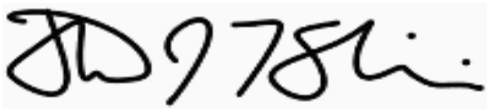
- Sealed TCT Bag Open Date: _____

- 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



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 8/5/24 M6025

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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CERTIFIED WEIGHT REPORT:

Part Number: 57182
Lot Number: 110923
Description: Lead (Pb)

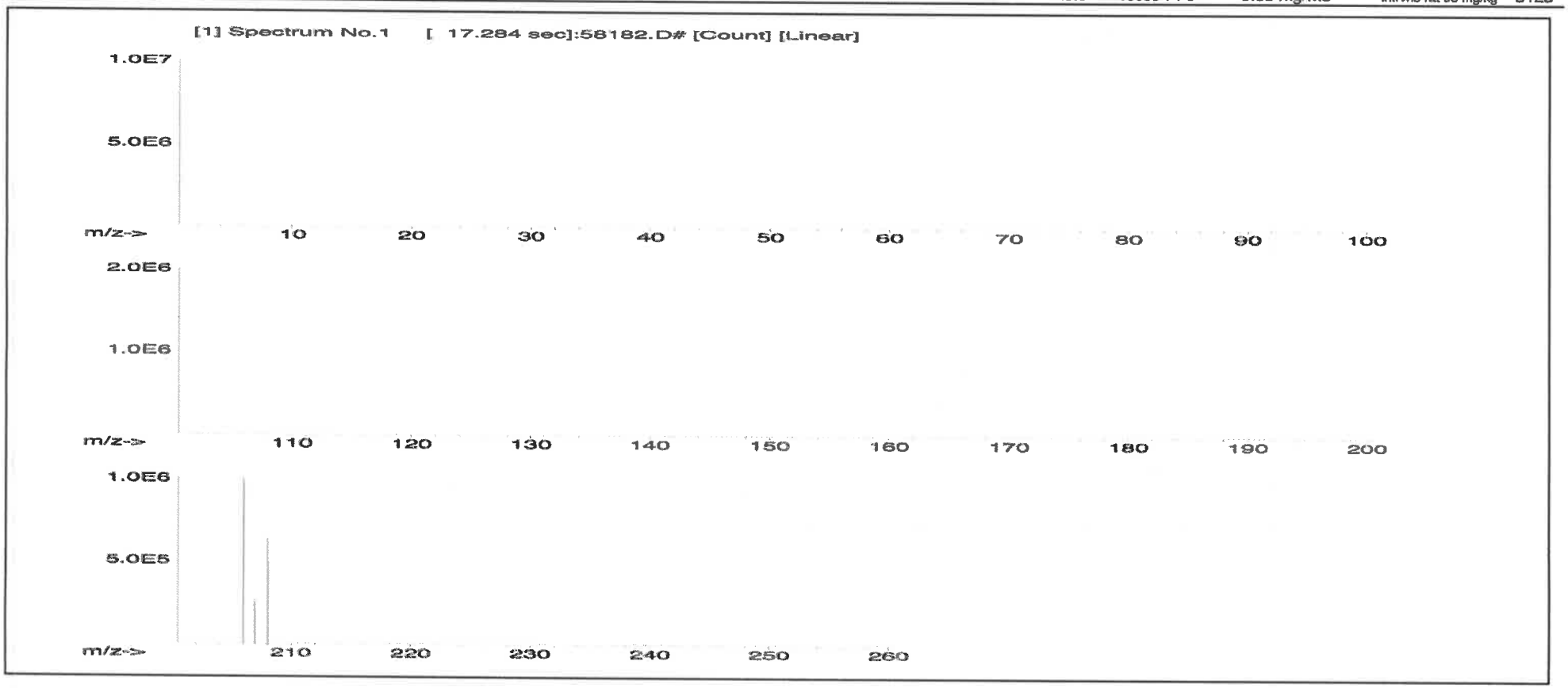
Expiration Date: 110926
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.02

	Lot #		
Solvent:	24002546	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By:	Lawence Barry	110923
Reviewed By:	Pedro L. Rentas	110923

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lead(II) nitrate (Pb)	IN029	PBD122016A1	10000	99.999	0.10	62.5	32.0006	32.0040	**10001.1**	**20.0**	10099-74-8	0.05 mg/m3	intrvns-rat 93 mg/kg	3128



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	T	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* 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).

QATS LABORATORY INORGANIC REFERENCE MATERIAL INTERFERENCE CHECK SAMPLE SET FOR ICP-AES (ICSA WITH ICSB)

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocol or your contract, disregard these instructions.

APPLICATION: For use with the CLP SFAM01.0 SOW and revisions.

CAUTION: Read instructions carefully before opening bottle(s) and proceeding with the analyses.

Contains Heavy Metals
HAZARDOUS MATERIAL

Safety Data Sheets
Available Upon Request

(A) *SAMPLE DESCRIPTION*

Enclosed is a set of one (1) or more bottles of Aqueous Reference Material, each composed of metals at various concentrations and prepared with nitrate salts and oxy-acids of the respective elements in a 5% nitric acid matrix. **For the reference material source in reporting ICSA and ICSAB mixture use "USEPA". For the reference material lot number for the ICSA use "ICSA-1211" and for the ICSAB mixture use "ICSA-1211+ICSB-0710".**

CAUTION: The bottle(s) should be protected from light during storage to ensure the stability of silver which is contained in the ICSB solution. The bottle(s) should be stored at room temperature. **Do not allow the solution(s) to freeze.**

(B) *BREAKAGE OR MISSING ITEMS*

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain of custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120

(C) *ANALYSIS OF SAMPLES*

The interference check sample set is to be used to verify inter-element and background correction factors of inductively-coupled plasma (ICP) spectrometers. This reference material set consists of two (2) concentrated solutions. The ICSA solution contains the four (4) interferent elements: Al, Ca, Fe, and Mg. The ICSB solution contains the analytes: Ag, As, Sb, Ba, Be,

Cd, Co, Cr, Cu, Mn, Ni, Pb, Tl, Se, V, and Zn. This instruction sheet provides the nominal values for ICP-AES Part A and Part B target analytes when diluted as directed.

Using Class "A" glassware, preparation and analysis must be performed according to the following instructions:

ICSA-1211, Interferents: Pipet 10 mL of the ICSA solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this ICSA solution by ICP-AES.

ICSB-0710, Analytes, mixed with ICSA-1211, Interferents: Pipet 10 mL of the ICSA solution and 10 mL of the ICSB solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this ICSAB solution by ICP-AES.

(D) *"CERTIFIED VALUE" CONCENTRATIONS OF QATS ICP-AES ICS SOLUTION(S)*

The "Certified Value" concentrations of the elements, listed in Table 1 below, were derived from statistically pooled analysis results from the following sources, if available: QATS Laboratory, CLP laboratories, Quarterly Blind (QB)/Proficiency Testing (PT) events, CLP pre-award events, and external referee laboratories.

Table 1. "CERTIFIED VALUES" FOR INTERFERENCE CHECK SAMPLE ICP-AES ICSA-1211, AND ICSA-1211 MIXED WITH ICSB-0710

Element	CRQL	Part A (µg/L)	Low Limit (µg/L)	High Limit (µg/L)	Part A +Part B (µg/L)	Low Limit (µg/L)	High Limit (µg/L)
Al	200	255000	216000	294000	247000	209000	285000
Sb	60	(0.0)	-60.0	60.0	618	525	711
As	10	(0.0)	-10.0	10.0	104	88.4	120
Ba	200	(6.0)	-194	206	(537)	337	737
Be	5.0	(0.0)	-5.0	5.0	495	420	570
Cd	5.0	(1.0)	-4.0	6.0	972	826	1120
Ca	5000	245000	208000	282000	235000	199000	271000
Cr	10	(52.0)	42.0	62.0	542	460	624
Co	50	(0.0)	-50.0	50.0	476	404	548
Cu	25	(2.0)	-23.0	27.0	511	434	588
Fe	100	101000	85600	116500	99300	84400	114500
Pb	10	(0.0)	-10.0	10.0	(49.0)	39.0	59.0
Mg	5000	255000	216000	294000	248000	210000	286000
Mn	15	(7.0)	-8.0	22.0	507	430	584
Ni	40	(2.0)	-38.0	42.0	954	810	1100
Se	35	(0.0)	-35.0	35.0	(46.0)	11.0	81.0
Ag	10	(0.0)	-10.0	10.0	201	170	232
Tl	25	(0.0)	-25.0	25.0	(108)	83.0	133
V	50	(0.0)	-50.0	50.0	491	417	565
Zn	60	(0.0)	-60.0	60.0	952	809	1095

ICSA M5126 M5127 M5128 M5129 M5130

ICSB M5219 M5220 M5221 M5222 M5223

The acceptance ranges for all analytes in parentheses in the above table were determined using the listed certified value ± 1 times the associated CLP SOW CRQL. The acceptance ranges for all other analytes were determined using the certified value ± 15 percent of the listed certified value.

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

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



QATS LABORATORY INORGANIC REFERENCE MATERIAL INTERFERENCE CHECK SAMPLE SET FOR ICP-AES (ICSA WITH ICSB)

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocol or your contract, disregard these instructions.

APPLICATION: For use with the CLP SFAM01.0 SOW and revisions.

CAUTION: Read instructions carefully before opening bottle(s) and proceeding with the analyses.

Contains Heavy Metals
HAZARDOUS MATERIAL

Safety Data Sheets
Available Upon Request

(A) *SAMPLE DESCRIPTION*

Enclosed is a set of one (1) or more bottles of Aqueous Reference Material, each composed of metals at various concentrations and prepared with nitrate salts and oxy-acids of the respective elements in a 5% nitric acid matrix. **For the reference material source in reporting ICSA and ICSAB mixture use "USEPA". For the reference material lot number for the ICSA use "ICSA-1211" and for the ICSAB mixture use "ICSA-1211+ICSB-0710".**

CAUTION: The bottle(s) should be protected from light during storage to ensure the stability of silver which is contained in the ICSB solution. The bottle(s) should be stored at room temperature. **Do not allow the solution(s) to freeze.**

(B) *BREAKAGE OR MISSING ITEMS*

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain of custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120

(C) *ANALYSIS OF SAMPLES*

The interference check sample set is to be used to verify inter-element and background correction factors of inductively-coupled plasma (ICP) spectrometers. This reference material set consists of two (2) concentrated solutions. The ICSA solution contains the four (4) interferent elements: Al, Ca, Fe, and Mg. The ICSB solution contains the analytes: Ag, As, Sb, Ba, Be,

Cd, Co, Cr, Cu, Mn, Ni, Pb, Tl, Se, V, and Zn. This instruction sheet provides the nominal values for ICP-AES Part A and Part B target analytes when diluted as directed.

Using Class "A" glassware, preparation and analysis must be performed according to the following instructions:

ICSA-1211, Interferents: Pipet 10 mL of the ICSA solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this ICSA solution by ICP-AES.

ICSB-0710, Analytes, mixed with ICSA-1211, Interferents: Pipet 10 mL of the ICSA solution and 10 mL of the ICSB solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this ICSAB solution by ICP-AES.

(D) *"CERTIFIED VALUE" CONCENTRATIONS OF QATS ICP-AES ICS SOLUTION(S)*

The "Certified Value" concentrations of the elements, listed in Table 1 below, were derived from statistically pooled analysis results from the following sources, if available: QATS Laboratory, CLP laboratories, Quarterly Blind (QB)/Proficiency Testing (PT) events, CLP pre-award events, and external referee laboratories.

Table 1. "CERTIFIED VALUES" FOR INTERFERENCE CHECK SAMPLE ICP-AES ICSA-1211, AND ICSA-1211 MIXED WITH ICSB-0710

Element	CRQL	Part A (µg/L)	Low Limit (µg/L)	High Limit (µg/L)	Part A +Part B (µg/L)	Low Limit (µg/L)	High Limit (µg/L)
Al	200	255000	216000	294000	247000	209000	285000
Sb	60	(0.0)	-60.0	60.0	618	525	711
As	10	(0.0)	-10.0	10.0	104	88.4	120
Ba	200	(6.0)	-194	206	(537)	337	737
Be	5.0	(0.0)	-5.0	5.0	495	420	570
Cd	5.0	(1.0)	-4.0	6.0	972	826	1120
Ca	5000	245000	208000	282000	235000	199000	271000
Cr	10	(52.0)	42.0	62.0	542	460	624
Co	50	(0.0)	-50.0	50.0	476	404	548
Cu	25	(2.0)	-23.0	27.0	511	434	588
Fe	100	101000	85600	116500	99300	84400	114500
Pb	10	(0.0)	-10.0	10.0	(49.0)	39.0	59.0
Mg	5000	255000	216000	294000	248000	210000	286000
Mn	15	(7.0)	-8.0	22.0	507	430	584
Ni	40	(2.0)	-38.0	42.0	954	810	1100
Se	35	(0.0)	-35.0	35.0	(46.0)	11.0	81.0
Ag	10	(0.0)	-10.0	10.0	201	170	232
Tl	25	(0.0)	-25.0	25.0	(108)	83.0	133
V	50	(0.0)	-50.0	50.0	491	417	565
Zn	60	(0.0)	-60.0	60.0	952	809	1095

ICSA M5126 M5127 M5128 M5129 M5130

ICSB M5219 M5220 M5221 M5222 M5223

The acceptance ranges for all analytes in parentheses in the above table were determined using the listed certified value ± 1 times the associated CLP SOW CRQL. The acceptance ranges for all other analytes were determined using the certified value ± 15 percent of the listed certified value.

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M5289 R: 07/12/22 (BH)

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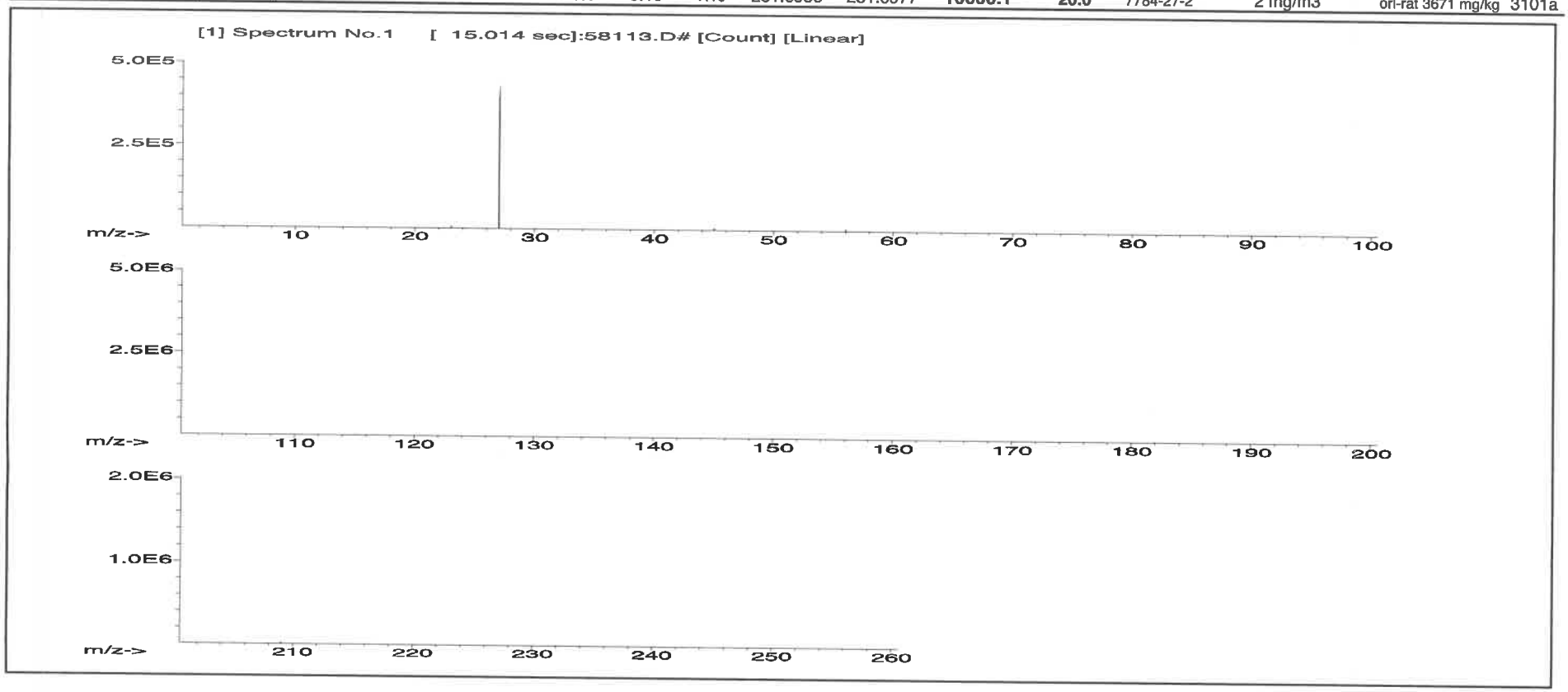
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CERTIFIED WEIGHT REPORT:

Part Number:	**58113**			**Lot #**	
Lot Number:	**070622**		**Solvent:**	20370011	Nitric Acid
Description:	**Aluminum (Al)**		2%	40.0 (mL)	Nitric Acid
Expiration Date:	070625				
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	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. Aluminum nitrate nonahydrate (Al)	IN022	ALD012021A1	10000	99.999	0.10	7.10	281.6956	281.6977	**10000.1**	**20.0**	7784-27-2	2 mg/m3	orl-rat 3671 mg/kg	3101a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	T	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	<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).

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.

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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R: 09/08/22 (BH)

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M5387 . M5389 . M5390 . M5391 . M5392

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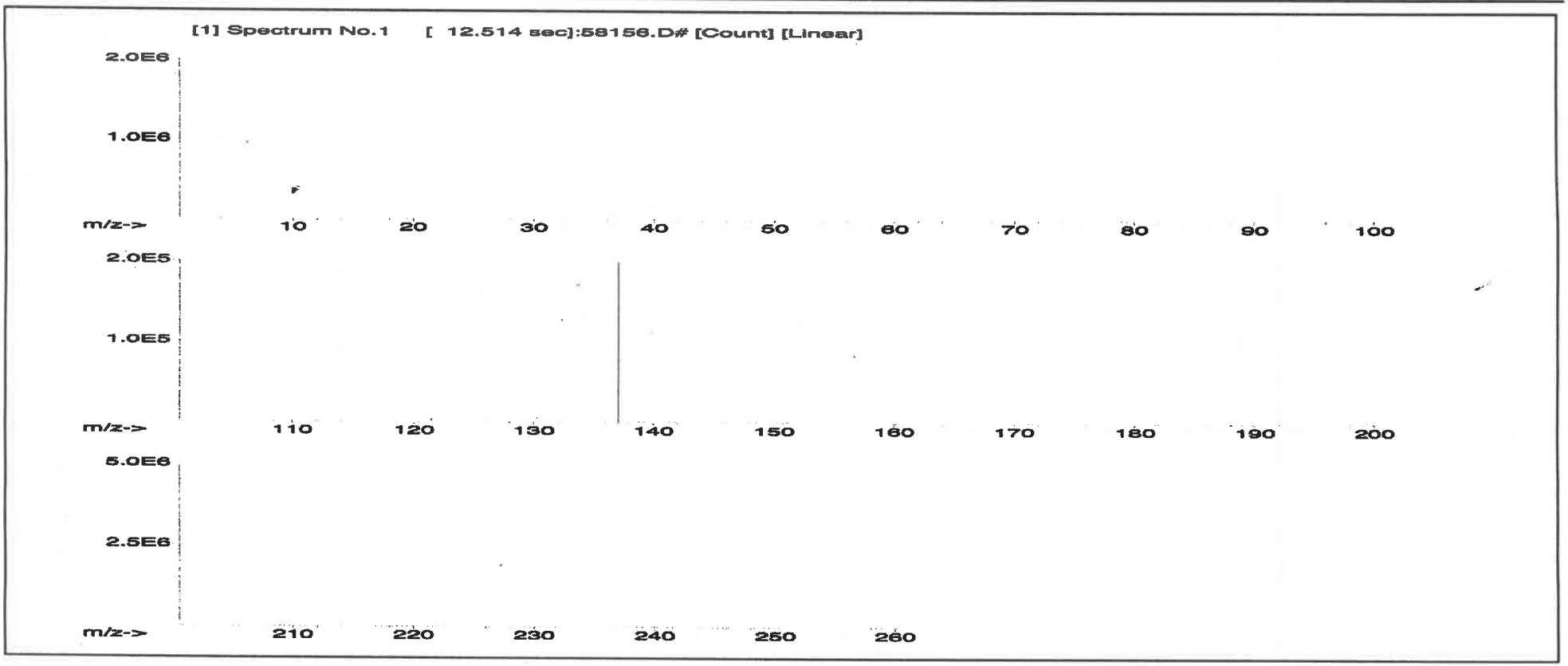
CERTIFIED WEIGHT REPORT:

			Lot #	
Part Number:	**57056**	**Solvent:**	20510011	Nitric Acid
Lot Number:	**072122**			
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.
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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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M5429 R1 01/26/23 BH

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CERTIFIED WEIGHT REPORT:

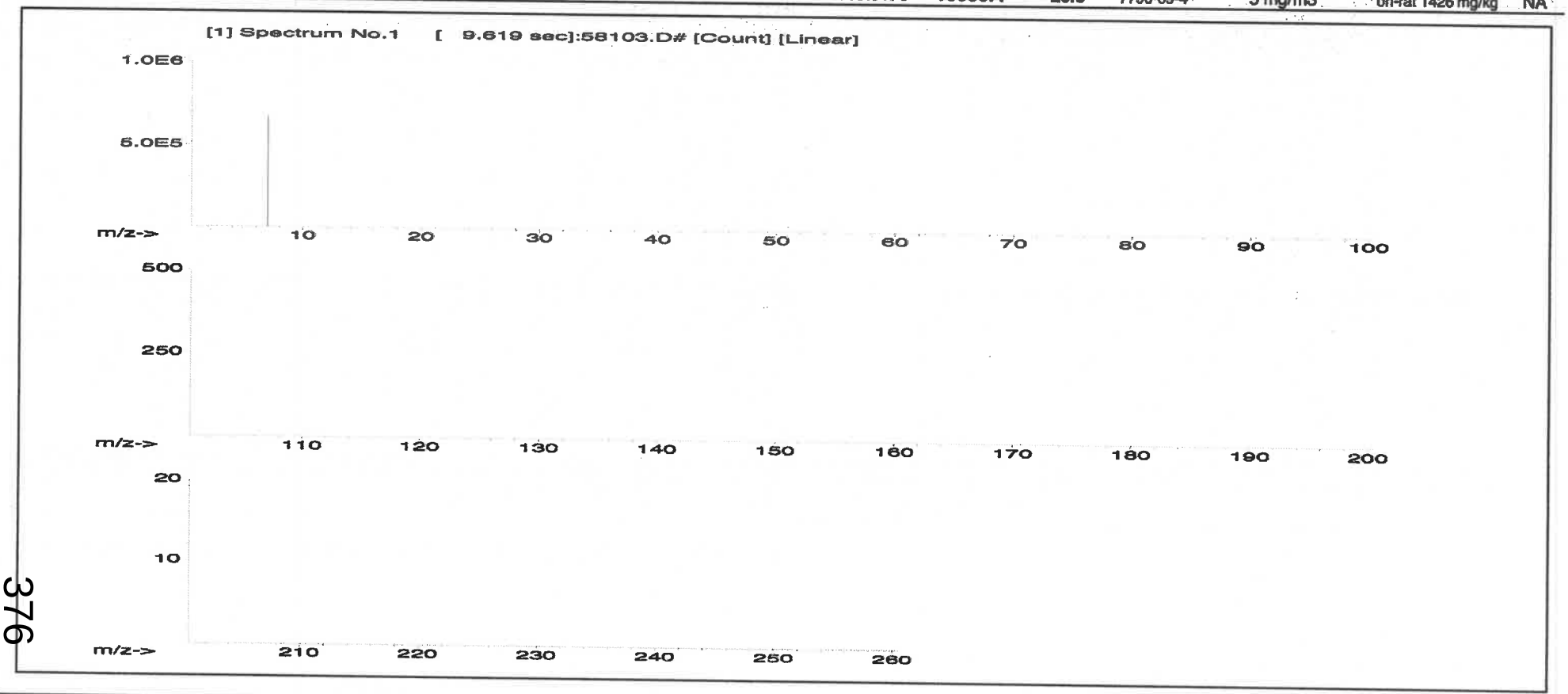
Part Number: 57103
Lot Number: 070622
Description: Lithium (Li)

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



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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:

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).

377

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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)

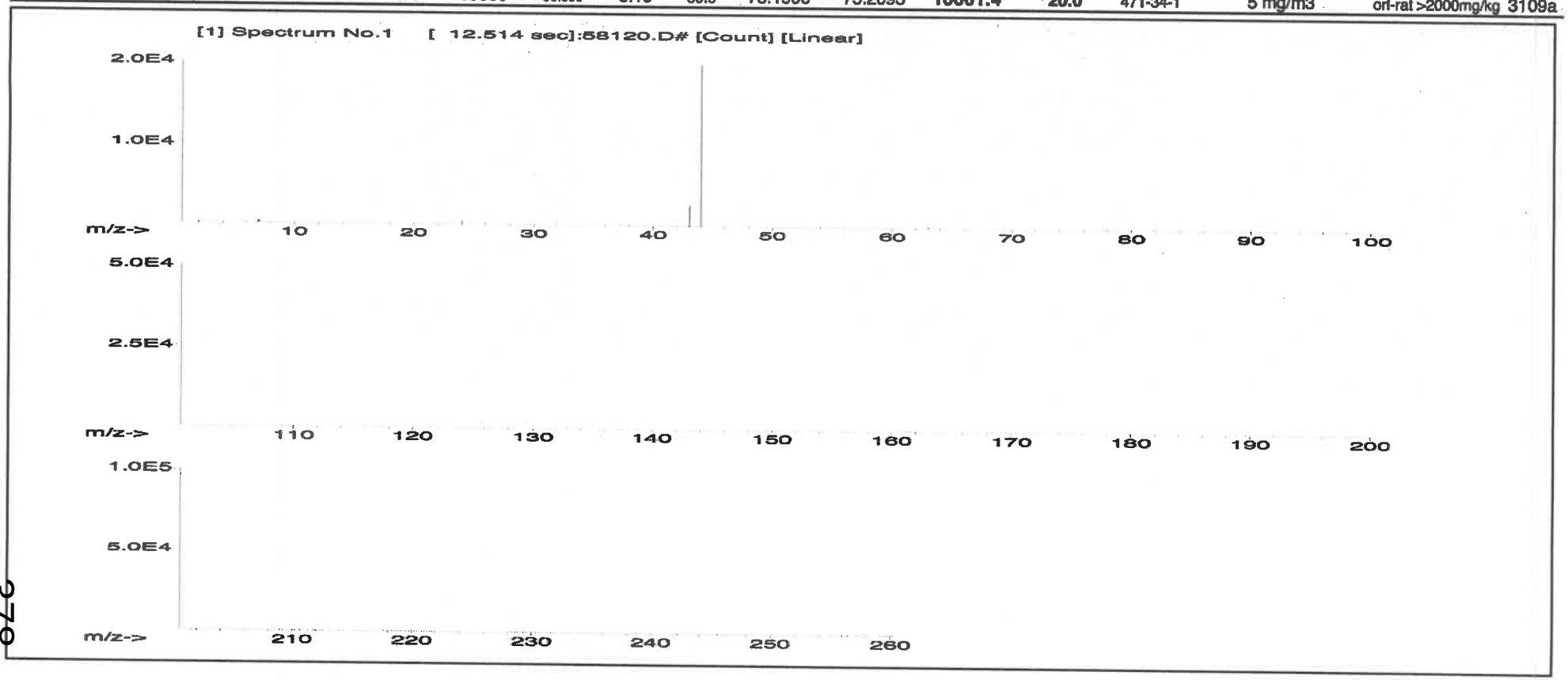
Expiration Date: 031526
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 3000.41 ± 0.058 Flask Uncertainty

	Lot #		
Solvent:	21110221	Nitric Acid	
2%	60.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	

Giovanni Esposito
Formulated By: Giovanni Esposito 031523

Pedro Rentas
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



378

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.

* 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).

6/30/23

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Certified Reference Material CRM

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	

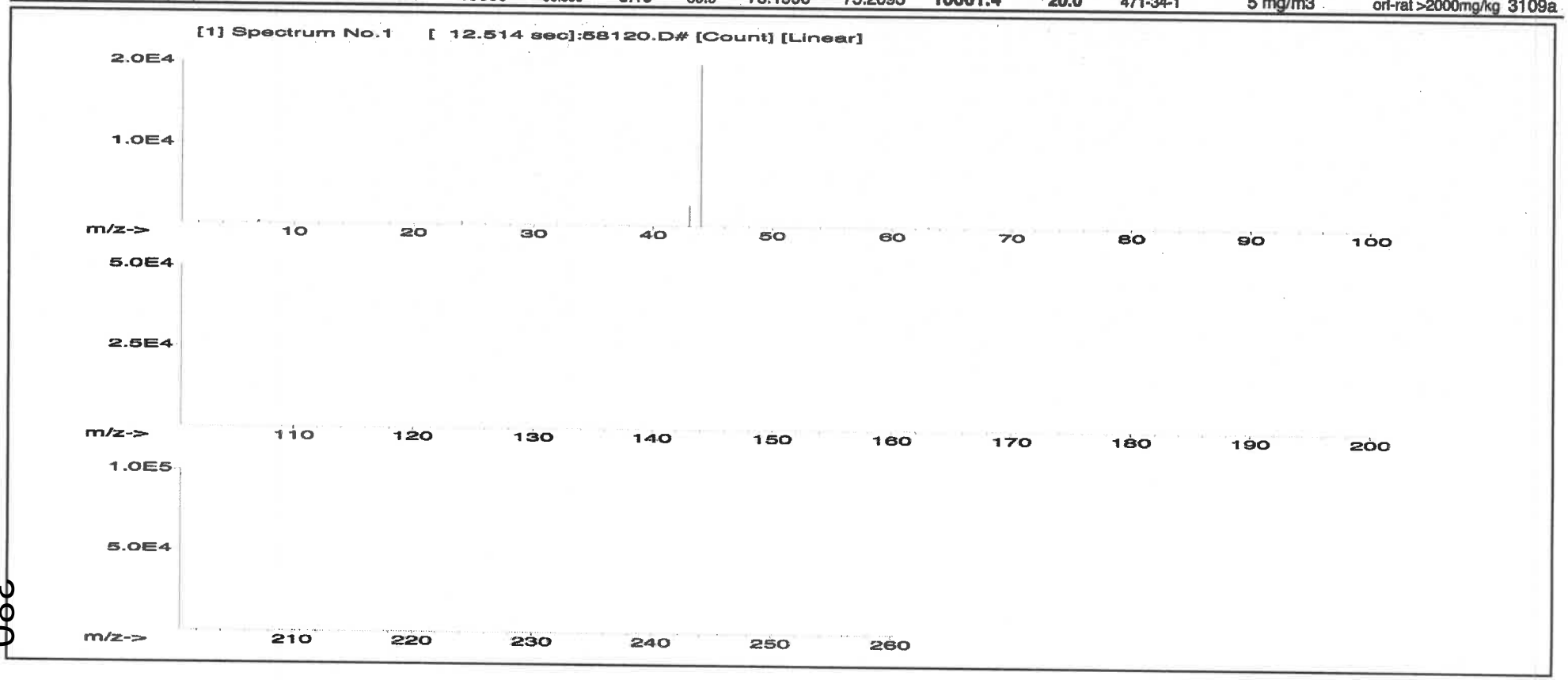
5E-05 Balance Uncertainty

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



380

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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* 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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M 5513 R: 03/17/23

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CERTIFIED WEIGHT REPORT:

Part Number: 57182
Lot Number: 061522
Description: Lead (Pb)

Expiration Date: 061525
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.02

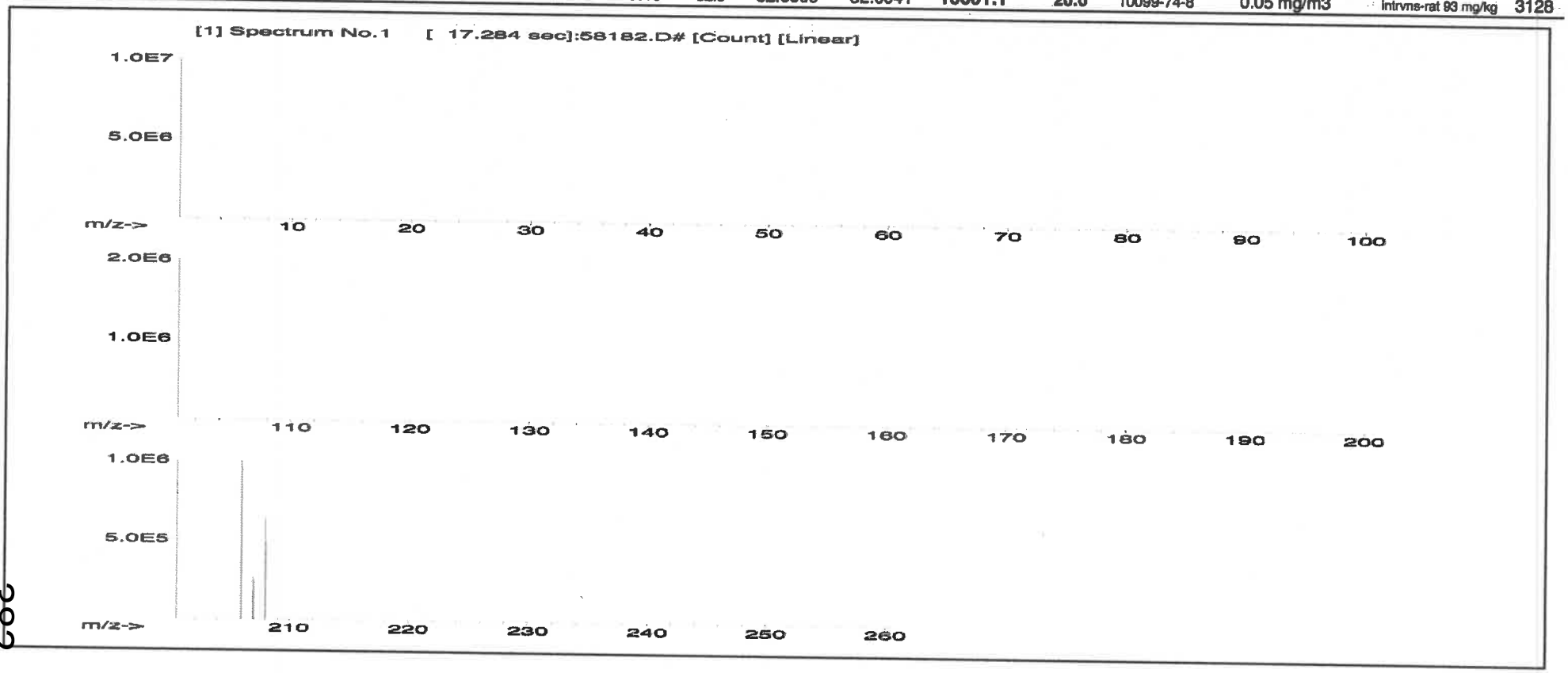
	Lot #		
Solvent:	20510011	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Giovanni Esposito

Formulated By:	Giovanni Esposito	061522
Reviewed By:	Pedro L. Rentas	061522

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lead(II) nitrate (Pb)	IN029	PBD122016A1	10000	99.999	0.10	62.5	32.0006	32.0041	**10001.1**	**20.0**	10099-74-8	0.05 mg/m3	Intrvns-rat 93 mg/kg	3128



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	T	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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* 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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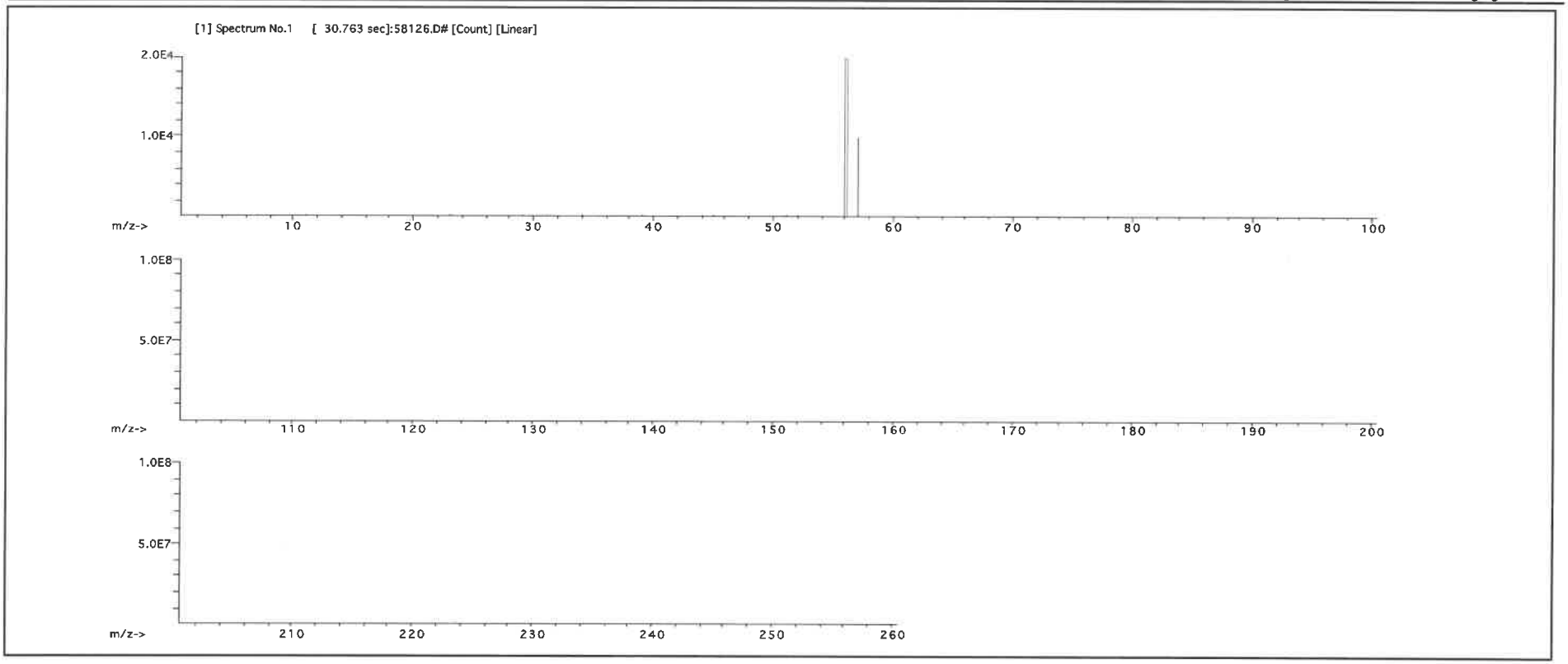
384

CERTIFIED WEIGHT REPORT:

		Lot #	
Part Number:	**58126**	**Solvent:** 20510011	Nitric Acid
Lot Number:	**092122**		
Description:	**Iron (Fe)**	7.0% 350.0 (mL)	Nitric Acid
Expiration Date:	092125		
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):	5000.1	0.12 Flask Uncertainty	

Giovanni Esposito		
Formulated By:	Giovanni Esposito	092122
Pedro Rentas		
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:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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386

CERTIFIED WEIGHT REPORT:

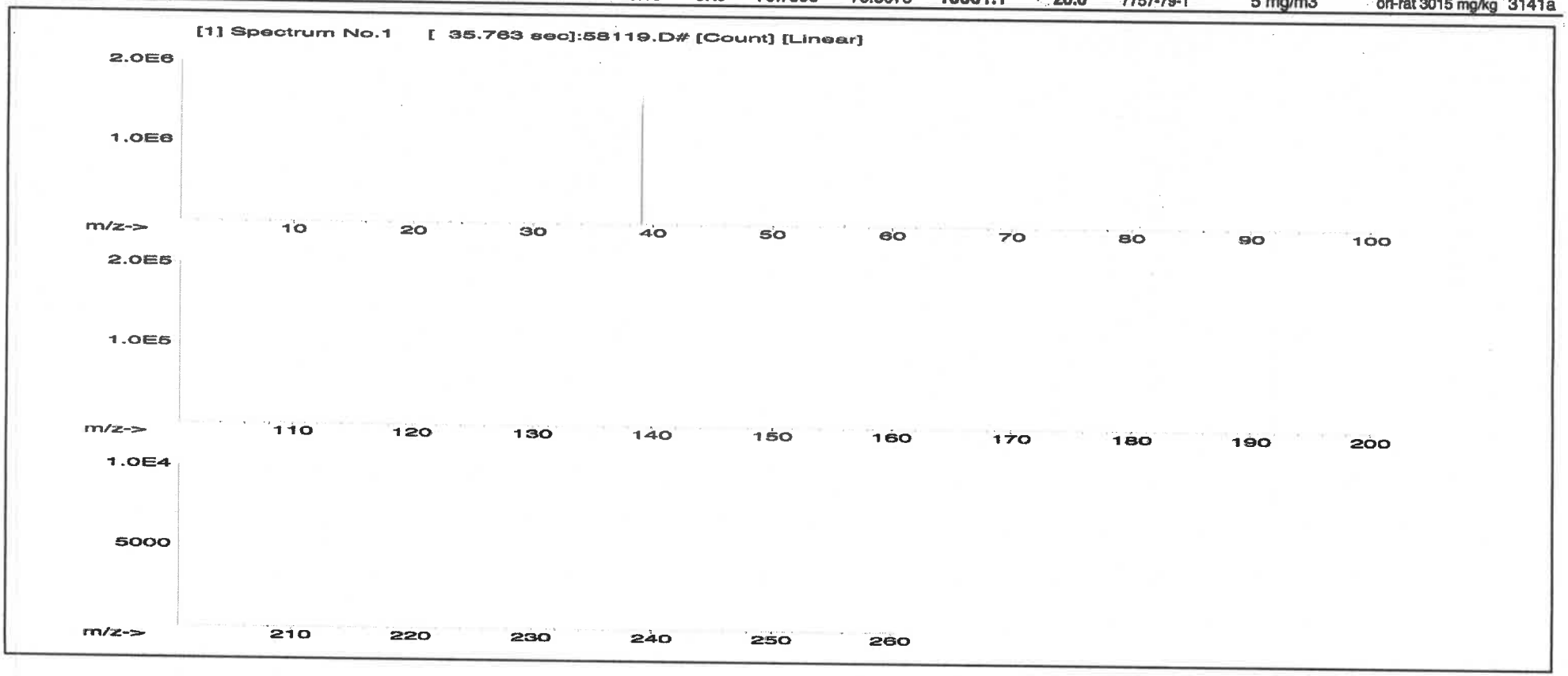
Part Number: 58119
Lot Number: 120822
Description: Potassium (K)

Expiration Date: 120825
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 3000.4

	Lot #		
Solvent:	20510011	Nitric Acid	
2%	60.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	
	0.06	Flask Uncertainty	

Giovanni Esposito
Formulated By: Giovanni Esposito 120822
Pedro Rentas
Reviewed By: Pedro L. Rentas 120822

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	79.7990	79.8075	**10001.1**	**20.0**	7757-79-1	5 mg/m3	orl-rat 3015 mg/kg	3141a



387

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:

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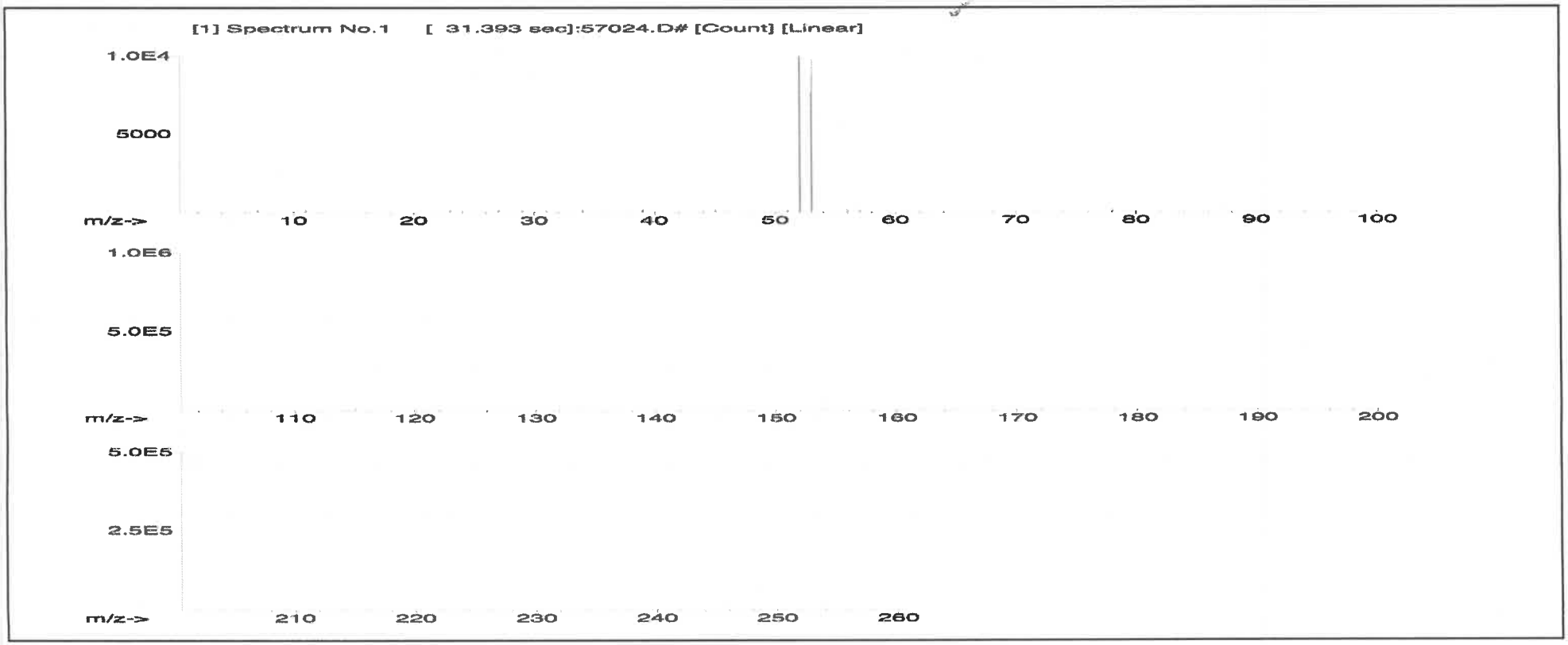
388

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



389

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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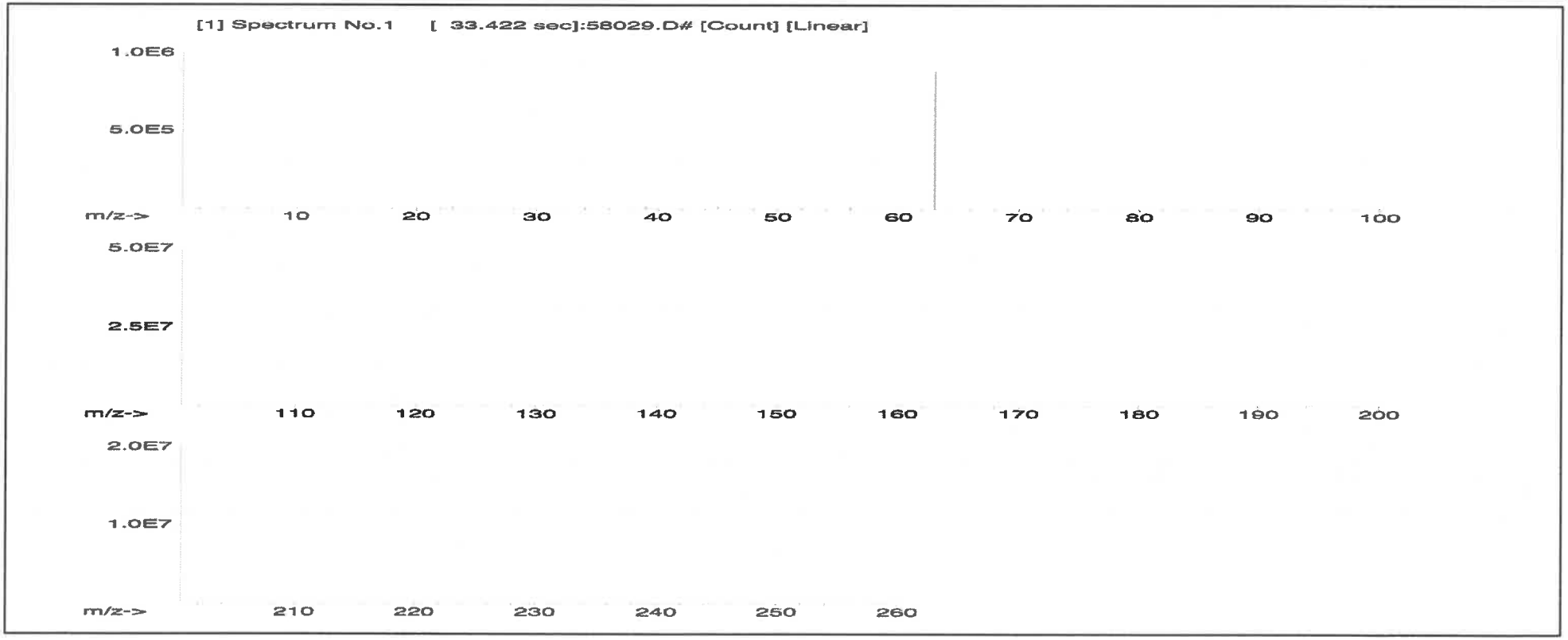
390

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



391

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:

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M5648 R: 10/27/23

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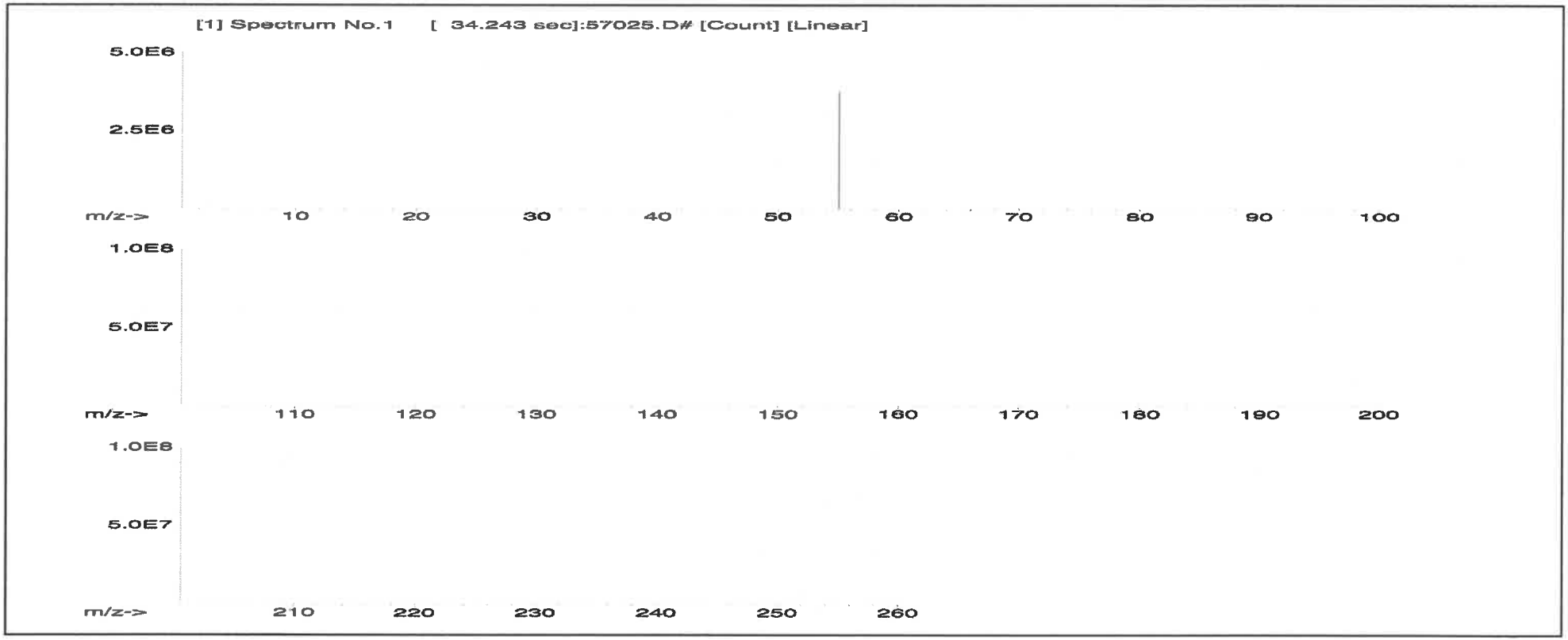
392

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



393

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	T	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the 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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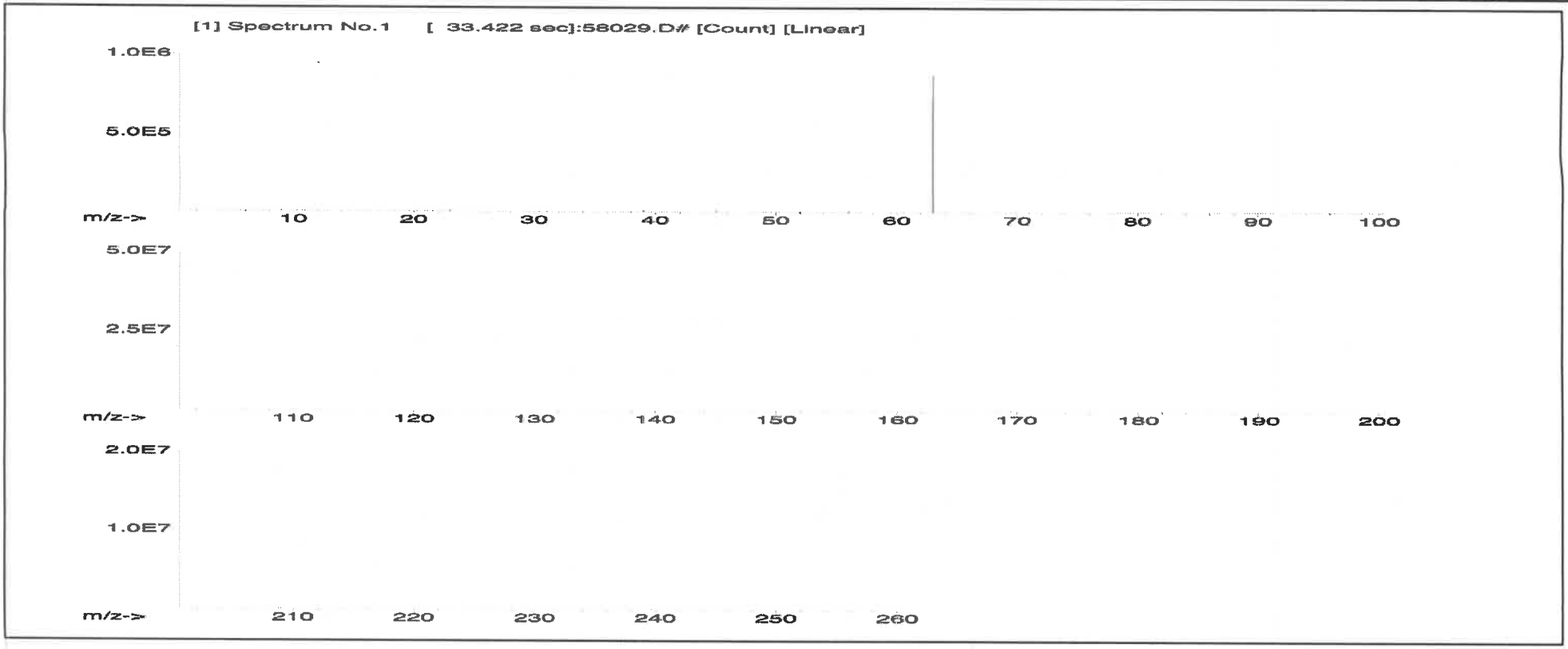
394

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**58029**	21110221	Nitric Acid	
Lot Number:	**071723**			
Description:	**Copper (Cu)**	2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	071726			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Benson Chan	071723
Reviewed By:	Pedro L. Rentas	071723

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Copper(II) nitrate trihydrate (Cu)	58129	022723	0.1000	200.0	0.084	1000	10000.5	**1000.0**	**2.2**	10031-43-3	1 mg/m3	orl-rat 794 mg/kg	3114



395

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	T	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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* 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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* 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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M5768 M5769 (BP) R:1/3/24

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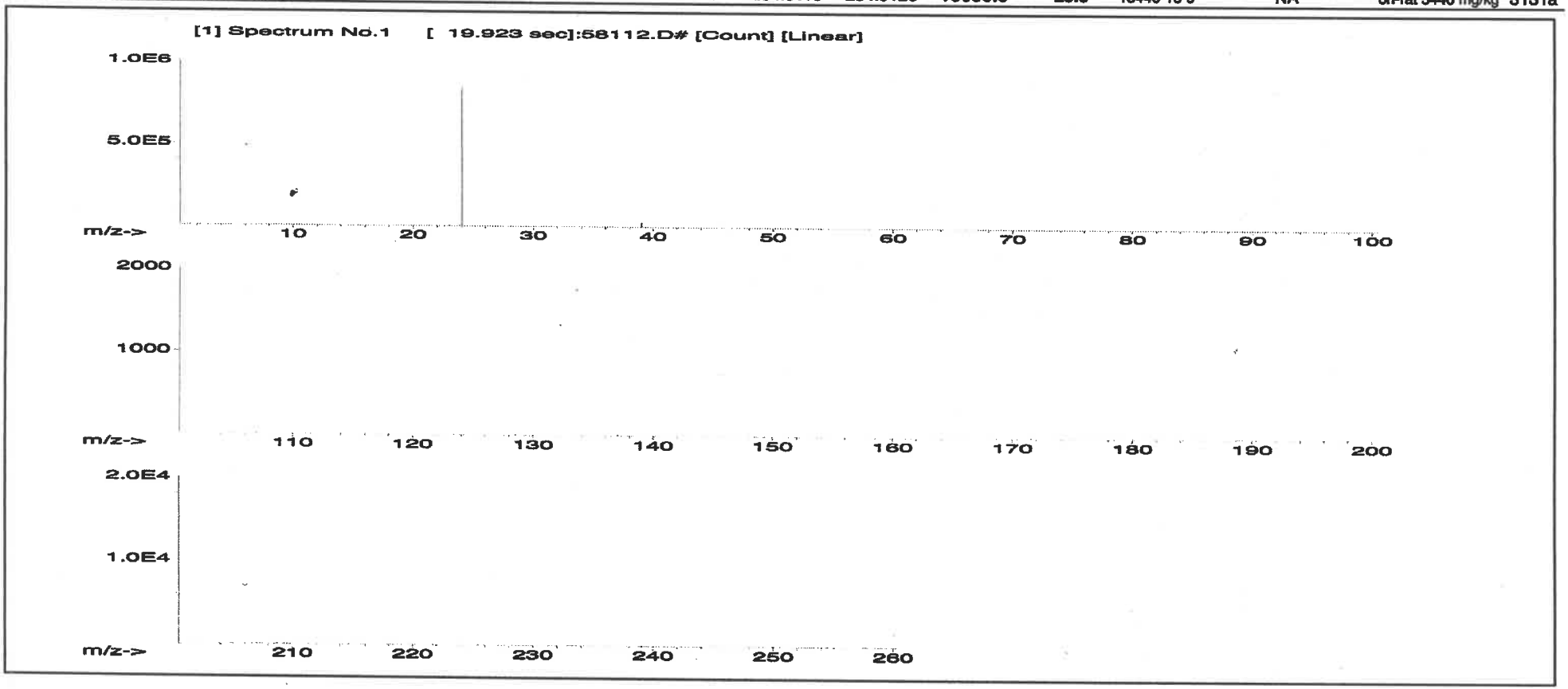
396

CERTIFIED WEIGHT REPORT:

			Lot #	
Part Number:	**58112**	**Solvent:**	24002546	Nitric Acid
Lot Number:	**091823**			
Description:	**Magnesium (Mg)**	2%	40.0 (mL)	Nitric Acid
Expiration Date:	091826			
Recommended Storage:	Ambient (20 °C)	M5768, M5769 (BP) R: 1/3/24		
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	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	ori-rat 5440 mg/kg	3131a



397

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	T	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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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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M5768 M5769 (BP) R:1/3/24

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398

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

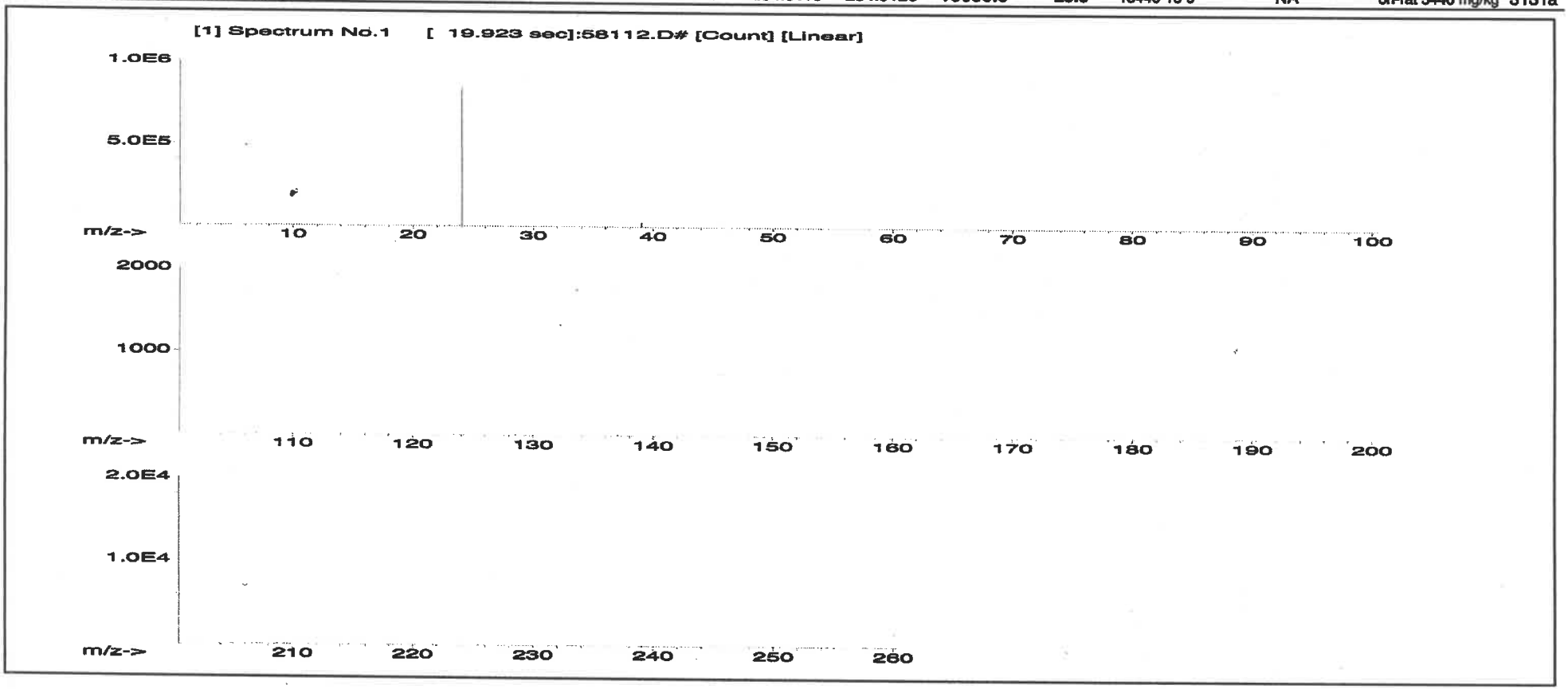
		Lot #	
Solvent:	24002546	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	

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	ori-rat 5440 mg/kg	3131a



399

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	T	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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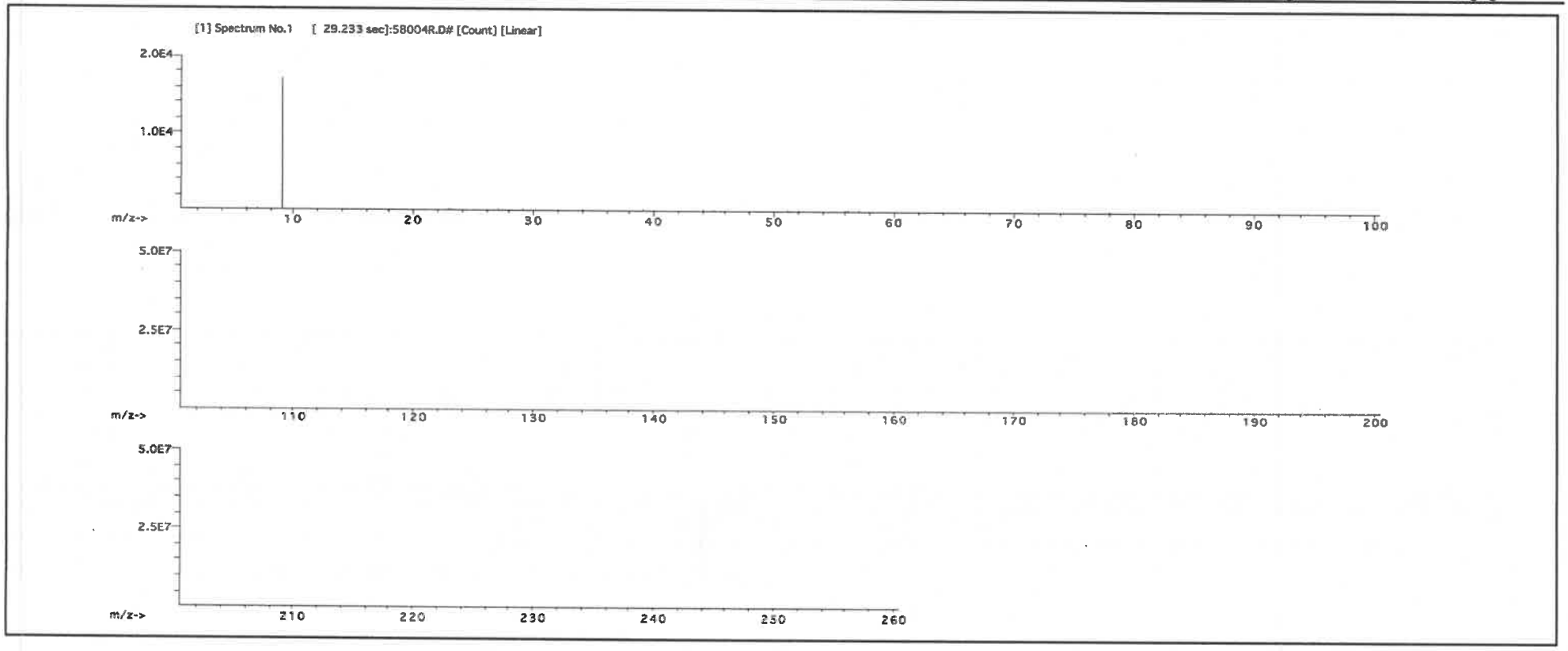
400

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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402

CERTIFIED WEIGHT REPORT:

Part Number: 57050
Lot Number: 071123
Description: Tin (Sn)

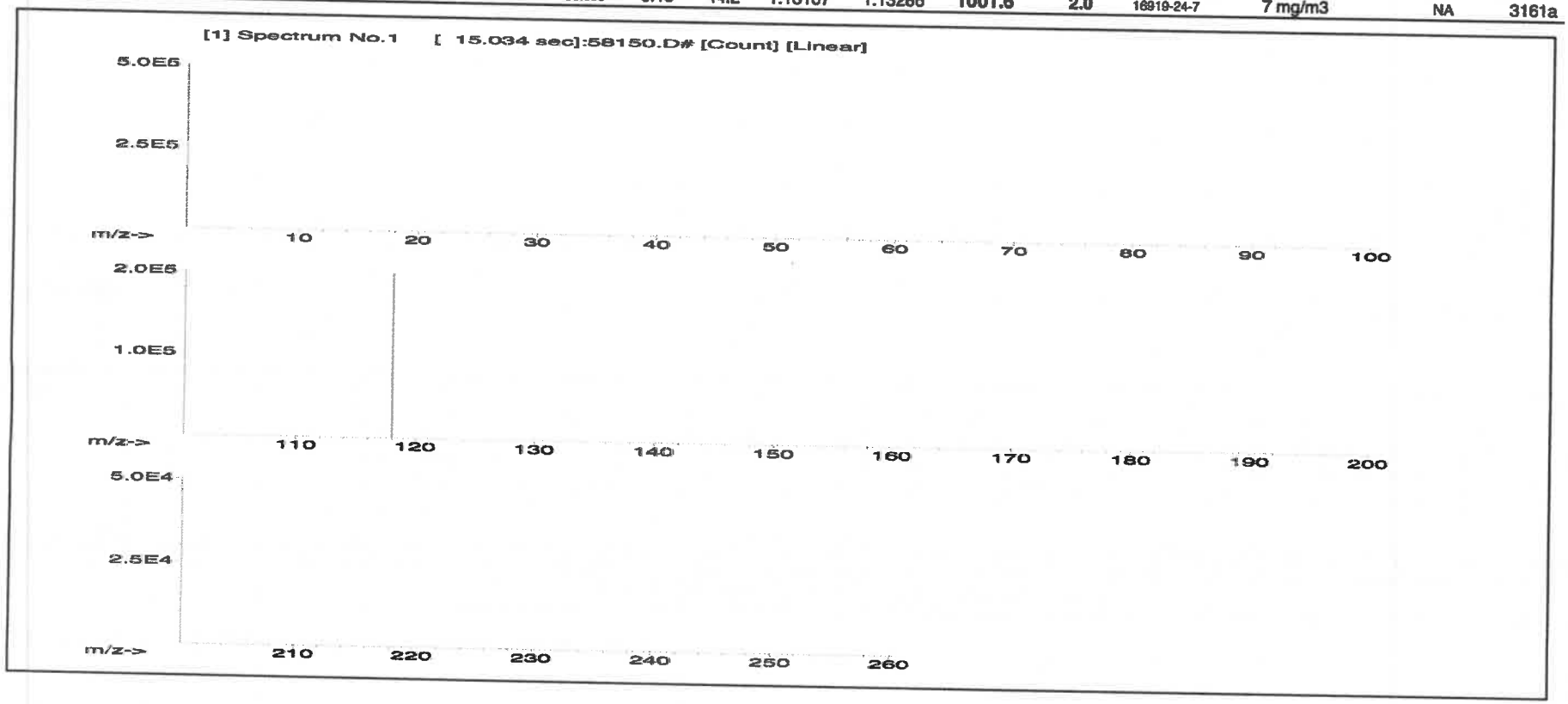
Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 499.93

	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



403

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<500	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	T	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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R: 02/09/24 IM5800 BH

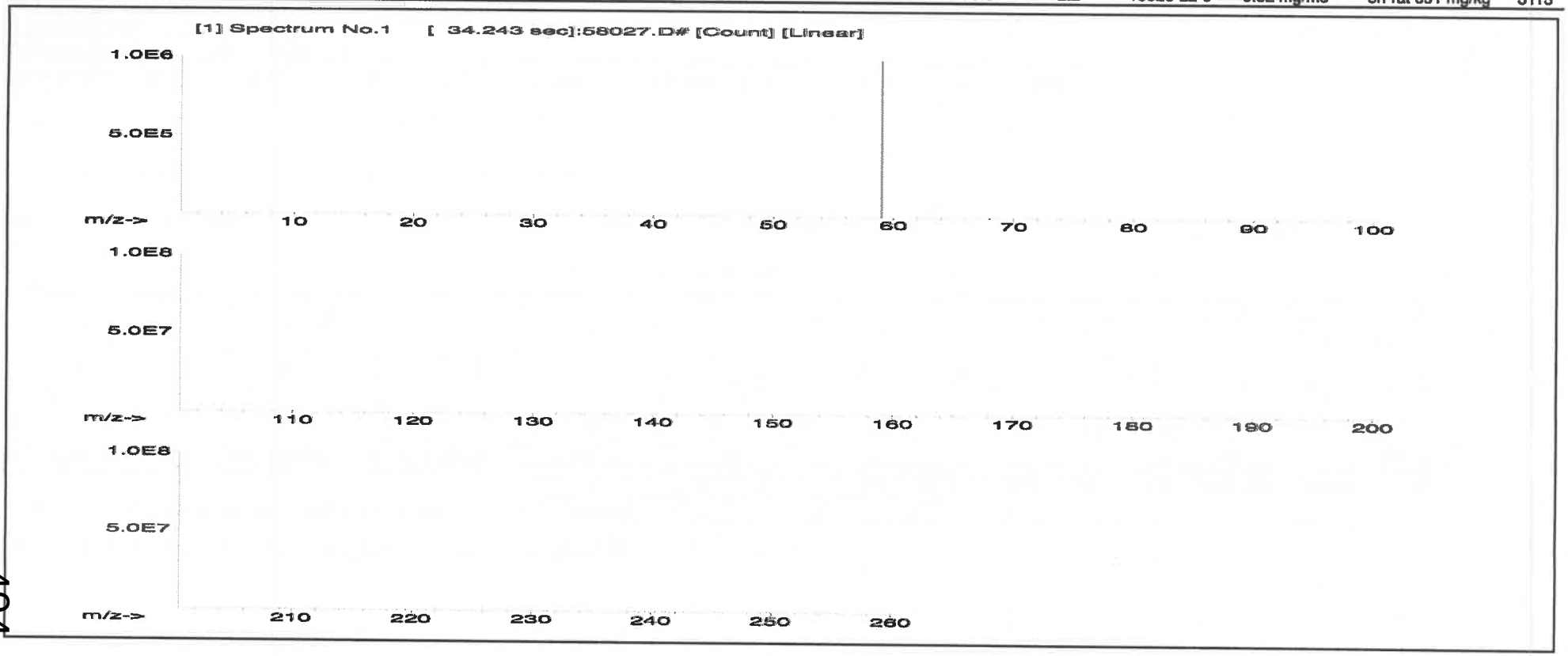
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CERTIFIED WEIGHT REPORT:

		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



404

Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	T	Gé	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

405

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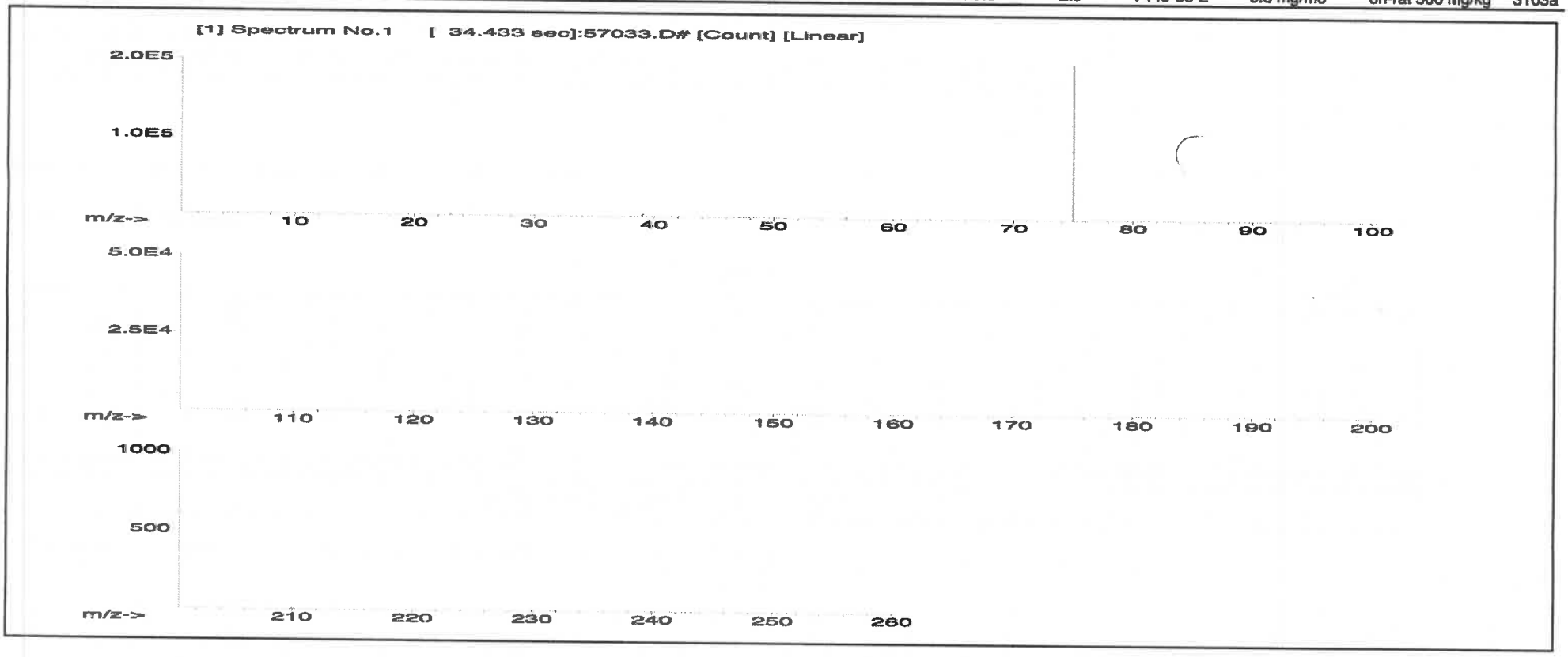
406

CERTIFIED **WEIGHT** REPORT:

		Lot #	Solvent:		
Part Number:	**57033**				
Lot Number:	**111323**	24002546	Nitric Acid		
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



407

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	T	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge*	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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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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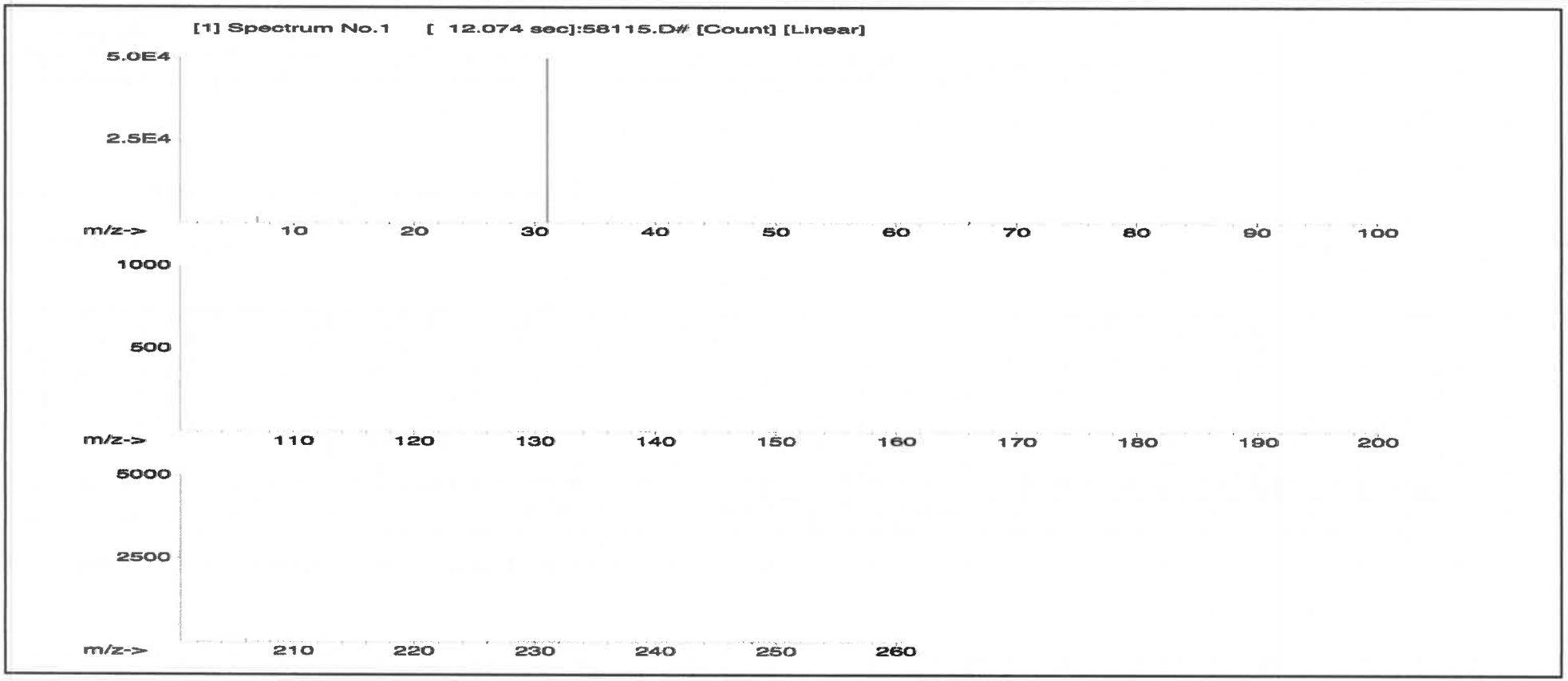
408

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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* 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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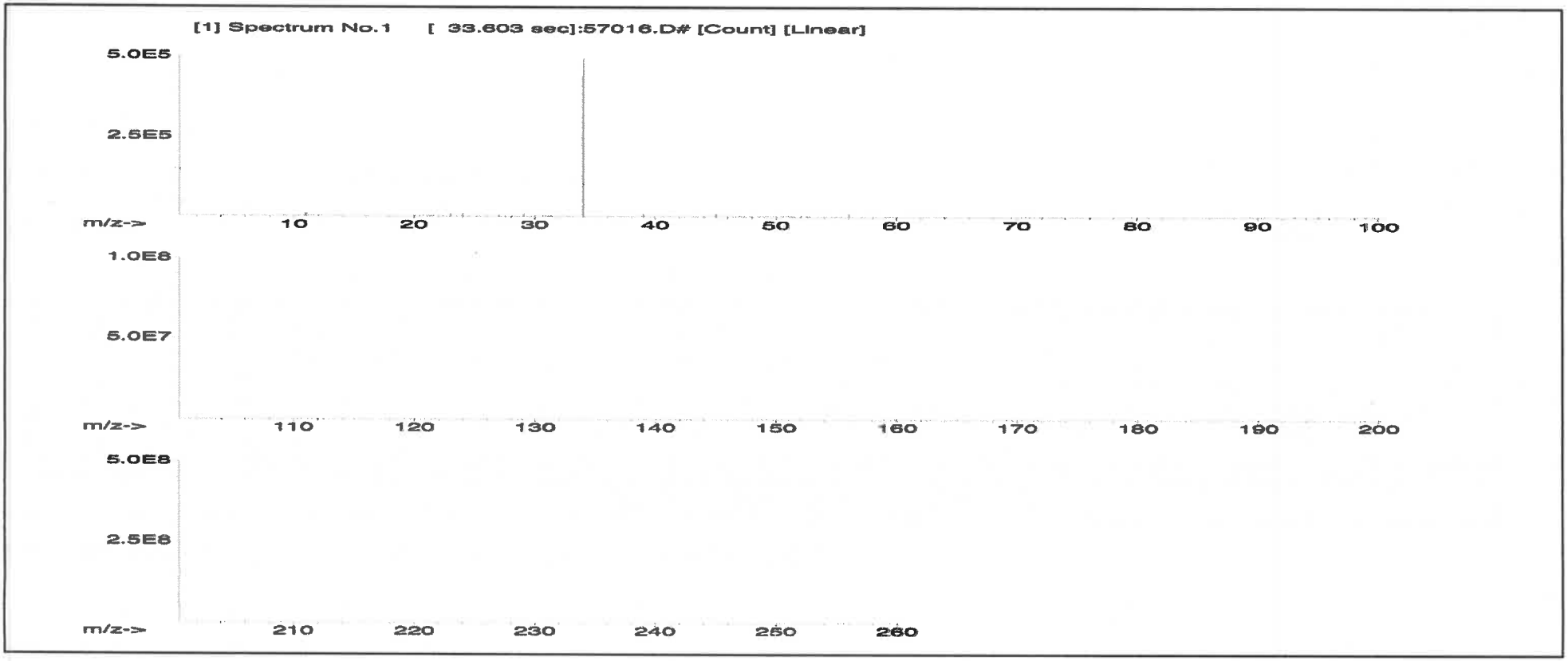
410

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



411

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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412

CERTIFIED WEIGHT REPORT:

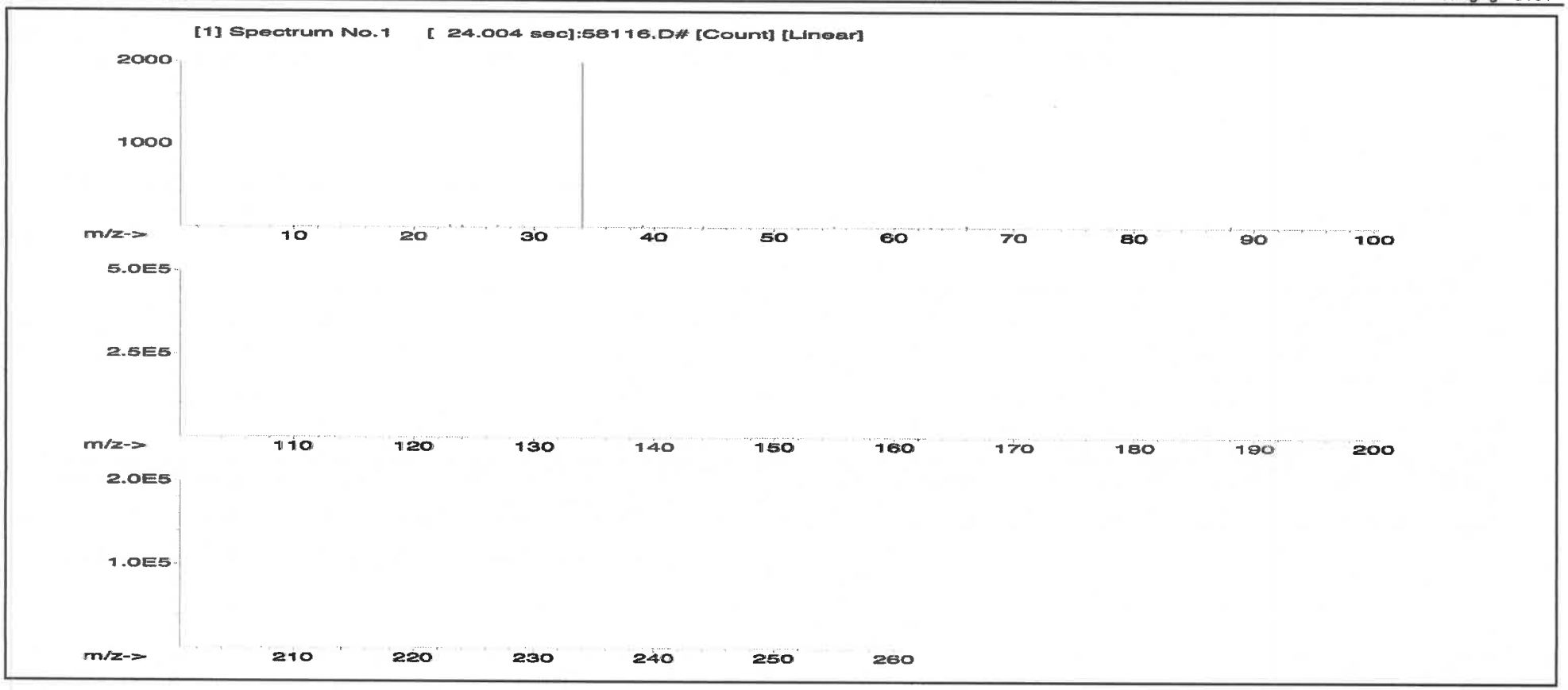
Part Number: 57116
Lot Number: 071123
Description: Sulfur (S)

Lot #
Solvent: 071123 ASTM Type 1 Water

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

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	ori-rat 4250mg/kg	3181



413

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 Reference Material CRM

R: 02/09/24 M.5818

Lot #

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414

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

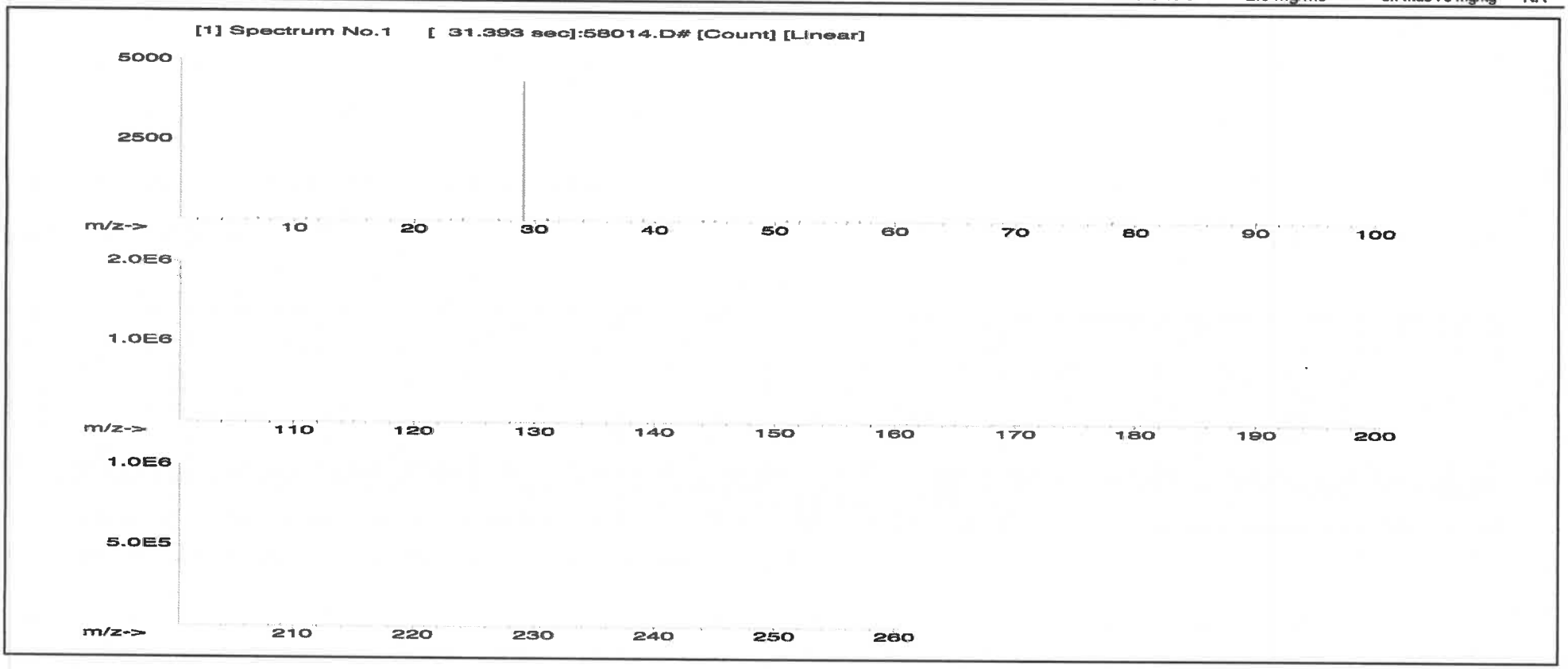
2% 40.0 (mL) Nitric Acid

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



415

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:

* 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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416

CERTIFIED WEIGHT REPORT:

Part Number: 58030
Lot Number: 111623
Description: Zinc (Zn)

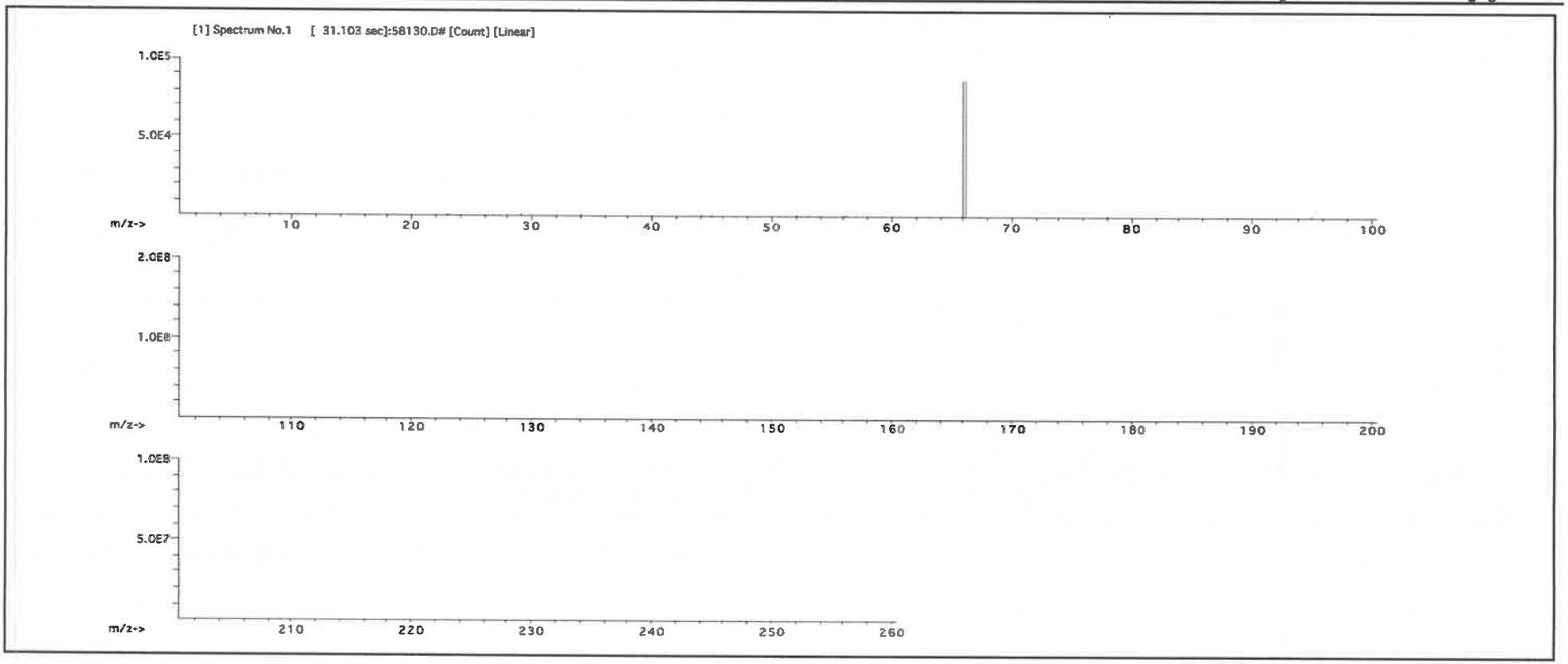
Expiration Date: 111626
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

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.
* 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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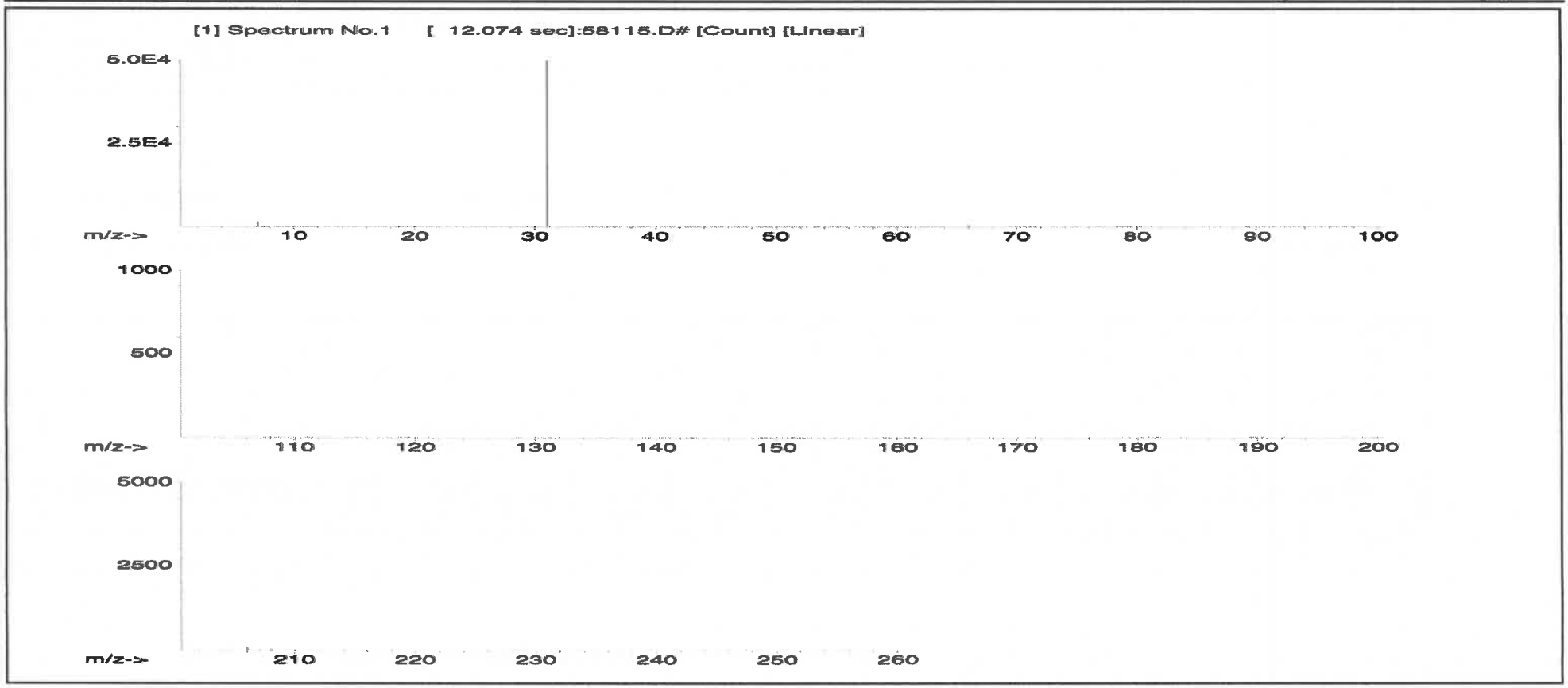
418

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	rl-rat >2000mg/k	3186



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	T	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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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:	Single Analyte Custom Grade Solution
Catalog Number:	CGY10
Lot Number:	V2-Y740548
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Yttrium
Starting Material:	Yttrium Oxide
Starting Material Lot#:	2661 and 06230520YL
Starting Material Purity:	99.9984%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10000 ± 30 µg/mL

Density: 1.032 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	**10011 ± 25 µg/mL** EDTA NIST SRM 928 Lot Number: 928
Assay Method #2	**9997 ± 50 µg/mL** ICP Assay NIST SRM 3167a Lot Number: 190730
Assay Method #3	**9984 ± 31 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.004600	M	Eu		0.009037	M	Na		0.086360	M	Se	<	0.005200	M	Zn		0.030125
M	Al		0.014862	O	Fe		0.002410	M	Nb	<	0.000570	O	Si		0.024100	O	Zr	<	0.002600
M	As	<	0.003500	M	Ga	<	0.000570	M	Nd		0.000923	M	Sm		0.000461				
M	Au	<	0.001700	M	Gd	<	0.003500	M	Ni	<	0.005700	M	Sn	<	0.002300				
O	B		0.002209	M	Ge	<	0.005200	M	Os	<	0.001200	M	Sr	<	0.004600				
O	Ba	<	0.002500	M	Hf	<	0.000570	n	P	<		M	Ta	<	0.000570				
O	Be	<	0.001400	M	Hg	<	0.000570	M	Pb		0.005020	M	Tb		0.001044				
M	Bi	<	0.003500	M	Ho		0.009037	M	Pd	<	0.005100	M	Te	<	0.002300				
O	Ca		0.009841	M	In	<	0.002300	M	Pr	<	0.002300	M	Th	<	0.000570				
M	Cd	<	0.000570	M	Ir	<	0.000570	M	Pt	<	0.000570	M	Ti	<	0.003500				
M	Ce	<	0.002300	O	K		0.018677	M	Rb	<	0.000570	M	Tl	<	0.000570				
M	Co	<	0.000570	M	La		0.000461	M	Re	<	0.000570	M	Tm	<	0.003500				
M	Cr	<	0.004000	O	Li	<	0.009300	M	Rh	<	0.008000	M	U	<	0.000570				
M	Cs	<	0.000570	M	Lu		0.000582	M	Ru	<	0.000570	M	V		0.001265				
M	Cu		0.002610	O	Mg		0.001486	n	S	<		M	W	<	0.002300				
M	Dy		0.003815	M	Mn		0.000582	M	Sb		0.005422	s	Y	<					
M	Er		0.003615	M	Mo	<	0.005700	M	Sc	<	0.001200	M	Yb		0.001827				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 88.91 +3 6 Y(OH)(H2O)x+2

Chemical Compatibility -Soluble in HCl, H2SO4 and HNO3. Avoid HF, H3PO4 and neutral to basic media. Stable with most metals and inorganic anions forming an insoluble carbonate, oxide, oxalate, and fluoride. Avoid mixing with elements / solutions containing moderate amounts of fluoride.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.

Y Containing Samples (Preparation and Solution) - Metal (Soluble in acids); Oxide (Dissolve by heating in H2O/ HNO3); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Dry ash and dissolve in 1:1 H2O / HCl or HNO3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 89 amu	0.8 ppt	N/A	73Ge16O, 178Hf+2
ICP-OES 360.073 nm	0.005 / 0.000036 µg/mL	1	Ce, Th
ICP-OES 371.030 nm	0.004 / 0.00007 µg/mL	1	Ce
ICP-OES 377.433 nm	0.005 / 0.0009 µg/mL	1	Ta, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 20, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- February 20, 2029

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Custom Processing Supervisor



Certificate Approved By:

Muzzammil Khan
Stock Laboratory Supervisor



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



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Certified Reference Material CRM

M5960 KK R. 6/11/24

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CERTIFIED WEIGHT REPORT:

Part Number: 57028
Lot Number: 041124
Description: Nickel (Ni)

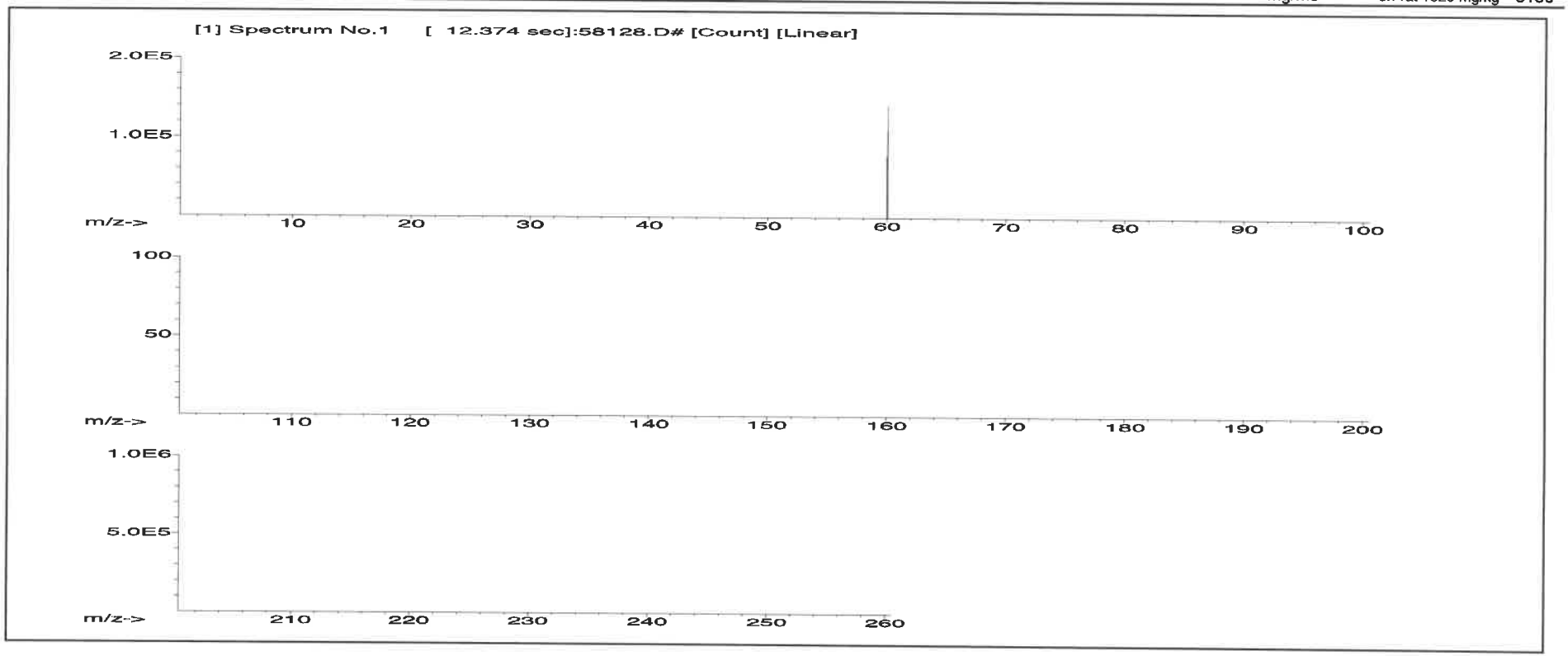
Expiration Date: 041127
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 249.85

	Lot #		
Solvent:	24002546	Nitric Acid	
2%	5.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty
0.002 Flask Uncertainty

Formulated By:	Brian Geddes	041124
Reviewed By:	Pedro L. Rentas	041124

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. Nickel(II) nitrate hexahydrate (Ni)	IN033	NIM052023A1	1000	99.999	0.10	20.2	1.2369	1.2369	**1000.0**	**2.0**	13478-00-7	1 mg/m3	orl-rat 1620 mg/kg	3136



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	T	Pr	<0.02	Sc	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:



* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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AR-1539 Certificate Number
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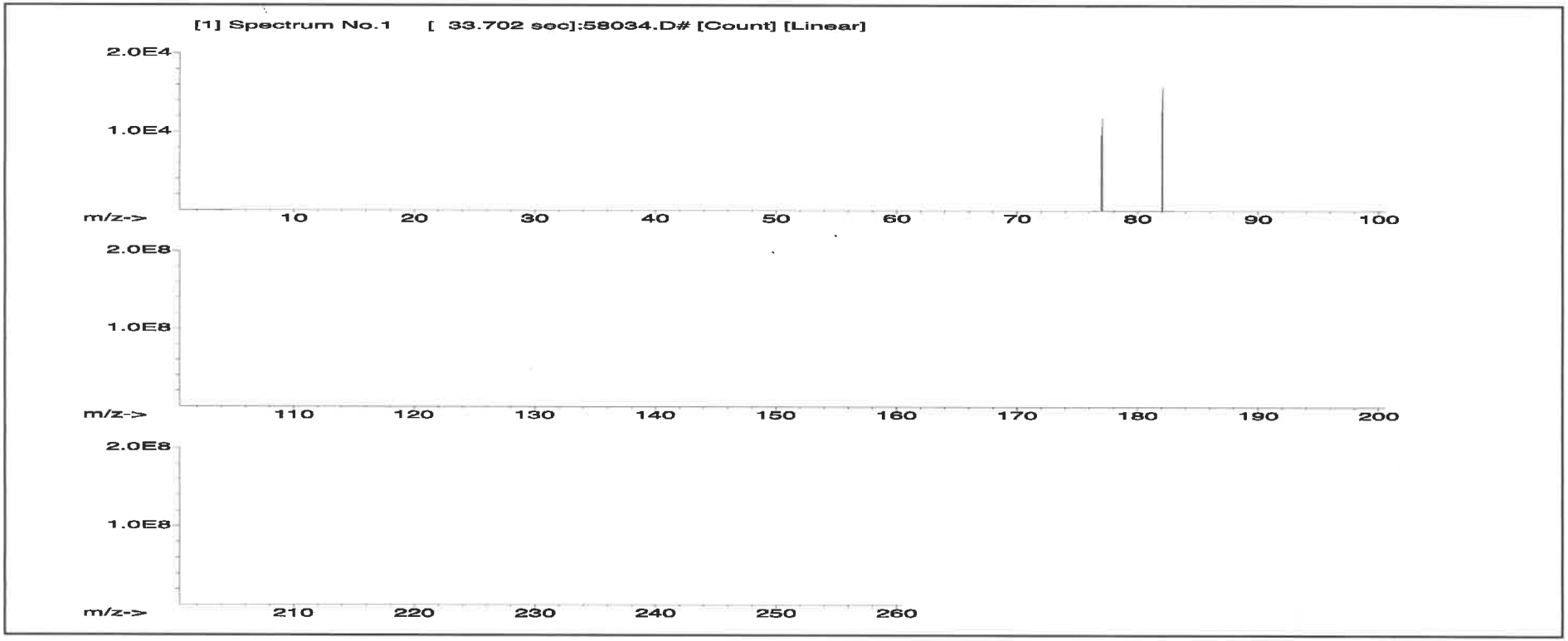
426

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57034**	24002546	Nitric Acid	
Lot Number:	**060624**			
Description:	**Selenium (Se)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	060627			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.07	0.100	Flask Uncertainty	

Formulated By:	Benson Chan	060624
Reviewed By:	Pedro L. Rentas	060624

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Selenium (Se)	58134	071223	0.1000	200.0	0.084	1000	10002.5	**1000.0**	**2.2**	7782-49-2	0.2 mg/m3	orl-rat 6700 mg/kg	3149



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																		
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	T	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:



* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5970, M5971 R: 7/01/24

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:		
Part Number:	**57003**	24002546	Nitric Acid		
Lot Number:	**062124**				
Description:	**Lithium (Li)**				
		2.0%	5.0 (mL)	Nitric Acid	
Expiration Date:	062127				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	250.11	0.016	Flask Uncertainty		

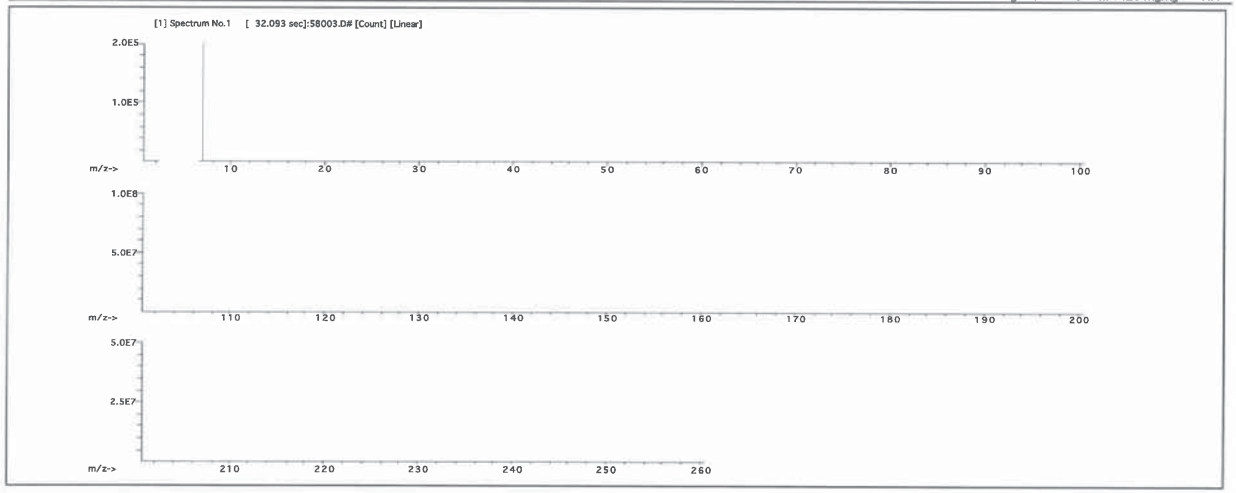
Giovanni Esposito

Formulated By: Giovanni Esposito 062124

Pedro Rentas

Reviewed By: Pedro L. Rentas 062124

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lithium nitrate (Li)	58103	070622	0.1000	25.0	0.004	1000	10000.4	**1000.0**	**2.0**	7790-69-4	5 mg/m3	orl-rat 1426 mg/kg	NA



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Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	T	Ni	<0.02	Pr	<0.02	Sc	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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F: 540-585-3012
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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGMO1
Lot Number:	T2-MO720876
Matrix:	H2O tr. NH4OH
Value / Analyte(s):	1 000 µg/mL ea: Molybdenum
Starting Material:	Ammonium Molybdate
Starting Material Lot#:	2361
Starting Material Purity:	99.9893%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 998 ± 7 µg/mL

Density: 1.000 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **998 ± 4 µg/mL**
ICP Assay NIST SRM 3134 Lot Number: 130418

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance.

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000590	M	Eu	<	0.000300	M	Na		0.000879	M	Se	<	0.008000	M	Zn		0.000598
M	Al		0.000563	M	Fe	<	0.006500	M	Nb	<	0.029000	i	Si	<		M	Zr	<	0.001800
M	As	<	0.002100	M	Ga	<	0.000300	i	Nd	<		M	Sm	<	0.000300				
M	Au	<	0.000300	M	Gd	<	0.000300	M	Ni	<	0.008000	M	Sn	<	0.008900				
M	B	<	0.003300	M	Ge	<	0.000300	M	Os	<	0.000590	M	Sr		0.000175				
M	Ba		0.001689	M	Hf	<	0.001800	i	P	<		M	Ta	<	0.004200				
M	Be	<	0.000890	M	Hg	<	0.003300	M	Pb	<	0.000300	M	Tb	<	0.000300				
M	Bi	<	0.000890	M	Ho	<	0.000300	M	Pd	<	0.001800	M	Te	<	0.021000				
O	Ca		0.006334	M	In	<	0.032000	M	Pr	<	0.013000	M	Th	<	0.000300				
O	Cd	<	0.026000	M	Ir	<	0.000300	M	Pt	<	0.000300	O	Tl	<	0.032000				
M	Ce	<	0.008300	M	K		0.130213	M	Rb		0.004575	M	Tl		0.001266				
M	Co		0.000598	M	La	<	0.000300	M	Re	<	0.000300	M	Tm	<	0.000300				
M	Cr		0.000527	O	Li		0.000059	M	Rh	<	0.000300	M	U	<	0.005300				
M	Cs		0.000527	M	Lu	<	0.000300	M	Ru	<	0.079000	M	V	<	0.000890				
M	Cu		0.002252	M	Mg		0.000563	i	S	<		M	W		0.087982				
M	Dy	<	0.000300	M	Mn	<	0.005900	M	Sb		0.001513	M	Y	<	0.000300				
M	Er	<	0.000300	s	Mo	<		M	Sc	<	0.001200	M	Yb	<	0.000300				

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 - 95.94 +6 6,7,8,9 [MoO4]-2(chemical form as received)

Chemical Compatibility -Mo is received in a NH4OH matrix giving the operator the option of using HCl or HF to stabilize acidic solutions. The [MoO4]-2 is soluble in concentrated HCl [MoOCl5]-2, dilute HF / HNO3 [MoOF5]-2 and basic media [MoO4]-2. Stable at ppm levels with some metals provided it is fluorinated. Do not mix with Alkaline or Rare Earths when HF is present. Stable with most inorganic anions provided it is in the [MoO4]-2 chemical form.

Stability - 2-100 ppb levels stable (alone or mixed with all other metals that are at comparable levels) as the [MoOF5]-2 for months in 1% HNO3 / LDPE container. 1-10,000 ppm single element solutions as the [MoO4]-2 chemically stable for years in 1% NH4OH in a LDPE container.

Mo Containing Samples (Preparation and Solution) -Metal (Soluble in HF / HNO3 or hot dilute HCl); Oxide (soluble in HF or NH4OH) ; Organic Matrices (Dry ash at 450EC in Pt0 and dissolve oxide with HF or HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 95 amu	3 ppt	n/a	40Ar39K16O,79Br1 6O,190Os2+,190Pt 2+
ICP-OES 202.030 nm	0.008 / 0.0002 µg/mL	1	Os, Hf
ICP-OES 203.844 nm	0.012 / 0.002 µg/mL	1	
ICP-OES 204.598 nm	0.012 / 0.001 µg/mL	1	Ir, Ta

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

July 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

- July 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 Prepared By:

Uyen Truong
Supervisor, Product Documentation



Certificate Approved By:

Michael Booth
Director, Technical



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



M5978, M5979

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 — ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGTI1
Lot Number:	T2-TI719972
Matrix:	2% (v/v) HNO3 tr. HF
Value / Analyte(s):	1 000 µg/mL ea: Titanium
Starting Material:	Ti Metal
Starting Material Lot#:	2094
Starting Material Purity:	99.9975%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1002 ± 5 µg/mL

Density: 1.012 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **1002 ± 4 µg/mL**
ICP Assay NIST SRM 3162a Lot Number: 130925

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$
w_i = the weighting factors for each method calculated using the inverse square of the variance

$w_i = (1/u_{char\ i}^2) / (\Sigma(1/u_{char\ i}^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = (\Sigma(w_i)^2\ (u_{char\ i})^2)^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty
u_{lts} = long term stability standard uncertainty (storage)
u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with
$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization
u_{bb} = bottle to bottle homogeneity standard uncertainty
u_{lts} = long term stability standard uncertainty (storage)
u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000536	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

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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:

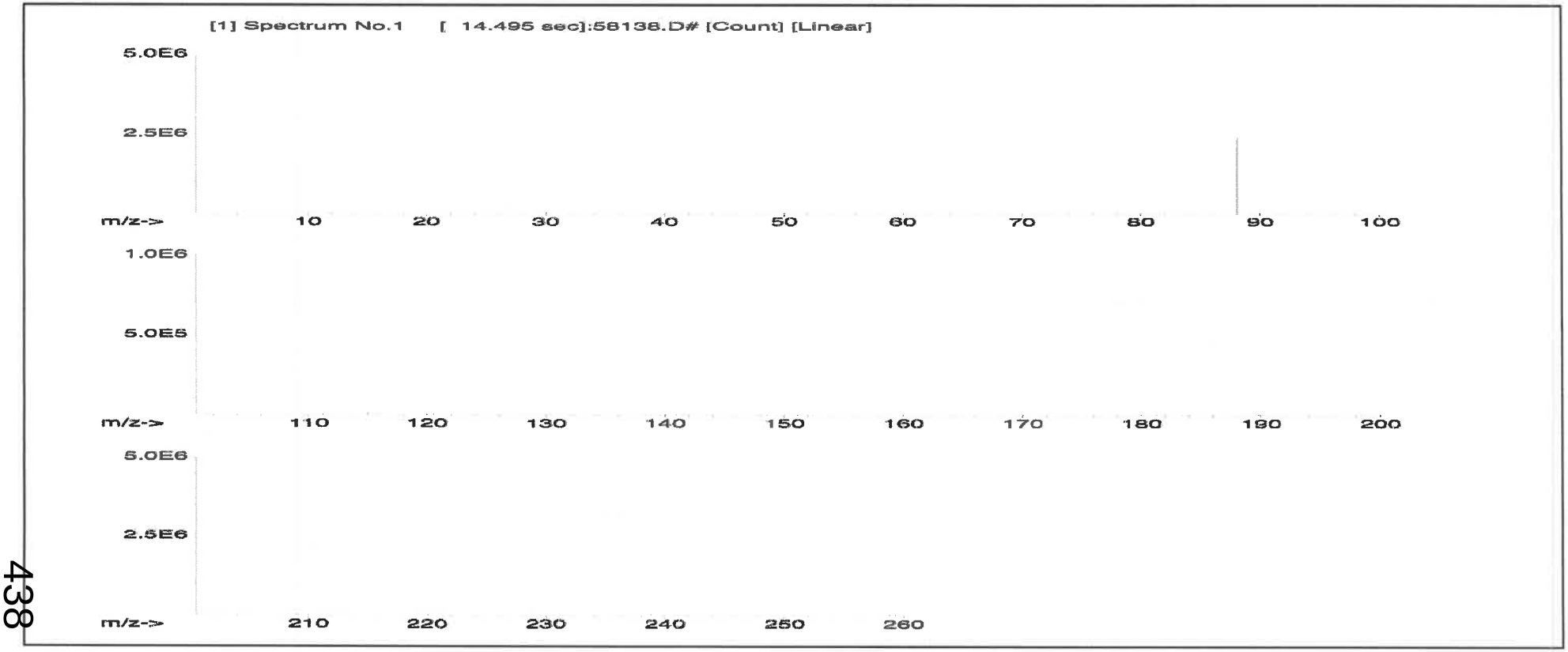
Part Number: 57038
Lot Number: 031524
Description: Strontium (Sr)

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



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	T	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certificate of Analysis

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MS985
R: 6/14/24

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 863.01
ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGIN10
Lot Number:	U2-IN729349
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Indium
Starting Material:	Indium Metal
Starting Material Lot#:	2511
Starting Material Purity:	99.9995%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10022 ± 30 µg/mL

Density: 1.044 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	**10021 ± 56 µg/mL** ICP Assay NIST SRM 3124a Lot Number: 110516
Assay Method #2	**10035 ± 25 µg/mL** EDTA NIST SRM 928 Lot Number: 928
Assay Method #3	**10001 ± 33 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000760	M	Eu	<	0.000760	O	Na		0.012771	M	Se	<	0.023000	M	Zn	<	0.006100
M	Al		0.003385	O	Fe		0.004462	M	Nb	<	0.000760	O	Si		0.024619	M	Zr	<	0.000760
M	As	<	0.004600	M	Ga	<	0.000760	M	Nd	<	0.000760	M	Sm	<	0.000760				
M	Au	<	0.002300	M	Gd	<	0.000760	O	Ni	<	0.005100	M	Sn	<	0.000760				
O	B		0.003692	M	Ge	<	0.001600	M	Os	<	0.000760	O	Sr	<	0.000610				
M	Ba	<	0.001600	M	Hf	<	0.000760	n	P	<		M	Ta	<	0.000760				
O	Be	<	0.000130	M	Hg	<	0.003100	M	Pb		0.001400	M	Tb	<	0.000760				
M	Bi	<	0.000760	M	Ho	<	0.000760	M	Pd	<	0.001600	M	Te	<	0.000760				
O	Ca		0.004616	s	In	<		M	Pr	<	0.000760	M	Th	<	0.000760				
M	Cd	<	0.000760	M	Ir	<	0.000760	M	Pt	<	0.000760	O	Ti	<	0.001100				
M	Ce	<	0.000760	O	K		0.007078	M	Rb	<	0.000760	M	Tl	<	0.000760				
M	Co	<	0.000760	M	La	<	0.000760	M	Re	<	0.000760	M	Tm	<	0.000760				
O	Cr	<	0.001300	O	Li	<	0.000130	M	Rh	<	0.000760	M	U	<	0.000760				
M	Cs	<	0.000760	M	Lu	<	0.000760	M	Ru	<	0.000760	M	V	<	0.001600				
M	Cu	<	0.003800	O	Mg		0.000707	n	S	<		M	W	<	0.001600				
M	Dy	<	0.000760	O	Mn		0.000149	M	Sb	<	0.000760	M	Y	<	0.000760				
M	Er	<	0.000760	M	Mo	<	0.002300	M	Sc	<	0.000760	M	Yb	<	0.000760				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 114.82 +3 6 In(H2O)6+3

Chemical Compatibility -Soluble in HCl, HNO3, and H2SO4. Avoid neutral and basic media. Stable with most metals and inorganic anions. The oxalate, sulfide, carbonate, hydroxide and phosphate are insoluble in water.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.

In Containing Samples (Preparation and Solution) -Metal (Best dissolved in HCl / HNO3); Oxide (Soluble in mineral acids); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Sulfuric/peroxide digestion or dry ash and dissolution in dilute HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 115 amu	1 ppt	n/a	115Sn, 99Ru16O
ICP-OES 158.583 nm	0.05 / 0.002 µg/mL	1	
ICP-OES 230.606 nm	0.1 / 0.03 µg/mL	1	Ni, Os
ICP-OES 325.609 nm	0.2 / 0.05 µg/mL	1	Mn, Mo, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 21, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- February 21, 2028

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



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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-SPK-1
Lot Number:	T2-MEB721963
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	2 000 µg/mL ea: Aluminum, Barium, 1 000 µg/mL ea: Iron, 500 µg/mL ea: Manganese, Nickel, Vanadium, Zinc, Cobalt, 250 µg/mL ea: Copper, 200 µg/mL ea: Chromium, 50 µg/mL ea: Beryllium, Silver

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	Chromium, Cr	200.0 ± 1.1 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	Manganese, Mn	500.0 ± 2.0 µg/mL
Nickel, Ni	500.0 ± 2.2 µg/mL	Silver, Ag	50.00 ± 0.22 µg/mL
Vanadium, V	500.0 ± 2.2 µg/mL	Zinc, Zn	500.0 ± 2.2 µg/mL

Density: 1.070 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
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
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
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
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

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 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

- July 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



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

448

CERTIFIED WEIGHT REPORT:

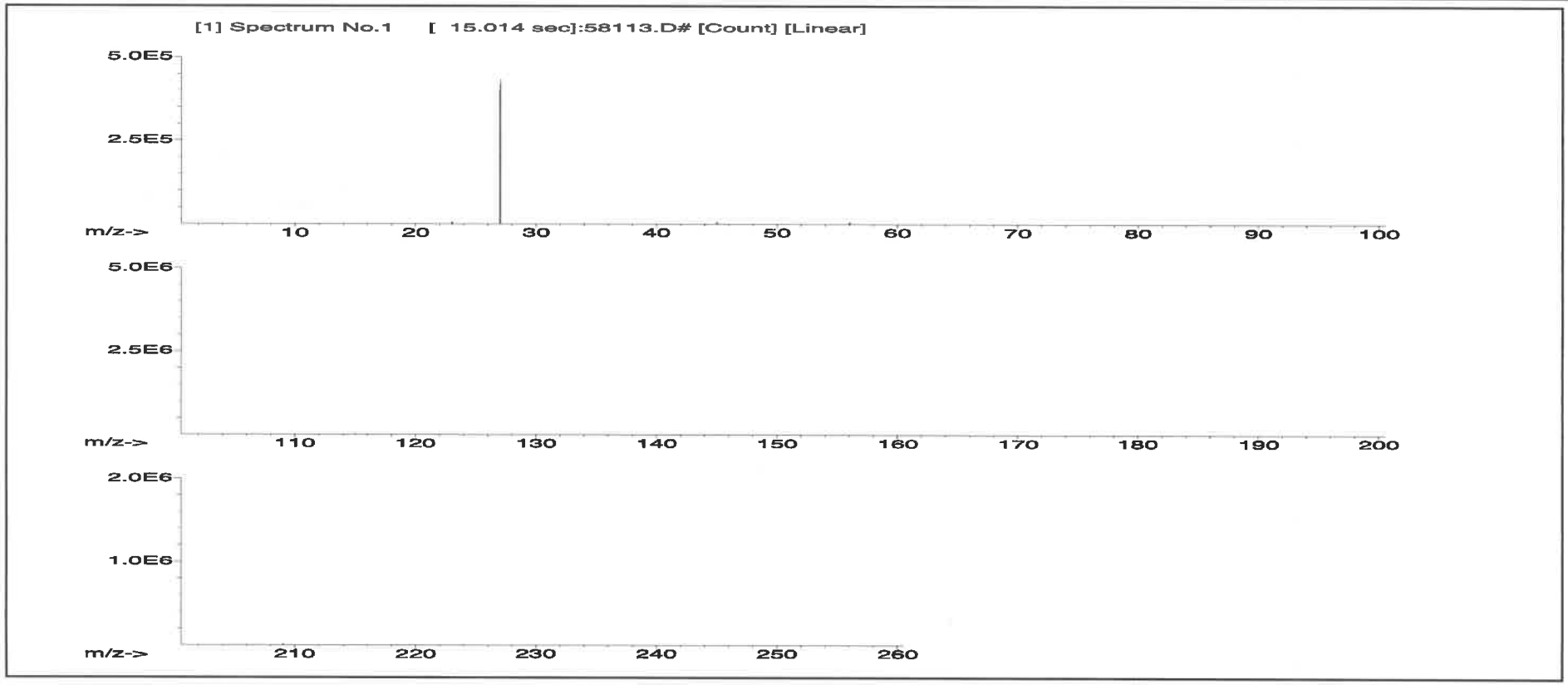
Part Number:	**58113**		**Solvent:**	20510011	Nitric Acid
Lot Number:	**011623**				
Description:	**Aluminum (Al)**				
			2%	40.0 (mL)	Nitric Acid
Expiration Date:	011626				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**10000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
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

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

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

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

R → 10/13/24
Met dig

M 6121

Material No.: 9530-33
Batch No.: 0000275677
Manufactured Date: 2020/12/16
Retest Date: 2025/12/15
Revision No: 1

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
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
ACS - Free Chlorine (as Cl_2)	<= 0.5 ppm	< 0.5
Phosphate (PO_4)	<= 0.05 ppm	< 0.03
Sulfate (SO_4)	<= 0.5 ppm	< 0.3
Sulfite (SO_3)	<= 0.8 ppm	0.3
Ammonium (NH_4)	<= 3 ppm	< 1
Trace Impurities - Arsenic (As)	<= 0.010 ppm	< 0.003
Trace Impurities - Aluminum (Al)	<= 10.0 ppb	< 0.2
Arsenic and Antimony (as As)	<= 5 ppb	< 3
Trace Impurities - Barium (Ba)	<= 1.0 ppb	< 0.2
Trace Impurities - Beryllium (Be)	<= 1.0 ppb	< 0.2
Trace Impurities - Bismuth (Bi)	<= 10.0 ppb	< 1.0
Trace Impurities - Boron (B)	<= 20.0 ppb	< 5.0
Trace Impurities - Cadmium (Cd)	<= 1.0 ppb	< 0.3
Trace Impurities - Calcium (Ca)	<= 50.0 ppb	29.7
Trace Impurities - Chromium (Cr)	<= 1.0 ppb	< 0.4
Trace Impurities - Cobalt (Co)	<= 1.0 ppb	< 0.3
Trace Impurities - Copper (Cu)	<= 1.0 ppb	< 0.1
Trace Impurities - Gallium (Ga)	<= 1.0 ppb	< 0.2

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

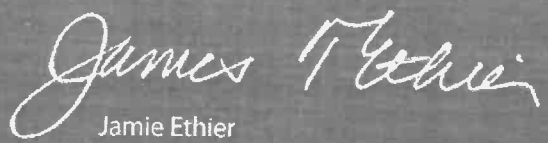
464

Material No.: 9530-33
Batch No.: 0000275677

Test	Specification	Result
Trace Impurities - Germanium (Ge)	<= 3.0 ppb	< 2.0
Trace Impurities - Gold (Au)	<= 4.0 ppb	< 0.2
Heavy Metals (as Pb)	<= 100 ppb	< 50
Trace Impurities - Iron (Fe)	<= 15.0 ppb	<1
Trace Impurities - Lead (Pb)	<= 1.0 ppb	< 0.5
Trace Impurities - Lithium (Li)	<= 1.0 ppb	0.2
Trace Impurities - Magnesium (Mg)	<= 10.0 ppb	0.4
Trace Impurities - Manganese (Mn)	<= 1.0 ppb	< 0.4
Trace Impurities - Mercury (Hg)	<= 0.5 ppb	0.1
Trace Impurities - Molybdenum (Mo)	<= 10.0 ppb	< 5.0
Trace Impurities - Nickel (Ni)	<= 4.0 ppb	< 0.3
Trace Impurities - Niobium (Nb)	<= 1.0 ppb	< 0.2
Trace Impurities - Potassium (K)	<= 9.0 ppb	< 2.0
Trace Impurities - Selenium (Se), For Information Only	ppb	1.0
Trace Impurities - Silicon (Si)	<= 100.0 ppb	< 10.0
Trace Impurities - Silver (Ag)	<= 1.0 ppb	< 0.3
Trace Impurities - Sodium (Na)	<= 100.0 ppb	< 5.0
Trace Impurities - Strontium (Sr)	<= 1.0 ppb	< 0.2
Trace Impurities - Tantalum (Ta)	<= 1.0 ppb	< 0.9
Trace Impurities - Thallium (Tl)	<= 5.0 ppb	< 2.0
Trace Impurities - Tin (Sn)	<= 5.0 ppb	< 0.8
Trace Impurities - Titanium (Ti)	<= 1.0 ppb	0.2
Trace Impurities - Vanadium (V)	<= 1.0 ppb	< 0.2
Trace Impurities - Zinc (Zn)	<= 5.0 ppb	0.3
Trace Impurities - Zirconium (Zr)	<= 1.0 ppb	< 0.1

For Laboratory, Research or Manufacturing Use
Product Information (not specifications):
Appearance (clear, fuming liquid)
Meets ACS Specifications

Country of Origin: US
Packaging Site: Phillipsburg Mfg Ctr & DC



Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

M6125 Receive -> 11/22/24

CORCO CHEMICAL CORPORATION

Manufacturers of ACS Reagents and Semiconductor Grade Chemicals

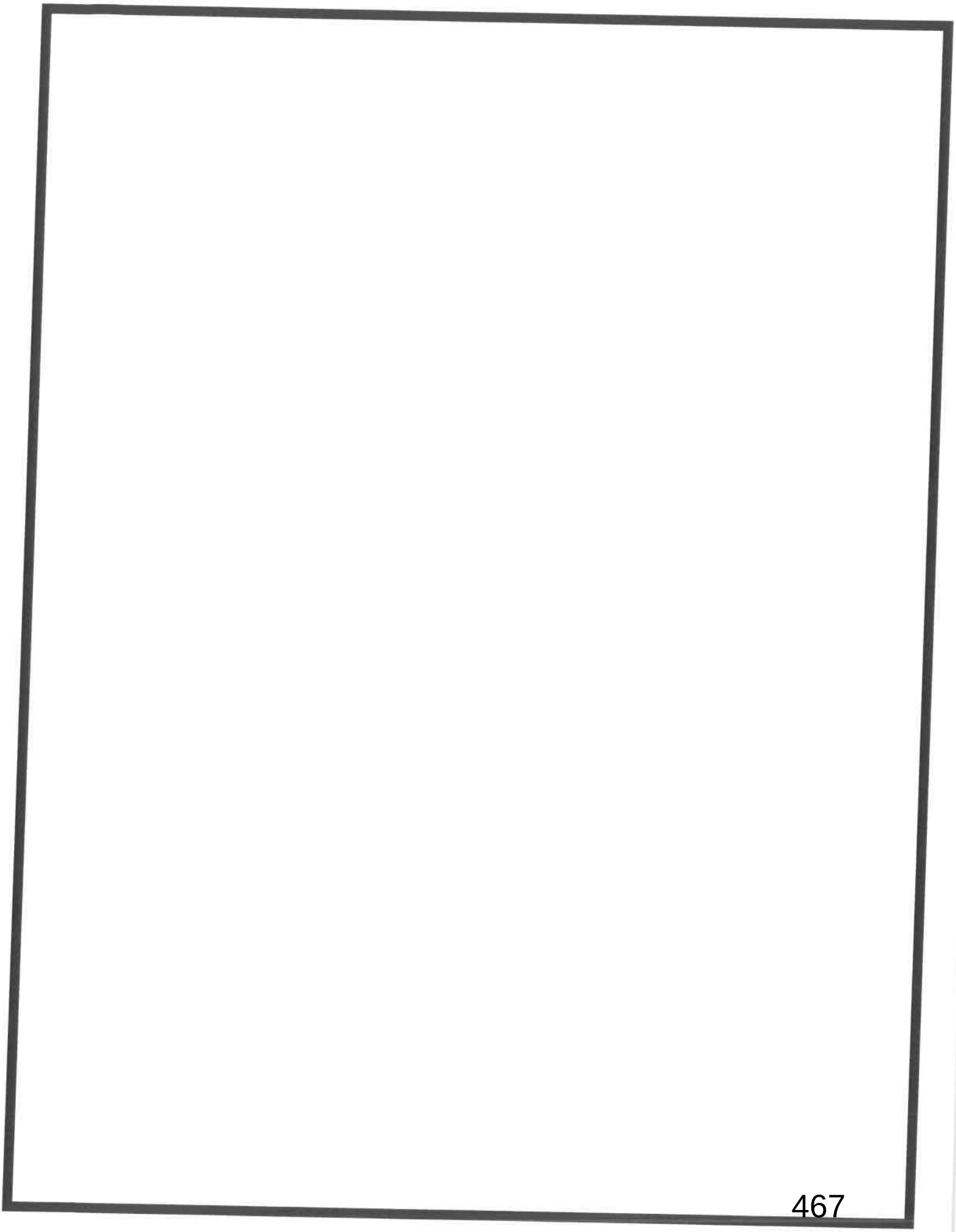
Office and Plant
299 Cedar Lane
Fairless Hills, PA 19030

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

Material No.: 9606-03
Batch No.: 24D1062002
Manufactured Date: 2024-03-26
Retest Date: 2029-03-25
Revision No.: 0

M6126

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

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Certified Reference Material CRM

R: 01/03/24 M5806, M5807

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470

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

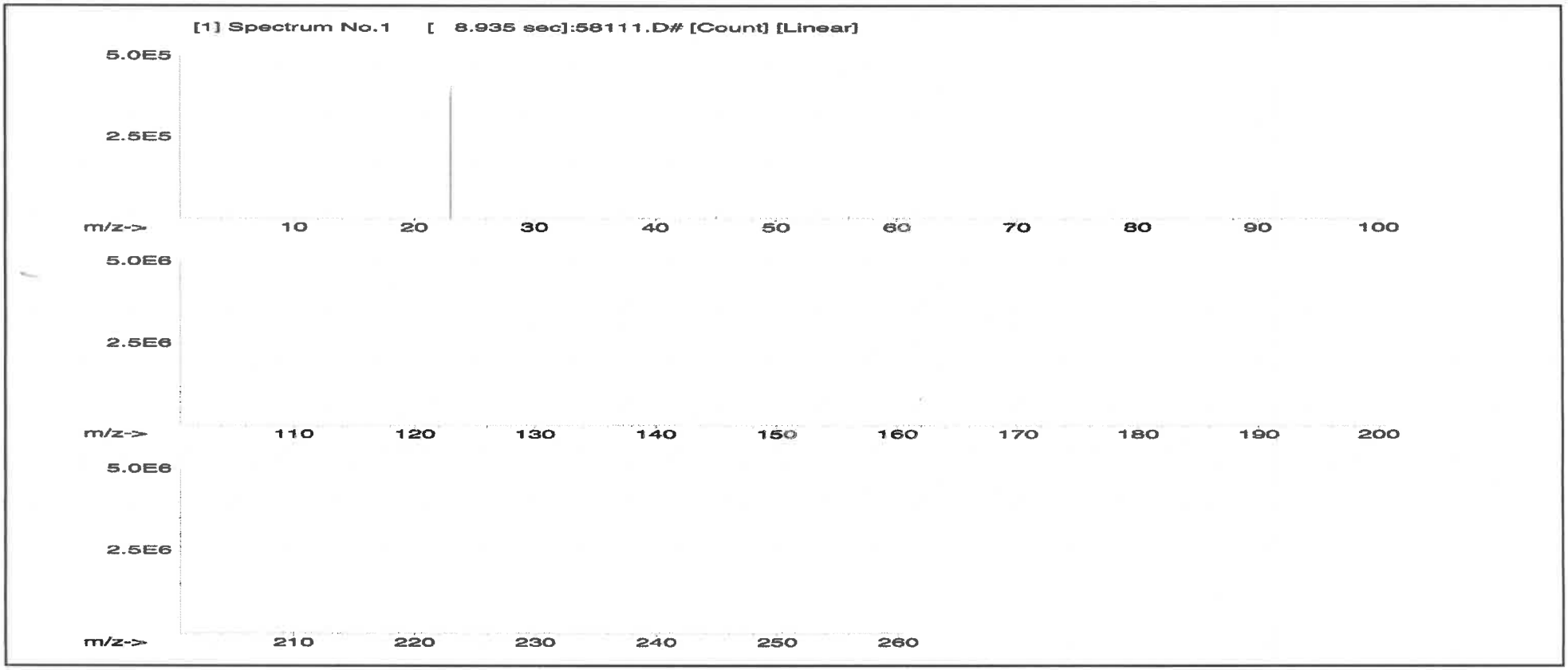
	Lot #		
Solvent:	24002546	Nitric Acid	
2%	60.0 (mL)	Nitric Acid	
		5E-05	Balance Uncertainty

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



471

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.

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: 01/03/24 M5802, M5803

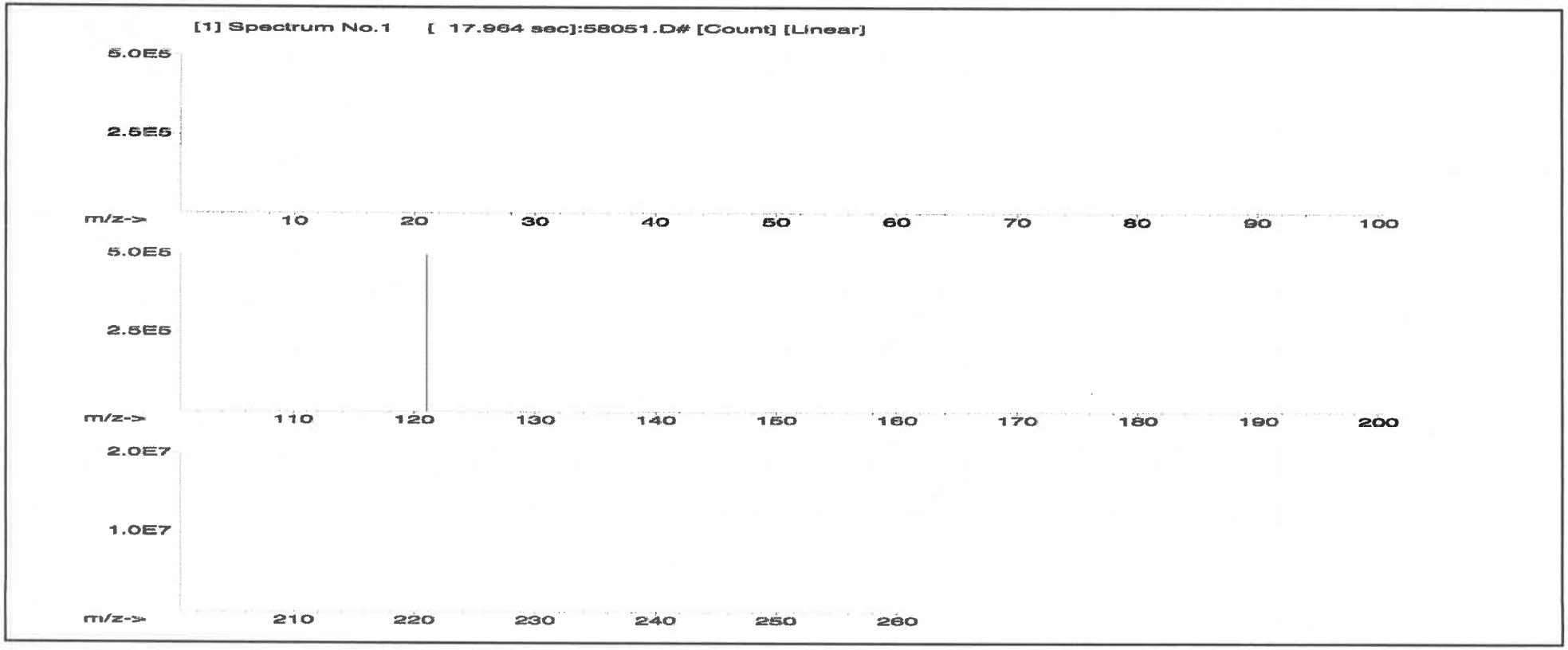
472

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



473

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	T	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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M6030

R: 8/5/24

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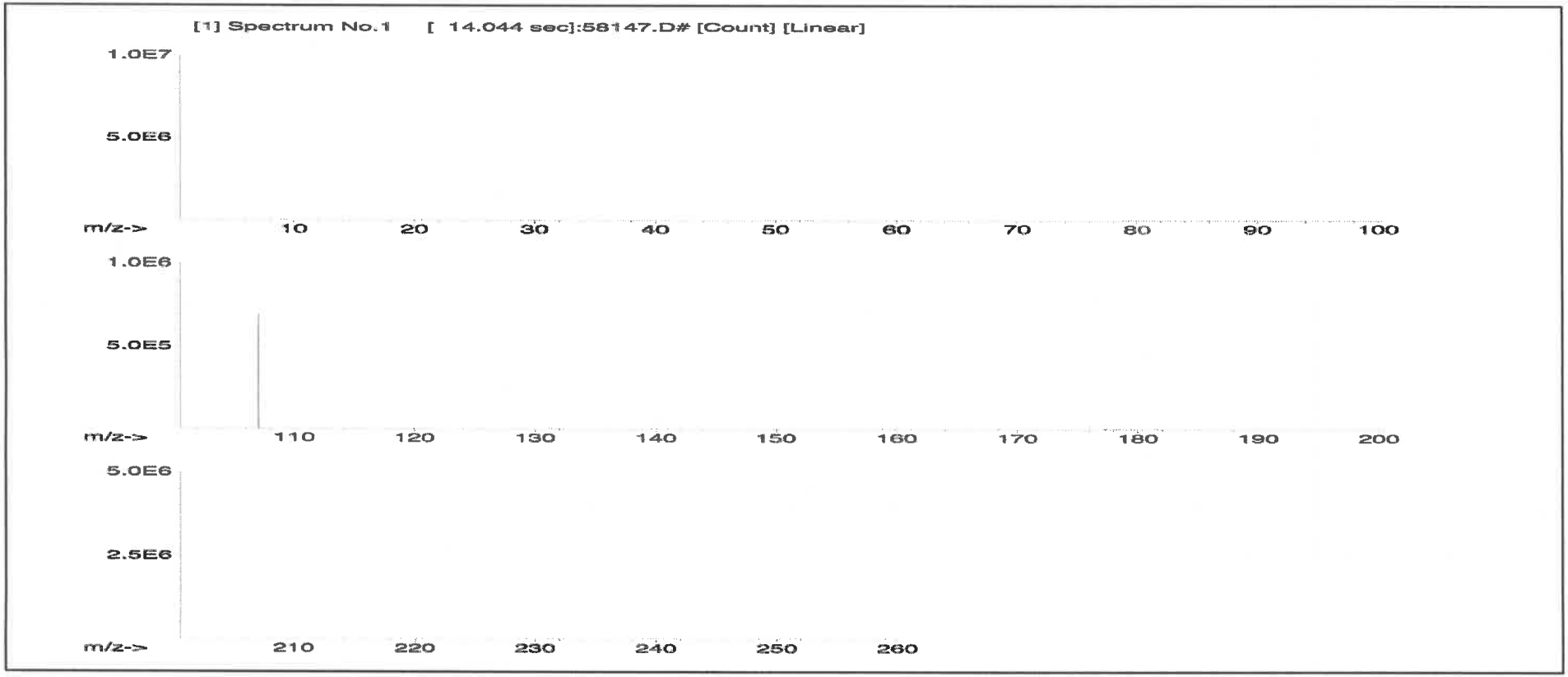
474

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



475

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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* 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: 03/16/23 M5473, M5474, M5475, M5476

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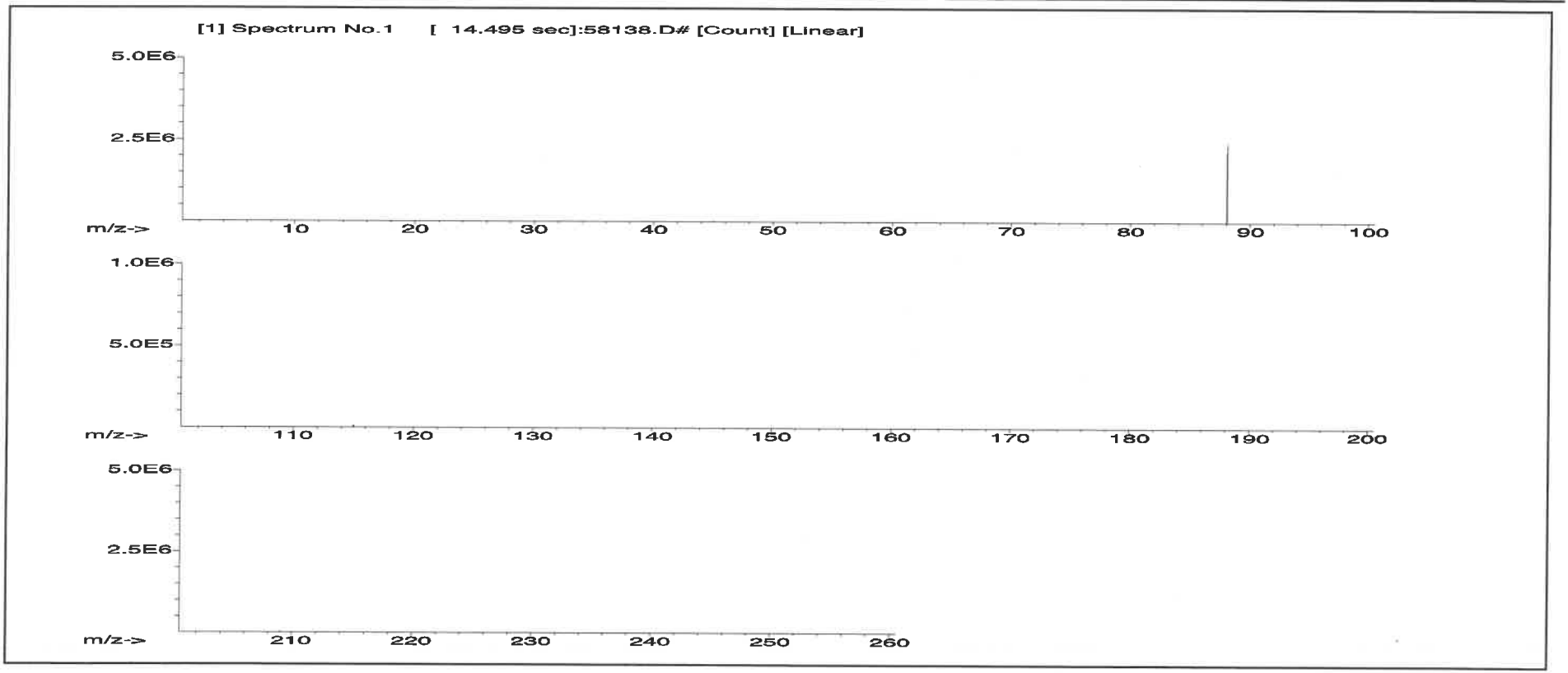
476

CERTIFIED WEIGHT REPORT:

Part Number:	**56138**		**Lot #**		
Lot Number:	**082922**	**Solvent:**	20510011	Nitric Acid	
Description:	**Strontium (Sr)**				
		2%	20.0 (mL)	Nitric Acid	
Expiration Date:	082925				
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):	1000.12	0.058	Flask Uncertainty		

Formulated By:	Lawrence Barry	082922
Reviewed By:	Pedro L. Rentas	082922

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	10000	99.997	0.10	41.2	24.2756	24.2758	**10000.1**	**20.0**	10042-76-9	NA	orl-rat >2000mg/kg	3153a



477

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	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.
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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: 03/16/23 M5473, M5474, M5475, M5476

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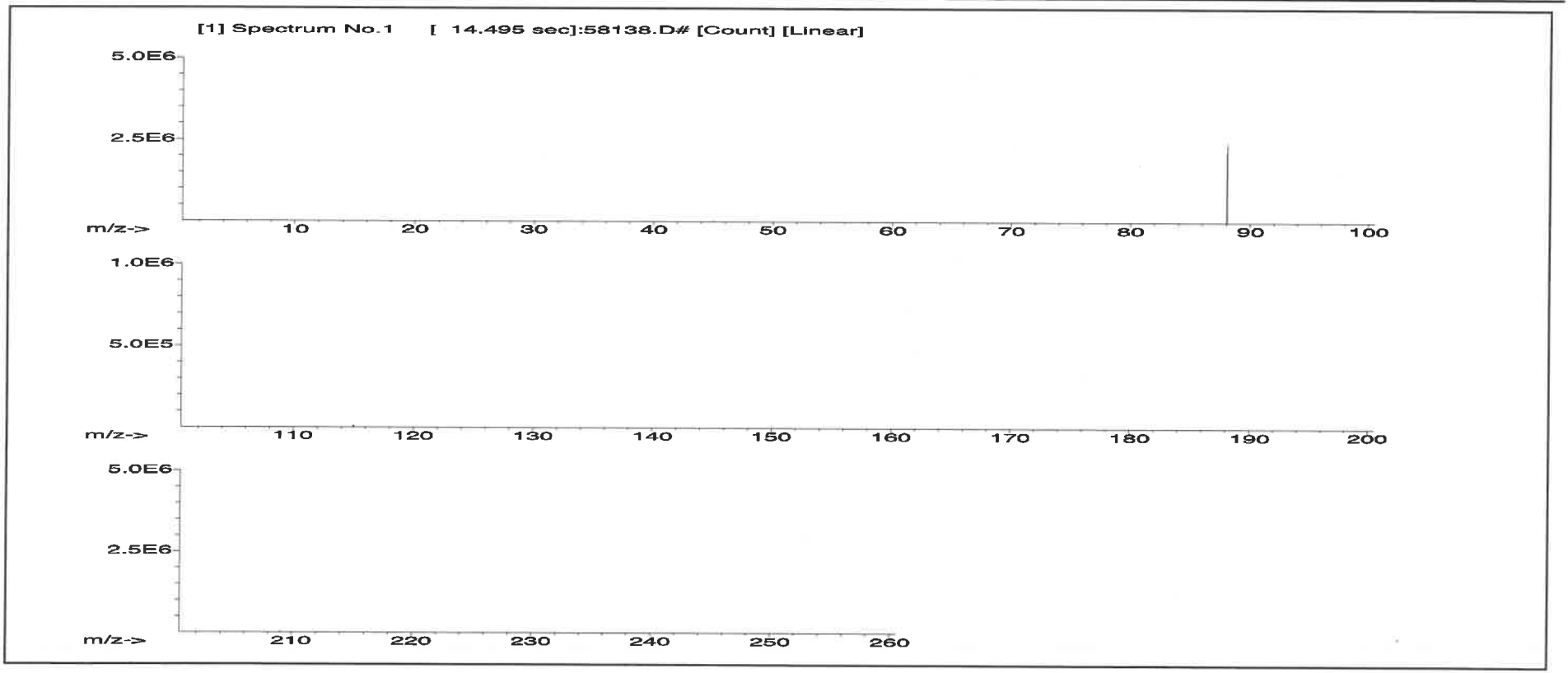
478

CERTIFIED WEIGHT REPORT:

Part Number:	**56138**		**Lot #**		
Lot Number:	**082922**	**Solvent:**	20510011	Nitric Acid	
Description:	**Strontium (Sr)**				
		2%	20.0 (mL)	Nitric Acid	
Expiration Date:	082925				
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):	1000.12	0.058	Flask Uncertainty		

Formulated By:	Lawrence Barry	082922
Reviewed By:	Pedro L. Rentas	082922

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	10000	99.997	0.10	41.2	24.2756	24.2758	**10000.1**	**20.0**	10042-76-9	NA	orl-rat >2000mg/kg	3153a



479

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	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.

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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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M6023

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480

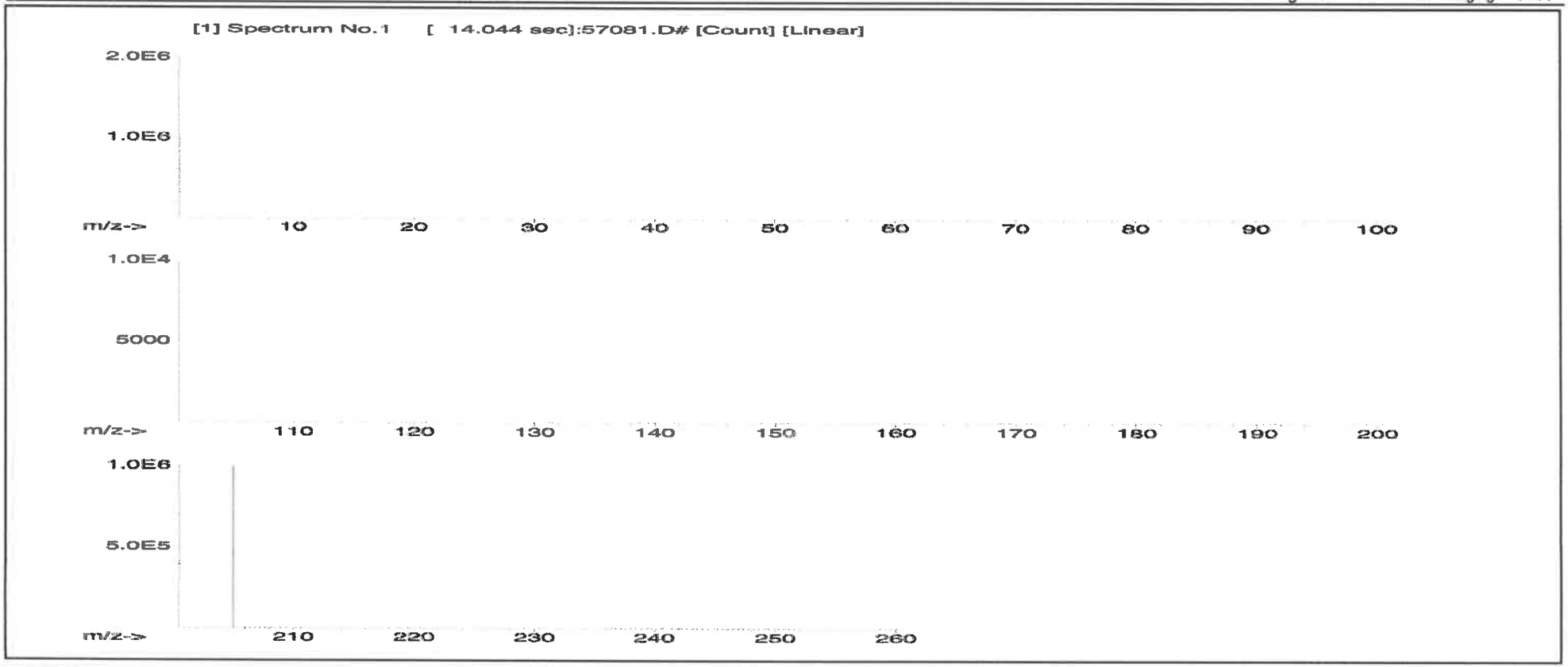
CERTIFIED WEIGHT REPORT:

Part Number:	**57081**		**Lot #**		
Lot Number:	**062724**	**Solvent:**	24002546	Nitric Acid	
Description:	**Thallium (Tl)**	2%	40.0 (mL)	Nitric Acid	
Expiration Date:	062727				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.1	0.10	Flask Uncertainty		

Aleah O'Brady

Formulated By:	Aleah O'Brady	062724
Reviewed By:	Pedro L. Rentas	062724

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Thallium nitrate (Tl)	IN037	BCCF4399	1000	99.999	0.10	77.0	2.5975	2.5977	**1000.1**	**2.0**	10102-45-1	0.1 mg/m3	orl-mus 15mg/kg	3158



481

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	T	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
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482

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57023**	24002546	Nitric Acid	
Lot Number:	**062424**			
Description:	**Vanadium (V)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	062427			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.3	0.06	Flask Uncertainty	

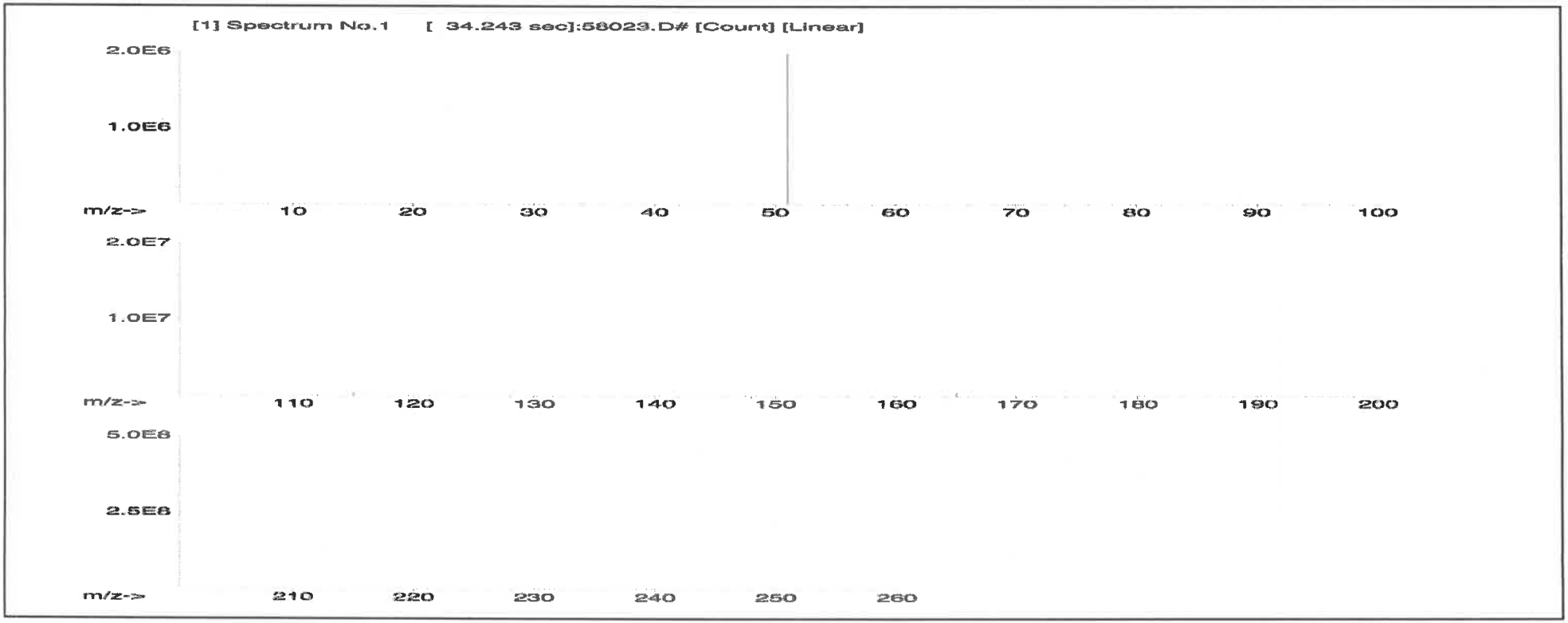
Aleah O'Brady

Formulated By:	Aleah O'Brady	062424

Pedro Rentas

Reviewed By:	Pedro L. Rentas	062424

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium metavanadate (V)	58123	021224	0.1000	200.0	0.084	1000	10000.3	**1000.0**	**2.2**	7803-55-6	0.05 mg/m3	orl-rat 58.1mg/kg	3165



483

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	T
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

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Certified by:

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Alliance TECHNICAL GROUP

Soil/Sludge Metals Preparation Sheet

PB165364

SOP ID : M3050B-Digestion-20, MSFAM01.1-Trace Metals-2

SDG No : MBHKD6, MBHK78, MBHKE

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 #2 2. N/A

Start Digest Date: 12/04/2024 **Time :** 13:50 **Temp :** 95 °C

End Digest Date: 12/04/2024 **Time :** 16:00 **Temp :** 96 °C

Digestion tube ID: M6054

Block thermometer ID: MET-DIG. #2

Dig Technician Signature: JGP

Supervisor Signature:

Temp : 1. 95°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 #2 CELL #34 : 96 C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
12/4/24 16:10	JGP Metals	(metals cab)
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

Soil/Sludge Metals Preparation Sheet

PB165364

Lab Sample ID	Client Sample ID	pH	Initial Weight (g)	Final Vol (ml)	Color Before	Color After	Texture	Artifact	Comment	Prep Pos
P5040-01	MBHKD6	N/A	1.34	100	Brown	Yellow	Medium	N/A	N/A	1
P5040-02	MBHKD6D	N/A	1.22	100	Brown	Yellow	Medium	N/A	N/A	2
P5040-03	MBHKD6S	N/A	1.19	100	Brown	Yellow	Medium	N/A	MP83147	3
P5041-01	MBHK78	N/A	1.43	100	Brown	Yellow	Medium	N/A	N/A	4
P5041-02	MBHK78D	N/A	1.27	100	Brown	Yellow	Medium	N/A	N/A	5
P5041-03	MBHK78S	N/A	1.31	100	Brown	Yellow	Medium	N/A	MP83147	6
P5042-01	MBHKB0	N/A	1.46	100	Brown	Yellow	Medium	N/A	N/A	7
P5042-02	MBHKB0D	N/A	1.17	100	Brown	Yellow	Medium	N/A	N/A	8
P5042-03	MBHKB0S	N/A	1.39	100	Brown	Yellow	Medium	N/A	MP83147	9
P5043-01	MBHKM2	N/A	1.42	100	Brown	Yellow	Medium	N/A	N/A	10
P5043-02	MBHKM2D	N/A	1.36	100	Brown	Yellow	Medium	N/A	N/A	11
P5043-03	MBHKM2S	N/A	1.47	100	Brown	Yellow	Medium	N/A	MP83147	12
PB165364BL	PBS364	N/A	1.00	100	Colorless	Colorless	Fine	N/A	N/A	13
PB165364BS	LCS364	N/A	1.00	100	Colorless	Colorless	Fine	N/A	MP83141	14

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

Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB133883

Review By	Sarabjit Jaswal	Review On	12/12/2024 8:19:04 AM
Supervise By	Kareem Khairalla	Supervise On	12/13/2024 7:24:03 PM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	
LCS Standard	
Chk Standard	MP83513,MP83514

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	12/10/24 15:54		Kareem	OK
2	S1	S01	CAL2	12/10/24 15:58		Kareem	OK
3	S2	S02	CAL3	12/10/24 16:02		Kareem	OK
4	S3	S03	CAL4	12/10/24 16:06		Kareem	OK
5	S4	S04	CAL5	12/10/24 16:09		Kareem	OK
6	S5	S05	CAL6	12/10/24 16:13		Kareem	OK
7	S6	S06	CAL7	12/10/24 16:17		Kareem	OK
8	ICV014	ICV014	ICV	12/10/24 16:45	Inst. paused for Calibration review	Kareem	OK
9	ICB014	ICB014	ICB	12/10/24 16:51	Inst. paused for review	Kareem	OK
10	ICSA014	ICSA014	ICSA	12/10/24 17:21	Inst. paused for review	Kareem	OK
11	ICSAB014	ICSAB014	ICSAB	12/10/24 17:27		Kareem	OK
12	CCV089	CCV089	CCV	12/10/24 17:48	Inst. paused for review	Kareem	OK
13	CCB089	CCB089	CCB	12/10/24 17:52		Kareem	OK
14	PB165364BL	PBS364	MB	12/10/24 17:56		Kareem	OK
15	PB165351BL	PBS351	MB	12/10/24 18:04		Kareem	OK
16	PB165364BS	LCS364	LCS	12/10/24 18:09		Kareem	OK
17	PB165351BS	LCS351	LCS	12/10/24 18:13		Kareem	OK
18	PB165350BL	PBS350	MB	12/10/24 18:17		Kareem	OK

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

Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB133883

Review By	Sarabjit Jaswal	Review On	12/12/2024 8:19:04 AM
Supervise By	Kareem Khairalla	Supervise On	12/13/2024 7:24:03 PM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	
LCS Standard	
Chk Standard	MP83513,MP83514

19	PB165350BS	LCS350	LCS	12/10/24 18:22		Kareem	OK
20	CCV090	CCV090	CCV	12/10/24 18:26		Kareem	OK
21	CCB090	CCB090	CCB	12/10/24 18:29		Kareem	OK
22	P5041-01	MBHK78	SAM	12/10/24 18:33		Kareem	OK
23	P5041-02	MBHK78D	DUP	12/10/24 18:37		Kareem	OK
24	P5041-01L	MBHK78L	SD	12/10/24 18:41		Kareem	OK
25	P5041-03	MBHK78S	MS	12/10/24 18:45	MS Fail For Se(Below RL)	Kareem	OK
26	P5042-01	MBHKB0	SAM	12/10/24 18:49	Not Use	Kareem	Not Ok
27	P5042-02	MBHKB0D	DUP	12/10/24 18:53	Not Use	Kareem	Not Ok
28	P5042-01L	MBHKB0L	SD	12/10/24 18:56	Not Use	Kareem	Not Ok
29	P5042-03	MBHKB0S	MS	12/10/24 19:00	Not Use	Kareem	Not Ok
30	P5043-01	MBHKM2	SAM	12/10/24 19:04		Kareem	OK
31	P5043-02	MBHKM2D	DUP	12/10/24 19:08		Kareem	OK
32	P5043-01L	MBHKM2L	SD	12/10/24 19:12		Kareem	OK
33	P5043-03	MBHKM2S	MS	12/10/24 19:16	MS Fail For Ag	Kareem	OK
34	P4977-03	ME29F8	SAM	12/10/24 19:20	Ca High	Kareem	Dilution
35	P4977-04	ME29F8D	DUP	12/10/24 19:23	Ca High	Kareem	Dilution
36	P4977-03L	ME29F8L	SD	12/10/24 19:27	Ca High	Kareem	Dilution
37	P4977-05	ME29F8S	MS	12/10/24 19:31		Kareem	OK
38	P4976-09	ME29E4D	DUP	12/10/24 19:35	Ca High	Kareem	Dilution

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Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB133883

Review By	Sarabjit Jaswal	Review On	12/12/2024 8:19:04 AM
Supervise By	Kareem Khairalla	Supervise On	12/13/2024 7:24:03 PM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	
LCS Standard	
Chk Standard	MP83513,MP83514

39	P4976-08L	ME29E4L	SD	12/10/24 19:39	Ca High	Kareem	Dilution
40	P4976-10	ME29E4S	MS	12/10/24 19:43		Kareem	OK
41	P5040-01	MBHKD6	SAM	12/10/24 19:47		Kareem	OK
42	CCV091	CCV091	CCV	12/10/24 19:51		Kareem	OK
43	CCB091	CCB091	CCB	12/10/24 19:54		Kareem	OK
44	P5040-02	MBHKD6D	DUP	12/10/24 19:58		Kareem	OK
45	P5040-01L	MBHKD6L	SD	12/10/24 20:02		Kareem	OK
46	P5040-03	MBHKD6S	MS	12/10/24 20:06	MS Fail For Se(Below RL)	Kareem	OK
47	P4977-01	ME29F6	SAM	12/10/24 20:10	Ca High	Kareem	Dilution
48	P4977-02	ME29F7	SAM	12/10/24 20:14	Ca High	Kareem	Dilution
49	P4977-06	ME29F9	SAM	12/10/24 20:18	Ca High	Kareem	Dilution
50	P4977-07	ME29G0	SAM	12/10/24 20:21	Ca High	Kareem	Dilution
51	P4977-08	ME29G1	SAM	12/10/24 20:25	Ca High	Kareem	Dilution
52	P4977-09	ME29G2	SAM	12/10/24 20:29	Ca High	Kareem	Dilution
53	P4976-01	ME29D7	SAM	12/10/24 20:33	Ca High	Kareem	Dilution
54	P4976-02	ME29D8	SAM	12/10/24 20:37	Ca High	Kareem	Dilution
55	P4976-03	ME29D9	SAM	12/10/24 20:41	Ca High	Kareem	Dilution
56	P4976-04	ME29E0	SAM	12/10/24 20:45		Kareem	OK
57	P4976-05	ME29E1	SAM	12/10/24 20:48	Ca High	Kareem	Dilution
58	P4976-06	ME29E2	SAM	12/10/24 20:52	Ca High	Kareem	Dilution

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Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB133883

Review By	Sarabjit Jaswal	Review On	12/12/2024 8:19:04 AM
Supervise By	Kareem Khairalla	Supervise On	12/13/2024 7:24:03 PM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	
LCS Standard	
Chk Standard	MP83513,MP83514

59	P4976-07	ME29E3	SAM	12/10/24 20:56	Ca High	Kareem	Dilution
60	P4976-08	ME29E4	SAM	12/10/24 21:00	Ca High	Kareem	Dilution
61	P4976-11	ME29E5	SAM	12/10/24 21:04	Ca High	Kareem	Dilution
62	P4976-12	ME29E6	SAM	12/10/24 21:08	Ca High	Kareem	Dilution
63	P4976-13	ME29E7	SAM	12/10/24 21:12	Ca High	Kareem	Dilution
64	CCV092	CCV092	CCV	12/10/24 21:29		Kareem	OK
65	CCB092	CCB092	CCB	12/10/24 21:52	Inst. paused for review	Kareem	OK
66	P4976-14	ME29E8	SAM	12/10/24 21:56	Ca High	Kareem	Dilution
67	P4976-15	ME29E9	SAM	12/10/24 22:00	Ca High	Kareem	Dilution
68	P4976-16	ME29F0	SAM	12/10/24 22:04	Ca High	Kareem	Dilution
69	P4976-17	ME29F1	SAM	12/10/24 22:08	Ca High	Kareem	Dilution
70	P4976-18	ME29F2	SAM	12/10/24 22:12	Ca High	Kareem	Dilution
71	P4976-19	ME29F3	SAM	12/10/24 22:16	Ca High	Kareem	Dilution
72	P4976-20	ME29F4	SAM	12/10/24 22:20	Ca High	Kareem	Dilution
73	P4976-21	ME29F5	SAM	12/10/24 22:23	Ca High	Kareem	Dilution
74	P4880-14	MBHH91	SAM	12/10/24 22:27		Kareem	OK
75	P4880-15	MBHH91D	DUP	12/10/24 22:31		Kareem	OK
76	P4880-14L	MBHH91L	SD	12/10/24 22:35		Kareem	OK
77	P4880-16	MBHH91S	MS	12/10/24 22:39	MS Fail For Ag,Se(Below RL)	Kareem	OK

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Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB133883

Review By	Sarabjit Jaswal	Review On	12/12/2024 8:19:04 AM
Supervise By	Kareem Khairalla	Supervise On	12/13/2024 7:24:03 PM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	
LCS Standard	
Chk Standard	MP83513,MP83514

78	P4880-12DL	MBHH89	SAM	12/10/24 22:43	2X For Ca	Kareem	Confirms
79	P4905-02	MBHHA6	SAM	12/10/24 22:46		Kareem	OK
80	P4905-03	MBHHA6D	DUP	12/10/24 22:50		Kareem	OK
81	P4905-02L	MBHHA6L	SD	12/10/24 22:54		Kareem	OK
82	P4905-04	MBHHA6S	MS	12/10/24 22:58	MS Fail For Sb,As(115.87ppb),Ba(2331 .33ppb),Cu(457.90),Se(Bel ow RL),Ag,Zn(2281.14ppb)	Kareem	OK
83	CCV093	CCV093	CCV	12/10/24 23:02		Kareem	OK
84	CCB093	CCB093	CCB	12/10/24 23:05		Kareem	OK
85	P4907-01A	MBHHE1A	PS	12/10/24 23:09	Not Use	Kareem	Not Ok
86	P4912-04A	MBHHJ4A	PS	12/10/24 23:13	PS For Cu(0.012ml m5751,Se-0.07ml mp83617,Zn-0.068ml m5819	Kareem	OK
87	P4912-14	MBHHK2	SAM	12/10/24 23:17		Kareem	OK
88	P4912-15	MBHHK3	SAM	12/10/24 23:21		Kareem	OK
89	P4912-16	MBHHL8	SAM	12/10/24 23:24		Kareem	OK
90	P4912-17	MBHHL9	SAM	12/10/24 23:28		Kareem	OK
91	P4912-18	MBHHM0	SAM	12/10/24 23:32		Kareem	OK
92	P4912-19	MBHHM1	SAM	12/10/24 23:36		Kareem	OK
93	P4912-20	MBHHM2	SAM	12/10/24 23:40		Kareem	OK
94	P4912-21	MBHHM3	SAM	12/10/24 23:43		Kareem	OK

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Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB133883

Review By	Sarabjit Jaswal	Review On	12/12/2024 8:19:04 AM
Supervise By	Kareem Khairalla	Supervise On	12/13/2024 7:24:03 PM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	
LCS Standard	
Chk Standard	MP83513,MP83514

95	P4912-22	MBHHM4	SAM	12/10/24 23:47		Kareem	OK
96	P4914-11A	MBHHK4A	PS	12/10/24 23:51	PS For Cu(0.01ML M5751-10ML SAMPLE)	Kareem	OK
97	P4915-08A	MBHHM8A	PS	12/10/24 23:55	PS For Se - 0.07ml mp83567-10ml sample	Kareem	OK
98	P4915-01	MBHHL4	SAM	12/10/24 23:58		Kareem	OK
99	P4915-02	MBHHL5	SAM	12/11/24 00:02		Kareem	OK
100	P4915-03	MBHHL6	SAM	12/11/24 00:06		Kareem	OK
101	P4915-04	MBHHL7	SAM	12/11/24 00:10		Kareem	OK
102	P4915-05	MBHHM5	SAM	12/11/24 00:14		Kareem	OK
103	P4915-06	MBHHM6	SAM	12/11/24 00:18	Not Use	Kareem	Not Ok
104	P4932-02	MBHHQ2	SAM	12/11/24 00:22	Not Use	Kareem	Not Ok
105	CCV094	CCV094	CCV	12/11/24 00:25		Kareem	OK
106	CCB094	CCB094	CCB	12/11/24 00:29		Kareem	OK
107	P4932-01	MBHHQ1	SAM	12/11/24 00:33	Not Use	Kareem	Not Ok
108	P4932-05	MBHHQ3	SAM	12/11/24 00:37	Not Use	Kareem	Not Ok
109	P4932-06	MBHHQ4	SAM	12/11/24 00:41	Not Use	Kareem	Not Ok
110	P4932-07	MBHHQ5	SAM	12/11/24 00:44	Not Use	Kareem	Not Ok
111	P4932-08	MBHHQ6	SAM	12/11/24 00:48	Not Use	Kareem	Not Ok
112	P4932-09	MBHHQ7	SAM	12/11/24 00:52	Not Use	Kareem	Not Ok
113	P4932-10	MBHHQ8	SAM	12/11/24 00:56	Not Use	Kareem	Not Ok

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Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB133883

Review By	Sarabjit Jaswal	Review On	12/12/2024 8:19:04 AM
Supervise By	Kareem Khairalla	Supervise On	12/13/2024 7:24:03 PM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	
LCS Standard	
Chk Standard	MP83513,MP83514

114	P4932-11	MBHHQ9	SAM	12/11/24 00:59	Not Use	Kareem	Not Ok
115	P4932-12	MBHHP1	SAM	12/11/24 01:03	Not Use	Kareem	Not Ok
116	P4932-13	MBHHP2	SAM	12/11/24 01:07	Not Use	Kareem	Not Ok
117	P4932-14	MBHHP3	SAM	12/11/24 01:11	Not Use	Kareem	Not Ok
118	P4932-15	MBHHP4	SAM	12/11/24 01:15	Not Use	Kareem	Not Ok
119	P4932-16	MBHHP5	SAM	12/11/24 01:18	Not Use	Kareem	Not Ok
120	P4932-17	MBHHP6	SAM	12/11/24 01:22	Not Use	Kareem	Not Ok
121	P4932-18	MBHHP7	SAM	12/11/24 01:26	Not Use	Kareem	Not Ok
122	P4932-19	MBHHP8	SAM	12/11/24 01:30	Not Use	Kareem	Not Ok
123	P4932-20	MBHHP9	SAM	12/11/24 01:34	Not Use	Kareem	Not Ok
124	P4932-21	MBHHQ0	SAM	12/11/24 01:37	Not Use	Kareem	Not Ok
125	P4932-22	MBHHR0	SAM	12/11/24 01:41	Not Use	Kareem	Not Ok
126	P4933-05DL	MBHHR5	SAM	12/11/24 01:45	5X For Mn	Kareem	Confirms
127	CCV095	CCV095	CCV	12/11/24 01:49		Kareem	OK
128	CCB095	CCB095	CCB	12/11/24 01:52		Kareem	OK
129	P4933-18	MBHHX2	SAM	12/11/24 01:56		Kareem	OK
130	P4933-19	MBHHX3	SAM	12/11/24 02:00		Kareem	OK
131	P4933-20	MBHHX4	SAM	12/11/24 02:04		Kareem	OK
132	P4933-21	MBHHX4D	DUP	12/11/24 02:08		Kareem	OK
133	P4933-20L	MBHHX4L	SD	12/11/24 02:12		Kareem	OK

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Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB133883

Review By	Sarabjit Jaswal	Review On	12/12/2024 8:19:04 AM
Supervise By	Kareem Khairalla	Supervise On	12/13/2024 7:24:03 PM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	
LCS Standard	
Chk Standard	MP83513,MP83514

134	P4933-22	MBHHX4S	MS	12/11/24 02:15	MS Fail for Se(Below RL),Zn(1944.24ppb)	Kareem	OK
135	P4939-10A	MBHHW8A	PS	12/11/24 02:19	PS For Se 0.07ml mp83617	Kareem	OK
136	P4939-22DL	MBHHZ2	SAM	12/11/24 02:23	2X For Cu	Kareem	Confirms
137	P5007-15DL	MBHK00	SAM	12/11/24 02:27	2X For Ca	Kareem	Confirms
138	P5007-10A	MBHJZ7A	PS	12/11/24 02:31	PS For As 0.01ml mp83618	Kareem	OK
139	P5014-12A	MBHJY0A	PS	12/11/24 02:34	PS For As-0.015ml mp83618, Se-0.07ml mp83617	Kareem	OK
140	P5015-17A	MBHKQ6A	PS	12/11/24 02:38	PS For As,Se,Tl,Zn	Kareem	OK
141	P5015-05DL	MBHKK0	SAM	12/11/24 02:42	2X For Pb	Kareem	Confirms
142	P5015-08DL	MBHKK3	SAM	12/11/24 02:46	2X For Ca	Kareem	Confirms
143	P5015-09DL	MBHKK4	SAM	12/11/24 02:50	2X For Ca	Kareem	Confirms
144	P5015-14DL	MBHKQ2	SAM	12/11/24 02:54	2X For Ca	Kareem	Confirms
145	CCV096	CCV096	CCV	12/11/24 02:57		Kareem	OK
146	CCB096	CCB096	CCB	12/11/24 03:01		Kareem	OK

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Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB133949

Review By	Sarabjit Jaswal	Review On	12/16/2024 12:48:54 AM
Supervise By	Mohan Bera	Supervise On	12/16/2024 12:49:43 AM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	MP83567
LCS Standard	
Chk Standard	MP83513,MP83514

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	12/13/24 11:23		Kareem	OK
2	S1	S01	CAL2	12/13/24 11:27		Kareem	OK
3	S2	S02	CAL3	12/13/24 11:31		Kareem	OK
4	S3	S03	CAL4	12/13/24 11:35		Kareem	OK
5	S4	S04	CAL5	12/13/24 11:39		Kareem	OK
6	S5	S05	CAL6	12/13/24 11:43		Kareem	OK
7	S6	S06	CAL7	12/13/24 11:47		Kareem	OK
8	ICV002	ICV002	ICV	12/13/24 12:40	Inst. paused for calibration review	Kareem	OK
9	ICB002	ICB002	ICB	12/13/24 13:14	Inst. paused for review	Kareem	OK
10	ICSA002	ICSA002	ICSA	12/13/24 13:18		Kareem	OK
11	ICSAB002	ICSAB002	ICSAB	12/13/24 13:22		Kareem	OK
12	CCV007	CCV007	CCV	12/13/24 13:45	Inst. paused for review	Kareem	OK
13	CCB007	CCB007	CCB	12/13/24 13:49		Kareem	OK
14	P4976-01DL	ME29D7	SAM	12/13/24 13:53	2x for Ca	Kareem	Confirms
15	P4976-02DL	ME29D8	SAM	12/13/24 13:56	2x for Ca	Kareem	Confirms
16	P4976-03DL	ME29D9	SAM	12/13/24 14:00	2x for Ca	Kareem	Confirms
17	P4976-05DL	ME29E1	SAM	12/13/24 14:04	2x for Ca	Kareem	Confirms
18	P4976-06DL	ME29E2	SAM	12/13/24 14:08	2x for Ca	Kareem	Confirms

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Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB133949

Review By	Sarabjit Jaswal	Review On	12/16/2024 12:48:54 AM
Supervise By	Mohan Bera	Supervise On	12/16/2024 12:49:43 AM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	MP83567
LCS Standard	
Chk Standard	MP83513,MP83514

19	P4976-07DL	ME29E3	SAM	12/13/24 14:12	2x for Ca	Kareem	Confirms
20	P4976-08DL	ME29E4	SAM	12/13/24 14:16	2x for Ca	Kareem	Confirms
21	P4976-09DL	ME29E4D	DUP	12/13/24 14:20	2x for Ca	Kareem	Confirms
22	P4976-08LDL	ME29E4L	SD	12/13/24 14:24	10x for Ca	Kareem	Confirms
23	P4976-10DL	ME29E4S	MS	12/13/24 14:28	10x for Ca	Kareem	Confirms
24	P4976-11DL	ME29E5	SAM	12/13/24 14:32	2x for Ca	Kareem	Confirms
25	P4976-12DL	ME29E6	SAM	12/13/24 14:36	2x for Ca	Kareem	Confirms
26	P4976-13DL	ME29E7	SAM	12/13/24 14:39	2x for Ca	Kareem	Confirms
27	P4976-14DL	ME29E8	SAM	12/13/24 14:43	2x for Ca	Kareem	Confirms
28	P4976-15DL	ME29E9	SAM	12/13/24 14:47	2x for Ca	Kareem	Confirms
29	P4976-16DL	ME29F0	SAM	12/13/24 14:51	2x for Ca	Kareem	Confirms
30	P4976-17DL	ME29F1	SAM	12/13/24 14:55	2x for Ca	Kareem	Confirms
31	P4976-18DL	ME29F2	SAM	12/13/24 14:59	2x for Ca	Kareem	Confirms
32	P4976-19DL	ME29F3	SAM	12/13/24 15:03	2x for Ca	Kareem	Confirms
33	P4976-20DL	ME29F4	SAM	12/13/24 15:07	2x for Ca	Kareem	Confirms
34	CCV008	CCV008	CCV	12/13/24 15:20		Kareem	OK
35	CCB008	CCB008	CCB	12/13/24 15:24		Kareem	OK
36	P4976-21DL	ME29F5	SAM	12/13/24 15:28	2x for Ca	Kareem	Confirms
37	P4977-01DL	ME29F6	SAM	12/13/24 15:32	2x for Ca	Kareem	Confirms
38	P4977-02DL	ME29F7	SAM	12/13/24 15:36	2x for Ca	Kareem	Confirms

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Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB133949

Review By	Sarabjit Jaswal	Review On	12/16/2024 12:48:54 AM
Supervise By	Mohan Bera	Supervise On	12/16/2024 12:49:43 AM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	MP83567
LCS Standard	
Chk Standard	MP83513,MP83514

39	P4977-03DL	ME29F8	SAM	12/13/24 15:40	2x for Ca	Kareem	Confirms
40	P4977-04DL	ME29F8D	DUP	12/13/24 15:44	2x for Ca	Kareem	Confirms
41	P4977-03LDL	ME29F8L	SD	12/13/24 15:48	10x for Ca	Kareem	Confirms
42	P4977-05DL	ME29F8S	MS	12/13/24 15:52	10x for Ca	Kareem	Confirms
43	P4977-06DL	ME29F9	SAM	12/13/24 15:56	2x for Ca	Kareem	Confirms
44	P4977-07DL	ME29G0	SAM	12/13/24 15:59	2x for Ca	Kareem	Confirms
45	P4977-08DL	ME29G1	SAM	12/13/24 16:03	2x for Ca	Kareem	Confirms
46	P4977-09DL	ME29G2	SAM	12/13/24 16:07	2x for Ca	Kareem	Confirms
47	P4981-10	MBHJA7	SAM	12/13/24 16:11	Ca high	Kareem	Dilution
48	P4981-11	MBHJA8	SAM	12/13/24 16:15		Kareem	OK
49	P4981-12	MBHJA9	SAM	12/13/24 16:19	Ca high	Kareem	Dilution
50	P4981-13	MBHJC4	SAM	12/13/24 16:23		Kareem	OK
51	P4981-14	MBHJC5	SAM	12/13/24 16:27		Kareem	OK
52	P4981-15	MBHJC6	SAM	12/13/24 16:31		Kareem	OK
53	P4981-16	MBHJC7	SAM	12/13/24 16:34	Ca high	Kareem	Dilution
54	P4981-17	MBHJC8	SAM	12/13/24 16:38	Ca high	Kareem	Dilution
55	P4981-21	MBHJD0	SAM	12/13/24 16:42	Ca high	Kareem	Dilution
56	CCV009	CCV009	CCV	12/13/24 17:02		Kareem	OK
57	CCB009	CCB009	CCB	12/13/24 17:05		Kareem	OK
58	P4981-22	MBHJE8	SAM	12/13/24 17:09		Kareem	OK

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

Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB133949

Review By	Sarabjit Jaswal	Review On	12/16/2024 12:48:54 AM
Supervise By	Mohan Bera	Supervise On	12/16/2024 12:49:43 AM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	MP83567
LCS Standard	
Chk Standard	MP83513,MP83514

59	P4983-01	MBHJ97	SAM	12/13/24 17:13	Ca high	Kareem	Dilution
60	P4983-02	MBHJC3	SAM	12/13/24 17:17		Kareem	OK
61	P4983-03	MBHJE5	SAM	12/13/24 17:21		Kareem	OK
62	P4983-04	MBHJE6	SAM	12/13/24 17:24	Ca high	Kareem	Dilution
63	P4983-05	MBHJB6	SAM	12/13/24 17:28	Ca high	Kareem	Dilution
64	P4983-06	MBHJE7	SAM	12/13/24 17:32		Kareem	OK
65	P4983-07	MBHJF9	SAM	12/13/24 17:37	Ca high	Kareem	Dilution
66	P4880-14A	MBHH91A	PS	12/13/24 17:40	PS for Se - 0.07ml mp83567-10ml sample	Kareem	OK
67	P5042-01A	MBHKB0A	PS	12/13/24 17:44	Not Use - PS for Se - 0.07ml mp83567-10ml sample	Kareem	Not Ok
68	P5041-01A	MBHK78A	PS	12/13/24 17:48	PS for Se - 0.07ml mp83567-10ml sample	Kareem	OK
69	P5040-01A	MBHKD6A	PS	12/13/24 17:52	PS for Se - 0.07ml mp83567-10ml sample	Kareem	OK
70	P4905-02A	MBHHA6A	PS	12/13/24 17:56	PS for As - 0.0023ml m5801, Ba - 0.047ml m5387, Cu - 0.009ml m5751, Se - 0.07ml mp83567, Zn - 0.046ml m5819 - 10ml sample	Kareem	OK
71	P4907-01A	MBHHE1A	PS	12/13/24 17:59	Not use- PS for Be,Se(0.01ML MP83672,0.07ML MP83673-10ML SAMPLE)	Kareem	Not Ok
72	P4932-02A	MBHHQ2A	PS	12/13/24 18:03	PS for Zn - 0.05ml m5819 - 10ml sample	Kareem	OK

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Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB133949

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Supervise By	Mohan Bera	Supervise On	12/16/2024 12:49:43 AM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	MP83567
LCS Standard	
Chk Standard	MP83513,MP83514

73	P4933-20A	MBHHX4A	PS	12/13/24 18:07	PS for Se - 0.07ml mp83567, Zn - 0.039ml m5819 - 10ml sample	Kareem	OK
74	P4983-08	MBHJG0	SAM	12/13/24 18:11		Kareem	OK
75	P4983-09	MBHJG1	SAM	12/13/24 18:15		Kareem	OK
76	P4983-13	MBHJG3	SAM	12/13/24 18:18	Ca high	Kareem	Dilution
77	P4983-14	MBHJG4	SAM	12/13/24 18:22	Ca high	Kareem	Dilution
78	CCV010	CCV010	CCV	12/13/24 18:32		Kareem	OK
79	CCB010	CCB010	CCB	12/13/24 18:45	Inst. paused for review	Kareem	OK
80	P4983-15	MBHJG5	SAM	12/13/24 18:49	Ca high	Kareem	Dilution
81	P4983-16	MBHJG6	SAM	12/13/24 18:53	Ca high	Kareem	Dilution
82	P4983-17	MBHJG7	SAM	12/13/24 18:57	Ca high	Kareem	Dilution
83	P4983-18	MBHJG8	SAM	12/13/24 19:00	Ca high	Kareem	Dilution
84	P4983-19	MBHJG9	SAM	12/13/24 19:04	Ca high	Kareem	Dilution
85	P4983-20	MBHJH0	SAM	12/13/24 19:08	Ca high	Kareem	Dilution
86	P4983-21	MBHJH1	SAM	12/13/24 19:12		Kareem	OK
87	P4940-16DL	MBHHX8	SAM	12/13/24 19:16	2x for Ca	Kareem	Confirms
88	P4940-17DL	MBHHX8D	DUP	12/13/24 19:20	2x for Ca	Kareem	Confirms
89	P4940-16LDL	MBHHX8L	SD	12/13/24 19:24	10x for Ca	Kareem	Confirms
90	P4940-18DL	MBHHX8S	MS	12/13/24 19:28	2x for Ca	Kareem	Confirms
91	P4963-15DL	MBHJ13	SAM	12/13/24 19:31	5x for Ca	Kareem	Confirms

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Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB133949

Review By	Sarabjit Jaswal	Review On	12/16/2024 12:48:54 AM
Supervise By	Mohan Bera	Supervise On	12/16/2024 12:49:43 AM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	MP83567
LCS Standard	
Chk Standard	MP83513,MP83514

92	P4963-16DL	MBHJ13D	DUP	12/13/24 19:35	5x for Ca	Kareem	Confirms
93	P4963-15LDL	MBHJ13L	SD	12/13/24 19:39	25x for Ca	Kareem	Confirms
94	P4963-17DL	MBHJ13S	MS	12/13/24 19:43	Not USe	Kareem	Not Ok
95	P4964-01DL	MBHJ01	SAM	12/13/24 19:47	2x for Ca	Kareem	Confirms
96	P4964-02DL	MBHJ01D	DUP	12/13/24 19:51	2x for Ca	Kareem	Confirms
97	P4964-01LDL	MBHJ01L	SD	12/13/24 19:55	10x for Ca	Kareem	Confirms
98	P4964-03DL	MBHJ01S	MS	12/13/24 19:59	2x for Ca	Kareem	Confirms
99	P4981-18DL	MBHJC9	SAM	12/13/24 20:02	2x for Ca	Kareem	Confirms
100	CCV011	CCV011	CCV	12/13/24 20:18		Kareem	OK
101	CCB011	CCB011	CCB	12/13/24 20:22		Kareem	OK
102	P4981-19DL	MBHJC9D	DUP	12/13/24 20:26	2x for Ca	Kareem	Confirms
103	P4981-18LDL	MBHJC9L	SD	12/13/24 20:30	10x for Ca	Kareem	Confirms
104	P4981-20DL	MBHJC9S	MS	12/13/24 20:34	2x for Ca	Kareem	Confirms
105	P4932-01	MBHHQ1	SAM	12/13/24 20:38		Kareem	OK
106	P4932-05	MBHHQ3	SAM	12/13/24 20:42		Kareem	OK
107	P4932-06	MBHHQ4	SAM	12/13/24 20:45		Kareem	OK
108	P4932-07	MBHHQ5	SAM	12/13/24 20:49		Kareem	OK
109	P4932-08	MBHHQ6	SAM	12/13/24 20:53		Kareem	OK
110	P4932-09	MBHHQ7	SAM	12/13/24 20:57		Kareem	OK
111	P4932-10	MBHHQ8	SAM	12/13/24 21:00		Kareem	OK

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Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB133949

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Supervise By	Mohan Bera	Supervise On	12/16/2024 12:49:43 AM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	MP83567
LCS Standard	
Chk Standard	MP83513,MP83514

112	P4932-11	MBHHQ9	SAM	12/13/24 21:04		Kareem	OK
113	P4932-12	MBHHP1	SAM	12/13/24 21:08		Kareem	OK
114	P4932-13	MBHHP2	SAM	12/13/24 21:12		Kareem	OK
115	P4932-14	MBHHP3	SAM	12/13/24 21:16		Kareem	OK
116	P4932-15	MBHHP4	SAM	12/13/24 21:20		Kareem	OK
117	P4932-16	MBHHP5	SAM	12/13/24 21:23		Kareem	OK
118	P4932-17	MBHHP6	SAM	12/13/24 21:27		Kareem	OK
119	P4932-18	MBHHP7	SAM	12/13/24 21:31		Kareem	OK
120	P4932-19	MBHHP8	SAM	12/13/24 21:35		Kareem	OK
121	P4932-20	MBHHP9	SAM	12/13/24 21:39		Kareem	OK
122	CCV012	CCV012	CCV	12/13/24 21:59		Kareem	OK
123	CCB012	CCB012	CCB	12/13/24 22:03		Kareem	OK
124	P4932-21	MBHHQ0	SAM	12/13/24 22:07		Kareem	OK
125	P4932-22	MBHHR0	SAM	12/13/24 22:11		Kareem	OK
126	P4914-01	MBHHF2	SAM	12/13/24 22:15		Kareem	OK
127	P4914-02	MBHHF3	SAM	12/13/24 22:18		Kareem	OK
128	P4914-03	MBHHF4	SAM	12/13/24 22:22		Kareem	OK
129	P4914-04	MBHHF5	SAM	12/13/24 22:26		Kareem	OK
130	P4914-05	MBHHF6	SAM	12/13/24 22:30		Kareem	OK
131	P4914-06	MBHHF7	SAM	12/13/24 22:33		Kareem	OK

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Instrument ID: P5

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Supervise By	Mohan Bera	Supervise On	12/16/2024 12:49:43 AM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	MP83567
LCS Standard	
Chk Standard	MP83513,MP83514

132	P4914-07	MBHHF8	SAM	12/13/24 22:37		Kareem	OK
133	P4914-08	MBHHF9	SAM	12/13/24 22:41		Kareem	OK
134	P4914-09	MBHHG0	SAM	12/13/24 22:45		Kareem	OK
135	P4914-10	MBHHG1	SAM	12/13/24 22:49		Kareem	OK
136	P4914-14	MBHHK5	SAM	12/13/24 22:52		Kareem	OK
137	P4914-15	MBHHK6	SAM	12/13/24 22:56		Kareem	OK
138	P4914-16	MBHHK7	SAM	12/13/24 23:00		Kareem	OK
139	P4914-17	MBHHK8	SAM	12/13/24 23:04		Kareem	OK
140	P4914-18	MBHHK9	SAM	12/13/24 23:08		Kareem	OK
141	P4914-19	MBHHL0	SAM	12/13/24 23:11		Kareem	OK
142	P4914-20	MBHHL1	SAM	12/13/24 23:15		Kareem	OK
143	P4914-21	MBHHL2	SAM	12/13/24 23:19		Kareem	OK
144	CCV013	CCV013	CCV	12/13/24 23:27		Kareem	OK
145	CCB013	CCB013	CCB	12/13/24 23:35	Inst. paused for review	Kareem	OK
146	P4914-22	MBHHL3	SAM	12/13/24 23:39		Kareem	OK
147	P5007-10A	MBHJZ7A	PS	12/13/24 23:42	NOT USE	Kareem	Not Ok
148	P5007-15DL	MBHK00	SAM	12/13/24 23:46	NOT USE	Kareem	Not Ok
149	P5014-12A	MBHJY0A	PS	12/13/24 23:50	NOT USE	Kareem	Not Ok
150	P5015-17A	MBHKQ6A	PS	12/13/24 23:54	NOT USE	Kareem	Not Ok

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Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB133949

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Supervise By	Mohan Bera	Supervise On	12/16/2024 12:49:43 AM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	MP83567
LCS Standard	
Chk Standard	MP83513,MP83514

151	P4940-16A	MBHHX8A	PS	12/13/24 23:58	PS for Se,Zn(0.07ML MP83673,0.016ML M5819-10ML SAMPLE)	Kareem	OK
152	P4963-15A	MBHJ13A	PS	12/14/24 00:01	PS for Se(0.07ML MP83673-10ML SAMPLE)	Kareem	OK
153	P4964-01A	MBHJ01A	PS	12/14/24 00:05	PS for Se,Zn(0.07ML MP83673,0.033ML M5819-10ML SAMPLE)	Kareem	OK
154	P4981-18A	MBHJC9A	PS	12/14/24 00:09	PS for Se,Zn(0.07ML MP83673,0.016ML M5819-10ML SAMPLE)	Kareem	OK
155	P4983-10A	MBHJG2A	PS	12/14/24 00:13	PS for Se(0.07ML MP83673-10ML SAMPLE)	Kareem	OK
156	P5015-05DL	MBHKK0	SAM	12/14/24 00:17	NOT USE	Kareem	Not Ok
157	P5015-08DL	MBHKK3	SAM	12/14/24 00:21	NOT USE	Kareem	Not Ok
158	P5015-09DL	MBHKK4	SAM	12/14/24 00:25	NOT USE	Kareem	Not Ok
159	P5015-14DL	MBHKQ2	SAM	12/14/24 00:29	NOT USE	Kareem	Not Ok
160	P4963-18DL	MBHJ14	SAM	12/14/24 00:32	Not Use	Kareem	Not Ok
161	P4963-19DL	MBHJ15	SAM	12/14/24 00:36	2x for Ca,Mg, Still Ca high	Kareem	Dilution
162	P4963-20DL	MBHJ16	SAM	12/14/24 00:40	2x for Ca,Mg, Still Ca high	Kareem	Dilution
163	P4963-21DL	MBHJ17	SAM	12/14/24 00:44	Not use	Kareem	Not Ok
164	P4963-22DL	MBHJ18	SAM	12/14/24 00:48	2x for Ca	Kareem	Confirms
165	CCV014	CCV014	CCV	12/14/24 01:00		Kareem	OK
166	CCB014	CCB014	CCB	12/14/24 01:03		Kareem	OK
167	P4981-01DL	MBHJ56	SAM	12/14/24 01:07	2x for Ca	Kareem	Confirms

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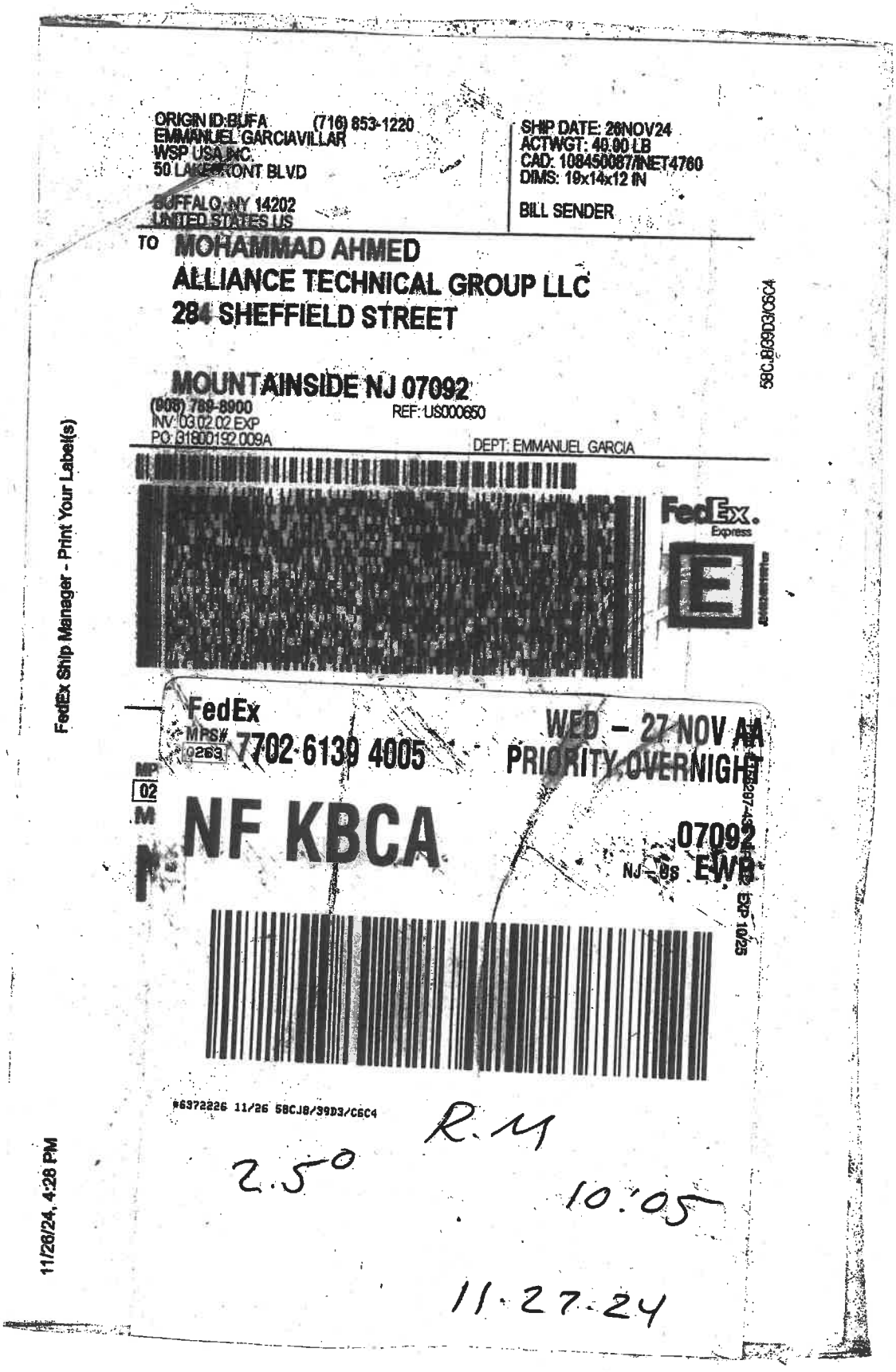
Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB133949

Review By	Sarabjit Jaswal	Review On	12/16/2024 12:48:54 AM
Supervise By	Mohan Bera	Supervise On	12/16/2024 12:49:43 AM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	MP83567
LCS Standard	
Chk Standard	MP83513,MP83514

168	P4981-02DL	MBHJ57	SAM	12/14/24 01:11	2x for Ca	Kareem	Confirms
169	P4981-03DL	MBHJ58	SAM	12/14/24 01:15	2x for Ca,Mg, Still Ca high	Kareem	Dilution
170	P4981-04DL	MBHJ59	SAM	12/14/24 01:19	2x for Ca,Mg, Still Ca high	Kareem	Dilution
171	P4981-05DL	MBHJ60	SAM	12/14/24 01:23	2x for Ca,Mg, Still Ca high	Kareem	Dilution
172	P4981-06DL	MBHJ61	SAM	12/14/24 01:27	2x for Ca	Kareem	Confirms
173	P4981-07DL	MBHJ62	SAM	12/14/24 01:30	NOT USE	Kareem	Not Ok
174	P4963-18DL2	MBHJ14	SAM	12/14/24 01:34	5x for Ca	Kareem	Confirms
175	P4963-19DL2	MBHJ15	SAM	12/14/24 01:38	5x for Ca	Kareem	Confirms
176	P4963-20DL2	MBHJ16	SAM	12/14/24 01:42	5x for Ca	Kareem	Confirms
177	P4963-21DL2	MBHJ17	SAM	12/14/24 01:46	5x for Ca	Kareem	Confirms
178	P4963-22DL2	MBHJ18	SAM	12/14/24 01:50	NOT USE	Kareem	Not Ok
179	P4981-03DL2	MBHJ58	SAM	12/14/24 01:54	5x for Ca	Kareem	Confirms
180	P4981-04DL2	MBHJ59	SAM	12/14/24 01:57	5x for Ca	Kareem	Confirms
181	P4981-05DL2	MBHJ60	SAM	12/14/24 02:01	5x for Ca	Kareem	Confirms
182	CCV015	CCV015	CCV	12/14/24 02:06		Kareem	OK
183	CCB015	CCB015	CCB	12/14/24 02:10		Kareem	OK



ORIGIN ID:BUFA (716) 853-1220
EMMANUEL GARCIAVILLAR
WSP USA INC.
50 LAKEFRONT BLVD

BUFFALO, NY 14202
UNITED STATES US

SHIP DATE: 26NOV24
ACTWGT: 40.00 LB
CAD: 108450087/INET4760
DIMS: 19x14x12 IN

BILL SENDER

TO MOHAMMAD AHMED
ALLIANCE TECHNICAL GROUP LLC
284 SHEFFIELD STREET

MOUNTAINSIDE NJ 07092
(908) 789-8900
INV: 03.02.02 EXP
PO: 81800192 009A

REF: US000650

DEPT: EMMANUEL GARCIA

58CJB/39D3/C6C4

FedEx Express

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MPS# 0263 7702 6139 4005

WED - 27 NOV AA
PRIORITY OVERNIGHT

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EXP 10/25

#6372226 11/26 58CJB/39D3/C6C4

FedEx Ship Manager - Print Your Label(s)

11/26/24, 4:28 PM

R.M

2.50

10.05

11.27.24

284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Login Summary Report

Order ID :	P5041	Order Date :	11/27/2024 10:05:00 AM	Project Mgr :	Deepak
Client :	USEPA CLP SMO	Project :	51879	Report Type :	USEPA CLP
Contact :	Anita Kapadia	Receive Date :	11/27/2024 10:05:00 AM	EDD Type :	EPA CLP
Date Sign Off :	12/3/2024 10:45:21 AM				

Sample ID	Client ID	Matrix	Sampling Date	Test	Test Group	Method	TAT Days	Fax Due Date	HC Due Date
P5041-01	MBHK78	Solid	11/21/2024						
				Metals CLP Full		SFAM_AES	15	01/01/2025	01/01/2025
				Percent Solids		Chemtech -SOP	15	01/01/2025	01/01/2025
P5041-02	MBHK78D	Solid	11/21/2024						
				Metals CLP Full		SFAM_AES	15	01/01/2025	01/01/2025
				Percent Solids		Chemtech -SOP	15	01/01/2025	01/01/2025
P5041-03	MBHK78S	Solid	11/21/2024						
				Metals CLP Full		SFAM_AES	15	01/01/2025	01/01/2025
				Percent Solids		Chemtech -SOP	15	01/01/2025	01/01/2025

WORKLIST(Hardcopy Internal Chain)

WorkList Name : PB165364 **WorkList ID :** 185965 **Department :** Digestion **Date :** 12-04-2024 10:56:42

5096

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P5040-01	MBHKD6	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C11	11/20/2024	SFAM_AES
P5040-02	MBHKD6D	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C11	11/20/2024	SFAM_AES
P5040-03	MBHKD6S	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C11	11/20/2024	SFAM_AES
P5041-01	MBHK78	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C11	11/20/2024	SFAM_AES
P5041-02	MBHK78D	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C11	11/21/2024	SFAM_AES
P5041-03	MBHK78S	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C11	11/21/2024	SFAM_AES
P5042-01	MBHKB0	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C11	11/21/2024	SFAM_AES
P5042-02	MBHKB0D	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C21	11/20/2024	SFAM_AES
P5042-03	MBHKB0S	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C21	11/20/2024	SFAM_AES
P5043-01	MBHKM2	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C21	11/20/2024	SFAM_AES
P5043-02	MBHKM2D	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C12	11/20/2024	SFAM_AES
P5043-03	MBHKM2S	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C12	11/20/2024	SFAM_AES

Date/Time 12/04/24 11:30

Raw Sample Received by: JSP (Met dlvy) CP

Raw Sample Relinquished by: CP

Date/Time 12/04/24 12:30

Raw Sample Received by: CP

Raw Sample Relinquished by: JSP (Met dlvy)