SDG COVER PAGE

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

Lab Code: ACE Case No.: 51879 MA No.: SDG No.: MBHMQ0

SOW No. : SFAM01.1

EPA Sample No.	Lab Sample Id	Analysis Method ICP-AES	ICP-MS	Mercury	Cyanide
MBHMQ0	P5199-01	X			
MBHMQ1	P5199-02	X			
MBHMQ2	P5199-03	X			
MBHMQ3	P5199-04	X			
MBHMQ3D	P5199-05	X			
MBHMQ3S	P5199-06	X			
MBHMQ4	P5199-07	X			
MBHMQ5	P5199-08	X			
MBHMQ6	P5199-09	X			
MBHMT1	P5199-10	X			
MBHMT2	P5199-11	X			
MBHMT3	P5199-12	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 # MBHMQ0

USEPA CLP COC (LAB COPY)

DateShipped: 12/5/2024

CarrierName: FedEx

AirbillNo: 7705 5865 8740

CHAIN OF CUSTODY RECORD

Case #: 51879

Cooler #: 2

No: 2-120524-112527-0053

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
P179-SB-08-Z00-02	MBHMQ0	Soil/		ICP-AES(35)	5182 (Wet ice < 6 C) (1)	P179-SB-08	11/22/2024 10:20	
P179-SB-08-Z02-06	MBHMQ1	Soil/		ICP-AES(35)	5183 (Wet ice < 6 C) (1)	P179-SB-08	11/22/2024 10:20	
P179-SB-08-Z06-12	MBHMQ2	Soil/		ICP-AES(35)	5184 (Wet ice < 6 C) (1)	P179-SB-08	11/22/2024 10:20	
P179-SB-08-Z12-18	MBHMQ3	Soil/		ICP-AES(35)	5185 (Wet ice < 6 C) (1)	P179-SB-08	11/22/2024 10:20	
P179-SB-08-Z18-24	MBHMQ4	Soil/		ICP-AES(35)	5186 (Wet ice < 6 C) (1)	P179-SB-08	11/22/2024 10:20	
P179-SB-08-Z24-30	MBHMQ5	Soil/		ICP-AES(35)	5187 (Wet ice < 6 C) (1)	P179-SB-08	11/22/2024 10:20	
P179-SB-08-Z30-36	MBHMQ6	Soil/		ICP-AES(35)	5188 (Wet ice < 6 C) (1)	P179-SB-08	11/22/2024 10:20	
P179-SB-04-Z00-02	MBHMT1	Soil/		ICP-AES(35)	5104 (Wet ice < 6 C) (1)	P179-SB-04	11/22/2024 09:50	
P179-SB-04-Z02-06	MBHMT2	Soil/		ICP-AES(35)	5105 (Wet ice < 6 C) (1)	P179-SB-04	11/22/2024 09:50	
P179-SB-04-Z06-12	MBHMT3	Soil/		ICP-AES(35)	5106 (Wet ice < 6 C) (1)	P179-SB-04	11/22/2024 09:50	

Sample(s) to be used for Lab QC: P179-SB-08-Z12-18 Tag 5185 - Special Instructions: Samples MBHMQ3 and MBHMX3 are MS/MSDs. Sample MBHMT2 had 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	[signature] USP	12/06/24 16:40	[signature]	12/7/24	2.5° Iden #1
				9:55	Temp blank Iden
		UPS	[signature]		Custody Seal Iden
			12/06/24		

FORM DC-1

SAMPLE LOG-IN SHEET

Lab Name : Alliance Technical Group, LLC		Page 1 of 1
Received By (Print Name) Jessenova Pena		Log-in Date 12/7/2024
Received By (Signature)		
Case Number 51879	SDG No. MBHMQ0	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.	770558658740 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	12/07/2024
12.Time Received	09:55

	EPA Sample #	Aqueous/ Water Sample pH	Corresponding Sample Tag #	Corresponding Assigned Lab #	Remarks: Condition of Sample Shipment, etc.
1	MBHMQ0	N/A	5182	P5199-01	Intact
2	MBHMQ1	N/A	5183	P5199-02	Intact
3	MBHMQ2	N/A	5184	P5199-03	Intact
4	MBHMQ3	N/A	5185	P5199-04	Intact
5	MBHMQ3D	N/A	5185	P5199-05	Intact
6	MBHMQ3S	N/A	5185	P5199-06	Intact
7	MBHMQ4	N/A	5186	P5199-07	Intact
8	MBHMQ5	N/A	5187	P5199-08	Intact
9	MBHMQ6	N/A	5188	P5199-09	Intact
10	MBHMT1	N/A	5104	P5199-10	Intact
11	MBHMT2	N/A	5105	P5199-11	Intact
12	MBHMT3	N/A	5106	P5199-12	Intact
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	12/9/24	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.	**MBHMQ0**
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	21	✓	
9. Instrument raw data by instrument in analysis order	22	282	✓	
Other Data				
10. Standard and Reagent Preparation Logs	283	421	✓	
11. Original Preparation and Cleanup forms or copies of Preparation and Cleanup Logbooks	422	423	✓	
12. Original Analysis or Instrument Run forms or copies of Analysis or Instrument Logbooks	424	430	✓	
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)	431	431	✓	
Sample Tags	NA	NA	✓	
Sample Log-In Sheet (Lab)	432	433	✓	
45. Misc. Shipping/Receiving Records (list all individual records)				
	NA	NA	✓	
46. Internal Lab Sample Transfer Records and Tracking Sheets (describe or list)				
	434	434	✓	
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 # MBHMQ0
CASE # 51879
CONTRACT # 68HERH20D0011
SOW# SFAM01.1
LAB NAME: Alliance Technical Group, LLC
LAB CODE: ACE
LAB ORDER ID # P5199

A. Number of Samples and Date of Receipt

10 Soil sample were delivered to the laboratory intact on 12/07/2024.

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 MBHMQ0 For Antimony:

If C = 0.0309128 ppm
Vf = 100 ml
W = 1.40 g
S = 0.742(74.2/100)
DF = 1

$$\text{Concentration (mg/kg)} = 0.0309128 \times \frac{100}{1.40 \times 0.742} \times 1$$

$$= 2.9758 \text{ mg/kg}$$

= 3.0 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, Arsenic, Selenium, Silver, Thallium. Duplicate sample did meet requirements. Serial Dilution did meet requirements except for Aluminum, Barium, Beryllium, Calcium, Chromium, Copper, Iron, Magnesium, Manganese, Zinc.

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: Iwona
Analyst: jignesh
Date: 12/12/2024

OVENTEMP IN Celsius(°C): 107
Time IN: 12:15
In Date: 12/11/2024
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 07:25
Out Date: 12/12/2024
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLID- OVEN

QC: LB133877

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
P5199-01	MBHMQ0	1	1.15	8.61	9.76	7.54	74.2	
P5199-02	MBHMQ1	2	1.15	8.70	9.85	7.96	78.3	
P5199-03	MBHMQ2	3	1.12	8.60	9.72	8.6	87.0	
P5199-04	MBHMQ3	4	1.17	8.60	9.77	8.35	83.5	
P5199-05	MBHMQ3D	5	1.17	8.60	9.77	8.35	83.5	
P5199-06	MBHMQ3S	6	1.17	8.60	9.77	8.35	83.5	
P5199-07	MBHMQ4	7	1.16	8.50	9.66	8.47	86.0	
P5199-08	MBHMQ5	8	1.15	8.74	9.89	8.98	89.6	
P5199-09	MBHMQ6	9	1.18	8.45	9.63	8.76	89.7	
P5199-10	MBHMT1	10	1.16	8.40	9.56	6.43	62.7	
P5199-11	MBHMT2	11	1.15	8.44	9.59	6.74	66.2	
P5199-12	MBHMT3	12	1.16	8.58	9.74	7.41	72.8	

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

WORKLIST(Hardcopy Internal Chain)

VA 133877

WorkList Name : %1-p5199 **WorkList ID :** 186217 **Department :** Wet-Chemistry **Date :** 12-11-2024 09:13:29

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P5199-01	MBHMQ0	Solid	Percent Solids	Cool 4 deg C	USEP01	C12	11/22/2024	Chemtech -SO
P5199-02	MBHMQ1	Solid	Percent Solids	Cool 4 deg C	USEP01	C12	11/22/2024	Chemtech -SO
P5199-03	MBHMQ2	Solid	Percent Solids	Cool 4 deg C	USEP01	C12	11/22/2024	Chemtech -SO
P5199-04	MBHMQ3	Solid	Percent Solids	Cool 4 deg C	USEP01	C12	11/22/2024	Chemtech -SO
P5199-05	MBHMQ3D	Solid	Percent Solids	Cool 4 deg C	USEP01	C12	11/22/2024	Chemtech -SO
P5199-06	MBHMQ3S	Solid	Percent Solids	Cool 4 deg C	USEP01	C12	11/22/2024	Chemtech -SO
P5199-07	MBHMQ4	Solid	Percent Solids	Cool 4 deg C	USEP01	C12	11/22/2024	Chemtech -SO
P5199-08	MBHMQ5	Solid	Percent Solids	Cool 4 deg C	USEP01	C12	11/22/2024	Chemtech -SO
P5199-09	MBHMQ6	Solid	Percent Solids	Cool 4 deg C	USEP01	C12	11/22/2024	Chemtech -SO
P5199-10	MBHMT1	Solid	Percent Solids	Cool 4 deg C	USEP01	C12	11/22/2024	Chemtech -SO
P5199-11	MBHMT2	Solid	Percent Solids	Cool 4 deg C	USEP01	C12	11/22/2024	Chemtech -SO
P5199-12	MBHMT3	Solid	Percent Solids	Cool 4 deg C	USEP01	C12	11/22/2024	Chemtech -SO

11

Date/Time 12-11-24 11:40

Raw Sample Received by: JP (COC)

Raw Sample Relinquished by: RM SM

Date/Time 12-11-24 12:20

Raw Sample Received by: RM SM

Raw Sample Relinquished by: JP (COC)

EPA SAMPLE NO.

MBHMQ0

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.: MBHMQ0

Matrix: SOIL Lab Sample ID: P5199-01

% Solids: 74.2 Date Received: 12/07/2024

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	8400	*	01/08/2025	2320
7440-36-0	Antimony	3.0	J*	01/08/2025	2320
7440-38-2	Arsenic	18	*	01/08/2025	2320
7440-39-3	Barium	87	*	01/08/2025	2320
7440-41-7	Beryllium	1.0	*	01/08/2025	2320
7440-43-9	Cadmium	0.71		01/08/2025	2320
7440-70-2	Calcium	3500	*	01/08/2025	2320
7440-47-3	Chromium	12	*	01/08/2025	2320
7440-48-4	Cobalt	12		01/08/2025	2320
7440-50-8	Copper	30	*	01/08/2025	2320
7439-89-6	Iron	18000	*	01/08/2025	2320
7439-92-1	Lead	67		01/08/2025	2320
7439-95-4	Magnesium	1800	*	01/08/2025	2320
7439-96-5	Manganese	810	*	01/08/2025	2320
7440-02-0	Nickel	17		01/08/2025	2320
7440-09-7	Potassium	210	J	01/08/2025	2320
7782-49-2	Selenium	11	*	01/08/2025	2320
7440-22-4	Silver	0.96	U*	01/08/2025	2320
7440-23-5	Sodium	480	U	01/08/2025	2320
7440-28-0	Thallium	2.4	U*	01/08/2025	2320
7440-62-2	Vanadium	19		01/08/2025	2320
7440-66-6	Zinc	110	*	01/08/2025	2320

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

Comments:

EPA SAMPLE NO.

MBHMQ1

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.: MBHMQ0

Matrix: SOIL Lab Sample ID: P5199-02

% Solids: 78.3 Date Received: 12/07/2024

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	8100	*	01/08/2025	2323
7440-36-0	Antimony	2.2	J*	01/08/2025	2323
7440-38-2	Arsenic	16	*	01/08/2025	2323
7440-39-3	Barium	79	*	01/08/2025	2323
7440-41-7	Beryllium	0.98	*	01/08/2025	2323
7440-43-9	Cadmium	0.58		01/08/2025	2323
7440-70-2	Calcium	3200	*	01/08/2025	2323
7440-47-3	Chromium	11	*	01/08/2025	2323
7440-48-4	Cobalt	11		01/08/2025	2323
7440-50-8	Copper	29	*	01/08/2025	2323
7439-89-6	Iron	17000	*	01/08/2025	2323
7439-92-1	Lead	59		01/08/2025	2323
7439-95-4	Magnesium	1700	*	01/08/2025	2323
7439-96-5	Manganese	750	*	01/08/2025	2323
7440-02-0	Nickel	15		01/08/2025	2323
7440-09-7	Potassium	85	J	01/08/2025	2323
7782-49-2	Selenium	10	*	01/08/2025	2323
7440-22-4	Silver	0.93	U*	01/08/2025	2323
7440-23-5	Sodium	470	U	01/08/2025	2323
7440-28-0	Thallium	2.3	U*	01/08/2025	2323
7440-62-2	Vanadium	18		01/08/2025	2323
7440-66-6	Zinc	79	*	01/08/2025	2323

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

Comments:

EPA SAMPLE NO.

MBHMQ2

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.: MBHMQ0

Matrix: SOIL Lab Sample ID: P5199-03

% Solids: 87 Date Received: 12/07/2024

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	9200	*	01/08/2025	2327
7440-36-0	Antimony	3.9	J*	01/08/2025	2327
7440-38-2	Arsenic	17	*	01/08/2025	2327
7440-39-3	Barium	56	*	01/08/2025	2327
7440-41-7	Beryllium	1.3	*	01/08/2025	2327
7440-43-9	Cadmium	0.26	J	01/08/2025	2327
7440-70-2	Calcium	2600	*	01/08/2025	2327
7440-47-3	Chromium	11	*	01/08/2025	2327
7440-48-4	Cobalt	13		01/08/2025	2327
7440-50-8	Copper	33	*	01/08/2025	2327
7439-89-6	Iron	25000	*	01/08/2025	2327
7439-92-1	Lead	36		01/08/2025	2327
7439-95-4	Magnesium	1700	*	01/08/2025	2327
7439-96-5	Manganese	600	*	01/08/2025	2327
7440-02-0	Nickel	12		01/08/2025	2327
7440-09-7	Potassium	460	U	01/08/2025	2327
7782-49-2	Selenium	15	*	01/08/2025	2327
7440-22-4	Silver	0.92	U*	01/08/2025	2327
7440-23-5	Sodium	460	U	01/08/2025	2327
7440-28-0	Thallium	2.3	U*	01/08/2025	2327
7440-62-2	Vanadium	20		01/08/2025	2327
7440-66-6	Zinc	68	*	01/08/2025	2327

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

Comments:

EPA SAMPLE NO.

MBHMQ3

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.: MBHMQ0

Matrix: SOIL Lab Sample ID: P5199-04

% Solids: 83.5 Date Received: 12/07/2024

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	8900	*	01/08/2025	1954
7440-36-0	Antimony	3.8	J*	01/08/2025	1954
7440-38-2	Arsenic	28	*	01/08/2025	1954
7440-39-3	Barium	80	*	01/08/2025	1954
7440-41-7	Beryllium	1.2	*	01/08/2025	1954
7440-43-9	Cadmium	0.78		01/08/2025	1954
7440-70-2	Calcium	3100	*	01/08/2025	1954
7440-47-3	Chromium	12	*	01/08/2025	1954
7440-48-4	Cobalt	23		01/08/2025	1954
7440-50-8	Copper	65	*	01/08/2025	1954
7439-89-6	Iron	26000	*	01/08/2025	1954
7439-92-1	Lead	79		01/08/2025	1954
7439-95-4	Magnesium	1900	*	01/08/2025	1954
7439-96-5	Manganese	1800	*	01/08/2025	1954
7440-02-0	Nickel	25		01/08/2025	1954
7440-09-7	Potassium	430	U	01/08/2025	1954
7782-49-2	Selenium	16	*	01/08/2025	1954
7440-22-4	Silver	0.87	U*	01/08/2025	1954
7440-23-5	Sodium	430	U	01/08/2025	1954
7440-28-0	Thallium	2.2	U*	01/08/2025	1954
7440-62-2	Vanadium	13		01/08/2025	1954
7440-66-6	Zinc	110	*	01/08/2025	1954

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

Comments:

EPA SAMPLE NO.

MBHMQ4

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.: MBHMQ0

Matrix: SOIL Lab Sample ID: P5199-07

% Solids: 86 Date Received: 12/07/2024

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	6900	*	01/08/2025	2331
7440-36-0	Antimony	2.2	J*	01/08/2025	2331
7440-38-2	Arsenic	19	*	01/08/2025	2331
7440-39-3	Barium	89	*	01/08/2025	2331
7440-41-7	Beryllium	0.95	*	01/08/2025	2331
7440-43-9	Cadmium	0.54		01/08/2025	2331
7440-70-2	Calcium	50000	*	01/08/2025	2331
7440-47-3	Chromium	11	*	01/08/2025	2331
7440-48-4	Cobalt	17		01/08/2025	2331
7440-50-8	Copper	43	*	01/08/2025	2331
7439-89-6	Iron	20000	*	01/08/2025	2331
7439-92-1	Lead	38		01/08/2025	2331
7439-95-4	Magnesium	3700	*	01/08/2025	2331
7439-96-5	Manganese	1500	*	01/08/2025	2331
7440-02-0	Nickel	20		01/08/2025	2331
7440-09-7	Potassium	110	J	01/08/2025	2331
7782-49-2	Selenium	9.4	*	01/08/2025	2331
7440-22-4	Silver	0.86	U*	01/08/2025	2331
7440-23-5	Sodium	87	J	01/08/2025	2331
7440-28-0	Thallium	2.1	U*	01/08/2025	2331
7440-62-2	Vanadium	15		01/08/2025	2331
7440-66-6	Zinc	43	*	01/08/2025	2331

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

Comments:

EPA SAMPLE NO.

MBHMQ5

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.: MBHMQ0

Matrix: SOIL Lab Sample ID: P5199-08

% Solids: 89.6 Date Received: 12/07/2024

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	6000	*	01/08/2025	2335
7440-36-0	Antimony	2.2	J*	01/08/2025	2335
7440-38-2	Arsenic	15	*	01/08/2025	2335
7440-39-3	Barium	130	*	01/08/2025	2335
7440-41-7	Beryllium	0.76	*	01/08/2025	2335
7440-43-9	Cadmium	0.44		01/08/2025	2335
7440-70-2	Calcium	39000	*	01/08/2025	2335
7440-47-3	Chromium	9.5	*	01/08/2025	2335
7440-48-4	Cobalt	16		01/08/2025	2335
7440-50-8	Copper	30	*	01/08/2025	2335
7439-89-6	Iron	17000	*	01/08/2025	2335
7439-92-1	Lead	27		01/08/2025	2335
7439-95-4	Magnesium	4600	*	01/08/2025	2335
7439-96-5	Manganese	1500	*	01/08/2025	2335
7440-02-0	Nickel	19		01/08/2025	2335
7440-09-7	Potassium	400	U	01/08/2025	2335
7782-49-2	Selenium	8.2	*	01/08/2025	2335
7440-22-4	Silver	0.79	U*	01/08/2025	2335
7440-23-5	Sodium	78	J	01/08/2025	2335
7440-28-0	Thallium	2.0	U*	01/08/2025	2335
7440-62-2	Vanadium	10		01/08/2025	2335
7440-66-6	Zinc	40	*	01/08/2025	2335

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

Comments:

EPA SAMPLE NO.

MBHMQ6

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.: MBHMQ0

Matrix: SOIL Lab Sample ID: P5199-09

% Solids: 89.7 Date Received: 12/07/2024

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	6000	*	01/08/2025	2339
7440-36-0	Antimony	1.8	J*	01/08/2025	2339
7440-38-2	Arsenic	17	*	01/08/2025	2339
7440-39-3	Barium	100	*	01/08/2025	2339
7440-41-7	Beryllium	0.76	*	01/08/2025	2339
7440-43-9	Cadmium	0.39	J	01/08/2025	2339
7440-70-2	Calcium	31000	*	01/08/2025	2339
7440-47-3	Chromium	9.5	*	01/08/2025	2339
7440-48-4	Cobalt	17		01/08/2025	2339
7440-50-8	Copper	35	*	01/08/2025	2339
7439-89-6	Iron	17000	*	01/08/2025	2339
7439-92-1	Lead	24		01/08/2025	2339
7439-95-4	Magnesium	2800	*	01/08/2025	2339
7439-96-5	Manganese	1600	*	01/08/2025	2339
7440-02-0	Nickel	19		01/08/2025	2339
7440-09-7	Potassium	420	U	01/08/2025	2339
7782-49-2	Selenium	9.0	*	01/08/2025	2339
7440-22-4	Silver	0.83	U*	01/08/2025	2339
7440-23-5	Sodium	81	J	01/08/2025	2339
7440-28-0	Thallium	2.1	U*	01/08/2025	2339
7440-62-2	Vanadium	8.8		01/08/2025	2339
7440-66-6	Zinc	43	*	01/08/2025	2339

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

Comments:

EPA SAMPLE NO.

MBHMT1

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.: MBHMQ0

Matrix: SOIL Lab Sample ID: P5199-10

% Solids: 62.7 Date Received: 12/07/2024

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	8000	*	01/08/2025	2342
7440-36-0	Antimony	2.6	J*	01/08/2025	2342
7440-38-2	Arsenic	18	*	01/08/2025	2342
7440-39-3	Barium	120	*	01/08/2025	2342
7440-41-7	Beryllium	1.0	*	01/08/2025	2342
7440-43-9	Cadmium	0.68		01/08/2025	2342
7440-70-2	Calcium	5400	*	01/08/2025	2342
7440-47-3	Chromium	14	*	01/08/2025	2342
7440-48-4	Cobalt	11		01/08/2025	2342
7440-50-8	Copper	43	*	01/08/2025	2342
7439-89-6	Iron	17000	*	01/08/2025	2342
7439-92-1	Lead	120		01/08/2025	2342
7439-95-4	Magnesium	2100	*	01/08/2025	2342
7439-96-5	Manganese	640	*	01/08/2025	2342
7440-02-0	Nickel	18		01/08/2025	2342
7440-09-7	Potassium	930		01/08/2025	2342
7782-49-2	Selenium	10	*	01/08/2025	2342
7440-22-4	Silver	1.1	U*	01/08/2025	2342
7440-23-5	Sodium	550	U	01/08/2025	2342
7440-28-0	Thallium	2.8	U*	01/08/2025	2342
7440-62-2	Vanadium	20		01/08/2025	2342
7440-66-6	Zinc	96	*	01/08/2025	2342

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

Comments:

EPA SAMPLE NO.

MBHMT2

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.: MBHMQ0

Matrix: SOIL Lab Sample ID: P5199-11

% Solids: 66.2 Date Received: 12/07/2024

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	7600	*	01/08/2025	2346
7440-36-0	Antimony	2.6	J*	01/08/2025	2346
7440-38-2	Arsenic	15	*	01/08/2025	2346
7440-39-3	Barium	110	*	01/08/2025	2346
7440-41-7	Beryllium	0.87	*	01/08/2025	2346
7440-43-9	Cadmium	0.64		01/08/2025	2346
7440-70-2	Calcium	4700	*	01/08/2025	2346
7440-47-3	Chromium	13	*	01/08/2025	2346
7440-48-4	Cobalt	11		01/08/2025	2346
7440-50-8	Copper	38	*	01/08/2025	2346
7439-89-6	Iron	16000	*	01/08/2025	2346
7439-92-1	Lead	110		01/08/2025	2346
7439-95-4	Magnesium	2200	*	01/08/2025	2346
7439-96-5	Manganese	690	*	01/08/2025	2346
7440-02-0	Nickel	16		01/08/2025	2346
7440-09-7	Potassium	500	J	01/08/2025	2346
7782-49-2	Selenium	9.9	*	01/08/2025	2346
7440-22-4	Silver	1.1	U*	01/08/2025	2346
7440-23-5	Sodium	570	U	01/08/2025	2346
7440-28-0	Thallium	2.8	U*	01/08/2025	2346
7440-62-2	Vanadium	19		01/08/2025	2346
7440-66-6	Zinc	87	*	01/08/2025	2346

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

Comments:

EPA SAMPLE NO.

MBHMT3

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.: MBHMQ0

Matrix: SOIL Lab Sample ID: P5199-12

% Solids: 72.8 Date Received: 12/07/2024

Analytical Method: ICP_AES

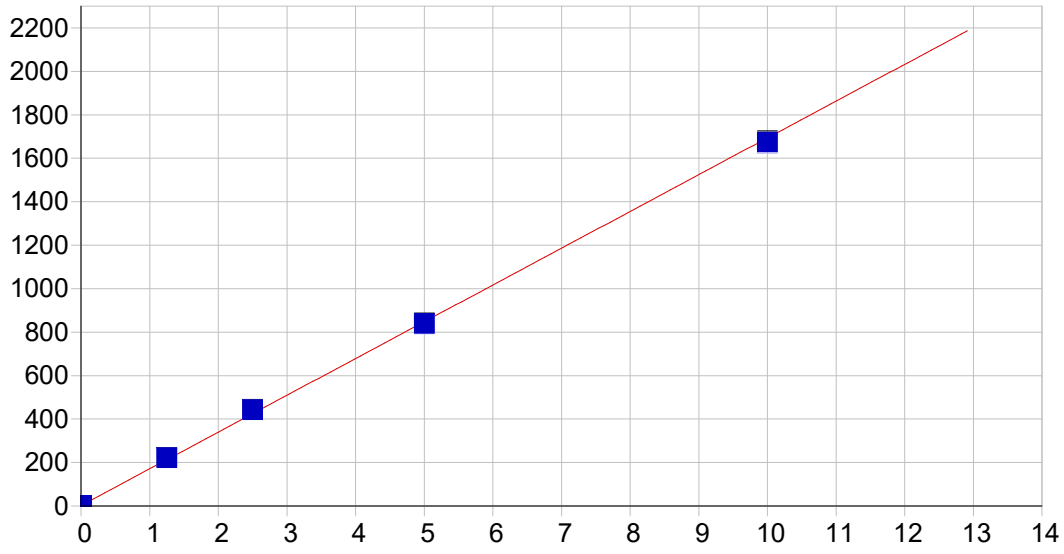
Concentration Units (µg/L, mg/L, mg/kg dry weight, µg, or µg/cm²): mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	7600	*	01/08/2025	2350
7440-36-0	Antimony	2.2	J*	01/08/2025	2350
7440-38-2	Arsenic	17	*	01/08/2025	2350
7440-39-3	Barium	140	*	01/08/2025	2350
7440-41-7	Beryllium	0.93	*	01/08/2025	2350
7440-43-9	Cadmium	0.77		01/08/2025	2350
7440-70-2	Calcium	4000	*	01/08/2025	2350
7440-47-3	Chromium	14	*	01/08/2025	2350
7440-48-4	Cobalt	11		01/08/2025	2350
7440-50-8	Copper	37	*	01/08/2025	2350
7439-89-6	Iron	16000	*	01/08/2025	2350
7439-92-1	Lead	130		01/08/2025	2350
7439-95-4	Magnesium	1900	*	01/08/2025	2350
7439-96-5	Manganese	600	*	01/08/2025	2350
7440-02-0	Nickel	17		01/08/2025	2350
7440-09-7	Potassium	440	J	01/08/2025	2350
7782-49-2	Selenium	9.8	*	01/08/2025	2350
7440-22-4	Silver	0.95	U*	01/08/2025	2350
7440-23-5	Sodium	480	U	01/08/2025	2350
7440-28-0	Thallium	2.4	U*	01/08/2025	2350
7440-62-2	Vanadium	20		01/08/2025	2350
7440-66-6	Zinc	93	*	01/08/2025	2350

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

Comments:

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5



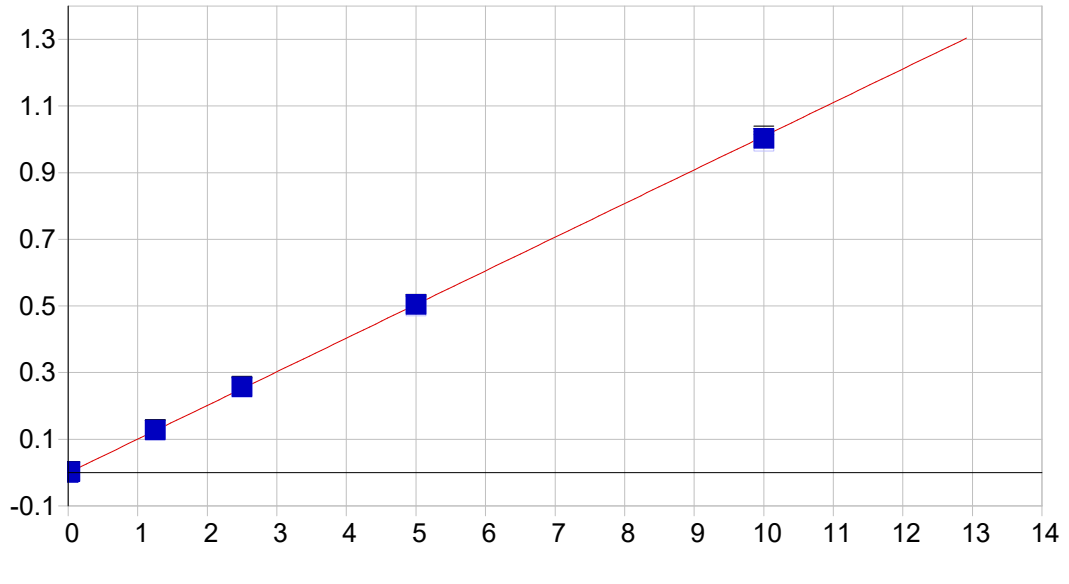
As 189.042 {478}

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A0 (Offset):	1.649988	Re-Slope:	1.000000
A1 (Gain):	169.200702	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999748	Status:	OK.
Std Error of Est:	0.063479		
Predicted MDL:	0.006409		
Predicted MQL:	0.021362		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	1.6495	.367	1
S1	.01000	.01238	.002	23.8	3.7419	.510	1
S2	1.2500	1.3009	.051	4.07	220.93	.398	1
S3	2.5000	2.6110	.111	4.44	441.79	1.43	1
S4	5.0000	4.9544	-.046	-.912	836.64	2.18	1
S5	10.000	9.8813	-.119	-1.19	1667.0	6.15	1

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

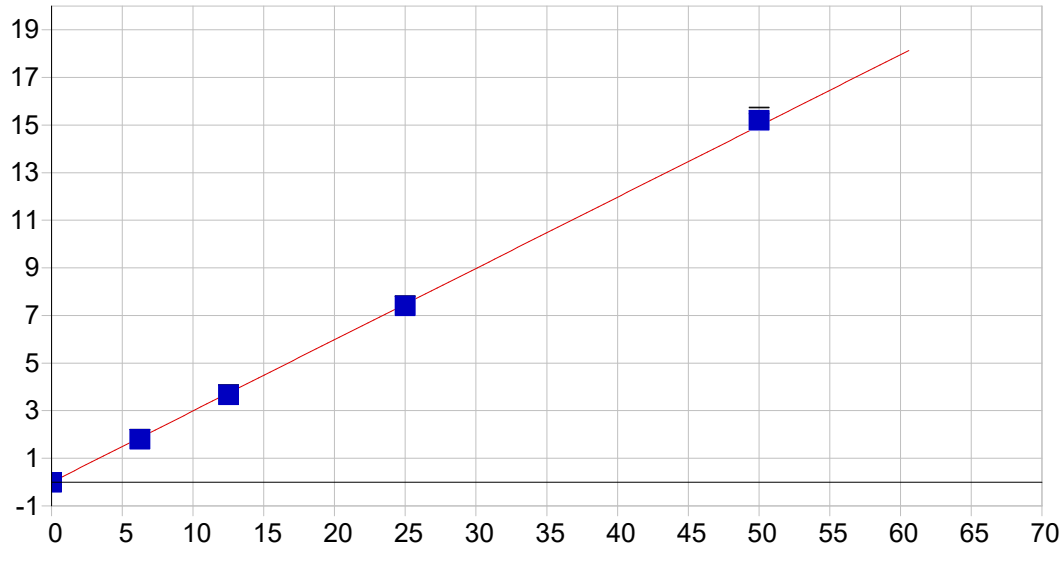


Tl 190.856 {477}

Date of Fit:	01/08/2025 17:55:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000547	Re-Slope:	1.000000
A1 (Gain):	0.100990	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999938	Status:	OK.
Std Error of Est:	0.000029		
Predicted MDL:	0.003120		
Predicted MQL:	0.010401		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00055	.000	1
S1	.02500	.02801	.003	12.0	.00219	.000	1
S2	1.2500	1.2725	.023	1.80	.12688	.001	1
S3	2.5000	2.5499	.050	2.00	.25480	.002	1
S4	5.0000	4.9957	-.004	-.087	.49963	.001	1
S5	10.000	9.9290	-.071	-.710	.99352	.008	1



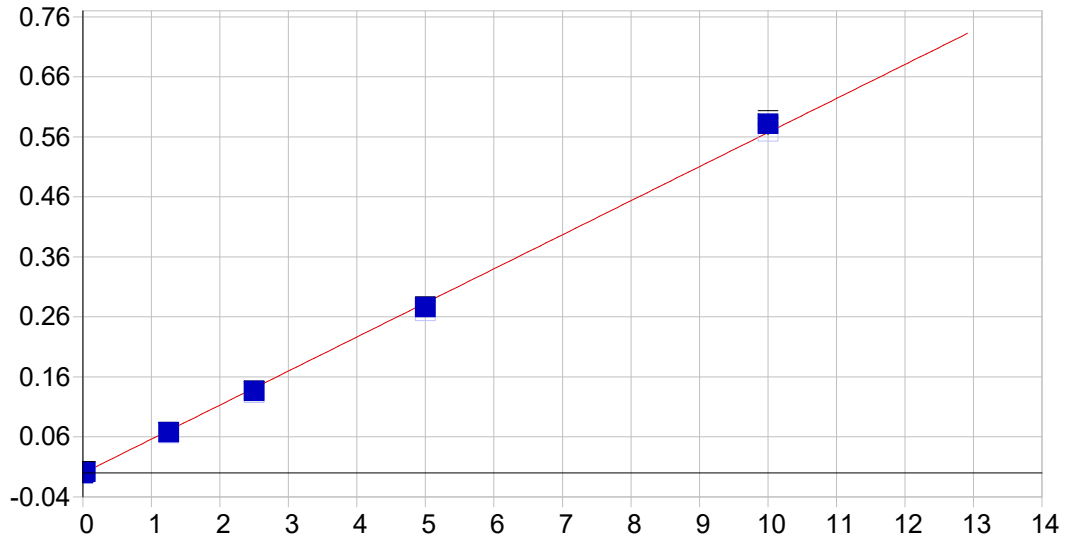
Pb 220.353 {453}

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A0 (Offset):	-0.001607	Re-Slope:	1.000000
A1 (Gain):	0.299280	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999828	Status:	OK.
Std Error of Est:	0.000208		
Predicted MDL:	0.002808		
Predicted MQL:	0.009359		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00161	.001	1
S1	.01000	.00736	-.003	-26.4	.00058	.001	1
S2	6.2500	5.9939	-.256	-4.10	1.7898	.006	1
S3	12.500	12.236	-.264	-2.11	3.6554	.012	1
S4	25.000	24.732	-.268	-1.07	7.3902	.008	1
S5	50.000	50.791	.791	1.58	15.179	.129	1

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5



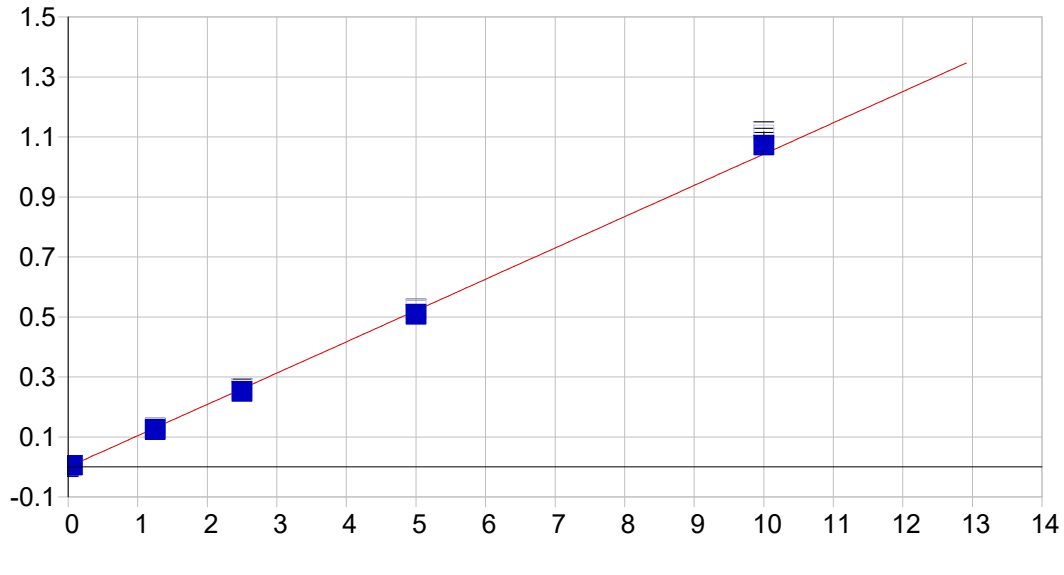
Se 196.090 {472}

Date of Fit:	01/08/2025 17:55:59	Type of Fit:	Linear	Weighting:	1/Conc

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A1 (Gain):	0.056761	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999569	Status:	OK.
Std Error of Est:	0.000051		
Predicted MDL:	0.007447		
Predicted MQL:	0.024824		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00052	.000	1
S1	.03500	.03984	.005	13.8	.00173	.000	1
S2	1.2500	1.1990	-.051	-4.08	.06594	.000	1
S3	2.5000	2.4120	-.088	-3.52	.13319	.000	1
S4	5.0000	4.8769	-.123	-2.46	.26991	.001	1
S5	10.000	10.257	.257	2.57	.56891	.005	1

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5



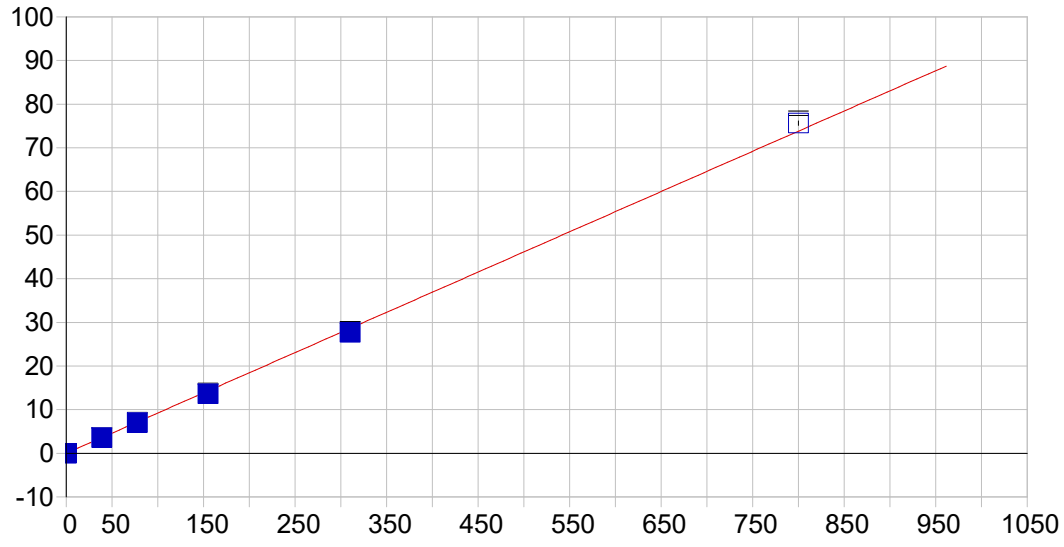
Sb 206.833 {463}

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A0 (Offset):	-0.000141	Re-Slope:	1.000000
A1 (Gain):	0.104277	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999572	Status:	OK.
Std Error of Est:	0.000130		
Predicted MDL:	0.005376		
Predicted MQL:	0.017921		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	-.00014	.000	1
S1	.06000	.05737	-.003	-4.38	.00584	.000	1
S2	1.2500	1.1901	-.060	-4.80	.12831	.001	1
S3	2.5000	2.4124	-.088	-3.51	.26013	.000	1
S4	5.0000	4.8708	-.129	-2.58	.52520	.001	1
S5	10.000	10.279	.279	2.79	1.1066	.011	1

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5



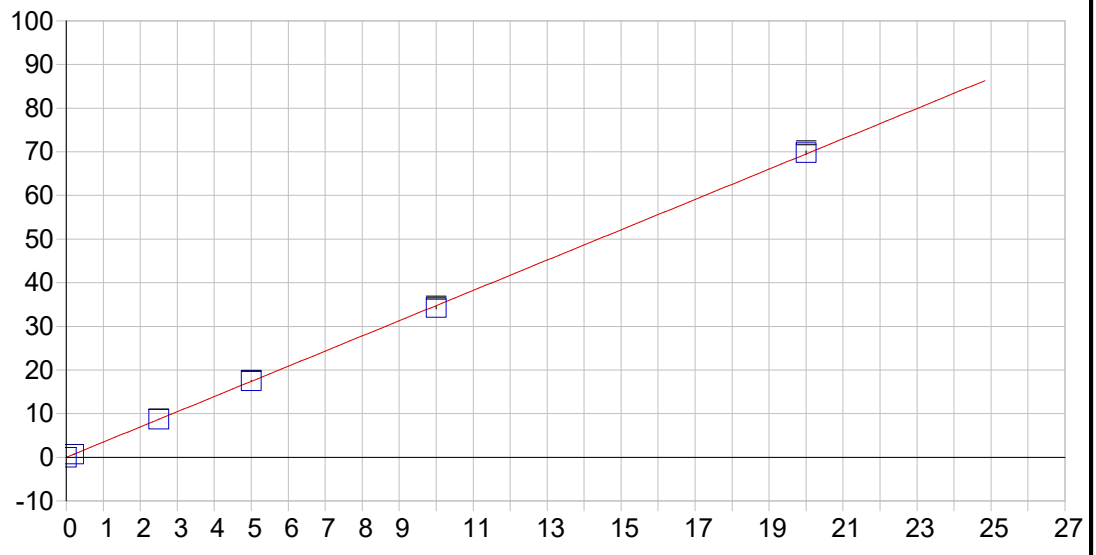
Al 396.152 { 85}

Date of Fit:	01/08/2025 17:55:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001072	Re-Slope:	1.000000
A1 (Gain):	0.092286	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999545	Status:	OK.
Std Error of Est:	0.001731		
Predicted MDL:	0.046555		
Predicted MQL:	0.155184		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00004	-.000	.000	-.00108	.001	1
S1	.20000	.25926	.059	29.6	.02289	.001	1
S2	38.750	38.315	-.435	-1.12	3.5387	.018	1
S3	77.500	76.157	-1.34	-1.73	7.0349	.067	1
S4	155.00	147.28	-7.72	-4.98	13.607	.152	1
S5	310.00	299.72	-10.3	-3.32	27.690	.213	1
S6	800.00	819.74	19.7	2.47	75.650	.534	1

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5



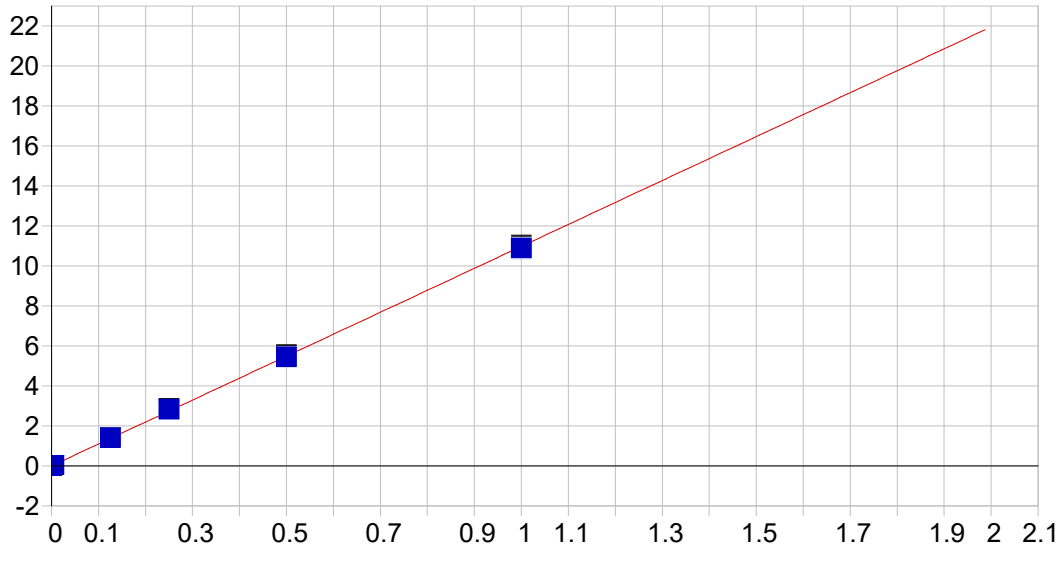
Ba 493.409 { 68}

Date of Fit:	01/08/2025 17:55:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.007272	Re-Slope:	1.000000
A1 (Gain):	3.475095	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999963	Status:	OK.
Std Error of Est:	0.003156		
Predicted MDL:	0.002161		
Predicted MQL:	0.007202		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00724	.013	1
S1	.20000	.20931	.009	4.66	.73465	.005	1
S2	2.5000	2.5044	.004	.178	8.7105	.027	1
S3	5.0000	5.0416	.042	.833	17.527	.129	1
S4	10.000	9.8701	-.130	-1.30	34.307	.338	1
S5	20.000	20.074	.074	.372	69.768	.438	1

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5



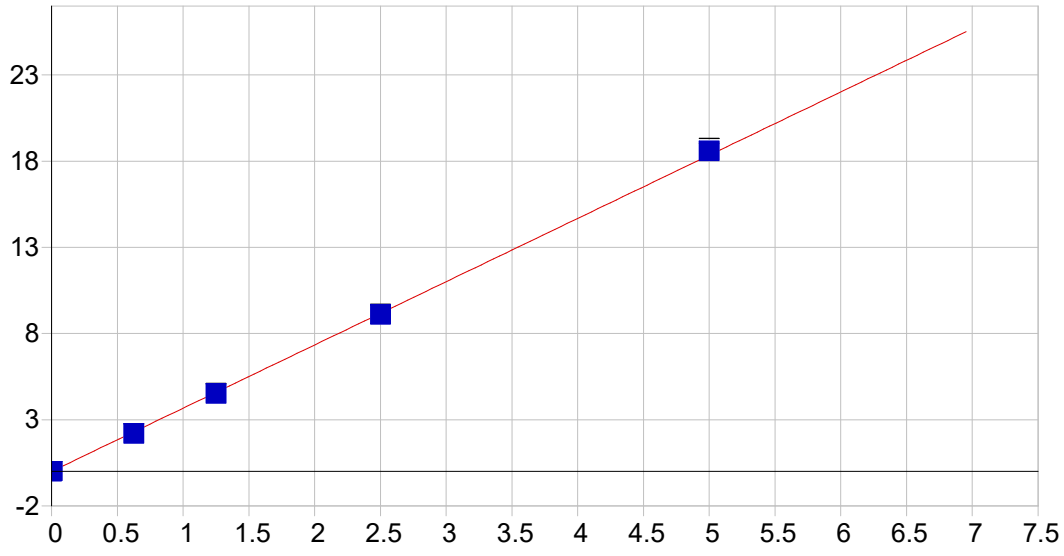
Be 234.861 {144}

Date of Fit:	01/08/2025 17:55:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000771	Re-Slope:	1.000000
A1 (Gain):	10.980928	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999878	Status:	OK.
Std Error of Est:	0.000640		
Predicted MDL:	0.000235		
Predicted MQL:	0.000783		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00077	.006	1
S1	.00500	.00481	-.000	-3.81	.05199	.002	1
S2	.12500	.12900	.004	3.20	1.4095	.006	1
S3	.25000	.25760	.008	3.04	2.8153	.033	1
S4	.50000	.49660	-.003	-.680	5.4272	.109	1
S5	1.0000	.99199	-.008	-.801	10.842	.147	1

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5



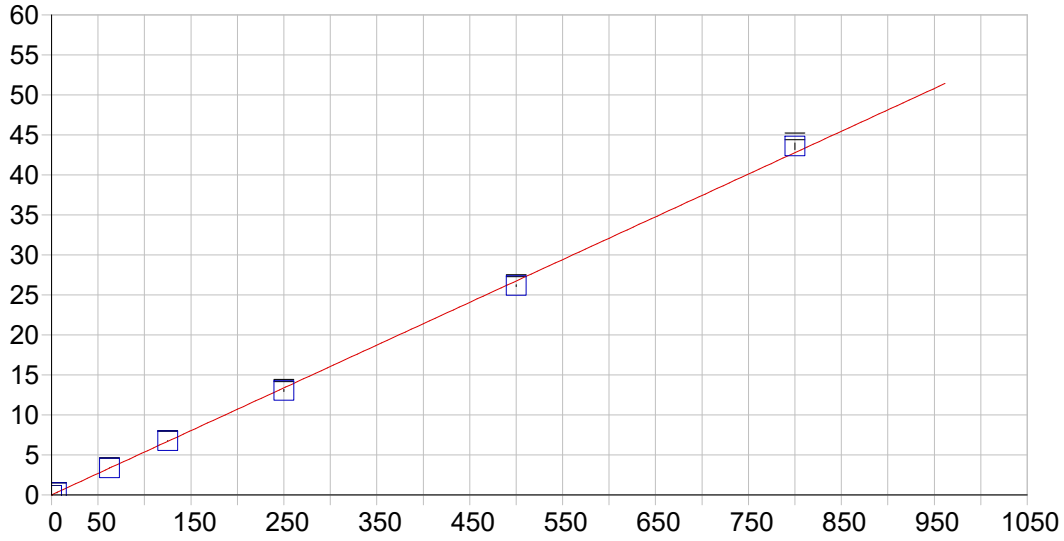
Cd 214.438 {457}

Date of Fit:	01/08/2025 17:55:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000297	Re-Slope:	1.000000
A1 (Gain):	3.669604	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999860	Status:	OK.
Std Error of Est:	0.000515		
Predicted MDL:	0.000118		
Predicted MQL:	0.000394		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00030	.000	1
S1	.00500	.00449	-.001	-10.3	.01683	.001	1
S2	.62500	.59685	-.028	-4.50	2.1940	.005	1
S3	1.2500	1.2300	-.020	-1.60	4.5208	.017	1
S4	2.5000	2.4827	-.017	-.692	9.1249	.005	1
S5	5.0000	5.0660	.066	1.32	18.619	.142	1

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5



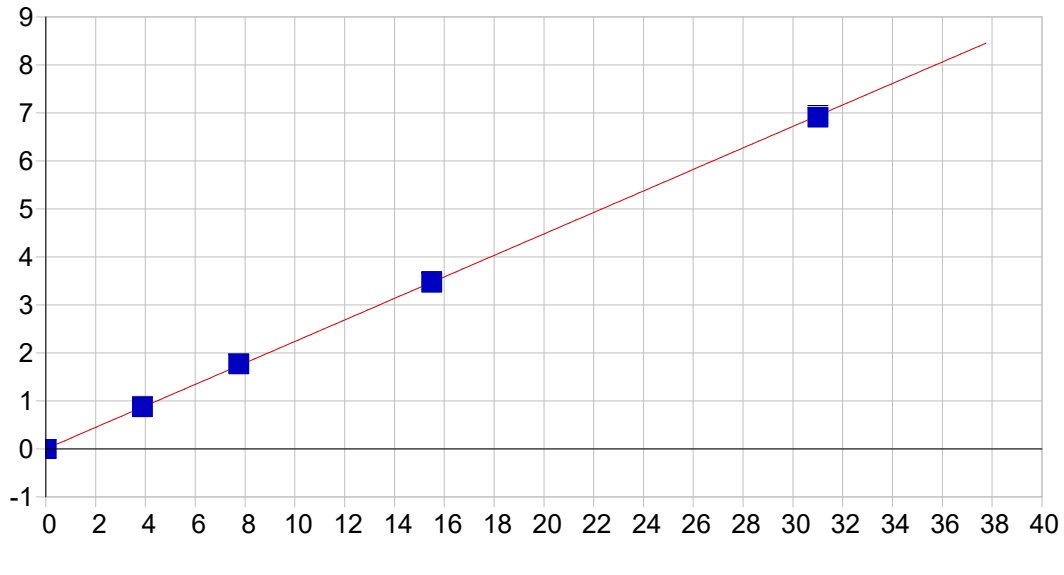
Ca 373.690 { 90}

Date of Fit:	01/08/2025 17:55:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.009646	Re-Slope:	1.000000
A1 (Gain):	0.053466	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999804	Status:	OK.
Std Error of Est:	0.003700		
Predicted MDL:	0.057672		
Predicted MQL:	0.192239		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00007	-.000	.000	.00964	.004	1
S1	5.0000	5.1177	.118	2.35	.28327	.002	1
S2	62.500	62.853	.353	.565	3.3702	.015	1
S3	125.00	126.33	1.33	1.07	6.7641	.030	1
S4	250.00	244.07	-5.93	-2.37	13.059	.127	1
S5	500.00	489.03	-11.0	-2.19	26.156	.126	1
S6	800.00	815.09	15.1	1.89	43.590	.426	1

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5



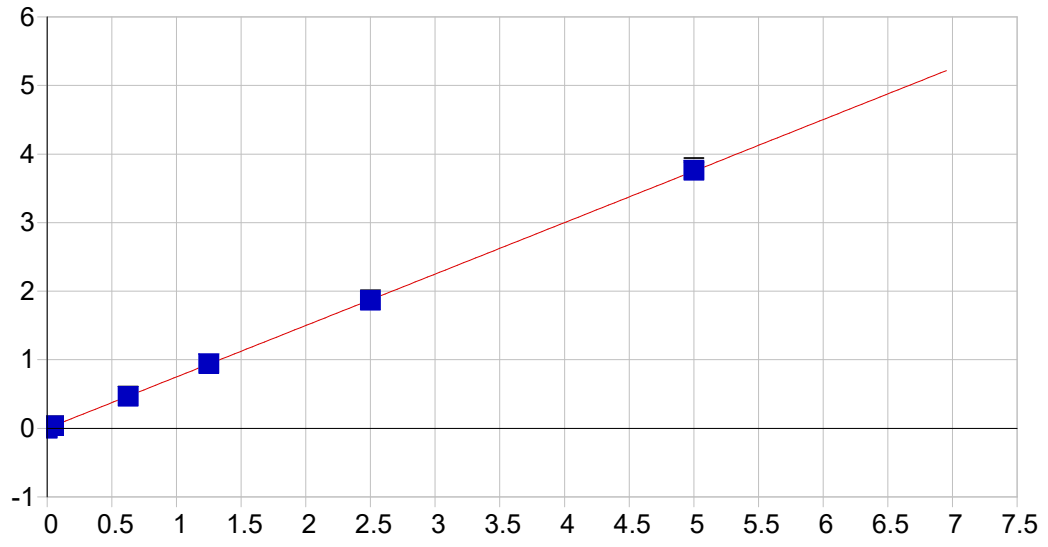
Cr 267.716 {126}

Date of Fit:	01/08/2025 17:55:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000242	Re-Slope:	1.000000
A1 (Gain):	0.223953	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999969	Status:	OK.
Std Error of Est:	0.000052		
Predicted MDL:	0.001407		
Predicted MQL:	0.004690		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00024	.000	1
S1	.01000	.01070	.001	7.03	.00216	.000	1
S2	3.8750	3.9118	.037	.949	.87648	.007	1
S3	7.7500	7.8874	.137	1.77	1.7675	.002	1
S4	15.500	15.478	-.022	-.141	3.4688	.011	1
S5	31.000	30.847	-.153	-.493	6.9134	.036	1

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5



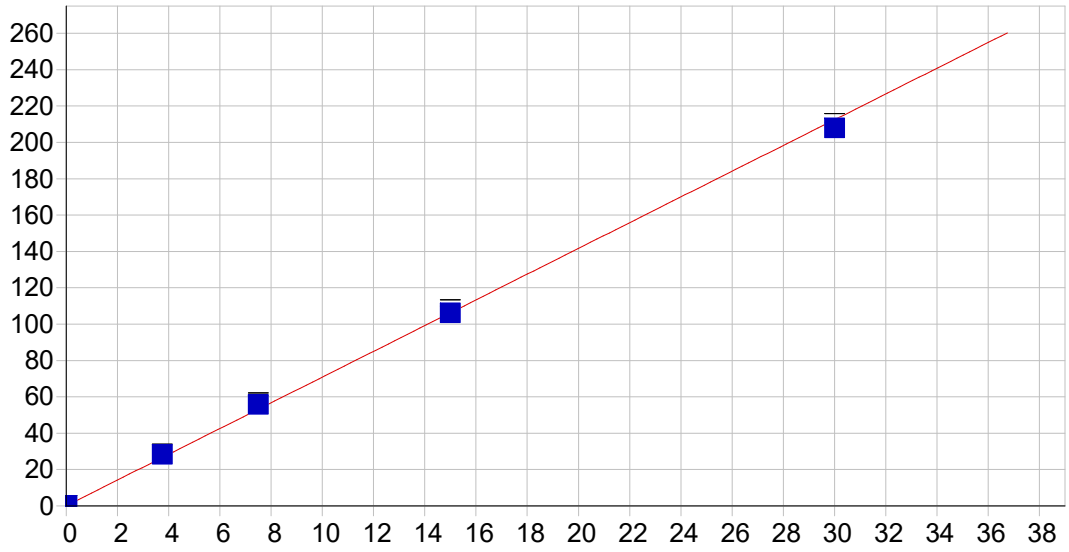
Co 228.616 {448}

Date of Fit:	01/08/2025 17:55:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000865	Re-Slope:	1.000000
A1 (Gain):	0.750356	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999992	Status:	OK.
Std Error of Est:	0.000078		
Predicted MDL:	0.000576		
Predicted MQL:	0.001918		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00086	.000	1
S1	.05000	.04908	-.001	-1.83	.03609	.000	1
S2	.62500	.62166	-.003	-.534	.46711	.001	1
S3	1.2500	1.2555	.006	.443	.94426	.003	1
S4	2.5000	2.4876	-.012	-.497	1.8718	.002	1
S5	5.0000	5.0111	.011	.223	3.7714	.029	1

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5



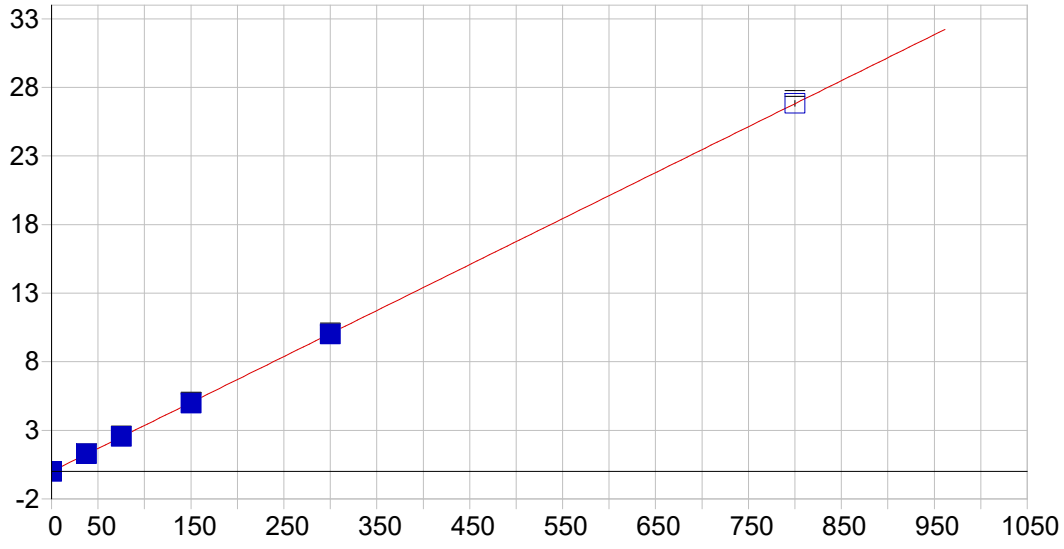
Cu 324.754 {104}

Date of Fit:	01/08/2025 17:55:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.081833	Re-Slope:	1.000000
A1 (Gain):	7.079540	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999551	Status:	OK.
Std Error of Est:	0.009739		
Predicted MDL:	0.000884		
Predicted MQL:	0.002948		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.08178	.006	1
S1	.02500	.02976	.005	19.1	.29232	.007	1
S2	3.7500	4.0022	.252	6.73	28.413	.171	1
S3	7.5000	7.8806	.381	5.08	55.867	.803	1
S4	15.000	14.995	-.005	-.035	106.23	1.74	1
S5	30.000	29.368	-.632	-2.11	207.97	2.48	1

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5



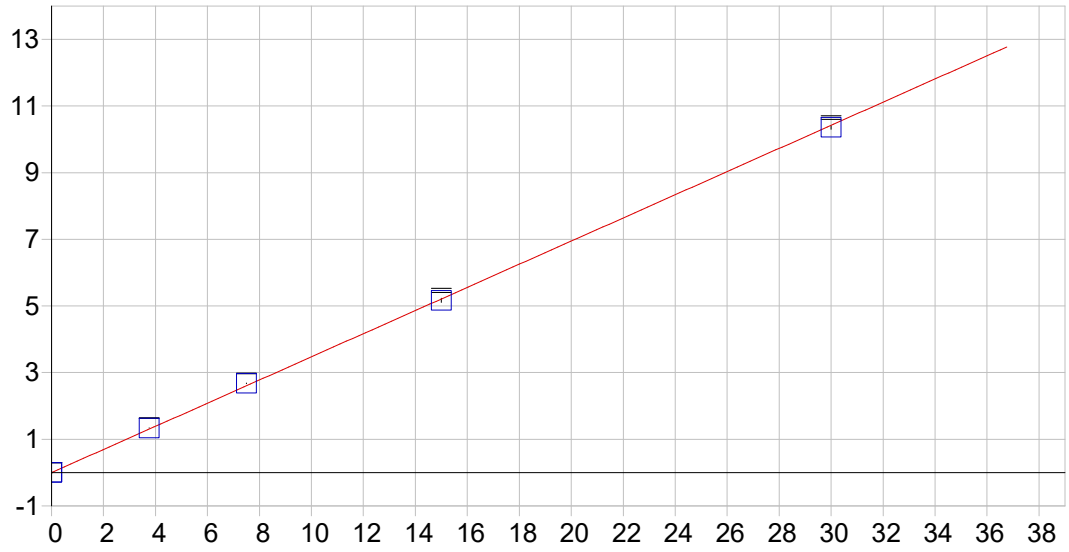
Fe 259.837 {130}

Date of Fit:	01/08/2025 17:55:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000205	Re-Slope:	1.000000
A1 (Gain):	0.033519	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999979	Status:	OK.
Std Error of Est:	0.000095		
Predicted MDL:	0.036994		
Predicted MQL:	0.123314		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00020	.000	1
S1	.10000	.09353	-.006	-6.47	.00293	.002	1
S2	37.500	38.226	.726	1.94	1.2814	.004	1
S3	75.000	76.340	1.34	1.79	2.5592	.016	1
S4	150.00	148.60	-1.40	-.934	4.9818	.057	1
S5	300.00	298.75	-1.25	-.418	10.016	.068	1
S6	800.00	800.60	.595	.074	26.835	.218	1

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5



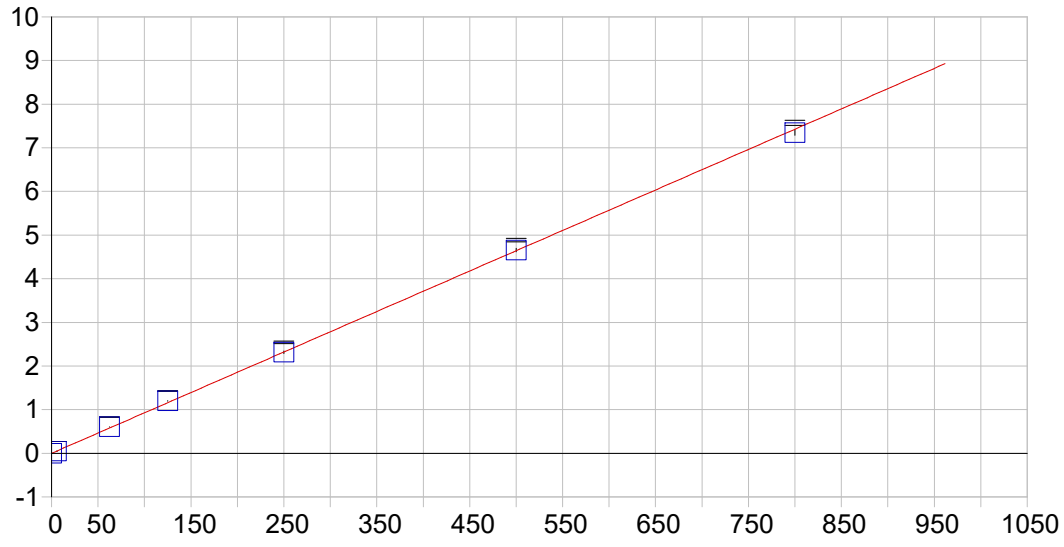
Mn 257.610 {131}

Date of Fit:	01/08/2025 17:55:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001402	Re-Slope:	1.000000
A1 (Gain):	0.347463	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999897	Status:	OK.
Std Error of Est:	0.000178		
Predicted MDL:	0.003169		
Predicted MQL:	0.010562		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00140	.001	1
S1	.01500	.01940	.004	29.4	.00534	.001	1
S2	3.7500	3.8478	.098	2.61	1.3356	.006	1
S3	7.5000	7.7059	.206	2.75	2.6761	.008	1
S4	15.000	14.883	-.117	-.780	5.1699	.064	1
S5	30.000	29.809	-.191	-.637	10.356	.051	1

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5



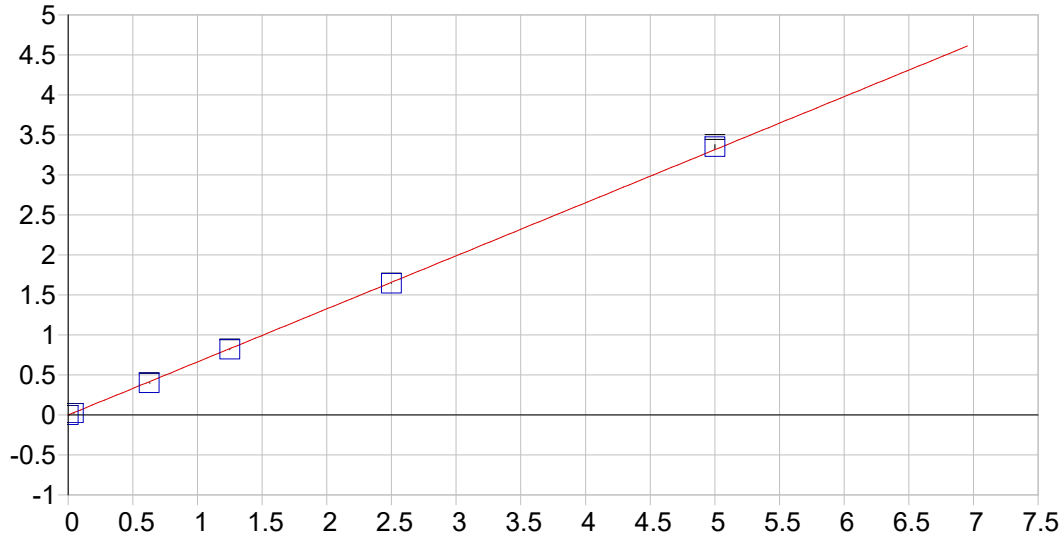
Mg 279.079 {121}

Date of Fit:	01/08/2025 17:55:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001167	Re-Slope:	1.000000
A1 (Gain):	0.009285	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999880	Status:	OK.
Std Error of Est:	0.000502		
Predicted MDL:	0.146076		
Predicted MQL:	0.486920		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00076	-.001	.000	-.00117	.001	1
S1	5.0000	5.4126	.413	8.25	.04909	.002	1
S2	62.500	65.259	2.76	4.41	.60478	.003	1
S3	125.00	129.49	4.49	3.59	1.2012	.006	1
S4	250.00	249.56	-.444	-.178	2.3160	.028	1
S5	500.00	501.53	1.53	.306	4.6557	.039	1
S6	800.00	791.25	-8.75	-1.09	7.3459	.061	1

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5



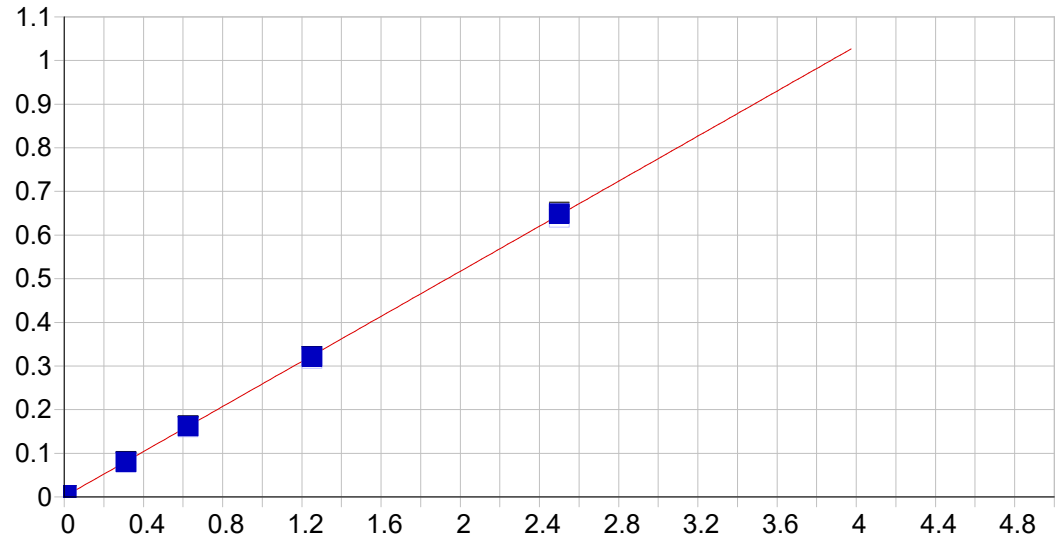
Ni 231.604 {446}

Date of Fit:	01/08/2025 17:55:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000727	Re-Slope:	1.000000
A1 (Gain):	0.663165	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999910	Status:	OK.
Std Error of Est:	0.000212		
Predicted MDL:	0.000939		
Predicted MQL:	0.003131		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00072	.000	1
S1	.04000	.03668	-.003	-8.30	.02360	.000	1
S2	.62500	.60504	-.020	-3.19	.40052	.001	1
S3	1.2500	1.2387	-.011	-.904	.82074	.003	1
S4	2.5000	2.4819	-.018	-.723	1.6452	.002	1
S5	5.0000	5.0527	.053	1.05	3.3500	.029	1

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5



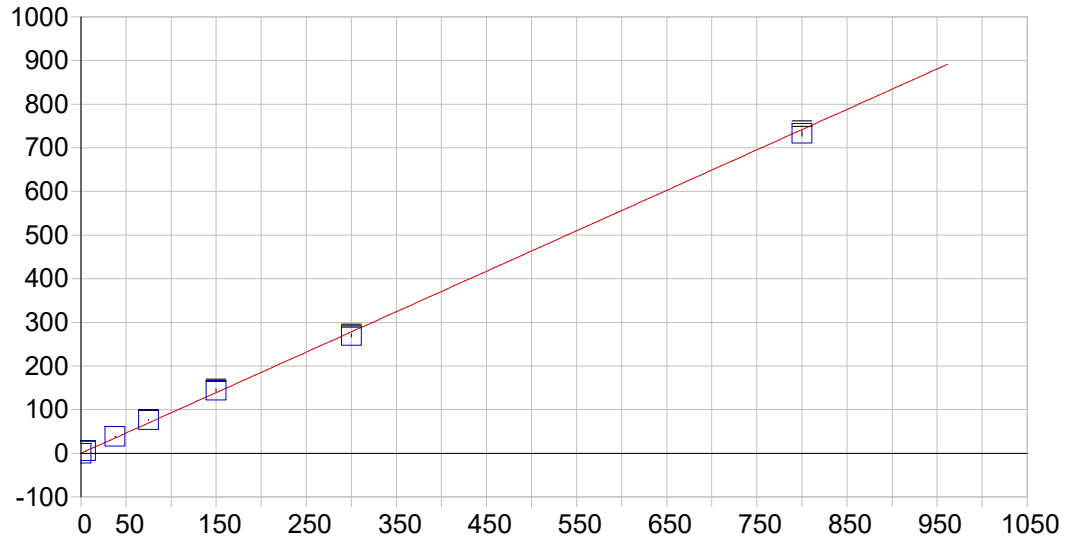
Ag 328.068 {103}

Date of Fit:	01/08/2025 17:55:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000739	Re-Slope:	1.000000
A1 (Gain):	0.258167	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999969	Status:	OK.
Std Error of Est:	0.000017		
Predicted MDL:	0.002216		
Predicted MQL:	0.007386		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00074	.000	1
S1	.01000	.00900	-.001	-10.0	.00306	.000	1
S2	.31250	.30778	-.005	-1.51	.07904	.001	1
S3	.62500	.62610	.001	.176	.16005	.001	1
S4	1.2500	1.2424	-.008	-.608	.31684	.001	1
S5	2.5000	2.5122	.012	.490	.64002	.003	1

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5



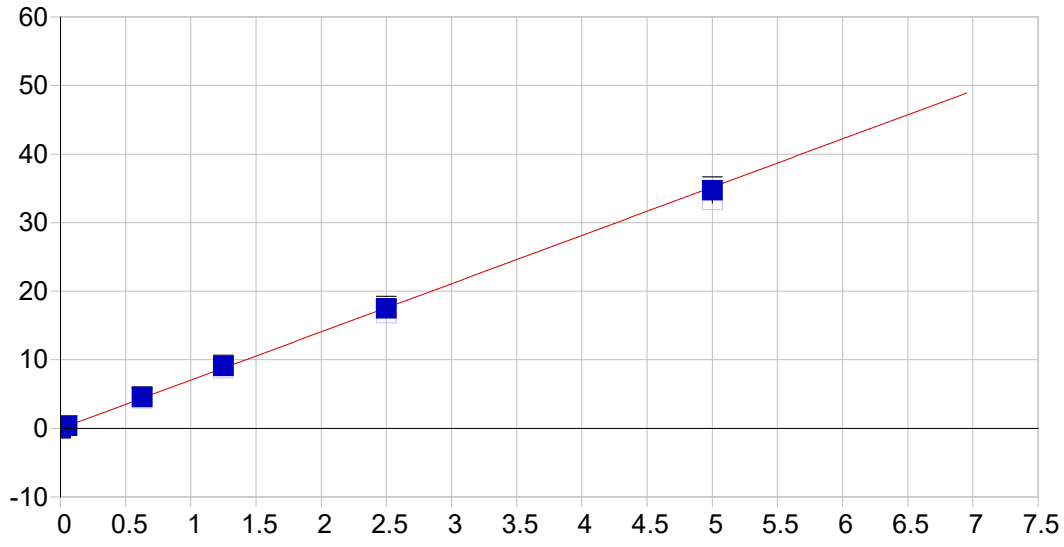
Na 818.326 { 41}

Date of Fit:	01/08/2025 17:55:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.011061	Re-Slope:	1.000000
A1 (Gain):	0.927156	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999290	Status:	OK.
Std Error of Est:	0.108042		
Predicted MDL:	0.020767		
Predicted MQL:	0.069224		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00185	-.002	.000	-.01277	.011	1
S1	5.0000	5.8164	.816	16.3	5.3816	.014	1
S2	37.500	41.511	4.01	10.7	38.476	.174	1
S3	75.000	82.679	7.68	10.2	76.645	1.02	1
S4	150.00	155.75	5.75	3.83	144.39	2.58	1
S5	300.00	291.12	-8.88	-2.96	269.90	3.27	1
S6	800.00	790.62	-9.38	-1.17	733.02	6.28	1

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5



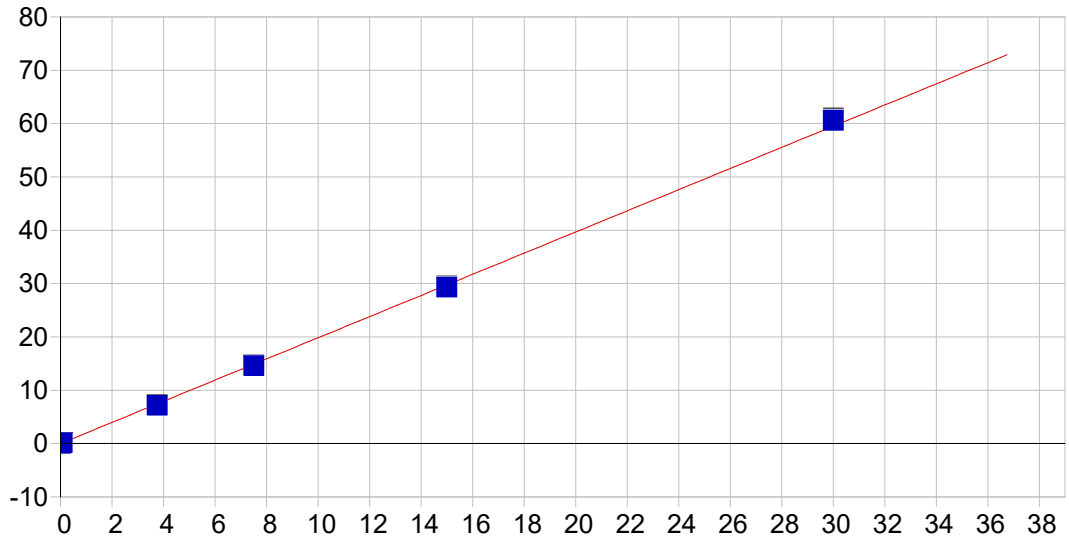
V 292.402 {115}

Date of Fit:	01/08/2025 17:55:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.009138	Re-Slope:	1.000000
A1 (Gain):	7.036516	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999784	Status:	OK.
Std Error of Est:	0.003730		
Predicted MDL:	0.000813		
Predicted MQL:	0.002711		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	-.00918	.008	1
S1	.05000	.05374	.004	7.48	.36804	.006	1
S2	.62500	.64950	.025	3.92	4.3849	.013	1
S3	1.2500	1.2956	.046	3.64	8.7545	.108	1
S4	2.5000	2.4895	-.010	-.419	16.803	.305	1
S5	5.0000	4.9365	-.063	-1.27	33.317	.497	1

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

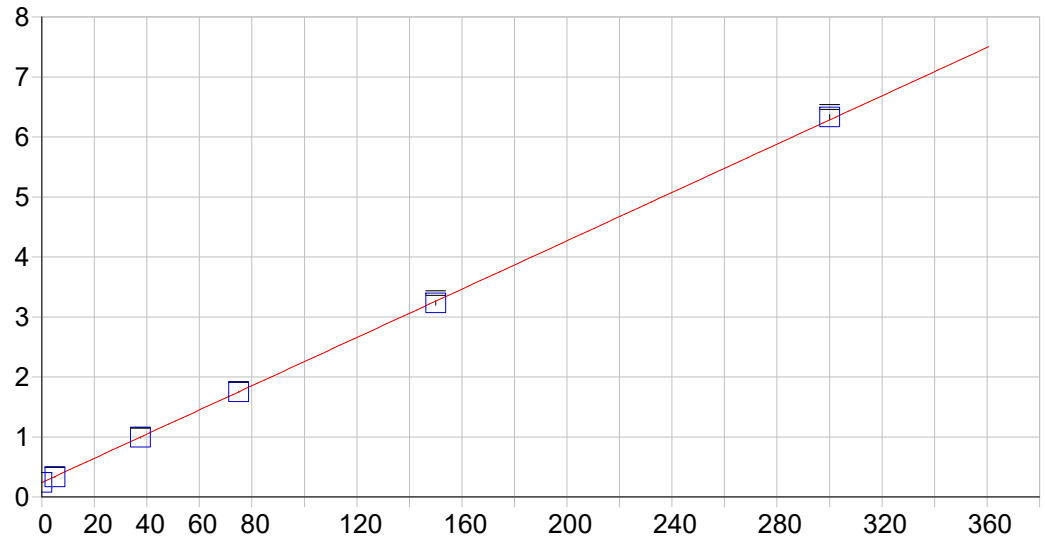


Zn 213.856 {158}

Date of Fit:	01/08/2025 17:55:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000192	Re-Slope:	1.000000
A1 (Gain):	1.983433	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999815	Status:	OK.
Std Error of Est:	0.002728		
Predicted MDL:	0.000901		
Predicted MQL:	0.003004		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00019	.001	1
S1	.06000	.06142	.001	2.37	.12200	.002	1
S2	3.7500	3.6054	-.145	-3.86	7.1873	.042	1
S3	7.5000	7.3639	-.136	-1.82	14.678	.015	1
S4	15.000	14.758	-.242	-1.61	29.417	.113	1
S5	30.000	30.521	.521	1.74	60.828	.203	1



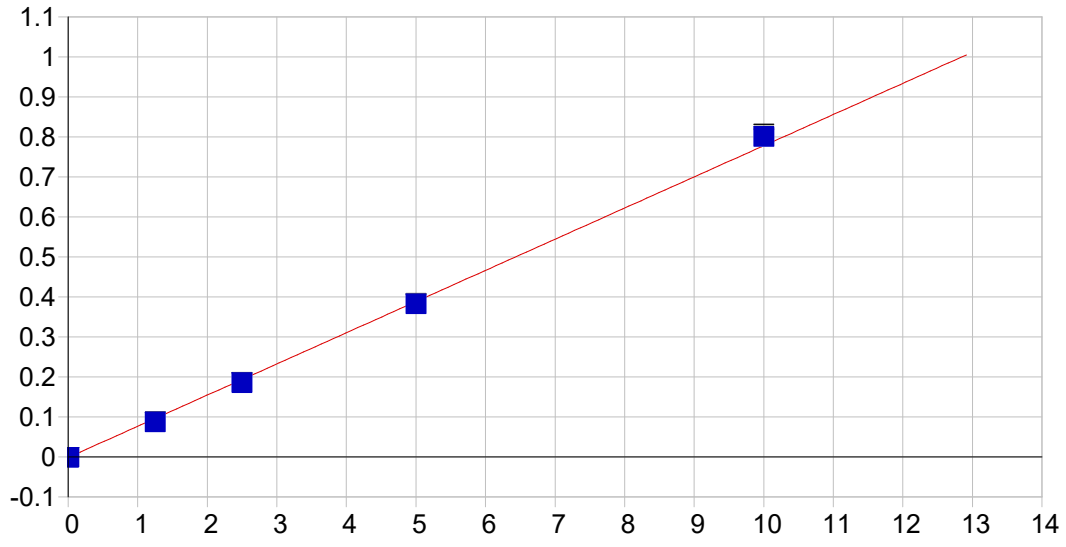
K 769.896 { 44}

Date of Fit:	01/08/2025 17:55:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.240910	Re-Slope:	1.000000
A1 (Gain):	0.020138	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999913	Status:	OK.
Std Error of Est:	0.000548		
Predicted MDL:	0.336554		
Predicted MQL:	1.121845		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00060	.001	.000	.24092	.003	1
S1	5.0000	4.4543	-.546	-10.9	.33061	.007	1
S2	37.500	37.186	-.314	-.838	.98976	.007	1
S3	75.000	74.974	-.026	-.035	1.7507	.005	1
S4	150.00	148.43	-1.57	-1.04	3.2301	.038	1
S5	300.00	302.45	2.45	.818	6.3317	.040	1

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

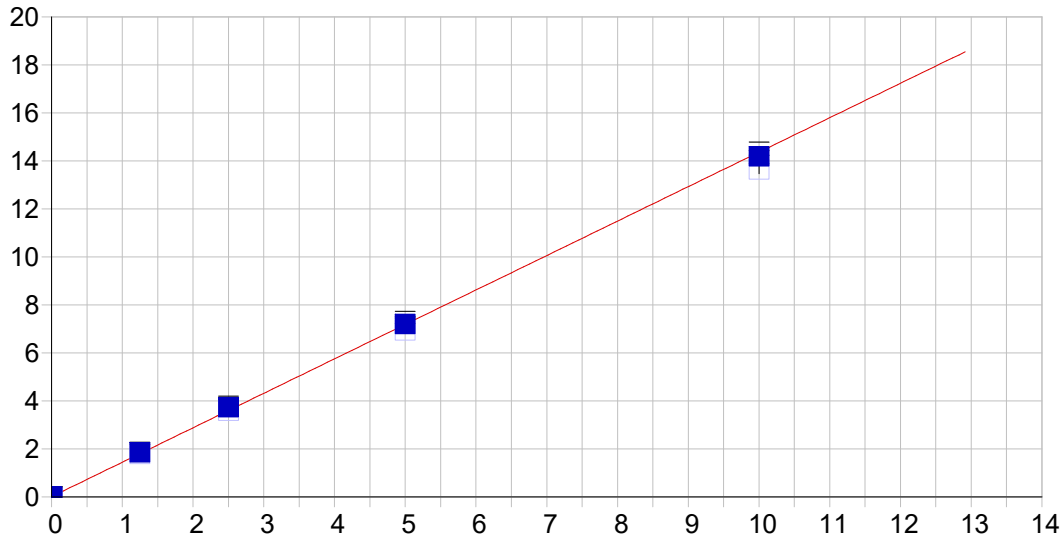


P 177.495 {490}

Date of Fit:	01/08/2025 17:55:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001343	Re-Slope:	1.000000
A1 (Gain):	0.077934	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999272	Status:	OK.
Std Error of Est:	0.000050		
Predicted MDL:	0.003021		
Predicted MQL:	0.010071		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	-.00134	.000	1
S1	.01000	.00479	-.005	-52.1	-.00097	.000	1
S2	1.2500	1.1360	-.114	-9.12	.08705	.000	1
S3	2.5000	2.3951	-.105	-4.19	.18503	.001	1
S4	5.0000	4.9288	-.071	-1.42	.38221	.001	1
S5	10.000	10.295	.295	2.95	.79987	.006	1



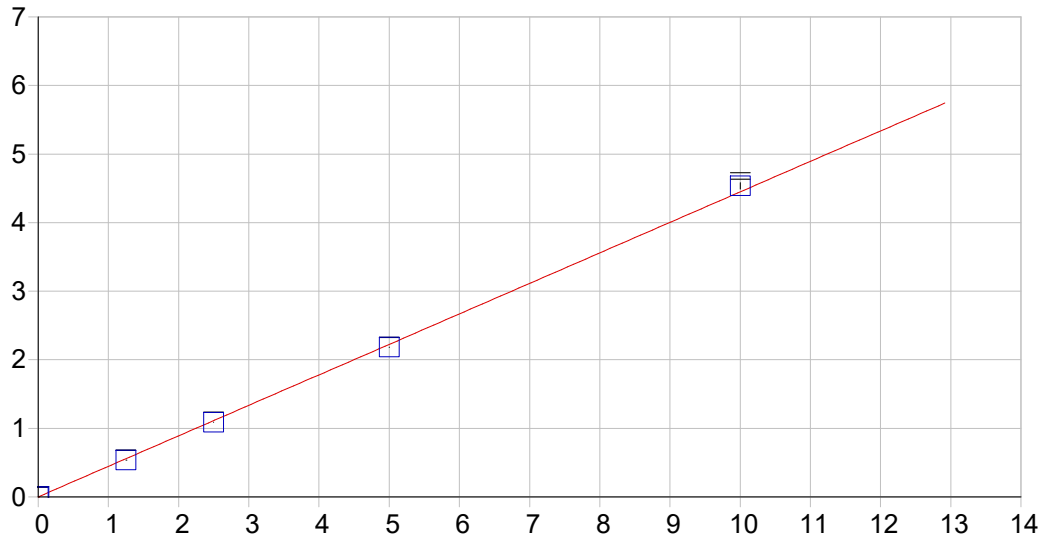
B 249.678 {135}

Date of Fit:	01/08/2025 17:55:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.010928	Re-Slope:	1.000000
A1 (Gain):	1.435209	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999316	Status:	OK.
Std Error of Est:	0.000857		
Predicted MDL:	0.002456		
Predicted MQL:	0.008186		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.01095	.005	1
S1	.01000	-.00348	-.013	-135.	.00586	.002	1
S2	1.2500	1.2832	.033	2.65	1.7843	.009	1
S3	2.5000	2.5902	.090	3.61	3.5920	.053	1
S4	5.0000	5.0099	.010	.197	6.9282	.114	1
S5	10.000	9.8807	-.119	-1.19	13.646	.180	1

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5



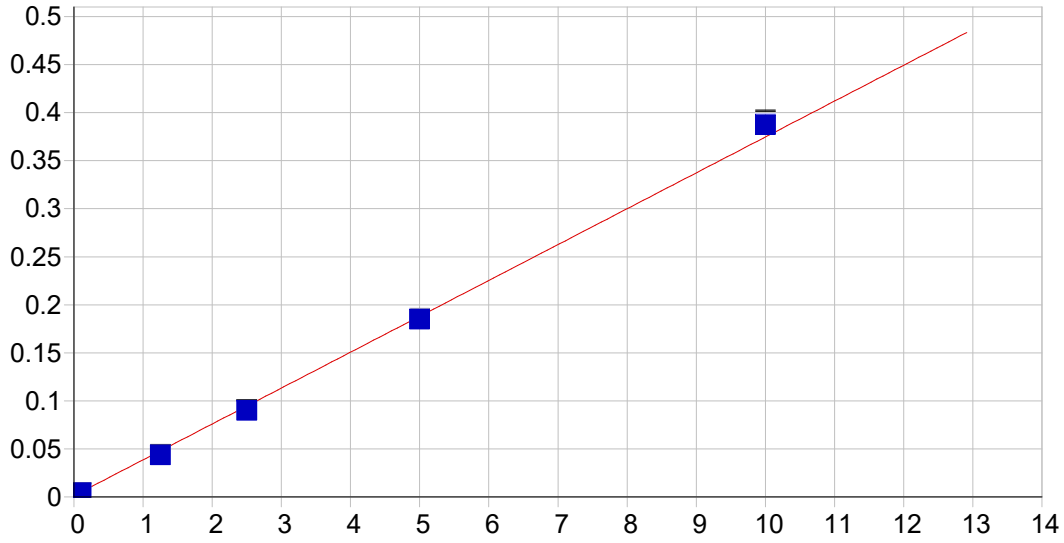
Mo 202.030 {467}

Date of Fit:	01/08/2025 17:55:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000967	Re-Slope:	1.000000
A1 (Gain):	0.444697	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999777	Status:	OK.
Std Error of Est:	0.000157		
Predicted MDL:	0.001009		
Predicted MQL:	0.003364		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00097	.000	1
S1	.01000	.00957	-.000	-4.30	.00522	.000	1
S2	1.2500	1.2068	-.043	-3.46	.53761	.000	1
S3	2.5000	2.4448	-.055	-2.21	1.0881	.003	1
S4	5.0000	4.9042	-.096	-1.92	2.1818	.004	1
S5	10.000	10.195	.195	1.95	4.5345	.046	1

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5



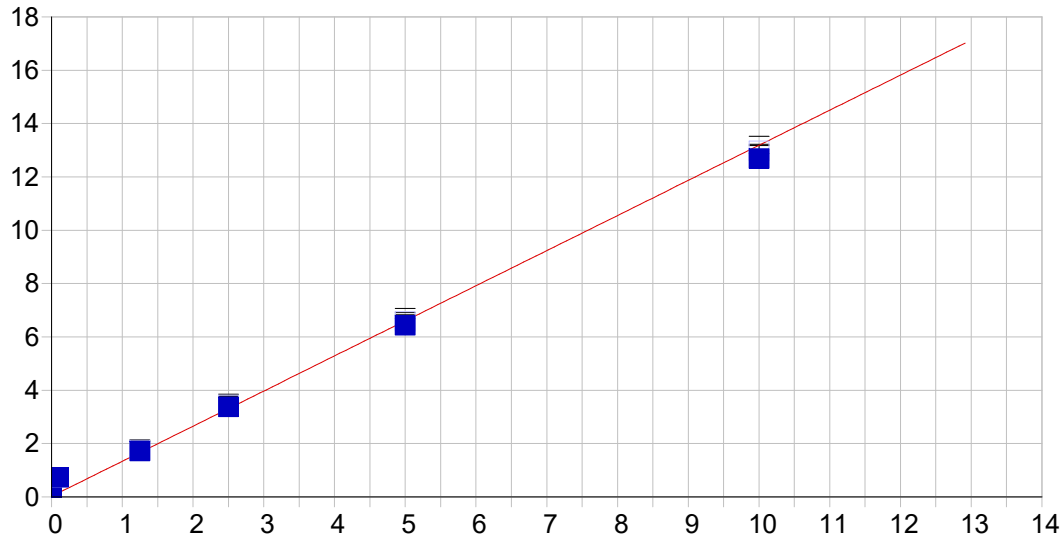
S 182.034 {485}

Date of Fit:	01/08/2025 17:55:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001301	Re-Slope:	1.000000
A1 (Gain):	0.037338	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999068	Status:	OK.
Std Error of Est:	0.000086		
Predicted MDL:	0.005874		
Predicted MQL:	0.019581		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00004	.000	.000	.00130	.000	1
S1	.10000	.07723	-.023	-22.8	.00418	.000	1
S2	1.2500	1.1341	-.116	-9.28	.04380	.000	1
S3	2.5000	2.3758	-.124	-4.97	.09031	.001	1
S4	5.0000	4.9176	-.082	-1.65	.18551	.000	1
S5	10.000	10.345	.345	3.45	.38877	.004	1

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5



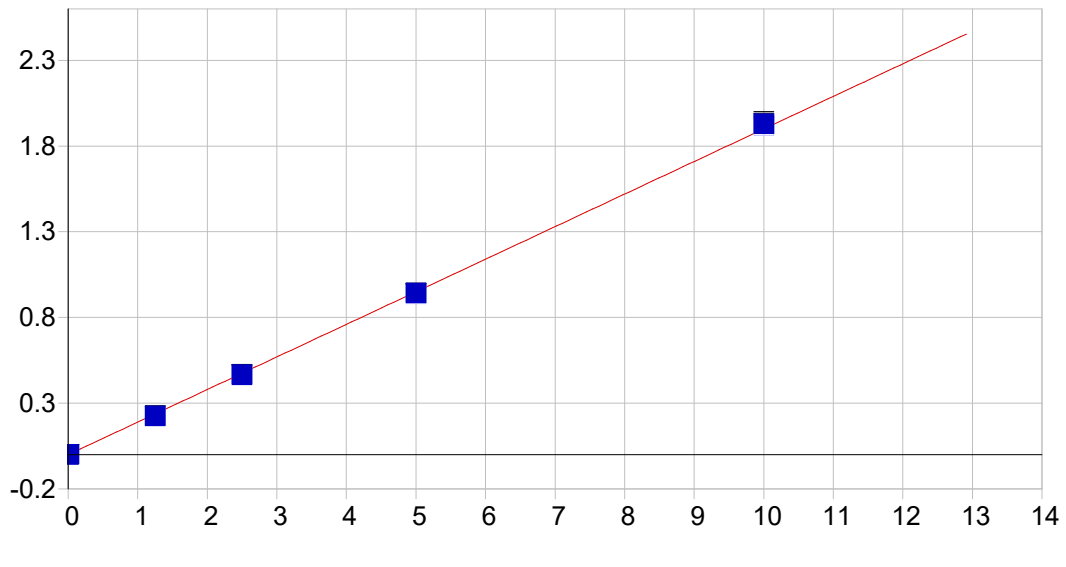
Si 251.611 {134}

Date of Fit:	01/08/2025 17:55:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.020496	Re-Slope:	1.000000
A1 (Gain):	1.316477	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.953238	Status:	OK.
Std Error of Est:	0.022682		
Predicted MDL:	0.002737		
Predicted MQL:	0.009122		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00044	-.000	.000	.01992	.007	1
S1	.10000	.54262	.443	443.	.73671	.004	1
S2	1.2500	1.2878	.038	3.02	1.7532	.009	1
S3	2.5000	2.5418	.042	1.67	3.4414	.035	1
S4	5.0000	4.8666	-.133	-2.67	6.5767	.117	1
S5	10.000	9.6149	-.385	-3.85	12.977	.178	1

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5



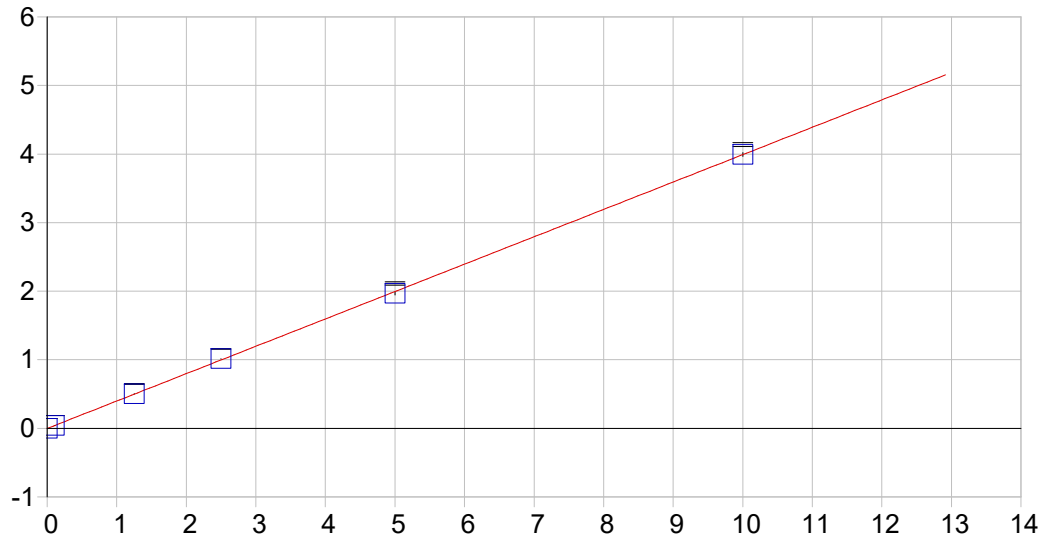
Sn 189.989 {478}

Date of Fit:	01/08/2025 17:55:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000145	Re-Slope:	1.000000
A1 (Gain):	0.189996	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999817	Status:	OK.
Std Error of Est:	0.000051		
Predicted MDL:	0.001279		
Predicted MQL:	0.004265		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00014	.000	1
S1	.00700	.00621	-.001	-11.2	.00098	.000	1
S2	1.2500	1.1880	-.062	-4.96	.22438	.001	1
S3	2.5000	2.4516	-.048	-1.93	.46328	.002	1
S4	5.0000	4.9578	-.042	-.843	.93706	.001	1
S5	10.000	10.153	.153	1.53	1.9194	.014	1

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5



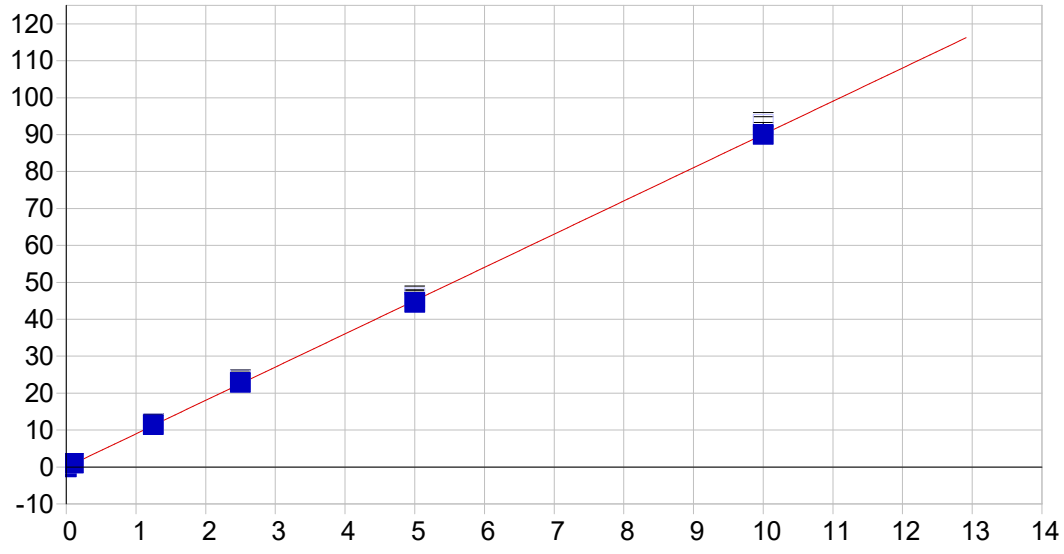
Ti 336.121 {100}

Date of Fit:	01/08/2025 17:55:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001156	Re-Slope:	1.000000
A1 (Gain):	0.399219	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999941	Status:	OK.
Std Error of Est:	0.000230		
Predicted MDL:	0.006496		
Predicted MQL:	0.021653		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	-.00116	.001	1
S1	.10000	.10519	.005	5.19	.04084	.002	1
S2	1.2500	1.2654	.015	1.23	.50402	.005	1
S3	2.5000	2.5425	.043	1.70	1.0139	.004	1
S4	5.0000	4.9281	-.072	-1.44	1.9662	.023	1
S5	10.000	10.009	.009	.088	3.9945	.027	1

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5



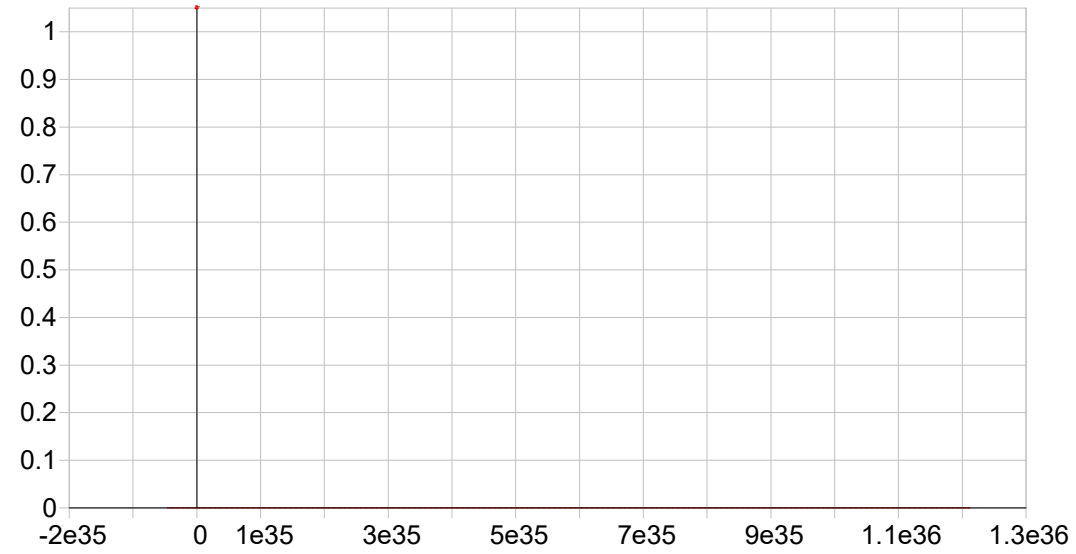
Sr 407.771 { 83}

Date of Fit:	01/08/2025 17:55:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000437	Re-Slope:	1.000000
A1 (Gain):	9.004102	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999948	Status:	OK.
Std Error of Est:	0.005045		
Predicted MDL:	0.000396		
Predicted MQL:	0.001321		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00036	.001	1
S1	.10000	.10729	.007	7.29	.96743	.016	1
S2	1.2500	1.2666	.017	1.32	11.742	.048	1
S3	2.5000	2.5388	.039	1.55	23.536	.121	1
S4	5.0000	4.9392	-.061	-1.22	45.824	.508	1
S5	10.000	9.9983	-.002	-.017	92.728	.591	1

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

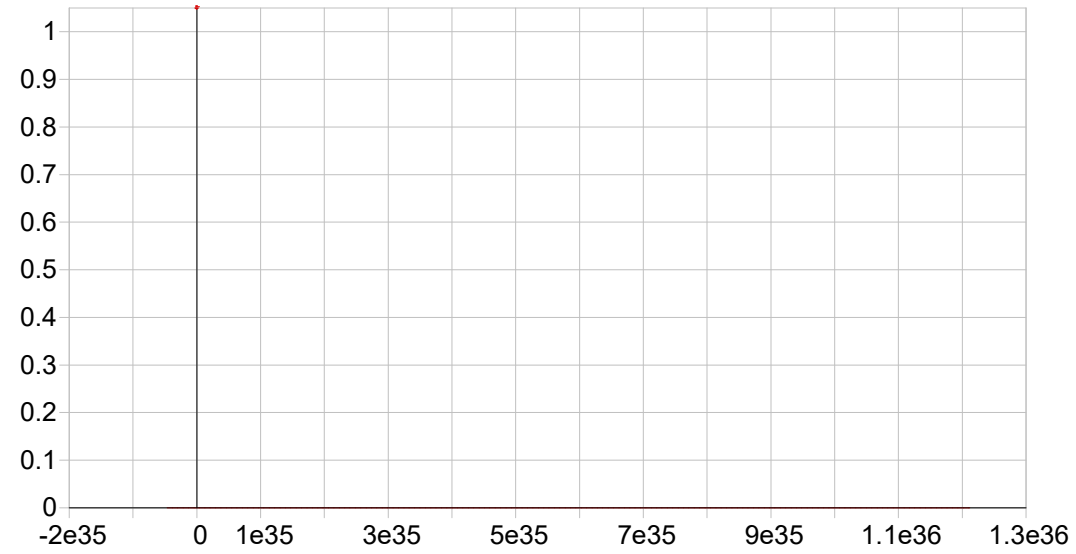


Y 224.306 {450}*

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}*

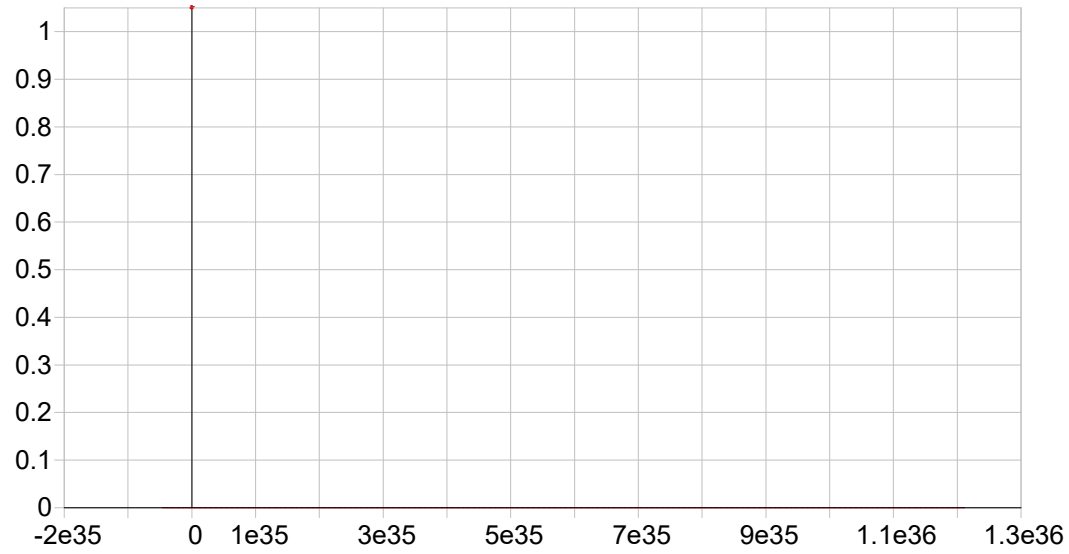
Date of Fit:	<not fit>	Type of Fit:	Linear	Weighting:	1/Conc

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

Reviewed By:jaswal
On:1/10/2025 4:14:54 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



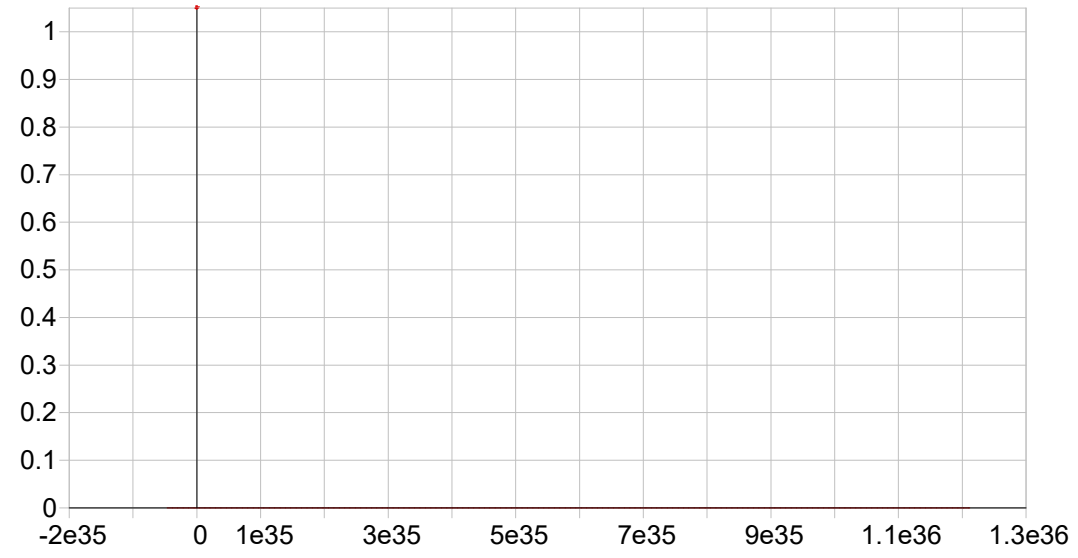
Y 371.030 { 91}*

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

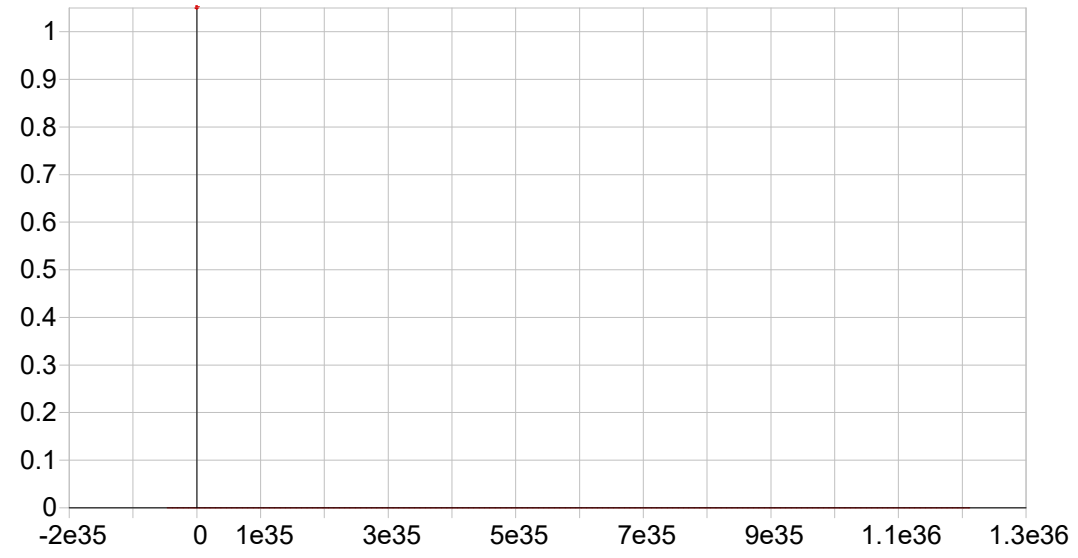
Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5



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

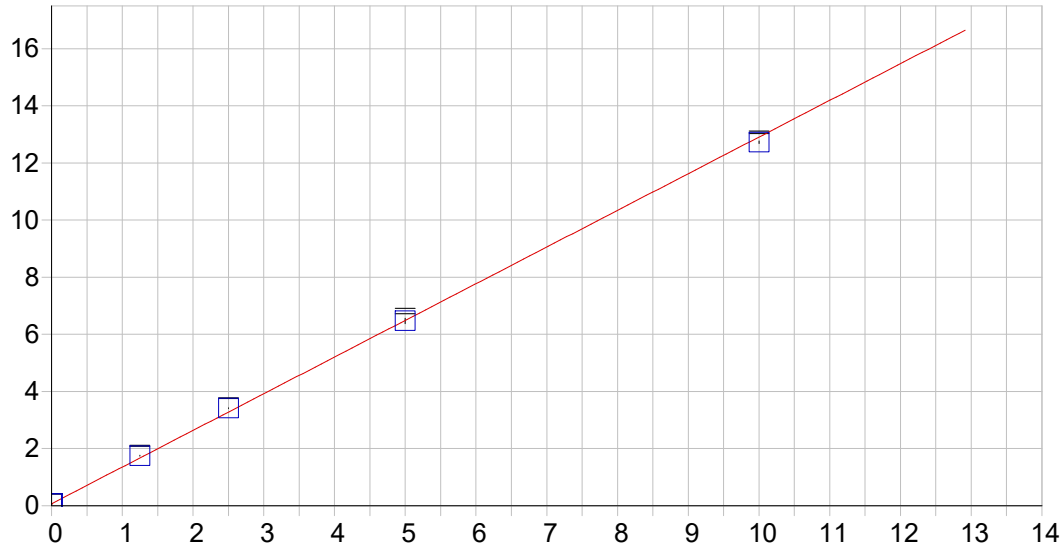


ln 230.606 {446}*

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	

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:	01/08/2025 17:55:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.070345	Re-Slope:	1.000000
A1 (Gain):	1.283855	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999485	Status:	OK.
Std Error of Est:	0.000847		
Predicted MDL:	0.005595		
Predicted MQL:	0.018651		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.07036	.008	1
S5	10.000	9.8602	-.140	-1.40	12.729	.044	1
S4	5.0000	4.9866	-.013	-.268	6.4724	.094	1
S3	2.5000	2.6054	.105	4.22	3.4153	.007	1
S2	1.2500	1.3100	.060	4.80	1.7522	.018	1
S1	.01500	.00274	-.012	-81.7	.07386	.003	1

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: S0 Acquired: 01/08/2025 17:30:20 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) 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	1.6495	-.00055	-.00161	-.00052	-.00014	-.00108	.00724	-.00077
Stddev	.3671	.00005	.00121	.00024	.00010	.00136	.01301	.00568
%RSD	22.255	9.3137	75.635	46.594	74.449	126.48	179.69	736.07
#1	1.3774	-.00049	-.00042	-.00025	-.00011	.00046	.01407	-.00725
#2	2.0670	-.00055	-.00285	-.00059	-.00005	-.00157	.01541	.00337
#3	1.5040	-.00060	-.00155	-.00073	-.00026	-.00212	-.00776	.00156

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	.00030	.00964	-.00024	-.00086	.08178	-.00020	-.00140	-.00117
Stddev	.00037	.00417	.00039	.00018	.00580	.00035	.00060	.00063
%RSD	122.20	43.290	162.85	20.886	7.0923	172.58	42.944	53.347
#1	-.00012	.01222	.00021	-.00093	.08023	-.00057	-.00117	-.00053
#2	.00052	.01188	-.00047	-.00100	.07692	-.00017	-.00095	-.00121
#3	.00050	.00483	-.00047	-.00066	.08820	.00013	-.00209	-.00178

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	-.00072	.00074	-.01277	-.00918	-.00019	.24092	-.00134	.01095
Stddev	.00036	.00019	.01084	.00777	.00116	.00269	.00019	.00527
%RSD	49.580	26.299	84.826	84.563	612.60	1.1184	14.036	48.141
#1	-.00068	.00053	-.01284	-.00711	.00109	.24313	-.00149	.00588
#2	-.00039	.00078	-.00191	-.01778	-.00048	.23792	-.00113	.01055
#3	-.00110	.00091	-.02358	-.00266	-.00117	.24172	-.00141	.01640

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	.00097	.00130	.01992	-.00014	-.00116	.00036	.07036
Stddev	.00006	.00015	.00724	.00016	.00132	.00105	.00809
%RSD	6.2427	11.154	36.360	111.04	113.47	294.67	11.495
#1	.00092	.00137	.01282	.00003	-.00068	.00155	.06556
#2	.00104	.00140	.02730	-.00029	-.00015	-.00008	.07970
#3	.00095	.00114	.01962	-.00018	-.00265	-.00040	.06583

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: S0 Acquired: 01/08/2025 17:30:20 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) 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	2145.3	19467.	1141.6	1451.6	2531.3
Stddev	16.5	106.	10.8	11.9	15.7
%RSD	.76784	.54196	.94513	.82312	.61890
#1	2132.7	19345.	1133.6	1439.0	2520.9
#2	2139.1	19517.	1153.9	1452.9	2523.6
#3	2163.9	19538.	1137.4	1462.8	2549.3

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: S1 Acquired: 01/08/2025 17:34:24 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) 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	3.7419	.00219	.00058	.00173	.00584	.02289	.73465	.05199
Stddev	.5100	.00023	.00053	.00027	.00047	.00077	.00456	.00204
%RSD	13.629	10.531	92.380	15.565	8.1029	3.3790	.62011	3.9293
#1	4.3279	.00213	.00024	.00149	.00584	.02261	.73099	.05000
#2	3.4995	.00199	.00119	.00168	.00632	.02376	.73321	.05189
#3	3.3983	.00244	.00030	.00202	.00537	.02229	.73975	.05408

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	.01683	.28327	.00216	.03609	.29232	.00293	.00534	.04909
Stddev	.00056	.00197	.00043	.00012	.00666	.00168	.00131	.00170
%RSD	3.2994	.69662	19.856	.34558	2.2777	57.208	24.583	3.4544
#1	.01619	.28102	.00226	.03623	.28504	.00469	.00434	.04885
#2	.01720	.28473	.00169	.03604	.29810	.00135	.00683	.05089
#3	.01709	.28405	.00252	.03599	.29380	.00276	.00486	.04753

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	.02360	.00306	5.3816	.36804	.12200	.33061	-.00097	.00586
Stddev	.00048	.00008	.0144	.00601	.00170	.00651	.00014	.00189
%RSD	2.0166	2.7155	.26691	1.6319	1.3975	1.9706	14.608	32.257
#1	.02306	.00300	5.3770	.36304	.12067	.32447	-.00080	.00594
#2	.02394	.00302	5.3701	.37471	.12142	.32993	-.00105	.00770
#3	.02380	.00315	5.3977	.36638	.12392	.33744	-.00105	.00393

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	.00522	.00418	.73671	.00098	.04084	.96743	.07386
Stddev	.00012	.00014	.00389	.00016	.00152	.01597	.00333
%RSD	2.2638	3.2967	.52826	16.697	3.7275	1.6507	4.5135
#1	.00510	.00411	.73557	.00082	.04029	.98553	.07768
#2	.00523	.00410	.74105	.00115	.04256	.95534	.07235
#3	.00534	.00434	.73352	.00097	.03966	.96142	.07155

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: S1 Acquired: 01/08/2025 17:34:24 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) 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	2107.2	19356.	1144.6	1449.2	2428.6
Stddev	3.0	11.	4.7	4.6	4.9
%RSD	.14026	.05434	.41083	.31613	.20017
#1	2104.6	19349.	1141.3	1453.9	2423.0
#2	2110.4	19351.	1150.0	1444.8	2430.7
#3	2106.6	19368.	1142.5	1448.9	2432.1

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: S2 Acquired: 01/08/2025 17:38:28 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) 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	220.93	.12688	1.7898	.06594	.12831	3.5387	8.7105	1.4095
Stddev	.40	.00058	.0062	.00032	.00065	.0176	.0266	.0057
%RSD	.17995	.45671	.34704	.49109	.50652	.49764	.30477	.40721
#1	221.30	.12753	1.7877	.06557	.12757	3.5224	8.7032	1.4160
#2	220.51	.12670	1.7849	.06618	.12875	3.5364	8.6883	1.4051
#3	220.98	.12641	1.7967	.06605	.12863	3.5574	8.7399	1.4073

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	2.1940	3.3702	.87648	.46711	28.413	1.2814	1.3356	.60478
Stddev	.0054	.0152	.00722	.00076	.171	.0037	.0059	.00291
%RSD	.24423	.45105	.82371	.16270	.60280	.28762	.44101	.48169
#1	2.1906	3.3835	.86826	.46658	28.593	1.2843	1.3409	.60463
#2	2.1912	3.3536	.87936	.46678	28.392	1.2826	1.3293	.60195
#3	2.2002	3.3734	.88181	.46798	28.252	1.2772	1.3365	.60777

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	.40052	.07904	38.476	4.3849	7.1873	.98976	.08705	1.7843
Stddev	.00066	.00117	.174	.0130	.0418	.00712	.00012	.0088
%RSD	.16589	1.4753	.45336	.29566	.58133	.71937	.14222	.49113
#1	.40042	.07777	38.605	4.3991	7.1438	.99232	.08709	1.7934
#2	.39991	.07926	38.547	4.3816	7.1910	.98171	.08691	1.7836
#3	.40122	.08007	38.278	4.3739	7.2271	.99524	.08715	1.7759

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	.53761	.04380	1.7532	.22438	.50402	11.742	1.7522
Stddev	.00029	.00046	.0088	.00055	.00499	.048	.0180
%RSD	.05400	1.0554	.50279	.24402	.99006	.40770	1.0281
#1	.53740	.04331	1.7633	.22392	.50683	11.765	1.7716
#2	.53748	.04423	1.7475	.22499	.49826	11.687	1.7490
#3	.53794	.04385	1.7487	.22424	.50696	11.774	1.7360

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: S2 Acquired: 01/08/2025 17:38:28 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) 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	2007.6	18644.	1109.8	1390.8	2081.7
Stddev	3.4	132.	8.1	8.8	5.7
%RSD	.16852	.71063	.72833	.63366	.27412
#1	2003.7	18786.	1100.6	1397.2	2075.5
#2	2010.2	18621.	1113.2	1394.4	2086.8
#3	2008.8	18524.	1115.7	1380.7	2082.7

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: S3 Acquired: 01/08/2025 17:42:23 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) 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	441.79	.25480	3.6554	.13319	.26013	7.0349	17.527	2.8153
Stddev	1.43	.00184	.0125	.00023	.00044	.0673	.129	.0333
%RSD	.32327	.72256	.34185	.17550	.16955	.95724	.73664	1.1835
#1	441.85	.25600	3.6620	.13344	.26063	6.9894	17.411	2.7832
#2	440.33	.25268	3.6410	.13298	.25980	7.0030	17.505	2.8129
#3	443.19	.25572	3.6632	.13315	.25996	7.1123	17.666	2.8497

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	4.5208	6.7641	1.7675	.94426	55.867	2.5592	2.6761	1.2012
Stddev	.0169	.0297	.0019	.00295	.803	.0159	.0083	.0056
%RSD	.37453	.43982	.10990	.31208	1.4366	.62312	.31115	.46426
#1	4.5347	6.7581	1.7672	.94700	55.049	2.5415	2.6686	1.1969
#2	4.5019	6.7379	1.7658	.94114	55.900	2.5636	2.6747	1.1991
#3	4.5257	6.7965	1.7696	.94463	56.653	2.5725	2.6851	1.2075

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	.82074	.16005	76.645	8.7545	14.678	1.7507	.18503	3.5920
Stddev	.00292	.00059	1.022	.1082	.015	.0047	.00076	.0526
%RSD	.35558	.37031	1.3333	1.2353	.10078	.26896	.40890	1.4648
#1	.82332	.15938	75.713	8.6426	14.690	1.7453	.18580	3.5336
#2	.81757	.16050	76.484	8.7626	14.662	1.7533	.18429	3.6066
#3	.82133	.16028	77.738	8.8584	14.684	1.7536	.18501	3.6358

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	1.0881	.09031	3.4414	.46328	1.0139	23.536	3.4153
Stddev	.0031	.00066	.0355	.00242	.0042	.121	.0074
%RSD	.28179	.73336	1.0300	.52279	.41868	.51447	.21636
#1	1.0912	.09080	3.4060	.46411	1.0122	23.469	3.4069
#2	1.0851	.08956	3.4413	.46055	1.0107	23.463	3.4185
#3	1.0881	.09057	3.4769	.46517	1.0187	23.675	3.4206

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: S3 Acquired: 01/08/2025 17:42:23 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) 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	1964.9	18151.	1102.4	1345.8	1988.2
Stddev	4.4	65.	10.5	7.7	6.6
%RSD	.22157	.35751	.95663	.57127	.32948
#1	1959.9	18076.	1111.9	1337.0	1981.3
#2	1967.9	18189.	1104.2	1350.9	1994.3
#3	1966.7	18188.	1091.0	1349.7	1989.1

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: S4 Acquired: 01/08/2025 17:46:10 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) 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	836.64	.49963	7.3902	.26991	.52520	13.607	34.307	5.4272
Stddev	2.18	.00067	.0083	.00068	.00132	.152	.338	.1090
%RSD	.26038	.13329	.11267	.25124	.25204	1.1157	.98515	2.0081
#1	837.79	.50025	7.3935	.27030	.52524	13.432	33.917	5.3088
#2	834.12	.49972	7.3807	.27030	.52650	13.680	34.519	5.4493
#3	838.00	.49892	7.3964	.26913	.52386	13.708	34.484	5.5233

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	9.1249	13.059	3.4688	1.8718	106.23	4.9818	5.1699	2.3160
Stddev	.0053	.127	.0113	.0017	1.74	.0574	.0639	.0279
%RSD	.05802	.96959	.32604	.09174	1.6389	1.1528	1.2362	1.2045
#1	9.1287	12.914	3.4800	1.8709	104.31	4.9158	5.0962	2.2850
#2	9.1189	13.117	3.4690	1.8707	106.66	5.0095	5.2034	2.3242
#3	9.1272	13.147	3.4574	1.8737	107.71	5.0201	5.2102	2.3390

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	1.6452	.31684	144.39	16.803	29.417	3.2301	.38221	6.9282
Stddev	.0016	.00060	2.58	.305	.113	.0379	.00105	.1143
%RSD	.09581	.18893	1.7846	1.8128	.38315	1.1750	.27433	1.6494
#1	1.6452	.31724	141.53	16.484	29.421	3.1864	.38105	6.8017
#2	1.6436	.31615	145.11	16.836	29.302	3.2550	.38249	6.9592
#3	1.6468	.31713	146.54	17.090	29.527	3.2488	.38309	7.0238

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	2.1818	.18551	6.5767	.93706	1.9662	45.824	6.4724
Stddev	.0037	.00039	.1169	.00141	.0231	.508	.0939
%RSD	.16714	.21227	1.7778	.15026	1.1738	1.1077	1.4501
#1	2.1828	.18584	6.4442	.93732	1.9421	45.238	6.3650
#2	2.1849	.18562	6.6204	.93555	1.9881	46.108	6.5135
#3	2.1778	.18508	6.6655	.93833	1.9685	46.126	6.5387

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: S4 Acquired: 01/08/2025 17:46:10 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) 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	1823.0	17095.	1067.5	1249.5	1824.8
Stddev	2.8	104.	14.5	4.9	2.1
%RSD	.15095	.60652	1.3580	.39066	.11770
#1	1824.4	16980.	1083.3	1246.1	1827.1
#2	1819.9	17122.	1064.3	1255.1	1824.5
#3	1824.8	17182.	1054.8	1247.4	1822.8

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: S5 Acquired: 01/08/2025 17:49:55 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) 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	1667.0	.99352	15.179	.56891	1.1066	27.690	69.768	10.842
Stddev	6.2	.00802	.129	.00530	.0106	.213	.438	.147
%RSD	.36898	.80746	.84994	.93145	.95498	.76836	.62738	1.3560
#1	1671.0	.98927	15.104	.56593	1.1021	27.915	70.245	11.011
#2	1670.0	.98851	15.106	.56577	1.0990	27.661	69.676	10.769
#3	1659.9	1.0028	15.328	.57503	1.1187	27.492	69.384	10.746

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	18.619	26.156	6.9134	3.7714	207.97	10.016	10.356	4.6557
Stddev	.142	.126	.0355	.0290	2.48	.068	.051	.0393
%RSD	.76252	.47984	.51408	.76968	1.1926	.68341	.49138	.84412
#1	18.536	26.290	6.8724	3.7523	210.82	10.095	10.414	4.7009
#2	18.537	26.041	6.9317	3.7570	206.79	9.9796	10.318	4.6299
#3	18.783	26.138	6.9361	3.8048	206.30	9.9729	10.336	4.6363

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	3.3500	.64002	269.90	33.317	60.828	6.3317	.79987	13.646
Stddev	.0288	.00346	3.27	.497	.203	.0401	.00597	.180
%RSD	.86052	.54057	1.2133	1.4920	.33310	.63291	.74673	1.3195
#1	3.3335	.63605	273.07	33.891	60.638	6.3778	.79705	13.851
#2	3.3333	.64235	266.53	33.020	60.805	6.3124	.79584	13.574
#3	3.3833	.64167	270.11	33.040	61.041	6.3050	.80674	13.513

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	4.5345	.38877	12.977	1.9194	3.9945	92.728	12.729
Stddev	.0464	.00353	.178	.0143	.0269	.591	.044
%RSD	1.0228	.90784	1.3681	.74366	.67271	.63753	.34273
#1	4.5121	.38696	13.182	1.9155	4.0255	93.410	12.770
#2	4.5037	.38652	12.878	1.9075	3.9779	92.416	12.683
#3	4.5879	.39284	12.871	1.9352	3.9802	92.358	12.736

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: S5 Acquired: 01/08/2025 17:49:55 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) 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	1712.8	16695.	1055.4	1178.8	1732.3
Stddev	17.8	142.	7.9	10.2	15.4
%RSD	1.0396	.85285	.74381	.86490	.88934
#1	1721.8	16852.	1046.5	1189.1	1741.0
#2	1724.3	16657.	1061.2	1178.6	1741.5
#3	1692.3	16575.	1058.6	1168.7	1714.5

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: S6 Acquired: 01/08/2025 17:53:50 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) 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	75.650	43.590	26.835	7.3459	733.02
Stddev	.534	.426	.218	.0609	6.28
%RSD	.70633	.97747	.81171	.82871	.85626
#1	75.978	43.828	26.994	7.3861	732.15
#2	75.938	43.844	26.924	7.3758	739.69
#3	75.033	43.098	26.587	7.2758	727.23

Int. Std.	Y_3710
Units	Cts/S
Avg	992.76
Stddev	10.23
%RSD	1.0302
#1	987.41
#2	986.32
#3	1004.6

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: ICV055 Acquired: 01/08/2025 18:07:30 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICV055 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.053336	.9795522	.9678166	1.046534	1.020555	2.473810
Stddev	.006439	.0022669	.0046379	.000425	.005335	.007564
%RSD	.6112520	.2314203	.4792116	.0406490	.5227220	.3057493
#1	1.048163	.9790226	.9636123	1.046294	1.016619	2.482356
#2	1.051298	.9775970	.9670460	1.046284	1.018419	2.471097
#3	1.060547	.9820370	.9727915	1.047025	1.026627	2.467978

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5156190	.5152183	.4982138	10.31929	.5408631	.4707476
Stddev	.0017858	.0008237	.0011493	.06609	.0016827	.0004539
%RSD	.3463446	.1598653	.2306831	.6404767	.3111151	.0964255
#1	.5161010	.5156062	.4973515	10.28056	.5417815	.4702236
#2	.5136416	.5142723	.4977713	10.39560	.5389211	.4710198
#3	.5171143	.5157765	.4995186	10.28170	.5418869	.4709995

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5573906	10.07199	.5097159	5.908219	.5221108	.2520950
Stddev	.0006725	.08944	.0022625	.163549	.0016985	.0009936
%RSD	.1206533	.8879636	.4438772	2.768169	.3253210	.3941323
#1	.5566234	10.03456	.5072042	5.861015	.5208770	.2526354
#2	.5576701	10.17405	.5103492	5.773464	.5240481	.2527012
#3	.5578783	10.00734	.5115943	6.090179	.5214074	.2509483

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.387726	.5251147	1.096964	10.29574	F -.000286	F -.001575
Stddev	.023452	.0012222	.003698	.33668	.004662	.006221
%RSD	.2498132	.2327437	.3371255	3.270054	1629.552	395.0365
#1	9.387104	.5258967	1.095589	9.98410	.004625	-.008752
#2	9.411483	.5237064	1.094150	10.25029	-.004651	.002282
#3	9.364591	.5257412	1.101152	10.65283	-.000832	.001745

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: ICV055 Acquired: 01/08/2025 18:07:30 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICV055 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .0005116	F .0003787	F .0081689	F -.000914	F .0083473	F -.009283
Stddev	.0007605	.0083580	.0003834	.000717	.0070563	.000666
%RSD	148.6600	2207.089	4.693450	78.45585	84.53431	7.172767
#1	.0012590	.0098974	.0080501	-.000181	.0043999	-.008872
#2	.0005370	-.003001	.0078589	-.000947	.0041480	-.008926
#3	-.000261	-.005760	.0085976	-.001614	.0164939	-.010052

Elem	Li6707
Units	ppm
Avg	F .0057285
Stddev	.0080409
%RSD	140.3678
#1	-.003306
#2	.008390
#3	.012101

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2086.865	18798.96	1111.793	1397.499	2331.243
Stddev	4.669	87.32	3.792	10.916	5.121
%RSD	.2237533	.4644834	.3410923	.7811217	.2196555
#1	2092.078	18831.20	1110.709	1404.861	2337.118
#2	2085.452	18865.57	1116.009	1402.679	2327.731
#3	2083.066	18700.10	1108.661	1384.958	2328.879

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: ICB055 Acquired: 01/08/2025 18:14:36 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICB055 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.003362	.0012509	.0006070	.0066775	-.002542	-.034357	.0014323
Stddev	.001871	.0025287	.0031112	.0098605	.004137	.005347	.0018363
%RSD	55.65383	202.1554	512.5255	147.6671	162.7414	15.56283	128.2051
#1	-.002111	.0022913	-.002344	-.002658	-.004194	-.040138	-.000480
#2	-.005513	-.001632	.000309	.005701	.002166	-.033344	.003182
#3	-.002462	.003093	.003857	.016990	-.005598	-.029589	.001596

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000566	.0001413	.1095064	.0010819	.0000594	-.001959	-.025171
Stddev	.000405	.0000941	.0466179	.0010167	.0002779	.002222	.018529
%RSD	71.54136	66.56043	42.57092	93.96864	467.8205	113.4102	73.61454
#1	-.000271	.0000730	.1541387	.0019296	.0000017	-.000173	-.015310
#2	-.001028	.0001024	.1132516	.0013615	-.000185	-.001258	-.046546
#3	-.000400	.0002486	.0611289	-.000045	.000362	-.004448	-.013658

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0018075	-.055539	-.000622	.0016615	.1020412	.0001835	.0004889
Stddev	.0040657	.142008	.000522	.0007212	.0292163	.0013393	.0007242
%RSD	224.9347	255.6928	84.04901	43.40824	28.63182	729.8866	148.1276
#1	.0027708	-.103868	-.001018	.0008661	.0889467	.0010855	.0011989
#2	.0053051	.104326	-.000030	.0018454	.1355141	-.001355	.0005166
#3	-.002653	-.167074	-.000817	.0022729	.0816628	.000820	-.000249

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0098786	-.005894	-.004824	-.000089	-.005263	.0074487	-.000545
Stddev	.4615133	.001121	.002111	.000590	.006045	.0023917	.000521
%RSD	4671.833	19.02180	43.77147	662.3953	114.8611	32.10893	95.59473
#1	-.424805	-.006698	-.004779	-.000711	-.008089	.0055797	-.000769
#2	-.039767	-.006371	-.002735	.000463	.001678	.0101440	-.000916
#3	.494208	-.004613	-.006957	-.000019	-.009376	.0066223	.000051

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: ICB055 Acquired: 01/08/2025 18:14:36 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICB055 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	-.002447	-.000444	-.013397
Stddev	.005771	.000412	.009233
%RSD	235.8445	92.74932	68.91617
#1	.003973	-.000901	-.007740
#2	-.007204	-.000100	-.024052
#3	-.004110	-.000332	-.008400

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2101.020	19404.29	1126.158	1448.754	2466.862
Stddev	11.788	93.96	10.465	7.760	14.807
%RSD	.5610589	.4842481	.9292955	.5356500	.6002215
#1	2090.450	19435.31	1114.136	1442.775	2457.356
#2	2098.878	19478.81	1133.236	1457.524	2459.308
#3	2113.732	19298.73	1131.100	1445.964	2483.922

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: ICSA055 Acquired: 01/08/2025 18:18:41 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSA055 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0092341	.0003261	.0009137	.0078899	.0049984	247.5715
Stddev	.0006080	.0057023	.0032530	.0030322	.0034969	1.2955
%RSD	6.584437	1748.484	356.0195	38.43149	69.96113	.5232696
#1	.0098250	-.006250	-.002263	.0113902	.0029163	247.5673
#2	.0092672	.003905	.004238	.0060659	.0090356	248.8690
#3	.0086103	.003323	.000766	.0062136	.0030432	246.2781

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0073841	.0025804	.0007212	252.0485	.0527053	.0173537
Stddev	.0020132	.0004191	.0000677	1.5252	.0012176	.0006962
%RSD	27.26438	16.24124	9.393601	.6051380	2.310240	4.011913
#1	.0096296	.0030576	.0007796	251.5678	.0513363	.0171550
#2	.0057404	.0024113	.0006469	253.7562	.0531126	.0167784
#3	.0067823	.0022723	.0007371	250.8215	.0536671	.0181276

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.017131	100.8819	.0073749	261.0505	.0020004	-.004661
Stddev	.001715	.5981	.0042960	1.5908	.0013908	.001651
%RSD	10.01041	.5928916	58.25247	.6093925	69.52576	35.42158
#1	-.016933	100.8902	.0100996	260.6337	.0017605	-.002984
#2	-.015524	101.4758	.0024225	262.8082	.0007451	-.004714
#3	-.018936	100.2796	.0096025	259.7095	.0034956	-.006284

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3283369	.0006745	-.032403	-.787119	F -.010975	F .0227882
Stddev	.0339512	.0008943	.000504	.364304	.003765	.0048122
%RSD	10.34037	132.5751	1.556436	46.28324	34.30669	21.11713
#1	.3437767	.0016228	-.031934	-.381128	-.015263	.0184948
#2	.3518244	.0005544	-.032338	-1.08549	-.009451	.0279899
#3	.2894097	-.000154	-.032936	-.89474	-.008210	.0218800

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: ICSA055 Acquired: 01/08/2025 18:18:41 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSA055 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0080429	.0124299	.0000496	F .0124203	.0006292	.0079867
Stddev	.0001656	.0067897	.0053961	.0021066	.0077828	.0006227
%RSD	2.058788	54.62428	10877.86	16.96133	1236.949	7.797206
#1	.0079650	.0091577	.0049762	.0108675	.0082407	.0076489
#2	.0082330	.0202361	-.005717	.0115751	-.007314	.0087053
#3	.0079305	.0078959	.000890	.0148183	.000961	.0076058

Elem	Li6707
Units	ppm
Avg	-.006812
Stddev	.001786
%RSD	26.22191
#1	-.008872
#2	-.005693
#3	-.005870

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1899.982	17361.39	1067.498	1318.553	1925.889
Stddev	3.189	60.79	3.602	7.070	4.763
%RSD	.1678381	.3501435	.3373892	.5361812	.2473175
#1	1903.524	17344.92	1067.715	1310.606	1929.296
#2	1899.086	17310.53	1063.793	1320.910	1927.924
#3	1897.338	17428.71	1070.986	1324.144	1920.446

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: ICSAB055 Acquired: 01/08/2025 18:22:39 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSAB055 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1036628	.0948159	.0489068	.0646348	.5768378	246.7528
Stddev	.0074902	.0020499	.0020839	.0164763	.0019743	2.4429
%RSD	7.225578	2.161944	4.261007	25.49131	.3422692	.9900074
#1	.1121705	.0928196	.0495004	.0488908	.5782117	246.0096
#2	.1007569	.0947127	.0506295	.0632568	.5777264	249.4810
#3	.0980609	.0969154	.0465905	.0817568	.5745753	244.7678

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5380864	.5249687	.9702794	251.0214	.5832443	.4993688
Stddev	.0067169	.0013975	.0021839	2.0087	.0051006	.0012335
%RSD	1.248300	.2661985	.2250783	.8001963	.8745174	.2470113
#1	.5357730	.5263625	.9690677	251.1285	.5863167	.4985916
#2	.5456543	.5249761	.9689701	252.9744	.5773565	.5007911
#3	.5328319	.5235676	.9728005	248.9613	.5860596	.4987238

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5023173	100.7372	.5024217	260.4577	.9742186	.2030064
Stddev	.0026280	1.0079	.0076717	3.0445	.0020416	.0034489
%RSD	.5231757	1.000555	1.526947	1.168918	.2095592	1.698899
#1	.5044105	100.8860	.4988442	259.6467	.9761799	.2034967
#2	.5031733	101.6625	.5112287	263.8257	.9721053	.1993386
#3	.4993680	99.6632	.4971922	257.9008	.9743707	.2061839

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2745509	.5228522	.9374312	-2.10284	-.008719	F .0247540
Stddev	.0405445	.0037688	.0139080	.17515	.004634	.0019177
%RSD	14.76757	.7208120	1.483633	8.329428	53.15466	7.747097
#1	.2589068	.5268050	.9478173	-2.13233	-.010013	.0256017
#2	.3205869	.5224520	.9216301	-2.26137	-.003575	.0261017
#3	.2441591	.5192994	.9428461	-1.91481	-.012569	.0225585

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: ICSAB055 Acquired: 01/08/2025 18:22:39 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSAB055 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0058666	.0081676	-.004796	F .0122339	-.008652	.0083456
Stddev	.0005699	.0090002	.001686	.0018563	.012421	.0011581
%RSD	9.714632	110.1940	35.14730	15.17338	143.5685	13.87686
#1	.0059158	-.002174	-.003130	.0143774	.001922	.0076155
#2	.0052737	.012453	-.006501	.0111681	-.005547	.0077405
#3	.0064104	.014225	-.004757	.0111563	-.022331	.0096810

Elem	Li6707
Units	ppm
Avg	-.013931
Stddev	.008283
%RSD	59.45267
#1	-.014782
#2	-.021756
#3	-.005256

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1913.950	17304.38	1063.233	1311.888	1949.410
Stddev	2.195	39.04	9.766	4.601	2.063
%RSD	.1146605	.2255902	.9185336	.3507214	.1058284
#1	1914.287	17267.61	1063.976	1308.019	1950.608
#2	1911.607	17300.18	1053.117	1316.976	1950.595
#3	1915.957	17345.34	1072.606	1310.670	1947.028

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: CCV132 Acquired: 01/08/2025 18:35:36 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV132 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.821542	4.880358	24.91225	5.056557	4.986047	390.5850	10.10065
Stddev	.005889	.013085	.07354	.018514	.001943	3.8101	.08432
%RSD	.1221446	.2681113	.2951898	.3661467	.0389673	.9754941	.8347521
#1	4.819328	4.895454	24.98927	5.067143	4.984452	386.1967	10.00383
#2	4.828217	4.872270	24.90473	5.035178	4.985477	393.0517	10.15798
#3	4.817080	4.873349	24.84277	5.067348	4.988211	392.5066	10.14013

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5120411	2.520181	403.7706	15.96620	2.538356	15.08194	397.3032
Stddev	.0028521	.005678	2.8091	.04912	.003607	.06300	3.2058
%RSD	.5570078	.2252903	.6957140	.3076393	.1420967	.4177332	.8068893
#1	.5087486	2.526030	400.5570	16.02204	2.540914	15.01946	393.6501
#2	.5137531	2.519821	404.9960	15.92970	2.539925	15.08091	398.6122
#3	.5136215	2.514692	405.7588	15.94685	2.534231	15.14546	399.6474

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	14.99061	401.2276	2.537296	1.295382	412.8146	2.503864	15.15826
Stddev	.14051	2.9378	.002941	.007713	4.4123	.011558	.02830
%RSD	.9373095	.7322128	.1159157	.5954587	1.068837	.4616220	.1866660
#1	14.82841	397.9235	2.539987	1.301760	408.4446	2.490858	15.13672
#2	15.06835	402.2139	2.537745	1.286809	412.7310	2.507771	15.14777
#3	15.07507	403.5453	2.534156	1.297576	417.2681	2.512962	15.19031

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	155.3419	5.018853	5.062024	4.936266	5.013499	4.891547	5.054658
Stddev	1.7362	.008084	.011719	.012648	.003103	.024761	.007578
%RSD	1.117692	.1610700	.2315084	.2562215	.0618981	.5061966	.1499201
#1	153.3518	5.026356	5.051933	4.950870	5.013862	4.869624	5.058514
#2	156.5470	5.019910	5.059263	4.928847	5.010231	4.886616	5.059533
#3	156.1269	5.010292	5.074878	4.929081	5.016406	4.918403	5.045928

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: CCV132 Acquired: 01/08/2025 18:35:36 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV132 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	4.985647	4.775501	5.216050
Stddev	.038550	.042681	.033295
%RSD	.7732123	.8937510	.6383123
#1	4.941134	4.726286	5.179784
#2	5.007804	4.802372	5.223133
#3	5.008003	4.797844	5.245233

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1733.824	15986.07	1022.402	1180.493	1719.638
Stddev	6.767	22.92	6.654	5.291	6.165
%RSD	.3903136	.1433611	.6507731	.4482335	.3585257
#1	1726.047	15974.62	1029.223	1185.574	1712.622
#2	1738.372	16012.46	1022.054	1180.893	1722.103
#3	1737.053	15971.14	1015.929	1175.014	1724.190

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: CCB132 Acquired: 01/08/2025 18:39:26 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB132 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.003468	.0030886	.0020416	.0068655	.0011522	.0818263
Stddev	.002789	.0014331	.0009829	.0047860	.0019856	.0367105
%RSD	80.40595	46.40057	48.14263	69.71009	172.3326	44.86400
#1	-.006680	.0020543	.0022820	.0116841	-.000580	.1240236
#2	-.002072	.0047244	.0009608	.0067998	.003319	.0642208
#3	-.001654	.0024870	.0028819	.0021128	.000717	.0572344

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004506	-.000128	-.000013	.0244217	.0001654	.0002483
Stddev	.0029057	.000200	.000074	.1040627	.0001404	.0004713
%RSD	644.8078	155.5653	592.8831	426.1074	84.86118	189.8110
#1	-.001740	-.000144	.000048	-.056044	.0001890	.0007081
#2	.003747	.000079	-.000096	.141940	.0000147	-.000234
#3	-.000655	-.000320	.000010	-.012631	.0002924	.000271

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007262	.0137979	.0021186	-.210586	-.000874	-.000976
Stddev	.0009007	.0413792	.0026205	.230231	.000764	.001297
%RSD	124.0336	299.8944	123.6876	109.3283	87.39585	132.9613
#1	.0003346	.0440534	-.000876	-.145713	.000001	-.001999
#2	.0000875	.0306966	.003992	-.019752	-.001215	.000483
#3	.0017564	-.033356	.003240	-.466293	-.001408	-.001411

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1051860	-.000642	.0012991	1.313170	-.009546	.0133960
Stddev	.0238619	.000404	.0010621	.173770	.001587	.0007857
%RSD	22.68546	63.00262	81.75305	13.23284	16.62218	5.865349
#1	.1093029	-.000809	.0005082	1.483238	-.008564	.0125377
#2	.0795335	-.000935	.0025063	1.320350	-.011377	.0135704
#3	.1267216	-.000181	.0008829	1.135922	-.008699	.0140799

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: CCB132 Acquired: 01/08/2025 18:39:26 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB132 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004556	-.015529	.0059472	.0005330	-.000059	-.000026
Stddev	.0004870	.002106	.0078769	.0015557	.003729	.000381
%RSD	106.9093	13.56217	132.4466	291.8654	6320.331	1461.640
#1	-.000105	-.013410	-.002664	.0003106	.002421	.000230
#2	.000700	-.017622	.012788	.0021880	.001750	.000156
#3	.000772	-.015554	.007718	-.000900	-.004347	-.000464

Elem	Li6707
Units	ppm
Avg	F .0242377
Stddev	.0061574
%RSD	25.40419
#1	.0284273
#2	.0271177
#3	.0171681

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2071.571	18991.60	1096.402	1423.529	2431.466
Stddev	4.992	58.80	4.520	4.325	4.616
%RSD	.2409782	.3095857	.4122681	.3037998	.1898402
#1	2077.210	18950.12	1101.082	1421.233	2429.418
#2	2069.783	19058.89	1092.061	1428.518	2436.752
#3	2067.719	18965.79	1096.064	1420.837	2428.229

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: PB165919BL Acquired: 01/08/2025 18:43:32 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS919 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0054113	.0010080	.0019263	.0051861	.0023639	-.006744
Stddev	.0026416	.0025725	.0049384	.0047832	.0050095	.071747
%RSD	48.81639	255.2193	256.3639	92.22999	211.9180	1063.841
#1	.0084602	-.001767	.0070864	.0017535	-.001221	.019940
#2	.0039676	.003312	-.002755	.0031553	.000225	.047838
#3	.0038062	.001479	.001448	.0106497	.008088	-.088010

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003033	-.000553	.0000186	.0342682	.0003980	.0000525
Stddev	.0018238	.000542	.0001003	.0387461	.0010681	.0004888
%RSD	601.3804	97.96446	538.8091	113.0672	268.3842	931.0316
#1	-.001200	-.000820	.0001033	.0778022	-.000316	.0005132
#2	-.000223	-.000910	-.000092	.0035652	-.000116	.0001045
#3	.002332	.000070	.000045	.0214372	.001626	-.000460

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000978	.0031821	.0048437	-.021902	-.000759	-.002376
Stddev	.001380	.0607704	.0049318	.245429	.001150	.001384
%RSD	141.0933	1909.790	101.8192	1120.559	151.6294	58.22955
#1	-.002413	.0296262	.0029737	.040825	.000304	-.002125
#2	-.000862	.0462501	.0011203	.186075	-.000600	-.001135
#3	.000340	-.066330	.0104370	-.292608	-.001980	-.003868

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1220206	.0011578	.0001302	.1929512	F -.010377	.0044253
Stddev	.0083400	.0009953	.0011392	.8694055	.000736	.0020446
%RSD	6.834956	85.96962	874.8462	450.5832	7.094981	46.20200
#1	.1130243	.0022289	-.001007	-.674687	-.009907	.0067481
#2	.1294947	.0002613	.001271	.189427	-.009999	.0028981
#3	.1235427	.0009831	.000126	1.064114	-.011225	.0036298

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: PB165919BL Acquired: 01/08/2025 18:43:32 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS919 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000485	-.014288	.0023504	.0009524	.0109457	-.000349
Stddev	.001166	.006130	.0025955	.0001617	.0118017	.000591
%RSD	240.5719	42.90149	110.4283	16.98297	107.8200	169.2981
#1	-.001795	-.017694	.0012315	.0011388	.0243278	-.000986
#2	-.000096	-.007212	.0053177	.0008696	.0064840	-.000241
#3	.000438	-.017958	.0005020	.0008488	.0020254	.000180

Elem	Li6707
Units	ppm
Avg	-.007526
Stddev	.007029
%RSD	93.39794
#1	-.000629
#2	-.014680
#3	-.007270

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2110.501	19236.33	1129.900	1434.970	2481.144
Stddev	5.042	171.90	13.656	8.553	4.944
%RSD	.2389040	.8936382	1.208576	.5960571	.1992734
#1	2115.045	19081.60	1141.879	1426.579	2486.853
#2	2111.383	19206.00	1115.030	1434.656	2478.380
#3	2105.077	19421.37	1132.791	1443.676	2478.201

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: PB165919BS Acquired: 01/08/2025 18:47:38 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS919 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0205445	.0512189	.0190411	.0620983	.1154970	.4036256
Stddev	.0018892	.0014080	.0019720	.0125450	.0053830	.0175714
%RSD	9.195393	2.748900	10.35647	20.20187	4.660698	4.353385
#1	.0208439	.0526373	.0173182	.0718028	.1156003	.3878210
#2	.0222661	.0498217	.0186131	.0479324	.1208276	.4225467
#3	.0185236	.0511976	.0211919	.0665595	.1100631	.4005090

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4115392	.0101060	.0089982	10.19156	.0211195	.0971649
Stddev	.0020598	.0006084	.0000638	.05987	.0019153	.0007219
%RSD	.5005126	6.020404	.7084532	.5874076	9.068750	.7429381
#1	.4122868	.0106545	.0090460	10.14092	.0227296	.0965931
#2	.4131207	.0102121	.0089259	10.25763	.0190014	.0969256
#3	.4092099	.0094516	.0090228	10.17613	.0216275	.0979761

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0577325	.2343386	.0353626	10.27105	.0735685	.0189834
Stddev	.0015386	.0176303	.0001876	.08659	.0010025	.0004673
%RSD	2.665072	7.523427	.5304604	.8430536	1.362697	2.461830
#1	.0588882	.2139817	.0352440	10.36066	.0724131	.0186562
#2	.0559861	.2443586	.0352649	10.18783	.0742078	.0187753
#3	.0583232	.2446754	.0355789	10.26467	.0740846	.0195186

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.76103	.1074341	.1197927	10.43404	F .0036244	F -.000908
Stddev	.13820	.0016465	.0010794	.75952	.0012546	.003072
%RSD	1.175076	1.532546	.9010505	7.279259	34.61577	338.4434
#1	11.88880	.1092654	.1185922	11.26408	.0029153	-.000019
#2	11.77994	.1069611	.1201031	10.26426	.0028848	-.004326
#3	11.61434	.1060760	.1206830	9.77378	.0050729	.001622

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: PB165919BS Acquired: 01/08/2025 18:47:38 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS919 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0193791	.1611912	F 1.078463	.0125125	.2069660	.2096192
Stddev	.0005837	.0051959	.009082	.0014355	.0175129	.0011069
%RSD	3.011792	3.223436	.8421280	11.47214	8.461708	.5280648
#1	.0200530	.1609901	1.086809	.0141061	.2234947	.2107993
#2	.0190361	.1560988	1.079790	.0121102	.1886120	.2086039
#3	.0190482	.1664847	1.068791	.0113211	.2087913	.2094543

Elem	Li6707
Units	ppm
Avg	.0242378
Stddev	.0007568
%RSD	3.122610
#1	.0239461
#2	.0236703
#3	.0250971

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2053.623	18619.14	1101.558	1401.926	2316.432
Stddev	7.065	65.24	11.137	2.897	9.651
%RSD	.3440272	.3503677	1.010979	.2066167	.4166239
#1	2060.941	18692.91	1090.388	1405.246	2327.258
#2	2046.841	18569.06	1101.624	1399.912	2308.732
#3	2053.088	18595.45	1112.661	1400.621	2313.307

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: PB165918BL Acquired: 01/08/2025 18:51:41 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS918 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002766	.0003448	.0031902	.0038001	.0014879	.0461646	.0016023
Stddev	.004276	.0027197	.0006662	.0038995	.0021903	.0517708	.0037454
%RSD	154.5575	788.8643	20.88334	102.6157	147.2019	112.1439	233.7459
#1	.001728	.0005405	.0038448	-.000672	-.000315	.0253498	.0055246
#2	-.006782	-.002468	.0032128	.006490	.003926	.1051031	.0012190
#3	-.003245	.002961	.0025130	.005582	.000853	.0080408	-.001937

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000499	-.000015	-.002434	.0009186	-.000013	-.000274	-.014791
Stddev	.000351	.000124	.096112	.0022361	.000388	.000789	.034611
%RSD	70.33012	815.5792	3948.912	243.4323	2977.898	288.2312	234.0056
#1	-.000566	-.000106	.108523	.0027071	.000077	-.000962	-.054031
#2	-.000811	.000126	-.059903	.0016371	.000322	-.000447	.011391
#3	-.000119	-.000066	-.055922	-.001588	-.000438	.000587	-.001732

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0046093	-.035969	-.000963	-.000699	.1016060	.0003802	.0000056
Stddev	.0007548	.077680	.001425	.001495	.0363518	.0013624	.0009707
%RSD	16.37628	215.9609	147.9449	214.0080	35.77723	358.3785	17251.25
#1	.0046816	-.113096	-.002595	-.002373	.0989624	.0005245	.0002751
#2	.0053253	.042252	.000035	-.000228	.1392075	.0016647	-.001071
#3	.0038209	-.037064	-.000329	.000504	.0666482	-.001049	.000813

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.184966	-.007178	-.003454	.0001737	-.011430	.0025770	-.001257
Stddev	.328458	.001864	.002623	.0007894	.005057	.0054272	.000767
%RSD	177.5780	25.96253	75.94606	454.3971	44.24472	210.5976	61.04912
#1	-.547129	-.005384	-.003711	.0010011	-.014086	.0088127	-.001488
#2	.093650	-.007045	-.000712	.0000912	-.005598	-.001081	-.000401
#3	-.101417	-.009104	-.005939	-.000571	-.014606	-.000001	-.001882

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: PB165918BL Acquired: 01/08/2025 18:51:41 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS918 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	-.002865	-.000487	-.014941
Stddev	.005678	.000308	.006099
%RSD	198.1956	63.11997	40.82312
#1	.001230	-.000382	-.021022
#2	-.000478	-.000246	-.008823
#3	-.009347	-.000834	-.014978

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2127.453	19213.93	1128.881	1432.756	2504.826
Stddev	.794	88.15	12.575	8.141	2.098
%RSD	.0373117	.4587616	1.113911	.5682400	.0837708
#1	2127.193	19131.15	1116.179	1423.453	2502.703
#2	2126.822	19306.61	1129.139	1436.234	2504.874
#3	2128.344	19204.04	1141.324	1438.581	2506.899

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: PB165918BS Acquired: 01/08/2025 18:55:48 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS918 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0196694	.0512456	.0211774	.0672311	.1143801	.4589378
Stddev	.0013013	.0021878	.0026359	.0044775	.0045797	.0555167
%RSD	6.615797	4.269198	12.44661	6.659914	4.003964	12.09678
#1	.0204341	.0495076	.0187313	.0622860	.1196502	.3972476
#2	.0181669	.0537024	.0208320	.0710103	.1113663	.5048773
#3	.0204072	.0505270	.0239689	.0683971	.1121237	.4746886

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4128610	.0101331	.0091886	10.28162	.0234109	.0981673
Stddev	.0065654	.0003695	.0000383	.06899	.0014398	.0003187
%RSD	1.590215	3.646567	.4162835	.6710137	6.149929	.3246130
#1	.4124626	.0105420	.0091503	10.36039	.0222059	.0982503
#2	.4196165	.0098231	.0092268	10.25259	.0230214	.0984363
#3	.4065039	.0100342	.0091886	10.23189	.0250053	.0978153

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0591014	.1861558	.0341279	10.31114	.0742334	.0220123
Stddev	.0005052	.0288631	.0022281	.15872	.0004839	.0006967
%RSD	.8547124	15.50480	6.528818	1.539273	.6518141	3.164889
#1	.0596258	.2183084	.0356939	10.17394	.0745197	.0222719
#2	.0586180	.1776775	.0351128	10.27450	.0745057	.0212231
#3	.0590604	.1624813	.0315770	10.48497	.0736747	.0225418

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.82979	.1085233	.1223099	9.751878	F .0042352	F -.005843
Stddev	.07399	.0002636	.0019595	.481421	.0021951	.004932
%RSD	.6254518	.2428909	1.602056	4.936702	51.82858	84.41553
#1	11.89727	.1086534	.1210057	9.201497	.0017129	-.010316
#2	11.84144	.1086965	.1245632	9.959416	.0057121	-.006658
#3	11.75067	.1082199	.1213607	10.09472	.0052807	-.000554

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: PB165918BS Acquired: 01/08/2025 18:55:48 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS918 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0203013	.1552149	F 1.091150	.0124183	.2020020	.2134141
Stddev	.0015939	.0032941	.008111	.0009761	.0010532	.0018211
%RSD	7.851061	2.122298	.7432986	7.859935	.5213926	.8533133
#1	.0216306	.1574635	1.100071	.0112941	.2008420	.2148440
#2	.0207391	.1567476	1.089160	.0130495	.2022658	.2140345
#3	.0185343	.1514337	1.084220	.0129114	.2028983	.2113639

Elem	Li6707
Units	ppm
Avg	F .0045925
Stddev	.0079827
%RSD	173.8201
#1	-.000973
#2	.013739
#3	.001012

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2089.280	18868.43	1124.408	1404.472	2350.739
Stddev	5.040	118.26	9.148	12.265	7.245
%RSD	.2412438	.6267825	.8135562	.8732548	.3082094
#1	2084.185	18919.69	1117.349	1412.625	2343.802
#2	2094.263	18733.19	1121.133	1390.367	2358.257
#3	2089.392	18952.42	1134.742	1410.424	2350.157

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: PB165882BL Acquired: 01/08/2025 18:59:50 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS882 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008237	.0012473	.0003446	.0044320	-.002406	.0012408
Stddev	.0033948	.0023050	.0018775	.0032773	.002798	.0205230
%RSD	412.1464	184.7907	544.8011	73.94676	116.2707	1653.953
#1	-.001373	.0031274	.0022693	.0080655	-.002048	-.019409
#2	-.000890	-.001324	.0002464	.0035313	.000195	.021635
#3	.004734	.001939	-.001482	.0016993	-.005366	.001497

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0019272	-.000122	.0000420	-.010511	.0010269	.0002489
Stddev	.0018284	.000079	.0000752	.027900	.0008440	.0001376
%RSD	94.87313	64.36718	178.7700	265.4464	82.18572	55.30000
#1	.0007338	-.000201	-.000038	-.019398	.0014229	.0003968
#2	.0040321	-.000121	.000052	-.032884	.0016000	.0002252
#3	.0010156	-.000044	.000112	.020750	.0000578	.0001246

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000976	.0152934	.0019169	-.121403	-.000594	-.001092
Stddev	.000696	.0147739	.0017804	.091527	.000229	.001312
%RSD	71.30888	96.60349	92.88195	75.39158	38.53915	120.1797
#1	-.000205	.0323361	.0038299	-.115707	-.000540	.000219
#2	-.001165	.0061178	.0003083	-.215644	-.000397	-.002405
#3	-.001558	.0074262	.0016125	-.032856	-.000845	-.001089

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0509635	-.000317	.0013160	-.115563	-.007198	-.006751
Stddev	.0383752	.001976	.0008834	.142640	.001465	.003042
%RSD	75.29934	622.5277	67.12886	123.4303	20.35325	45.05808
#1	.0074423	.000202	.0021157	-.261914	-.008617	-.007949
#2	.0799411	-.002501	.0014644	-.107825	-.007288	-.009012
#3	.0655071	.001347	.0003678	.023050	-.005690	-.003293

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: PB165882BL Acquired: 01/08/2025 18:59:50 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS882 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001085	-.013464	.0014250	-.000644	.0009025	-.000083
Stddev	.0011701	.007746	.0029083	.000629	.0111650	.000192
%RSD	1078.805	57.52934	204.0950	97.64642	1237.083	232.1999
#1	.0014152	-.021751	.0047345	-.001370	.0132324	-.000297
#2	-.000247	-.012232	-.000723	-.000302	-.008524	-.000024
#3	-.000842	-.006408	.000263	-.000261	-.002001	.000073

Elem	Li6707
Units	ppm
Avg	F -.022125
Stddev	.014059
%RSD	63.54365
#1	-.020666
#2	-.036858
#3	-.008853

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2121.525	19265.53	1134.376	1432.480	2493.496
Stddev	4.939	81.68	5.600	3.133	6.926
%RSD	.2328275	.4239635	.4937061	.2187105	.2777446
#1	2115.822	19177.35	1137.564	1429.258	2485.554
#2	2124.437	19338.60	1127.909	1435.515	2496.658
#3	2124.316	19280.64	1137.655	1432.667	2498.276

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: PB165882BS Acquired: 01/08/2025 19:03:58 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS882 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0172666	.0498171	.0195578	.0674871	.1077254	.4073679
Stddev	.0056396	.0047731	.0037974	.0038209	.0033592	.0275668
%RSD	32.66168	9.581315	19.41619	5.661608	3.118343	6.767043
#1	.0120245	.0529503	.0189805	.0640659	.1115134	.3881628
#2	.0165417	.0443236	.0236107	.0667850	.1065547	.4389545
#3	.0232335	.0521774	.0160821	.0716103	.1051082	.3949862

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4028759	.0102592	.0089488	10.10866	.0221095	.0955403
Stddev	.0052346	.0002571	.0001063	.06804	.0012614	.0000547
%RSD	1.299317	2.506409	1.188318	.6731083	5.705044	.0572396
#1	.3991597	.0103999	.0088549	10.13856	.0211633	.0955906
#2	.4006057	.0099624	.0089272	10.03079	.0216237	.0955480
#3	.4088624	.0104152	.0090643	10.15664	.0235416	.0954821

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0565866	.2391206	.0316897	10.10281	.0718288	.0192009
Stddev	.0010629	.0384878	.0033505	.36779	.0007695	.0036276
%RSD	1.878390	16.09556	10.57293	3.640449	1.071285	18.89274
#1	.0568376	.2791437	.0287621	9.84514	.0719928	.0203128
#2	.0554207	.2023780	.0353439	10.52400	.0709905	.0151475
#3	.0575016	.2358403	.0309630	9.93929	.0725031	.0221424

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.55973	.1066634	.1184932	8.991554	F .0051682	F -.004966
Stddev	.07302	.0030403	.0013252	.802899	.0020349	.004450
%RSD	.6317175	2.850351	1.118414	8.929478	39.37321	89.60721
#1	11.62263	.1101632	.1176620	8.241243	.0051723	-.004031
#2	11.47965	.1051526	.1200215	8.895092	.0072010	-.001058
#3	11.57693	.1046745	.1177961	9.838326	.0031312	-.009809

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: PB165882BS Acquired: 01/08/2025 19:03:58 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS882 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0198081	.1507836	F 1.069028	.0126360	.2018702	.2091250
Stddev	.0002504	.0035163	.004875	.0011205	.0125491	.0012957
%RSD	1.264282	2.332003	.4560426	8.867633	6.216413	.6196031
#1	.0200901	.1545561	1.073841	.0136947	.1878729	.2095813
#2	.0197223	.1475973	1.064093	.0114625	.2056226	.2076628
#3	.0196118	.1501975	1.069148	.0127510	.2121149	.2101309

Elem	Li6707
Units	ppm
Avg	F -.004681
Stddev	.004870
%RSD	104.0416
#1	-.008566
#2	-.006259
#3	.000783

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2104.189	19042.49	1128.930	1428.427	2368.133
Stddev	4.806	26.30	3.442	8.403	2.880
%RSD	.2283966	.1381012	.3048624	.5883006	.1216222
#1	2103.225	19064.89	1125.230	1432.704	2366.187
#2	2099.938	19013.53	1132.036	1418.745	2366.771
#3	2109.404	19049.05	1129.524	1433.831	2371.442

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: PB165883BL Acquired: 01/08/2025 19:08:01 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS883 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0063056	.0010574	-.000639	.0061023	-.002242	-.013847
Stddev	.0011750	.0040263	.003138	.0026852	.006987	.043221
%RSD	18.63423	380.7804	491.4916	44.00237	311.6656	312.1402
#1	.0068277	.0054283	-.003596	.0082085	-.007986	-.046288
#2	.0071291	.0002437	-.000973	.0030787	-.004275	-.030471
#3	.0049600	-.002500	.002654	.0070198	.005536	.035218

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0012292	-.000391	.0000231	-.068162	.0003933	.0002914
Stddev	.0009283	.000298	.0000416	.102651	.0004992	.0002092
%RSD	75.52341	76.26251	179.9674	150.5991	126.9244	71.77859
#1	.0009919	-.000227	-.000004	.027206	-.000122	.0004840
#2	.0004426	-.000211	.000071	-.176804	.000875	.0000688
#3	.0022532	-.000735	.000003	-.054887	.000428	.0003215

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000658	.0132439	.0024113	-.171915	-.000229	-.001009
Stddev	.001498	.0346885	.0060398	.128861	.000554	.000678
%RSD	227.6903	261.9211	250.4773	74.95646	241.9913	67.17740
#1	-.001755	-.020442	.0030596	-.216979	.000022	-.001693
#2	.001049	.011319	-.003926	-.026573	.000155	-.000337
#3	-.001268	.048855	.008101	-.272193	-.000864	-.000997

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0605929	-.000646	.0001226	-.317770	-.008280	-.006258
Stddev	.0113068	.001237	.0007993	.655414	.001198	.002895
%RSD	18.66028	191.4734	652.0959	206.2546	14.47416	46.26194
#1	.0487635	.000298	-.000652	-.316706	-.006906	-.006275
#2	.0617230	-.002047	.000945	-.973715	-.008818	-.009144
#3	.0712923	-.000190	.000075	.337112	-.009114	-.003354

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: PB165883BL Acquired: 01/08/2025 19:08:01 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS883 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006620	-.015659	-.001284	-.000480	.0115929	-.000172
Stddev	.0005181	.002224	.002089	.000248	.0079563	.000155
%RSD	78.26362	14.20074	162.6312	51.73705	68.63027	90.08702
#1	.0000845	-.016744	-.002321	-.000330	.0031599	-.000017
#2	.0010860	-.017132	.001120	-.000767	.0189663	-.000327
#3	.0008154	-.013101	-.002652	-.000344	.0126526	-.000172

Elem	Li6707
Units	ppm
Avg	F -.017859
Stddev	.003130
%RSD	17.52916
#1	-.015672
#2	-.021445
#3	-.016459

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2128.451	19245.09	1129.740	1439.185	2504.659
Stddev	4.251	27.68	17.239	5.506	4.291
%RSD	.1997396	.1438437	1.525921	.3825735	.1713107
#1	2124.690	19231.87	1123.515	1443.332	2503.621
#2	2127.598	19226.50	1149.227	1441.285	2500.982
#3	2133.064	19276.90	1116.479	1432.938	2509.373

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: PB165883BS Acquired: 01/08/2025 19:12:05 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS883 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0243818	.0503194	.0176649	.0640068	.1099565	.4073749
Stddev	.0034425	.0029834	.0035093	.0059081	.0026304	.0268664
%RSD	14.11906	5.928971	19.86612	9.230427	2.392183	6.595003
#1	.0274730	.0482167	.0147646	.0572956	.1129497	.3920605
#2	.0206719	.0537340	.0166643	.0684234	.1089067	.4383967
#3	.0250003	.0490076	.0215659	.0663013	.1080132	.3916674

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4021503	.0099252	.0087879	10.12256	.0219701	.0948388
Stddev	.0017867	.0003486	.0001900	.13999	.0012095	.0004011
%RSD	.4442925	3.512301	2.162557	1.382936	5.505291	.4228749
#1	.4029757	.0103223	.0088783	10.08110	.0205799	.0951128
#2	.4033750	.0096698	.0089158	10.27860	.0227807	.0950252
#3	.4001000	.0097834	.0085695	10.00799	.0225497	.0943785

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0573939	.1747662	.0334207	10.14669	.0727000	.0186523
Stddev	.0005253	.0136426	.0023541	.19328	.0001410	.0007290
%RSD	.9152569	7.806223	7.043941	1.904850	.1939676	3.908530
#1	.0578952	.1877617	.0324649	10.36457	.0728566	.0189548
#2	.0574390	.1605575	.0316948	10.07960	.0725830	.0191815
#3	.0568475	.1759795	.0361024	9.99589	.0726604	.0178208

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.52953	.1050643	.1184819	9.430158	F .0074409	F -.006828
Stddev	.07680	.0011547	.0005222	.260765	.0039489	.002994
%RSD	.6660969	1.099067	.4407771	2.765224	53.07001	43.84456
#1	11.44892	.1037891	.1188634	9.290271	.0029528	-.003728
#2	11.60184	.1053644	.1186956	9.731017	.0103825	-.007053
#3	11.53783	.1060393	.1178867	9.269186	.0089875	-.009702

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: PB165883BS Acquired: 01/08/2025 19:12:05 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS883 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0195250	.1433554	F 1.070380	.0117937	.2066077	.2085798
Stddev	.0008128	.0046243	.005443	.0009993	.0136013	.0003860
%RSD	4.162981	3.225785	.5085387	8.473242	6.583157	.1850524
#1	.0203413	.1486897	1.072184	.0108909	.1996037	.2082061
#2	.0195180	.1404806	1.074693	.0128675	.1979359	.2085563
#3	.0187157	.1408958	1.064264	.0116226	.2222836	.2089770

Elem	Li6707
Units	ppm
Avg	F .0161489
Stddev	.0027360
%RSD	16.94264
#1	.0168005
#2	.0185003
#3	.0131459

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2109.139	19101.61	1131.572	1428.319	2376.049
Stddev	11.002	77.08	1.760	11.648	6.992
%RSD	.5216260	.4035187	.1555709	.8155172	.2942542
#1	2107.300	19030.19	1132.833	1418.571	2369.744
#2	2120.944	19183.32	1129.561	1441.219	2383.568
#3	2099.172	19091.31	1132.321	1425.166	2374.834

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5204-11 Acquired: 01/08/2025 19:16:05 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHNC9 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0962340	-.018409	2.398118	.0723225	.0195751	48.38448
Stddev	.0039298	.002760	.009591	.0042007	.0036760	.34669
%RSD	4.083555	14.99152	.3999542	5.808252	18.77911	.7165292
#1	.1007215	-.015833	2.389236	.0770360	.0199282	48.64448
#2	.0934077	-.021322	2.396830	.0709572	.0230618	47.99086
#3	.0945727	-.018074	2.408288	.0689743	.0157353	48.51809

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.120814	.0074953	.0093007	79.45404	.1439497	.0895720
Stddev	.007901	.0002496	.0001957	.65646	.0015440	.0002394
%RSD	.7049026	3.329683	2.103820	.8262081	1.072602	.2672740
#1	1.126977	.0074381	.0091964	80.10394	.1453418	.0898482
#2	1.111907	.0077685	.0095264	78.79122	.1422890	.0894247
#3	1.123557	.0072793	.0091792	79.46695	.1442182	.0894430

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4248945	134.9662	4.983002	29.20878	.2371742	-.005521
Stddev	.0033341	1.2079	.038489	.30057	.0010202	.003236
%RSD	.7846787	.8949719	.7724043	1.029050	.4301644	58.61118
#1	.4256522	135.9380	5.021278	29.50694	.2382899	-.009234
#2	.4277845	133.6139	4.944304	28.90585	.2369439	-.004028
#3	.4212468	135.3468	4.983422	29.21354	.2362888	-.003302

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7064100	.1443163	1.565545	-2.48710	F 10.44140	.0740219
Stddev	.0351076	.0006130	.000142	.23740	.01653	.0025781
%RSD	4.969868	.4247876	.0090817	9.545126	.1582753	3.482823
#1	.7408617	.1448642	1.565400	-2.74175	10.43280	.0769879
#2	.6706813	.1436542	1.565552	-2.44764	10.43095	.0723186
#3	.7076869	.1444304	1.565684	-2.27190	10.46045	.0727592

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5204-11 Acquired: 01/08/2025 19:16:05 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHNC9 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0159449	5.368313	9.269735	.0979407	.8663085	.1500751
Stddev	.0009125	.015094	.028167	.0014388	.0136723	.0015799
%RSD	5.723087	.2811765	.3038563	1.469074	1.578227	1.052735
#1	.0149157	5.351498	9.296459	.0963272	.8779809	.1518192
#2	.0166552	5.380694	9.272428	.0984044	.8512664	.1496663
#3	.0162636	5.372747	9.240319	.0990905	.8696783	.1487397

Elem	Li6707
Units	ppm
Avg	.0340362
Stddev	.0041824
%RSD	12.28819
#1	.0333711
#2	.0302261
#3	.0385113

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2329.408	21025.80	1254.154	1575.010	2296.609
Stddev	5.638	113.36	4.681	6.594	7.259
%RSD	.2420264	.5391637	.3732746	.4186552	.3160537
#1	2326.854	21028.35	1249.068	1573.560	2293.385
#2	2335.871	21137.87	1258.282	1582.208	2304.921
#3	2325.499	20911.18	1255.113	1569.262	2291.521

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5204-12 Acquired: 01/08/2025 19:19:57 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHNC9D Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0870983	-.020360	2.361948	.0717056	.0194849	47.97687
Stddev	.0025356	.000908	.009088	.0098142	.0015742	.22782
%RSD	2.911243	4.457320	.3847527	13.68675	8.078831	.4748540
#1	.0857812	-.020145	2.358222	.0759486	.0179161	47.79377
#2	.0854923	-.019579	2.355316	.0786844	.0194741	47.90484
#3	.0900215	-.021356	2.372307	.0604838	.0210643	48.23200

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.109733	.0076814	.0090827	78.59801	.1417913	.0893131
Stddev	.009925	.0004393	.0001317	.70422	.0006995	.0004778
%RSD	.8943968	5.719457	1.450372	.8959805	.4933634	.5350104
#1	1.098803	.0080274	.0092338	77.98688	.1419662	.0897770
#2	1.112212	.0078298	.0090223	78.43902	.1410208	.0888224
#3	1.118184	.0071871	.0089920	79.36814	.1423867	.0893400

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4196834	133.5615	4.923195	28.85607	.2330624	-.005700
Stddev	.0011579	.8944	.016353	.24667	.0011940	.000792
%RSD	.2758897	.6696453	.3321690	.8548302	.5123072	13.89923
#1	.4199157	132.7016	4.913114	28.57162	.2338346	-.006430
#2	.4184269	133.4959	4.914407	28.98560	.2336654	-.004858
#3	.4207074	134.4868	4.942063	29.01100	.2316871	-.005811

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6982269	.1417216	1.554022	-2.31089	F 10.26564	.0754243
Stddev	.0071572	.0008293	.009953	.15657	.01758	.0019285
%RSD	1.025047	.5851970	.6404530	6.775212	.1712592	2.556866
#1	.6919390	.1419629	1.544376	-2.46016	10.25027	.0753789
#2	.6967264	.1424036	1.564256	-2.32460	10.26183	.0735189
#3	.7060154	.1407984	1.553433	-2.14792	10.28481	.0773751

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5204-12 Acquired: 01/08/2025 19:19:57 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHNC9D Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0156561	5.286005	9.156239	.0949436	.8573475	.1489586
Stddev	.0011723	.015553	.019104	.0014126	.0094510	.0011662
%RSD	7.487836	.2942279	.2086416	1.487851	1.102357	.7828763
#1	.0143088	5.282700	9.174814	.0941803	.8464713	.1479253
#2	.0162168	5.272370	9.136647	.0965737	.8620091	.1487277
#3	.0164428	5.302944	9.157258	.0940769	.8635621	.1502230

Elem	Li6707
Units	ppm
Avg	.0300935
Stddev	.0009450
%RSD	3.140089
#1	.0297097
#2	.0311699
#3	.0294008

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2336.539	20897.40	1252.378	1563.384	2306.771
Stddev	.964	95.28	6.763	9.758	1.935
%RSD	.0412778	.4559492	.5400099	.6241729	.0838635
#1	2337.574	20998.82	1254.690	1574.385	2306.111
#2	2336.377	20883.62	1257.682	1555.773	2308.949
#3	2335.666	20809.75	1244.762	1559.994	2305.252

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5204-11LX5 Acquired: 01/08/2025 19:23:49 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHNC9L Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0113520	-.006707	.4670425	.0190469	-.001897	10.43949	.2401518
Stddev	.0034806	.001172	.0014512	.0009531	.005073	.04281	.0006258
%RSD	30.66074	17.47197	.3107171	5.004190	267.3954	.4100642	.2605861
#1	.0150926	-.007149	.4681909	.0185830	.003115	10.43148	.2398684
#2	.0082085	-.007594	.4654115	.0201431	-.007030	10.40125	.2408692
#3	.0107550	-.005378	.4675251	.0184144	-.001777	10.48574	.2397179

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0014029	.0017517	17.19035	.0310111	.0229319	.0938498	28.88746
Stddev	.0001327	.0000113	.15581	.0008069	.0007006	.0011492	.17173
%RSD	9.457958	.6470389	.9063674	2.601916	3.055255	1.224498	.5944785
#1	.0014357	.0017566	17.36523	.0313218	.0227192	.0942650	29.08192
#2	.0012569	.0017387	17.06633	.0316163	.0237142	.0947337	28.75661
#3	.0015161	.0017598	17.13949	.0300950	.0223622	.0925507	28.82386

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.082365	6.351789	.0438595	-.001117	.2039679	.0308617	.3421784
Stddev	.003351	.245209	.0005663	.002516	.0320866	.0009310	.0039886
%RSD	.3096448	3.860465	1.291257	225.2573	15.73119	3.016620	1.165635
#1	1.080597	6.514725	.0434351	.000749	.2016591	.0307780	.3464612
#2	1.086231	6.470860	.0436408	-.000121	.1730981	.0299753	.3415039
#3	1.080268	6.069781	.0445026	-.003979	.2371465	.0318317	.3385701

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.761838	1.948218	.0082627	.0030374	.9864778	2.075791	.0197973
Stddev	.413300	.019709	.0030205	.0005536	.0143008	.009289	.0010025
%RSD	54.25035	1.011663	36.55537	18.22534	1.449686	.4474862	5.064018
#1	-.300806	1.960070	.0114763	.0036749	.9829638	2.078047	.0186654
#2	-1.09914	1.959118	.0054821	.0027592	1.002208	2.083744	.0201532
#3	-.88557	1.925466	.0078297	.0026782	.974262	2.065582	.0205734

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5204-11LX5 Acquired: 01/08/2025 19:23:49 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHNC9L Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.1870059	.0322579	-.005820
Stddev	.0115372	.0002431	.003016
%RSD	6.169453	.7536644	51.81918
#1	.1769289	.0321306	-.004365
#2	.1995908	.0321048	-.009287
#3	.1844980	.0325382	-.003807

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2178.929	19406.18	1154.316	1448.864	2428.824
Stddev	21.166	138.96	6.841	13.289	24.028
%RSD	.9713883	.7160837	.5926781	.9172340	.9892878
#1	2175.081	19314.24	1155.515	1434.185	2420.093
#2	2159.951	19338.25	1146.955	1452.330	2410.381
#3	2201.755	19566.04	1160.479	1460.077	2455.996

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5205-19 Acquired: 01/08/2025 19:31:41 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN51 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1737157	-.034151	.7901140	.1111360	.0249059	87.43337	.9696758
Stddev	.0067809	.001446	.0038221	.0046214	.0049063	.77460	.0072684
%RSD	3.903467	4.235012	.4837405	4.158322	19.69927	.8859273	.7495701
#1	.1798407	-.032489	.7920004	.1129773	.0193529	88.21108	.9772073
#2	.1748773	-.035125	.7926261	.1058778	.0286542	86.66193	.9627027
#3	.1664290	-.034839	.7857154	.1145530	.0267105	87.42711	.9691173

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0105431	.0064491	48.84523	.1269134	.1337535	.3333433	189.5369
Stddev	.0002020	.0000721	.39383	.0005310	.0004238	.0018991	1.7702
%RSD	1.915896	1.117537	.8062863	.4184116	.3168922	.5697030	.9339638
#1	.0105221	.0063693	49.21443	.1272695	.1336507	.3311537	191.0934
#2	.0107548	.0064686	48.43069	.1271675	.1333905	.3343360	187.6112
#3	.0103524	.0065095	48.89057	.1263030	.1342193	.3345404	189.9060

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.35773	23.65609	.1493852	-.007748	.6460758	.1873638	.7035275
Stddev	.09722	.21297	.0011695	.001491	.0083599	.0006304	.0035740
%RSD	.9385795	.9002567	.7828450	19.24706	1.293953	.3364317	.5080051
#1	10.45532	23.90132	.1506547	-.006142	.6385566	.1876015	.6994206
#2	10.26089	23.51758	.1483518	-.009089	.6445928	.1866492	.7052294
#3	10.35697	23.54938	.1491493	-.008013	.6550779	.1878408	.7059323

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.631118	9.401508	.0684877	.0076476	1.135386	12.78257	.0431208
Stddev	.188497	.016591	.0028197	.0007588	.011253	.04182	.0019438
%RSD	29.86711	.1764710	4.117105	9.922695	.9910918	.3271409	4.507739
#1	-.846795	9.417943	.0712970	.0072582	1.148324	12.74097	.0452317
#2	-.548643	9.401817	.0685083	.0085220	1.127874	12.78214	.0427259
#3	-.497915	9.384765	.0656577	.0071624	1.129961	12.82460	.0414048

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5205-19 Acquired: 01/08/2025 19:31:41 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN51 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.5175138	-.012085	.0696603
Stddev	.0054125	.000696	.0023496
%RSD	1.045863	5.755982	3.372899
#1	.5237484	-.012605	.0671488
#2	.5147739	-.011295	.0700271
#3	.5140191	-.012355	.0718048

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2606.537	23333.55	1390.411	1747.829	2252.997
Stddev	3.064	78.32	2.900	5.712	2.249
%RSD	.1175351	.3356735	.2085746	.3268216	.0998427
#1	2603.078	23252.94	1389.510	1744.299	2252.607
#2	2608.910	23338.34	1393.655	1754.419	2250.968
#3	2607.623	23409.37	1388.069	1744.768	2255.416

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5205-20 Acquired: 01/08/2025 19:35:36 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN51D Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1791916	-.033109	.7871449	.1133120	.0253151	86.54909	.9573153
Stddev	.0037653	.003963	.0078974	.0073912	.0073485	1.11944	.0148809
%RSD	2.101257	11.96947	1.003299	6.522867	29.02818	1.293419	1.554440
#1	.1801324	-.032752	.7780468	.1182314	.0220925	87.75642	.9738741
#2	.1750451	-.037239	.7911580	.1048125	.0337244	86.34532	.9530101
#3	.1823972	-.029337	.7922300	.1168922	.0201285	85.54553	.9450616

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0102723	.0063826	48.30575	.1218638	.1323480	.3239250	186.5073
Stddev	.0004801	.0001444	.67197	.0033054	.0020635	.0060941	2.3542
%RSD	4.674006	2.262277	1.391076	2.712403	1.559147	1.881325	1.262272
#1	.0105404	.0062890	49.02466	.1231295	.1307111	.3301372	188.8925
#2	.0105586	.0063099	48.19911	.1243494	.1316670	.3236813	186.4439
#3	.0097180	.0065489	47.69347	.1181126	.1346659	.3179564	184.1853

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.20775	23.39878	.1487952	-.009017	.5972504	.1817246	.6867517
Stddev	.11328	.32043	.0003830	.001297	.0180028	.0044906	.0171234
%RSD	1.109784	1.369423	.2573767	14.37922	3.014276	2.471096	2.493396
#1	10.32048	23.76192	.1483530	-.010480	.6117896	.1861410	.6993400
#2	10.20885	23.27861	.1490174	-.008561	.5771138	.1818693	.6936622
#3	10.09392	23.15580	.1490152	-.008010	.6028476	.1771634	.6672529

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-1.08479	9.307663	.0665917	.0065496	1.125491	12.41752	.0423819
Stddev	.55754	.083012	.0048724	.0005473	.020406	.25590	.0022048
%RSD	51.39565	.8918719	7.316821	8.356613	1.813107	2.060796	5.202110
#1	-.70164	9.220025	.0708557	.0061309	1.101995	12.66569	.0401934
#2	-.82833	9.317858	.0612810	.0063491	1.135702	12.43235	.0423498
#3	-1.72441	9.385108	.0676384	.0071689	1.138776	12.15453	.0446025

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5205-20 Acquired: 01/08/2025 19:35:36 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN51D Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.5066253	-.010597	.0584761
Stddev	.0065509	.000501	.0016813
%RSD	1.293049	4.726682	2.875263
#1	.5139613	-.011090	.0601875
#2	.5013600	-.010088	.0584141
#3	.5045545	-.010612	.0568266

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2615.655	23715.03	1413.120	1776.282	2265.570
Stddev	14.190	393.71	19.974	25.528	14.166
%RSD	.5424907	1.660150	1.413439	1.437173	.6252705
#1	2630.868	23426.08	1390.875	1755.167	2280.798
#2	2613.318	23555.55	1418.966	1769.026	2263.127
#3	2602.779	24163.46	1429.518	1804.653	2252.784

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5205-19LX5 Acquired: 01/08/2025 19:39:32 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN51L Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0328842	-.006571	.1585965	.0315189	.0034318	21.23024	.2334830
Stddev	.0011396	.003431	.0013714	.0071390	.0079995	.10147	.0018850
%RSD	3.465339	52.22296	.8646910	22.64988	233.0980	.4779598	.8073498
#1	.0323648	-.008065	.1570131	.0392999	-.005452	21.34705	.2336404
#2	.0320968	-.002645	.1593776	.0252709	.010064	21.17978	.2352844
#3	.0341909	-.009001	.1593989	.0299860	.005683	21.16388	.2315242

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0022476	.0009507	11.76566	.0295275	.0292427	.0805357	45.00908
Stddev	.0002941	.0001070	.02429	.0005956	.0005920	.0008363	.42472
%RSD	13.08661	11.25169	.2064664	2.017202	2.024437	1.038378	.9436363
#1	.0021224	.0010705	11.76419	.0302113	.0286760	.0813108	45.29860
#2	.0020368	.0009169	11.74213	.0292501	.0298571	.0796494	45.20715
#3	.0025836	.0008647	11.79065	.0291212	.0291950	.0806469	44.52151

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.508897	5.778406	.0278644	-.002790	.1414875	.0447634	.1690491
Stddev	.013613	.169460	.0009642	.002239	.0198578	.0017826	.0005617
%RSD	.5425717	2.932651	3.460467	80.27185	14.03499	3.982337	.3323016
#1	2.511256	5.586606	.0282112	-.003755	.1270747	.0445718	.1684305
#2	2.521176	5.840741	.0286072	-.000230	.1332494	.0466341	.1695274
#3	2.494259	5.907870	.0267747	-.004384	.1641385	.0430843	.1691893

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.446860	1.782002	.0101167	.0016739	.2012528	3.154442	.0081291
Stddev	.344039	.005968	.0035558	.0006520	.0033882	.034282	.0010707
%RSD	76.99040	.3349309	35.14818	38.94785	1.683534	1.086777	13.17125
#1	-.069374	1.781237	.0105577	.0024128	.1992668	3.155096	.0069126
#2	-.742799	1.776453	.0134314	.0014297	.1993265	3.188392	.0089283
#3	-.528406	1.788316	.0063609	.0011794	.2051649	3.119838	.0085465

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5205-19LX5 Acquired: 01/08/2025 19:39:32 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN51L Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.1309069	-.002585	.0073003
Stddev	.0082812	.000834	.0056113
%RSD	6.326030	32.25604	76.86421
#1	.1368007	-.002718	.0130425
#2	.1214389	-.001693	.0018298
#3	.1344812	-.003345	.0070285

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2249.006	20332.20	1198.163	1508.413	2419.740
Stddev	.851	90.55	9.953	5.337	.587
%RSD	.0378470	.4453583	.8307213	.3537969	.0242669
#1	2248.335	20255.59	1196.597	1503.136	2419.558
#2	2248.720	20432.13	1189.085	1508.296	2419.266
#3	2249.964	20308.89	1208.806	1513.808	2420.397

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5205-21 Acquired: 01/08/2025 19:43:32 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN51S Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2607773	.0569389	.8241889	.2589529	.1738025	89.73986	4.286963
Stddev	.0025575	.0016826	.0051047	.0019144	.0036693	.73174	.027313
%RSD	.9807385	2.955147	.6193550	.7392851	2.111196	.8154025	.6371138
#1	.2633703	.0557483	.8292011	.2594348	.1735495	88.91084	4.256331
#2	.2582567	.0562044	.8189965	.2605803	.1702662	90.29574	4.308778
#3	.2607049	.0588639	.8243692	.2568436	.1775917	90.01300	4.295781

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0919379	.0986104	48.60252	.4778580	1.082900	.7788069	189.1176
Stddev	.0003494	.0008125	.03105	.0006264	.008235	.0005569	1.0139
%RSD	.3800356	.8239371	.0638856	.1310816	.7604931	.0715015	.5361131
#1	.0920085	.0995429	48.56963	.4778408	1.090697	.7782519	187.9476
#2	.0922467	.0980549	48.60660	.4784927	1.074287	.7788033	189.7389
#3	.0915586	.0982333	48.63133	.4772403	1.083717	.7793656	189.6663

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.06044	23.48925	1.116861	.0528937	.6162410	1.045439	1.480406
Stddev	.07256	.27223	.008477	.0012929	.0252844	.004135	.006779
%RSD	.6560252	1.158939	.7589696	2.444367	4.102997	.3955072	.4579394
#1	10.97671	23.22971	1.125248	.0527888	.6181914	1.040667	1.483581
#2	11.09975	23.77260	1.108297	.0516564	.5900380	1.047685	1.472622
#3	11.10486	23.46543	1.117037	.0542359	.6404938	1.047964	1.485016

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.622942	9.310340	.0639563	.0071047	1.124913	12.66763	.0424121
Stddev	.124478	.069232	.0030857	.0013741	.012110	.03383	.0010427
%RSD	19.98228	.7436084	4.824691	19.34132	1.076526	.2670476	2.458369
#1	-.479210	9.377275	.0659118	.0080674	1.138893	12.63606	.0426339
#2	-.695628	9.239018	.0603991	.0077157	1.118180	12.66350	.0412764
#3	-.693987	9.314728	.0655580	.0055310	1.117666	12.70334	.0433260

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5205-21 Acquired: 01/08/2025 19:43:32 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN51S Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.5068966	-.013052	.0666485
Stddev	.0060427	.000379	.0071515
%RSD	1.192097	2.900295	10.73011
#1	.5007134	-.012642	.0685494
#2	.5127882	-.013388	.0587387
#3	.5071882	-.013126	.0726575

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2603.830	23210.03	1393.525	1740.628	2253.881
Stddev	12.020	113.73	2.993	3.380	15.344
%RSD	.4616115	.4900104	.2147714	.1941937	.6807748
#1	2597.846	23132.82	1393.232	1736.732	2243.159
#2	2617.667	23156.62	1390.689	1742.367	2271.458
#3	2595.978	23340.63	1396.653	1742.785	2247.028

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5199-04 Acquired: 01/08/2025 19:54:39 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMQ3 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3267576	-.048168	.9135462	.1882584	.0442704	102.9988	.9175150
Stddev	.0020182	.004200	.0023647	.0015277	.0036362	.0600	.0005638
%RSD	.6176397	8.719776	.2588507	.8114985	8.213596	.0582519	.0614534
#1	.3284702	-.045295	.9160320	.1876423	.0404636	102.9933	.9180701
#2	.3245326	-.046220	.9113248	.1871350	.0477078	103.0614	.9175320
#3	.3272701	-.052989	.9132819	.1899980	.0446398	102.9418	.9169428

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0142815	.0089614	35.94648	.1374542	.2628124	.7491942	293.9455
Stddev	.0004321	.0001206	.05781	.0002899	.0002170	.0079749	.2929
%RSD	3.025253	1.345181	.1608282	.2109464	.0825762	1.064461	.0996548
#1	.0147384	.0090661	35.90044	.1371366	.2625619	.7530601	294.2371
#2	.0142265	.0088296	36.01136	.1377047	.2629323	.7544994	293.9481
#3	.0138795	.0089885	35.92764	.1375213	.2629430	.7400232	293.6512

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	20.93943	21.31541	.2908463	-.008562	.6953154	.1519384	1.270431
Stddev	.01494	.08315	.0014541	.001449	.0304358	.0022876	.003468
%RSD	.0713321	.3900858	.4999673	16.92248	4.377267	1.505611	.2729464
#1	20.93637	21.41127	.2924752	-.007399	.7284688	.1544970	1.274311
#2	20.95566	21.26279	.2896790	-.008102	.6888372	.1512277	1.267636
#3	20.92626	21.27217	.2903846	-.010185	.6686403	.1500904	1.269346

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.501981	4.032787	.0819489	.0085455	1.157163	4.656016	.0319247
Stddev	.156630	.008392	.0052390	.0003009	.006614	.048331	.0001738
%RSD	31.20247	.2081031	6.393043	3.521032	.5716005	1.038035	.5442818
#1	-.333361	4.030976	.0780820	.0083966	1.164459	4.683033	.0317285
#2	-.642934	4.025448	.0798534	.0083481	1.155472	4.684798	.0319863
#3	-.529648	4.041937	.0879114	.0088918	1.151558	4.600218	.0320592

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5199-04 Acquired: 01/08/2025 19:54:39 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMQ3 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.4888669	-.199192	.0557296
Stddev	.0102358	.000841	.0055196
%RSD	2.093788	.4219576	9.904201
#1	.4895451	-.199991	.0562499
#2	.4987467	-.199271	.0609705
#3	.4783088	-.198316	.0499683

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2948.533	26425.95	1562.722	1989.162	2210.755
Stddev	10.096	136.08	11.200	11.435	5.358
%RSD	.3423929	.5149336	.7166886	.5748531	.2423733
#1	2940.733	26558.58	1561.992	2001.726	2205.841
#2	2944.931	26432.59	1551.904	1986.397	2209.955
#3	2959.936	26286.67	1574.268	1979.364	2216.468

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5199-05 Acquired: 01/08/2025 19:58:31 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMQ3D Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3269134	-.050199	.9278330	.1855043	.0388950	103.2876	.9217254
Stddev	.0019467	.001150	.0028748	.0025422	.0054537	.3188	.0017419
%RSD	.5954951	2.290639	.3098447	1.370441	14.02162	.3086473	.1889866
#1	.3285723	-.051057	.9250475	.1842508	.0433841	103.3299	.9232310
#2	.3273978	-.048892	.9276618	.1838322	.0328256	103.5831	.9221277
#3	.3247702	-.050647	.9307896	.1884298	.0404752	102.9498	.9198175

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0144851	.0091687	35.93497	.1396964	.2689591	.7517543	293.8819
Stddev	.0004701	.0001022	.08267	.0012950	.0006376	.0032214	1.6362
%RSD	3.245248	1.114700	.2300420	.9270411	.2370635	.4285161	.5567545
#1	.0142613	.0092096	36.03041	.1383618	.2683776	.7523584	295.2472
#2	.0150253	.0090524	35.88559	.1397795	.2688588	.7546308	294.3303
#3	.0141688	.0092441	35.88893	.1409478	.2696409	.7482736	292.0683

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	20.87820	21.24642	.2951567	-.007198	.7159718	.1523823	1.288391
Stddev	.09751	.26476	.0006713	.001627	.0128641	.0024454	.001909
%RSD	.4670350	1.246120	.2274519	22.61043	1.796726	1.604753	.1481816
#1	20.94250	21.34024	.2958209	-.008973	.7114189	.1550790	1.289836
#2	20.92610	21.45148	.2951706	-.005777	.7060034	.1517589	1.286227
#3	20.76601	20.94752	.2944785	-.006843	.7304932	.1503089	1.289111

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.738026	4.110286	.0832132	.0089073	1.167094	6.267898	.0327627
Stddev	.151152	.019885	.0029151	.0005005	.009243	.025768	.0014877
%RSD	20.48059	.4837787	3.503188	5.619296	.7919340	.4111034	4.540753
#1	-.773323	4.091143	.0855269	.0094743	1.169338	6.267857	.0310462
#2	-.572349	4.108878	.0841738	.0085268	1.156936	6.293686	.0335620
#3	-.868407	4.130837	.0799391	.0087208	1.175009	6.242151	.0336798

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5199-05 Acquired: 01/08/2025 19:58:31 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMQ3D Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.4764942	-.198723	.0644479
Stddev	.0088686	.002022	.0041192
%RSD	1.861218	1.017323	6.391519
#1	.4811888	-.200468	.0637448
#2	.4820286	-.199194	.0688734
#3	.4662651	-.196508	.0607255

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2949.590	26516.43	1573.352	1990.190	2198.402
Stddev	4.400	121.58	6.030	17.634	4.875
%RSD	.1491703	.4584912	.3832559	.8860652	.2217407
#1	2948.322	26500.07	1567.348	1976.206	2203.625
#2	2945.963	26645.35	1579.408	2010.000	2197.605
#3	2954.484	26403.86	1573.301	1984.364	2193.974

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5199-04LX5 Acquired: 01/08/2025 20:02:23 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMQ3L Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0724044	-.013153	.1853540	.0507228	.0079863	27.16608	.2383980
Stddev	.0024063	.004049	.0008344	.0087543	.0074707	.04011	.0040862
%RSD	3.323391	30.78733	.4501637	17.25920	93.54418	.1476389	1.714005
#1	.0751597	-.010072	.1854360	.0408225	.0018422	27.20935	.2431045
#2	.0707164	-.011647	.1861444	.0539049	.0163023	27.15874	.2363327
#3	.0713371	-.017739	.1844817	.0574410	.0058144	27.13015	.2357567

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0034967	.0014493	9.434415	.0387129	.0541884	.2067124	75.84777
Stddev	.0000415	.0000595	.139720	.0011004	.0004201	.0019887	.31437
%RSD	1.186768	4.103721	1.480957	2.842536	.7752644	.9620779	.4144753
#1	.0035277	.0015005	9.589282	.0381622	.0545802	.2078159	75.61832
#2	.0035128	.0014632	9.396147	.0399800	.0542402	.2079048	76.20610
#3	.0034496	.0013841	9.317817	.0379966	.0537448	.2044166	75.71889

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.553813	5.821560	.0558707	-.002588	.2203494	.0448027	.3427180
Stddev	.020733	.168418	.0012858	.000156	.0236494	.0010480	.0001146
%RSD	.3733056	2.893001	2.301400	6.028027	10.73268	2.339074	.0334431
#1	5.576498	5.965846	.0568160	-.002759	.2115082	.0450763	.3427656
#2	5.549096	5.636498	.0563895	-.002552	.2023944	.0456867	.3428011
#3	5.535846	5.862337	.0544065	-.002453	.2471456	.0436451	.3425872

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.513899	.7700959	.0140212	.0017621	.2049517	1.680474	.0072634
Stddev	.583540	.0084892	.0044276	.0014688	.0026129	.018403	.0004994
%RSD	113.5515	1.102361	31.57785	83.35428	1.274872	1.095085	6.875007
#1	.103725	.7692422	.0168479	.0030450	.2037039	1.679171	.0072549
#2	-.589421	.7789798	.0162971	.0001599	.2079545	1.699493	.0077669
#3	-1.05600	.7620658	.0089186	.0020814	.2031966	1.662757	.0067683

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5199-04LX5 Acquired: 01/08/2025 20:02:23 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMQ3L Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.1227896	-.051550	.0073786
Stddev	.0093850	.000426	.0040999
%RSD	7.643174	.8266580	55.56517
#1	.1223385	-.051251	.0026457
#2	.1323920	-.051362	.0096498
#3	.1136383	-.052038	.0098402

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2338.889	20835.83	1231.942	1557.286	2405.651
Stddev	25.575	125.98	6.496	8.927	24.965
%RSD	1.093461	.6046133	.5273134	.5732437	1.037756
#1	2327.804	20743.03	1230.461	1548.833	2392.875
#2	2320.726	20979.24	1226.315	1566.621	2389.661
#3	2368.136	20785.22	1239.052	1556.405	2434.418

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5199-06 Acquired: 01/08/2025 20:07:47 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMQ3S Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4178626	.0457865	.9681167	.3133084	.1708557	105.8135	3.894158
Stddev	.0041076	.0004764	.0028640	.0121919	.0013150	.6031	.018561
%RSD	.9830004	1.040421	.2958365	3.891338	.7696872	.5699336	.4766441
#1	.4209883	.0452642	.9667426	.3046880	.1723530	105.1241	3.873676
#2	.4132103	.0458980	.9661987	.3272575	.1703259	106.2434	3.909866
#3	.4193892	.0461972	.9714089	.3079797	.1698881	106.0729	3.898932

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0875902	.1047708	35.77540	.4561658	1.258897	1.153397	293.7876
Stddev	.0011423	.0004038	.14207	.0009154	.002710	.014865	1.4682
%RSD	1.304118	.3853962	.3971032	.2006815	.2152735	1.288811	.4997535
#1	.0863071	.1047323	35.61137	.4567615	1.258666	1.136290	292.1893
#2	.0884964	.1043876	35.85527	.4551117	1.256310	1.160732	295.0764
#3	.0879671	.1051924	35.85955	.4566242	1.261715	1.163169	294.0972

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	21.50616	21.17918	1.299209	.0457936	.7300868	.9320134	1.983631
Stddev	.10955	.24778	.004099	.0006510	.0263302	.0096268	.007093
%RSD	.5093822	1.169930	.3155122	1.421583	3.606449	1.032900	.3575565
#1	21.38797	21.03487	1.296461	.0452483	.7418488	.9210103	1.977103
#2	21.60430	21.46529	1.297246	.0465144	.7484858	.9388836	1.982610
#3	21.52621	21.03738	1.303921	.0456182	.6999257	.9361463	1.991178

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.716168	4.118376	.0846159	.0086174	1.179534	7.310884	.0342159
Stddev	.212799	.012161	.0034949	.0003135	.007183	.093153	.0003961
%RSD	29.71352	.2952755	4.130275	3.638270	.6090007	1.274174	1.157689
#1	-.957146	4.115526	.0884467	.0087578	1.187046	7.203375	.0344233
#2	-.637275	4.107895	.0816016	.0088361	1.178825	7.367633	.0344652
#3	-.554082	4.131709	.0837993	.0082582	1.172732	7.361643	.0337591

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5199-06 Acquired: 01/08/2025 20:07:47 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMQ3S Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.4760535	-.199335	.0592145
Stddev	.0030591	.000982	.0035344
%RSD	.6425970	.4924156	5.968817
#1	.4733178	-.198202	.0562842
#2	.4754861	-.199898	.0582197
#3	.4793566	-.199906	.0631397

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2936.383	26237.42	1560.098	1968.421	2192.868
Stddev	13.655	95.91	11.363	4.516	11.936
%RSD	.4650204	.3655649	.7283274	.2294461	.5443114
#1	2930.192	26128.14	1572.593	1963.214	2190.120
#2	2952.036	26307.67	1550.384	1971.282	2205.938
#3	2926.920	26276.45	1557.316	1970.766	2182.545

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5204-13 Acquired: 01/08/2025 20:11:38 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHNC9S Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1698536	.0684734	2.288991	.2170466	.1793034	49.35124	4.554231
Stddev	.0034517	.0007037	.003368	.0034889	.0013338	1.92348	.175159
%RSD	2.032182	1.027723	.1471483	1.607424	.7438551	3.897538	3.846076
#1	.1673676	.0678333	2.292491	.2198711	.1783915	47.15306	4.352751
#2	.1683985	.0692269	2.285772	.2181222	.1808342	50.17506	4.639636
#3	.1737946	.0683598	2.288711	.2131466	.1786845	50.72561	4.670306

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0953233	.0963078	73.98040	.5208342	1.000018	.8947693	126.0729
Stddev	.0030389	.0002052	2.67112	.0038727	.002177	.0285303	4.7789
%RSD	3.188046	.2130383	3.610580	.7435576	.2176731	3.188571	3.790601
#1	.0919006	.0962943	70.90471	.5182852	.999564	.8621967	120.5967
#2	.0963644	.0961097	75.31825	.5252907	.998105	.9067831	128.2224
#3	.0977048	.0965194	75.71822	.5189268	1.002387	.9153280	129.3997

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.435895	26.96516	1.157267	.0588703	.7088306	1.071459	2.335018
Stddev	.201976	.90105	.004405	.0024884	.0434307	.032088	.013002
%RSD	3.715602	3.341541	.3806661	4.226975	6.127097	2.994772	.5568348
#1	5.205323	25.93107	1.154441	.0565173	.6899420	1.036493	2.336066
#2	5.520816	27.38274	1.155016	.0614751	.6780426	1.078331	2.347464
#3	5.581545	27.58167	1.162343	.0586186	.7585073	1.099555	2.321523

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-2.64920	9.730652	.0688309	.0135759	5.015699	16.39587	.0888195
Stddev	.13841	.020108	.0014529	.0004273	.009902	.50624	.0008593
%RSD	5.224714	.2066446	2.110888	3.147738	.1974254	3.087619	.9674441
#1	-2.80699	9.723493	.0694118	.0139020	5.006728	15.82828	.0884329
#2	-2.59228	9.715103	.0671774	.0137335	5.014044	16.55858	.0882214
#3	-2.54831	9.753360	.0699036	.0130921	5.026324	16.80075	.0898041

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5204-13 Acquired: 01/08/2025 20:11:38 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHNC9S Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.8723490	.1533950	.0283314
Stddev	.0336617	.0051645	.0058315
%RSD	3.858747	3.366825	20.58311
#1	.8334814	.1474356	.0222465
#2	.8920858	.1565652	.0288765
#3	.8914799	.1561843	.0338712

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2340.337	21135.30	1268.907	1586.807	2319.945
Stddev	7.115	141.42	42.151	9.712	8.295
%RSD	.3039962	.6691341	3.321842	.6120529	.3575521
#1	2346.409	21296.45	1316.526	1594.941	2328.866
#2	2342.093	21031.84	1253.821	1576.054	2318.503
#3	2332.509	21077.61	1236.375	1589.426	2312.465

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: CCV133 Acquired: 01/08/2025 20:17:23 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV133 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.990685	4.817291	24.57354	4.959271	4.943080	387.3736
Stddev	.008520	.022968	.10496	.028899	.015707	2.6107
%RSD	.1707087	.4767864	.4271063	.5827228	.3177661	.6739391
#1	4.998472	4.797944	24.45880	4.929327	4.925051	390.2115
#2	4.991999	4.811255	24.59714	4.986997	4.953813	386.8351
#3	4.981586	4.842675	24.66469	4.961489	4.950375	385.0742

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.876781	.4963216	2.477876	399.1421	15.64386	2.503106
Stddev	.072474	.0048685	.011519	1.4444	.11253	.009241
%RSD	.7337853	.9809157	.4648644	.3618819	.7193203	.3691662
#1	9.954356	.5000109	2.465338	400.4442	15.76466	2.494003
#2	9.865181	.4981503	2.480300	399.3938	15.62488	2.502836
#3	9.810807	.4908035	2.487990	397.5884	15.54202	2.512479

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.22408	388.8700	14.01154	379.4467	2.497165	1.257935
Stddev	.14865	1.5653	.07761	1.5181	.014269	.006152
%RSD	.9764155	.4025354	.5539096	.4000828	.5714044	.4890929
#1	15.36239	390.1180	14.08376	380.9898	2.480906	1.264861
#2	15.24295	389.3783	14.02137	379.3955	2.502979	1.255843
#3	15.06689	387.1136	13.92948	377.9549	2.507608	1.253102

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	409.0461	2.453740	14.74461	149.9436	4.885648	5.008982
Stddev	2.5797	.017953	.16200	.9733	.020348	.039756
%RSD	.6306612	.7316448	1.098712	.6491307	.4164914	.7936864
#1	410.2373	2.468102	14.92746	150.6613	4.863729	5.039512
#2	410.8150	2.459505	14.61898	150.3337	4.889275	5.023405
#3	406.0861	2.433613	14.68740	148.8357	4.903938	4.964028

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: CCV133 Acquired: 01/08/2025 20:17:23 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV133 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.835169	4.912886	F 10.62586	4.987064	4.883331	4.614722
Stddev	.023395	.023783	.10473	.022476	.026581	.027704
%RSD	.4838419	.4840885	.9856017	.4506795	.5443188	.6003352
#1	4.808564	4.902938	10.72958	4.962716	4.911764	4.642618
#2	4.844419	4.940028	10.62784	4.991456	4.879126	4.614334
#3	4.852524	4.895694	10.52015	5.007019	4.859103	4.587215

Elem	Li6707
Units	ppm
Avg	5.019099
Stddev	.018435
%RSD	.3672894
#1	5.025011
#2	5.033851
#3	4.998433

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1764.819	16263.90	1041.343	1195.998	1753.391
Stddev	6.688	91.26	8.485	13.026	7.220
%RSD	.3789775	.5610969	.8147888	1.089160	.4117733
#1	1771.887	16165.05	1033.284	1181.570	1759.435
#2	1763.980	16281.71	1040.549	1206.894	1755.341
#3	1758.589	16344.94	1050.197	1199.529	1745.396

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: CCB133 Acquired: 01/08/2025 20:21:11 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB133 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.004332	.0026564	.0034378	.0009278	-.004380	.0084643	.0010979
Stddev	.006723	.0025440	.0017558	.0105285	.003260	.0291928	.0044650
%RSD	155.1999	95.76902	51.07191	1134.761	74.42478	344.8926	406.6946
#1	-.002490	-.000210	.0045070	.0018927	-.006975	.0375436	.0010176
#2	.001279	.004645	.0014115	.0109407	-.000721	-.020841	-.003326
#3	-.011783	.003534	.0043950	-.010050	-.005443	.008690	.005602

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000422	.0000110	-.037222	-.000445	-.000211	-.001154	.0234557
Stddev	.000340	.0000072	.102629	.000674	.000437	.000730	.0715881
%RSD	80.60007	65.26816	275.7175	151.3379	207.7501	63.24477	305.2061
#1	-.000537	.0000132	-.142279	-.001129	.000281	-.001862	-.029818
#2	-.000689	.0000030	-.032180	-.000425	-.000355	-.001198	-.004646
#3	-.000039	.0000169	.062792	.000218	-.000558	-.000403	.104831

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0049567	-.069769	-.000874	-.001494	.1219502	-.000164	.0003517
Stddev	.0015299	.216713	.000393	.002106	.0090959	.000558	.0001144
%RSD	30.86614	310.6158	44.96168	141.0012	7.458708	340.7959	32.53001
#1	.0067231	-.308931	-.001051	-.002227	.1117055	.000255	.0002433
#2	.0040503	.113575	-.000423	-.003135	.1290774	-.000797	.0003406
#3	.0040966	-.013951	-.001146	.000881	.1250679	.000051	.0004713

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3371769	-.006680	.0069580	.0005633	-.016946	.0024246	.0001912
Stddev	.2111462	.002709	.0052419	.0006098	.001297	.0026083	.0010149
%RSD	62.62178	40.54893	75.33629	108.2491	7.653952	107.5759	530.9212
#1	.5784982	-.005413	.0018144	-.000058	-.017739	.0000880	.0008117
#2	.1864211	-.009789	.0067665	.001161	-.017649	.0052387	.0007419
#3	.2466114	-.004837	.0122929	.000586	-.015449	.0019471	-.000980

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: CCB133 Acquired: 01/08/2025 20:21:11 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB133 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.0105326	-.000681	.0066895
Stddev	.0078767	.000534	.0056389
%RSD	74.78402	78.46577	84.29519
#1	.0031469	-.001247	.0129472
#2	.0096285	-.000185	.0051189
#3	.0188224	-.000612	.0020024

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2134.332	19182.94	1116.283	1437.520	2511.217
Stddev	20.908	150.70	6.087	7.893	25.801
%RSD	.9795867	.7855725	.5453199	.5490770	1.027443
#1	2128.295	19058.44	1121.221	1431.127	2506.270
#2	2157.594	19139.92	1109.482	1435.091	2539.134
#3	2117.108	19350.47	1118.146	1446.342	2488.247

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5199-04LREX5 Acquired: 01/08/2025 20:25:12 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMQ3L Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0710289	-.013487	.1843026	.0511781	.0088162	26.51291	.2357362
Stddev	.0030071	.003743	.0032634	.0023410	.0044199	.22230	.0005550
%RSD	4.233681	27.75543	1.770671	4.574273	50.13437	.8384409	.2354453
#1	.0734672	-.016750	.1876773	.0503499	.0097445	26.26003	.2363433
#2	.0719508	-.009400	.1811633	.0493638	.0040058	26.60123	.2356106
#3	.0676688	-.014310	.1840673	.0538207	.0126982	26.67747	.2352548

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0034300	.0013354	9.235416	.0362087	.0529995	.2003369	74.39529
Stddev	.0004700	.0001256	.107484	.0015142	.0005259	.0016035	.59118
%RSD	13.70220	9.404118	1.163820	4.181904	.9923539	.8004192	.7946522
#1	.0035567	.0014784	9.113878	.0365158	.0528415	.1985379	73.72919
#2	.0038236	.0012846	9.317956	.0375458	.0535863	.2016160	74.59899
#3	.0029096	.0012432	9.274415	.0345644	.0525707	.2008568	74.85768

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.414071	5.395006	.0560978	-.003523	.2885397	.0437249	.3338947
Stddev	.046674	.116850	.0007870	.001492	.0271122	.0007149	.0018005
%RSD	.8620883	2.165884	1.402903	42.34678	9.396334	1.634982	.5392570
#1	5.360794	5.269484	.0559327	-.002257	.3198270	.0430466	.3351796
#2	5.433665	5.414907	.0554065	-.005168	.2738442	.0444715	.3318367
#3	5.447755	5.500627	.0569542	-.003144	.2719480	.0436566	.3346677

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.131018	.7510839	.0195687	.0014315	.1908659	1.638747	.0068050
Stddev	.347755	.0060043	.0013614	.0010487	.0014850	.009766	.0003413
%RSD	265.4263	.7994176	6.957011	73.25523	.7780373	.5959214	5.014832
#1	-.459890	.7490381	.0188651	.0009276	.1897886	1.628114	.0071989
#2	.232958	.7463698	.0187031	.0026370	.1902492	1.640813	.0065993
#3	-.166120	.7578437	.0211379	.0007300	.1925599	1.647315	.0066168

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5199-04LREX5 Acquired: 01/08/2025 20:25:12 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMQ3L Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.1298393	-.050396	.0122480
Stddev	.0033464	.000287	.0009578
%RSD	2.577350	.5703577	7.820271
#1	.1262214	-.050646	.0118841
#2	.1304729	-.050459	.0133345
#3	.1328236	-.050082	.0115255

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2322.439	20828.95	1224.497	1554.154	2390.757
Stddev	5.718	40.06	4.038	9.735	4.265
%RSD	.2461925	.1923384	.3297830	.6263991	.1783907
#1	2328.035	20784.01	1229.018	1543.136	2395.639
#2	2322.676	20841.91	1223.224	1561.595	2387.758
#3	2316.607	20860.92	1221.248	1557.730	2388.873

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5200-08 Acquired: 01/08/2025 20:29:06 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMX3 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2096907	-.029317	3.043200	.1199435	.0360962	75.64269
Stddev	.0005255	.003205	.003633	.0041928	.0018462	.48927
%RSD	.2506236	10.93260	.1193837	3.495631	5.114780	.6468183
#1	.2100546	-.029522	3.039008	.1190976	.0364583	75.14428
#2	.2090881	-.026014	3.045149	.1162382	.0377346	76.12228
#3	.2099292	-.032415	3.045442	.1244948	.0340958	75.66152

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.525006	.0101782	.0120575	61.19258	.1583387	.1461470
Stddev	.019053	.0002354	.0000859	.35271	.0011450	.0004896
%RSD	.7545827	2.312753	.7124162	.5763947	.7231552	.3349772
#1	2.509078	.0104098	.0121250	60.85331	.1570549	.1466758
#2	2.546113	.0101857	.0120867	61.55735	.1587065	.1460558
#3	2.519826	.0099392	.0119608	61.16709	.1592545	.1457095

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.009853	200.3130	11.90355	20.93607	.2103093	-.004270
Stddev	.009267	1.0217	.04290	.16749	.0015350	.000005
%RSD	.9176590	.5100398	.3604080	.8000256	.7298769	.1198001
#1	1.001135	199.3825	11.86277	20.74542	.2119178	-.004272
#2	1.019586	201.4063	11.94830	21.05960	.2101496	-.004264
#3	1.008837	200.1504	11.89959	21.00318	.2088603	-.004273

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.634503	.1887694	3.056806	2.202632	F 16.78233	.0752290
Stddev	.014700	.0022180	.011772	.251586	.05599	.0025119
%RSD	.8993286	1.174960	.3851115	11.42206	.3336525	3.338970
#1	1.624137	.1864400	3.069433	2.263879	16.77886	.0730568
#2	1.651326	.1908559	3.054851	1.926077	16.72815	.0746506
#3	1.628047	.1890124	3.046134	2.417940	16.83998	.0779797

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5200-08 Acquired: 01/08/2025 20:29:06 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMX3 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0118806	3.216736	10.85553	.2027887	.8457283	.0796934
Stddev	.0015344	.026653	.09573	.0028219	.0075645	.0006499
%RSD	12.91480	.8285846	.8818278	1.391537	.8944309	.8154854
#1	.0118300	3.208729	10.77362	.2010768	.8458909	.0790258
#2	.0134396	3.195005	10.96076	.2012436	.8532101	.0803240
#3	.0103722	3.246476	10.83221	.2060457	.8380838	.0797303

Elem	Li6707
Units	ppm
Avg	.0861540
Stddev	.0082441
%RSD	9.569058
#1	.0769782
#2	.0929372
#3	.0885467

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2627.280	23446.65	1395.266	1752.925	2260.735
Stddev	7.338	32.46	10.862	3.721	5.029
%RSD	.2792814	.1384549	.7784731	.2122605	.2224345
#1	2619.855	23444.01	1406.351	1748.888	2255.244
#2	2627.456	23480.35	1384.642	1756.216	2261.845
#3	2634.527	23415.58	1394.804	1753.671	2265.116

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5200-09 Acquired: 01/08/2025 20:32:54 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMX3D Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2114131	-.032295	3.051502	.1201072	.0356749	75.21378
Stddev	.0010126	.002902	.004062	.0053300	.0070619	1.41567
%RSD	.4789595	8.985201	.1330993	4.437730	19.79526	1.882198
#1	.2125411	-.028950	3.050781	.1222314	.0357770	75.97534
#2	.2111156	-.034135	3.047849	.1140426	.0285625	73.58035
#3	.2105826	-.033799	3.055876	.1240476	.0426853	76.08566

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.511739	.0103720	.0120889	60.65964	.1569453	.1466084
Stddev	.054542	.0001958	.0001375	1.41072	.0007202	.0006324
%RSD	2.171494	1.888048	1.137111	2.325625	.4589092	.4313799
#1	2.544055	.0104542	.0121809	61.32422	.1563436	.1470346
#2	2.448766	.0101485	.0121548	59.03937	.1567490	.1469088
#3	2.542396	.0105134	.0119308	61.61531	.1577434	.1458817

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.011014	199.5453	11.84135	20.64895	.2103497	-.004048
Stddev	.011336	4.9337	.27295	.37889	.0007019	.000872
%RSD	1.121280	2.472490	2.305081	1.834890	.3336924	21.54703
#1	1.020094	202.1436	11.97630	20.70817	.2105633	-.005015
#2	.998309	193.8554	11.52721	20.24395	.2109200	-.003811
#3	1.014640	202.6368	12.02055	20.99474	.2095658	-.003319

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.627503	.1887559	3.056207	2.026678	F 16.82579	.0740079
Stddev	.028553	.0034187	.013806	.419502	.06260	.0044269
%RSD	1.754433	1.811161	.4517524	20.69899	.3720387	5.981666
#1	1.659136	.1910345	3.054592	2.104878	16.79072	.0762634
#2	1.603637	.1848249	3.070750	1.573579	16.78858	.0689075
#3	1.619734	.1904082	3.043279	2.401578	16.89806	.0768527

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5200-09 Acquired: 01/08/2025 20:32:54 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMX3D Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0124638	3.218957	10.80616	.2061137	.8316078	.0790274
Stddev	.0006192	.019340	.13019	.0012357	.0165567	.0015361
%RSD	4.967874	.6008037	1.204746	.5995077	1.990930	1.943738
#1	.0119139	3.198489	10.90017	.2075360	.8415701	.0807534
#2	.0123431	3.221458	10.65757	.2053047	.8124955	.0778107
#3	.0131345	3.236925	10.86074	.2055004	.8407578	.0785180

Elem	Li6707
Units	ppm
Avg	.0975243
Stddev	.0078487
%RSD	8.047890
#1	.1013159
#2	.0884997
#3	.1027572

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2609.296	23425.56	1391.068	1757.365	2250.646
Stddev	2.902	64.68	13.925	12.024	1.871
%RSD	.1112103	.2760999	1.001013	.6842097	.0831130
#1	2607.311	23440.08	1378.739	1759.240	2252.788
#2	2607.951	23354.86	1406.171	1744.514	2249.332
#3	2612.626	23481.75	1388.293	1768.342	2249.819

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5200-08LREX5 Acquired: 01/08/2025 20:36:43 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMX3L Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0413767	-.007789	.5919960	.0295853	.0035270	18.10380	.6032114
Stddev	.0029151	.003224	.0014973	.0030377	.0029229	.22159	.0076374
%RSD	7.045293	41.38814	.2529259	10.26768	82.87223	1.224016	1.266132
#1	.0446043	-.011464	.5930460	.0271817	.0006362	18.35964	.6119329
#2	.0405906	-.006462	.5926607	.0329995	.0064810	17.97983	.5977185
#3	.0389353	-.005440	.5902814	.0285747	.0034639	17.97194	.5999826

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0022972	.0020775	14.45332	.0358600	.0328658	.2456612	47.25299
Stddev	.0004081	.0000653	.19387	.0007089	.0002251	.0035603	.63946
%RSD	17.76505	3.143403	1.341328	1.976920	.6849496	1.449271	1.353258
#1	.0025872	.0020321	14.67717	.0366618	.0329911	.2491243	47.98010
#2	.0024738	.0021523	14.34306	.0353161	.0326059	.2420111	46.77814
#3	.0018305	.0020480	14.33974	.0356021	.0330004	.2458484	47.00074

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.875699	4.913103	.0384985	.0011071	.4621784	.0462214	.7067980
Stddev	.026332	.160784	.0018023	.0010217	.0147894	.0015178	.0044518
%RSD	.9156684	3.272563	4.681374	92.28599	3.199926	3.283643	.6298535
#1	2.904761	4.785791	.0384351	.0005770	.4788555	.0444810	.7037899
#2	2.853427	5.093786	.0367288	.0004593	.4570231	.0469132	.7046922
#3	2.868909	4.859733	.0403317	.0022848	.4506567	.0472700	.7119121

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.988408	3.136762	.0113154	.0024420	.5779777	2.626518	.0392734
Stddev	.083837	.009373	.0030922	.0005236	.0048121	.032361	.0024056
%RSD	4.216264	.2988207	27.32700	21.44237	.8325790	1.232082	6.125254
#1	2.025753	3.132762	.0107800	.0018962	.5731885	2.658848	.0378222
#2	1.892388	3.147472	.0085258	.0029402	.5828125	2.594127	.0420502
#3	2.047083	3.130053	.0146402	.0024895	.5779323	2.626579	.0379477

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5200-08LREX5 Acquired: 01/08/2025 20:36:43 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMX3L Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.2023613	.0195442	.0162698
Stddev	.0032389	.0000922	.0070788
%RSD	1.600571	.4714816	43.50856
#1	.2002361	.0196424	.0244367
#2	.2060891	.0195307	.0118939
#3	.2007587	.0194597	.0124789

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2249.083	20253.55	1169.048	1511.148	2407.189
Stddev	11.454	96.55	18.924	3.340	10.196
%RSD	.5092827	.4766972	1.618729	.2210062	.4235772
#1	2256.464	20148.06	1148.012	1507.359	2413.721
#2	2235.887	20275.06	1184.688	1513.667	2395.440
#3	2254.896	20337.53	1174.442	1512.417	2412.406

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5200-10 Acquired: 01/08/2025 20:40:35 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMX3S Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2979818	.0601794	3.053607	.2637619	.1817916	78.07260
Stddev	.0069241	.0042265	.011811	.0074365	.0036795	.72462
%RSD	2.323674	7.023154	.3867978	2.819389	2.024009	.9281337
#1	.2931582	.0599450	3.041042	.2628758	.1784033	78.80687
#2	.2948716	.0560750	3.055296	.2568081	.1812659	78.05288
#3	.3059157	.0645182	3.064483	.2716017	.1857057	77.35804

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.889433	.0922949	.1061809	60.72607	.5141673	1.118736
Stddev	.062191	.0015647	.0005316	.53397	.0011916	.004066
%RSD	1.055969	1.695321	.5006431	.8793041	.2317521	.3634712
#1	5.953183	.0939957	.1056065	61.21226	.5128060	1.114056
#2	5.886186	.0919724	.1062807	60.81135	.5150210	1.120748
#3	5.828929	.0909166	.1066555	60.15459	.5146750	1.121404

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.454432	200.5399	12.64360	20.65261	1.198524	.0551415
Stddev	.012959	1.9656	.11607	.37363	.006673	.0002092
%RSD	.8910294	.9801372	.9180464	1.809142	.5567616	.3793670
#1	1.468014	202.6581	12.77222	21.01947	1.192263	.0551367
#2	1.453083	200.1868	12.61193	20.66580	1.197766	.0549348
#3	1.442200	198.7748	12.54665	20.27255	1.205544	.0553531

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.609337	1.065270	3.803884	2.164874	F 16.62975	.0762000
Stddev	.019326	.008649	.021590	.346625	.06746	.0006738
%RSD	1.200846	.8118973	.5675714	16.01134	.4056323	.8842809
#1	1.623330	1.074374	3.787341	1.940441	16.57090	.0767452
#2	1.617395	1.064273	3.796005	2.564095	16.61498	.0754466
#3	1.587286	1.057162	3.828307	1.990085	16.70336	.0764081

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5200-10 Acquired: 01/08/2025 20:40:35 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMX3S Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0114956	3.182332	10.67411	.2010429	.8243512	.0766549
Stddev	.0005062	.019131	.11667	.0001646	.0117545	.0000761
%RSD	4.403622	.6011506	1.093051	.0818982	1.425909	.0992050
#1	.0113646	3.164426	10.78657	.2010354	.8331732	.0767342
#2	.0110677	3.180082	10.68213	.2012111	.8288732	.0765825
#3	.0120544	3.202488	10.55364	.2008821	.8110073	.0766480

Elem	Li6707
Units	ppm
Avg	.0899313
Stddev	.0038694
%RSD	4.302668
#1	.0941759
#2	.0866006
#3	.0890174

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2613.325	23402.08	1395.270	1753.271	2259.592
Stddev	12.859	74.80	18.043	10.976	5.651
%RSD	.4920650	.3196202	1.293175	.6260570	.2500756
#1	2601.860	23333.50	1375.113	1753.602	2253.746
#2	2610.887	23481.84	1400.783	1764.079	2260.005
#3	2627.229	23390.89	1409.914	1742.134	2265.025

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5200-08LX5 Acquired: 01/08/2025 20:44:42 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMX3L Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0386987	-.005834	.5647273	.0323447	.0075143	17.41003	.5776990
Stddev	.0030266	.001283	.0008969	.0053008	.0032964	.06049	.0037216
%RSD	7.820974	21.98580	.1588118	16.38847	43.86862	.3474421	.6442058
#1	.0404593	-.005813	.5642206	.0337911	.0065844	17.46296	.5809235
#2	.0404328	-.004561	.5657628	.0367722	.0047827	17.34409	.5736267
#3	.0352039	-.007126	.5641985	.0264709	.0111758	17.42302	.5785468

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0021388	.0020891	13.90901	.0350185	.0311457	.2352629	45.31508
Stddev	.0000677	.0000106	.18498	.0017522	.0002887	.0023020	.24318
%RSD	3.165885	.5049957	1.329930	5.003498	.9267782	.9785022	.5366318
#1	.0021634	.0020924	13.90019	.0355618	.0314775	.2328146	45.59185
#2	.0020623	.0020773	13.72859	.0364346	.0309526	.2373836	45.13568
#3	.0021909	.0020976	14.09824	.0330590	.0310069	.2355904	45.21771

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.749446	4.853928	.0375397	-.002281	.4361990	.0422594	.6875172
Stddev	.009533	.108473	.0005033	.003045	.0292904	.0008257	.0034294
%RSD	.3467402	2.234757	1.340697	133.5006	6.714920	1.953767	.4988031
#1	2.750102	4.776146	.0372854	-.004732	.4676896	.0429533	.6914770
#2	2.739601	4.977842	.0372143	-.003239	.4311395	.0413462	.6855191
#3	2.758634	4.807795	.0381194	.001128	.4097680	.0424787	.6855554

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.394744	3.002093	.0075836	.0024981	.5510841	2.531696	.0372325
Stddev	.491166	.003286	.0025556	.0012582	.0026736	.012546	.0007398
%RSD	35.21548	.1094594	33.69911	50.36680	.4851507	.4955562	1.986919
#1	1.567612	3.000488	.0104031	.0030032	.5511512	2.523829	.0368558
#2	.840516	2.999918	.0054195	.0010658	.5537235	2.546164	.0367569
#3	1.776104	3.005873	.0069284	.0034254	.5483776	2.525093	.0380848

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5200-08LX5 Acquired: 01/08/2025 20:44:42 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMX3L Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.2010633	.0187524	.0089780
Stddev	.0054838	.0004514	.0057922
%RSD	2.727415	2.407339	64.51616
#1	.2040955	.0189313	.0156628
#2	.1947329	.0182389	.0054504
#3	.2043614	.0190869	.0058206

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2259.516	20174.94	1172.559	1504.772	2425.627
Stddev	3.245	47.08	6.638	9.164	5.240
%RSD	.1436356	.2333476	.5661143	.6089921	.2160461
#1	2261.863	20158.90	1174.130	1495.819	2422.145
#2	2260.872	20137.97	1165.276	1514.133	2431.654
#3	2255.812	20227.94	1178.270	1504.366	2423.083

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5204-01 Acquired: 01/08/2025 20:48:33 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN64 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1048933	-.015487	.9952376	.0588347	.0204380	72.90650	.9986167
Stddev	.0005421	.003084	.0068171	.0021516	.0046902	.55067	.0072694
%RSD	.5168382	19.91567	.6849708	3.656987	22.94817	.7553060	.7279450
#1	.1054795	-.017207	.9880627	.0564510	.0152604	72.64929	.9983158
#2	.1044101	-.011926	1.001629	.0594204	.0216514	73.53871	1.006032
#3	.1047902	-.017328	.996021	.0606328	.0244023	72.53150	.991502

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0072198	.0056702	199.2385	.0978226	.1181040	.2137569	145.4838
Stddev	.0004181	.0001575	1.8456	.0006019	.0011533	.0010658	1.1861
%RSD	5.791407	2.777845	.9263223	.6153507	.9765281	.4985892	.8153018
#1	.0075721	.0055400	199.9531	.0972902	.1170435	.2145741	145.4868
#2	.0067577	.0058453	200.6200	.0984758	.1179366	.2125515	146.6685
#3	.0073296	.0056252	197.1425	.0977017	.1193318	.2141452	144.2963

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.932902	41.00267	.1318203	-.004580	.8946244	.1432152	1.248607
Stddev	.071531	.19985	.0006354	.001168	.0164281	.0014180	.005863
%RSD	.9016941	.4874170	.4820537	25.49796	1.836317	.9901367	.4695409
#1	7.927648	40.80953	.1321545	-.003927	.8794899	.1448463	1.252439
#2	8.006914	41.20862	.1322190	-.005928	.8922875	.1425233	1.251523
#3	7.864143	40.98986	.1310875	-.003884	.9120959	.1422759	1.241858

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6200563	8.869099	.0854121	.0100744	2.097056	13.24876	.2104708
Stddev	.5203779	.038902	.0045570	.0004346	.012200	.08197	.0037647
%RSD	83.92430	.4386288	5.335329	4.314213	.5817877	.6187159	1.788730
#1	.1762319	8.824179	.0860536	.0096798	2.083037	13.34195	.2061838
#2	1.192765	8.891823	.0896144	.0105403	2.105267	13.21654	.2132385
#3	.491172	8.891294	.0805684	.0100033	2.102866	13.18780	.2119902

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5204-01 Acquired: 01/08/2025 20:48:33 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN64 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.6389073	.1497914	.0508737
Stddev	.0085391	.0009562	.0032624
%RSD	1.336516	.6383601	6.412672
#1	.6356932	.1491886	.0541191
#2	.6485870	.1508940	.0475947
#3	.6324416	.1492918	.0509073

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2330.941	20907.99	1245.320	1574.520	2194.591
Stddev	9.256	154.66	7.539	10.509	10.378
%RSD	.3971000	.7397066	.6053945	.6674390	.4728952
#1	2338.336	20981.95	1240.923	1570.503	2205.201
#2	2320.561	20730.24	1241.011	1566.612	2184.462
#3	2333.926	21011.78	1254.025	1586.445	2194.110

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5204-02 Acquired: 01/08/2025 20:52:23 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN65 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0838745	.0176773	.3223226	.0448188	.0118388	43.61015	1.468067
Stddev	.0021544	.0078531	.0052328	.0038799	.0042281	.35469	.010853
%RSD	2.568546	44.42448	1.623471	8.656923	35.71373	.8133291	.7392958
#1	.0863438	.0170911	.3227460	.0492990	.0135271	43.93270	1.477486
#2	.0823786	.0101338	.3168909	.0425828	.0149619	43.66747	1.470518
#3	.0829012	.0258070	.3273308	.0425747	.0070274	43.23029	1.456198

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0045760	.0053646	604.4688	.0801599	.1550585	.2662183	137.3810
Stddev	.0001880	.0001569	1.7591	.0014693	.0008047	.0026483	.9055
%RSD	4.108620	2.925171	.2910109	1.832992	.5189668	.9947737	.6591425
#1	.0047218	.0052318	605.7808	.0787065	.1547898	.2692763	138.2601
#2	.0046424	.0055378	605.1557	.0816446	.1544225	.2646877	137.4317
#3	.0043638	.0053242	602.4699	.0801286	.1559632	.2646910	136.4512

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	23.48075	104.1998	.1602229	-.002264	1.157591	.0571971	.5028018
Stddev	.12435	.6120	.0006676	.001077	.027151	.0010463	.0028773
%RSD	.5296010	.5873275	.4166812	47.59970	2.345467	1.829382	.5722493
#1	23.61972	104.8418	.1602941	-.002003	1.145535	.0563120	.5009796
#2	23.44256	104.1346	.1595225	-.001340	1.138557	.0583519	.5061188
#3	23.37997	103.6230	.1608520	-.003448	1.188683	.0569274	.5013070

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.815836	8.039574	.0815190	.0094102	1.475307	9.459720	.0370066
Stddev	.606680	.027479	.0037670	.0007913	.008796	.083917	.0006665
%RSD	74.36297	.3417917	4.621050	8.409074	.5961929	.8870994	1.801074
#1	-.498122	8.028258	.0801045	.0085153	1.467601	9.556100	.0373782
#2	-1.51539	8.019559	.0857885	.0096980	1.484890	9.402858	.0374046
#3	-.43400	8.070903	.0786639	.0100174	1.473430	9.420201	.0362372

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5204-02 Acquired: 01/08/2025 20:52:23 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN65 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.4181425	.4424926	.0488938
Stddev	.0118803	.0025935	.0036472
%RSD	2.841204	.5861091	7.459424
#1	.4316617	.4441965	.0489777
#2	.4133987	.4437735	.0452054
#3	.4093670	.4395079	.0524983

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2281.897	20489.09	1249.525	1545.858	1977.502
Stddev	4.076	75.98	10.479	10.269	5.560
%RSD	.1786438	.3708417	.8386094	.6643167	.2811594
#1	2286.030	20507.03	1239.039	1553.340	1980.196
#2	2281.780	20405.74	1249.541	1534.150	1981.201
#3	2277.880	20554.49	1259.996	1550.084	1971.108

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5204-03 Acquired: 01/08/2025 20:56:11 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN66 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1407819	.0205142	.2623583	.0163653	.0051648	35.06094
Stddev	.0062368	.0024059	.0080939	.0097089	.0043976	.57826
%RSD	4.430093	11.72787	3.085072	59.32614	85.14648	1.649296
#1	.1479467	.0179058	.2704830	.0096089	.0086122	34.81458
#2	.1365698	.0226463	.2542955	.0119957	.0066700	34.64666
#3	.1378292	.0209905	.2622964	.0274911	.0002122	35.72158

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6827279	.0049126	.0035557	F 1410.271	.0700640	.2118965
Stddev	.0104838	.0001542	.0000890	34.165	.0024739	.0004529
%RSD	1.535568	3.138529	2.503428	2.422604	3.530967	.2137399
#1	.6791984	.0050495	.0035907	1391.229	.0728144	.2122660
#2	.6744643	.0047456	.0036220	1389.870	.0693572	.2113913
#3	.6945209	.0049428	.0034546	1449.714	.0680203	.2120324

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4472138	116.2206	11.36348	88.71832	.1686397	-.003064
Stddev	.0149997	2.3443	.24640	2.02986	.0006481	.002670
%RSD	3.354027	2.017151	2.168308	2.287981	.3843047	87.14120
#1	.4374143	115.1872	11.26005	87.50325	.1689101	-.005864
#2	.4397455	114.5705	11.18567	87.59006	.1679002	-.002782
#3	.4644815	118.9041	11.64474	91.06167	.1691088	-.000547

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.453259	.0677745	.3557115	2.270682	7.692829	.0961743
Stddev	.080940	.0024542	.0021706	.796361	.023387	.0046882
%RSD	5.569517	3.621184	.6102226	35.07146	.3040144	4.874643
#1	1.369408	.0659027	.3555632	1.535780	7.703141	.0918186
#2	1.459436	.0668677	.3579525	2.159458	7.666058	.0955682
#3	1.530933	.0705531	.3536188	3.116809	7.709288	.1011360

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5204-03 Acquired: 01/08/2025 20:56:11 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN66 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0032268	3.042911	9.408000	.0249123	.3494002	1.200464
Stddev	.0017506	.010546	.295404	.0011721	.0147746	.026043
%RSD	54.25192	.3465913	3.139927	4.705003	4.228565	2.169389
#1	.0046683	3.054099	9.240462	.0261846	.3419837	1.187122
#2	.0012788	3.033152	9.234451	.0238764	.3398029	1.183796
#3	.0037333	3.041481	9.749086	.0246759	.3664139	1.230474

Elem	Li6707
Units	ppm
Avg	.0696039
Stddev	.0022994
%RSD	3.303500
#1	.0722382
#2	.0685744
#3	.0679992

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2175.889	19258.42	1195.952	1459.492	1836.985
Stddev	4.398	84.22	31.526	9.966	3.588
%RSD	.2021453	.4373336	2.636064	.6828292	.1953105
#1	2180.946	19223.02	1216.501	1456.753	1840.620
#2	2173.766	19197.67	1211.701	1451.183	1836.888
#3	2172.954	19354.56	1159.655	1470.541	1833.446

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5204-04 Acquired: 01/08/2025 21:00:00 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN67 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0283819	.0126593	.0661450	.0027750	.0098119	29.99752
Stddev	.0041491	.0021086	.0017443	.0132781	.0052872	.09648
%RSD	14.61868	16.65642	2.637129	478.4876	53.88542	.3216273
#1	.0235927	.0146082	.0647159	-.012555	.0051822	29.88623
#2	.0306652	.0129489	.0656302	.010690	.0086802	30.05746
#3	.0308879	.0104209	.0680887	.010189	.0155733	30.04889

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2812293	.0033950	.0008779	389.7905	.0539583	.0957952
Stddev	.0009753	.0001929	.0000768	1.3541	.0009410	.0007866
%RSD	.3467882	5.680866	8.749064	.3473886	1.743998	.8211574
#1	.2801036	.0032133	.0009585	388.2288	.0547638	.0958198
#2	.2818195	.0035973	.0008698	390.5037	.0541872	.0949966
#3	.2817648	.0033743	.0008055	390.6388	.0529240	.0965693

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1876503	83.11547	3.711891	59.91286	.0808692	-.005362
Stddev	.0009322	.16534	.014797	.37521	.0006343	.002310
%RSD	.4967765	.1989224	.3986309	.6262667	.7844067	43.08527
#1	.1871706	83.15421	3.695729	59.71151	.0812366	-.007971
#2	.1870556	82.93420	3.724772	59.68131	.0812342	-.004541
#3	.1887246	83.25799	3.715171	60.34577	.0801367	-.003575

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.055169	.0856574	.1885433	F -4.91323	5.100031	.0406420
Stddev	.039084	.0008982	.0019040	.51815	.011921	.0032082
%RSD	3.704070	1.048536	1.009823	10.54601	.2337514	7.893727
#1	1.091347	.0850530	.1904301	-4.34960	5.096092	.0424939
#2	1.013715	.0866895	.1866227	-5.02118	5.113424	.0369375
#3	1.060444	.0852299	.1885771	-5.36889	5.090579	.0424946

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5204-04 Acquired: 01/08/2025 21:00:00 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN67 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0057512	.5515356	7.908004	.0161368	.6202560	.4796260
Stddev	.0003289	.0099947	.029392	.0004255	.0032635	.0012308
%RSD	5.719086	1.812156	.3716697	2.636867	.5261574	.2566245
#1	.0055363	.5408956	7.874093	.0166281	.6238004	.4799605
#2	.0061298	.5607268	7.923771	.0158965	.6173756	.4806551
#3	.0055874	.5529843	7.926148	.0158858	.6195918	.4782625

Elem	Li6707
Units	ppm
Avg	.0230479
Stddev	.0016342
%RSD	7.090400
#1	.0241261
#2	.0211677
#3	.0238500

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2218.066	19964.00	1205.655	1493.926	2084.116
Stddev	8.728	102.78	4.079	5.724	6.101
%RSD	.3934857	.5148230	.3383315	.3831828	.2927300
#1	2228.082	19845.81	1209.202	1488.555	2091.092
#2	2212.090	20032.42	1206.565	1499.949	2079.777
#3	2214.027	20013.78	1201.198	1493.275	2081.479

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5204-05 Acquired: 01/08/2025 21:03:52 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN89 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1402484	-.012580	5.166221	.0625240	.0242214	58.31666
Stddev	.0049028	.005769	.017228	.0050936	.0011240	.73503
%RSD	3.495800	45.86133	.3334733	8.146568	4.640509	1.260420
#1	.1346094	-.019079	5.178291	.0677603	.0234114	58.37026
#2	.1435024	-.008061	5.173881	.0622255	.0255047	59.02343
#3	.1426334	-.010601	5.146492	.0575863	.0237482	57.55630

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.194954	.0074420	.0077943	138.2956	.3373725	.1100087
Stddev	.014180	.0000542	.0001138	1.3657	.0016284	.0004647
%RSD	1.186620	.7277366	1.459724	.9875198	.4826719	.4224430
#1	1.191617	.0074235	.0079013	138.3421	.3374433	.1097601
#2	1.210504	.0073995	.0078067	139.6374	.3357098	.1105448
#3	1.182740	.0075030	.0076748	136.9072	.3389643	.1097211

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3457926	142.3641	6.681106	43.73259	.1870478	.0001269
Stddev	.0024995	1.8229	.055403	.50489	.0013150	.0018452
%RSD	.7228306	1.280465	.8292484	1.154500	.7030044	1454.394
#1	.3439300	142.1386	6.674071	43.58367	.1882721	-.001349
#2	.3486332	144.2893	6.739691	44.29519	.1856578	.002196
#3	.3448147	140.6644	6.629557	43.31890	.1872134	-.000466

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8181571	.1470148	1.676815	2.243313	F 10.30896	.0880318
Stddev	.0140788	.0028112	.000637	.274090	.03316	.0003909
%RSD	1.720790	1.912210	.0380175	12.21807	.3216139	.4440991
#1	.8086054	.1438745	1.676292	1.987389	10.32706	.0878353
#2	.8343253	.1492969	1.676629	2.532527	10.32914	.0884820
#3	.8115408	.1478731	1.677525	2.210022	10.27070	.0877780

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5204-05 Acquired: 01/08/2025 21:03:52 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN89 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0114981	5.689843	12.62361	.0861632	.7757468	.0571120
Stddev	.0005228	.017815	.06460	.0000627	.0054940	.0006117
%RSD	4.546603	.3131080	.5117417	.0727801	.7082175	1.071085
#1	.0116526	5.695986	12.58193	.0862256	.7720491	.0568104
#2	.0119262	5.703774	12.69802	.0861636	.7820598	.0578159
#3	.0109155	5.669769	12.59088	.0861002	.7731314	.0567096

Elem	Li6707
Units	ppm
Avg	.0786204
Stddev	.0053239
%RSD	6.771602
#1	.0778173
#2	.0737436
#3	.0843001

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2396.984	21514.59	1272.467	1612.170	2238.143
Stddev	12.404	104.22	10.307	7.189	8.314
%RSD	.5174822	.4843942	.8100278	.4458986	.3714700
#1	2385.356	21407.15	1273.757	1606.631	2232.135
#2	2395.555	21521.36	1261.575	1609.586	2234.662
#3	2410.040	21615.25	1282.069	1620.294	2247.632

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5204-06 Acquired: 01/08/2025 21:07:39 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN90 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1218808	-.007906	4.106077	.0618279	.0195574	53.18799
Stddev	.0064104	.002764	.007370	.0048959	.0017381	.76241
%RSD	5.259555	34.96539	.1794887	7.918559	8.887143	1.433418
#1	.1186242	-.008272	4.109034	.0578583	.0190105	52.68030
#2	.1177525	-.010470	4.111509	.0603269	.0215031	52.81898
#3	.1292657	-.004977	4.097688	.0672986	.0181584	54.06469

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.119451	.0074585	.0089135	156.3781	.4282563	.1111556
Stddev	.017886	.0006595	.0000690	1.4856	.0040009	.0005377
%RSD	1.597705	8.841587	.7736622	.9499767	.9342401	.4837755
#1	1.109589	.0067849	.0089919	155.2905	.4236470	.1105399
#2	1.108667	.0074877	.0088621	155.7732	.4308314	.1115331
#3	1.140097	.0081029	.0088866	158.0707	.4302906	.1113938

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3770717	135.6266	6.307211	55.62305	.1909124	-.000934
Stddev	.0042801	1.3675	.063601	.89518	.0018731	.000558
%RSD	1.135099	1.008316	1.008381	1.609360	.9811224	59.76723
#1	.3758786	134.6908	6.266288	54.90337	.1928467	-.000291
#2	.3735147	134.9930	6.274861	55.34033	.1891073	-.001215
#3	.3818218	137.1961	6.380484	56.62545	.1907830	-.001295

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8115395	.1443410	1.602382	1.295684	F 10.63751	.0862905
Stddev	.0160532	.0019635	.008290	.285588	.01510	.0020098
%RSD	1.978116	1.360349	.5173351	22.04148	.1419401	2.329089
#1	.8266676	.1438232	1.598305	1.192914	10.65465	.0848367
#2	.7946986	.1426882	1.596920	1.075703	10.63171	.0854509
#3	.8132523	.1465115	1.611920	1.618434	10.62616	.0885840

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5204-06 Acquired: 01/08/2025 21:07:39 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN90 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0112104	5.510895	11.50305	.0979471	.6634167	.0742983
Stddev	.0002458	.012221	.16037	.0026047	.0089068	.0007741
%RSD	2.192785	.2217565	1.394168	2.659312	1.342561	1.041868
#1	.0113791	5.524778	11.40646	.0980505	.6580062	.0746568
#2	.0113239	5.501764	11.41452	.1004985	.6585473	.0734100
#3	.0109284	5.506144	11.68817	.0952922	.6736966	.0748281

Elem	Li6707
Units	ppm
Avg	.0529257
Stddev	.0050553
%RSD	9.551711
#1	.0480607
#2	.0581519
#3	.0525644

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2369.205	21140.73	1269.252	1583.598	2213.398
Stddev	5.298	107.86	15.638	5.633	5.403
%RSD	.2236021	.5101810	1.232047	.3556986	.2441209
#1	2375.052	21250.91	1280.999	1588.563	2219.475
#2	2367.837	21035.36	1275.255	1584.754	2209.135
#3	2364.725	21135.92	1251.502	1577.476	2211.583

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5204-07 Acquired: 01/08/2025 21:11:27 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN91 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1449438	-.010983	4.533998	.0686970	.0208945	59.94235
Stddev	.0005625	.002685	.002241	.0049615	.0080735	.61312
%RSD	.3881024	24.44733	.0494345	7.222262	38.63931	1.022842
#1	.1443911	-.011797	4.531410	.0629786	.0251318	59.34491
#2	.1449246	-.013168	4.535268	.0712538	.0115845	60.57002
#3	.1455156	-.007986	4.535315	.0718585	.0259671	59.91211

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.309509	.0087264	.0103360	202.9140	.4388644	.1347784
Stddev	.013859	.0002679	.0002285	.5416	.0016017	.0009795
%RSD	1.058320	3.069816	2.210784	.2669344	.3649560	.7267501
#1	1.293533	.0084357	.0100744	202.4495	.4386792	.1358677
#2	1.318300	.0089634	.0104364	203.5089	.4373635	.1339701
#3	1.316693	.0087801	.0104970	202.7836	.4405507	.1344974

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4282169	152.9798	7.823115	69.64229	.2188987	-.002292
Stddev	.0031842	1.0362	.033720	.59609	.0012389	.001885
%RSD	.7436013	.6773263	.4310354	.8559248	.5659859	82.23726
#1	.4249695	151.9535	7.790915	68.95947	.2196230	-.000386
#2	.4313340	154.0256	7.858174	69.90863	.2196048	-.004155
#3	.4283471	152.9601	7.820256	70.05877	.2174681	-.002336

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.025689	.1600099	1.672805	1.883539	F 10.35838	.1015284
Stddev	.013354	.0021089	.004212	.421749	.01660	.0019355
%RSD	1.301932	1.318007	.2518143	22.39132	.1602894	1.906390
#1	1.036160	.1576070	1.668163	2.275362	10.35071	.1037629
#2	1.010651	.1615537	1.673869	1.437171	10.34699	.1004521
#3	1.030256	.1608690	1.676384	1.938082	10.37743	.1003703

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5204-07 Acquired: 01/08/2025 21:11:27 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN91 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0133370	5.323269	11.52992	.1237793	.7451029	.1053603
Stddev	.0010606	.016328	.05293	.0011592	.0076119	.0021494
%RSD	7.952618	.3067331	.4590907	.9364989	1.021592	2.040062
#1	.0134026	5.304776	11.47882	.1251035	.7406467	.1040426
#2	.0122450	5.335694	11.58451	.1232864	.7538921	.1041977
#3	.0143632	5.329338	11.52642	.1229481	.7407698	.1078407

Elem	Li6707
Units	ppm
Avg	.0792070
Stddev	.0076925
%RSD	9.711878
#1	.0762266
#2	.0734507
#3	.0879438

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2386.201	21284.44	1276.904	1596.826	2152.227
Stddev	6.899	24.17	10.985	9.079	5.463
%RSD	.2891353	.1135402	.8602710	.5685769	.2538402
#1	2378.570	21311.91	1288.865	1606.400	2146.775
#2	2391.998	21274.94	1267.268	1595.739	2157.702
#3	2388.036	21266.46	1274.579	1588.339	2152.205

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5204-08 Acquired: 01/08/2025 21:15:14 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN92 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1495543	-.012194	8.707814	.0693139	.0271821	65.18697	1.845874
Stddev	.0057165	.004416	.021940	.0004324	.0011584	.75684	.029489
%RSD	3.822348	36.21571	.2519561	.6237803	4.261605	1.161028	1.597569
#1	.1550331	-.007106	8.702655	.0690958	.0261792	64.73090	1.828463
#2	.1436266	-.015028	8.688913	.0698119	.0269170	64.76940	1.829236
#3	.1500032	-.014448	8.731873	.0690340	.0284501	66.06061	1.879922

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0100482	.0075266	332.4352	.2649052	.1352458	.3506527	177.5420
Stddev	.0001814	.0001006	4.2264	.0015225	.0007648	.0041602	2.2035
%RSD	1.804978	1.336047	1.271355	.5747188	.5654735	1.186418	1.241088
#1	.0100581	.0075649	330.4542	.2646365	.1361171	.3506081	176.4214
#2	.0098620	.0076024	329.5632	.2635350	.1346856	.3465150	176.1242
#3	.0102244	.0074125	337.2883	.2665441	.1349347	.3548350	180.0806

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.156365	121.4729	.1746867	-.004323	1.201119	.1600218	2.239722
Stddev	.074489	1.5099	.0008243	.000674	.027367	.0018725	.012188
%RSD	1.040872	1.242967	.4718756	15.60216	2.278461	1.170168	.5441746
#1	7.128853	120.3571	.1740334	-.004985	1.185240	.1596192	2.226106
#2	7.099545	120.8707	.1744139	-.003636	1.185398	.1583832	2.249614
#3	7.240696	123.1909	.1756128	-.004348	1.232720	.1620628	2.243445

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.184025	8.677358	.0965341	.0125735	6.255451	12.14111	.0994957
Stddev	.259445	.025247	.0022122	.0009244	.023273	.14473	.0014595
%RSD	21.91215	.2909472	2.291659	7.352216	.3720425	1.192053	1.466913
#1	.937895	8.658970	.0970035	.0116209	6.244428	12.14405	.0978453
#2	1.454999	8.666961	.0984740	.0126328	6.239737	11.99493	.1000251
#3	1.159183	8.706143	.0941248	.0134669	6.282187	12.28434	.1006166

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5204-08 Acquired: 01/08/2025 21:15:14 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN92 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.7340060	.1397367	.0755573
Stddev	.0138982	.0020349	.0042629
%RSD	1.893474	1.456254	5.641881
#1	.7247816	.1383051	.0790097
#2	.7272452	.1388389	.0707926
#3	.7499911	.1420661	.0768696

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2303.801	20690.01	1247.140	1555.089	2037.025
Stddev	8.802	35.07	14.232	10.895	6.712
%RSD	.3820643	.1694877	1.141183	.7005913	.3295016
#1	2304.809	20703.28	1252.361	1567.333	2037.560
#2	2312.056	20716.51	1258.024	1551.468	2043.453
#3	2294.538	20650.25	1231.034	1546.466	2030.061

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5204-09 Acquired: 01/08/2025 21:19:00 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN93 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1035416	-.021707	7.211374	.0903416	.0259809	73.78806	2.133557
Stddev	.0047926	.002049	.016189	.0066369	.0038696	.86303	.021471
%RSD	4.628685	9.437862	.2244958	7.346425	14.89403	1.169612	1.006334
#1	.1049031	-.020615	7.218326	.0864580	.0266410	72.88571	2.112573
#2	.0982155	-.024070	7.222925	.0980049	.0218237	73.87298	2.132614
#3	.1075060	-.020435	7.192869	.0865618	.0294780	74.60550	2.155484

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0088356	.0052294	91.09635	.1745054	.1079277	.2760968	161.9525
Stddev	.0001258	.0000927	.51319	.0007068	.0007840	.0025236	1.6305
%RSD	1.424281	1.772088	.5633506	.4050050	.7263795	.9140127	1.006755
#1	.0088724	.0053363	90.56163	.1753192	.1088165	.2769466	160.2673
#2	.0089389	.0051732	91.14253	.1740456	.1076322	.2732580	162.0682
#3	.0086955	.0051786	91.58489	.1741514	.1073345	.2780858	163.5220

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.463773	30.72430	.1396303	-.004591	1.134373	.1474466	1.686240
Stddev	.064622	.09465	.0003848	.001057	.005831	.0011095	.011001
%RSD	.9997631	.3080680	.2755565	23.02356	.5140140	.7524784	.6524076
#1	6.406637	30.65130	.1400715	-.003396	1.128270	.1487038	1.677563
#2	6.450775	30.69036	.1394552	-.005403	1.139887	.1466044	1.698614
#3	6.533906	30.83124	.1393644	-.004973	1.134962	.1470316	1.682545

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-1.98741	9.341662	.0806090	.0111195	4.784332	12.36817	.0525188
Stddev	.44313	.019189	.0020229	.0004461	.014199	.09322	.0017140
%RSD	22.29677	.2054100	2.509566	4.011697	.2967881	.7536964	3.263508
#1	-1.58916	9.363584	.0823252	.0111779	4.790808	12.31335	.0544363
#2	-1.90832	9.333485	.0783786	.0106471	4.794138	12.31536	.0519845
#3	-2.46476	9.327916	.0811233	.0115335	4.768049	12.47581	.0511356

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5204-09 Acquired: 01/08/2025 21:19:00 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN93 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.5086236	.0073019	.0993230
Stddev	.0109803	.0003047	.0039796
%RSD	2.158822	4.172581	4.006725
#1	.4959668	.0076397	.0952531
#2	.5156004	.0072182	.0995101
#3	.5143036	.0070478	.1032057

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2450.521	21801.33	1302.279	1634.090	2286.767
Stddev	8.874	39.15	11.479	13.134	3.913
%RSD	.3621412	.1795809	.8814182	.8037784	.1711183
#1	2441.691	21841.92	1311.041	1649.031	2282.701
#2	2459.439	21763.81	1306.510	1624.363	2290.507
#3	2450.432	21798.25	1289.285	1628.875	2287.093

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5204-10 Acquired: 01/08/2025 21:22:49 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN94 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0552217	-.015457	1.241761	.0638530	.0145628	60.13860
Stddev	.0034213	.000303	.005453	.0036165	.0065300	.68918
%RSD	6.195530	1.958368	.4391561	5.663814	44.84013	1.145983
#1	.0518315	-.015688	1.247840	.0678116	.0162268	60.13776
#2	.0551604	-.015570	1.237299	.0607221	.0073618	59.44985
#3	.0586733	-.015115	1.240144	.0630253	.0200997	60.82821

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9274287	.0064334	.0021547	55.89239	.1089138	.0758239
Stddev	.0103656	.0001832	.0001075	.60446	.0008025	.0007380
%RSD	1.117672	2.848251	4.986698	1.081470	.7368715	.9732985
#1	.9266999	.0062391	.0021032	55.64322	.1098112	.0755821
#2	.9174468	.0064582	.0022782	55.45235	.1086652	.0766524
#3	.9381395	.0066030	.0020827	56.58161	.1082649	.0752371

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1544153	114.5440	2.951479	19.29539	.0999583	-.005164
Stddev	.0019790	.9896	.024997	.51383	.0010428	.001478
%RSD	1.281604	.8639532	.8469390	2.662943	1.043279	28.62831
#1	.1547782	114.1693	2.957422	19.52653	.1011333	-.003559
#2	.1522799	113.7965	2.924046	18.70659	.0995988	-.005461
#3	.1561877	115.6663	2.972969	19.65305	.0991428	-.006471

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.291471	.1162739	.6171998	F -5.06765	7.711005	.0570206
Stddev	.017805	.0005567	.0002884	.15558	.025639	.0042709
%RSD	1.378655	.4788042	.0467321	3.070061	.3324948	7.490088
#1	1.311174	.1163475	.6175277	-5.21698	7.705340	.0559239
#2	1.276534	.1156840	.6169851	-4.90650	7.688672	.0534050
#3	1.286706	.1167902	.6170867	-5.07947	7.739002	.0617329

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5204-10 Acquired: 01/08/2025 21:22:49 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN94 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0075899	3.107450	11.36787	.0202649	.4583965	.0166522
Stddev	.0017786	.007865	.10802	.0009723	.0079224	.0006197
%RSD	23.43340	.2530861	.9502377	4.798131	1.728287	3.721450
#1	.0096338	3.107075	11.38150	.0203115	.4499205	.0160346
#2	.0063941	3.099781	11.25369	.0212130	.4596538	.0166480
#3	.0067419	3.115496	11.46844	.0192700	.4656150	.0172739

Elem	Li6707
Units	ppm
Avg	.0637738
Stddev	.0040889
%RSD	6.411506
#1	.0665025
#2	.0590726
#3	.0657462

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2355.526	21058.14	1235.117	1580.780	2326.500
Stddev	5.523	97.89	12.240	4.611	5.471
%RSD	.2344550	.4648541	.9909681	.2916621	.2351806
#1	2360.879	21165.97	1241.760	1585.593	2331.427
#2	2355.852	20974.87	1242.600	1576.403	2327.462
#3	2349.848	21033.58	1220.993	1580.346	2320.612

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5204-14 Acquired: 01/08/2025 21:26:38 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHND1 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1830260	-.033249	9.219775	.1046787	.0437041	69.90286	5.041885
Stddev	.0025440	.002789	.015392	.0087978	.0012434	.18132	.010856
%RSD	1.389946	8.387001	.1669456	8.404590	2.845148	.2593911	.2153079
#1	.1857946	-.035793	9.220094	.1121296	.0447605	70.04390	5.045808
#2	.1824919	-.030267	9.235005	.0949729	.0423337	69.96635	5.050233
#3	.1807915	-.033688	9.204226	.1069337	.0440180	69.69833	5.029613

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0125191	.0234681	177.4470	.2846555	.1266763	1.064445	215.3281
Stddev	.0003353	.0000678	.4914	.0015055	.0010430	.001831	.8979
%RSD	2.678739	.2889294	.2769319	.5288999	.8233295	.1720220	.4170076
#1	.0123413	.0233901	177.5816	.2859361	.1259992	1.064570	214.9683
#2	.0123100	.0235128	177.8570	.2850334	.1261523	1.066210	216.3502
#3	.0129059	.0235015	176.9023	.2829970	.1278774	1.062555	214.6660

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.796574	39.99326	.2998294	-.007006	2.294340	.4013696	20.45030
Stddev	.018474	.11921	.0014099	.000753	.005228	.0004949	.04581
%RSD	.3851426	.2980768	.4702481	10.74059	.2278568	.1232996	.2240289
#1	4.786941	39.98653	.3003836	-.007808	2.290697	.4018574	20.45385
#2	4.817873	40.11570	.2982266	-.006895	2.291993	.4013836	20.49423
#3	4.784908	39.87756	.3008781	-.006315	2.300330	.4008679	20.40281

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.009976	9.756919	.1296468	.0161090	7.387308	11.89835	1.438936
Stddev	.644572	.010984	.0044721	.0010564	.008696	.02633	.004447
%RSD	6461.028	.1125749	3.449441	6.557698	.1177154	.2212831	.3090701
#1	.701441	9.768644	.1293529	.0152391	7.393420	11.89962	1.437536
#2	-.555123	9.746869	.1342586	.0172845	7.391151	11.92401	1.435357
#3	-.176247	9.755245	.1253289	.0158034	7.377352	11.87140	1.443915

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5204-14 Acquired: 01/08/2025 21:26:38 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHND1 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	1.942861	.5798336	.0364624
Stddev	.011771	.0032982	.0028414
%RSD	.6058793	.5688171	7.792678
#1	1.951940	.5830379	.0393761
#2	1.929561	.5800140	.0363118
#3	1.947082	.5764489	.0336993

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2266.663	20299.89	1200.062	1522.229	2230.813
Stddev	3.943	17.86	2.312	3.721	3.949
%RSD	.1739618	.0879797	.1926858	.2444720	.1769999
#1	2270.683	20303.66	1200.658	1523.521	2235.143
#2	2266.503	20280.45	1197.510	1518.034	2227.411
#3	2262.802	20315.57	1202.018	1525.133	2229.886

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5204-15 Acquired: 01/08/2025 21:30:25 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHND2 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2064607	-.062852	35.50035	.1792954	.0561000	59.52321
Stddev	.0043394	.005897	.16302	.0081281	.0036699	.21137
%RSD	2.101828	9.382222	.4592079	4.533338	6.541674	.3551130
#1	.2036610	-.061455	35.31833	.1882797	.0586952	59.75571
#2	.2042616	-.069322	35.54980	.1724522	.0577036	59.47127
#3	.2114594	-.057779	35.63293	.1771544	.0519012	59.34264

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.368150	.0147504	.0123125	293.2093	.1499140	.1573345
Stddev	.016031	.0005232	.0001579	1.0841	.0022062	.0017543
%RSD	.6769430	3.547387	1.282861	.3697246	1.471647	1.115034
#1	2.383560	.0152902	.0121391	294.4610	.1503488	.1554239
#2	2.351563	.0142454	.0124482	292.5932	.1475228	.1577070
#3	2.369328	.0147157	.0123501	292.5736	.1518704	.1588727

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5846886	367.7370	11.99908	57.68756	.2088943	-.009178
Stddev	.0035503	2.1275	.04041	.22043	.0002386	.001368
%RSD	.6072175	.5785506	.3367590	.3821125	.1142217	14.90506
#1	.5886766	369.9504	12.04473	57.83387	.2086206	-.009240
#2	.5835174	367.5535	11.96791	57.79479	.2090033	-.010514
#3	.5818719	365.7072	11.98459	57.43403	.2090588	-.007780

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.777840	.1989890	8.301719	-.290505	F 16.51493	.1381971
Stddev	.013761	.0032811	.018359	.580704	.08120	.0059319
%RSD	.7740472	1.648899	.2211434	199.8946	.4916501	4.292339
#1	1.792491	.2027762	8.306965	.045476	16.42123	.1422432
#2	1.765187	.1970022	8.316884	-.961044	16.55896	.1409604
#3	1.775842	.1971886	8.281309	.044052	16.56461	.1313877

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5204-15 Acquired: 01/08/2025 21:30:25 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHND2 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0124840	4.458191	10.40794	.3737182	.6467315	.1522365
Stddev	.0009119	.019308	.04070	.0016549	.0058229	.0017268
%RSD	7.304370	.4330833	.3910464	.4428305	.9003599	1.134285
#1	.0116594	4.436353	10.45472	.3718937	.6461929	.1530425
#2	.0123293	4.465219	10.38062	.3741382	.6411966	.1502541
#3	.0134633	4.473000	10.38849	.3751226	.6528050	.1534130

Elem	Li6707
Units	ppm
Avg	.0654888
Stddev	.0062864
%RSD	9.599167
#1	.0669029
#2	.0586158
#3	.0709476

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2386.436	21406.74	1282.880	1606.233	2147.602
Stddev	8.375	26.02	6.209	2.984	9.793
%RSD	.3509448	.1215300	.4840216	.1857734	.4559746
#1	2394.594	21436.71	1276.127	1608.112	2157.792
#2	2377.860	21389.96	1288.344	1602.792	2138.262
#3	2386.854	21393.55	1284.169	1607.794	2146.752

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5204-16 Acquired: 01/08/2025 21:34:14 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHND3 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1189012	-.005942	11.19235	.0621057	.0227103	49.89430
Stddev	.0025753	.001897	.01512	.0038192	.0015074	.20319
%RSD	2.165913	31.91718	.1351144	6.149452	6.637547	.4072430
#1	.1164208	-.004010	11.20097	.0658018	.0229446	50.08891
#2	.1215619	-.006017	11.17489	.0623409	.0240869	49.68350
#3	.1187209	-.007801	11.20118	.0581744	.0210995	49.91048

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.393567	.0070379	.0045710	305.3559	.1423951	.1297733
Stddev	.009951	.0002092	.0001569	.7446	.0013045	.0008448
%RSD	.4157295	2.973100	3.432343	.2438451	.9161324	.6510165
#1	2.394591	.0072292	.0047465	305.3413	.1437773	.1294664
#2	2.383144	.0070701	.0045224	304.6187	.1422225	.1307287
#3	2.402966	.0068144	.0044442	306.1077	.1411855	.1291249

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3947189	153.8655	11.18164	48.28885	.1450240	-.003580
Stddev	.0008280	.2961	.07146	.09140	.0018930	.000541
%RSD	.2097661	.1924486	.6391141	.1892675	1.305285	15.09960
#1	.3940037	154.1689	11.20886	48.34853	.1450201	-.003158
#2	.3956260	153.5773	11.10057	48.18364	.1431329	-.003392
#3	.3945271	153.8502	11.23550	48.33440	.1469189	-.004189

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.211886	.1277135	2.196239	-.933191	F 13.03131	.0812083
Stddev	.028181	.0001950	.006795	.283796	.02133	.0018714
%RSD	2.325353	.1526936	.3094107	30.41136	.1636808	2.304407
#1	1.239886	.1276900	2.192321	-.611803	13.03697	.0805749
#2	1.212244	.1275313	2.192311	-1.14932	13.00772	.0833141
#3	1.183528	.1279192	2.204085	-1.03845	13.04924	.0797357

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5204-16 Acquired: 01/08/2025 21:34:14 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHND3 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0104176	2.556460	10.05650	.2079396	.5480295	.3520250
Stddev	.0009834	.008474	.02955	.0007038	.0070204	.0008342
%RSD	9.439697	.3314845	.2938225	.3384760	1.281021	.2369673
#1	.0094791	2.547059	10.08977	.2087503	.5531517	.3528588
#2	.0114405	2.563512	10.03334	.2074843	.5400271	.3511905
#3	.0103333	2.558809	10.04638	.2075842	.5509096	.3520258

Elem	Li6707
Units	ppm
Avg	.0598666
Stddev	.0039285
%RSD	6.562132
#1	.0553474
#2	.0617864
#3	.0624662

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2408.176	21635.00	1297.430	1620.940	2179.212
Stddev	2.685	98.10	3.515	3.854	3.610
%RSD	.1115060	.4534191	.2709566	.2377880	.1656553
#1	2410.789	21521.96	1293.774	1624.594	2182.320
#2	2408.315	21685.21	1300.786	1621.312	2180.065
#3	2405.424	21697.82	1297.731	1616.913	2175.252

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5204-17 Acquired: 01/08/2025 21:38:03 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHND4 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1246966	-.001991	4.606884	.0765766	.0187005	60.59364
Stddev	.0020239	.002916	.005917	.0074664	.0070970	.48378
%RSD	1.623028	146.4644	.1284372	9.750236	37.95085	.7983936
#1	.1236466	-.003543	4.602732	.0849959	.0160527	60.16656
#2	.1270296	.001373	4.604261	.0707596	.0267407	61.11902
#3	.1234135	-.003803	4.613659	.0739742	.0133080	60.49534

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.559011	.0081958	.0047591	485.0926	.1224007	.1563890
Stddev	.013285	.0002761	.0002417	3.6831	.0008460	.0008737
%RSD	.8521146	3.369196	5.077825	.7592555	.6911487	.5586735
#1	1.548192	.0083365	.0044817	483.8103	.1222349	.1566106
#2	1.573838	.0078777	.0048719	489.2454	.1216499	.1554258
#3	1.555001	.0083733	.0049237	482.2220	.1233173	.1571306

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3327848	178.0619	15.20074	62.23830	.1709215	-.003296
Stddev	.0022316	1.7335	.15074	.48142	.0009747	.001483
%RSD	.6705748	.9735229	.9916591	.7735086	.5702851	45.00822
#1	.3324465	177.1946	15.11050	62.12116	.1708252	-.004878
#2	.3351662	180.0578	15.37476	62.76748	.1719408	-.003072
#3	.3307417	176.9332	15.11696	61.82626	.1699985	-.001937

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.366845	.1390146	1.346055	1.604952	F 16.98431	.0984033
Stddev	.029503	.0007740	.010206	.230090	.01274	.0030100
%RSD	2.158501	.5567409	.7582116	14.33625	.0750006	3.058817
#1	1.343457	.1381213	1.350794	1.572117	16.99540	.0949763
#2	1.399991	.1394845	1.334342	1.849696	16.97040	.0996151
#3	1.357088	.1394381	1.353031	1.393044	16.98713	.1006185

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5204-17 Acquired: 01/08/2025 21:38:03 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHND4 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0099518	2.848440	7.603115	.1861105	.5303780	.5670144
Stddev	.0001638	.018194	.035337	.0016877	.0107182	.0062037
%RSD	1.645445	.6387327	.4647699	.9068228	2.020856	1.094092
#1	.0101262	2.838712	7.591941	.1853251	.5184339	.5604848
#2	.0098013	2.869429	7.642689	.1849588	.5391576	.5728305
#3	.0099278	2.837178	7.574717	.1880478	.5335426	.5677278

Elem	Li6707
Units	ppm
Avg	.0902509
Stddev	.0023103
%RSD	2.559896
#1	.0917584
#2	.0914032
#3	.0875910

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2433.731	21826.10	1316.161	1646.640	2033.693
Stddev	.425	112.28	11.696	5.558	3.474
%RSD	.0174525	.5144285	.8886817	.3375262	.1708008
#1	2434.043	21814.69	1316.013	1640.347	2033.343
#2	2433.247	21719.96	1304.540	1648.696	2037.328
#3	2433.903	21943.65	1327.932	1650.877	2030.408

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5204-18 Acquired: 01/08/2025 21:41:50 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHND5 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1094416	-.003553	1.127472	.0771852	.0231032	62.33749
Stddev	.0044670	.002190	.004165	.0050329	.0028344	.41251
%RSD	4.081643	61.65264	.3693858	6.520581	12.26843	.6617397
#1	.1141079	-.005281	1.131744	.0774500	.0233093	62.09920
#2	.1090119	-.004287	1.127246	.0820804	.0258290	62.09945
#3	.1052049	-.001089	1.123424	.0720250	.0201714	62.81382

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.156858	.0075587	.0042207	407.6999	.0965990	.1416100
Stddev	.007413	.0001438	.0001241	3.3614	.0009991	.0002926
%RSD	.6407739	1.902077	2.939520	.8244871	1.034257	.2066152
#1	1.154119	.0074936	.0043640	404.9642	.0970072	.1419433
#2	1.151205	.0074591	.0041491	406.6831	.0973293	.1413957
#3	1.165251	.0077236	.0041491	411.4523	.0954605	.1414909

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2086921	187.1282	16.97792	47.57579	.1549043	-.006312
Stddev	.0016729	1.4017	.18357	.44797	.0016082	.001594
%RSD	.8016283	.7490463	1.081200	.9415832	1.038216	25.25795
#1	.2071015	185.7770	16.80145	47.14365	.1565472	-.005518
#2	.2104368	187.0320	16.96449	47.54565	.1548325	-.005271
#3	.2085381	188.5754	17.16784	48.03806	.1533331	-.008147

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.121401	.1172447	.6230496	-.661898	F 13.30508	.0783173
Stddev	.020156	.0008028	.0024333	.307702	.04264	.0023947
%RSD	1.797399	.6846921	.3905464	46.48784	.3204855	3.057703
#1	1.107590	.1174351	.6204446	-.947740	13.34016	.0755633
#2	1.144531	.1163639	.6252639	-.336217	13.25762	.0794792
#3	1.112084	.1179352	.6234402	-.701735	13.31746	.0799094

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5204-18 Acquired: 01/08/2025 21:41:50 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHND5 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0091354	1.890876	10.39686	.0658795	.6210047	.3595368
Stddev	.0002383	.010491	.07695	.0002896	.0158599	.0039701
%RSD	2.608337	.5548201	.7400824	.4395630	2.553910	1.104234
#1	.0092937	1.895010	10.31222	.0656887	.6127229	.3568148
#2	.0092511	1.878948	10.41575	.0657371	.6109999	.3577032
#3	.0088614	1.898670	10.46259	.0662127	.6392910	.3640923

Elem	Li6707
Units	ppm
Avg	.0596502
Stddev	.0048934
%RSD	8.203505
#1	.0649004
#2	.0588340
#3	.0552162

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2487.748	22134.31	1349.560	1656.762	2078.292
Stddev	1.692	40.74	9.113	2.558	4.714
%RSD	.0679975	.1840493	.6752474	.1543956	.2268015
#1	2489.604	22150.17	1359.153	1659.492	2082.851
#2	2487.349	22088.03	1348.509	1654.421	2078.587
#3	2486.292	22164.74	1341.018	1656.373	2073.437

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5204-19 Acquired: 01/08/2025 21:45:36 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHNJ7 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1479937	-.015834	5.249000	.0725749	.0357743	59.78394
Stddev	.0071003	.001630	.008057	.0065233	.0047440	.45011
%RSD	4.797687	10.29320	.1534906	8.988363	13.26105	.7528976
#1	.1449258	-.016442	5.240757	.0738938	.0336219	60.22806
#2	.1561121	-.017072	5.249388	.0654929	.0324880	59.32806
#3	.1429433	-.013987	5.256856	.0783379	.0412130	59.79570

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.207838	.0079822	.0081584	112.6829	.3523391	.1093548
Stddev	.009582	.0002787	.0000733	.3291	.0009509	.0010928
%RSD	.7933579	3.491812	.8978189	.2920856	.2698733	.9993507
#1	1.218474	.0079979	.0081338	113.0046	.3514209	.1085922
#2	1.199877	.0076960	.0081007	112.3468	.3533196	.1106068
#3	1.205162	.0082528	.0082408	112.6971	.3522769	.1088653

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3427692	148.2591	6.777497	38.39270	.1951629	-.000236
Stddev	.0019483	.8749	.042428	.12615	.0002612	.001667
%RSD	.5684060	.5900981	.6260156	.3285808	.1338486	707.3804
#1	.3448118	149.1917	6.820455	38.33588	.1949337	-.001252
#2	.3409314	147.4564	6.735620	38.30495	.1954473	.001688
#3	.3425644	148.1291	6.776415	38.53726	.1951078	-.001143

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8141948	.1507683	1.735624	1.144005	F 12.37961	.0965307
Stddev	.0390747	.0011143	.008306	.382859	.02405	.0021600
%RSD	4.799187	.7390741	.4785656	33.46657	.1942545	2.237639
#1	.7794350	.1518535	1.738224	1.458948	12.37272	.0972271
#2	.8066619	.1496271	1.726329	1.255213	12.35975	.0982566
#3	.8564876	.1508242	1.742320	.717853	12.40635	.0941084

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5204-19 Acquired: 01/08/2025 21:45:36 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHNJ7 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0137160	5.645094	11.27562	.0795992	.6009477	.0386226
Stddev	.0011427	.012689	.03390	.0005116	.0108856	.0005546
%RSD	8.330960	.2247747	.3006675	.6426773	1.811400	1.435841
#1	.0149802	5.652324	11.30963	.0801895	.6091313	.0392211
#2	.0127567	5.630443	11.24183	.0793228	.5885936	.0381261
#3	.0134111	5.652516	11.27541	.0792852	.6051183	.0385204

Elem	Li6707
Units	ppm
Avg	.0670647
Stddev	.0003017
%RSD	.4499282
#1	.0667560
#2	.0673590
#3	.0670790

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2431.975	21730.09	1294.854	1626.469	2263.490
Stddev	2.183	113.78	8.537	14.308	2.456
%RSD	.0897655	.5236223	.6592982	.8797133	.1084909
#1	2432.649	21601.95	1286.477	1617.812	2266.285
#2	2429.535	21819.31	1303.542	1642.985	2261.678
#3	2433.742	21769.01	1294.542	1618.612	2262.506

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: CCV134 Acquired: 01/08/2025 21:49:22 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV134 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.846820	4.773491	24.42825	4.948908	4.879467	385.2623	10.06112
Stddev	.004509	.013289	.05864	.035229	.029543	1.5256	.03448
%RSD	.0930311	.2783897	.2400685	.7118567	.6054536	.3959889	.3426850
#1	4.850014	4.787321	24.49315	4.987821	4.913402	384.9125	10.05093
#2	4.848785	4.772333	24.41251	4.939722	4.865518	386.9324	10.09954
#3	4.841662	4.760819	24.37907	4.919182	4.859481	383.9420	10.03288

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5051516	2.471725	398.6235	15.63718	2.493029	14.93675	386.1033
Stddev	.0019282	.006530	.9404	.02493	.006528	.05973	1.5387
%RSD	.3816964	.2641687	.2359068	.1594154	.2618396	.3999135	.3985197
#1	.5037176	2.478670	399.0597	15.66542	2.500360	14.89203	386.0066
#2	.5043935	2.470795	399.2666	15.62789	2.490879	14.91363	387.6881
#3	.5073435	2.465711	397.5442	15.61823	2.487847	15.00459	384.6153

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	14.57288	391.4273	2.480448	1.265714	408.0289	2.470033	14.84169
Stddev	.05825	.5158	.009414	.002176	.9212	.007169	.11687
%RSD	.3997386	.1317629	.3795485	.1719406	.2257691	.2902251	.7874129
#1	14.51974	391.0122	2.491310	1.264479	408.6692	2.467356	14.97630
#2	14.63517	392.0047	2.474642	1.268227	408.4443	2.464587	14.78267
#3	14.56373	391.2650	2.475391	1.264436	406.9731	2.478154	14.76611

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	153.0187	4.908266	4.964759	4.838306	4.902255	4.847902	4.952698
Stddev	.7539	.014184	.015725	.030963	.013807	.022619	.009921
%RSD	.4926862	.2889772	.3167277	.6399611	.2816429	.4665731	.2003062
#1	152.1723	4.921986	4.952807	4.873737	4.909742	4.830839	4.960796
#2	153.2657	4.909151	4.958897	4.824739	4.910702	4.839308	4.941632
#3	153.6181	4.893660	4.982572	4.816442	4.886322	4.873558	4.955665

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: CCV134 Acquired: 01/08/2025 21:49:22 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV134 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	4.924492	4.739754	5.119133
Stddev	.031349	.013661	.018916
%RSD	.6365848	.2882292	.3695069
#1	4.925790	4.734534	5.127122
#2	4.955172	4.755255	5.132743
#3	4.892515	4.729471	5.097534

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1786.315	16368.60	1032.237	1200.978	1769.518
Stddev	9.043	139.99	3.393	16.874	5.024
%RSD	.5062486	.8552328	.3286866	1.405048	.2839183
#1	1777.697	16234.49	1028.484	1182.964	1765.727
#2	1785.518	16357.50	1033.139	1203.553	1767.612
#3	1795.731	16513.81	1035.088	1216.417	1775.216

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: CCB134 Acquired: 01/08/2025 21:53:07 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB134 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001734	.0019200	.0090428	.0095289	-.002930	.0267550
Stddev	.002036	.0006513	.0021712	.0098570	.001104	.0787077
%RSD	117.4323	33.91993	24.01052	103.4432	37.67268	294.1793
#1	.000520	.0021423	.0078930	-.001661	-.002187	.0933706
#2	-.002282	.0011867	.0076882	.013322	-.002404	-.060094
#3	-.003441	.0024311	.0115471	.016926	-.004198	.046988

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011868	-.000133	.0000404	.0139848	.0023497	.0007562
Stddev	.0015765	.000102	.0000474	.1195178	.0004704	.0007022
%RSD	132.8350	76.42157	117.2142	854.6240	20.02123	92.85876
#1	-.000294	-.000211	-.000014	-.064015	.0019254	.0006968
#2	.001010	-.000171	.000072	-.045613	.0022681	.0014861
#3	.002844	-.000018	.000063	.151583	.0028556	.0000856

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000828	.0174939	.0037537	-.229138	-.000534	-.000516
Stddev	.000767	.0407632	.0006115	.117552	.001155	.001796
%RSD	92.64150	233.0142	16.29194	51.30154	216.5836	348.3186
#1	-.001426	.0571789	.0034268	-.318621	-.000565	.001152
#2	-.001095	.0195709	.0044592	-.272788	-.001673	-.002417
#3	.000037	-.024268	.0033750	-.096006	.000637	-.000282

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0704570	.0005686	.0009284	.5982224	-.007717	.0083864
Stddev	.0467317	.0003446	.0003640	.3352294	.002309	.0013797
%RSD	66.32659	60.61229	39.20359	56.03759	29.91846	16.45158
#1	.0677564	.0001786	.0009408	.9702913	-.009152	.0077856
#2	.1184805	.0006952	.0012860	.3197092	-.005054	.0074090
#3	.0251342	.0008321	.0005584	.5046667	-.008945	.0099646

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: CCB134 Acquired: 01/08/2025 21:53:07 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB134 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004188	-.018935	.0045921	.0002499	.0105400	-.000548
Stddev	.0012635	.002831	.0048315	.0001959	.0048082	.000360
%RSD	301.7008	14.94856	105.2148	78.39616	45.61836	65.68761
#1	-.001007	-.015697	.0040843	.0003450	.0063213	-.000874
#2	.001401	-.020172	.0096574	.0000246	.0157751	-.000608
#3	.000862	-.020938	.0000345	.0003802	.0095235	-.000162

Elem	Li6707
Units	ppm
Avg	F .0187575
Stddev	.0049375
%RSD	26.32309
#1	.0243492
#2	.0149981
#3	.0169251

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2148.129	19475.50	1125.531	1452.242	2523.450
Stddev	10.674	21.02	15.913	2.867	11.111
%RSD	.4968976	.1079312	1.413858	.1973885	.4403164
#1	2138.531	19498.06	1139.185	1448.959	2511.943
#2	2146.231	19456.47	1108.055	1453.517	2524.291
#3	2159.625	19471.95	1129.355	1454.249	2534.117

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5204-20 Acquired: 01/08/2025 21:57:05 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHNJ8 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1283259	-.010977	.6739807	.0694867	.0211226	80.10382
Stddev	.0052884	.003175	.0166047	.0138443	.0066124	4.97893
%RSD	4.121102	28.92717	2.463682	19.92362	31.30498	6.215597
#1	.1244158	-.007441	.6550439	.0539761	.0169192	75.85513
#2	.1262188	-.013584	.6808484	.0738910	.0177040	78.87389
#3	.1343431	-.011906	.6860499	.0805930	.0287445	85.58245

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.079608	.0077637	.0034653	231.7591	.0952126	.1219375
Stddev	.066283	.0003337	.0001495	14.5016	.0007468	.0023416
%RSD	6.139588	4.297813	4.313330	6.257167	.7843456	1.920354
#1	1.023233	.0077083	.0033534	219.0493	.0960481	.1192930
#2	1.062963	.0074611	.0036351	228.6724	.0946098	.1227718
#3	1.152627	.0081216	.0034074	247.5554	.0949801	.1237477

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2187407	159.7383	8.051003	44.18937	.1363390	-.005669
Stddev	.0104145	10.2176	.523764	2.66428	.0032599	.000873
%RSD	4.761134	6.396441	6.505571	6.029223	2.391007	15.38958
#1	.2098893	150.8567	7.594955	41.84715	.1328886	-.006485
#2	.2161163	157.4532	7.935017	43.63309	.1367612	-.004749
#3	.2302164	170.9049	8.623038	47.08787	.1393672	-.005774

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.072899	.1555323	.7074242	2.002556	F 10.50974	.0883967
Stddev	.042114	.0075401	.0084677	.896151	.23551	.0075719
%RSD	3.925239	4.847919	1.196981	44.75038	2.240849	8.565773
#1	1.049724	.1485558	.7154430	1.000067	10.23781	.0817131
#2	1.047463	.1545095	.7082599	2.281650	10.64349	.0868568
#3	1.121511	.1635316	.6985696	2.725949	10.64792	.0966201

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5204-20 Acquired: 01/08/2025 21:57:05 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHNJ8 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0091776	2.152924	13.21027	.0502219	.6256715	.1740345
Stddev	.0011088	.046279	.65858	.0033833	.0380192	.0109665
%RSD	12.08140	2.149594	4.985345	6.736672	6.076543	6.301311
#1	.0085314	2.099708	12.65026	.0489019	.5980345	.1651352
#2	.0085435	2.183758	13.04473	.0540662	.6099500	.1706825
#3	.0104579	2.175305	13.93583	.0476975	.6690299	.1862857

Elem	Li6707
Units	ppm
Avg	.0851547
Stddev	.0082324
%RSD	9.667615
#1	.0792711
#2	.0816304
#3	.0945626

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2372.200	21272.79	1218.248	1607.180	2205.406
Stddev	41.346	34.02	61.401	9.860	42.268
%RSD	1.742936	.1599220	5.040136	.6135190	1.916546
#1	2419.924	21278.59	1273.457	1604.921	2253.979
#2	2347.206	21236.25	1229.170	1598.645	2176.989
#3	2349.469	21303.54	1152.119	1617.974	2185.250

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5205-01 Acquired: 01/08/2025 22:00:52 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN20 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0994343	.0040811	1.938883	.0530869	.0225625	52.23533
Stddev	.0034501	.0027259	.006629	.0034022	.0033165	.24524
%RSD	3.469759	66.79489	.3418738	6.408737	14.69916	.4694929
#1	.0958541	.0045598	1.943337	.0558725	.0257012	52.40200
#2	.0997112	.0011474	1.931265	.0540932	.0190930	51.95373
#3	.1027377	.0065359	1.942046	.0492951	.0228934	52.35026

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.158722	.0068274	.0073409	270.4465	.1505096	.1229994
Stddev	.004726	.0003352	.0000920	.2696	.0030612	.0011411
%RSD	.4078345	4.910347	1.252987	.0996700	2.033869	.9277271
#1	1.160462	.0069531	.0073916	270.5150	.1474410	.1237380
#2	1.162331	.0064474	.0073963	270.1493	.1535633	.1235750
#3	1.153373	.0070816	.0072347	270.6752	.1505244	.1216851

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4375653	135.8619	7.420116	66.70745	.1990286	-.005201
Stddev	.0024141	.3700	.008982	.34264	.0007367	.001286
%RSD	.5517094	.2723396	.1210503	.5136466	.3701491	24.71818
#1	.4372312	136.2862	7.430459	67.10307	.1981872	-.004228
#2	.4401290	135.6063	7.415613	66.51348	.1993410	-.006658
#3	.4353356	135.6933	7.414276	66.50580	.1995576	-.004717

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.175733	.1325478	1.997055	3.058371	F 12.08844	.1309425
Stddev	.017185	.0011259	.015173	.020348	.01406	.0022663
%RSD	1.461634	.8494274	.7597747	.6653056	.1162735	1.730766
#1	1.162533	.1324785	1.983728	3.040896	12.08545	.1326702
#2	1.169502	.1314582	1.993867	3.080710	12.07613	.1283765
#3	1.195164	.1337068	2.013568	3.053508	12.10376	.1317808

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5205-01 Acquired: 01/08/2025 22:00:52 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN20 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0140689	7.467741	11.67179	.1087747	.9331796	.3246120
Stddev	.0007245	.038180	.04973	.0014465	.0045329	.0009653
%RSD	5.149607	.5112610	.4260905	1.329831	.4857521	.2973630
#1	.0138768	7.475234	11.66024	.1098624	.9370630	.3239946
#2	.0134598	7.426371	11.72628	.1093286	.9281987	.3257244
#3	.0148700	7.501619	11.62885	.1071331	.9342771	.3241171

Elem	Li6707
Units	ppm
Avg	.0538629
Stddev	.0058515
%RSD	10.86377
#1	.0495358
#2	.0605207
#3	.0515323

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2388.237	21436.82	1296.041	1615.529	2168.395
Stddev	7.926	157.53	3.574	18.950	3.837
%RSD	.3318854	.7348371	.2757532	1.172966	.1769596
#1	2393.786	21556.28	1300.040	1631.533	2168.952
#2	2391.766	21495.89	1293.159	1620.450	2171.923
#3	2379.160	21258.30	1294.925	1594.605	2164.310

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5205-02 Acquired: 01/08/2025 22:04:37 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN21 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1097038	-.006867	2.266318	.0691879	.0236775	60.73193
Stddev	.0029462	.002459	.003512	.0017085	.0011480	.46579
%RSD	2.685604	35.80812	.1549525	2.469283	4.848297	.7669553
#1	.1064803	-.006747	2.264791	.0694326	.0239174	60.60327
#2	.1122574	-.004470	2.263829	.0673703	.0224286	60.34400
#3	.1103736	-.009383	2.270335	.0707609	.0246866	61.24852

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.278502	.0086651	.0081339	414.8131	.1553456	.1386052
Stddev	.010711	.0002252	.0001202	2.5671	.0010483	.0004196
%RSD	.8378095	2.598621	1.477718	.6188562	.6747972	.3027305
#1	1.270401	.0085222	.0079951	414.2588	.1565419	.1390638
#2	1.274458	.0089247	.0082069	412.5684	.1549071	.1385113
#3	1.290646	.0085485	.0081995	417.6121	.1545877	.1382405

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4287893	162.5376	8.144094	100.2758	.2277494	-.006081
Stddev	.0027991	1.2475	.043967	1.2591	.0007925	.000519
%RSD	.6527885	.7675085	.5398686	1.255631	.3479787	8.532112
#1	.4268227	162.0325	8.144989	100.2564	.2280473	-.005904
#2	.4275513	161.6218	8.099685	99.0266	.2268511	-.006665
#3	.4319939	163.9584	8.187607	101.5445	.2283498	-.005673

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.407260	.1518547	1.996514	1.504370	F 13.52435	.1261125
Stddev	.028338	.0004958	.015429	.538654	.01978	.0024483
%RSD	2.013700	.3265239	.7727776	35.80595	.1462179	1.941333
#1	1.406941	.1521443	1.990078	2.094205	13.50588	.1245795
#2	1.379083	.1521377	1.985345	1.038515	13.52196	.1248220
#3	1.435757	.1512822	2.014118	1.380392	13.54521	.1289361

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5205-02 Acquired: 01/08/2025 22:04:37 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN21 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0134311	7.340446	12.55648	.1045348	.8334057	.3721869
Stddev	.0005744	.027147	.09478	.0001622	.0117952	.0030732
%RSD	4.276385	.3698326	.7548033	.1552128	1.415305	.8257044
#1	.0129123	7.318296	12.51618	.1046495	.8309090	.3718704
#2	.0140483	7.332311	12.48851	.1043491	.8230586	.3692842
#3	.0133329	7.370731	12.66475	.1046057	.8462494	.3754060

Elem	Li6707
Units	ppm
Avg	.0731170
Stddev	.0076911
%RSD	10.51897
#1	.0661443
#2	.0813667
#3	.0718400

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2368.378	21132.19	1284.429	1601.766	2045.314
Stddev	5.636	72.46	5.881	7.481	4.415
%RSD	.2379589	.3428808	.4579061	.4670663	.2158721
#1	2373.384	21072.84	1287.559	1604.190	2050.332
#2	2362.274	21212.94	1288.084	1607.736	2043.582
#3	2369.475	21110.79	1277.645	1593.374	2042.027

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5205-03 Acquired: 01/08/2025 22:08:22 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN22 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1133481	.0006172	1.549068	.0440381	.0129069	60.60260
Stddev	.0038551	.0042309	.007166	.0014864	.0018976	.45498
%RSD	3.401116	685.4875	.4625914	3.375142	14.70223	.7507642
#1	.1167776	-.000414	1.540825	.0425766	.0136519	60.46266
#2	.1091756	.005268	1.553815	.0455482	.0107498	60.23402
#3	.1140912	-.003003	1.552565	.0439896	.0143189	61.11111

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.167632	.0080810	.0062374	610.4969	.1225404	.1435379
Stddev	.012161	.0001108	.0000416	4.9116	.0010001	.0003904
%RSD	1.041482	1.371134	.6673360	.8045246	.8161220	.2719837
#1	1.169515	.0081583	.0062509	610.1539	.1236937	.1435353
#2	1.154640	.0079541	.0061907	605.7658	.1220157	.1439296
#3	1.178742	.0081308	.0062706	615.5711	.1219119	.1431488

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3837437	152.5717	7.924752	126.1789	.2128316	-.006609
Stddev	.0030844	1.6870	.079869	.9681	.0011616	.001892
%RSD	.8037724	1.105695	1.007842	.7672108	.5457765	28.62354
#1	.3870656	152.4784	7.914885	125.4395	.2138944	-.004660
#2	.3809704	150.9334	7.850276	125.8226	.2115916	-.008437
#3	.3831952	154.3035	8.009097	127.2746	.2130089	-.006731

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.472841	.1418533	1.320848	1.785834	F 10.76217	.0929694
Stddev	.040004	.0021555	.002994	.085371	.01326	.0019907
%RSD	2.716117	1.519531	.2266551	4.780444	.1232040	2.141234
#1	1.490786	.1437790	1.319647	1.710542	10.77339	.0946577
#2	1.427006	.1395248	1.318641	1.768375	10.74754	.0907743
#3	1.500730	.1422561	1.324256	1.878585	10.76558	.0934763

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5205-03 Acquired: 01/08/2025 22:08:22 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN22 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0103012	4.641555	12.25722	.0862892	.9600063	.5106180
Stddev	.0005861	.007378	.12442	.0010431	.0079425	.0051857
%RSD	5.689308	.1589658	1.015057	1.208879	.8273347	1.015565
#1	.0109778	4.650004	12.35542	.0854645	.9585102	.5106053
#2	.0099517	4.636378	12.11730	.0859412	.9529182	.5054386
#3	.0099741	4.638284	12.29893	.0874618	.9685904	.5158099

Elem	Li6707
Units	ppm
Avg	.0732059
Stddev	.0090687
%RSD	12.38794
#1	.0804815
#2	.0630458
#3	.0760905

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2305.326	20459.95	1247.990	1540.547	1981.415
Stddev	2.462	57.59	17.543	8.520	.915
%RSD	.1067989	.2814871	1.405699	.5530757	.0461851
#1	2305.049	20450.87	1240.597	1540.486	1981.020
#2	2307.915	20521.55	1268.019	1549.098	1982.462
#3	2303.014	20407.44	1235.352	1532.057	1980.764

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5205-04 Acquired: 01/08/2025 22:12:07 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN23 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1285739	-.001287	3.884674	.0641707	.0232464	59.78698
Stddev	.0030497	.004087	.020501	.0086312	.0026726	.18233
%RSD	2.371958	317.6459	.5277339	13.45035	11.49703	.3049629
#1	.1261917	.001031	3.899772	.0679497	.0263271	59.70888
#2	.1275191	-.006005	3.861335	.0542945	.0215471	59.99534
#3	.1320110	.001115	3.892914	.0702677	.0218652	59.65670

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.338912	.0100770	.0057238	426.1276	.0984924	.1283084
Stddev	.001093	.0001160	.0000936	1.4208	.0002774	.0007562
%RSD	.0816350	1.151095	1.636035	.3334262	.2816180	.5893435
#1	1.338852	.0101983	.0058286	425.6034	.0984700	.1290440
#2	1.340034	.0099671	.0056484	427.7360	.0987802	.1275332
#3	1.337851	.0100655	.0056944	425.0433	.0982268	.1283479

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4674709	154.7407	10.86480	107.4520	.1551311	-.004918
Stddev	.0060944	.2686	.04813	.4852	.0018972	.002200
%RSD	1.303698	.1735524	.4429836	.4515256	1.222943	44.72844
#1	.4689578	154.9024	10.85471	107.7545	.1572706	-.002642
#2	.4726842	154.8890	10.91717	107.7091	.1536539	-.005079
#3	.4607706	154.4307	10.82251	106.8924	.1544688	-.007033

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.152767	.1454455	1.300869	1.946816	F 10.01926	.0982753
Stddev	.026801	.0006885	.003218	.478445	.05439	.0009984
%RSD	1.244933	.4733788	.2473864	24.57579	.5428568	1.015948
#1	2.124790	.1458300	1.302528	1.574119	10.06789	.0983376
#2	2.178211	.1458560	1.297159	2.486340	9.96053	.0972472
#3	2.155301	.1446506	1.302918	1.779989	10.02936	.0992412

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5205-04 Acquired: 01/08/2025 22:12:07 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN23 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0130599	5.656360	13.37488	.0952303	2.168869	.4162547
Stddev	.0013407	.033294	.12989	.0006603	.017638	.0021907
%RSD	10.26553	.5886196	.9711438	.6933788	.8132564	.5262868
#1	.0137730	5.677200	13.38654	.0958991	2.161773	.4179512
#2	.0115134	5.617962	13.49854	.0952130	2.188950	.4170314
#3	.0138932	5.673919	13.23955	.0945789	2.155883	.4137814

Elem	Li6707
Units	ppm
Avg	.0735552
Stddev	.0114012
%RSD	15.50024
#1	.0845711
#2	.0742903
#3	.0618042

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2354.992	21081.99	1266.304	1580.700	2047.972
Stddev	2.003	16.03	10.906	8.266	6.705
%RSD	.0850421	.0760286	.8612322	.5229643	.3273896
#1	2357.302	21063.52	1261.327	1572.123	2047.137
#2	2353.754	21090.19	1258.775	1588.617	2055.055
#3	2353.918	21092.26	1278.811	1581.362	2041.724

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5205-05 Acquired: 01/08/2025 22:15:53 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN24 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1719831	.0029348	2.551516	.0911895	.0212016	62.00130
Stddev	.0038732	.0031283	.004694	.0019319	.0025266	2.04681
%RSD	2.252073	106.5908	.1839706	2.118529	11.91689	3.301233
#1	.1730165	.0065453	2.556871	.0932343	.0183492	62.85839
#2	.1752347	.0012262	2.548112	.0909392	.0231584	63.48022
#3	.1676980	.0010330	2.549565	.0893950	.0220971	59.66527

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.853365	.0077927	.0107850	170.2137	.1286607	.1508580
Stddev	.059605	.0000927	.0000565	5.4833	.0009993	.0007154
%RSD	3.216058	1.189981	.5238583	3.221400	.7766643	.4741879
#1	1.877232	.0077208	.0108067	173.1323	.1283323	.1509370
#2	1.897338	.0078974	.0108274	173.6203	.1278670	.1515305
#3	1.785525	.0077599	.0107208	163.8884	.1297828	.1501064

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6406156	163.9024	21.45566	45.21939	.2506529	.0017810
Stddev	.0195444	5.5522	.72433	1.44841	.0011685	.0007374
%RSD	3.050881	3.387522	3.375956	3.203084	.4661871	41.40651
#1	.6476743	166.6795	21.80763	45.78291	.2519476	.0015406
#2	.6556501	167.5181	21.93675	46.30135	.2496764	.0011937
#3	.6185224	157.5095	20.62260	43.57390	.2503349	.0026086

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.221586	.0900774	1.761073	3.046707	F 17.00025	.0923828
Stddev	.047544	.0016470	.009395	.652115	.04367	.0039036
%RSD	3.891971	1.828379	.5334883	21.40392	.2568930	4.225415
#1	1.233837	.0904748	1.750639	3.571450	16.99089	.0954709
#2	1.261805	.0914894	1.763717	3.252029	16.96201	.0936822
#3	1.169115	.0882682	1.768862	2.316642	17.04784	.0879952

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5205-05 Acquired: 01/08/2025 22:15:53 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN24 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0169442	5.069940	11.44207	.1046458	.7696701	.1302742
Stddev	.0003201	.010019	.31853	.0012937	.0289804	.0052935
%RSD	1.889115	.1976160	2.783828	1.236306	3.765301	4.063388
#1	.0169108	5.074322	11.58121	.1031624	.7829270	.1334560
#2	.0166420	5.058477	11.66736	.1052343	.7896509	.1332030
#3	.0172796	5.077022	11.07765	.1055407	.7364324	.1241635

Elem	Li6707
Units	ppm
Avg	.0648470
Stddev	.0064978
%RSD	10.02022
#1	.0668574
#2	.0701019
#3	.0575815

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2851.629	25470.69	1537.581	1920.643	2166.218
Stddev	3.015	14.17	43.252	8.392	6.188
%RSD	.1057405	.0556300	2.813011	.4369214	.2856455
#1	2852.131	25455.84	1518.820	1930.225	2164.012
#2	2854.361	25472.15	1506.876	1917.103	2173.207
#3	2848.394	25484.07	1587.046	1914.601	2161.436

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5205-06 Acquired: 01/08/2025 22:19:38 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN25 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1486980	-.008446	.5607795	.0973880	.0248815	66.73981
Stddev	.0061242	.004472	.0036331	.0016580	.0021516	.46280
%RSD	4.118540	52.95021	.6478625	1.702414	8.647227	.6934434
#1	.1552955	-.004867	.5631955	.0986564	.0263639	66.84990
#2	.1431946	-.007012	.5625416	.0979956	.0224137	66.23189
#3	.1476039	-.013460	.5566014	.0955120	.0258669	67.13764

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.158889	.0074597	.0094754	74.45075	.1304434	.1453679
Stddev	.006563	.0001292	.0001429	.35103	.0011451	.0001506
%RSD	.5663517	1.731244	1.507927	.4714962	.8778656	.1036011
#1	1.164629	.0074375	.0093109	74.83355	.1293187	.1451944
#2	1.151733	.0073431	.0095464	74.14392	.1304037	.1454650
#3	1.160305	.0075985	.0095688	74.37479	.1316079	.1454443

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5599565	158.4827	14.65530	30.38079	.2832051	-.003585
Stddev	.0025073	.9179	.06155	.14486	.0017263	.001968
%RSD	.4477744	.5792063	.4199513	.4768027	.6095598	54.90216
#1	.5610912	158.8879	14.69863	30.54791	.2850490	-.005820
#2	.5616958	157.4318	14.58485	30.30331	.2829390	-.002823
#3	.5570823	159.1282	14.68241	30.29115	.2816273	-.002111

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.138842	.1095774	1.300405	.5200250	F 13.84909	.0738656
Stddev	.010041	.0003958	.005633	.2405359	.01999	.0008307
%RSD	.8816683	.3611933	.4331375	46.25467	.1443573	1.124539
#1	1.150420	.1100090	1.293939	.4540806	13.86553	.0745623
#2	1.132519	.1094916	1.303024	.3193394	13.85492	.0740881
#3	1.133588	.1092315	1.304251	.7866552	13.82684	.0729463

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5205-06 Acquired: 01/08/2025 22:19:38 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN25 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0066375	3.619337	10.85269	.0304186	.4983858	.0211911
Stddev	.0006314	.005871	.05313	.0018197	.0084829	.0004638
%RSD	9.512532	.1622097	.4895800	5.982169	1.702073	2.188851
#1	.0072493	3.621240	10.89234	.0292730	.4941160	.0206834
#2	.0059882	3.612751	10.87340	.0294659	.4928862	.0212972
#3	.0066750	3.624021	10.79232	.0325168	.5081553	.0215927

Elem	Li6707
Units	ppm
Avg	.0526280
Stddev	.0023254
%RSD	4.418530
#1	.0501545
#2	.0547696
#3	.0529599

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3182.149	28409.49	1675.205	2132.851	2277.071
Stddev	11.397	110.78	3.576	16.414	6.743
%RSD	.3581390	.3899240	.2134597	.7695876	.2961388
#1	3172.122	28450.38	1672.239	2146.139	2270.779
#2	3179.781	28494.01	1679.176	2137.911	2276.245
#3	3194.543	28284.09	1674.200	2114.503	2284.189

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5205-07 Acquired: 01/08/2025 22:23:24 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN26 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1079995	-.007520	.2782748	.0745716	.0225051	51.65875
Stddev	.0014050	.001684	.0017036	.0041077	.0024459	.27583
%RSD	1.300885	22.38977	.6122090	5.508458	10.86835	.5339474
#1	.1080764	-.008001	.2763525	.0764783	.0249217	51.97544
#2	.1093645	-.008911	.2788741	.0698570	.0200308	51.52977
#3	.1065578	-.005648	.2795978	.0773794	.0225628	51.47103

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9978804	.0061285	.0058889	90.23903	.0935493	.1265771
Stddev	.0030157	.0001131	.0000660	.47306	.0004198	.0005854
%RSD	.3022125	1.845165	1.121041	.5242334	.4487087	.4624652
#1	1.001357	.0060049	.0058855	90.66817	.0940160	.1264913
#2	.996318	.0062268	.0058247	90.31714	.0932025	.1260394
#3	.995967	.0061537	.0059566	89.73177	.0934296	.1272007

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3519344	143.2621	10.74514	36.54997	.2050161	-.004973
Stddev	.0034615	.6795	.03786	.13903	.0015308	.001542
%RSD	.9835785	.4743097	.3523677	.3803708	.7466847	31.01747
#1	.3546941	143.9122	10.77805	36.43651	.2034494	-.003741
#2	.3530586	143.3176	10.75361	36.50836	.2065083	-.006702
#3	.3480505	142.5566	10.70376	36.70505	.2050906	-.004474

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.176003	.1153722	.8570055	-1.44410	F 16.08480	.0593246
Stddev	.028718	.0015246	.0020498	.05177	.05722	.0013883
%RSD	2.441989	1.321487	.2391802	3.584879	.3557619	2.340121
#1	1.207806	.1168899	.8588916	-1.39814	16.01903	.0584637
#2	1.168234	.1153861	.8548241	-1.50018	16.11217	.0585840
#3	1.151968	.1138407	.8573010	-1.43396	16.12320	.0609261

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5205-07 Acquired: 01/08/2025 22:23:24 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN26 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0059780	1.497688	9.502777	.0225689	.6494919	.0339823
Stddev	.0009130	.005333	.091245	.0022738	.0075655	.0002034
%RSD	15.27182	.3561153	.9601907	10.07474	1.164841	.5985611
#1	.0051826	1.494231	9.578705	.0250975	.6450004	.0339638
#2	.0057765	1.503831	9.528074	.0219167	.6582267	.0337888
#3	.0069749	1.495003	9.401553	.0206925	.6452487	.0341944

Elem	Li6707
Units	ppm
Avg	.0508124
Stddev	.0083885
%RSD	16.50878
#1	.0439196
#2	.0483653
#3	.0601524

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2829.740	25403.60	1486.234	1898.442	2234.923
Stddev	9.843	34.39	13.661	13.062	7.220
%RSD	.3478538	.1353619	.9191466	.6880129	.3230488
#1	2837.349	25364.02	1472.177	1892.078	2243.260
#2	2818.623	25426.09	1487.063	1913.466	2230.761
#3	2833.247	25420.70	1499.461	1889.782	2230.749

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5205-08 Acquired: 01/08/2025 22:27:10 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN40 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0972542	-.013869	.8805672	.0653982	.0233936	64.00849	.9997816
Stddev	.0033619	.003087	.0023981	.0058204	.0027853	.48381	.0064929
%RSD	3.456764	22.26220	.2723319	8.899985	11.90634	.7558523	.6494371
#1	.0995873	-.011331	.8818226	.0614951	.0265657	63.85607	.9976812
#2	.0934007	-.012969	.8820771	.0626114	.0213479	64.55015	1.007065
#3	.0987746	-.017306	.8778021	.0720881	.0222672	63.61924	.994599

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0068882	.0040676	119.0160	.1193021	.1034017	.2829141	135.0780
Stddev	.0005199	.0001079	.5113	.0009651	.0007910	.0019647	.6218
%RSD	7.548025	2.652550	.4296032	.8089663	.7649753	.6944552	.4603227
#1	.0069166	.0041835	118.9220	.1194111	.1025076	.2830693	135.1285
#2	.0073934	.0040494	119.5679	.1182871	.1040104	.2847966	135.6730
#3	.0063547	.0039700	118.5584	.1202081	.1036871	.2808764	134.4325

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.598652	39.44769	.1554256	-.005148	.7549206	.1539828	.8753557
Stddev	.039926	.36445	.0008129	.001444	.0371113	.0016343	.0057157
%RSD	.6050669	.9238793	.5229950	28.04812	4.915925	1.061378	.6529609
#1	6.596637	39.52704	.1547744	-.004974	.7120683	.1536452	.8729758
#2	6.639548	39.76593	.1563366	-.003799	.7764428	.1557595	.8712145
#3	6.559772	39.05010	.1551659	-.006671	.7762507	.1525436	.8818769

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5058100	9.218445	.0741611	.0132373	4.524681	11.86942	.0867643
Stddev	.3204290	.029634	.0018252	.0008638	.002175	.09813	.0023696
%RSD	63.34968	.3214690	2.461113	6.525155	.0480668	.8267259	2.731046
#1	.8756583	9.192211	.0747183	.0123489	4.526907	11.83324	.0880009
#2	.3300465	9.250589	.0721223	.0132889	4.522561	11.98050	.0882597
#3	.3117251	9.212534	.0756428	.0140741	4.524575	11.79452	.0840323

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5205-08 Acquired: 01/08/2025 22:27:10 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN40 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.9168545	.0707617	.0438076
Stddev	.0101478	.0004461	.0011406
%RSD	1.106805	.6304922	2.603590
#1	.9252853	.0707059	.0424928
#2	.9196867	.0712332	.0445303
#3	.9055915	.0703461	.0443998

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2417.254	21625.40	1272.354	1624.719	2282.425
Stddev	4.008	19.05	13.086	9.862	5.976
%RSD	.1657913	.0880711	1.028457	.6069771	.2618324
#1	2416.190	21647.35	1275.420	1631.549	2280.847
#2	2413.885	21615.68	1258.008	1629.193	2277.397
#3	2421.686	21613.19	1283.635	1613.413	2289.032

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5205-09 Acquired: 01/08/2025 22:30:57 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN41 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0880840	-.005446	.7623626	.0574515	.0159478	61.12344	1.024505
Stddev	.0044412	.001717	.0049578	.0047422	.0039655	.56370	.006891
%RSD	5.041997	31.53783	.6503139	8.254354	24.86574	.9222289	.6726501
#1	.0903074	-.006218	.7680708	.0585225	.0124898	61.72974	1.029511
#2	.0909744	-.006642	.7598855	.0615667	.0202762	61.02535	1.027359
#3	.0829702	-.003478	.7591316	.0522654	.0150773	60.61522	1.016645

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0064915	.0038176	228.7686	.1022555	.1043390	.2497702	130.4754
Stddev	.0003591	.0000948	1.2571	.0010136	.0004708	.0010412	.8329
%RSD	5.532160	2.484074	.5494911	.9912676	.4512049	.4168744	.6383522
#1	.0068801	.0038351	228.9469	.1022413	.1038372	.2487979	131.3238
#2	.0061718	.0039024	229.9270	.1032761	.1047710	.2508688	130.4435
#3	.0064225	.0037152	227.4320	.1012490	.1044089	.2496440	129.6589

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.083339	66.36098	.1437698	-.006002	.9848296	.1480738	.7543101
Stddev	.020487	.21791	.0017689	.000975	.0349836	.0014895	.0034883
%RSD	.3367799	.3283709	1.230389	16.23785	3.552254	1.005926	.4624543
#1	6.100445	66.56343	.1457796	-.005791	.9825648	.1481474	.7518743
#2	6.088938	66.38915	.1424495	-.007064	.9510334	.1495251	.7527498
#3	6.060634	66.13035	.1430802	-.005150	1.020891	.1465488	.7583063

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.746929	7.970918	.0761343	.0105493	3.623451	10.89257	.0575039
Stddev	.380499	.001560	.0028417	.0015611	.002285	.03778	.0020601
%RSD	50.94181	.0195719	3.732512	14.79768	.0630737	.3468360	3.582589
#1	-1.09986	7.972685	.0794073	.0102816	3.623205	10.91473	.0584760
#2	-.34384	7.970341	.0742958	.0091394	3.621298	10.91403	.0551376
#3	-.79709	7.969729	.0746997	.0122269	3.625849	10.84895	.0588981

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5205-09 Acquired: 01/08/2025 22:30:57 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN41 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.8631333	.3211778	.0411324
Stddev	.0038474	.0017311	.0034319
%RSD	.4457430	.5389870	8.343500
#1	.8675279	.3227216	.0442024
#2	.8615001	.3215056	.0417675
#3	.8603720	.3193062	.0374273

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2352.860	20984.92	1245.968	1580.031	2190.824
Stddev	5.538	113.78	1.757	8.004	5.958
%RSD	.2353631	.5421752	.1409933	.5065513	.2719318
#1	2353.792	21048.53	1243.959	1585.934	2189.866
#2	2357.873	21052.67	1246.730	1583.237	2197.202
#3	2346.915	20853.57	1247.215	1570.921	2185.403

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5205-10 Acquired: 01/08/2025 22:34:44 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN42 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1216000	-.009195	.9463069	.0729417	.0209735	62.39223	1.419613
Stddev	.0046967	.001076	.0027556	.0078654	.0022024	.53859	.010672
%RSD	3.862380	11.70289	.2911910	10.78310	10.50071	.8632403	.7517551
#1	.1263417	-.010186	.9436111	.0731205	.0234213	61.78384	1.407302
#2	.1169497	-.009349	.9461911	.0807162	.0203469	62.80815	1.425303
#3	.1215086	-.008051	.9491186	.0649885	.0191523	62.58469	1.426234

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0074500	.0056426	329.6445	.1158796	.1436757	.4325583	168.4621
Stddev	.0001093	.0002883	2.4927	.0008220	.0018849	.0024980	1.2434
%RSD	1.466878	5.109186	.7561690	.7094031	1.311893	.5774963	.7380968
#1	.0073290	.0059054	326.9527	.1168263	.1415414	.4301626	167.0350
#2	.0075414	.0056881	331.8730	.1153465	.1443739	.4351474	169.3126
#3	.0074797	.0053342	330.1078	.1154660	.1451119	.4323651	169.0386

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.35517	66.26216	.1828988	-.006794	1.191615	.1806407	.9407373
Stddev	.08019	.44176	.0011201	.000982	.033088	.0018999	.0035650
%RSD	.7061610	.6666883	.6123977	14.46044	2.776757	1.051758	.3789540
#1	11.26528	65.76476	.1829878	-.005707	1.229667	.1817048	.9446026
#2	11.41933	66.41287	.1817368	-.007055	1.169618	.1817701	.9400307
#3	11.38092	66.60885	.1839716	-.007619	1.175559	.1784472	.9375785

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.408515	8.108178	.0786742	.0104022	3.399291	9.997753	.0782921
Stddev	.803080	.017338	.0050520	.0007002	.006675	.064705	.0009842
%RSD	196.5850	.2138368	6.421459	6.731643	.1963567	.6471999	1.257118
#1	-.834014	8.124531	.0844196	.0107819	3.394193	9.930230	.0789647
#2	-.909313	8.089999	.0766769	.0108305	3.396835	10.05922	.0771624
#3	.517782	8.110006	.0749262	.0095941	3.406846	10.00381	.0787491

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5205-10 Acquired: 01/08/2025 22:34:44 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN42 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.8881151	.2273076	.0525325
Stddev	.0089084	.0026643	.0060304
%RSD	1.003071	1.172131	11.47926
#1	.8803593	.2242753	.0587374
#2	.8978450	.2292742	.0521668
#3	.8861411	.2283732	.0466934

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2441.675	21707.83	1304.120	1633.680	2155.718
Stddev	2.265	81.70	5.587	7.633	1.561
%RSD	.0927644	.3763644	.4283759	.4671985	.0724322
#1	2443.998	21617.10	1309.682	1626.634	2156.944
#2	2439.473	21730.81	1298.509	1632.618	2153.960
#3	2441.552	21775.58	1304.169	1641.787	2156.251

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5205-11 Acquired: 01/08/2025 22:38:31 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN43 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1546797	-.018063	1.379161	.0753184	.0262243	43.49279	1.359501
Stddev	.0034216	.003212	.004419	.0068867	.0031111	.17530	.003773
%RSD	2.212050	17.78063	.3204275	9.143461	11.86357	.4030509	.2775604
#1	.1507557	-.014438	1.382644	.0673694	.0272173	43.55330	1.355159
#2	.1562430	-.019195	1.374190	.0794863	.0287177	43.29525	1.361353
#3	.1570404	-.020555	1.380651	.0790994	.0227379	43.62981	1.361990

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0075892	.0054505	319.1194	.0679272	.1386463	.7727594	192.6038
Stddev	.0002407	.0000864	.7219	.0010301	.0006376	.0029022	.1561
%RSD	3.171890	1.585650	.2262087	1.516494	.4598692	.3755623	.0810727
#1	.0076709	.0053818	319.2325	.0667912	.1393811	.7714065	192.4542
#2	.0077783	.0054221	318.3476	.0688005	.1383182	.7760910	192.5914
#3	.0073182	.0055475	319.7780	.0681899	.1382396	.7707807	192.7658

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.788306	95.47447	.1726734	-.009135	1.943863	.2662493	1.007457
Stddev	.005938	.48578	.0011238	.000554	.038449	.0007782	.011852
%RSD	.0874695	.5088070	.6508361	6.066588	1.977959	.2922655	1.176440
#1	6.783957	94.93014	.1732814	-.009128	1.941578	.2668720	1.021127
#2	6.785889	95.62929	.1733622	-.008584	1.983404	.2664990	1.001194
#3	6.795071	95.86396	.1713766	-.009693	1.906608	.2653770	1.000050

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-2.02286	5.697894	.0863445	.0119118	5.372539	8.323942	1.080996
Stddev	.45898	.013355	.0030255	.0010438	.012755	.023267	.002414
%RSD	22.68969	.2343828	3.503947	8.762443	.2374069	.2795168	.2233173
#1	-2.12876	5.703325	.0891798	.0131170	5.378456	8.314066	1.083533
#2	-2.41963	5.682679	.0831593	.0113018	5.357901	8.350517	1.080729
#3	-1.52018	5.707677	.0866944	.0113166	5.381261	8.307241	1.078727

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5205-11 Acquired: 01/08/2025 22:38:31 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN43 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	1.403956	.1942832	.0242819
Stddev	.007561	.0001305	.0078802
%RSD	.5385683	.0671432	32.45299
#1	1.397935	.1941926	.0319116
#2	1.412442	.1942242	.0161731
#3	1.401490	.1944327	.0247611

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2309.888	20598.80	1219.293	1546.782	2147.760
Stddev	4.817	114.99	2.912	23.108	4.815
%RSD	.2085178	.5582222	.2387930	1.493962	.2241813
#1	2313.278	20466.05	1216.430	1520.427	2151.027
#2	2312.011	20663.18	1219.200	1563.572	2150.022
#3	2304.375	20667.18	1222.250	1556.346	2142.231

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5205-12 Acquired: 01/08/2025 22:42:16 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN44 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0910482	-.010261	2.328836	.0547325	.0166310	36.53952	.9214330
Stddev	.0037775	.003600	.006238	.0039138	.0042566	.24978	.0081713
%RSD	4.148921	35.08581	.2678787	7.150760	25.59440	.6835871	.8868063
#1	.0885955	-.010293	2.327538	.0580985	.0163996	36.25493	.9120375
#2	.0953984	-.013845	2.323349	.0504379	.0124948	36.64123	.9253792
#3	.0891509	-.006645	2.335621	.0556610	.0209985	36.72239	.9268822

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0064297	.0028989	264.9041	.0589912	.1170658	.4367534	153.9591
Stddev	.0006233	.0001274	1.5776	.0010507	.0006033	.0020880	.8007
%RSD	9.694862	4.395391	.5955541	1.781141	.5153398	.4780775	.5200412
#1	.0067026	.0029589	263.5855	.0595446	.1163693	.4380184	153.3080
#2	.0057164	.0027526	264.4749	.0577794	.1174251	.4343434	153.7162
#3	.0068700	.0029853	266.6519	.0596495	.1174029	.4378984	154.8530

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.652097	74.54421	.1184552	-.010587	1.561121	.2368251	.6135500
Stddev	.035104	.65879	.0013764	.001730	.004747	.0002498	.0013688
%RSD	.5277159	.8837524	1.161973	16.33765	.3040936	.1054821	.2230975
#1	6.617937	73.88937	.1172448	-.012187	1.563929	.2369129	.6124491
#2	6.650279	75.20687	.1199525	-.010824	1.563795	.2370191	.6150826
#3	6.688075	74.53640	.1181684	-.008752	1.555640	.2365432	.6131183

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-2.38733	4.876748	.0757844	.0110851	3.698991	8.370661	.0880274
Stddev	.74704	.018071	.0032617	.0007412	.007685	.024133	.0016477
%RSD	31.29191	.3705525	4.303914	6.686744	.2077613	.2882991	1.871842
#1	-2.08653	4.887148	.0738792	.0115571	3.697808	8.387507	.0884520
#2	-3.23789	4.855882	.0739233	.0102307	3.691967	8.343015	.0862090
#3	-1.83758	4.887215	.0795506	.0114674	3.707200	8.381462	.0894213

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5205-12 Acquired: 01/08/2025 22:42:16 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN44 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	1.086258	.1893337	.0240192
Stddev	.009907	.0016095	.0019259
%RSD	.9120397	.8500661	8.017964
#1	1.075240	.1877165	.0250541
#2	1.089102	.1893492	.0217971
#3	1.094433	.1909353	.0252063

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2296.882	20503.59	1215.403	1533.430	2167.551
Stddev	5.225	8.69	3.331	6.057	1.923
%RSD	.2274999	.0423670	.2740630	.3949654	.0887103
#1	2302.220	20504.46	1217.863	1540.285	2167.168
#2	2296.650	20494.50	1216.735	1528.803	2165.849
#3	2291.777	20511.81	1211.613	1531.202	2169.637

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5205-13 Acquired: 01/08/2025 22:46:04 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN45 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1211099	.0010037	.7177834	.0452284	.0161814	45.15640	1.071216
Stddev	.0015646	.0018698	.0030962	.0031445	.0040395	.19985	.003037
%RSD	1.291928	186.2860	.4313522	6.952427	24.96391	.4425625	.2834842
#1	.1223458	.0025714	.7211194	.0417603	.0178777	45.33923	1.074538
#2	.1216333	.0015056	.7172287	.0460313	.0115703	45.18691	1.070530
#3	.1193507	-.001066	.7150021	.0478936	.0190961	44.94305	1.068582

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0064304	.0030638	577.9773	.0872520	.1386097	.3844594	140.2253
Stddev	.0000550	.0001214	.8938	.0026006	.0002274	.0022444	.7385
%RSD	.8553331	3.962271	.1546376	2.980603	.1640681	.5837755	.5266681
#1	.0063913	.0031786	578.9603	.0894921	.1386442	.3862650	140.9942
#2	.0064065	.0030760	577.2136	.0878639	.1383670	.3851666	140.1604
#3	.0064932	.0029368	577.7579	.0844000	.1388179	.3819466	139.5215

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.83395	55.55936	.1177162	-.003186	1.189845	.0967888	.8715227
Stddev	.02821	.39670	.0005312	.000792	.010023	.0026373	.0030855
%RSD	.2198170	.7140056	.4512318	24.85963	.8423678	2.724776	.3540349
#1	12.85310	56.01717	.1175993	-.003211	1.201409	.0981356	.8732894
#2	12.84720	55.34370	.1182961	-.002382	1.184469	.0984808	.8733188
#3	12.80156	55.31721	.1172532	-.003966	1.183656	.0937501	.8679599

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.714390	7.323852	.0831231	.0102876	4.699031	10.39578	.0738549
Stddev	.108150	.026810	.0035840	.0011149	.020995	.07084	.0011245
%RSD	15.13879	.3660616	4.311701	10.83736	.4468004	.6814624	1.522618
#1	-.731355	7.353493	.0864612	.0099395	4.721783	10.45970	.0739874
#2	-.813055	7.316768	.0835725	.0093883	4.694906	10.40801	.0726699
#3	-.598761	7.301296	.0793356	.0115350	4.680405	10.31961	.0749072

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5205-13 Acquired: 01/08/2025 22:46:04 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN45 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.6372440	.5472590	.0509866
Stddev	.0078440	.0008080	.0014354
%RSD	1.230929	.1476401	2.815318
#1	.6455387	.5474050	.0523387
#2	.6362472	.5479840	.0494803
#3	.6299460	.5463880	.0511407

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2320.019	20619.49	1241.942	1555.745	2035.882
Stddev	7.388	23.94	5.628	6.875	8.914
%RSD	.3184468	.1161094	.4531642	.4419174	.4378279
#1	2312.276	20609.97	1237.485	1548.133	2026.213
#2	2320.790	20646.73	1240.076	1557.598	2037.661
#3	2326.992	20601.77	1248.266	1561.503	2043.772

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5205-14 Acquired: 01/08/2025 22:49:51 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN46 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1424696	-.024934	.4131179	.0903488	.0233258	62.13834
Stddev	.0033558	.004012	.0040146	.0038747	.0025984	1.22892
%RSD	2.355427	16.09084	.9717686	4.288634	11.13956	1.977718
#1	.1459785	-.026467	.4087473	.0900323	.0205050	62.57248
#2	.1421389	-.027954	.4166412	.0943720	.0238508	63.09127
#3	.1392914	-.020381	.4139650	.0866420	.0256217	60.75128

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8198664	.0083754	.0027284	104.6540	.1073162	.1292184
Stddev	.0155142	.0001828	.0002392	1.6501	.0016611	.0005900
%RSD	1.892283	2.182775	8.767493	1.576695	1.547878	.4565495
#1	.8256246	.0083316	.0026239	105.1794	.1072390	.1285477
#2	.8316782	.0085762	.0025592	105.9774	.1056950	.1294500
#3	.8022964	.0082185	.0030021	102.8052	.1090145	.1296573

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2840552	179.7614	6.905935	30.50748	.1560647	-.008388
Stddev	.0031776	2.7433	.125029	.48707	.0012564	.001956
%RSD	1.118648	1.526069	1.810453	1.596555	.8050364	23.31481
#1	.2853076	181.2506	6.951070	30.70201	.1562053	-.007902
#2	.2864158	181.4381	7.002130	30.86722	.1572448	-.006721
#3	.2804423	176.5956	6.764607	29.95321	.1547439	-.010541

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8447415	.1545584	.8124900	-1.29783	F 10.94791	.0697432
Stddev	.0088582	.0007705	.0037995	.38054	.00691	.0026665
%RSD	1.048632	.4984943	.4676348	29.32164	.0631374	3.823306
#1	.8370505	.1551702	.8097371	-1.11459	10.95290	.0712281
#2	.8544269	.1548119	.8168249	-1.04357	10.95081	.0713367
#3	.8427470	.1536931	.8109081	-1.73533	10.94002	.0666648

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5205-14 Acquired: 01/08/2025 22:49:51 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN46 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0074104	1.014457	12.11558	.0450660	.6949083	.0463538
Stddev	.0007243	.005851	.09685	.0001831	.0073436	.0017326
%RSD	9.773902	.5767782	.7993904	.4062986	1.056773	3.737838
#1	.0078888	1.010074	12.12356	.0451015	.6986836	.0474645
#2	.0077653	1.021101	12.20820	.0452288	.6995962	.0472395
#3	.0065772	1.012195	12.01500	.0448678	.6864450	.0443573

Elem	Li6707
Units	ppm
Avg	.0727871
Stddev	.0025328
%RSD	3.479717
#1	.0747012
#2	.0737451
#3	.0699151

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2625.724	23517.86	1391.534	1755.956	2281.770
Stddev	2.180	142.72	18.969	17.743	.221
%RSD	.0830232	.6068652	1.363153	1.010426	.0096684
#1	2624.099	23468.22	1387.030	1759.115	2281.520
#2	2624.873	23406.60	1375.222	1736.846	2281.938
#3	2628.202	23678.78	1412.349	1771.907	2281.852

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5205-15 Acquired: 01/08/2025 22:53:38 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN47 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2128079	-.028633	3.390456	.1280603	.0346187	85.73593
Stddev	.0081778	.003091	.020163	.0013000	.0034447	.34666
%RSD	3.842811	10.79604	.5947002	1.015168	9.950427	.4043338
#1	.2222478	-.027407	3.412684	.1295574	.0373609	85.37173
#2	.2082931	-.026342	3.385342	.1272167	.0307524	85.77420
#3	.2078827	-.032149	3.373343	.1274067	.0357428	86.06187

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.342683	.0109707	.0105974	112.5757	.2650129	.1350817
Stddev	.015044	.0003055	.0000820	.4258	.0018048	.0011924
%RSD	.6421848	2.784618	.7735323	.3782241	.6810273	.8827499
#1	2.329145	.0106331	.0106871	112.3461	.2669756	.1360913
#2	2.340024	.0110509	.0105790	112.3139	.2646384	.1353876
#3	2.358879	.0112281	.0105262	113.0670	.2634247	.1337661

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.092747	203.0732	7.001728	30.99526	.1971571	-.005661
Stddev	.007761	1.2561	.054338	.30607	.0024858	.001024
%RSD	.7102372	.6185314	.7760705	.9874637	1.260844	18.08247
#1	1.085367	202.2284	6.952593	30.92984	.1988834	-.006694
#2	1.092034	202.4746	6.992504	30.72719	.1982801	-.005643
#3	1.100840	204.5166	7.060088	31.32875	.1943079	-.004647

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9109009	.2391231	2.627444	6.016111	F 20.06783	.0916168
Stddev	.0435592	.0019596	.008830	.532845	.09310	.0054591
%RSD	4.781995	.8194724	.3360561	8.856964	.4639496	5.958590
#1	.9401744	.2385819	2.635681	6.527674	20.17188	.0900886
#2	.8608423	.2374910	2.628528	6.056388	20.03921	.0870847
#3	.9316859	.2412964	2.618122	5.464271	19.99239	.0976771

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5205-15 Acquired: 01/08/2025 22:53:38 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN47 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0148190	5.835521	13.33557	.1836984	1.114327	.1866530
Stddev	.0001835	.044331	.07162	.0028013	.013463	.0008555
%RSD	1.238263	.7596726	.5370504	1.524961	1.208194	.4583468
#1	.0147375	5.886643	13.26222	.1867579	1.102947	.1856791
#2	.0146904	5.812229	13.33916	.1830780	1.110844	.1869969
#3	.0150291	5.807691	13.40532	.1812592	1.129189	.1872832

Elem	Li6707
Units	ppm
Avg	.1091835
Stddev	.0041211
%RSD	3.774506
#1	.1085627
#2	.1054079
#3	.1135797

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2503.497	22422.64	1315.912	1681.432	2268.357
Stddev	17.354	128.26	8.906	5.993	17.292
%RSD	.6931861	.5720268	.6767863	.3564153	.7623324
#1	2488.763	22280.25	1322.828	1674.831	2253.771
#2	2499.104	22458.53	1319.045	1682.936	2263.841
#3	2522.626	22529.13	1305.863	1686.530	2287.460

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5205-16 Acquired: 01/08/2025 22:57:23 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN48 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1677318	-.016891	3.295839	.0792804	.0256805	65.98170
Stddev	.0030581	.005957	.003130	.0021129	.0015819	.25747
%RSD	1.823199	35.26875	.0949718	2.665122	6.159855	.3902182
#1	.1706432	-.020701	3.295820	.0803972	.0261029	66.13617
#2	.1645456	-.019945	3.292718	.0806005	.0270084	66.12445
#3	.1680064	-.010026	3.298979	.0768434	.0239303	65.68447

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.353021	.0080459	.0091186	96.60049	.2086276	.1044120
Stddev	.011047	.0004393	.0001586	.21193	.0000638	.0006720
%RSD	.4694801	5.459356	1.739120	.2193839	.0305922	.6436021
#1	2.357749	.0084694	.0092636	96.71918	.2086779	.1051733
#2	2.360916	.0080758	.0089493	96.72648	.2085558	.1041611
#3	2.340396	.0075924	.0091430	96.35582	.2086491	.1039015

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.035278	136.9547	5.905862	24.87027	.1454271	-.001350
Stddev	.009347	.6231	.023793	.18310	.0000078	.001291
%RSD	.9028925	.4549756	.4028776	.7362178	.0053923	95.65026
#1	1.042610	137.3325	5.918264	24.95063	.1454196	-.002706
#2	1.038471	137.2961	5.920892	24.99946	.1454352	-.000134
#3	1.024752	136.2355	5.878430	24.66074	.1454264	-.001210

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7379281	.1715181	2.538936	1.450304	F 16.87705	.0653302
Stddev	.0269277	.0004990	.002938	.412615	.00961	.0018851
%RSD	3.649093	.2909433	.1157057	28.45022	.0569622	2.885505
#1	.7363498	.1717315	2.536825	1.542150	16.86657	.0674824
#2	.7118243	.1709479	2.542291	1.809255	16.88546	.0639715
#3	.7656103	.1718750	2.537692	.999505	16.87912	.0645369

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5205-16 Acquired: 01/08/2025 22:57:23 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN48 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0123233	3.951080	11.91512	.1517622	.7436223	.1993471
Stddev	.0008023	.022288	.09985	.0014467	.0098023	.0008699
%RSD	6.510829	.5641013	.8380136	.9532810	1.318179	.4363545
#1	.0116835	3.965426	11.97936	.1517884	.7514063	.2002471
#2	.0132235	3.925402	11.96590	.1531957	.7468466	.1992833
#3	.0120628	3.962410	11.80008	.1503026	.7326140	.1985109

Elem	Li6707
Units	ppm
Avg	.0721893
Stddev	.0019800
%RSD	2.742749
#1	.0731392
#2	.0699134
#3	.0735154

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2447.203	21906.87	1282.652	1637.644	2302.018
Stddev	2.716	70.09	11.256	4.282	3.543
%RSD	.1110016	.3199557	.8775522	.2614772	.1539150
#1	2449.077	21843.92	1273.520	1634.602	2299.162
#2	2448.444	21894.30	1279.209	1635.790	2305.983
#3	2444.087	21982.40	1295.228	1642.541	2300.909

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5205-17 Acquired: 01/08/2025 23:01:08 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN49 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2462638	-.031200	4.287115	.1386451	.0312937	80.02160
Stddev	.0024485	.000642	.013869	.0041241	.0018245	.75522
%RSD	.9942418	2.057478	.3234995	2.974575	5.830385	.9437680
#1	.2485469	-.030459	4.280760	.1396000	.0301217	79.32484
#2	.2436781	-.031552	4.303022	.1341274	.0303636	80.82413
#3	.2465662	-.031590	4.277562	.1422081	.0333959	79.91582

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.941053	.0116580	.0118119	145.3966	.2392666	.1272260
Stddev	.024167	.0002480	.0001403	.8384	.0016591	.0005020
%RSD	.8216960	2.127098	1.187920	.5766283	.6934051	.3945390
#1	2.920330	.0116991	.0116790	144.6856	.2373986	.1268580
#2	2.967599	.0113921	.0119586	146.3211	.2398326	.1270222
#3	2.935231	.0118830	.0117982	145.1830	.2405686	.1277978

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.249798	229.0501	7.386748	30.60654	.1783233	-.005892
Stddev	.010309	1.2454	.032688	.11868	.0012472	.001729
%RSD	.8248273	.5437138	.4425257	.3877521	.6994139	29.34571
#1	1.254600	227.8221	7.354873	30.47885	.1788779	-.003896
#2	1.256830	230.3121	7.420193	30.62732	.1791971	-.006936
#3	1.237965	229.0162	7.385179	30.71346	.1768950	-.006844

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9907640	.2227141	3.208473	1.935555	F 20.83735	.0999448
Stddev	.0313321	.0025039	.004220	.076821	.03420	.0041862
%RSD	3.162414	1.124267	.1315401	3.968942	.1641463	4.188483
#1	.9926898	.2223789	3.207878	1.862942	20.82455	.0954016
#2	.9585134	.2253687	3.212959	2.015986	20.87611	.1036459
#3	1.021089	.2203946	3.204582	1.927736	20.81140	.1007870

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5205-17 Acquired: 01/08/2025 23:01:08 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN49 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0136691	4.009876	12.59569	.8561222	.7550295	.2445014
Stddev	.0005573	.010572	.07072	.0027543	.0056185	.0020010
%RSD	4.076836	.2636555	.5614425	.3217193	.7441476	.8184157
#1	.0140188	4.003550	12.63843	.8545459	.7524450	.2430273
#2	.0139619	4.022081	12.63458	.8593026	.7614752	.2467794
#3	.0130264	4.003997	12.51406	.8545182	.7511683	.2436974

Elem	Li6707
Units	ppm
Avg	.1039606
Stddev	.0046779
%RSD	4.499697
#1	.1021575
#2	.1004526
#3	.1092718

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2484.036	22132.86	1305.858	1660.662	2279.646
Stddev	6.759	151.21	8.416	8.453	5.576
%RSD	.2721155	.6832058	.6444771	.5090254	.2446184
#1	2490.243	22228.41	1306.500	1668.644	2283.976
#2	2476.834	21958.52	1297.139	1651.806	2273.353
#3	2485.029	22211.64	1313.934	1661.536	2281.607

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5205-18 Acquired: 01/08/2025 23:04:54 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN50 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1687269	-.021217	2.057333	.0910769	.0224836	73.53212
Stddev	.0055231	.003419	.012416	.0009744	.0052124	.54405
%RSD	3.273401	16.11348	.6035063	1.069846	23.18298	.7398840
#1	.1744910	-.018526	2.071145	.0915278	.0280124	73.87856
#2	.1682084	-.020061	2.053756	.0899588	.0176593	72.90505
#3	.1634813	-.025064	2.047099	.0917442	.0217792	73.81275

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.582327	.0085384	.0059447	98.92437	.1445006	.1112345
Stddev	.011740	.0000372	.0000246	.35161	.0024554	.0013560
%RSD	.7419673	.4362068	.4137882	.3554321	1.699224	1.219036
#1	1.591166	.0084971	.0059166	99.16127	.1420624	.1127923
#2	1.569006	.0085489	.0059626	98.52038	.1469728	.1103194
#3	1.586809	.0085693	.0059548	99.09149	.1444666	.1105918

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6681478	153.7942	6.293592	24.01646	.1236742	-.005273
Stddev	.0055096	.9689	.034448	.36480	.0014884	.001983
%RSD	.8246155	.6300190	.5473520	1.518940	1.203459	37.60870
#1	.6731684	154.7873	6.322164	24.30885	.1246159	-.003064
#2	.6622535	152.8514	6.255339	23.60767	.1244484	-.005852
#3	.6690215	153.7438	6.303272	24.13287	.1219583	-.006901

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7152468	.1839717	1.601788	-.114017	F 13.74107	.0579721
Stddev	.0294988	.0015512	.014026	.279592	.06079	.0043192
%RSD	4.124288	.8431684	.8756228	245.2195	.4423942	7.450475
#1	.7386990	.1855461	1.590157	.176663	13.81005	.0590082
#2	.7249142	.1839241	1.617364	-.381014	13.71785	.0616790
#3	.6821273	.1824448	1.597845	-.137701	13.69531	.0532291

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5205-18 Acquired: 01/08/2025 23:04:54 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN50 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0097827	2.083769	8.147913	.1363967	.5126024	.1512227
Stddev	.0015903	.004622	.077328	.0019332	.0095175	.0012832
%RSD	16.25649	.2218324	.9490548	1.417365	1.856704	.8485206
#1	.0108086	2.081696	8.225751	.1382822	.5225481	.1524235
#2	.0105887	2.080546	8.071105	.1344190	.5035805	.1498706
#3	.0079507	2.089065	8.146885	.1364888	.5116786	.1513739

Elem	Li6707
Units	ppm
Avg	.0699022
Stddev	.0038931
%RSD	5.569346
#1	.0674474
#2	.0743910
#3	.0678682

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2443.440	21962.80	1297.863	1647.817	2305.122
Stddev	4.601	89.18	14.099	9.503	7.930
%RSD	.1883198	.4060548	1.086338	.5767107	.3440316
#1	2438.449	22056.24	1286.395	1658.228	2296.938
#2	2444.358	21953.56	1313.605	1639.608	2305.656
#3	2447.514	21878.59	1293.589	1645.616	2312.772

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5205-22 Acquired: 01/08/2025 23:08:41 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN52 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1221813	.0010710	1.231980	.0555453	.0152267	58.42831	.8554303
Stddev	.0015924	.0038625	.004097	.0065372	.0024816	.64632	.0097605
%RSD	1.303337	360.6406	.3325787	11.76912	16.29767	1.106182	1.141000
#1	.1207097	-.003167	1.234715	.0509320	.0129422	59.03840	.8664355
#2	.1219622	.001985	1.227269	.0526777	.0178670	58.49555	.8520328
#3	.1238719	.004394	1.233957	.0630263	.0148709	57.75100	.8478227

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0078005	.0042187	414.3874	.1032547	.1382684	.2540505	147.8342
Stddev	.0002426	.0002287	2.8195	.0022880	.0019305	.0032538	1.1889
%RSD	3.109883	5.422171	.6804063	2.215839	1.396172	1.280779	.8042229
#1	.0075432	.0041620	417.3925	.1006190	.1368665	.2567920	149.0883
#2	.0080251	.0040236	413.9695	.1044166	.1404702	.2549047	147.6909
#3	.0078331	.0044704	411.8001	.1047286	.1374684	.2504548	146.7234

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.845887	205.1848	.1419554	-.006593	.9438291	.1387165	.5862274
Stddev	.069200	2.1627	.0002155	.002051	.0121541	.0001332	.0020778
%RSD	.7822857	1.054018	.1517708	31.11288	1.287743	.0960134	.3544391
#1	8.914165	207.3447	.1417278	-.008716	.9314490	.1387351	.5860975
#2	8.847697	205.1906	.1421562	-.006441	.9442947	.1388394	.5842175
#3	8.775800	203.0193	.1419822	-.004622	.9557438	.1385750	.5883671

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-2.79384	8.532963	.0621363	.0124238	1.468944	11.08418	.0453271
Stddev	.16700	.016115	.0023452	.0008657	.001673	.06850	.0010934
%RSD	5.977383	.1888517	3.774313	6.968286	.1138654	.6180209	2.412357
#1	-2.69655	8.517269	.0598675	.0119996	1.470038	11.12655	.0464811
#2	-2.98668	8.532153	.0645511	.0134198	1.467018	11.12083	.0443064
#3	-2.69831	8.549467	.0619904	.0118520	1.469775	11.00514	.0451937

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5205-22 Acquired: 01/08/2025 23:08:41 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN52 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.5716886	.2067430	.0489808
Stddev	.0180302	.0016810	.0015837
%RSD	3.153846	.8130758	3.233311
#1	.5894151	.2083587	.0479598
#2	.5722815	.2068669	.0508052
#3	.5533693	.2050035	.0481776

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2539.027	22898.43	1372.531	1711.911	1999.553
Stddev	2.407	38.41	6.807	3.688	4.495
%RSD	.0947823	.1677210	.4959325	.2154497	.2247933
#1	2541.246	22856.90	1366.812	1711.175	2004.734
#2	2539.365	22905.70	1370.722	1715.912	1997.230
#3	2536.469	22932.67	1380.060	1708.647	1996.694

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: CCV135 Acquired: 01/08/2025 23:12:29 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV135 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.847517	4.729231	24.20635	4.896354	4.875380	369.8665	9.700753
Stddev	.017481	.006927	.09049	.022047	.016410	7.1740	.192270
%RSD	.3606141	.1464730	.3738248	.4502816	.3365805	1.939616	1.982014
#1	4.867558	4.735789	24.24715	4.873161	4.888196	364.9880	9.585233
#2	4.835409	4.721986	24.10264	4.898859	4.856885	366.5078	9.594320
#3	4.839585	4.729919	24.26926	4.917041	4.881058	378.1037	9.922705

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4900062	2.455311	382.5854	15.25211	2.480210	14.53705	371.8034
Stddev	.0055972	.006488	7.1971	.04528	.007493	.17034	7.1059
%RSD	1.142266	.2642284	1.881167	.2968543	.3020975	1.171786	1.911212
#1	.4850797	2.457883	378.6011	15.29972	2.483721	14.40904	368.5784
#2	.4888466	2.447931	378.2615	15.20959	2.471606	14.47173	366.8817
#3	.4960924	2.460118	390.8935	15.24703	2.485302	14.73039	379.9499

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	14.03712	373.8680	2.463568	1.230101	401.4539	2.405897	14.61899
Stddev	.26662	7.1179	.008747	.003033	4.2249	.025499	.06737
%RSD	1.899374	1.903864	.3550538	.2465443	1.052409	1.059870	.4608644
#1	13.88026	369.9438	2.463367	1.233569	397.0531	2.382512	14.67954
#2	13.88613	369.5759	2.454923	1.227942	401.8309	2.402096	14.63102
#3	14.34496	382.0844	2.472414	1.228793	405.4777	2.433084	14.54641

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	147.9149	4.868200	4.835821	4.824435	4.873469	4.727373	4.925360
Stddev	3.0926	.010299	.059273	.007355	.014120	.047005	.011179
%RSD	2.090815	.2115593	1.225705	.1524571	.2897246	.9943210	.2269622
#1	145.6617	4.877092	4.787061	4.827266	4.877704	4.695360	4.926624
#2	146.6421	4.856915	4.818606	4.816085	4.857717	4.705420	4.913603
#3	151.4408	4.870592	4.901796	4.829954	4.884987	4.781338	4.935853

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: CCV135 Acquired: 01/08/2025 23:12:29 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV135 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	4.715472	4.565097	4.933666
Stddev	.087398	.080701	.093166
%RSD	1.853425	1.767793	1.888374
#1	4.657702	4.524267	4.879778
#2	4.672696	4.512969	4.879976
#3	4.816018	4.658054	5.041245

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1785.831	16671.69	1052.889	1209.192	1774.168
Stddev	3.386	38.88	10.369	6.123	5.877
%RSD	.1895872	.2332256	.9848280	.5063521	.3312270
#1	1789.124	16631.35	1062.322	1204.938	1776.300
#2	1786.009	16674.79	1054.559	1206.428	1778.680
#3	1782.360	16708.92	1041.786	1216.209	1767.523

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: CCB135 Acquired: 01/08/2025 23:16:13 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB135 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0014594	.0005648	.0076919	.0058910	-.003869	.0167095
Stddev	.0019971	.0032883	.0050997	.0069889	.003386	.1145767
%RSD	136.8473	582.2474	66.29964	118.6380	87.51315	685.6980
#1	.0033894	.0042991	.0088317	.0064235	-.004029	.1487846
#2	-.000599	-.000708	.0021188	-.001349	-.000406	-.042623
#3	.001587	-.001897	.0121254	.012598	-.007173	-.056033

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0026554	-.000625	-.000075	.0113159	.0005556	.0003967
Stddev	.0034113	.000330	.000044	.0719158	.0000344	.0005681
%RSD	128.4670	52.74955	58.57847	635.5270	6.199386	143.2132
#1	.0018262	-.000519	-.000126	.0857472	.0005351	-.000131
#2	.0064048	-.000995	-.000049	-.057788	.0005362	.000323
#3	-.000265	-.000362	-.000050	.005989	.0005953	.000998

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001584	.0641716	.0050302	-.151891	-.000391	-.000331
Stddev	.001142	.0725746	.0010247	.042250	.000884	.001933
%RSD	72.13217	113.0945	20.37112	27.81626	225.8879	584.3074
#1	-.001871	.1440274	.0057106	-.132626	-.000370	-.002440
#2	-.000325	.0462523	.0038517	-.122707	.000482	.001358
#3	-.002554	.0022354	.0055284	-.200340	-.001286	.000089

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0589232	-.000260	.0007127	1.308086	-.007171	.0069863
Stddev	.0165468	.000676	.0009772	.177008	.001678	.0020609
%RSD	28.08199	260.0934	137.1112	13.53186	23.40365	29.49894
#1	.0754956	.000005	.0010293	1.186202	-.005237	.0091599
#2	.0588719	.000244	.0014923	1.511120	-.008032	.0067386
#3	.0424021	-.001029	-.000384	1.226936	-.008245	.0050605

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: CCB135 Acquired: 01/08/2025 23:16:13 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB135 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009243	-.021894	.0000860	.0005471	.0080454	-.000536
Stddev	.0001580	.001963	.0055955	.0011737	.0024759	.000404
%RSD	17.09829	8.965583	6503.268	214.5408	30.77371	75.22092
#1	.0007854	-.022833	-.004218	.0015292	.0053197	-.000134
#2	.0008912	-.019638	.006411	.0008647	.0101552	-.000534
#3	.0010962	-.023211	-.001936	-.000753	.0086612	-.000941

Elem	Li6707
Units	ppm
Avg	F .0442176
Stddev	.0074534
%RSD	16.85609
#1	.0461669
#2	.0505026
#3	.0359833

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2152.030	19547.01	1114.334	1455.599	2529.649
Stddev	1.916	102.69	64.139	16.422	2.788
%RSD	.0890095	.5253364	5.755848	1.128171	.1102286
#1	2149.850	19545.98	1146.442	1451.388	2532.828
#2	2152.799	19444.85	1040.482	1441.692	2528.501
#3	2153.442	19650.21	1156.079	1473.715	2527.617

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5199-01 Acquired: 01/08/2025 23:20:12 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMQ0 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1861335	-.033325	.6977738	.1146398	.0309128	87.43251	.9068498
Stddev	.0044779	.002086	.0008220	.0027839	.0074967	.61434	.0026641
%RSD	2.405755	6.260028	.1178062	2.428387	24.25127	.7026436	.2937733
#1	.1860228	-.035446	.6986909	.1115397	.0222689	87.95444	.9079223
#2	.1817119	-.033254	.6971034	.1169263	.0348304	86.75549	.9038166
#3	.1906657	-.031275	.6975270	.1154533	.0356391	87.58760	.9088104

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0104607	.0073722	36.20003	.1267276	.1245634	.3153847	188.5208
Stddev	.0004494	.0000624	.17204	.0015375	.0003757	.0017041	.6743
%RSD	4.295797	.8461230	.4752425	1.213210	.3015832	.5403375	.3576988
#1	.0108188	.0074321	36.26156	.1249665	.1245635	.3148980	188.8300
#2	.0099564	.0073769	36.00569	.1274139	.1241876	.3172792	187.7473
#3	.0106068	.0073076	36.33285	.1278024	.1249390	.3139768	188.9851

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.426866	18.80813	.1739493	-.008028	.6153582	.1960956	1.110577
Stddev	.039649	.26875	.0012333	.000859	.0146071	.0003030	.003714
%RSD	.4705027	1.428911	.7090032	10.69617	2.373749	.1545070	.3344504
#1	8.451774	19.11846	.1733396	-.008830	.6310372	.1962409	1.114567
#2	8.381144	18.65162	.1731396	-.008133	.6021343	.1962985	1.107219
#3	8.447679	18.65433	.1753687	-.007122	.6129030	.1957473	1.109946

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.174392	8.831874	.0753989	.0116039	3.170505	6.610743	.0504606
Stddev	.303785	.011115	.0032429	.0003203	.007228	.030367	.0019704
%RSD	13.97102	.1258544	4.300936	2.760152	.2279824	.4593620	3.904882
#1	2.514593	8.826934	.0737560	.0119185	3.170304	6.587355	.0500100
#2	1.930247	8.844603	.0733064	.0116149	3.163379	6.645062	.0526173
#3	2.078337	8.824085	.0791345	.0112782	3.177831	6.599810	.0487546

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5199-01 Acquired: 01/08/2025 23:20:12 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMQ0 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.7051303	-.072728	.0717461
Stddev	.0015643	.000524	.0037698
%RSD	.2218409	.7205202	5.254284
#1	.7063906	-.072715	.0676880
#2	.7033796	-.072210	.0751388
#3	.7056207	-.073258	.0724116

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2513.081	22556.96	1318.942	1686.067	2312.270
Stddev	4.007	148.18	7.255	17.609	.646
%RSD	.1594371	.6568959	.5500263	1.044368	.0279292
#1	2517.490	22460.36	1310.576	1668.399	2311.814
#2	2509.661	22727.56	1323.496	1703.616	2311.988
#3	2512.093	22482.95	1322.753	1686.185	2313.009

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5199-02 Acquired: 01/08/2025 23:23:58 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMQ1 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1697615	-.032504	.6304996	.1084038	.0230132	87.32662	.8463244
Stddev	.0051060	.001865	.0040227	.0048029	.0063054	.72193	.0056483
%RSD	3.007753	5.738898	.6380215	4.430566	27.39907	.8266989	.6673871
#1	.1749460	-.034621	.6351410	.1138265	.0194167	87.75185	.8505732
#2	.1696006	-.031099	.6280197	.1046855	.0193291	86.49307	.8399147
#3	.1647378	-.031794	.6283381	.1066995	.0302939	87.73494	.8484853

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0105065	.0062313	34.64592	.1194378	.1216914	.3094913	181.7723
Stddev	.0005406	.0000823	.33292	.0032109	.0005867	.0026427	1.6601
%RSD	5.145248	1.321166	.9609185	2.688372	.4821167	.8538774	.9133020
#1	.0100351	.0063229	34.82023	.1158980	.1223178	.3069612	182.7352
#2	.0103879	.0062073	34.26204	.1221630	.1216018	.3092791	179.8553
#3	.0110965	.0061636	34.85549	.1202524	.1211547	.3122337	182.7263

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.019479	18.04391	.1551868	-.008688	.6553053	.1914691	.8503973
Stddev	.079488	.20676	.0010896	.001176	.0251120	.0021358	.0326392
%RSD	.9911873	1.145885	.7021502	13.54090	3.832111	1.115457	3.838110
#1	8.065235	17.99391	.1559880	-.008141	.6735613	.1928890	.8134681
#2	7.927694	17.86673	.1539461	-.010038	.6656875	.1890129	.8753804
#3	8.065507	18.27108	.1556264	-.007885	.6266670	.1925054	.8623433

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9059415	8.018846	.0689645	.0113814	2.772661	6.123351	.1763736
Stddev	.2440318	.048719	.0037496	.0016592	.029461	.036420	.0011944
%RSD	26.93682	.6075577	5.436995	14.57815	1.062542	.5947734	.6771860
#1	.7929433	8.040520	.0716807	.0130223	2.782063	6.113907	.1773710
#2	1.185992	7.963051	.0646864	.0114174	2.739646	6.092583	.1750500
#3	.738890	8.052967	.0705263	.0097045	2.796272	6.163563	.1766998

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5199-02 Acquired: 01/08/2025 23:23:58 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMQ1 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.6593953	-.071850	.0613805
Stddev	.0016406	.000733	.0053573
%RSD	.2488070	1.020780	8.728040
#1	.6605330	-.072592	.0590401
#2	.6575146	-.071126	.0575917
#3	.6601382	-.071831	.0675099

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2453.852	22366.13	1303.053	1661.402	2291.457
Stddev	4.836	629.53	7.465	51.456	6.334
%RSD	.1970911	2.814661	.5728516	3.097122	.2764105
#1	2449.812	23083.81	1296.405	1719.293	2288.862
#2	2459.211	21907.24	1311.128	1620.873	2298.676
#3	2452.532	22107.35	1301.626	1644.039	2286.832

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5199-03 Acquired: 01/08/2025 23:27:45 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMQ2 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1797865	-.062426	.3923139	.1638666	.0428230	100.2587	.6063422
Stddev	.0020940	.002141	.0020672	.0118021	.0007623	.4798	.0046941
%RSD	1.164714	3.429923	.5269202	7.202253	1.780065	.4785391	.7741617
#1	.1797321	-.064252	.3946333	.1673818	.0424518	99.7535	.6015271
#2	.1777202	-.060070	.3916428	.1507063	.0423174	100.3145	.6065947
#3	.1819071	-.062958	.3906657	.1735117	.0436998	100.7082	.6109050

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0135737	.0028355	27.72935	.1169919	.1369572	.3567967	271.6367
Stddev	.0003139	.0001962	.17445	.0014334	.0014585	.0027734	2.0392
%RSD	2.312799	6.918471	.6291266	1.225186	1.064944	.7773132	.7507153
#1	.0139345	.0030615	27.53403	.1158961	.1383871	.3566440	269.2821
#2	.0134237	.0027353	27.86969	.1164656	.1370129	.3596433	272.7969
#3	.0133629	.0027096	27.78434	.1186141	.1354716	.3541028	272.8310

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.549625	18.37226	.1307485	-.015542	.7100160	.2156198	.7429716
Stddev	.048130	.04541	.0003184	.000842	.0228619	.0014899	.0043852
%RSD	.7348461	.2471753	.2434797	5.416876	3.219920	.6909707	.5902185
#1	6.498823	18.32103	.1304589	-.015916	.6863237	.2164928	.7432367
#2	6.594540	18.40754	.1310893	-.016132	.7117786	.2138995	.7472181
#3	6.555514	18.38821	.1306972	-.014578	.7319456	.2164671	.7384599

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-1.53712	2.752131	.0751785	.0095483	.6641835	2.770758	.0301036
Stddev	.23861	.014385	.0033452	.0002668	.0039469	.010738	.0007981
%RSD	15.52325	.5226816	4.449624	2.794126	.5942514	.3875490	2.651224
#1	-1.39825	2.755335	.0736796	.0092823	.6685495	2.774527	.0296531
#2	-1.40046	2.764643	.0728448	.0095466	.6631324	2.779103	.0310251
#3	-1.81264	2.736414	.0790109	.0098159	.6608685	2.758643	.0296326

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5199-03 Acquired: 01/08/2025 23:27:45 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMQ2 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.5105720	-.181405	.0644243
Stddev	.0058579	.001624	.0008424
%RSD	1.147310	.8955037	1.307550
#1	.5083215	-.179530	.0653947
#2	.5061732	-.182373	.0638810
#3	.5172214	-.182313	.0639972

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2393.200	21446.05	1254.771	1609.005	2317.837
Stddev	7.898	57.63	4.143	6.813	8.813
%RSD	.3300305	.2687172	.3301480	.4234461	.3802127
#1	2387.695	21489.36	1254.264	1609.481	2311.185
#2	2389.655	21468.14	1259.144	1615.568	2314.494
#3	2402.249	21380.64	1250.905	1601.967	2327.832

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5199-07 Acquired: 01/08/2025 23:31:32 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMQ4 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2263879	-.002923	.4455520	.1098351	.0258217	80.09530	1.038638
Stddev	.0034387	.005454	.0079363	.0046107	.0034838	.32127	.007017
%RSD	1.518918	186.6178	1.781232	4.197841	13.49158	.4011124	.6755798
#1	.2302416	-.008657	.4530073	.1151406	.0219227	80.35146	1.045969
#2	.2236329	-.002310	.4464394	.1075667	.0286283	79.73483	1.031985
#3	.2252892	.002199	.4372092	.1067981	.0269143	80.19959	1.037959

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0110548	.0062762	581.6845	.1249897	.1946943	.5070941	231.8598
Stddev	.0004372	.0001678	2.4204	.0008243	.0002812	.0015167	.3312
%RSD	3.954478	2.673026	.4160933	.6595308	.1444228	.2990876	.1428439
#1	.0105515	.0062905	580.1052	.1258748	.1944740	.5059773	231.7306
#2	.0113400	.0064364	580.4773	.1242439	.1945980	.5064842	231.6127
#3	.0112729	.0061018	584.4710	.1248502	.1950110	.5088207	232.2362

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	17.61303	43.05459	.2288103	-.010252	1.014030	.1738218	.5048915
Stddev	.02798	.27365	.0019815	.001397	.013208	.0012011	.0004497
%RSD	.1588771	.6355928	.8659871	13.62991	1.302513	.6910188	.0890692
#1	17.58074	43.14767	.2292720	-.011209	1.005540	.1735198	.5049005
#2	17.62821	42.74655	.2305202	-.010898	1.007301	.1728006	.5044374
#3	17.63014	43.26957	.2266388	-.008649	1.029247	.1751452	.5053367

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.224531	6.723875	.1022993	.0073427	1.618663	7.695976	.0357386
Stddev	.533490	.049169	.0024200	.0003410	.020168	.011231	.0019933
%RSD	43.56685	.7312568	2.365591	4.644120	1.245978	.1459272	5.577435
#1	1.237422	6.769149	.0995121	.0076585	1.641392	7.683603	.0377263
#2	.684713	6.730907	.1038662	.0073884	1.602904	7.698801	.0337398
#3	1.751459	6.671568	.1035196	.0069811	1.611694	7.705524	.0357497

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5199-07 Acquired: 01/08/2025 23:31:32 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMQ4 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.5806366	.2084463	.0737323
Stddev	.0091153	.0014157	.0059608
%RSD	1.569883	.6791916	8.084361
#1	.5798716	.2092997	.0676241
#2	.5719279	.2068121	.0740391
#3	.5901103	.2092272	.0795338

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2781.933	24685.75	1515.743	1851.773	1999.158
Stddev	8.417	14.36	5.303	7.307	12.784
%RSD	.3025768	.0581532	.3498448	.3945850	.6394748
#1	2772.507	24669.39	1519.189	1855.732	1985.566
#2	2784.593	24696.23	1518.404	1856.245	2000.966
#3	2788.699	24691.64	1509.637	1843.341	2010.942

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5199-08 Acquired: 01/08/2025 23:35:18 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMQ5 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1855858	.0007320	.3430304	.1037113	.0277093	76.25093	1.625259
Stddev	.0071909	.0063766	.0056607	.0021631	.0018535	.75396	.014955
%RSD	3.874711	871.1407	1.650210	2.085687	6.689139	.9887827	.9201773
#1	.1869624	-.005665	.3493262	.1023659	.0280184	75.65687	1.613285
#2	.1778060	.000774	.3383605	.1062064	.0293889	75.99682	1.620470
#3	.1919888	.007088	.3414046	.1025615	.0257207	77.09911	1.642022

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0096185	.0055519	494.5296	.1201416	.1959017	.3780882	218.5356
Stddev	.0003801	.0001139	3.9741	.0011575	.0008148	.0054681	2.1950
%RSD	3.951858	2.050705	.8036055	.9634838	.4159131	1.446244	1.004415
#1	.0094204	.0054420	492.0788	.1214251	.1965079	.3728027	216.5811
#2	.0100567	.0056694	492.3952	.1198229	.1962216	.3777396	218.1154
#3	.0093783	.0055442	499.1148	.1191768	.1949755	.3837221	220.9104

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	18.51365	58.47943	.2450784	-.009591	.9902764	.1283812	.5103176
Stddev	.16670	.75614	.0008897	.001480	.0273162	.0010248	.0019586
%RSD	.9004421	1.292997	.3630227	15.42817	2.758445	.7982652	.3837929
#1	18.38557	57.72258	.2453013	-.008920	.9668966	.1273079	.5098148
#2	18.45326	58.48086	.2458354	-.011287	.9836301	.1284863	.5086595
#3	18.70214	59.23485	.2440984	-.008565	1.020303	.1293495	.5124786

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.257074	6.975435	.0873398	.0069422	1.134057	6.312309	.0318876
Stddev	.249209	.033482	.0003810	.0010158	.011964	.096699	.0016139
%RSD	96.94076	.4800016	.4361683	14.63196	1.055002	1.531914	5.061276
#1	-.135269	6.936877	.0877749	.0060296	1.121994	6.218979	.0300386
#2	-.543759	6.992265	.0871786	.0080366	1.134259	6.305890	.0330139
#3	-.092193	6.997164	.0870661	.0067603	1.145920	6.412057	.0326103

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5199-08 Acquired: 01/08/2025 23:35:18 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMQ5 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.6408603	.1796678	.0966314
Stddev	.0091813	.0019621	.0055026
%RSD	1.432652	1.092061	5.694450
#1	.6469888	.1783233	.0920094
#2	.6303042	.1787608	.0951665
#3	.6452878	.1819193	.1027182

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2816.846	25430.71	1546.199	1910.071	1991.272
Stddev	11.253	75.08	23.667	7.183	1.420
%RSD	.3994819	.2952401	1.530671	.3760404	.0713088
#1	2803.972	25457.78	1571.157	1917.941	1989.736
#2	2821.756	25345.85	1543.361	1908.405	1992.537
#3	2824.809	25488.50	1524.079	1903.868	1991.544

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5199-09 Acquired: 01/08/2025 23:39:04 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMQ6 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1987436	-.002666	.2872882	.1081692	.0210909	71.49573	1.228921
Stddev	.0076208	.005569	.0049306	.0067648	.0027931	.20161	.003479
%RSD	3.834495	208.8909	1.716250	6.253937	13.24288	.2819899	.2830629
#1	.1986432	.003124	.2841048	.1003678	.0213362	71.26354	1.227823
#2	.2064142	-.007984	.2847922	.1124111	.0181834	71.59717	1.226124
#3	.1911735	-.003138	.2929677	.1117288	.0237533	71.62647	1.232816

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0091159	.0046876	371.8799	.1143336	.2012429	.4242667	206.6205
Stddev	.0002603	.0000969	1.3480	.0009999	.0008099	.0039674	1.0509
%RSD	2.854893	2.066195	.3624798	.8745442	.4024592	.9351205	.5086118
#1	.0088338	.0045794	370.7008	.1139310	.2021780	.4203822	205.6271
#2	.0093466	.0047661	371.5894	.1154720	.2007900	.4241058	206.5136
#3	.0091673	.0047174	373.3494	.1135977	.2007608	.4283121	207.7207

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	19.65927	33.09447	.2336114	-.007932	.9703531	.1056794	.5149218
Stddev	.10474	.23133	.0011554	.000379	.0178558	.0011600	.0025542
%RSD	.5327811	.6989980	.4945679	4.778743	1.840135	1.097660	.4960313
#1	19.57889	32.94261	.2348600	-.007862	.9498768	.1066053	.5121128
#2	19.62119	32.98009	.2333941	-.008341	.9785004	.1043782	.5171048
#3	19.77772	33.36071	.2325801	-.007593	.9826820	.1060546	.5155477

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3491757	7.296548	.0866868	.0080555	1.353664	7.003064	.0294859
Stddev	.2469369	.028539	.0016908	.0003105	.018702	.046224	.0014501
%RSD	70.71996	.3911301	1.950424	3.854925	1.381552	.6600535	4.918006
#1	.1580774	7.328595	.0885411	.0077325	1.361859	6.959158	.0309885
#2	.2614520	7.287172	.0862886	.0083519	1.366869	6.998733	.0280947
#3	.6279976	7.273876	.0852306	.0080820	1.332264	7.051301	.0293745

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5199-09 Acquired: 01/08/2025 23:39:04 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMQ6 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.7151989	.0971172	.0982561
Stddev	.0063911	.0006117	.0047779
%RSD	.8936089	.6298253	4.862716
#1	.7078191	.0964452	.0938399
#2	.7188788	.0976416	.0976003
#3	.7188988	.0972647	.1033280

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2852.234	25615.44	1535.578	1922.362	2047.732
Stddev	4.802	81.53	7.429	4.048	4.853
%RSD	.1683565	.3182674	.4837766	.2105833	.2369846
#1	2847.141	25635.62	1542.737	1925.382	2042.132
#2	2856.680	25525.72	1536.091	1923.943	2050.361
#3	2852.881	25684.98	1527.906	1917.762	2050.703

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5199-10 Acquired: 01/08/2025 23:42:50 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMT1 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1589321	-.025740	1.074230	.0934894	.0230722	72.17272
Stddev	.0018078	.001878	.005686	.0010220	.0051387	.27876
%RSD	1.137467	7.296550	.5292751	1.093142	22.27215	.3862438
#1	.1569736	-.027201	1.067700	.0939921	.0260586	72.21355
#2	.1592859	-.026397	1.078082	.0941627	.0260193	72.42881
#3	.1605369	-.023621	1.076907	.0923135	.0171386	71.87579

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.093024	.0092059	.0061158	49.09631	.1289475	.1019333
Stddev	.001570	.0000727	.0002226	.14192	.0023744	.0011880
%RSD	.1436766	.7898827	3.640039	.2890545	1.841355	1.165466
#1	1.093338	.0092860	.0058603	48.94906	.1270997	.1006650
#2	1.094414	.0091876	.0062681	49.23221	.1281172	.1021148
#3	1.091320	.0091441	.0062191	49.10764	.1316255	.1030201

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3909259	151.8603	5.753858	18.54415	.1583389	-.007467
Stddev	.0016623	.6536	.020468	.05058	.0013024	.000812
%RSD	.4252085	.4303895	.3557347	.2727499	.8225346	10.87201
#1	.3919721	151.5427	5.745459	18.54420	.1570191	-.008006
#2	.3917964	152.6120	5.777190	18.59470	.1596232	-.007862
#3	.3890092	151.4262	5.738925	18.49354	.1583745	-.006533

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5914151	.1838524	.8629857	8.362211	F 11.01317	.0735107
Stddev	.0416755	.0010019	.0015427	.407968	.04677	.0026102
%RSD	7.046745	.5449493	.1787610	4.878710	.4246781	3.550778
#1	.6060572	.1835623	.8613371	8.830998	10.95917	.0745841
#2	.5443946	.1830275	.8632256	8.168038	11.04070	.0754130
#3	.6237937	.1849673	.8643943	8.087599	11.03964	.0705349

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5199-10 Acquired: 01/08/2025 23:42:50 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMT1 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0134077	4.510886	10.79606	.0891039	.9244857	.0032823
Stddev	.0007340	.027781	.04371	.0015408	.0090579	.0004944
%RSD	5.474593	.6158752	.4048268	1.729234	.9797736	15.06316
#1	.0131470	4.479871	10.84641	.0897678	.9336374	.0037079
#2	.0142365	4.533491	10.76789	.0873424	.9242950	.0027400
#3	.0128396	4.519295	10.77387	.0902015	.9155246	.0033990

Elem	Li6707
Units	ppm
Avg	.0629355
Stddev	.0100217
%RSD	15.92380
#1	.0613346
#2	.0736614
#3	.0538106

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2424.645	21804.05	1259.862	1630.700	2251.164
Stddev	12.454	85.99	5.040	13.621	9.386
%RSD	.5136599	.3943649	.4000600	.8352776	.4169195
#1	2430.942	21841.08	1256.285	1643.184	2258.786
#2	2410.299	21705.75	1257.676	1616.173	2240.681
#3	2432.693	21865.31	1265.627	1632.744	2254.024

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5199-11 Acquired: 01/08/2025 23:46:37 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMT2 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1356347	-.026312	.9436149	.0866823	.0225648	66.99414	.9491149
Stddev	.0009875	.003606	.0088910	.0103732	.0049872	.41591	.0064431
%RSD	.7280830	13.70439	.9422250	11.96696	22.10167	.6208144	.6788587
#1	.1349661	-.028892	.9487305	.0927620	.0172728	67.30983	.9531226
#2	.1351689	-.027852	.9487656	.0747048	.0232439	66.52287	.9416826
#3	.1367690	-.022191	.9333485	.0925801	.0271776	67.14971	.9525395

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0076609	.0056245	41.70374	.1130750	.0955280	.3336714	143.9192
Stddev	.0003065	.0000902	.09597	.0011021	.0007325	.0027348	.4019
%RSD	4.000389	1.603693	.2301185	.9746191	.7668104	.8195977	.2792788
#1	.0078852	.0055537	41.60390	.1139042	.0953989	.3305227	144.3829
#2	.0077857	.0057261	41.79530	.1118244	.0963166	.3354529	143.6701
#3	.0073117	.0055939	41.71202	.1134964	.0948687	.3350387	143.7046

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.096394	19.57720	.1446792	-.006494	.5455560	.1668042	.7616424
Stddev	.009181	.29424	.0019434	.001005	.0084433	.0015294	.0027609
%RSD	.1505964	1.502996	1.343242	15.48280	1.547650	.9168691	.3624925
#1	6.105909	19.88104	.1460309	-.007584	.5552648	.1658563	.7591856
#2	6.095684	19.55698	.1455547	-.005603	.5399312	.1659877	.7646302
#3	6.087588	19.29359	.1424521	-.006295	.5414720	.1685685	.7611115

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.411505	8.993611	.0663392	.0103938	3.251264	5.603712	.2469699
Stddev	.252210	.072921	.0012108	.0007321	.030113	.034028	.0027051
%RSD	5.717093	.8108081	1.825112	7.044173	.9261941	.6072346	1.095317
#1	4.148406	9.057743	.0655034	.0096555	3.281667	5.564495	.2478967
#2	4.651193	9.008795	.0677277	.0111196	3.250676	5.621218	.2490897
#3	4.434917	8.914293	.0657866	.0104062	3.221450	5.625423	.2439232

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5199-11 Acquired: 01/08/2025 23:46:37 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMT2 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.7469351	-.006410	.0632020
Stddev	.0142212	.000913	.0079922
%RSD	1.903936	14.24908	12.64557
#1	.7623509	-.007465	.0656784
#2	.7343276	-.005907	.0542647
#3	.7441268	-.005859	.0696629

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2439.696	21880.21	1271.401	1623.385	2322.754
Stddev	4.779	92.42	7.693	6.729	10.546
%RSD	.1958854	.4223985	.6050631	.4145009	.4540118
#1	2438.969	21823.64	1279.669	1626.238	2315.098
#2	2435.322	21830.13	1264.455	1615.699	2318.382
#3	2444.797	21986.87	1270.078	1628.217	2334.783

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5199-12 Acquired: 01/08/2025 23:50:24 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMT3 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1750597	-.033924	1.322754	.1031533	.0233596	79.93765
Stddev	.0023514	.002544	.017038	.0064321	.0050883	.38889
%RSD	1.343213	7.497767	1.288056	6.235466	21.78235	.4864882
#1	.1723503	-.035233	1.303340	.1095312	.0238953	80.16129
#2	.1765680	-.035547	1.329702	.0966683	.0180247	79.48861
#3	.1762607	-.030993	1.335220	.1032605	.0281589	80.16306

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.414252	.0097803	.0081054	41.80017	.1434733	.1100625
Stddev	.001452	.0001947	.0002112	.12368	.0005828	.0012691
%RSD	.1026575	1.990549	2.605767	.2958896	.4061935	1.153035
#1	1.415719	.0099689	.0079525	41.91218	.1433738	.1087197
#2	1.414220	.0095801	.0080173	41.66743	.1429467	.1102260
#3	1.412816	.0097920	.0083464	41.82090	.1440994	.1112420

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3874209	168.0523	6.266348	19.97333	.1797449	-.010913
Stddev	.0073854	.7208	.040664	.21148	.0012843	.001282
%RSD	1.906305	.4289438	.6489194	1.058800	.7144989	11.74393
#1	.3870448	168.6659	6.309735	20.10773	.1784563	-.012376
#2	.3802307	167.2584	6.229107	19.72957	.1797537	-.010375
#3	.3949871	168.2325	6.260202	20.08270	.1810248	-.009989

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6863464	.2043303	.9766697	4.555931	F 10.12825	.0755780
Stddev	.0053778	.0023814	.0069874	.119131	.14135	.0037481
%RSD	.7835427	1.165484	.7154333	2.614866	1.395628	4.959179
#1	.6925548	.2051215	.9845665	4.592431	9.96923	.0712930
#2	.6833544	.2016539	.9712879	4.652543	10.17593	.0782469
#3	.6831299	.2062154	.9741547	4.422820	10.23960	.0771942

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5199-12 Acquired: 01/08/2025 23:50:24 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMT3 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0105373	3.028525	9.875561	.1077794	.9456766	.0294500
Stddev	.0008998	.030583	.109354	.0013337	.0106521	.0006498
%RSD	8.539272	1.009835	1.107324	1.237398	1.126400	2.206412
#1	.0105377	2.994798	9.877795	.1065478	.9529664	.0299251
#2	.0096373	3.036319	9.765106	.1091958	.9334520	.0297153
#3	.0114369	3.054456	9.983781	.1075946	.9506115	.0287095

Elem	Li6707
Units	ppm
Avg	.0757979
Stddev	.0153936
%RSD	20.30879
#1	.0842110
#2	.0580311
#3	.0851515

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2443.417	21859.95	1291.126	1634.123	2277.034
Stddev	24.004	192.74	13.287	19.433	26.196
%RSD	.9823808	.8816988	1.029094	1.189204	1.150449
#1	2470.527	21639.12	1285.316	1612.608	2306.738
#2	2434.858	21946.36	1306.329	1639.358	2267.133
#3	2424.866	21994.36	1281.735	1650.402	2257.232

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5200-01 Acquired: 01/08/2025 23:54:11 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMT4 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1604200	-.032733	1.163118	.1101759	.0223164	91.22593	1.232597
Stddev	.0041312	.002085	.008399	.0066828	.0035621	.51403	.004489
%RSD	2.575221	6.370636	.7221109	6.065525	15.96193	.5634708	.3642164
#1	.1646257	-.033754	1.171613	.1027228	.0219816	90.89103	1.231638
#2	.1563677	-.030334	1.162923	.1156339	.0260341	91.81777	1.237488
#3	.1602666	-.034112	1.154819	.1121711	.0189335	90.96898	1.228665

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0101828	.0054695	37.02184	.1333936	.1196369	.3268819	182.9947
Stddev	.0000883	.0000627	.02239	.0009968	.0009933	.0031489	.5659
%RSD	.8666488	1.145374	.0604756	.7472288	.8302327	.9633173	.3092309
#1	.0101895	.0053980	37.02069	.1337372	.1187392	.3305073	182.9040
#2	.0100914	.0054957	37.04479	.1341730	.1194676	.3253107	183.6005
#3	.0102675	.0055148	37.00005	.1322704	.1207040	.3248278	182.4797

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.431181	22.10200	.1623303	-.010030	.6687635	.2166508	.7551724
Stddev	.012172	.11948	.0017270	.002008	.0078699	.0012117	.0041367
%RSD	.1637930	.5405966	1.063879	20.02224	1.176788	.5593042	.5477827
#1	7.428892	22.23548	.1631682	-.008630	.6616176	.2177806	.7556774
#2	7.444335	22.00504	.1634784	-.009128	.6771983	.2153711	.7508064
#3	7.420316	22.06547	.1603441	-.012331	.6674748	.2168007	.7590334

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.004916	9.491175	.0759622	.0095894	1.927789	12.51744	.1078461
Stddev	.232080	.033606	.0014134	.0002321	.007032	.06887	.0019157
%RSD	4.637039	.3540797	1.860664	2.420668	.3647693	.5501848	1.776340
#1	4.764503	9.525399	.0775935	.0097220	1.935873	12.59664	.1096462
#2	5.022595	9.489905	.0751027	.0093214	1.924413	12.48408	.1080594
#3	5.227652	9.458222	.0751905	.0097249	1.923082	12.47161	.1058326

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5200-01 Acquired: 01/08/2025 23:54:11 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMT4 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.8476552	-.014023	.0893193
Stddev	.0152867	.000387	.0049794
%RSD	1.803409	2.756508	5.574870
#1	.8311863	-.014212	.0872036
#2	.8613910	-.014279	.0950072
#3	.8503883	-.013578	.0857471

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2466.469	22224.76	1290.392	1665.036	2294.411
Stddev	10.999	122.77	7.148	4.330	8.275
%RSD	.4459316	.5523860	.5539338	.2600632	.3606412
#1	2461.457	22348.42	1288.121	1668.978	2288.873
#2	2479.081	22222.95	1284.655	1665.728	2303.923
#3	2458.869	22102.91	1298.400	1660.401	2290.438

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5200-02 Acquired: 01/08/2025 23:57:58 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMT5 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1632684	-.035368	.7218472	.1263269	.0252804	85.44343	.9949868
Stddev	.0058836	.001310	.0079495	.0055457	.0022851	.61582	.0057850
%RSD	3.603626	3.703966	1.101274	4.389989	9.038868	.7207395	.5814176
#1	.1700055	-.036627	.7304557	.1201287	.0253245	85.97595	1.000303
#2	.1606580	-.035464	.7203026	.1308193	.0275431	84.76906	.988826
#3	.1591416	-.034012	.7147834	.1280328	.0229736	85.58529	.995831

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0106125	.0063752	36.42754	.1250532	.2070310	.2863730	204.7394
Stddev	.0000968	.0001081	.11809	.0014891	.0038066	.0026929	1.0510
%RSD	.9123797	1.694916	.3241855	1.190760	1.838680	.9403604	.5133138
#1	.0106212	.0064938	36.40865	.1234663	.2104182	.2894810	205.5394
#2	.0107047	.0062825	36.32003	.1252732	.2077635	.2847332	203.5491
#3	.0105116	.0063492	36.55394	.1264200	.2029114	.2849049	205.1297

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.75803	27.88744	.1951828	-.011022	.6622768	.1933977	.5752962
Stddev	.08344	.08694	.0027472	.001527	.0105259	.0013600	.0029739
%RSD	.6540088	.3117546	1.407500	13.85768	1.589351	.7032036	.5169400
#1	12.83279	27.98605	.1982844	-.010610	.6739040	.1945386	.5719557
#2	12.66802	27.82186	.1942086	-.012713	.6595291	.1918928	.5776556
#3	12.77329	27.85440	.1930555	-.009743	.6533972	.1937618	.5762773

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.843891	8.567160	.0747837	.0098879	1.240436	11.49891	.0671872
Stddev	.427546	.100208	.0059263	.0005238	.010459	.04456	.0010068
%RSD	23.18715	1.169672	7.924558	5.297054	.8431497	.3875300	1.498432
#1	1.555194	8.663952	.0746262	.0100506	1.249138	11.54686	.0680135
#2	1.641417	8.573673	.0689378	.0093021	1.243336	11.49110	.0674822
#3	2.335062	8.463855	.0807872	.0103111	1.228833	11.45876	.0660659

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5200-02 Acquired: 01/08/2025 23:57:58 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMT5 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.9053616	-.078947	.0815316
Stddev	.0131456	.000596	.0028130
%RSD	1.451974	.7543742	3.450220
#1	.9079109	-.078290	.0842126
#2	.8911280	-.079098	.0817791
#3	.9170458	-.079452	.0786030

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2604.087	23399.71	1368.571	1748.480	2266.216
Stddev	20.360	121.31	5.989	10.742	22.427
%RSD	.7818616	.5184049	.4376420	.6143399	.9896147
#1	2581.598	23531.60	1361.671	1757.642	2244.856
#2	2609.397	23292.92	1371.614	1736.658	2264.217
#3	2621.266	23374.62	1372.428	1751.138	2289.576

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5200-03 Acquired: 01/09/2025 0:01:44 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMT6 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0990333	-.032384	.1812066	.0862659	.0179440	51.54990	.4067302
Stddev	.0025730	.003038	.0029604	.0034253	.0051513	.09684	.0019479
%RSD	2.598110	9.382196	1.633705	3.970595	28.70752	.1878557	.4789125
#1	.0969533	-.030251	.1819818	.0900860	.0238907	51.46214	.4062923
#2	.0982360	-.035863	.1779357	.0852432	.0148572	51.53376	.4050385
#3	.1019105	-.031038	.1837023	.0834684	.0150840	51.65379	.4088597

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0075249	.0017554	20.05107	.0765442	.0847309	.1876574	143.8976
Stddev	.0002449	.0001381	.13665	.0000878	.0020136	.0006440	.7241
%RSD	3.254874	7.865087	.6814986	.1147284	2.376508	.3431981	.5032167
#1	.0077631	.0017305	20.11150	.0765472	.0835501	.1872361	143.8583
#2	.0075378	.0019042	19.89463	.0764550	.0835866	.1873373	143.1940
#3	.0072738	.0016315	20.14709	.0766305	.0870559	.1883987	144.6406

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.814675	18.73946	.1092430	-.008950	.5719051	.1527732	.2743468
Stddev	.023213	.07537	.0010676	.000895	.0266447	.0010143	.0019170
%RSD	.6085280	.4021908	.9772271	9.997122	4.658930	.6639011	.6987507
#1	3.800690	18.79746	.1099942	-.009104	.5428090	.1516352	.2764030
#2	3.801864	18.76664	.1080210	-.007989	.5951134	.1531026	.2726088
#3	3.841471	18.65427	.1097140	-.009758	.5777928	.1535819	.2740287

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-3.26639	4.831592	.0466006	.0032715	.2407315	8.372128	.0201096
Stddev	.36854	.053123	.0027969	.0005989	.0050827	.035854	.0015236
%RSD	11.28282	1.099492	6.001925	18.30529	2.111341	.4282503	7.576490
#1	-2.90992	4.808561	.0498233	.0036686	.2464691	8.360865	.0195317
#2	-3.64592	4.793870	.0448070	.0035633	.2367935	8.343258	.0218377
#3	-3.24333	4.892344	.0451714	.0025827	.2389317	8.412261	.0189596

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5200-03 Acquired: 01/09/2025 0:01:44 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMT6 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.9597036	-.080791	.0470935
Stddev	.0030824	.000121	.0018631
%RSD	.3211847	.1503292	3.956232
#1	.9630531	-.080731	.0453087
#2	.9569863	-.080710	.0469458
#3	.9590713	-.080930	.0490262

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2597.490	23437.10	1340.495	1736.324	2350.387
Stddev	21.149	168.20	6.737	19.733	25.410
%RSD	.8142179	.7176591	.5025526	1.136503	1.081107
#1	2599.730	23242.99	1337.559	1714.815	2359.124
#2	2617.430	23539.77	1348.201	1740.565	2370.275
#3	2575.310	23528.55	1335.724	1753.592	2321.761

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5200-04 Acquired: 01/09/2025 0:05:32 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMT7 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1413511	-.045128	.1619199	.1195314	.0254677	86.02284	.7638960
Stddev	.0042887	.000528	.0003419	.0020409	.0052487	.50438	.0046941
%RSD	3.034095	1.169029	.2111461	1.707429	20.60939	.5863349	.6144884
#1	.1425595	-.044668	.1615260	.1182806	.0314305	85.87580	.7610720
#2	.1449060	-.045704	.1620940	.1184272	.0234261	86.58441	.7693146
#3	.1365878	-.045011	.1621398	.1218866	.0215466	85.60832	.7613013

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0110066	.0024851	27.40560	.1252074	.1032740	.3044603	195.5510
Stddev	.0002343	.0001222	.09253	.0022662	.0010531	.0014784	1.6048
%RSD	2.128494	4.916893	.3376163	1.809989	1.019710	.4855722	.8206804
#1	.0107442	.0023823	27.35774	.1229442	.1021580	.3048439	195.1371
#2	.0111948	.0024528	27.51225	.1252013	.1042503	.3057091	197.3223
#3	.0110806	.0026201	27.34680	.1274767	.1034136	.3028280	194.1937

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.226629	30.72028	.1963308	-.011766	.6413520	.1871123	.5627572
Stddev	.019003	.18632	.0004765	.001322	.0188952	.0010945	.0043242
%RSD	.5889437	.6064986	.2426916	11.23753	2.946148	.5849679	.7683916
#1	3.223602	30.77918	.1967637	-.013286	.6355327	.1877782	.5629291
#2	3.246964	30.87002	.1958203	-.010881	.6260509	.1877095	.5583496
#3	3.209321	30.51163	.1964085	-.011130	.6624723	.1858490	.5669928

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.337561	6.409394	.0682928	.0026069	.4816511	10.50616	.0232803
Stddev	.410133	.016037	.0032872	.0008654	.0009554	.05190	.0017867
%RSD	121.4989	.2502072	4.813340	33.19656	.1983646	.4939653	7.674788
#1	.045273	6.390897	.0649282	.0035337	.4810347	10.55006	.0217021
#2	-.287551	6.419408	.0684536	.0018199	.4827516	10.51954	.0252202
#3	-.770405	6.417875	.0714967	.0024672	.4811668	10.44888	.0229185

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5200-04 Acquired: 01/09/2025 0:05:32 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMT7 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.6933947	-.087069	.1033219
Stddev	.0030847	.001353	.0044070
%RSD	.4448689	1.554385	4.265337
#1	.6899544	-.087226	.0982354
#2	.6959139	-.088337	.1059953
#3	.6943159	-.085644	.1057352

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3175.140	28771.74	1662.191	2144.219	2247.129
Stddev	11.126	52.31	7.270	13.770	10.303
%RSD	.3504146	.1818114	.4373627	.6422004	.4585113
#1	3186.882	28792.60	1654.961	2141.072	2256.642
#2	3173.786	28810.40	1662.111	2159.290	2248.562
#3	3164.753	28712.22	1669.500	2132.295	2236.185

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5200-05 Acquired: 01/09/2025 0:09:19 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMX0 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1458881	-.030623	1.025088	.0918771	.0201788	73.87025	1.046466
Stddev	.0090492	.000957	.001560	.0095027	.0084216	.39120	.002856
%RSD	6.202815	3.126470	.1521435	10.34286	41.73477	.5295722	.2729182
#1	.1518023	-.030731	1.023422	.0851810	.0185031	73.93629	1.047012
#2	.1354708	-.031521	1.026514	.1027533	.0293122	74.22422	1.049009
#3	.1503911	-.029616	1.025327	.0876969	.0127210	73.45023	1.043376

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0085912	.0049501	33.09222	.1336408	.0938261	.3004618	149.7536
Stddev	.0005220	.0001589	.20410	.0008314	.0005085	.0048275	.7769
%RSD	6.076081	3.210123	.6167544	.6220917	.5419895	1.606706	.5187686
#1	.0082252	.0047668	33.15671	.1328088	.0944131	.2950575	149.6442
#2	.0083594	.0050355	33.25628	.1344716	.0935456	.3043474	150.5794
#3	.0091889	.0050480	32.86366	.1336420	.0935197	.3019803	149.0372

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.728945	17.26575	.1435435	-.006407	.6318447	.1836872	.6677034
Stddev	.028846	.14541	.0009582	.002149	.0224481	.0032120	.0049715
%RSD	.5035105	.8422077	.6675539	33.54140	3.552781	1.748630	.7445736
#1	5.721021	17.11700	.1427055	-.007970	.6061232	.1806879	.6622162
#2	5.760925	17.40758	.1445882	-.007294	.6419272	.1870763	.6719080
#3	5.704889	17.27268	.1433368	-.003956	.6474836	.1832974	.6689859

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.254274	8.009902	.0682433	.0088518	1.777623	11.77394	.0938510
Stddev	.290608	.018333	.0031452	.0005977	.007713	.17060	.0028401
%RSD	8.930042	.2288774	4.608849	6.752622	.4339099	1.448935	3.026134
#1	3.059103	8.000028	.0701471	.0093871	1.769973	11.59203	.0906404
#2	3.588259	8.031056	.0699698	.0082068	1.785398	11.93035	.0960349
#3	3.115462	7.998623	.0646129	.0089614	1.777499	11.79943	.0948778

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5200-05 Acquired: 01/09/2025 0:09:19 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMX0 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.8240595	-.002565	.0702703
Stddev	.0125677	.000350	.0028311
%RSD	1.525092	13.63175	4.028891
#1	.8140221	-.002338	.0734081
#2	.8381548	-.002968	.0694959
#3	.8200017	-.002390	.0679070

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2396.946	21524.09	1253.912	1603.058	2304.830
Stddev	7.207	86.22	12.424	3.823	2.211
%RSD	.3006740	.4005602	.9907872	.2384698	.0959168
#1	2393.453	21444.12	1266.465	1607.252	2302.669
#2	2392.151	21512.74	1241.622	1602.153	2304.734
#3	2405.234	21615.43	1253.649	1599.769	2307.087

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5200-06 Acquired: 01/09/2025 0:13:06 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMX1 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1649538	-.025671	2.739810	.0879244	.0289258	63.86712
Stddev	.0041895	.005658	.006545	.0056550	.0029548	.30700
%RSD	2.539827	22.04074	.2388879	6.431648	10.21510	.4806847
#1	.1691382	-.031938	2.743319	.0863426	.0259329	63.77955
#2	.1607591	-.020939	2.743853	.0942019	.0290034	64.20839
#3	.1649641	-.024135	2.732259	.0832288	.0318410	63.61343

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.981095	.0088573	.0094401	55.72136	.1408984	.1196004
Stddev	.009367	.0004007	.0002074	.17798	.0013011	.0006869
%RSD	.4728220	4.524429	2.197171	.3194104	.9234428	.5743714
#1	1.980821	.0085936	.0094079	55.92392	.1396314	.1201702
#2	1.990597	.0086598	.0096617	55.65012	.1422311	.1197934
#3	1.971869	.0093184	.0092506	55.59003	.1408326	.1188376

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8364244	163.6147	8.821980	18.47108	.1785946	-.005544
Stddev	.0064814	.4054	.025744	.25025	.0015006	.000730
%RSD	.7748915	.2477884	.2918218	1.354818	.8402079	13.17320
#1	.8426256	164.0821	8.850414	18.42922	.1801657	-.004937
#2	.8296952	163.4026	8.815276	18.24441	.1771762	-.006355
#3	.8369522	163.3593	8.800252	18.73963	.1784419	-.005341

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8142988	.1704934	2.845839	1.657609	F 14.33676	.0708499
Stddev	.0335961	.0008571	.010660	.162178	.04564	.0010709
%RSD	4.125768	.5026853	.3745679	9.783854	.3183670	1.511551
#1	.8384238	.1698159	2.857398	1.532303	14.37485	.0705529
#2	.7759269	.1702075	2.843722	1.599741	14.34927	.0699588
#3	.8285457	.1714569	2.836397	1.840784	14.28617	.0720379

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5200-06 Acquired: 01/09/2025 0:13:06 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMX1 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0129203	3.959434	12.54377	.1859015	.8093913	.0739097
Stddev	.0008635	.009630	.10268	.0014045	.0026856	.0004470
%RSD	6.683343	.2432130	.8186134	.7555076	.3318009	.6048311
#1	.0134087	3.969555	12.63820	.1873847	.8062984	.0736854
#2	.0119233	3.958365	12.43445	.1857281	.8111318	.0736192
#3	.0134290	3.950384	12.55866	.1845918	.8107437	.0744245

Elem	Li6707
Units	ppm
Avg	.0701617
Stddev	.0036883
%RSD	5.256892
#1	.0665842
#2	.0699493
#3	.0739517

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2542.172	23003.15	1324.940	1712.047	2296.265
Stddev	5.951	85.32	9.996	14.597	6.905
%RSD	.2340725	.3709188	.7544667	.8525912	.3007016
#1	2548.116	22933.10	1313.599	1698.816	2296.808
#2	2542.185	22978.18	1332.469	1709.620	2289.104
#3	2536.215	23098.18	1328.752	1727.705	2302.882

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5200-07 Acquired: 01/09/2025 0:16:51 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMX2 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2271304	-.033527	3.976914	.1251502	.0404050	80.98815
Stddev	.0041442	.003897	.008700	.0033707	.0020648	.19219
%RSD	1.824571	11.62254	.2187627	2.693346	5.110252	.2373075
#1	.2299726	-.036087	3.969213	.1238871	.0380424	81.06100
#2	.2223753	-.035450	3.975177	.1225934	.0413087	81.13327
#3	.2290434	-.029042	3.986351	.1289700	.0418639	80.77019

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.560701	.0114691	.0151395	72.38707	.1743485	.1570951
Stddev	.006880	.0001308	.0000807	.08549	.0010071	.0007094
%RSD	.1932154	1.140562	.5331465	.1181071	.5776218	.4515617
#1	3.556718	.0114666	.0150566	72.47460	.1751689	.1562763
#2	3.568645	.0116011	.0152179	72.38284	.1746520	.1575250
#3	3.556740	.0113395	.0151440	72.30377	.1732246	.1574840

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.162192	209.3840	12.54175	24.01642	.2433875	-.009093
Stddev	.005432	.3883	.02652	.10140	.0003427	.000923
%RSD	.4674145	.1854393	.2114428	.4222305	.1407979	10.14583
#1	1.159454	209.4527	12.53117	24.10900	.2430641	-.008530
#2	1.158673	209.7333	12.57192	24.03222	.2437467	-.008592
#3	1.168449	208.9659	12.52215	23.90805	.2433517	-.010158

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.520483	.2144358	3.861061	1.873556	F 19.32790	.0870597
Stddev	.006324	.0007187	.012689	.054168	.05258	.0029317
%RSD	.4158911	.3351724	.3286453	2.891162	.2720427	3.367515
#1	1.526904	.2136520	3.875320	1.901956	19.27001	.0902719
#2	1.520285	.2150640	3.856852	1.907617	19.37269	.0845280
#3	1.514261	.2145914	3.851011	1.811094	19.34100	.0863793

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5200-07 Acquired: 01/09/2025 0:16:51 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMX2 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0154224	4.373781	11.20258	.3352263	.8867960	.1673656
Stddev	.0005968	.005492	.04384	.0040421	.0061668	.0007255
%RSD	3.869592	.1255571	.3913538	1.205770	.6954081	.4334899
#1	.0152938	4.372156	11.17488	.3305940	.8834519	.1677423
#2	.0160730	4.379902	11.17974	.3380372	.8939126	.1678252
#3	.0149004	4.369286	11.25313	.3370475	.8830236	.1665292

Elem	Li6707
Units	ppm
Avg	.1060643
Stddev	.0074110
%RSD	6.987284
#1	.0981614
#2	.1128585
#3	.1071731

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2640.251	24087.23	1387.082	1801.171	2232.713
Stddev	1.580	151.65	8.736	13.560	4.281
%RSD	.0598374	.6295970	.6298144	.7528594	.1917417
#1	2641.888	23930.77	1381.524	1786.275	2236.052
#2	2640.129	24233.57	1397.151	1812.797	2227.886
#3	2638.735	24097.35	1382.570	1804.440	2234.200

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5200-11 Acquired: 01/09/2025 0:20:37 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMX4 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2200703	-.027530	2.718262	.1234603	.0352792	77.65521
Stddev	.0026693	.005734	.015827	.0021723	.0016939	.87841
%RSD	1.212918	20.82844	.5822620	1.759492	4.801496	1.131168
#1	.2170501	-.021761	2.700429	.1253275	.0346694	76.77135
#2	.2221131	-.033229	2.723718	.1210762	.0339745	77.66622
#3	.2210476	-.027600	2.730640	.1239772	.0371935	78.52806

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.435246	.0106212	.0129394	56.58683	.1713727	.1635502
Stddev	.025529	.0003239	.0000990	.89340	.0009304	.0015545
%RSD	1.048325	3.049904	.7649579	1.578809	.5429359	.9504513
#1	2.409328	.0103332	.0128252	55.59134	.1707828	.1622792
#2	2.436043	.0105586	.0129964	56.85024	.1708900	.1652834
#3	2.460368	.0109719	.0129968	57.31890	.1724453	.1630882

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.013850	206.5590	12.48030	20.41840	.2249487	-.009123
Stddev	.013898	2.3562	.11908	.07733	.0010438	.001330
%RSD	1.370774	1.140675	.9541202	.3787064	.4639986	14.57485
#1	1.004488	204.1024	12.34528	20.41458	.2237775	-.009978
#2	1.007244	206.7745	12.52527	20.34306	.2252879	-.007591
#3	1.029818	208.8000	12.57034	20.49757	.2257807	-.009800

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8976260	.1863016	2.800043	1.986021	F 18.57959	.0782348
Stddev	.0270151	.0030622	.008993	.274245	.10399	.0034994
%RSD	3.009621	1.643665	.3211879	13.80875	.5597102	4.472889
#1	.8664325	.1834028	2.806082	1.717573	18.45967	.0822249
#2	.9130080	.1859975	2.789707	2.265716	18.63427	.0756880
#3	.9134373	.1895044	2.804338	1.974774	18.64484	.0767913

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5200-11 Acquired: 01/09/2025 0:20:37 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMX4 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0125025	2.912319	10.04365	.1937055	.8131234	.0719593
Stddev	.0009778	.022295	.12015	.0012933	.0174926	.0005697
%RSD	7.821184	.7655575	1.196324	.6676665	2.151289	.7916306
#1	.0127542	2.886594	9.96092	.1922281	.7932248	.0713054
#2	.0114235	2.926055	9.98855	.1946329	.8200681	.0722242
#3	.0133300	2.924308	10.18147	.1942555	.8260773	.0723482

Elem	Li6707
Units	ppm
Avg	.0986768
Stddev	.0052097
%RSD	5.279518
#1	.0935180
#2	.0985765
#3	.1039358

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2705.768	24573.22	1432.469	1834.279	2228.407
Stddev	4.409	149.89	14.416	2.453	5.576
%RSD	.1629566	.6099728	1.006375	.1337491	.2502420
#1	2710.655	24713.72	1447.284	1835.249	2234.561
#2	2704.561	24415.44	1431.636	1831.489	2223.689
#3	2702.088	24590.50	1418.488	1836.099	2226.973

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5200-12 Acquired: 01/09/2025 0:24:23 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMX5 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1712293	-.022251	2.399210	.0991394	.0289083	69.60337
Stddev	.0040917	.002006	.001557	.0055913	.0063025	1.48812
%RSD	2.389627	9.013211	.0649057	5.639830	21.80170	2.137993
#1	.1720982	-.020623	2.400828	.1042891	.0319614	67.88931
#2	.1748168	-.021639	2.399081	.0931922	.0331027	70.56526
#3	.1667729	-.024491	2.397722	.0999368	.0216607	70.35554

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.684057	.0086072	.0075100	61.77106	.1383101	.1221604
Stddev	.037319	.0000526	.0000578	1.50916	.0013747	.0006856
%RSD	2.216003	.6110646	.7696112	2.443149	.9939497	.5612422
#1	1.641126	.0086092	.0074433	60.07772	.1398820	.1222614
#2	1.708742	.0086588	.0075433	62.97410	.1377157	.1227899
#3	1.702303	.0085537	.0075434	62.26137	.1373325	.1214298

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6104681	163.9414	9.872997	23.48056	.2156611	-.007205
Stddev	.0147665	4.0049	.234395	.72879	.0007151	.002927
%RSD	2.418878	2.442872	2.374102	3.103821	.3315930	40.63199
#1	.5937078	159.4047	9.606314	22.66323	.2164868	-.006919
#2	.6215630	166.9859	10.04635	24.06276	.2152561	-.010264
#3	.6161334	165.4337	9.96633	23.71570	.2152404	-.004430

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7533425	.1742251	2.131820	1.969371	F 12.71819	.0917319
Stddev	.0231305	.0035250	.010493	.275458	.02751	.0035065
%RSD	3.070388	2.023236	.4921967	13.98713	.2162735	3.822597
#1	.7337973	.1703418	2.141996	1.687242	12.72366	.0876974
#2	.7788793	.1772230	2.132428	2.237635	12.74255	.0934534
#3	.7473509	.1751104	2.121037	1.983237	12.68836	.0940450

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5200-12 Acquired: 01/09/2025 0:24:23 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMX5 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0124356	4.122692	10.36540	.1390424	.8870210	.0247613
Stddev	.0005041	.020559	.23892	.0016066	.0172161	.0003715
%RSD	4.053571	.4986785	2.305009	1.155443	1.940889	1.500367
#1	.0119404	4.145080	10.09311	.1374572	.8674630	.0245052
#2	.0124181	4.118335	10.54001	.1390005	.8998835	.0251874
#3	.0129481	4.104661	10.46307	.1406695	.8937166	.0245913

Elem	Li6707
Units	ppm
Avg	.0769493
Stddev	.0093497
%RSD	12.15045
#1	.0691120
#2	.0744375
#3	.0872983

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2578.455	23370.87	1352.789	1737.585	2298.974
Stddev	9.450	161.00	27.215	14.432	2.053
%RSD	.3665156	.6889055	2.011744	.8305608	.0893066
#1	2581.871	23197.93	1382.919	1721.428	2298.165
#2	2585.721	23398.25	1329.992	1742.128	2301.308
#3	2567.771	23516.43	1345.458	1749.199	2297.449

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5200-13 Acquired: 01/09/2025 0:28:09 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMX6 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2070539	-.019967	2.720859	.1032202	.0300587	70.69750
Stddev	.0063759	.000132	.012826	.0105600	.0041189	.38302
%RSD	3.079338	.6618453	.4713831	10.23051	13.70297	.5417682
#1	.2144162	-.019912	2.706187	.1091895	.0253097	70.53411
#2	.2033827	-.019872	2.726449	.1094435	.0322073	71.13512
#3	.2033629	-.020118	2.729940	.0910275	.0326591	70.42328

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.076067	.0095550	.0091204	106.5913	.1441126	.1464598
Stddev	.015650	.0001808	.0000744	.2829	.0010433	.0005630
%RSD	.7538341	1.892411	.8160304	.2654457	.7239757	.3843823
#1	2.066566	.0093655	.0090565	106.3155	.1446752	.1460665
#2	2.094130	.0095738	.0091027	106.8809	.1429087	.1462083
#3	2.067505	.0097257	.0092021	106.5776	.1447539	.1471047

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7847257	182.5477	12.18431	30.54261	.2286746	-.006683
Stddev	.0089364	1.0627	.06618	.10066	.0018774	.002134
%RSD	1.138794	.5821620	.5431504	.3295838	.8210023	31.93474
#1	.7782453	181.5738	12.10907	30.51602	.2270458	-.007968
#2	.7949202	183.6812	12.23349	30.45791	.2282501	-.004219
#3	.7810115	182.3881	12.21037	30.65390	.2307280	-.007862

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9138553	.1786581	3.430123	2.399976	F 12.63107	.0874411
Stddev	.0127440	.0022029	.017772	.210642	.07454	.0003299
%RSD	1.394536	1.233008	.5181168	8.776855	.5901187	.3772634
#1	.9007559	.1775466	3.447430	2.576288	12.54536	.0871088
#2	.9262114	.1811953	3.411920	2.456926	12.68076	.0877685
#3	.9145988	.1772324	3.431019	2.166714	12.66709	.0874462

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5200-13 Acquired: 01/09/2025 0:28:09 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMX6 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0132213	3.311853	10.45645	.1575387	.9376126	.0807754
Stddev	.0012584	.022955	.13116	.0019427	.0115379	.0008968
%RSD	9.517720	.6931070	1.254320	1.233135	1.230557	1.110216
#1	.0126757	3.288121	10.34038	.1554379	.9400601	.0806926
#2	.0123278	3.313496	10.59873	.1579078	.9477304	.0817106
#3	.0146603	3.333942	10.43023	.1592702	.9250474	.0799228

Elem	Li6707
Units	ppm
Avg	.0714776
Stddev	.0036379
%RSD	5.089507
#1	.0716161
#2	.0677724
#3	.0750442

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2537.861	23022.05	1338.600	1721.466	2219.201
Stddev	9.110	100.21	12.082	14.764	10.402
%RSD	.3589635	.4352760	.9026219	.8576361	.4687244
#1	2546.328	22927.59	1348.074	1706.487	2228.560
#2	2528.222	23127.16	1324.993	1736.005	2208.002
#3	2539.033	23011.40	1342.732	1721.906	2221.041

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5200-14 Acquired: 01/09/2025 0:31:55 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMX7 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1896519	-.021708	2.573025	.0945582	.0251136	73.33095
Stddev	.0070816	.005851	.002589	.0057957	.0032457	.23511
%RSD	3.733986	26.95412	.1006190	6.129265	12.92419	.3206082
#1	.1923548	-.015402	2.571391	.0988411	.0213912	73.48061
#2	.1949839	-.026961	2.571674	.0968702	.0265975	73.45226
#3	.1816169	-.022762	2.576010	.0879633	.0273521	73.05996

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.333486	.0088881	.0084755	92.65810	.1533857	.1370498
Stddev	.010039	.0002429	.0001390	.46794	.0015681	.0007573
%RSD	.4302185	2.732365	1.640001	.5050146	1.022334	.5525640
#1	2.339264	.0087559	.0083404	93.04658	.1546906	.1378648
#2	2.339300	.0087401	.0084679	92.13863	.1538204	.1363678
#3	2.321894	.0091684	.0086181	92.78910	.1516461	.1369168

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7310844	167.9727	10.88897	30.66910	.2193663	-.005290
Stddev	.0055279	.5725	.02709	.19944	.0002190	.001661
%RSD	.7561257	.3408493	.2488094	.6502950	.0998455	31.39642
#1	.7338326	168.5746	10.91221	30.71355	.2191140	-.005864
#2	.7247210	167.4350	10.89547	30.84256	.2194763	-.003418
#3	.7346997	167.9084	10.85921	30.45118	.2195084	-.006588

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.394257	.1784226	2.725287	4.215846	F 11.98537	.0856165
Stddev	.042735	.0025665	.009193	.348185	.00742	.0005673
%RSD	1.784897	1.438410	.3373355	8.258956	.0619113	.6625642
#1	2.426608	.1808814	2.721240	4.049154	11.98637	.0862674
#2	2.345812	.1757606	2.718812	4.616040	11.97750	.0853550
#3	2.410351	.1786259	2.735810	3.982343	11.99224	.0852273

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5200-14 Acquired: 01/09/2025 0:31:55 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMX7 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0127145	3.308636	11.90142	.2191496	1.148229	.0744281
Stddev	.0009169	.009966	.12037	.0008477	.003730	.0000479
%RSD	7.211647	.3012247	1.011388	.3868050	.3248450	.0644006
#1	.0120834	3.314925	11.98329	.2193986	1.144952	.0744728
#2	.0122938	3.297144	11.76321	.2198449	1.147447	.0743775
#3	.0137663	3.313837	11.95775	.2182053	1.152288	.0744341

Elem	Li6707
Units	ppm
Avg	.0805714
Stddev	.0036459
%RSD	4.525105
#1	.0774632
#2	.0796662
#3	.0845846

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2570.531	22798.17	1341.717	1703.663	2260.841
Stddev	4.030	190.86	6.121	9.304	4.707
%RSD	.1567843	.8371578	.4561783	.5461356	.2081979
#1	2567.479	22894.75	1340.254	1713.299	2257.110
#2	2575.099	22578.33	1348.437	1694.730	2266.129
#3	2569.013	22921.43	1336.460	1702.960	2259.283

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: CCV136 Acquired: 01/09/2025 0:35:42 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV136 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.854763	4.638795	23.79996	4.822478	4.827431	368.6263	9.672301
Stddev	.013834	.023112	.10684	.029917	.041255	1.8528	.060530
%RSD	.2849536	.4982288	.4488905	.6203686	.8545882	.5026158	.6258060
#1	4.853407	4.616193	23.75207	4.808986	4.815761	370.5633	9.740153
#2	4.841657	4.637807	23.72544	4.801682	4.793269	366.8712	9.623849
#3	4.869224	4.662385	23.92236	4.856765	4.873264	368.4445	9.652902

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4858712	2.417416	379.1404	15.21678	2.440321	14.37595	367.3667
Stddev	.0025564	.011101	3.5914	.03281	.009427	.10884	3.2842
%RSD	.5261370	.4591904	.9472537	.2156158	.3862896	.7570836	.8939902
#1	.4882978	2.410292	382.7303	15.25266	2.436502	14.49509	370.9750
#2	.4832024	2.411749	375.5474	15.20938	2.433403	14.28173	364.5521
#3	.4861134	2.430206	379.1436	15.18831	2.451058	14.35103	366.5729

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	13.86896	370.9096	2.425231	1.221600	394.6960	2.395033	14.58340
Stddev	.11081	1.6944	.011840	.001945	1.6134	.014480	.04361
%RSD	.7990094	.4568323	.4882051	.1592182	.4087711	.6045849	.2990097
#1	13.97645	372.5077	2.420704	1.222249	393.1344	2.405891	14.58008
#2	13.75510	369.1330	2.416323	1.219414	396.3566	2.378593	14.62856
#3	13.87532	371.0880	2.438667	1.223138	394.5970	2.400614	14.54154

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	146.6456	4.784188	4.790689	4.770325	4.802837	4.688713	4.851096
Stddev	1.4246	.026763	.032350	.030085	.021867	.037744	.021531
%RSD	.9714695	.5594079	.6752738	.6306795	.4552965	.8050017	.4438477
#1	147.9097	4.767131	4.826636	4.749944	4.805569	4.723024	4.834957
#2	145.1019	4.770398	4.763918	4.756152	4.779732	4.648283	4.842786
#3	146.9253	4.815033	4.781512	4.804879	4.823209	4.694831	4.875544

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: CCV136 Acquired: 01/09/2025 0:35:42 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV136 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	4.676278	4.549390	4.893121
Stddev	.022460	.031629	.058158
%RSD	.4803056	.6952373	1.188573
#1	4.701684	4.581034	4.946084
#2	4.659059	4.517775	4.830882
#3	4.668092	4.549362	4.902396

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1811.270	16767.99	1068.102	1221.291	1804.941
Stddev	6.204	75.77	9.775	3.408	3.635
%RSD	.3425437	.4518858	.9152104	.2790748	.2014163
#1	1816.144	16748.11	1061.177	1224.134	1808.258
#2	1813.380	16851.72	1079.284	1222.225	1805.511
#3	1804.286	16704.14	1063.844	1217.512	1801.055

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: CCB136 Acquired: 01/09/2025 0:39:27 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB136 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.003083	.0003085	.0055571	.0117244	-.000778	.0729019
Stddev	.001969	.0006438	.0015433	.0065413	.002385	.0469742
%RSD	63.86230	208.6779	27.77151	55.79238	306.5725	64.43475
#1	-.003532	-.000434	.0066016	.0131166	.000487	.0186630
#2	-.000928	.000655	.0037844	.0045991	-.003529	.1004415
#3	-.004788	.000705	.0062852	.0174576	.000708	.0996013

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0037510	-.000125	.0000442	-.009031	.0013988	.0001581
Stddev	.0023663	.000050	.0001182	.037861	.0009366	.0003286
%RSD	63.08437	39.74073	267.4584	419.2278	66.95478	207.8450
#1	.0062731	-.000073	.0001805	-.052677	.0023879	.0000131
#2	.0015797	-.000128	-.000032	.014969	.0005254	-.000073
#3	.0034001	-.000172	-.000016	.010615	.0012833	.000534

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001646	.0611128	.0042126	-.181385	-.001190	-.000260
Stddev	.001160	.0489967	.0047331	.041790	.000628	.004827
%RSD	70.50640	80.17426	112.3545	23.03915	52.78446	1855.085
#1	-.002985	.1138573	.0006871	-.217036	-.001536	.005230
#2	-.000934	.0170151	.0095920	-.135397	-.000465	-.003837
#3	-.001018	.0524660	.0023588	-.191722	-.001569	-.002174

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1029726	.0004207	.0020707	.5689422	F -.012326	.0117137
Stddev	.0196029	.0011649	.0012941	.2436449	.002310	.0047952
%RSD	19.03702	276.8723	62.49282	42.82420	18.74210	40.93681
#1	.0826415	-.000915	.0035449	.6719995	-.011481	.0132035
#2	.1217556	.001228	.0015452	.7441231	-.014940	.0155872
#3	.1045206	.000949	.0011221	.2907039	-.010558	.0063504

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: CCB136 Acquired: 01/09/2025 0:39:27 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB136 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000299	-.022691	.0052688	.0010197	.0033121	-.000379
Stddev	.000864	.004119	.0076735	.0005351	.0051533	.000740
%RSD	288.5267	18.15026	145.6420	52.47511	155.5904	195.3512
#1	-.000943	-.018160	.0054358	.0004147	-.000366	.000198
#2	-.000637	-.023708	-.002487	.0012135	.009202	-.001214
#3	.000682	-.026206	.012857	.0014310	.001100	-.000121

Elem	Li6707
Units	ppm
Avg	F .0420523
Stddev	.0113067
%RSD	26.88723
#1	.0369310
#2	.0550135
#3	.0342124

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2190.823	19831.42	1098.270	1470.581	2571.698
Stddev	3.094	32.18	8.116	4.140	.451
%RSD	.1412195	.1622823	.7389750	.2815241	.0175247
#1	2193.822	19808.18	1107.618	1475.335	2571.327
#2	2187.642	19817.94	1093.027	1467.767	2571.567
#3	2191.004	19868.16	1094.164	1468.642	2572.200

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P4317-08DLX2 Acquired: 01/09/2025 0:43:27 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYDB99 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2698273	-.038466	.3359750	.0967583	.0287051	72.21324	.5795454
Stddev	.0019489	.003255	.0070561	.0058363	.0035146	1.15111	.0092282
%RSD	.7222738	8.462439	2.100179	6.031791	12.24400	1.594042	1.592317
#1	.2682769	-.039775	.3292418	.0924628	.0257000	71.28569	.5719199
#2	.2691899	-.040864	.3353686	.0944090	.0325698	71.85251	.5769122
#3	.2720150	-.034761	.3433148	.1034031	.0278455	73.50151	.5898040

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0070180	.0015041	75.86761	.2511186	.1391655	.4578099	183.9712
Stddev	.0002946	.0000851	1.25071	.0011891	.0013448	.0062646	3.1494
%RSD	4.197553	5.655439	1.648538	.4735208	.9663268	1.368388	1.711897
#1	.0073575	.0015786	74.59515	.2524229	.1381553	.4514821	181.6244
#2	.0068292	.0014114	75.91233	.2508379	.1386494	.4579385	182.7387
#3	.0068675	.0015223	77.09536	.2500950	.1406920	.4640093	187.5505

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.738995	45.19350	.1855679	-.013859	1.201245	.4956717	.6406008
Stddev	.060287	.55987	.0014319	.001907	.012022	.0071943	.0071674
%RSD	1.612384	1.238820	.7716218	13.75648	1.000790	1.451415	1.118851
#1	3.704591	44.91448	.1842662	-.015452	1.198203	.4877295	.6486361
#2	3.703786	44.82797	.1853357	-.011747	1.214496	.4975337	.6382999
#3	3.808607	45.83804	.1871016	-.014378	1.191036	.5017519	.6348664

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.643128	3.596135	.0599966	.0042426	.6806558	.4213789	.0722280
Stddev	.389970	.041551	.0021932	.0014169	.0077673	.0049507	.0001999
%RSD	4.511902	1.155438	3.655606	33.39633	1.141151	1.174871	.2766960
#1	8.608917	3.560204	.0591266	.0040621	.6765917	.4218159	.0724182
#2	8.271392	3.586565	.0583719	.0029247	.6757637	.4162242	.0720197
#3	9.049076	3.641637	.0624914	.0057411	.6896120	.4260966	.0722461

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P4317-08DLX2 Acquired: 01/09/2025 0:43:27 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYDB99 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	1.521943	.0547834	.0449560
Stddev	.016687	.0010681	.0040512
%RSD	1.096413	1.949719	9.011516
#1	1.513410	.0559897	.0437011
#2	1.511248	.0544029	.0416808
#3	1.541171	.0539577	.0494862

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2204.693	19919.47	1170.688	1491.350	2234.921
Stddev	21.597	62.99	12.688	13.327	24.998
%RSD	.9796001	.3162214	1.083768	.8936225	1.118521
#1	2218.565	19850.96	1183.255	1476.187	2253.452
#2	2215.705	19932.58	1170.925	1496.658	2244.822
#3	2179.810	19974.88	1157.883	1501.205	2206.489

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: PBS001 Acquired: 01/09/2025 0:47:15 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS001 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.005095	-.000644	.0063416	.0015755	.0024494	-.028473	.0016643
Stddev	.005525	.004389	.0018059	.0050098	.0026404	.078624	.0036055
%RSD	108.4426	681.0243	28.47736	317.9792	107.7992	276.1340	216.6385
#1	.001284	-.003272	.0072154	.0015551	-.000568	-.006505	.0028242
#2	-.008179	.004422	.0042650	-.003424	.003577	.036830	-.002378
#3	-.008390	-.003083	.0075445	.006595	.004338	-.115745	.004547

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000427	.0000815	-.062202	.0013871	.0002743	-.002678	.0196466
Stddev	.000288	.0000551	.011112	.0010831	.0005579	.001343	.0084418
%RSD	67.46412	67.52998	17.86455	78.08204	203.3804	50.15689	42.96814
#1	-.000218	.0000194	-.063003	.0015126	.0009111	-.002957	.0100308
#2	-.000308	.0001008	-.050711	.0002467	.0000407	-.003859	.0258385
#3	-.000756	.0001244	-.072892	.0024019	-.000129	-.001217	.0230706

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005782	-.038229	-.000989	-.001220	.0367341	-.000363	.0001102
Stddev	.0003708	.137521	.000260	.001260	.0581848	.000916	.0003923
%RSD	64.12785	359.7290	26.32762	103.2493	158.3943	252.1508	356.1096
#1	.0004026	.116292	-.000713	-.002507	-.012684	-.001209	.0005336
#2	.0003279	-.147185	-.001230	-.001165	.100862	.000610	-.000241
#3	.0010042	-.083794	-.001024	.000011	.022024	-.000491	.000038

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.354744	-.009459	-.008111	-.000219	-.029201	-.000919	-.000009
Stddev	.322505	.000530	.003019	.001210	.008506	.000369	.000313
%RSD	90.91209	5.607352	37.22383	551.8870	29.13010	40.17387	3376.222
#1	-.508189	-.010067	-.005691	-.000647	-.031272	-.000838	.000272
#2	.015833	-.009223	-.011495	.001147	-.019850	-.001322	.000047
#3	-.571876	-.009088	-.007147	-.001158	-.036481	-.000597	-.000347

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: PBS001 Acquired: 01/09/2025 0:47:15 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS001 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.0077670	-.000598	.0148475
Stddev	.0046883	.000520	.0142209
%RSD	60.36203	86.88016	95.77975
#1	.0036266	-.000423	.0089326
#2	.0068168	-.000188	.0045387
#3	.0128577	-.001183	.0310711

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2208.788	19901.74	1140.662	1472.665	2603.837
Stddev	15.117	93.20	5.242	4.863	14.523
%RSD	.6844080	.4683141	.4595955	.3302499	.5577357
#1	2225.607	19990.94	1143.597	1471.100	2620.546
#2	2204.426	19909.29	1134.609	1478.118	2594.247
#3	2196.332	19805.00	1143.779	1468.776	2596.720

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: LCS001 Acquired: 01/09/2025 0:51:14 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS001 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0168326	.0496571	.0217929	.0696844	.1048012	.4762167
Stddev	.0022742	.0015451	.0015019	.0061354	.0039148	.0851709
%RSD	13.51066	3.111445	6.891779	8.804499	3.735467	17.88491
#1	.0148621	.0510823	.0204492	.0724215	.1030612	.5085197
#2	.0163145	.0480151	.0215152	.0626569	.1092843	.5405107
#3	.0193211	.0498737	.0234143	.0739749	.1020580	.3796197

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4024830	.0098489	.0086384	9.736486	.0214093	.0928363
Stddev	.0120607	.0000734	.0002681	.259998	.0003280	.0007718
%RSD	2.996582	.7451024	3.103979	2.670352	1.532153	.8314039
#1	.3886148	.0098581	.0083311	9.453078	.0214473	.0924845
#2	.4105196	.0097714	.0087588	9.963975	.0217166	.0937214
#3	.4083146	.0099173	.0088252	9.792406	.0210638	.0923030

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0565896	.1837747	.0324856	9.786027	.0696180	.0196255
Stddev	.0018782	.0109075	.0057811	.479764	.0001955	.0011642
%RSD	3.318947	5.935238	17.79606	4.902537	.2808214	5.932172
#1	.0546343	.1871790	.0258309	9.274418	.0694933	.0205840
#2	.0583798	.1715710	.0362697	10.22586	.0698433	.0183300
#3	.0567547	.1925739	.0353561	9.85781	.0695174	.0199627

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.66935	.1064513	.1158301	9.072429	F .0066449	F -.005627
Stddev	.22936	.0038480	.0025012	.874382	.0026889	.004262
%RSD	1.965515	3.614778	2.159339	9.637793	40.46588	75.73089
#1	11.41121	.1020609	.1163437	8.067096	.0064821	-.005733
#2	11.74714	.1092386	.1180346	9.494330	.0094116	-.009835
#3	11.84970	.1080543	.1131120	9.655861	.0040411	-.001314

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: LCS001 Acquired: 01/09/2025 0:51:14 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS001 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0191312	F .1263130	F 1.079962	.0122948	.1871287	.2047662
Stddev	.0006497	.0030589	.019672	.0007724	.0090181	.0050760
%RSD	3.395866	2.421645	1.821538	6.281977	4.819183	2.478944
#1	.0190656	.1247760	1.059128	.0124856	.1825815	.1990868
#2	.0198111	.1298356	1.082538	.0114449	.1975151	.2088606
#3	.0185168	.1243275	1.098218	.0129539	.1812895	.2063511

Elem	Li6707
Units	ppm
Avg	.0367038
Stddev	.0085287
%RSD	23.23666
#1	.0287641
#2	.0356279
#3	.0457195

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2176.328	19566.17	1118.927	1455.640	2451.228
Stddev	8.334	291.07	22.542	18.828	9.497
%RSD	.3829332	1.487617	2.014587	1.293447	.3874513
#1	2184.110	19485.35	1144.806	1451.745	2462.134
#2	2167.535	19324.05	1108.406	1439.064	2444.778
#3	2177.339	19889.10	1103.570	1476.111	2446.772

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: LCSD001 Acquired: 01/09/2025 0:55:08 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCSD001 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0052964	.0292071	.0122888	.0380819	.0509056	.2419293	.2104345
Stddev	.0049946	.0008731	.0029847	.0010232	.0021810	.1029125	.0027155
%RSD	94.30187	2.989361	24.28769	2.686714	4.284427	42.53826	1.290407
#1	.0061672	.0300687	.0152169	.0386049	.0484208	.2107068	.2080579
#2	-.000076	.0283229	.0123991	.0387378	.0517927	.3568374	.2098514
#3	.009798	.0292297	.0092506	.0369030	.0525032	.1582438	.2133941

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0048787	.0042008	5.064450	.0114290	.0469585	.0281493	.1090323
Stddev	.0002310	.0000926	.034420	.0023880	.0001710	.0007979	.0304688
%RSD	4.734549	2.203977	.6796336	20.89435	.3642392	2.834573	27.94471
#1	.0046899	.0042033	5.025870	.0088070	.0469300	.0273814	.1239326
#2	.0051363	.0041069	5.092013	.0134793	.0468035	.0289742	.1291835
#3	.0048100	.0042921	5.075466	.0120008	.0471420	.0280924	.0739809

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0189816	5.031400	.0346970	.0090950	6.095729	.0549247	.0592666
Stddev	.0036276	.143845	.0010456	.0015801	.043464	.0011090	.0025671
%RSD	19.11113	2.858943	3.013396	17.37352	.7130315	2.019154	4.331487
#1	.0157006	4.868912	.0358861	.0072726	6.052836	.0553715	.0563036
#2	.0183670	5.142469	.0339216	.0099296	6.139744	.0536620	.0606729
#3	.0228772	5.082820	.0342833	.0100828	6.094607	.0557407	.0608233

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.944851	-.000616	-.004474	.0090943	.0542059	.5591537	.0063765
Stddev	.558165	.002876	.000549	.0007592	.0011309	.0023055	.0012493
%RSD	11.28780	466.5782	12.26575	8.348255	2.086243	.4123121	19.59210
#1	4.319094	.002431	-.004396	.0084204	.0530908	.5612901	.0064598
#2	5.391405	-.003282	-.003969	.0089456	.0541749	.5594610	.0050876
#3	5.124053	-.000997	-.005058	.0099168	.0553519	.5567100	.0075820

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: LCSD001 Acquired: 01/09/2025 0:55:08 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCSD001 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.0996984	.1059747	.0211743
Stddev	.0076227	.0004460	.0029771
%RSD	7.645751	.4208289	14.05974
#1	.0926835	.1054601	.0232715
#2	.1078101	.1062477	.0177669
#3	.0986017	.1062164	.0224846

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2162.332	19422.03	1096.664	1444.274	2490.590
Stddev	41.760	372.50	5.507	33.708	49.041
%RSD	1.931252	1.917911	.5021403	2.333883	1.969035
#1	2114.294	19838.05	1101.215	1482.206	2434.376
#2	2189.981	19308.60	1090.542	1432.862	2524.614
#3	2182.722	19119.43	1098.233	1417.754	2512.779

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5199-04A Acquired: 01/09/2025 0:59:06 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMQ3A Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9948993	.0018232	.9091030	.4495075	.1160519	102.2832	.9231799
Stddev	.0011076	.0023487	.0048010	.0062266	.0005631	.5718	.0042233
%RSD	.1113248	128.8217	.5280980	1.385201	.4852271	.5590676	.4574749
#1	.9961688	.0032096	.9048239	.4430162	.1166728	101.9756	.9225267
#2	.9943990	.0031488	.9142948	.4554303	.1155743	101.9311	.9193212
#3	.9941302	-.000889	.9081903	.4500761	.1159085	102.9430	.9276918

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0148223	.0087867	34.62618	.1370138	.2643622	.7607990	286.8396
Stddev	.0003851	.0001478	.03398	.0019759	.0011837	.0015757	.3265
%RSD	2.597947	1.681665	.0981200	1.442132	.4477565	.2071181	.1138135
#1	.0151536	.0087683	34.63759	.1392849	.2629955	.7617940	286.5849
#2	.0149135	.0086490	34.58796	.1356891	.2650273	.7589822	286.7263
#3	.0143998	.0089428	34.65297	.1360673	.2650637	.7616208	287.2076

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	20.43374	20.61039	.2904753	.0003621	.7717060	.1472346	1.278635
Stddev	.02613	.04433	.0005493	.0003952	.0311855	.0003883	.004077
%RSD	.1278927	.2150765	.1891005	109.1581	4.041107	.2637430	.3188561
#1	20.42463	20.64146	.2908483	.0003236	.8076882	.1472040	1.280001
#2	20.41339	20.55963	.2898445	.0007751	.7524919	.1476373	1.281854
#3	20.46321	20.63007	.2907330	-.000013	.7549379	.1468625	1.274050

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.328346	4.006588	.0933273	.0082713	1.157837	5.471095	.0323246
Stddev	.369263	.010758	.0022308	.0005481	.012808	.008511	.0019079
%RSD	112.4617	.2685117	2.390262	6.625875	1.106172	.1555554	5.902266
#1	-.130264	3.995684	.0912358	.0079524	1.144877	5.462018	.0343889
#2	-.754385	4.017194	.0930708	.0089041	1.170486	5.472374	.0306261
#3	-.100388	4.006888	.0956752	.0079574	1.158147	5.478895	.0319588

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5199-04A Acquired: 01/09/2025 0:59:06 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMQ3A Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.4729002	-.192189	.0604015
Stddev	.0055704	.000107	.0029913
%RSD	1.177916	.0558868	4.952417
#1	.4748961	-.192128	.0634378
#2	.4771976	-.192313	.0603093
#3	.4666068	-.192127	.0574573

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2939.831	26543.18	1537.194	1974.817	2201.351
Stddev	17.293	116.85	2.344	6.399	10.962
%RSD	.5882237	.4402445	.1525133	.3240207	.4979671
#1	2959.746	26458.60	1535.811	1969.050	2213.997
#2	2928.610	26494.42	1539.901	1973.699	2194.547
#3	2931.137	26676.52	1535.870	1981.701	2195.510

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5200-08A Acquired: 01/09/2025 1:02:53 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMX3A Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5708045	.0137092	2.933485	.1097410	.0354890	74.31625
Stddev	.0012212	.0003816	.012085	.0091601	.0023359	.98517
%RSD	.2139345	2.783813	.4119553	8.347033	6.582037	1.325640
#1	.5694617	.0135213	2.945175	.0991725	.0330476	75.13358
#2	.5718485	.0141483	2.934239	.1146541	.0377028	73.22236
#3	.5711032	.0134579	2.921041	.1153965	.0357166	74.59281

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.503537	.0101953	.0115578	58.53232	.1523106	.1415392
Stddev	.023820	.0001268	.0001815	.43484	.0002812	.0012306
%RSD	.9514589	1.243951	1.570836	.7428989	.1846147	.8694386
#1	2.522056	.0100505	.0115992	58.96136	.1525875	.1427439
#2	2.476666	.0102866	.0117150	58.09191	.1520253	.1415896
#3	2.511889	.0102489	.0113591	58.54370	.1523190	.1402842

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9917371	193.3520	11.50136	20.05525	.2024477	.0065236
Stddev	.0121543	1.8929	.10431	.06378	.0005741	.0008580
%RSD	1.225554	.9790164	.9069762	.3180156	.2835619	13.15266
#1	1.005613	195.1861	11.60065	20.08775	.2024693	.0075048
#2	.982978	191.4052	11.39266	19.98177	.2030107	.0059137
#3	.986620	193.4646	11.51077	20.09624	.2018632	.0061524

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.604422	.1850750	2.971070	2.020328	F 16.15914	.0823028
Stddev	.051299	.0028594	.018940	.328071	.06996	.0018765
%RSD	3.197369	1.544986	.6374724	16.23851	.4329134	2.279992
#1	1.663559	.1880581	2.950148	2.399133	16.18074	.0802385
#2	1.571903	.1823579	2.976018	1.827606	16.21574	.0827650
#3	1.577804	.1848090	2.987045	1.834246	16.08093	.0839051

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5200-08A Acquired: 01/09/2025 1:02:53 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMX3A Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0133717	3.124611	10.74025	.1976578	.8228923	.0812086
Stddev	.0005705	.015289	.12678	.0015110	.0040739	.0009128
%RSD	4.266502	.4893216	1.180460	.7644749	.4950650	1.124021
#1	.0134155	3.123756	10.87644	.1983146	.8262364	.0821824
#2	.0139190	3.140310	10.62564	.1987293	.8240854	.0803725
#3	.0127806	3.109767	10.71868	.1959295	.8183551	.0810708

Elem	Li6707
Units	ppm
Avg	.0967908
Stddev	.0082909
%RSD	8.565786
#1	.1063627
#2	.0918530
#3	.0921567

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2653.732	23827.74	1398.478	1782.310	2300.621
Stddev	16.736	92.17	15.656	13.587	13.358
%RSD	.6306578	.3867984	1.119538	.7623113	.5806364
#1	2637.996	23910.68	1380.498	1797.854	2288.300
#2	2651.885	23728.52	1409.097	1772.697	2298.745
#3	2671.315	23844.04	1405.840	1776.378	2314.818

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5204-11A Acquired: 01/09/2025 1:06:41 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHNC9A Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0880110	.0322904	2.343559	.1981728	.0180601	47.79973
Stddev	.0095517	.0042327	.001749	.0062375	.0038741	.27488
%RSD	10.85284	13.10836	.0746149	3.147479	21.45143	.5750664
#1	.0868134	.0361033	2.343514	.2053508	.0151591	47.60182
#2	.0981049	.0330322	2.341833	.1950959	.0224597	47.68378
#3	.0791145	.0277358	2.345330	.1940716	.0165615	48.11359

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.122774	.0079487	.0091681	77.43438	.1402948	.0888251
Stddev	.004831	.0000971	.0001072	.09320	.0008901	.0006947
%RSD	.4303008	1.220956	1.169194	.1203597	.6344496	.7820785
#1	1.126608	.0078443	.0092163	77.53904	.1413073	.0894698
#2	1.117348	.0080361	.0090452	77.36033	.1396356	.0880894
#3	1.124368	.0079656	.0092427	77.40378	.1399415	.0889161

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4295659	131.2068	4.837092	28.23603	.2320302	.0119428
Stddev	.0059913	.0989	.007666	.35515	.0020402	.0008373
%RSD	1.394743	.0753897	.1584761	1.257792	.8792943	7.010903
#1	.4316922	131.1416	4.837685	28.54651	.2300158	.0123231
#2	.4228015	131.3206	4.844444	27.84877	.2319793	.0125224
#3	.4342042	131.1581	4.829147	28.31282	.2340954	.0109828

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6928889	.1451443	1.549787	-2.06504	F 10.13892	.0761100
Stddev	.0084739	.0025359	.008338	.06383	.02136	.0054794
%RSD	1.222982	1.747161	.5380287	3.091163	.2106319	7.199342
#1	.7009191	.1455730	1.556083	-2.00649	10.11526	.0766543
#2	.6937157	.1424213	1.552948	-2.13309	10.15678	.0812970
#3	.6840319	.1474384	1.540331	-2.05553	10.14471	.0703788

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5204-11A Acquired: 01/09/2025 1:06:41 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHNC9A Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0160823	5.246330	9.385788	.0960085	.8468054	.1504073
Stddev	.0017480	.005609	.134692	.0010686	.0087557	.0010221
%RSD	10.86918	.1069049	1.435065	1.113012	1.033968	.6795708
#1	.0180989	5.252774	9.418006	.0968998	.8549543	.1514592
#2	.0149982	5.243667	9.237909	.0948239	.8375484	.1494178
#3	.0151500	5.242549	9.501450	.0963018	.8479134	.1503450

Elem	Li6707
Units	ppm
Avg	.0405626
Stddev	.0031618
%RSD	7.794826
#1	.0369967
#2	.0430241
#3	.0416668

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2340.191	21111.13	1224.697	1573.324	2307.728
Stddev	3.232	194.28	8.010	23.223	4.297
%RSD	.1381012	.9202740	.6540564	1.476048	.1861811
#1	2336.611	21156.16	1222.566	1565.475	2306.876
#2	2342.894	20898.28	1233.557	1555.041	2312.386
#3	2341.067	21278.93	1217.968	1599.454	2303.920

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5205-19A Acquired: 01/09/2025 1:10:27 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN51A Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5939389	.0146792	.7726234	.1065175	.0223916	84.70617	.9586326
Stddev	.0065802	.0036825	.0022708	.0056196	.0047865	.30313	.0015954
%RSD	1.107887	25.08633	.2939015	5.275721	21.37618	.3578609	.1664285
#1	.5921708	.0133107	.7716229	.1000398	.0179068	84.50643	.9579668
#2	.5884234	.0118768	.7710246	.1094268	.0218366	85.05497	.9604530
#3	.6012225	.0188499	.7752225	.1100860	.0274313	84.55711	.9574778

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0108892	.0061734	46.89840	.1212262	.1315956	.3326924	181.2517
Stddev	.0002418	.0001304	.15118	.0005186	.0011952	.0066790	.5851
%RSD	2.220808	2.112972	.3223578	.4278288	.9082681	2.007558	.3228104
#1	.0111391	.0062998	46.81133	.1218001	.1327438	.3348074	181.4995
#2	.0108721	.0061811	47.07296	.1207911	.1303583	.3380579	181.6722
#3	.0106563	.0060393	46.81090	.1210874	.1316846	.3252120	180.5835

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.914402	22.27077	.1477960	.0027282	.6565283	.1855388	.6985243
Stddev	.024057	.05618	.0008418	.0008082	.0241536	.0027458	.0022020
%RSD	.2426521	.2522375	.5695614	29.62461	3.678989	1.479891	.3152336
#1	9.928369	22.21566	.1471520	.0031520	.6311027	.1870771	.6967975
#2	9.928213	22.32795	.1474875	.0032364	.6791684	.1871705	.6977715
#3	9.886622	22.26870	.1487485	.0017962	.6593138	.1823687	.7010040

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.517125	9.189185	.0697875	.0077887	1.119974	12.76252	.0420180
Stddev	.317476	.013311	.0050616	.0002102	.002028	.16779	.0007560
%RSD	61.39249	.1448576	7.252854	2.698216	.1810385	1.314690	1.799203
#1	-.161872	9.198775	.0707526	.0076799	1.119856	12.80536	.0423455
#2	-.616410	9.194792	.0643128	.0080309	1.118007	12.90474	.0411535
#3	-.773093	9.173987	.0742970	.0076552	1.122057	12.57747	.0425551

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5205-19A Acquired: 01/09/2025 1:10:27 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN51A Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.4885777	-.007740	.0732426
Stddev	.0101212	.000282	.0027985
%RSD	2.071556	3.642344	3.820865
#1	.4769366	-.007964	.0751404
#2	.4935027	-.007833	.0745587
#3	.4952937	-.007424	.0700287

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2638.047	23791.84	1391.390	1775.411	2282.575
Stddev	12.038	173.26	10.632	12.359	7.763
%RSD	.4563219	.7282230	.7641590	.6961018	.3401010
#1	2647.740	23864.23	1391.712	1788.662	2288.730
#2	2624.573	23917.17	1380.600	1773.372	2273.854
#3	2641.829	23594.13	1401.857	1764.198	2285.141

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5204-03DLX5 Acquired: 01/09/2025 1:14:13 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN66 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0166075	.0207894	.0636356	-.023464	-.001013	8.030780	.1549890
Stddev	.0018291	.0022516	.0019105	.010245	.001592	.031320	.0007735
%RSD	11.01376	10.83071	3.002166	43.66350	157.0982	.3899976	.4990888
#1	.0144976	.0232441	.0614302	-.029833	-.001699	8.039279	.1558448
#2	.0177449	.0203041	.0646922	-.028913	-.002148	8.056974	.1543395
#3	.0175800	.0188200	.0647844	-.011646	.000807	7.996088	.1547826

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006942	.0005299	321.1217	.0163744	.0808295	.1094994	26.40804
Stddev	.0002690	.0001656	.6632	.0015375	.0004509	.0005930	.04152
%RSD	38.74032	31.25532	.2065143	9.389903	.5578127	.5415595	.1572317
#1	.0009160	.0003531	321.7776	.0146976	.0808801	.1101280	26.39910
#2	.0003951	.0005552	320.4515	.0167077	.0803555	.1089500	26.45330
#3	.0007716	.0006814	321.1360	.0177180	.0812530	.1094203	26.37171

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.614143	20.54482	.0311656	-.002103	.4403367	.0162223	.0805732
Stddev	.013940	.21946	.0015377	.002169	.0039306	.0009943	.0001962
%RSD	.5332501	1.068203	4.933954	103.1248	.8926433	6.129512	.2434511
#1	2.609188	20.77185	.0328272	-.001455	.4439614	.0151035	.0807677
#2	2.629883	20.52880	.0297928	-.000333	.4408900	.0170050	.0803754
#3	2.603357	20.33380	.0308767	-.004523	.4361588	.0165585	.0805765

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6154882	1.388440	.0176078	.0068533	.5441831	2.203293	.0089075
Stddev	.3595875	.005585	.0037407	.0002852	.0091461	.009609	.0002633
%RSD	58.42314	.4022542	21.24437	4.160918	1.680706	.4361156	2.956186
#1	.6090193	1.393218	.0160643	.0069195	.5547438	2.196875	.0086059
#2	.9782665	1.382299	.0218732	.0070995	.5388265	2.198665	.0090916
#3	.2591788	1.389801	.0148859	.0065409	.5389791	2.214341	.0090250

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: P5204-03DLX5 Acquired: 01/09/2025 1:14:13 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHN66 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.0757156	.2715751	.0307677
Stddev	.0152978	.0016548	.0110675
%RSD	20.20425	.6093505	35.97098
#1	.0821969	.2721567	.0204217
#2	.0867058	.2697079	.0424375
#3	.0582442	.2728605	.0294439

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2074.975	18718.76	1100.017	1397.272	2115.267
Stddev	5.238	113.28	3.122	8.891	3.728
%RSD	.2524347	.6051810	.2838161	.6362965	.1762413
#1	2071.562	18798.33	1101.545	1395.214	2114.973
#2	2081.006	18589.06	1096.425	1389.591	2119.134
#3	2072.357	18768.89	1102.080	1407.012	2111.696

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: CCV137 Acquired: 01/09/2025 1:18:05 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV137 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.868115	4.774350	24.45143	4.959497	4.957550	384.5678	10.11135
Stddev	.010259	.008589	.06635	.027168	.002753	.6175	.00655
%RSD	.2107411	.1798923	.2713646	.5477878	.0555328	.1605678	.0647379
#1	4.868015	4.766762	24.39597	4.928157	4.954479	385.2767	10.11884
#2	4.878424	4.772613	24.43337	4.976350	4.959796	384.2800	10.10845
#3	4.857906	4.783674	24.52494	4.973985	4.958374	384.1468	10.10675

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5144057	2.482173	395.2312	15.64601	2.507218	15.12119	384.3475
Stddev	.0019089	.006380	.8062	.06809	.008059	.08060	.6061
%RSD	.3710938	.2570317	.2039838	.4351682	.3214314	.5329950	.1576944
#1	.5150293	2.477824	394.4711	15.71866	2.499720	15.15817	384.6101
#2	.5122630	2.479199	396.0767	15.63571	2.506193	15.02874	384.7781
#3	.5159249	2.489497	395.1460	15.58366	2.515740	15.17666	383.6545

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	14.50759	386.1020	2.493274	1.260994	414.0262	2.521059	14.97992
Stddev	.04343	.7731	.007148	.004014	1.1655	.011773	.03457
%RSD	.2993836	.2002399	.2866877	.3183005	.2814925	.4669871	.2307803
#1	14.52174	386.7091	2.492101	1.265227	415.3537	2.524596	15.01234
#2	14.54219	386.3654	2.486785	1.260512	413.5541	2.507923	14.98388
#3	14.45885	385.2317	2.500935	1.257243	413.1710	2.530658	14.94354

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	153.3258	4.909669	5.036132	4.905837	4.913493	4.925247	4.983422
Stddev	.6768	.016703	.029588	.016064	.015064	.022707	.014704
%RSD	.4414140	.3402146	.5875108	.3274453	.3065779	.4610276	.2950572
#1	152.5443	4.891300	5.048426	4.889736	4.898595	4.937134	4.979441
#2	153.7123	4.913757	5.002379	4.905912	4.913167	4.899064	4.971119
#3	153.7208	4.923948	5.057590	4.921864	4.928717	4.939543	4.999707

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: CCV137 Acquired: 01/09/2025 1:18:05 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV137 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	4.874611	4.730971	5.107363
Stddev	.013039	.005933	.025514
%RSD	.2674806	.1254159	.4995535
#1	4.871610	4.737320	5.080501
#2	4.888889	4.730025	5.110316
#3	4.863335	4.725567	5.131272

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1761.260	16376.53	1020.700	1199.018	1756.469
Stddev	8.584	99.67	6.198	6.599	9.020
%RSD	.4873612	.6085860	.6072219	.5504002	.5135210
#1	1767.486	16272.77	1015.194	1191.645	1759.827
#2	1764.825	16385.29	1027.413	1201.039	1763.329
#3	1751.468	16471.52	1019.495	1204.372	1746.252

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: CCB137 Acquired: 01/09/2025 1:21:51 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB137 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005425	.0008892	.0046963	.0035738	-.001675	.0193506
Stddev	.0047766	.0022435	.0032906	.0052929	.000791	.0315374
%RSD	880.5132	252.2997	70.06633	148.1036	47.24303	162.9790
#1	-.000567	-.000862	.0062413	-.001876	-.001091	-.012074
#2	.005776	.003418	.0009176	.003903	-.001358	.051000
#3	-.003582	.000111	.0069301	.008695	-.002576	.019126

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0012544	-.000366	-.000002	.0060449	.0009698	.0003070
Stddev	.0035990	.000516	.000055	.0396480	.0009059	.0002710
%RSD	286.9158	140.9879	2525.193	655.8973	93.40731	88.27567
#1	-.002889	-.000916	.000055	-.034977	.0017337	.0006168
#2	.003601	-.000293	-.000007	.008953	.0012067	.0001145
#3	.003051	.000109	-.000055	.044159	-.000031	.0001895

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002280	.0178012	.0056397	-.013883	-.000130	-.000614
Stddev	.001385	.0772857	.0042550	.153785	.000111	.003886
%RSD	60.73091	434.1616	75.44701	1107.731	85.66020	633.1686
#1	-.001118	-.042803	.0012049	-.080315	-.000212	.003278
#2	-.003812	-.008628	.0096887	.161951	-.000173	-.000626
#3	-.001911	.104834	.0060256	-.123284	-.000003	-.004493

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0782181	-.000143	.0022257	1.259472	-.008878	.0065163
Stddev	.0130302	.001446	.0009300	.171474	.001227	.0012792
%RSD	16.65880	1012.736	41.78273	13.61478	13.82363	19.63139
#1	.0930694	-.000556	.0032470	1.408717	-.010294	.0079864
#2	.0687029	.001465	.0020023	1.297535	-.008231	.0059061
#3	.0728821	-.001337	.0014278	1.072165	-.008111	.0056564

Reviewed By:jaswal
On:1/10/2025 4:14:54 AM
Inst Id :P5

Sample Name: CCB137 Acquired: 01/09/2025 1:21:51 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v90) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB137 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000261	-.022534	-.001674	-.000195	.0114299	-.000522
Stddev	.000952	.003119	.002302	.000105	.0132041	.000137
%RSD	364.2995	13.84043	137.4721	53.63368	115.5224	26.17638
#1	-.001359	-.018962	.000885	-.000095	-.001806	-.000679
#2	.000340	-.023924	-.003574	-.000187	.011493	-.000432
#3	.000235	-.024717	-.002333	-.000304	.024603	-.000454

Elem	Li6707
Units	ppm
Avg	F .0325171
Stddev	.0045401
%RSD	13.96228
#1	.0302008
#2	.0377482
#3	.0296023

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2134.665	19471.76	1105.015	1447.948	2517.085
Stddev	17.863	163.94	8.491	14.263	20.205
%RSD	.8368193	.8419597	.7683858	.9850821	.8027140
#1	2155.257	19344.95	1097.748	1436.191	2539.680
#2	2123.327	19413.45	1114.349	1443.836	2500.754
#3	2125.412	19656.89	1102.949	1463.815	2510.820

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Prep Standard - Chemical Standard Summary

Order ID : P5199

Test : Metals CLP Full

Prepbatch ID : PB165882,

Sequence ID/Qc Batch ID: LB134200,

Standard ID :
MP83498,MP83500,MP83501,MP83502,MP83503,MP83504,MP83505,MP83506,MP83507,MP83508,MP83509,MP835
10,MP83511,MP83512,MP83513,MP83514,MP83619,MP83726,MP83745,

Chemical ID :
M5130,M5218,M5223,M5289,M5295,M5296,M5390,M5393,M5429,M5473,M5496,M5497,M5498,M5513,M5515,M5519
,M5658,M5697,M5698,M5768,M5769,M5798,M5799,M5800,M5801,M5802,M5806,M5815,M5816,M5817,M5818,M581
9,M5820,M5875,M5959,M5960,M5962,M5970,M5976,M5978,M5982,M5985,M5990,M5999,M6021,M6023,M6025,M60
28,M6030,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
169	1:1HNO3	MP83498	12/09/2024	01/31/2025	Janvi Patel	None	None	Sarabjit Jaswal 12/09/2024

FROM 1250.00000ml of M6126 + 1250.00000ml of W3112 = Final Quantity: 2500.000 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	01/14/2025	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	01/13/2025	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	01/13/2025	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	01/13/2025	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	01/13/2025	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	01/13/2025	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	01/13/2025	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 + 99.50000ml 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
1003	ICPAES ISM01.2 S1	MP83507	12/09/2024	01/13/2025	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	01/13/2025	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	01/13/2025	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	01/13/2025	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	01/13/2025	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
921	ICPAES SPIKE SOL#6	MP83512	12/09/2024	01/13/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 12/09/2024

FROM 2.50000ml of M5962 + 50.00000ml of M5990 + 50.00000ml of M5999 + 147.50000ml 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
919	ICP AES INTERNAL STD	MP83513	12/09/2024	01/13/2025	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

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
513	RINSE SOLN	MP83514	12/09/2024	01/13/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 12/09/2024

FROM 200.00000ml of M6126 + 9800.00000ml of W3112 = Final Quantity: 10000.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1122	ICPMS CALIB BLANK(S0/ICB/CCB)	MP83619	12/13/2024	01/10/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 12/17/2024

FROM 25.00000ml of M6121 + 4925.00000ml of W3112 + 50.00000ml of M6126 = Final Quantity: 5000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3559	SE 100PPM	MP83726	12/18/2024	01/10/2025	Sarabjit Jaswal	None	None	Mohan Bera 12/20/2024

FROM 1.00000ml of M5962 + 9.00000ml of MP83500 = Final Quantity: 10.000 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
1905	TL 10PPM	MP83745	12/15/2024	01/10/2025	Sarabjit Jaswal	None	None	Mohan Bera 12/23/2024

FROM 0.10000ml of M6023 + 9.90000ml of MP83619 = 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	01/31/2025	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	01/31/2025	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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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57056 / Ba, 1000 PPM, 125 ml	072122	07/21/2025	08/07/2024 / jaswal	09/18/2022 / bin	M5390

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CLPP-CAL-3 / CLP CAL SOLUTION #3, 125mL	T2-MEB714159	01/13/2027	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.	58113 / Al, 10000 PPM, 500 ml	011623	01/16/2026	08/15/2023 / jaswal	03/17/2023 / bin	M5496

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

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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	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

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

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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.	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

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

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	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

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

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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

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

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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

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

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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

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

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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 #
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

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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R: 02/22/24 M5986 M5987, M5988, M5989-M5990

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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

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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

R 8/5/24

M6028

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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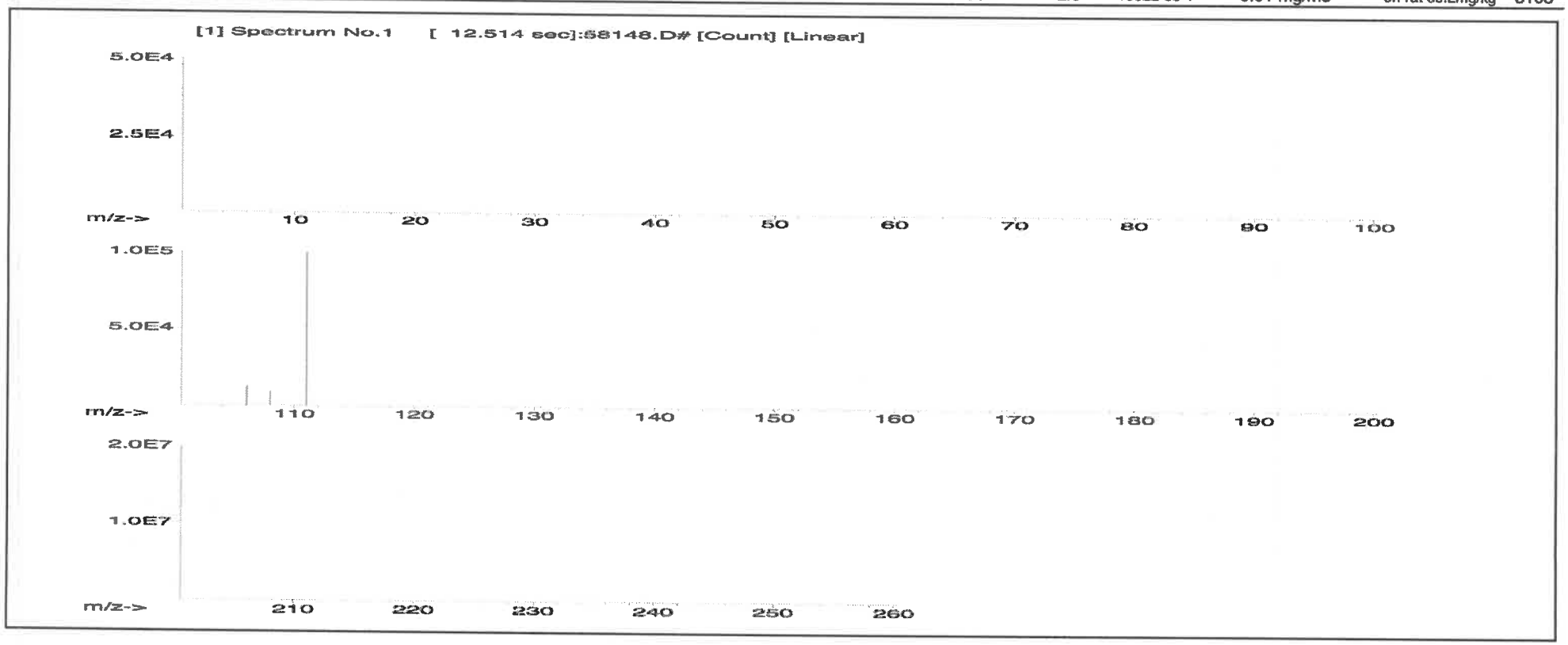
CERTIFIED WEIGHT REPORT:

Part Number:	**57048**		**Lot #**		
Lot Number:	**070124**	**Solvent:**	24002546	Nitric Acid	
Description:	**Cadmium (Cd)**	2%	40.0 (mL)	Nitric Acid	
Expiration Date:	070127				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.07	0.100	Flask Uncertainty		

Aleah O'Brady

Formulated By:	Aleah O'Brady	070124
Reviewed By:	Pedro L. Rentas	070124

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Cadmium nitrate tetrahydrate (Cd)	IN024	CDM092021A1	1000	99.999	0.10	36.5	5.4797	5.4804	**1000.1**	**2.0**	10022-68-1	0.01 mg/m3	orl-rat 60.2mg/kg	3108



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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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info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CHEM-CLP-4
Lot Number:	S2-MEB711673
Matrix:	3% (v/v) HNO3 3% (v/v) HF
Value / Analyte(s):	1 000 µg/mL ea: Boron, Molybdenum, Silicon, Tin, Titanium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Boron, B	**1 000 ± 6 µg/mL**	**Molybdenum, Mo**	**1 000 ± 6 µg/mL**
Silicon, Si	**1 000 ± 7 µg/mL**	**Tin, Sn**	**1 000 ± 6 µg/mL**
Titanium, Ti	**1 000 ± 7 µg/mL**		

Density: 1.030 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
B	ICP Assay	3107	110830
Mo	ICP Assay	3134	130418
Si	ICP Assay	3150	130912
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	3162a	130925

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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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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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

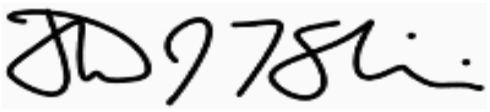
- Sealed TCT Bag Open Date: _____

- 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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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:

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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.

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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

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- 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

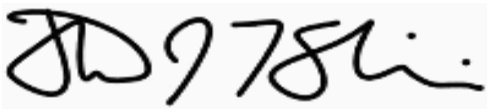
- Sealed TCT Bag Open Date: _____

- 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:

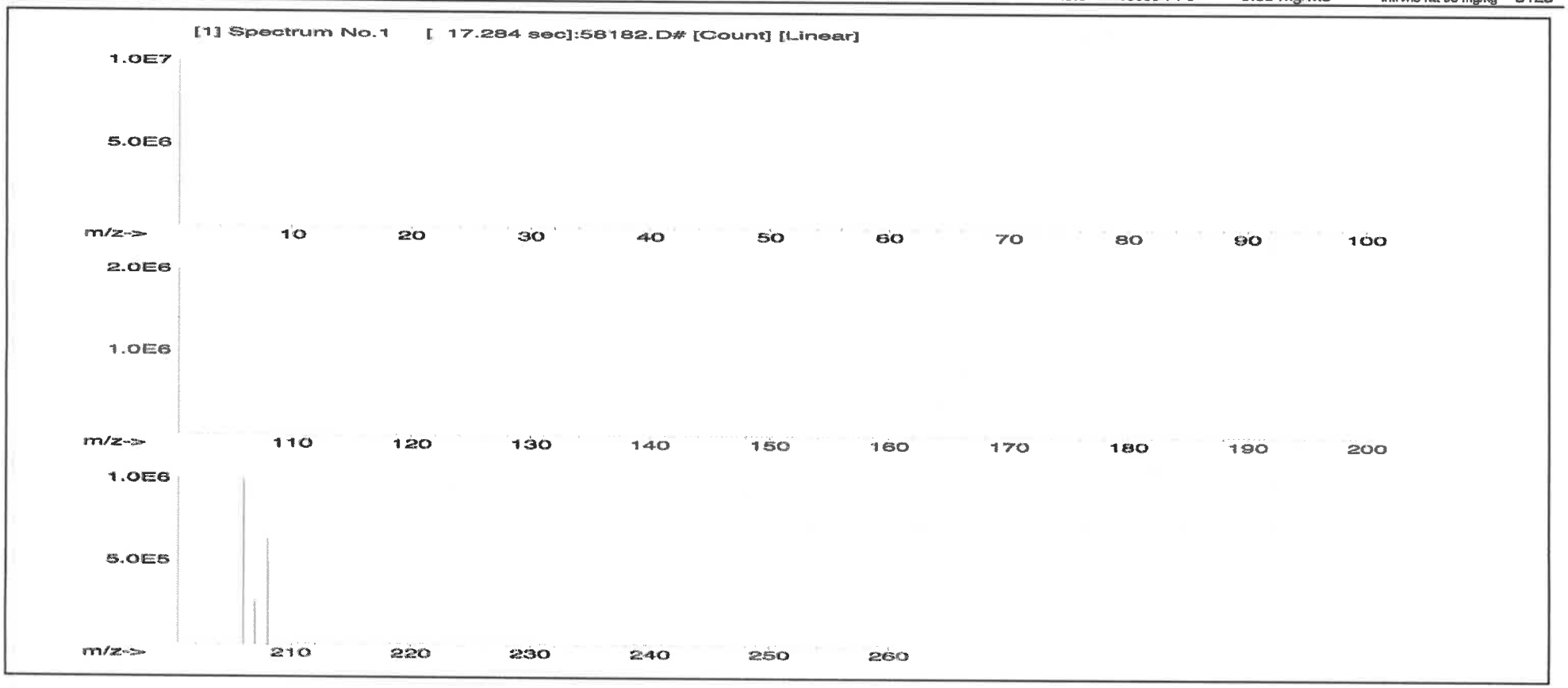
Part Number: 57182
Lot Number: 110923
Description: Lead (Pb)

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.

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

M5289 R: 07/12/22 BH

Certified Reference Material CRM

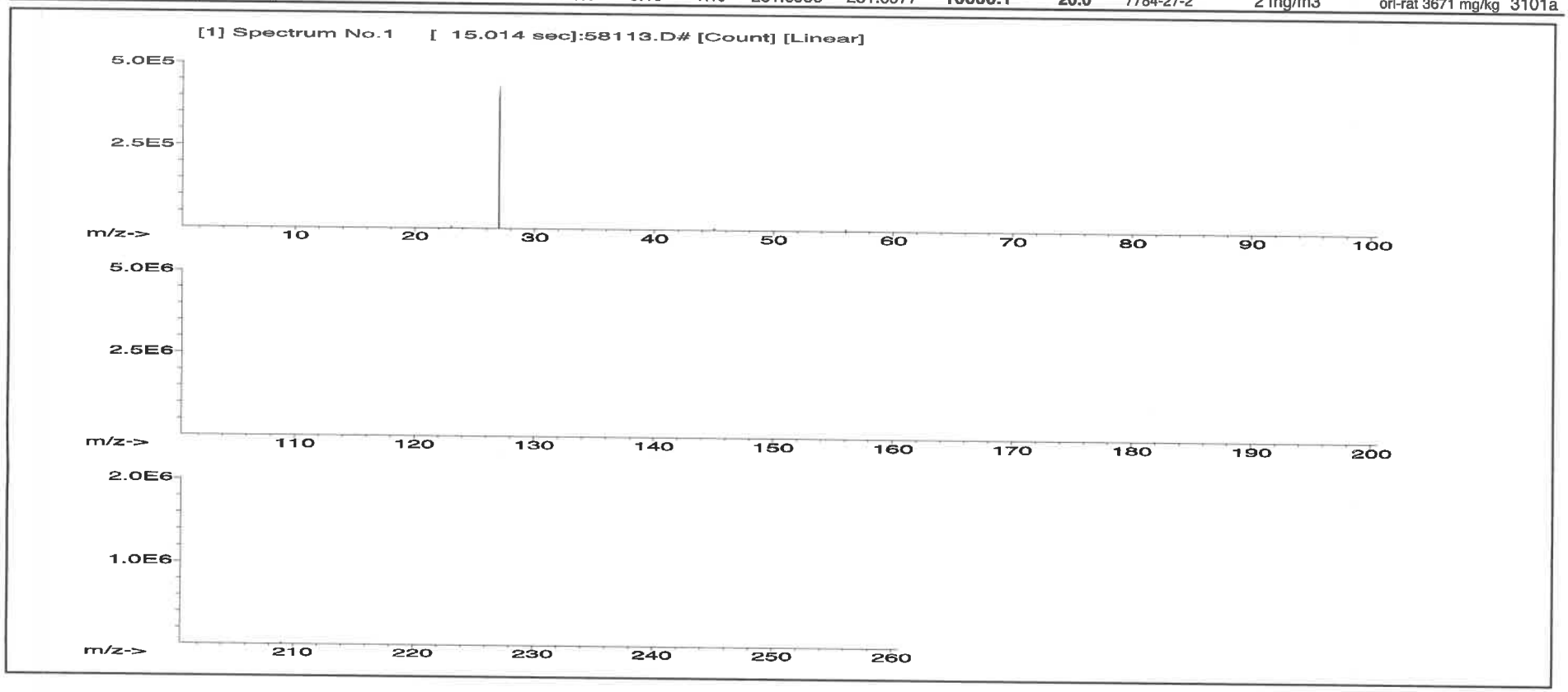
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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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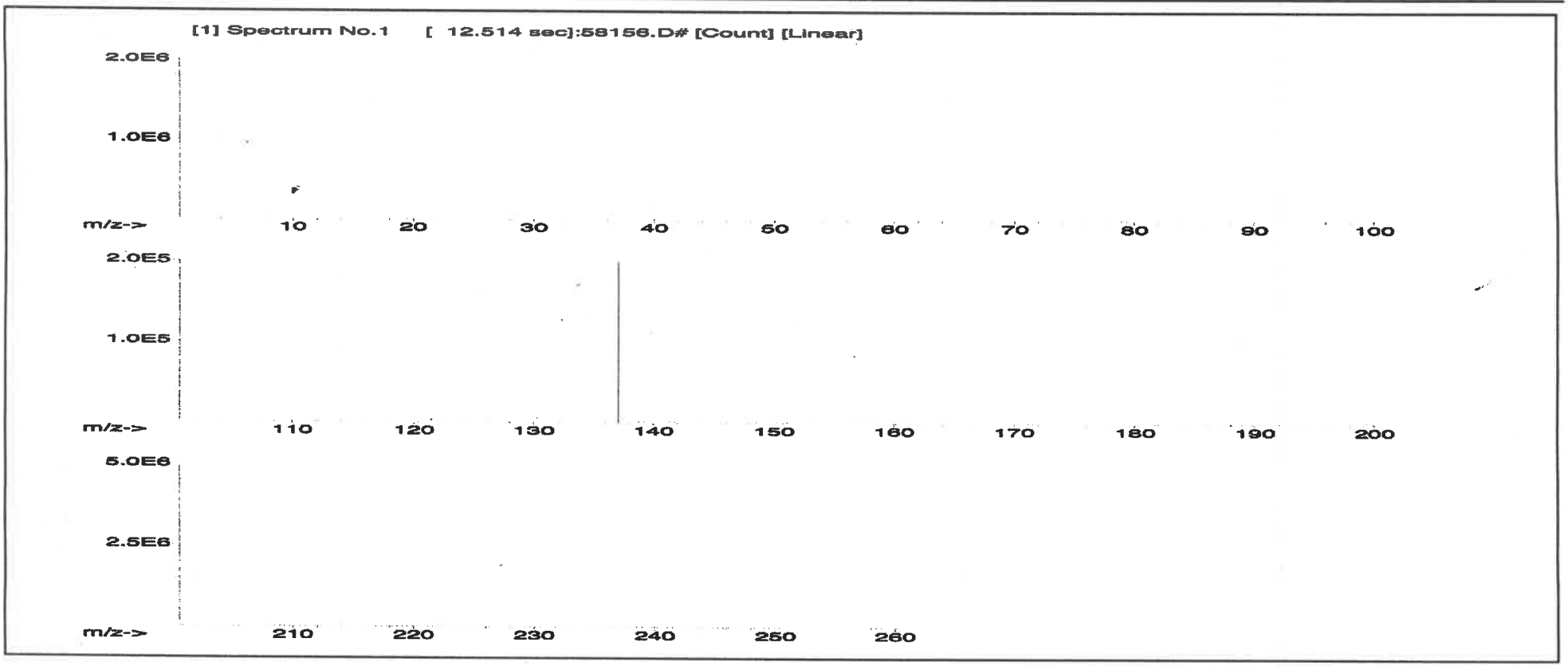
CERTIFIED WEIGHT REPORT:

Part Number:	**57056**		**Lot #**		
Lot Number:	**072122**	**Solvent:**	20510011	Nitric Acid	
Description:	**Barium (Ba)**	2%	40.0 (mL)	Nitric Acid	
Expiration Date:	072125				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Giovanni Esposito

Formulated By:	Giovanni Esposito	072122
Reviewed By:	Pedro L. Rentas	072122

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Barium nitrate (Ba)	IN023	BAD022019A1	1000	99.999	0.10	52.3	3.82417	3.82426	**1000.0**	**2.0**	10022-31-8	0.5 mg/m3	orl-rat 355 mg/kg	3104a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	T	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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M5429 R1 01/26/23 BH

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CERTIFIED WEIGHT REPORT:

Part Number: 57103
Lot Number: 070622
Description: Lithium (Li)

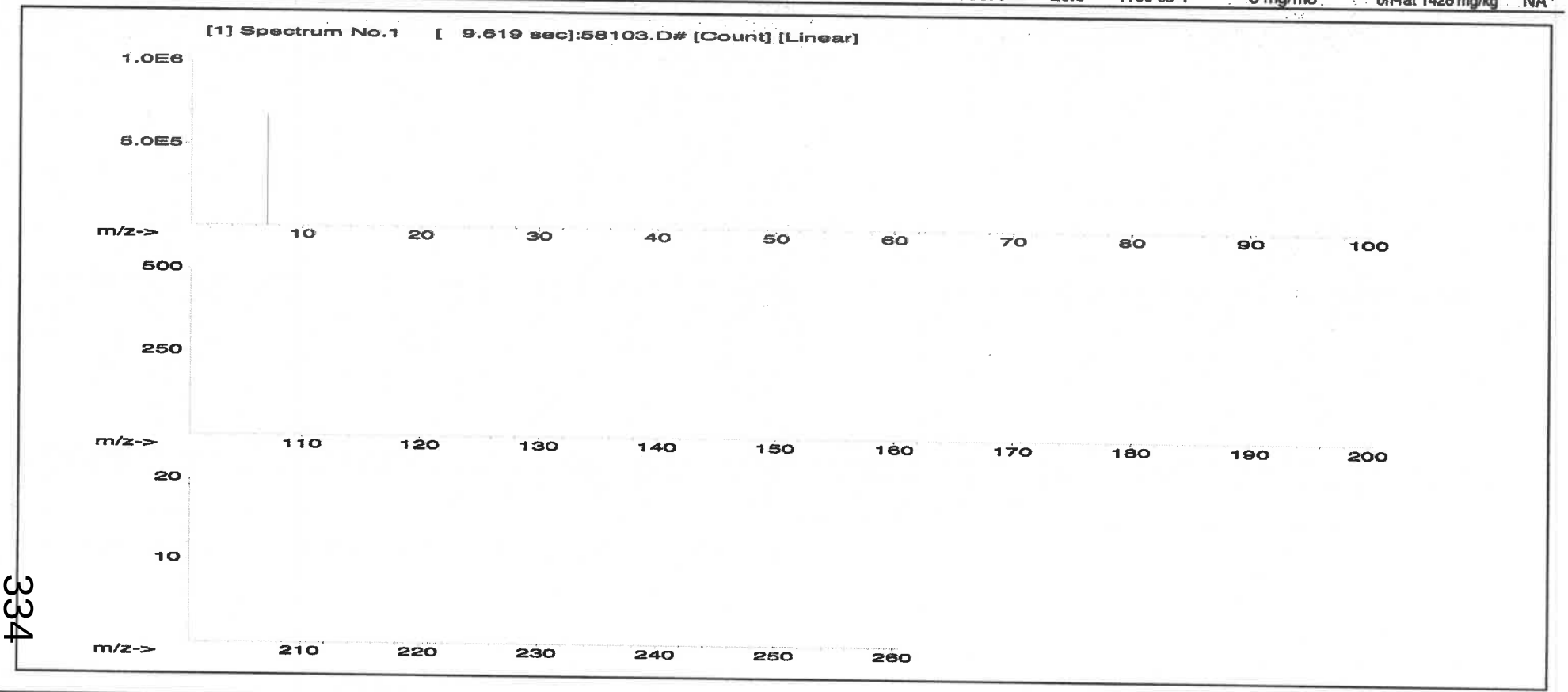
Expiration Date: 070625
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 1000.12

	Lot #		
Solvent:	20510011	Nitric Acid	
2%	20.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty
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. 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.
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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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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

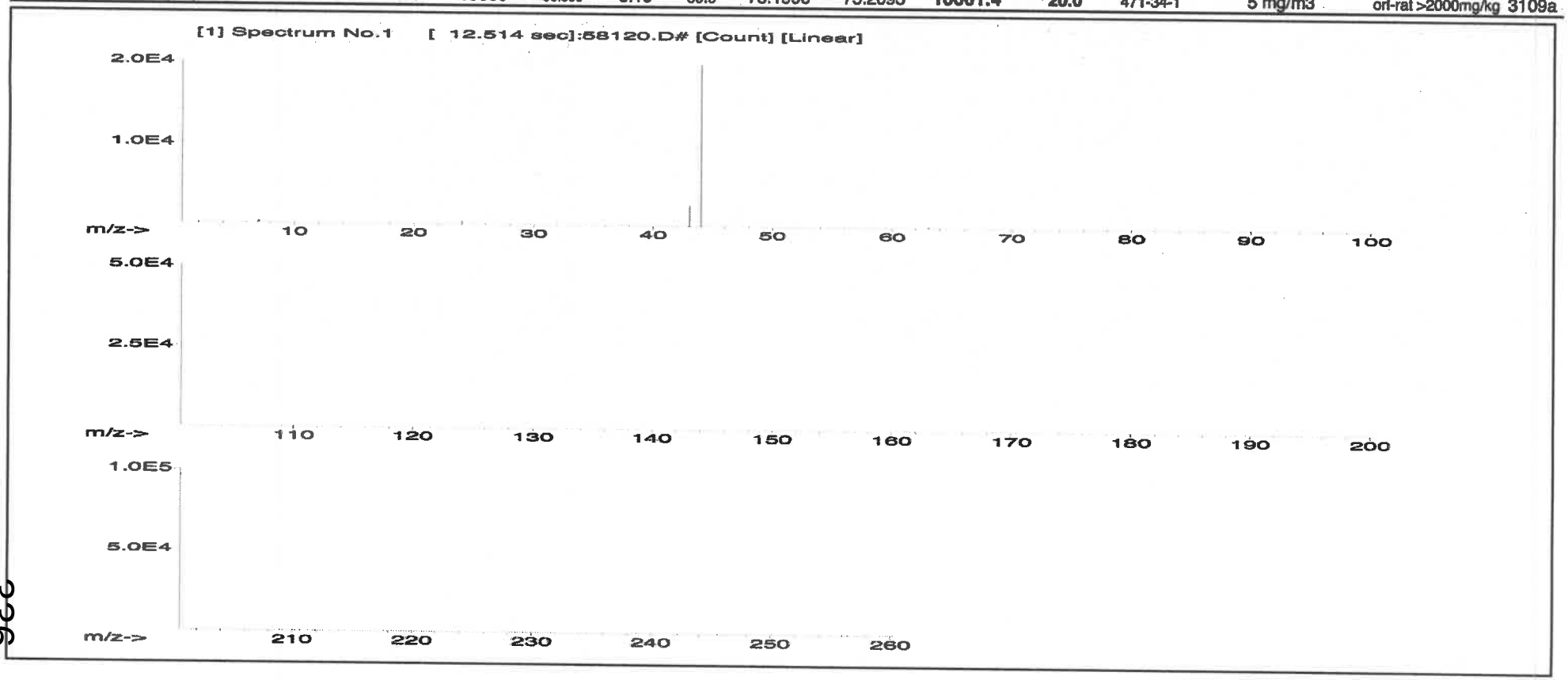
	Lot #		
Solvent:	21110221	Nitric Acid	
2%	60.0 (mL)	Nitric Acid	

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



336

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.
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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).

33717

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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:	2%	21110221	Nitric Acid
		60.0 (mL)	Nitric Acid

5E-05 Balance Uncertainty

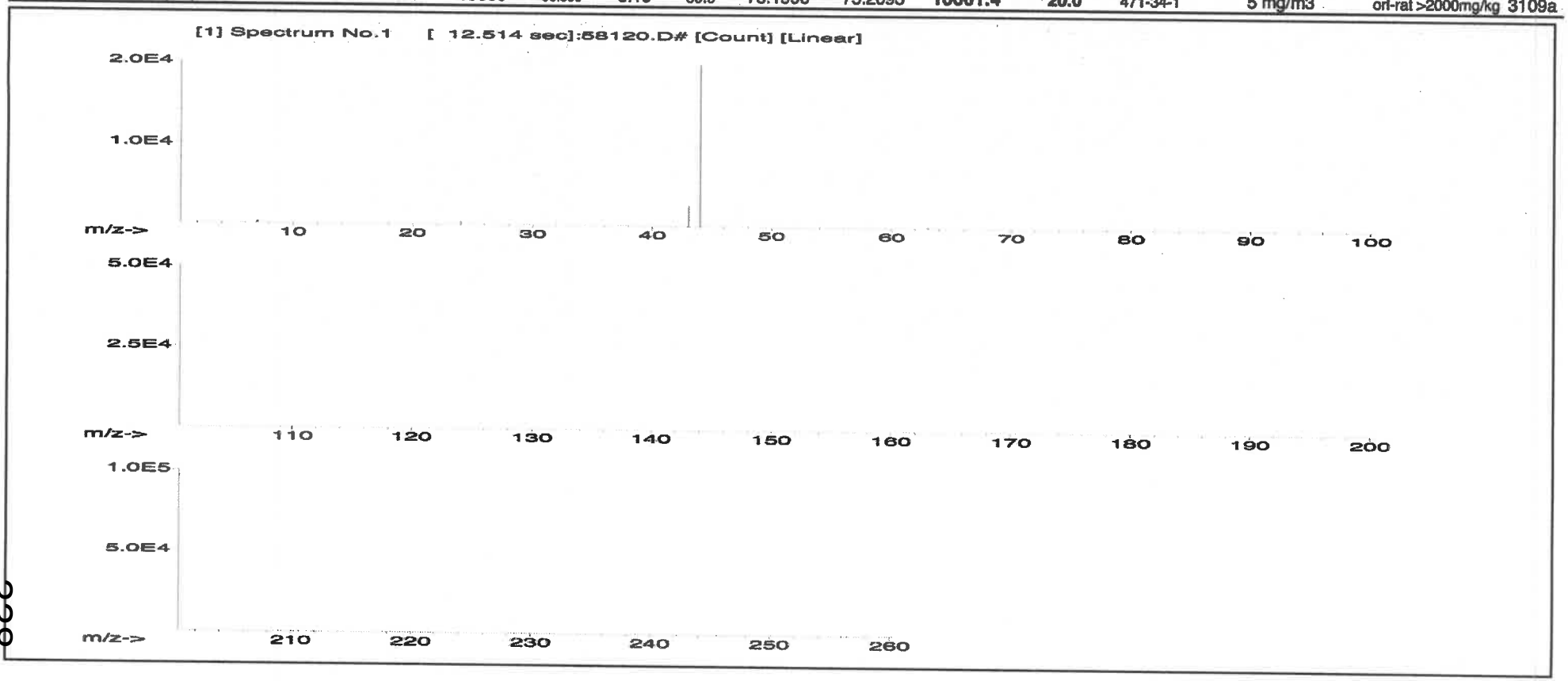
Giovanni Esposito

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



338

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.
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* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

M 5513 R: 03/17/23

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AR-1539 Certificate Number
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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

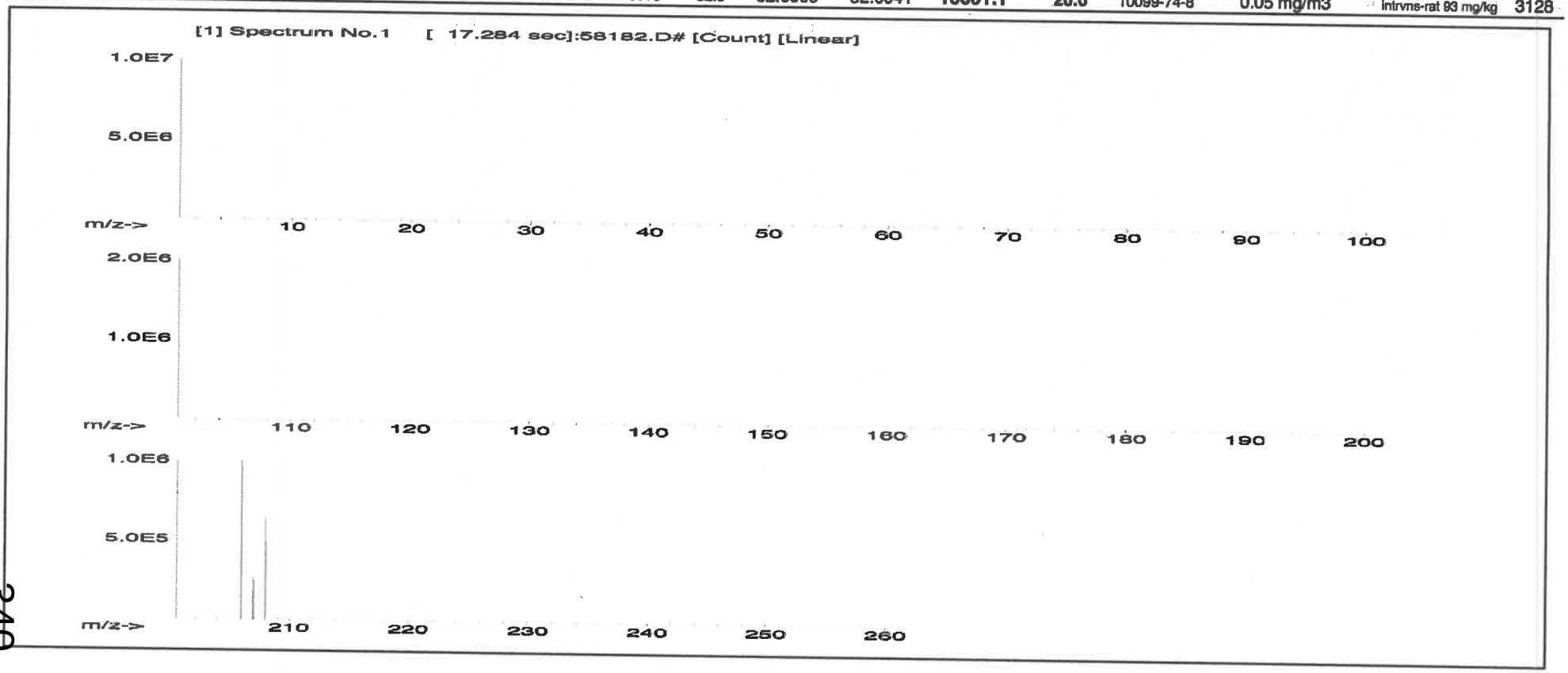
	Lot #		
Solvent:	20510011	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	

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.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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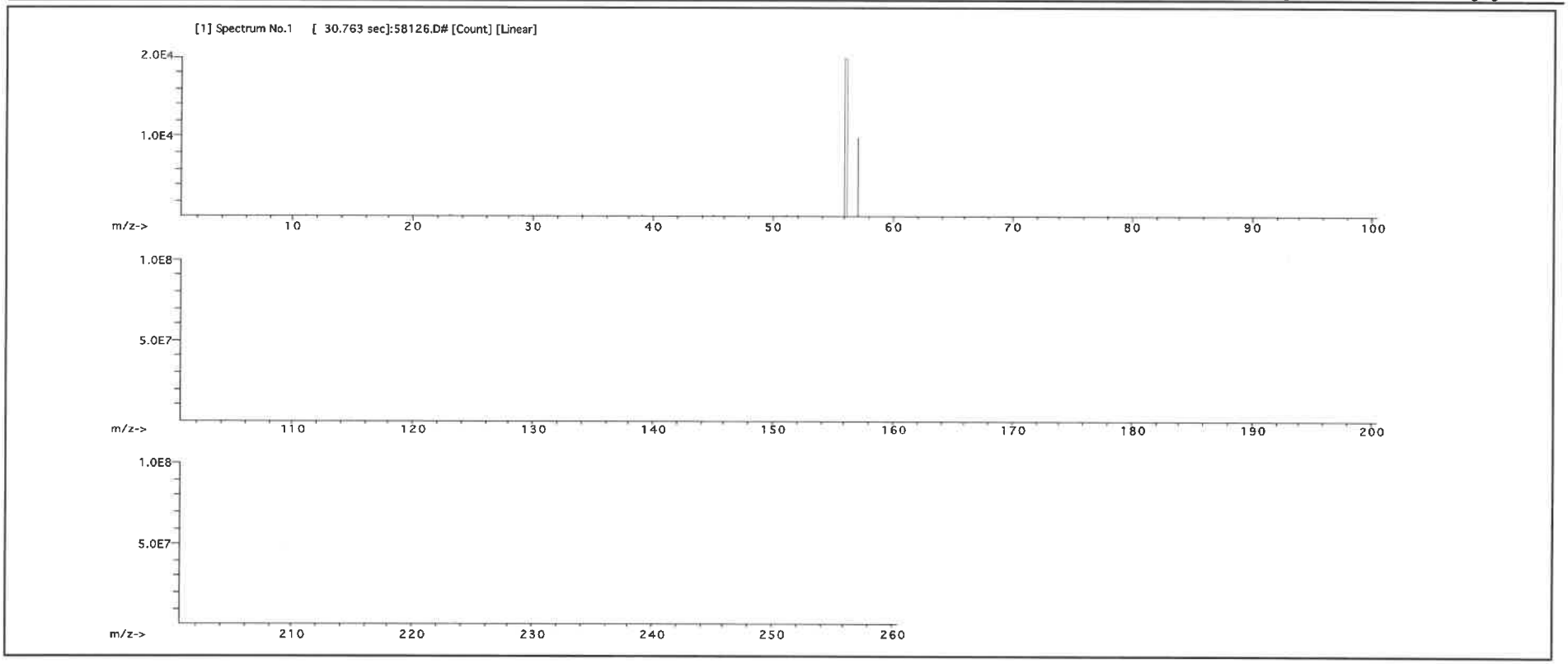
CERTIFIED WEIGHT REPORT:

Part Number:	**58126**		**Lot #**		
Lot Number:	**092122**		**Solvent:**	20510011	Nitric Acid
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
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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* 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 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

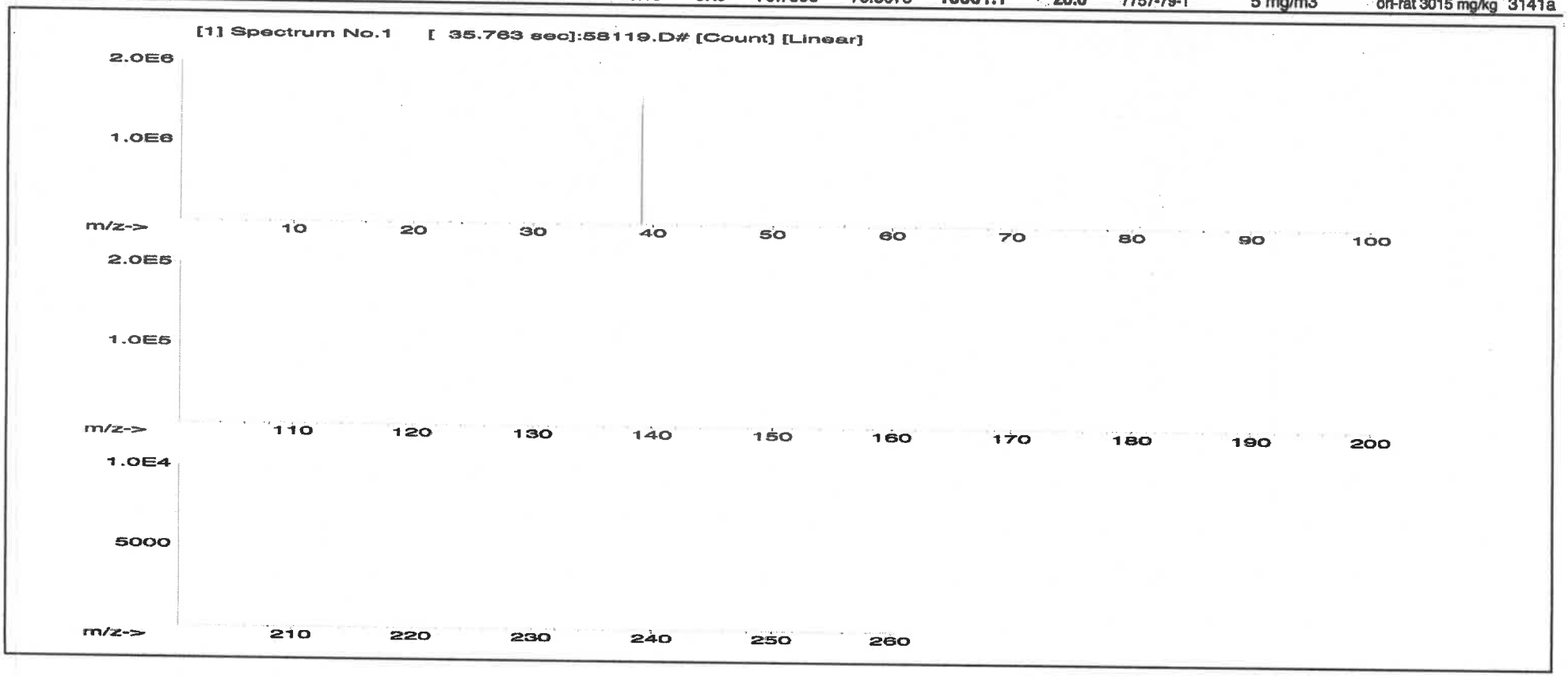
	Lot #		
Solvent:	20510011	Nitric Acid	
2%	60.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty
0.06 Flask Uncertainty

Giovanni Esposito

Formulated By:	Giovanni Esposito	120822
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



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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	<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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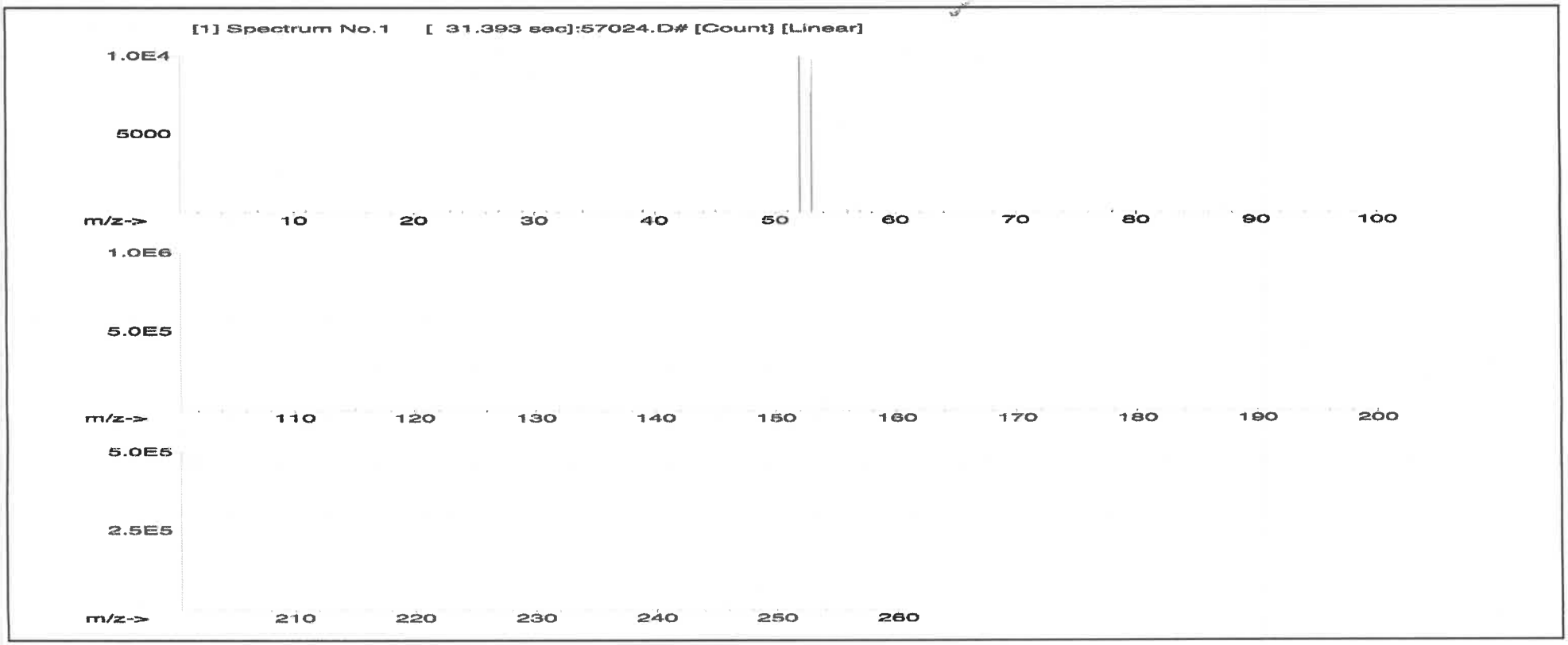
346

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



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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	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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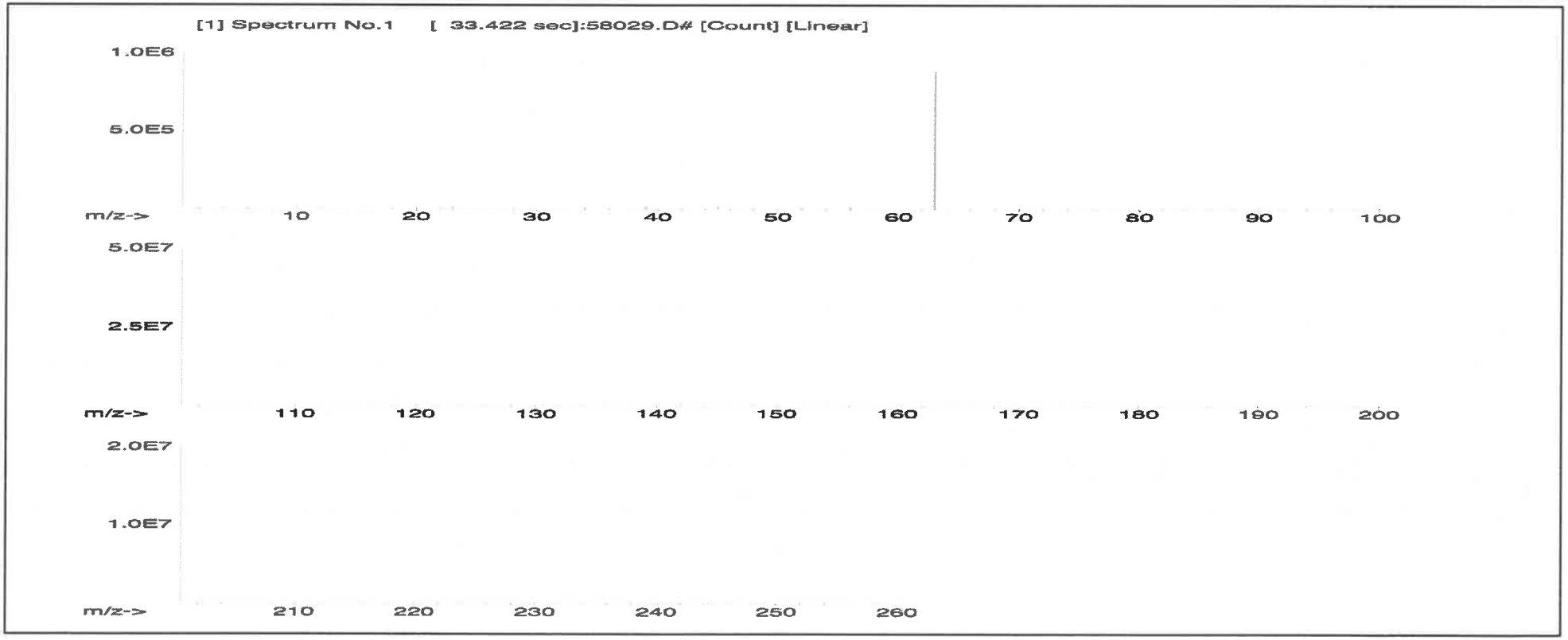
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CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:		
Part Number:	**58029**	24002546	Nitric Acid		
Lot Number:	**102523**				
Description:	**Copper (Cu)**	2.0%	40.0 (mL)	Nitric Acid	
Expiration Date:	102526				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Formulated By:	Benson Chan	102523
Reviewed By:	Pedro L. Rentas	102523

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Copper(II) nitrate trihydrate (Cu)	58129	100223	0.1000	200.0	0.084	1000	10000.1	**1000.0**	**2.2**	10031-43-3	1 mg/m3	orl-rat 794 mg/kg	3114



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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	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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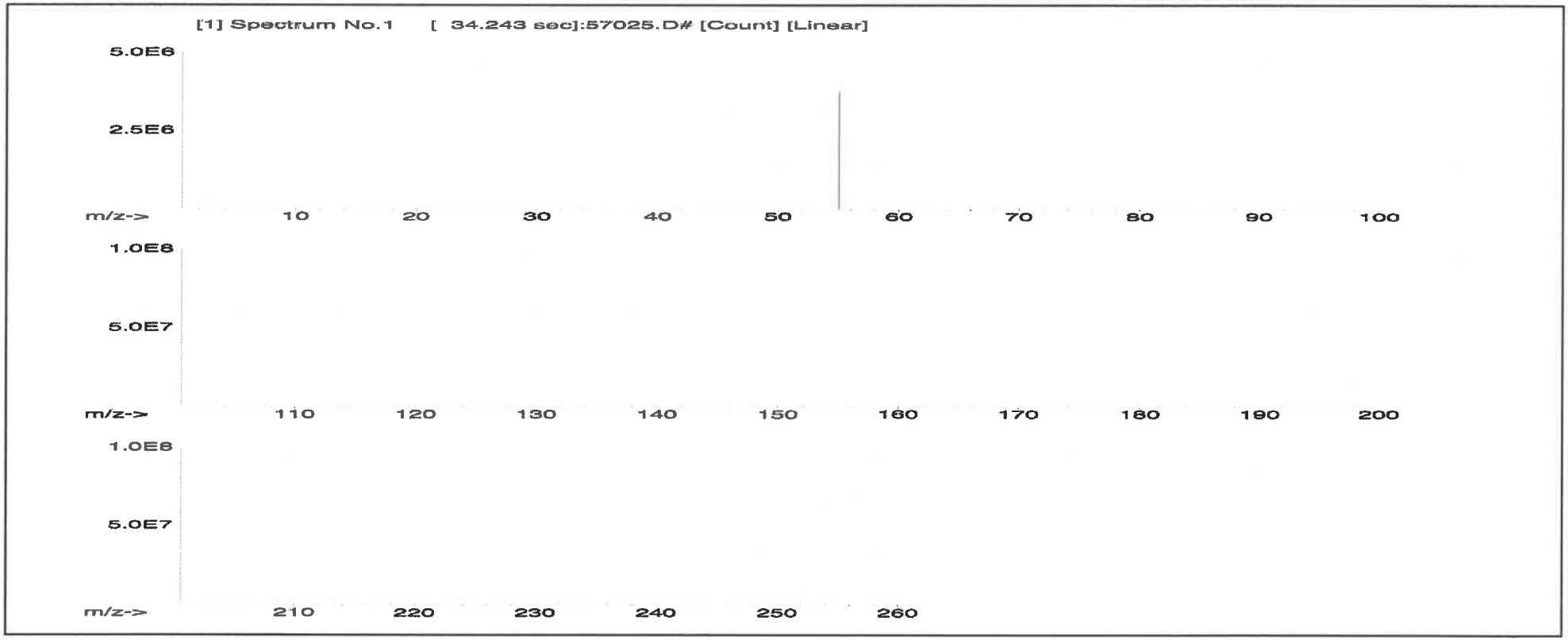
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CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**58025**	24002546	Nitric Acid	
Lot Number:	**102623**			
Description:	**Manganese (Mn)**			
		2.0%	60.0 (mL)	Nitric Acid
Expiration Date:	102626			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	3000.41	0.058	Flask Uncertainty	

Formulated By:	Benson Chan	102623
Reviewed By:	Pedro L. Rentas	102623

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Manganese(II) nitrate tetrahydrate (Mn)	58125	071123	0.1000	300.0	0.084	1000	10000.1	**1000.0**	**2.1**	20694-39-7	5 mg/m3	orl-rat >300mg/kg	3132



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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
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As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	T	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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M5768 M5769 (BP) R:1/3/24

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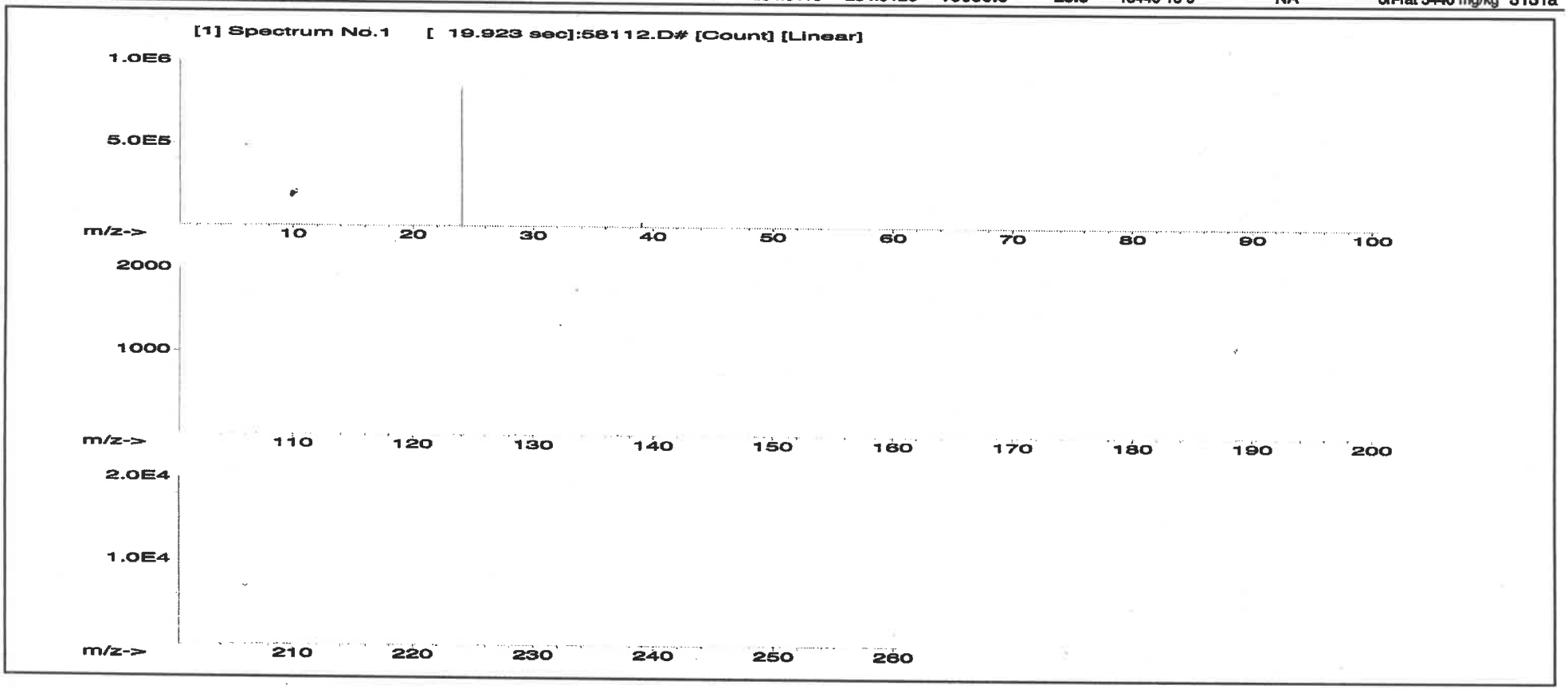
352

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	orl-rat 5440 mg/kg	3131a



353

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	T	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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M5768 M5769 (BP) R:1/3/24

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CERTIFIED WEIGHT REPORT:

Part Number: 58112
Lot Number: 091823
Description: Magnesium (Mg)

Expiration Date: 091826
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB

Weight shown below was diluted to (mL): 2000.02 0.058 Flask Uncertainty

		Lot #	
Solvent:	24002546	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	

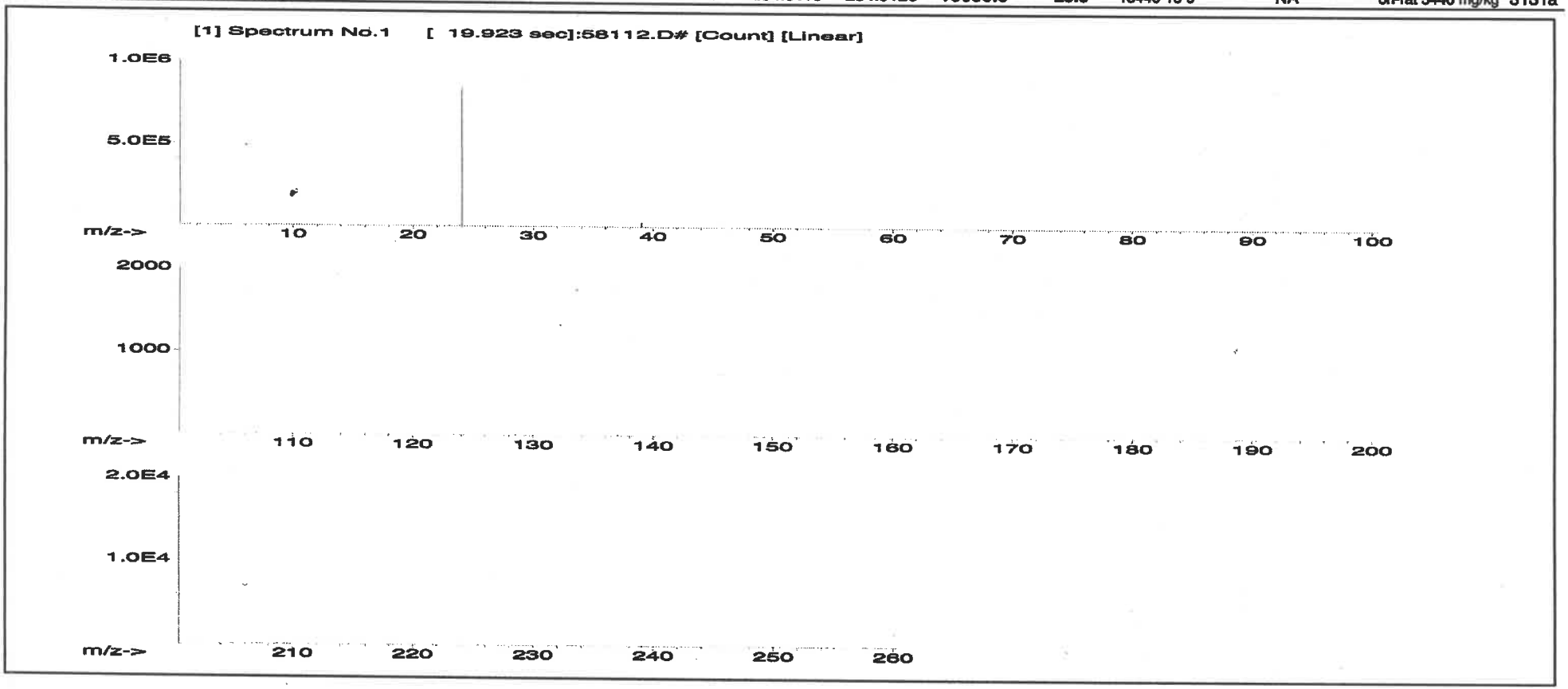
5E-05 Balance Uncertainty

M5768, M5769 (BP) R: 1/3/24

Formulated By: Lawrence Barry 091823

Reviewed By: Pedro L. Rentas 091823

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Magnesium nitrate hexahydrate (Mg)	IN030	MGD052023A1	10000	99.999	0.10	8.51	234.9118	234.9126	**10000.0**	**20.0**	13446-18-9	NA	ori-rat 5440 mg/kg	3131a



355

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	T	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* 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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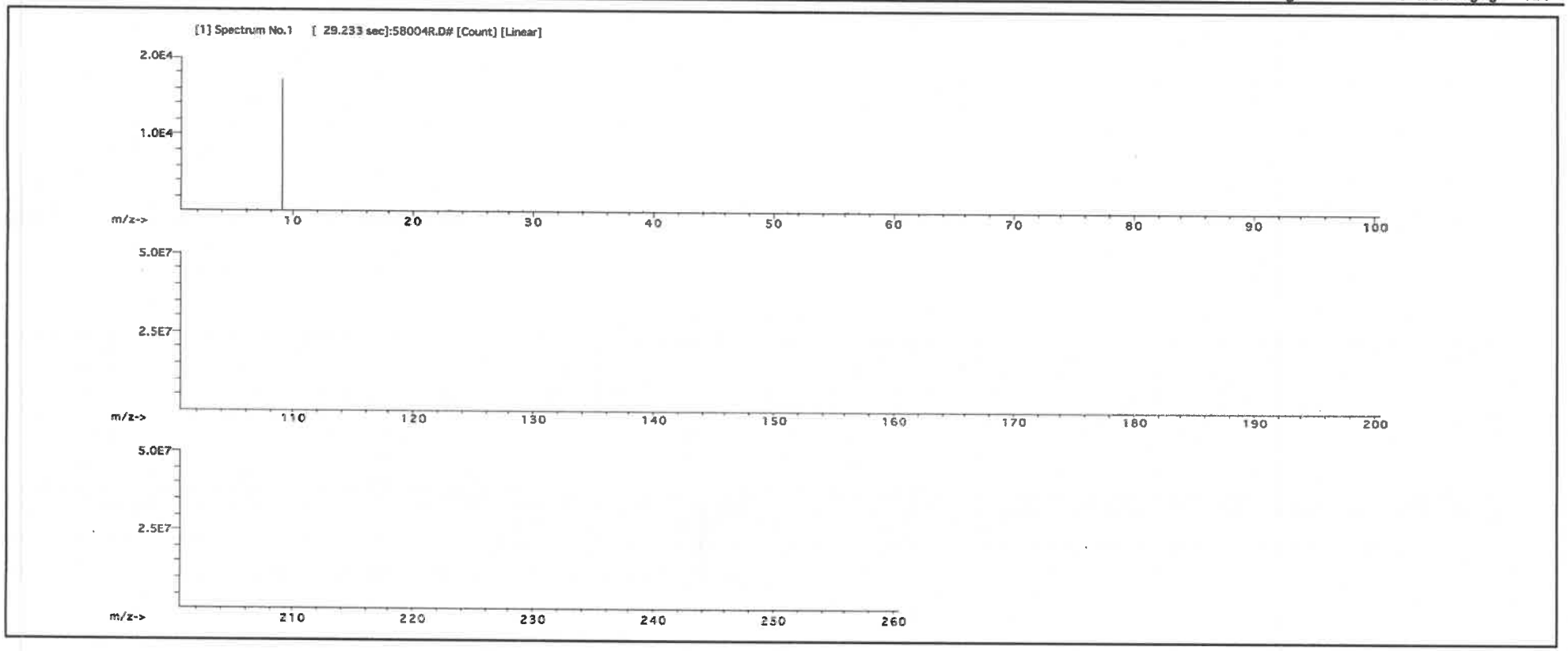
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CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57004**	24002546	Nitric Acid	
Lot Number:	**102523**			
Description:	**Beryllium (Be)**	2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	102526			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Benson Chan	102523
Reviewed By:	Pedro L. Rentas	102523

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Beryllium nitrate (Be)	58104	091423	0.1000	200.0	0.084	1000	10001.5	**1000.0**	**2.2**	13597-99-4	0.2ug/m3	intrvns-rat 3.16mg/kg	NA



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																		
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	T	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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CERTIFIED WEIGHT REPORT:

Part Number: 57050
Lot Number: 071123
Description: Tin (Sn)

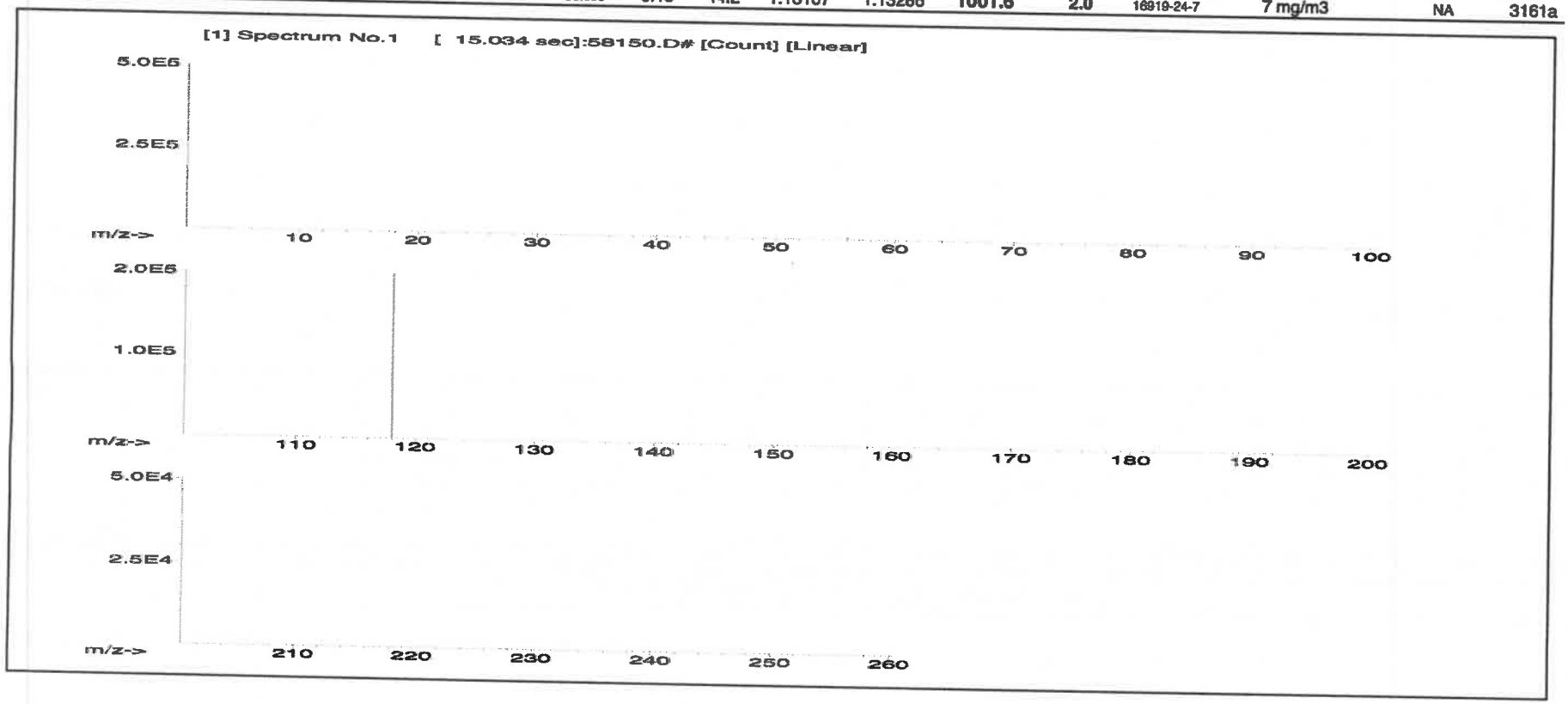
Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 499.93

	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



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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	<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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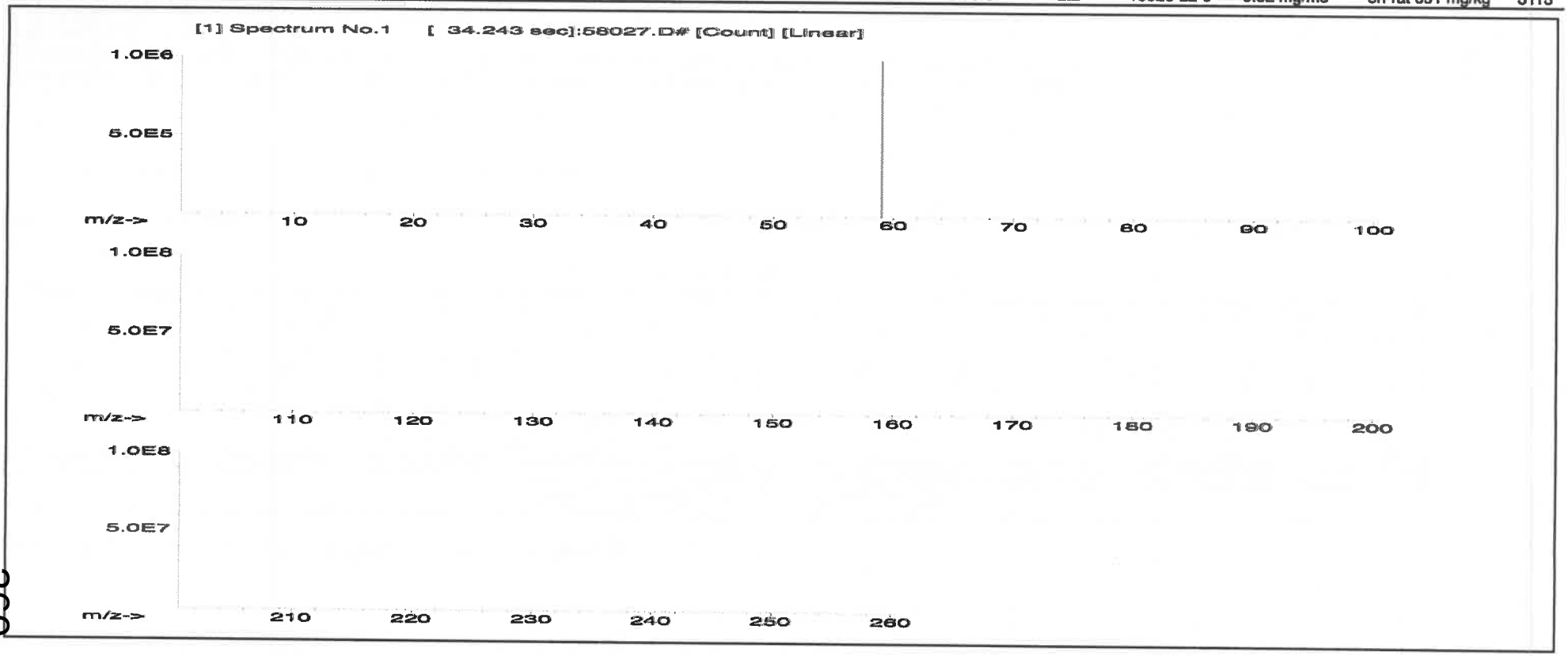
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CERTIFIED WEIGHT REPORT:

		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



360

Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	T	Gé	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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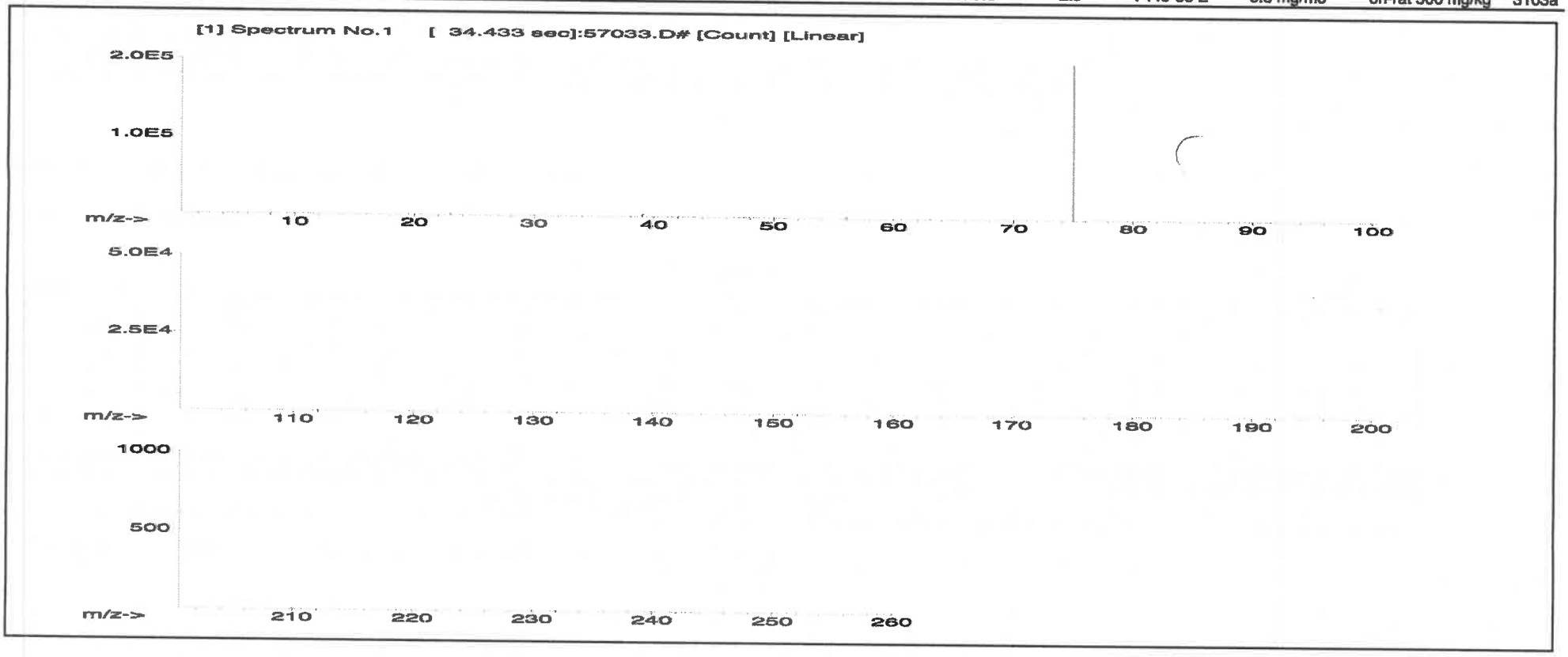
362

CERTIFIED **WEIGHT** REPORT:

		Lot #	Solvent:		
Part Number:	**57033**	24002546	Nitric Acid		
Lot Number:	**111323**				
Description:	**Arsenic (As)**	2.0%	80.0 (mL)	Nitric Acid	
Expiration Date:	111326				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	4000.0	0.06	Flask Uncertainty		

Formulated By:	Lawrence Barry	111323
Reviewed By:	Pedro L. Rentas	111323

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Arsenic (As)	58133	020522	0.1000	400.0	0.084	1000	10001.0	**1000.0**	**2.0**	7440-38-2	0.5 mg/m3	orl-rat 500 mg/kg	3103a



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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	T	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge*	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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* 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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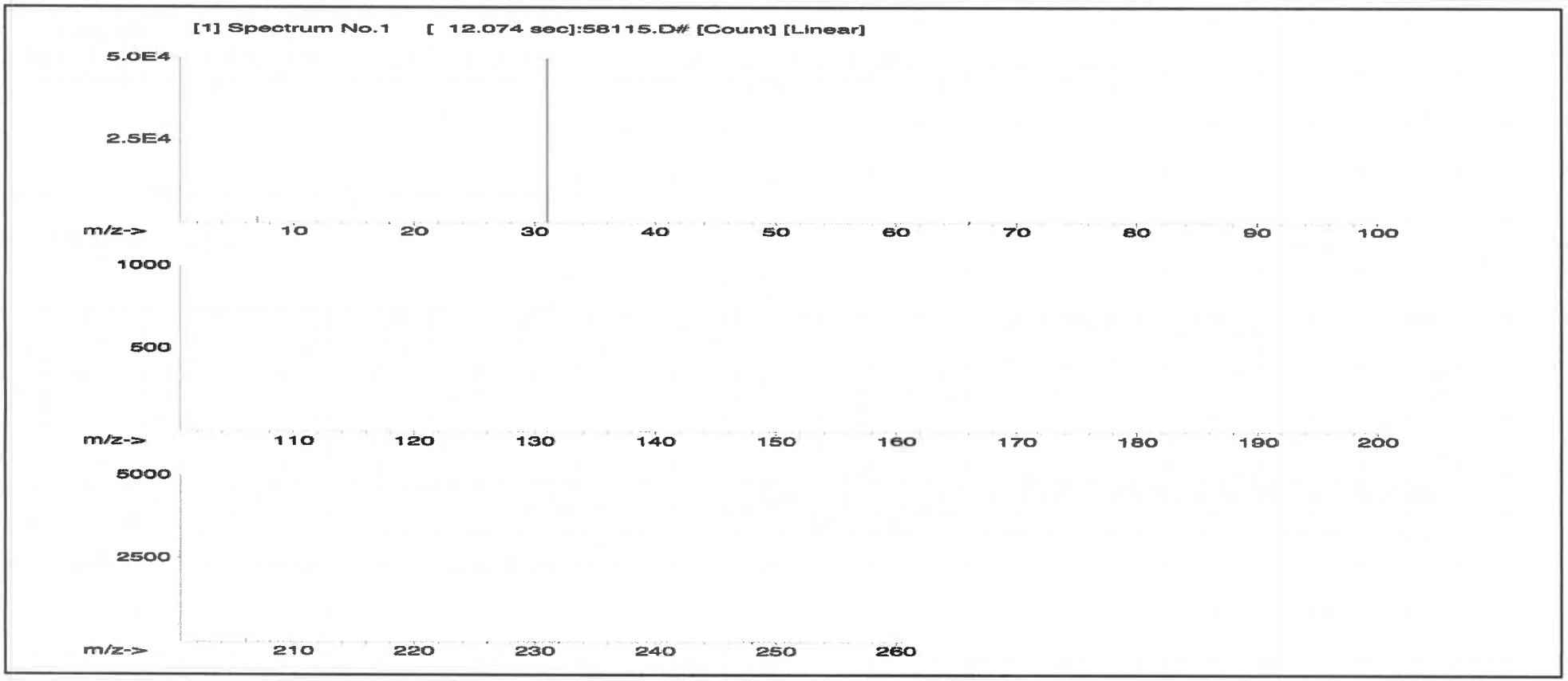
364

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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* 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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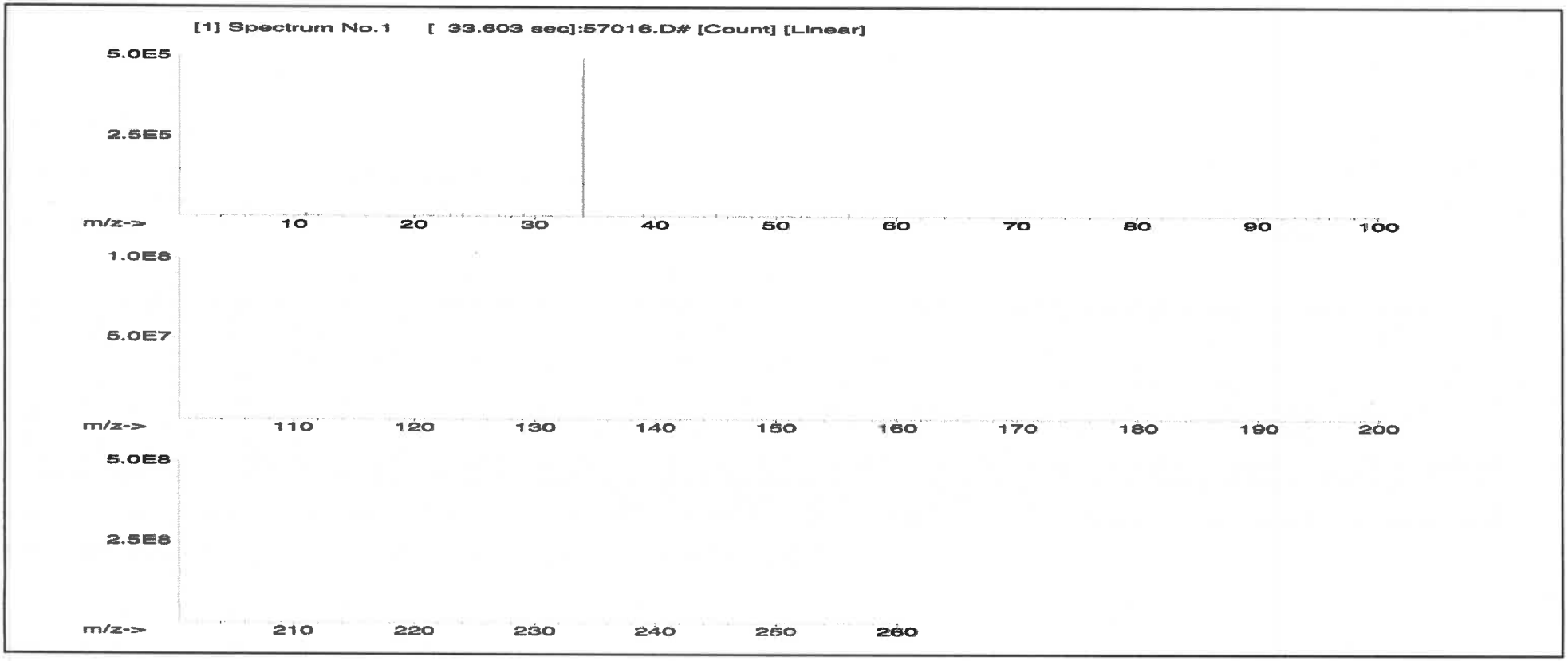
366

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



367

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	T	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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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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368

CERTIFIED WEIGHT REPORT:

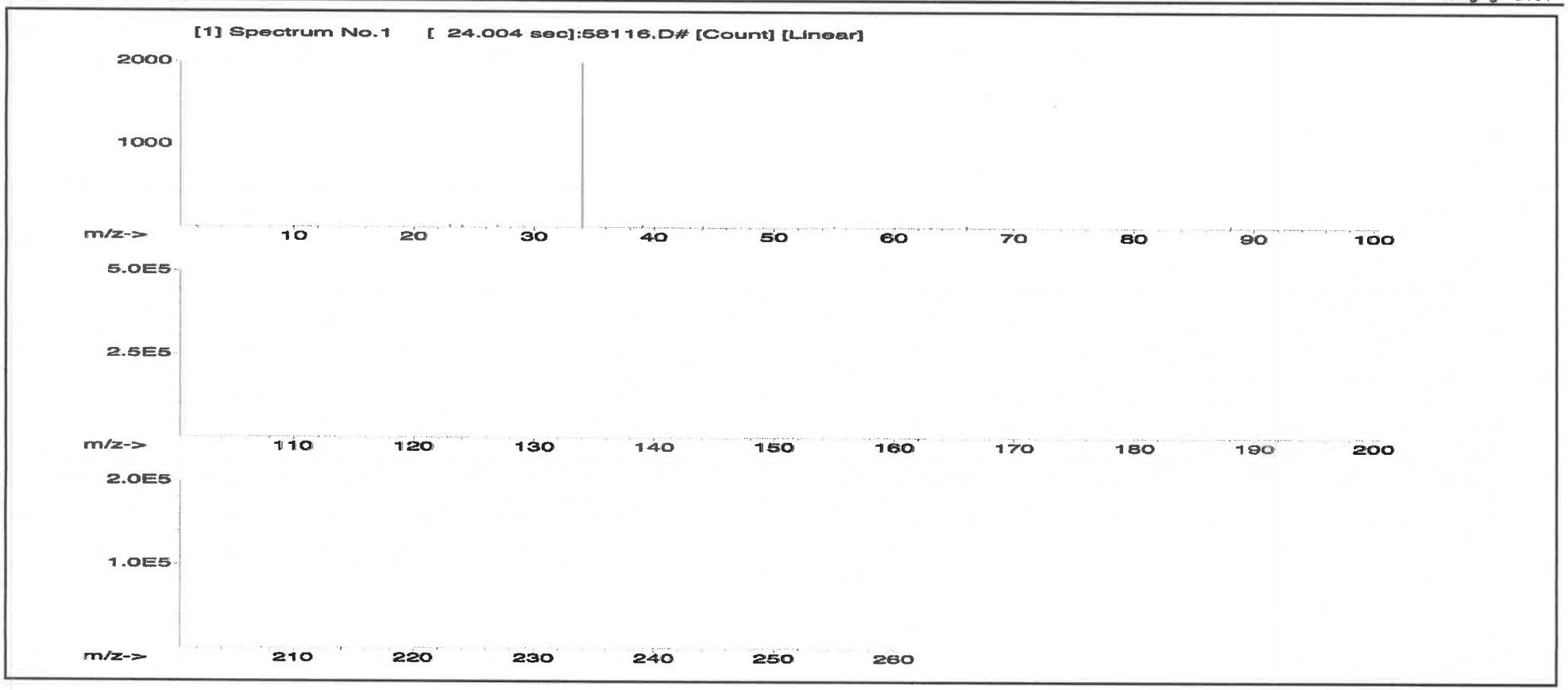
Part Number: 57116
Lot Number: 071123
Description: Sulfur (S)

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	orl-rat 4250mg/kg	3181



369

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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Lot #

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370

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

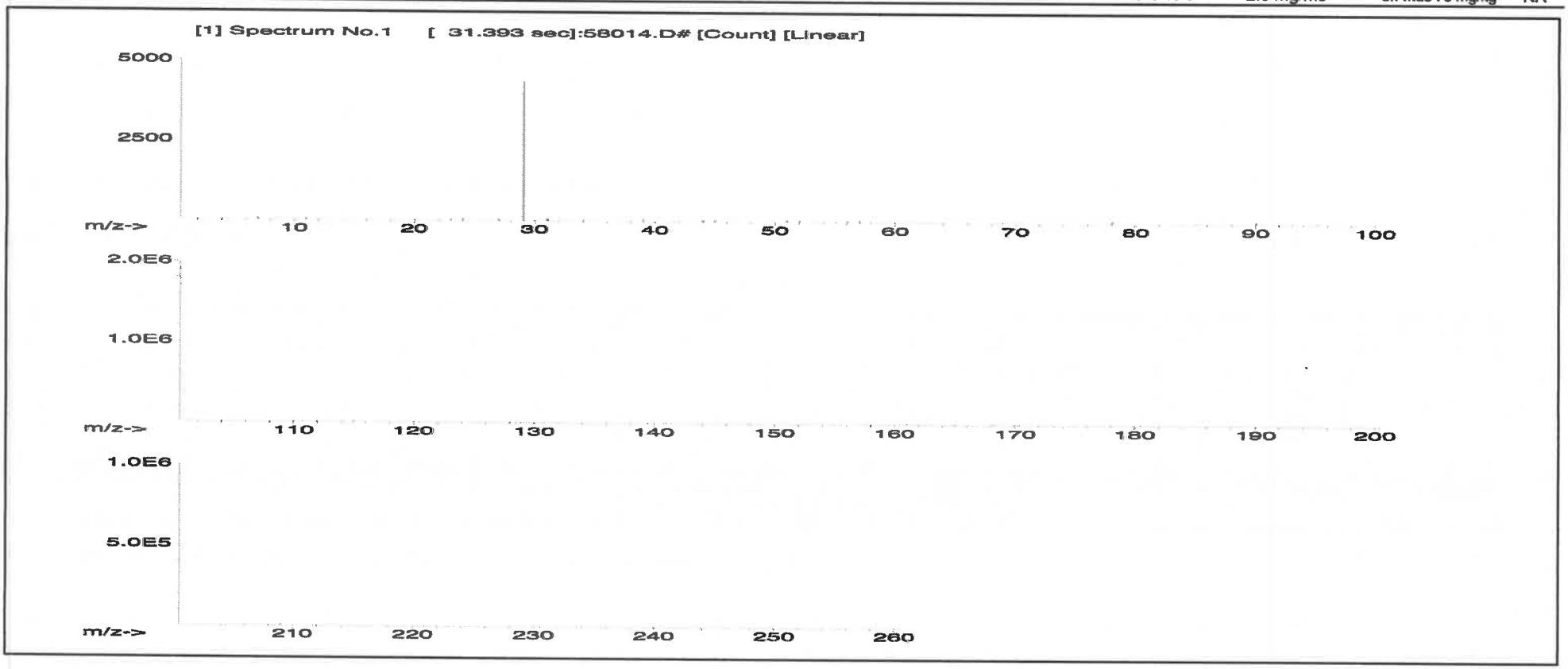
Aleah O'Brady

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



371

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	T	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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* 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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372

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

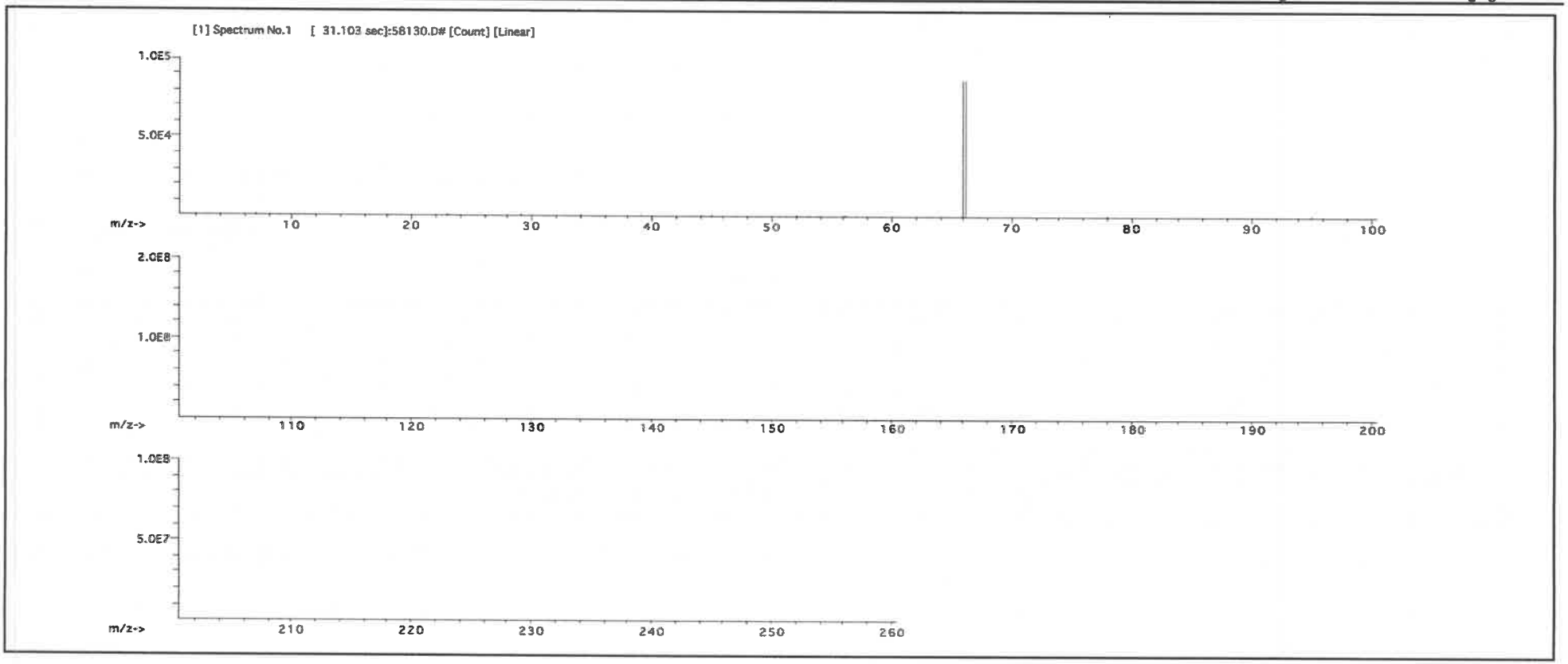
Weight shown below was diluted to (mL): 3000.4 0.06 Flask Uncertainty

	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:

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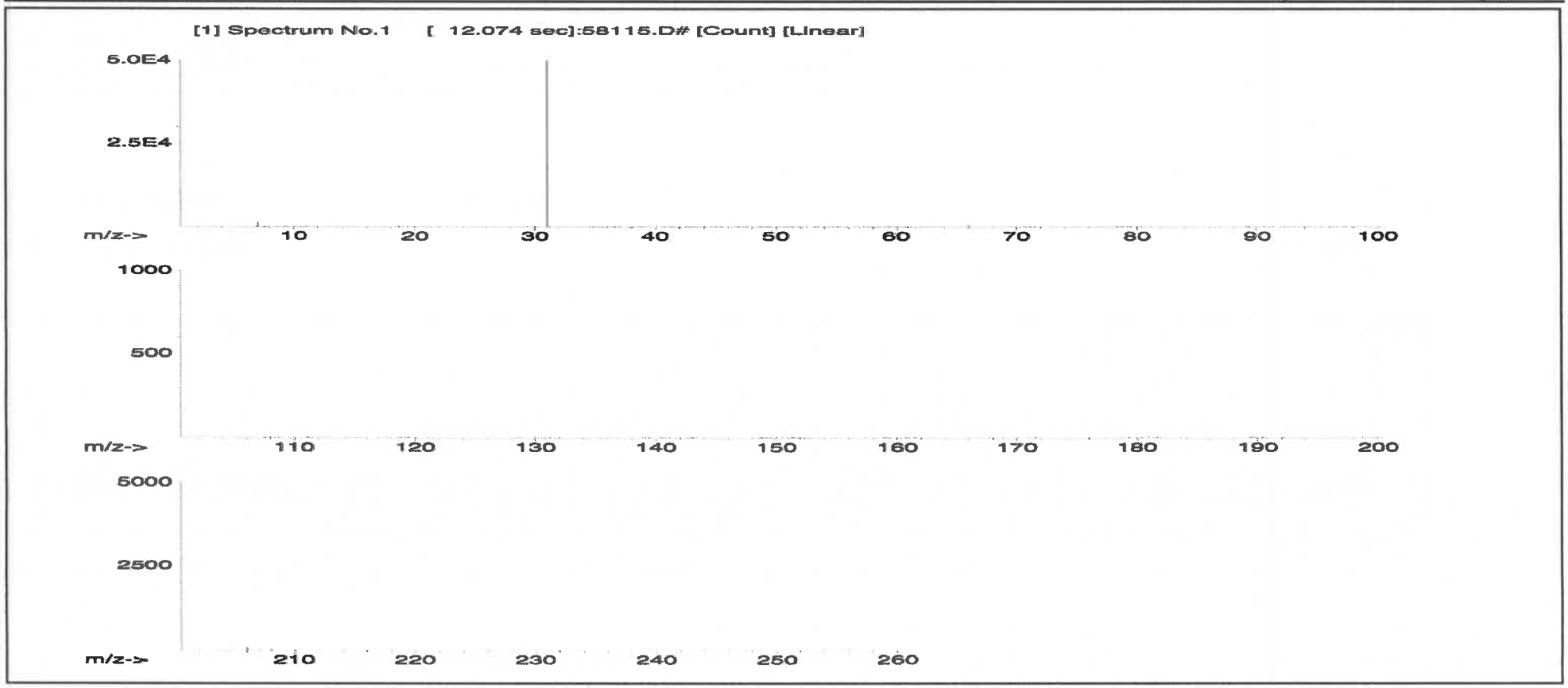
374

CERTIFIED WEIGHT REPORT:

Part Number:	**57015**		**Lot #**		
Lot Number:	**091123**	**Solvent:**	24002546	Nitric Acid	
Description:	**Phosphorous (P)**				
		2%	40.0 (mL)	Nitric Acid	
Expiration Date:	091126				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Formulated By:	Lawrence Barry	091123
Reviewed By:	Pedro L. Rentas	091123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium dihydrogen phosphate (P)	IN008	PV082019A1	1000	99.999	0.10	27.5	7.2729	7.2730	**1000.0**	**2.0**	7722-76-1	5 mg/m3	orl-rat >2000mg/k	3186



375

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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Certificate of Analysis

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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 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)

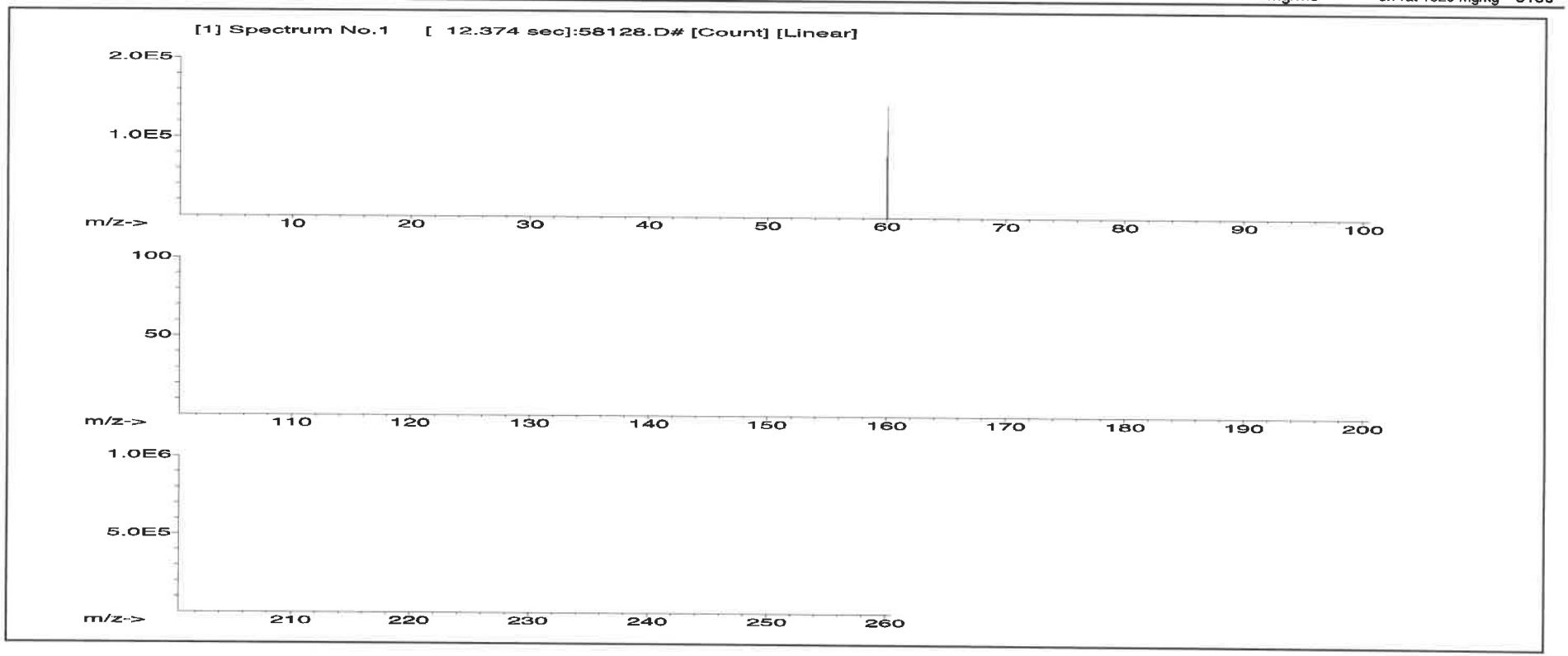
Expiration Date: 041127
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 249.85

	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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Certified Reference Material CRM

M5962 R! 06/14/24.

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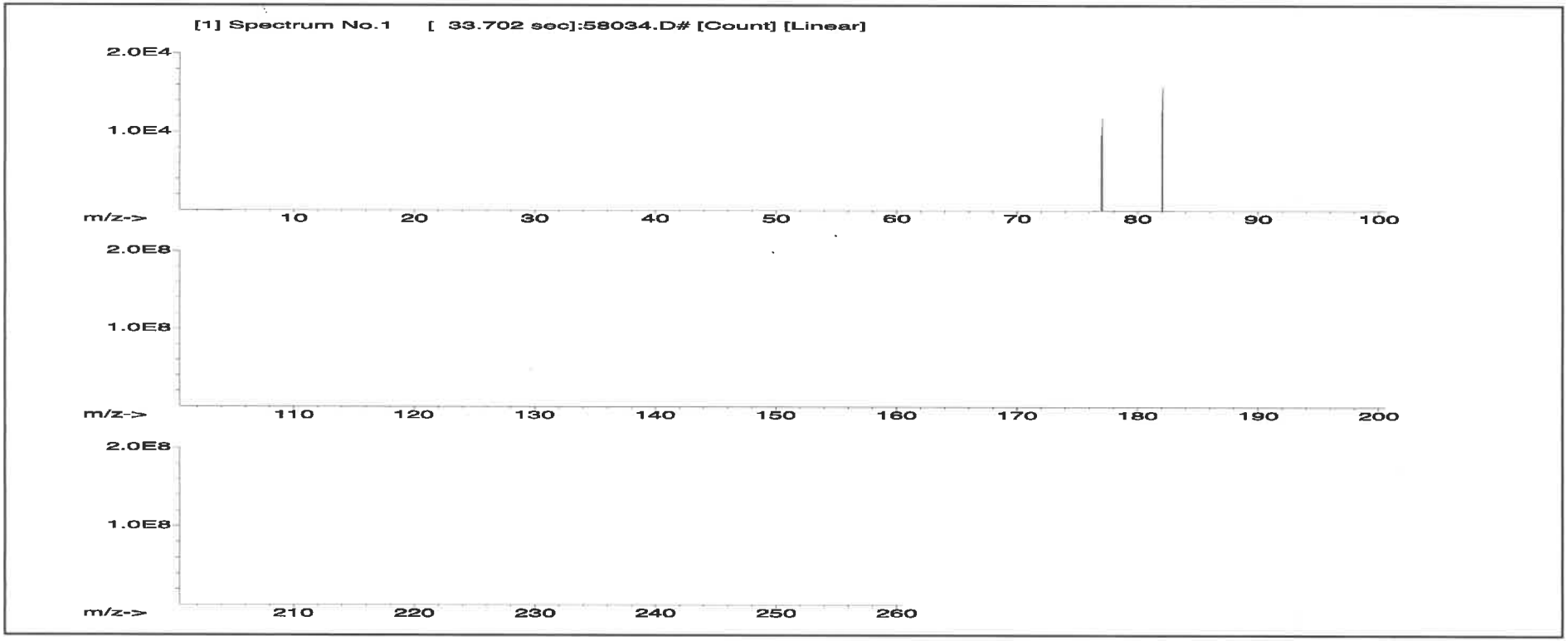
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CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57034**	24002546	Nitric Acid	
Lot Number:	**060624**			
Description:	**Selenium (Se)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	060627			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.07	0.100	Flask Uncertainty	

Formulated By:	Benson Chan	060624
Reviewed By:	Pedro L. Rentas	060624

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Selenium (Se)	58134	071223	0.1000	200.0	0.084	1000	10002.5	**1000.0**	**2.2**	7782-49-2	0.2 mg/m3	orl-rat 6700 mg/kg	3149



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																		
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	T	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:



* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

M5970, M5971 R: 7/01/24

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CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:		
Part Number:	**57003**	24002546	Nitric Acid		
Lot Number:	**062124**				
Description:	**Lithium (Li)**				
		2.0%	5.0 (mL)	Nitric Acid	
Expiration Date:	062127				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	250.11	0.016	Flask Uncertainty		

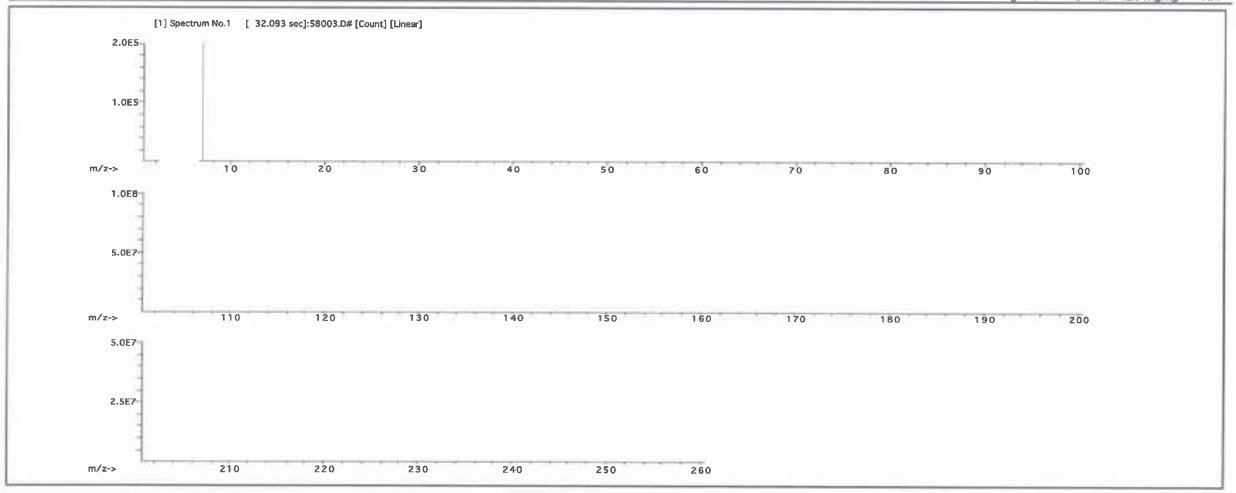
Giovanni Esposito

Formulated By: Giovanni Esposito 062124

Pedro Rentas

Reviewed By: Pedro L. Rentas 062124

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lithium nitrate (Li)	58103	070622	0.1000	25.0	0.004	1000	10000.4	**1000.0**	**2.0**	7790-69-4	5 mg/m3	orl-rat 1426 mg/kg	NA



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Certified Reference Material CRM



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AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	T	Ni	<0.02	Pr	<0.02	Sc	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:



* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certificate of Analysis

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	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



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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) HNO_3 tr. HF
Value / Analyte(s):	1 000 µg/mL ea: Titanium
Starting Material:	Ti Metal
Starting Material Lot#:	2094
Starting Material Purity:	99.9975%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1002 ± 5 µg/mL

Density: 1.012 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **1002 ± 4 µg/mL**
ICP Assay NIST SRM 3162a Lot Number: 130925

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$
w_i = the weighting factors for each method calculated using the inverse square of the variance

$w_i = (1/u_{char\ i}^2) / (\Sigma(1/u_{char\ i}^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma(w_i)^2\ (u_{char\ i})^2]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty
u_{lts} = long term stability standard uncertainty (storage)
u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with
$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization
u_{bb} = bottle to bottle homogeneity standard uncertainty
u_{lts} = long term stability standard uncertainty (storage)
u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000536	M	Eu	<	0.000268	O	Na	<	0.032670	M	Se		0.001204	O	Zn	<	0.003267
O	Al		0.000872	O	Fe		0.003225	O	Nb	<	0.043560	O	Si		0.004735	O	Zr	<	0.043560
M	As	<	0.008586	M	Ga	<	0.000268	M	Nd	<	0.000268	M	Sm	<	0.000268				
M	Au	<	0.004577	M	Gd	<	0.000268	O	Ni	<	0.010890	M	Sn		0.000096				
O	B	<	0.008929	M	Ge	<	0.002146	M	Os	<	0.000269	O	Sr		0.000096				
M	Ba	<	0.002683	M	Hf		0.002161	O	P	<	0.054450	M	Ta		0.010560				
M	Be	<	0.005366	M	Hg	<	0.003231	M	Pb	<	0.001073	M	Tb	<	0.000268				
M	Bi	<	0.001609	M	Ho	<	0.000268	M	Pd	<	0.000268	M	Te	<	0.001341				
O	Ca		0.000676	M	In	<	0.002683	M	Pr	<	0.000268	M	Th	<	0.053663				
M	Cd	<	0.000268	M	Ir	<	0.000269	M	Pt	<	0.000536	s	Ti	<					
M	Ce	<	0.000268	M	K		0.001172	M	Rb	<	0.000268	M	Tl	<	0.000268				
M	Co	<	0.004293	M	La	<	0.000268	M	Re	<	0.000268	M	Tm	<	0.000268				
M	Cr		0.000752	O	Li	<	0.027225	M	Rh	<	0.000268	M	U	<	0.000268				
M	Cs	<	0.000268	M	Lu	<	0.000268	M	Ru	<	0.000269	M	V	<	0.019855				
O	Cu	<	0.010890	O	Mg	<	0.005445	i	S	<		M	W		0.000473				
M	Dy	<	0.000268	O	Mn	<	0.003267	M	Sb	<	0.006976	M	Y	<	0.002146				
M	Er	<	0.000268	M	Mo		0.000774	O	Sc	<	0.004900	M	Yb	<	0.000536				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 47.87 +4 6 Ti(F)6-2

Chemical Compatibility - Soluble in concentrated HCl, HF, H3PO4 H2SO4 and HNO3. Avoid neutral to basic media. Unstable at ppm levels with metals that would pull F- away (i.e. Do not mix with Alkaline or Rare Earths or high levels of transition elements unless they are fluorinated). Stable with most inorganic anions with a tendency to hydrolyze forming the hydrated oxide in all dilute acids except HF.

Stability - 2-100 ppb levels stable (Alone or mixed with all other metals) as the Ti(F)6-2 for months in 1% HNO3 / LDPE container. 1-10,000 ppm single element solutions as the Ti(F)6-2 chemically stable for years in 2-5% HNO3 / trace HF in an LDPE container.

Ti Containing Samples (Preparation and Solution) - Metal (Soluble in H2O / HF caution -powder reacts violently); Oxide - low temperature history anatase or rutile (Dissolved by heating in 1:1:1 H2O / HF / H2SO4); Oxide - high temperature history (~800EC) brookite (fuse in Pt0 with K2S2O7); Ores (fuse in Pt0 with KF + K2S2O7 - no KF if silica not present); Organic Matrices (Dry ash at 450EC in Pt0 and dissolve by heating with 1:1:1 H2O / HF / H2SO4 or fuse ash with pyrosulfate if oxide is as plastic pigment and likely in brookite crystalline form).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 48 amu	14 ppt	N/A	32S16O, 32S14N, 14N16O18O, 14N17N2, 36Ar12C, 48Ca, [96X=2 (where X = Zr, Mo, Ru)]
ICP-OES 323.452 nm	0.0054 / 0.00092 µg/mL	1	Ce, Ar, Ni
ICP-OES 334.941 nm	0.0038 / 0.000028 µg/mL	1	Nb, Ta, Cr, U
ICP-OES 336.121 nm	0.0053 / 0.000034 µg/mL	1	W, Mo, Co

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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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

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

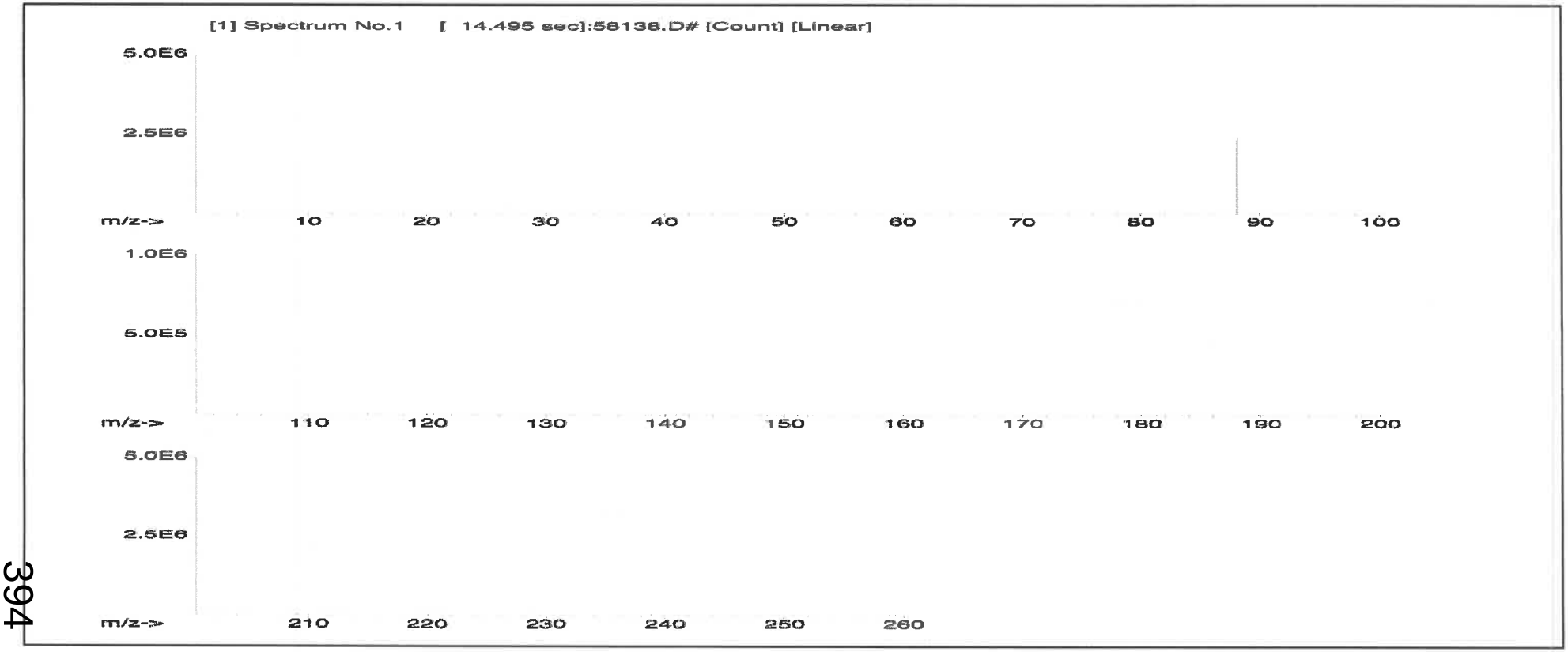
45982 R: 6/11/24

CERTIFIED WEIGHT REPORT:

Part Number:	**57038**		**Lot #**		
Lot Number:	**031524**	**Solvent:**	24002546	Nitric Acid	
Description:	**Strontium (Sr)**				
		2%	40.0 (mL)	Nitric Acid	
Expiration Date:	031527				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.07	0.100	Flask Uncertainty		

Formulated By:	Benson Chan	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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Refine your results. Redefine your industry.

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

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 21, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- February 21, 2028

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



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Certificate of Analysis

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R: 2/22/2024
M5999

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-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:

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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



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

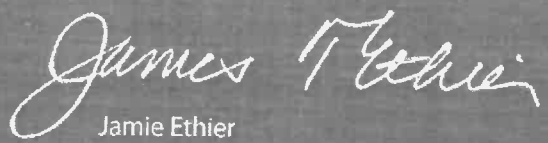
404

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

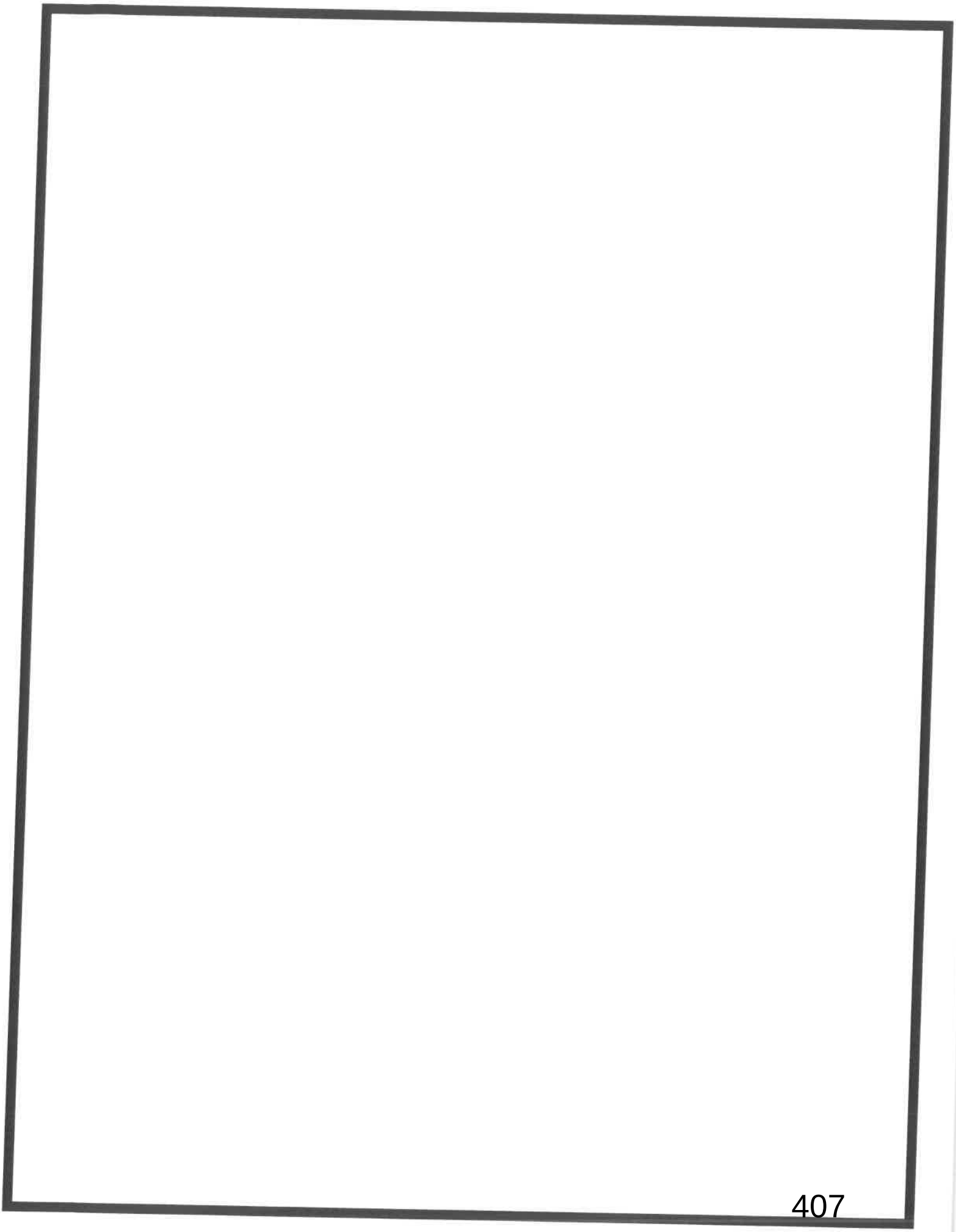
Office and Plant
299 Cedar Lane
Fairless Hills, PA 19030

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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R: 01/03/24 M5806, M5807

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410

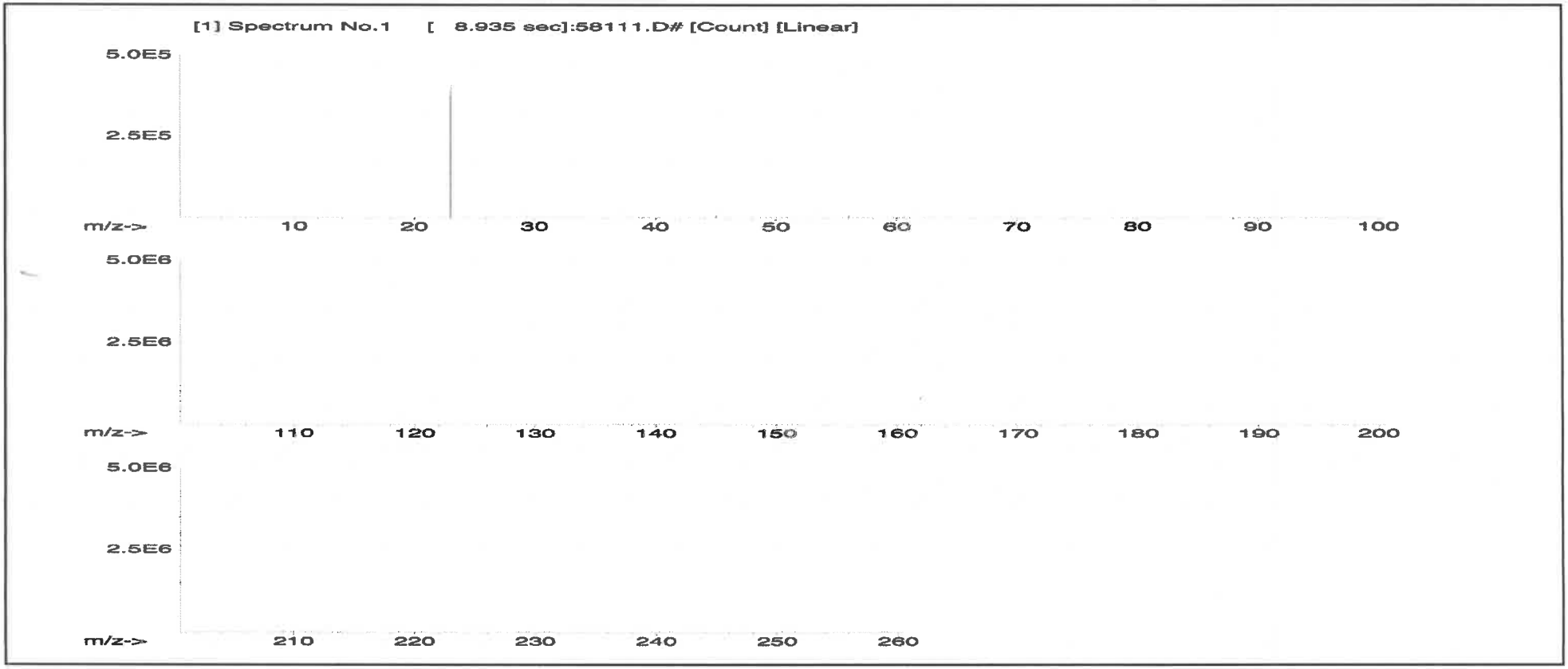
CERTIFIED WEIGHT REPORT:

			Lot #	
Part Number:	**58111**	**Solvent:**	24002546	Nitric Acid
Lot Number:	**122223**			
Description:	**Sodium (Na)**	2%	60.0 (mL)	Nitric Acid
Expiration Date:	122226			
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):	3000.4	0.06	Flask 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



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	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.
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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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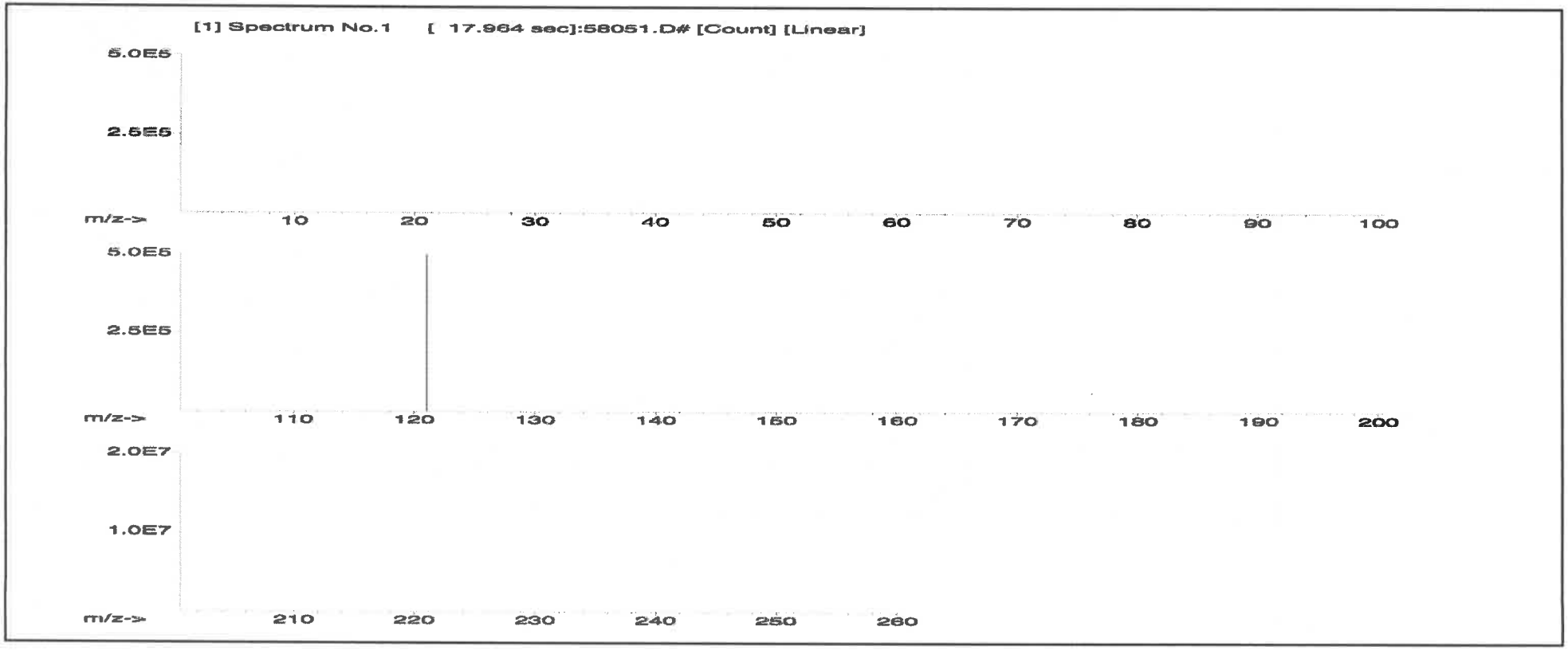
412

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



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	T	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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* 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: 8/5/24

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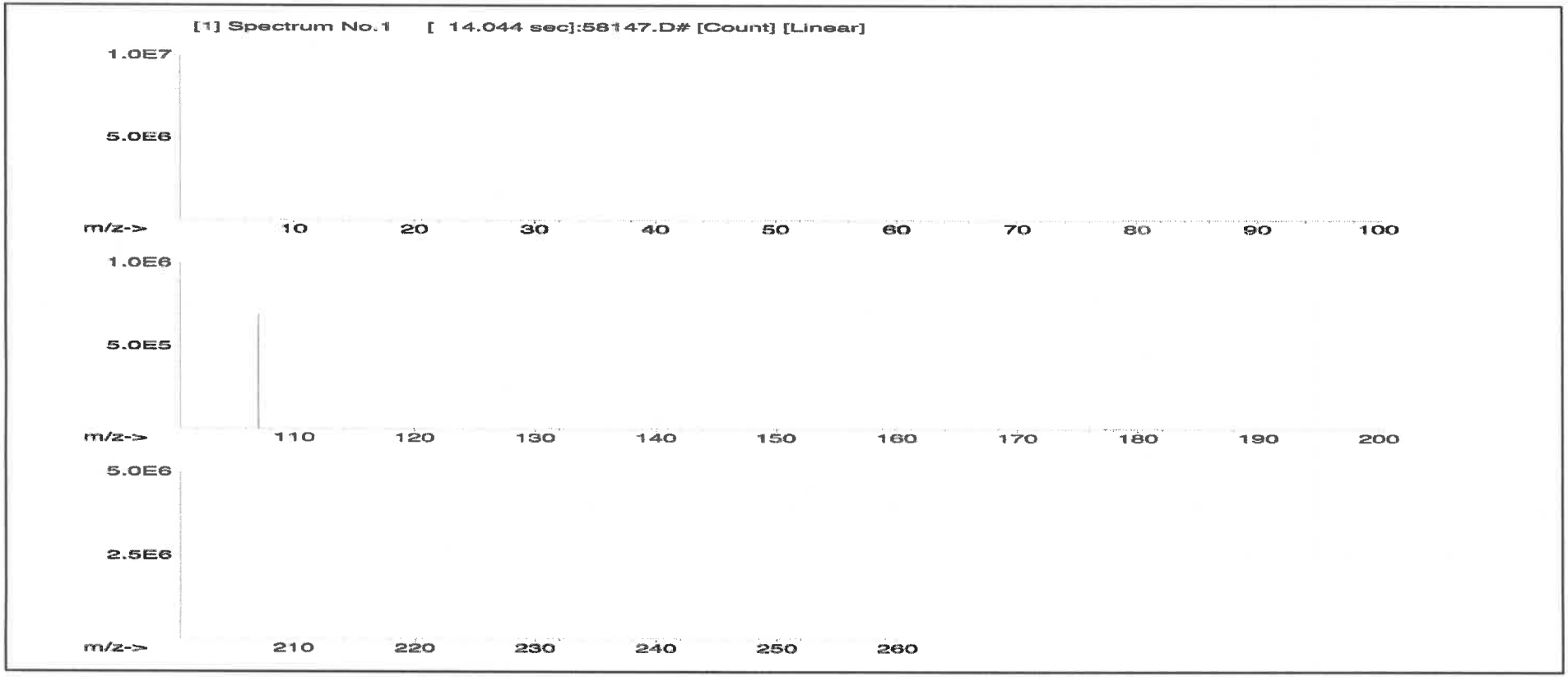
414

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



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	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	T	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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R: 03/16/23 M5473, M5474, M5475, M5476

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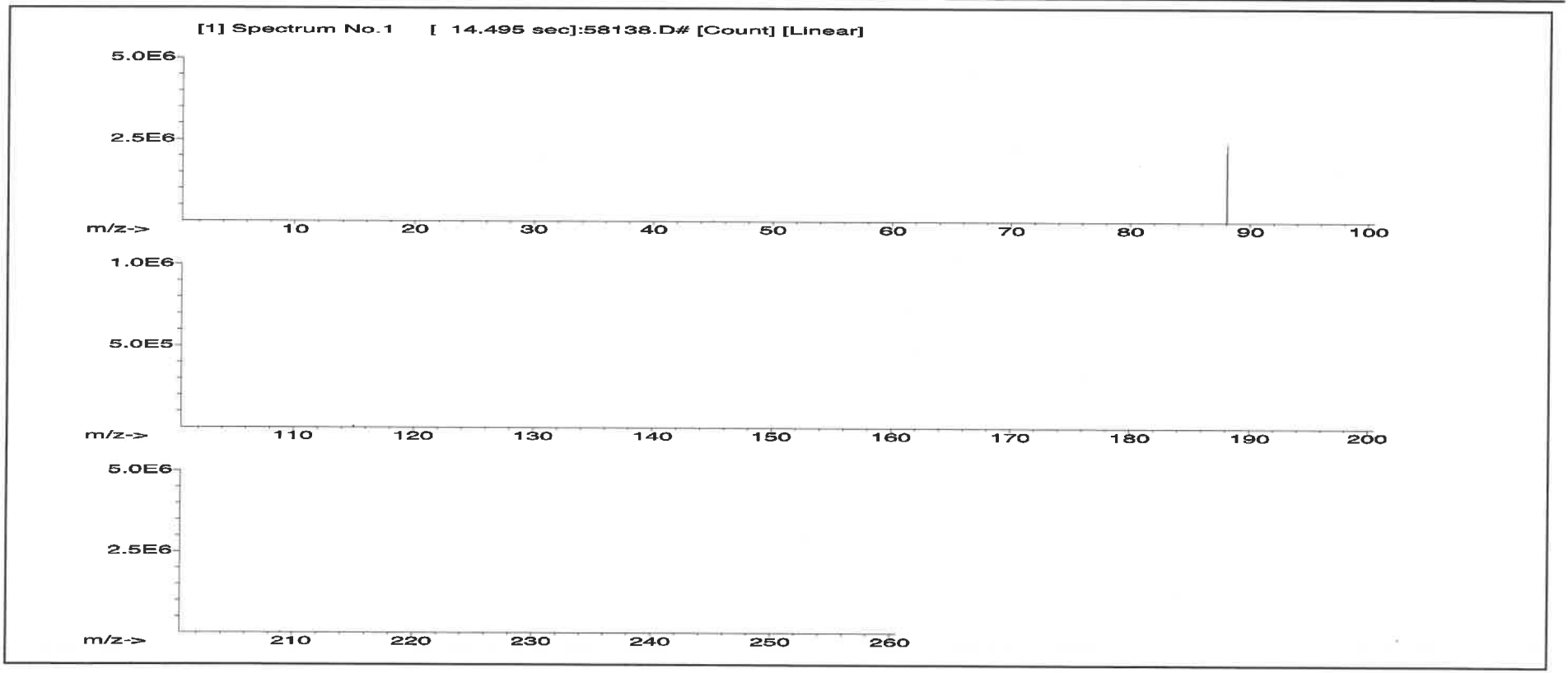
416

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



417

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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418

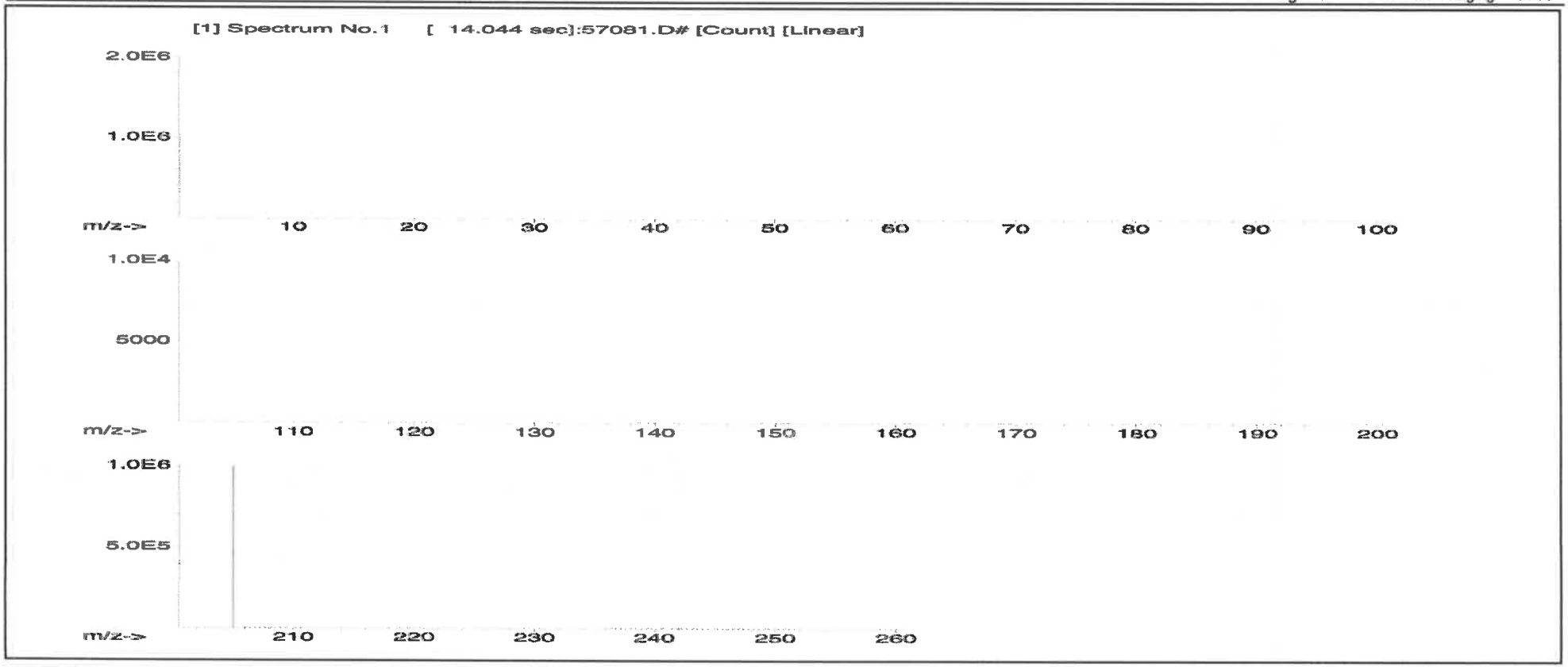
CERTIFIED WEIGHT REPORT:

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



419

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	T	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:



* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M6021

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Rc. 8/5/24

420

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	

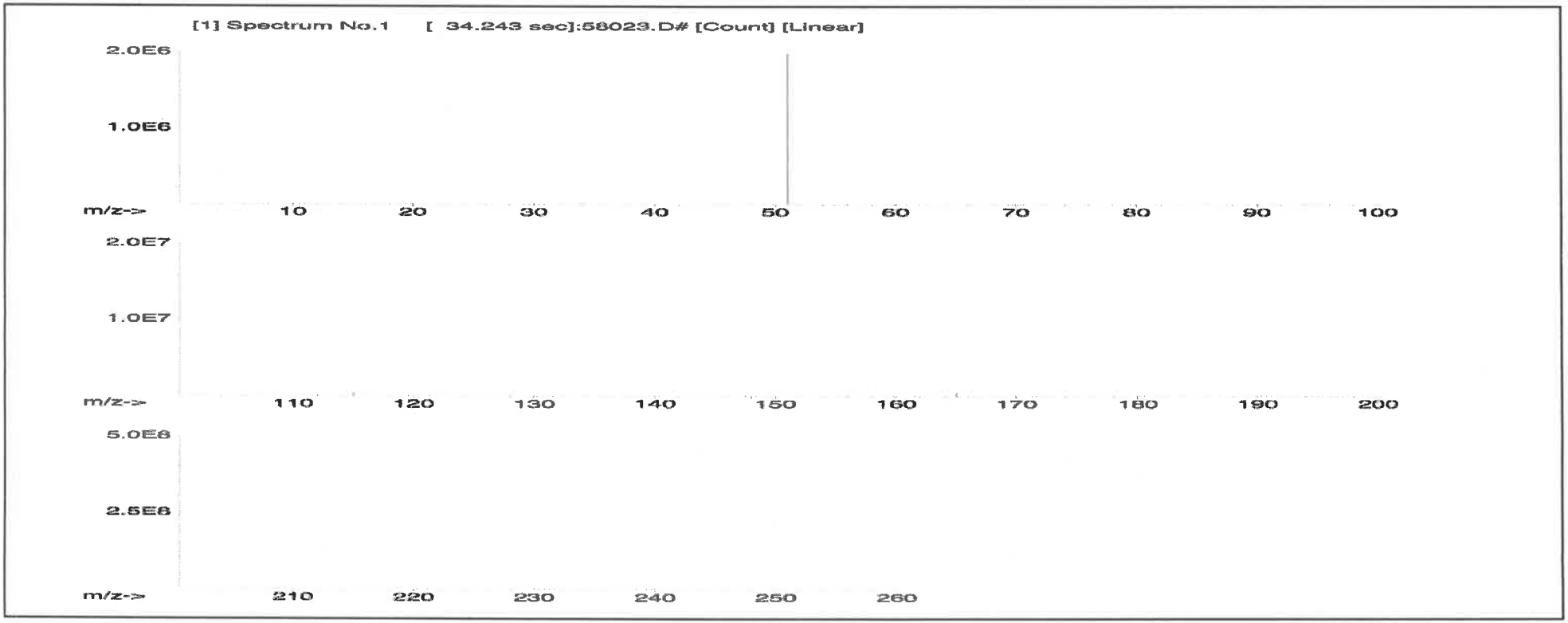
Aleah O'Brady

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



421

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	T
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Alliance TECHNICAL GROUP

Soil/Sludge Metals Preparation Sheet

PB165882

SOP ID : M3050B-Digestion-20, MSFAM01.1-Trace Metals-2

SDG No : MBHMQ0

Matrix : SOIL

Pippete ID: ICP A

Balance ID : M SC-2

Filter paper ID : N/A

pH Strip ID : N/A

Hood ID : #3

Block ID: 1. HOT BLOCK #3 2. N/A

Start Digest Date: 12/27/2024 **Time :** 10:15 **Temp :** 96 °C

End Digest Date: 12/27/2024 **Time :** 12:20 **Temp :** 96 °C

Digestion tube ID: M6054

Block thermometer ID: MET-DIG. # 3

Dig Technician Signature: S123.

Supervisor Signature:

Temp : 1. 96°C 2. N/A

Standared Name	MLS USED	STD REF. # FROM LOG
LCSS	1.00	MP83506
Spike Sol 6	1.00	MP83512
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	MP83498
Conc. HNO3	5.00	M6126
30% H2O2	3.00	M6125
Conc. HCL	10.00	M6121
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Extraction Conformance/Non-Conformance Comments:

HOT BLOCK #3 CELL #35 : 96 C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
12/27/24 13:20	S123. met digestion	
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

Soil/Sludge Metals Preparation Sheet

PB165882

Lab Sample ID	Client Sample ID	pH	Initial Weight (g)	Final Vol (ml)	Color Before	Color After	Texture	Artifact	Comment	Prep Pos
P5199-01	MBHMQ0	N/A	1.40	100	Brown	Yellow	Medium	N/A	N/A	1
P5199-02	MBHMQ1	N/A	1.37	100	Brown	Yellow	Medium	N/A	N/A	2
P5199-03	MBHMQ2	N/A	1.25	100	Brown	Yellow	Medium	N/A	N/A	3
P5199-04	MBHMQ3	N/A	1.38	100	Brown	Yellow	Medium	N/A	N/A	4
P5199-05	MBHMQ3D	N/A	1.28	100	Brown	Yellow	Medium	N/A	N/A	5
P5199-06	MBHMQ3S	N/A	1.24	100	Brown	Yellow	Medium	N/A	MP83512	6
P5199-07	MBHMQ4	N/A	1.36	100	Brown	Yellow	Medium	N/A	N/A	7
P5199-08	MBHMQ5	N/A	1.41	100	Brown	Yellow	Medium	N/A	N/A	8
P5199-09	MBHMQ6	N/A	1.34	100	Brown	Yellow	Medium	N/A	N/A	9
P5199-10	MBHMT1	N/A	1.44	100	Black	Yellow	Medium	N/A	N/A	10
P5199-11	MBHMT2	N/A	1.33	100	Black	Yellow	Medium	N/A	N/A	11
P5199-12	MBHMT3	N/A	1.44	100	Black	Yellow	Medium	N/A	N/A	12
PB165882BL	PBS882	N/A	1.00	100	Colorless	Colorless	Fine	N/A	N/A	13
PB165882BS	LCS882	N/A	1.00	100	Colorless	Colorless	Fine	N/A	MP83506	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 # LB134200

Review By	Mohan Bera	Review On	1/10/2025 4:14:20 AM
Supervise By	Sarabjit Jaswal	Supervise On	1/10/2025 4:14:54 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	
LCS Standard	MP83506
Chk Standard	MP83513,MP83514

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	01/08/25 17:30		Kareem	OK
2	S1	S01	CAL2	01/08/25 17:34		Kareem	OK
3	S2	S02	CAL3	01/08/25 17:38		Kareem	OK
4	S3	S03	CAL4	01/08/25 17:42		Kareem	OK
5	S4	S04	CAL5	01/08/25 17:46		Kareem	OK
6	S5	S05	CAL6	01/08/25 17:49		Kareem	OK
7	S6	S06	CAL7	01/08/25 17:53		Kareem	OK
8	ICV055	ICV055	ICV	01/08/25 18:07	Inst. paused for calibration review	Kareem	OK
9	ICB055	ICB055	ICB	01/08/25 18:14	Inst. paused for review	Kareem	OK
10	ICSA055	ICSA055	ICSA	01/08/25 18:18		Kareem	OK
11	ICSAB055	ICSAB055	ICSAB	01/08/25 18:22		Kareem	OK
12	CCV132	CCV132	CCV	01/08/25 18:35	Inst. paused for review	Kareem	OK
13	CCB132	CCB132	CCB	01/08/25 18:39		Kareem	OK
14	PB165919BL	PBS919	MB	01/08/25 18:43		Kareem	OK
15	PB165919BS	LCS919	LCS	01/08/25 18:47		Kareem	OK
16	PB165918BL	PBS918	MB	01/08/25 18:51		Kareem	OK
17	PB165918BS	LCS918	LCS	01/08/25 18:55		Kareem	OK
18	PB165882BL	PBS882	MB	01/08/25 18:59		Kareem	OK

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Supervise By	Sarabjit Jaswal	Supervise On	1/10/2025 4:14:54 AM

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ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
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CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	
LCS Standard	MP83506
Chk Standard	MP83513,MP83514

19	PB165882BS	LCS882	LCS	01/08/25 19:03		Kareem	OK
20	PB165883BL	PBS883	MB	01/08/25 19:08		Kareem	OK
21	PB165883BS	LCS883	LCS	01/08/25 19:12		Kareem	OK
22	P5204-11	MBHNC9	SAM	01/08/25 19:16		Kareem	OK
23	P5204-12	MBHNC9D	DUP	01/08/25 19:19		Kareem	OK
24	P5204-11L	MBHNC9L	SD	01/08/25 19:23		Kareem	OK
25	P5205-19	MBHN51	SAM	01/08/25 19:31		Kareem	OK
26	P5205-20	MBHN51D	DUP	01/08/25 19:35		Kareem	OK
27	P5205-19L	MBHN51L	SD	01/08/25 19:39		Kareem	OK
28	P5205-21	MBHN51S	MS	01/08/25 19:43	MS Fail For As,Ag,Tl(Below RL)	Kareem	OK
29	P5199-04	MBHMQ3	SAM	01/08/25 19:54		Kareem	OK
30	P5199-05	MBHMQ3D	DUP	01/08/25 19:58		Kareem	OK
31	P5199-04L	MBHMQ3L	SD	01/08/25 20:02		Kareem	OK
32	P5199-06	MBHMQ3S	MS	01/08/25 20:07	MS Fail For Sb,As,Se,AgTl(Below RL)	Kareem	OK
33	P5204-13	MBHNC9S	MS	01/08/25 20:11	MS Fail For Se,Ag,Tl(Below RL)	Kareem	OK
34	CCV133	CCV133	CCV	01/08/25 20:17		Kareem	OK
35	CCB133	CCB133	CCB	01/08/25 20:21		Kareem	OK
36	P5199-04LRE	MBHMQ3L	SD	01/08/25 20:25	Not use	Kareem	Not Ok
37	P5200-08	MBHMX3	SAM	01/08/25 20:29		Kareem	OK

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Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB134200

Review By	Mohan Bera	Review On	1/10/2025 4:14:20 AM
Supervise By	Sarabjit Jaswal	Supervise On	1/10/2025 4:14:54 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	
LCS Standard	MP83506
Chk Standard	MP83513,MP83514

38	P5200-09	MBHMX3D	DUP	01/08/25 20:32		Kareem	OK
39	P5200-08LRE	MBHMX3L	SD	01/08/25 20:36	Not use	Kareem	Not Ok
40	P5200-10	MBHMX3S	MS	01/08/25 20:40	MS Fail For As,Ag,Tl(Below RL)	Kareem	OK
41	P5200-08L	MBHMX3L	SD	01/08/25 20:44		Kareem	OK
42	P5204-01	MBHN64	SAM	01/08/25 20:48		Kareem	OK
43	P5204-02	MBHN65	SAM	01/08/25 20:52		Kareem	OK
44	P5204-03	MBHN66	SAM	01/08/25 20:56	Ca High	Kareem	Dilution
45	P5204-04	MBHN67	SAM	01/08/25 21:00		Kareem	OK
46	P5204-05	MBHN89	SAM	01/08/25 21:03		Kareem	OK
47	P5204-06	MBHN90	SAM	01/08/25 21:07		Kareem	OK
48	P5204-07	MBHN91	SAM	01/08/25 21:11		Kareem	OK
49	P5204-08	MBHN92	SAM	01/08/25 21:15		Kareem	OK
50	P5204-09	MBHN93	SAM	01/08/25 21:19		Kareem	OK
51	P5204-10	MBHN94	SAM	01/08/25 21:22		Kareem	OK
52	P5204-14	MBHND1	SAM	01/08/25 21:26		Kareem	OK
53	P5204-15	MBHND2	SAM	01/08/25 21:30		Kareem	OK
54	P5204-16	MBHND3	SAM	01/08/25 21:34		Kareem	OK
55	P5204-17	MBHND4	SAM	01/08/25 21:38		Kareem	OK
56	P5204-18	MBHND5	SAM	01/08/25 21:41		Kareem	OK

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Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB134200

Review By	Mohan Bera	Review On	1/10/2025 4:14:20 AM
Supervise By	Sarabjit Jaswal	Supervise On	1/10/2025 4:14:54 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	
LCS Standard	MP83506
Chk Standard	MP83513,MP83514

57	P5204-19	MBHNJ7	SAM	01/08/25 21:45		Kareem	OK
58	CCV134	CCV134	CCV	01/08/25 21:49		Kareem	OK
59	CCB134	CCB134	CCB	01/08/25 21:53		Kareem	OK
60	P5204-20	MBHNJ8	SAM	01/08/25 21:57		Kareem	OK
61	P5205-01	MBHN20	SAM	01/08/25 22:00		Kareem	OK
62	P5205-02	MBHN21	SAM	01/08/25 22:04		Kareem	OK
63	P5205-03	MBHN22	SAM	01/08/25 22:08		Kareem	OK
64	P5205-04	MBHN23	SAM	01/08/25 22:12		Kareem	OK
65	P5205-05	MBHN24	SAM	01/08/25 22:15		Kareem	OK
66	P5205-06	MBHN25	SAM	01/08/25 22:19		Kareem	OK
67	P5205-07	MBHN26	SAM	01/08/25 22:23		Kareem	OK
68	P5205-08	MBHN40	SAM	01/08/25 22:27		Kareem	OK
69	P5205-09	MBHN41	SAM	01/08/25 22:30		Kareem	OK
70	P5205-10	MBHN42	SAM	01/08/25 22:34		Kareem	OK
71	P5205-11	MBHN43	SAM	01/08/25 22:38		Kareem	OK
72	P5205-12	MBHN44	SAM	01/08/25 22:42		Kareem	OK
73	P5205-13	MBHN45	SAM	01/08/25 22:46		Kareem	OK
74	P5205-14	MBHN46	SAM	01/08/25 22:49		Kareem	OK
75	P5205-15	MBHN47	SAM	01/08/25 22:53		Kareem	OK
76	P5205-16	MBHN48	SAM	01/08/25 22:57		Kareem	OK

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Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB134200

Review By	Mohan Bera	Review On	1/10/2025 4:14:20 AM
Supervise By	Sarabjit Jaswal	Supervise On	1/10/2025 4:14:54 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	
LCS Standard	MP83506
Chk Standard	MP83513,MP83514

77	P5205-17	MBHN49	SAM	01/08/25 23:01		Kareem	OK
78	P5205-18	MBHN50	SAM	01/08/25 23:04		Kareem	OK
79	P5205-22	MBHN52	SAM	01/08/25 23:08		Kareem	OK
80	CCV135	CCV135	CCV	01/08/25 23:12		Kareem	OK
81	CCB135	CCB135	CCB	01/08/25 23:16		Kareem	OK
82	P5199-01	MBHMQ0	SAM	01/08/25 23:20		Kareem	OK
83	P5199-02	MBHMQ1	SAM	01/08/25 23:23		Kareem	OK
84	P5199-03	MBHMQ2	SAM	01/08/25 23:27		Kareem	OK
85	P5199-07	MBHMQ4	SAM	01/08/25 23:31		Kareem	OK
86	P5199-08	MBHMQ5	SAM	01/08/25 23:35		Kareem	OK
87	P5199-09	MBHMQ6	SAM	01/08/25 23:39		Kareem	OK
88	P5199-10	MBHMT1	SAM	01/08/25 23:42		Kareem	OK
89	P5199-11	MBHMT2	SAM	01/08/25 23:46		Kareem	OK
90	P5199-12	MBHMT3	SAM	01/08/25 23:50		Kareem	OK
91	P5200-01	MBHMT4	SAM	01/08/25 23:54		Kareem	OK
92	P5200-02	MBHMT5	SAM	01/08/25 23:57		Kareem	OK
93	P5200-03	MBHMT6	SAM	01/09/25 00:01		Kareem	OK
94	P5200-04	MBHMT7	SAM	01/09/25 00:05		Kareem	OK
95	P5200-05	MBHMX0	SAM	01/09/25 00:09		Kareem	OK
96	P5200-06	MBHMX1	SAM	01/09/25 00:13		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 # LB134200

Review By	Mohan Bera	Review On	1/10/2025 4:14:20 AM
Supervise By	Sarabjit Jaswal	Supervise On	1/10/2025 4:14:54 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	
LCS Standard	MP83506
Chk Standard	MP83513,MP83514

97	P5200-07	MBHMX2	SAM	01/09/25 00:16		Kareem	OK
98	P5200-11	MBHMX4	SAM	01/09/25 00:20		Kareem	OK
99	P5200-12	MBHMX5	SAM	01/09/25 00:24		Kareem	OK
100	P5200-13	MBHMX6	SAM	01/09/25 00:28		Kareem	OK
101	P5200-14	MBHMX7	SAM	01/09/25 00:31		Kareem	OK
102	CCV136	CCV136	CCV	01/09/25 00:35		Kareem	OK
103	CCB136	CCB136	CCB	01/09/25 00:39		Kareem	OK
104	P4317-08DL	MYDB99	SAM	01/09/25 00:43	Not Use	Kareem	Not Ok
105	PBS001	PBS001	SAM	01/09/25 00:47		Kareem	OK
106	LCS001	LCS001	SAM	01/09/25 00:51		Kareem	OK
107	LCSD001	LCSD001	SAM	01/09/25 00:55		Kareem	OK
108	P5199-04A	MBHMQ3A	PS	01/09/25 00:59	PS For AS- 0.0065ML M5801, SE- 0.038ML MP83726,TL- 0.05ML MP83745- 10 ml Sample	Kareem	OK
109	P5200-08A	MBHMX3A	PS	01/09/25 01:02	PS For AS- 0.0042ML M5801 , TL- 0.05ML MP83745 - 10 ml Sample	Kareem	OK
110	P5204-11A	MBHNC9A	PS	01/09/25 01:06	PS For SE- 0.015ML MP83726,TL- 0.05ML MP83745 - 10ml Sample	Kareem	OK
111	P5205-19A	MBHN51A	PS	01/09/25 01:10	PS For AS- 0.0035ML M5801, TL- 0.05ML MP83745 -10ml Sample	Kareem	OK
112	P5204-03DL	MBHN66	SAM	01/09/25 01:14	5X For Ca	Kareem	Confirms

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 # LB134200

Review By	Mohan Bera	Review On	1/10/2025 4:14:20 AM
Supervise By	Sarabjit Jaswal	Supervise On	1/10/2025 4:14:54 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	
LCS Standard	MP83506
Chk Standard	MP83513,MP83514

113	CCV137	CCV137	CCV	01/09/25 01:18		Kareem	OK
114	CCB137	CCB137	CCB	01/09/25 01:21		Kareem	OK

ORIGIN ID:BUFA (716) 853-1220
EMMANUEL GARCIAVILLAR
WSP USA INC.
50 LAKEFRONT BLVD

BUFFALO, NY 14202
UNITED STATES US

SHIP DATE: 06DEC24
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 REF: US000650
INV: 03.02.02.EXP
PO: 31800192.009A DEPT: EMMANUEL GARCIA

58CJ4/EB78/C8C4

FedEx Express

2 of 8
MPS# 0263 7705 5865 8740
Mstr# 7705 5865 9768

SATURDAY 1:30P
PRIORITY OVERNIGHT

0201

07092
NJ-US EWR

X0 KBCA

After printing this label:
CONSIGNEE COPY - PLEASE PLACE IN FRONT OF POUCH
1. Fold the printed page along the horizontal line.
2. Place label in shipping pouch and affix it to your shipment.

431

Rec'd
12/7/24
9:55 2.5°C

Alliance TECHNICAL GROUP 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Login Summary Report

Order ID :	P5199	Order Date :	12/7/2024 9:55:00 AM	Project Mgr :	Deepak
Client :	USEPA CLP SMO	Project :	51879	Report Type :	USEPA CLP
Contact :	Anita Kapadia	Receive Date :	12/7/2024 9:55:00 AM	EDD Type :	EPA CLP
Date Sign Off :	12/10/2024 1:23:51 PM				

Sample ID	Client ID	Matrix	Sampling Date	Test	Test Group	Method	TAT Days	Fax Due Date	HC Due Date
P5199-01	MBHMQ0	Solid	11/22/2024						
				Metals CLP Full		SFAM_AES	15	01/13/2025	01/13/2025
				Percent Solids		Chemtech -SOP	15	01/13/2025	01/13/2025
P5199-02	MBHMQ1	Solid	11/22/2024						
				Metals CLP Full		SFAM_AES	15	01/13/2025	01/13/2025
				Percent Solids		Chemtech -SOP	15	01/13/2025	01/13/2025
P5199-03	MBHMQ2	Solid	11/22/2024						
				Metals CLP Full		SFAM_AES	15	01/13/2025	01/13/2025
				Percent Solids		Chemtech -SOP	15	01/13/2025	01/13/2025
P5199-04	MBHMQ3	Solid	11/22/2024						
				Metals CLP Full		SFAM_AES	15	01/13/2025	01/13/2025
				Percent Solids		Chemtech -SOP	15	01/13/2025	01/13/2025
P5199-05	MBHMQ3D	Solid	11/22/2024						
				Metals CLP Full		SFAM_AES	15	01/13/2025	01/13/2025
				Percent Solids		Chemtech -SOP	15	01/13/2025	01/13/2025
P5199-06	MBHMQ3S	Solid	11/22/2024						
				Metals CLP Full		SFAM_AES	15	01/13/2025	01/13/2025
				Percent Solids		Chemtech -SOP	15	01/13/2025	01/13/2025
P5199-07	MBHMQ4	Solid	11/22/2024						
				Metals CLP Full		SFAM_AES	15	01/13/2025	01/13/2025
				Percent Solids		Chemtech -SOP	15	01/13/2025	01/13/2025
P5199-08	MBHMQ5	Solid	11/22/2024						
				Metals CLP Full		SFAM_AES	15	01/13/2025	01/13/2025
				Percent Solids		Chemtech -SOP	15	01/13/2025	01/13/2025
P5199-09	MBHMQ6	Solid	11/22/2024						
				Metals CLP Full		SFAM_AES	15	01/13/2025	01/13/2025
				Percent Solids		Chemtech -SOP	15	01/13/2025	01/13/2025
P5199-10	MBHMT1	Solid	11/22/2024						
				Metals CLP Full		SFAM_AES	15	01/13/2025	01/13/2025
				Percent Solids		Chemtech -SOP	15	01/13/2025	01/13/2025

P5199-11	MBHMT2	Solid	11/22/2024					
				Metals CLP Full	SFAM_AES	15	01/13/2025	01/13/2025
				Percent Solids	Chemtech -SOP	15	01/13/2025	01/13/2025
P5199-12	MBHMT3	Solid	11/22/2024					
				Metals CLP Full	SFAM_AES	15	01/13/2025	01/13/2025
				Percent Solids	Chemtech -SOP	15	01/13/2025	01/13/2025

WORKLIST(Hardcopy Internal Chain)

WorkList Name : PB165882 **WorkList ID :** 186658 **Department :** Digestion **Date :** 12-27-2024 09:23:52

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P5199-01	MBHMQ0	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C12	11/22/2024	SFAM_AES
P5199-02	MBHMQ1	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C12	11/22/2024	SFAM_AES
P5199-03	MBHMQ2	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C12	11/22/2024	SFAM_AES
P5199-04	MBHMQ3	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C12	11/22/2024	SFAM_AES
P5199-05	MBHMQ3D	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C12	11/22/2024	SFAM_AES
P5199-06	MBHMQ3S	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C12	11/22/2024	SFAM_AES
P5199-07	MBHMQ4	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C12	11/22/2024	SFAM_AES
P5199-08	MBHMQ5	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C12	11/22/2024	SFAM_AES
P5199-09	MBHMQ6	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C12	11/22/2024	SFAM_AES
P5199-10	MBHMT1	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C12	11/22/2024	SFAM_AES
P5199-11	MBHMT2	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C12	11/22/2024	SFAM_AES
P5199-12	MBHMT3	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C12	11/22/2024	SFAM_AES

Date/Time 12/27/24 9:45

Raw Sample Received by: SLD. MCT dissolution

Raw Sample Relinquished by: RM SM

Date/Time 12/27/24 10:45

Raw Sample Received by: RM SM

Raw Sample Relinquished by: SLD. MCT dissol