SDG COVER PAGE

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

Lab Code: ACE Case No.: 51863 MA No.: SDG No.: MC0D50

SOW No. : SFAM01.1

EPA Sample No.	Lab Sample Id	Analysis Method ICP-AES	ICP-MS	Mercury	Cyanide
MC0D50	P4753-01	X			
MC0D51	P4753-02	X			
MC0D52	P4753-03	X			
MC0D53	P4753-04	X			
MC0D54	P4753-05	X			
MC0D56	P4753-06	X			
MC0D57	P4753-07	X			
MC0D58	P4753-08	X			
MC0D59	P4753-09	X			
MC0D60	P4753-10	X			
MC0D61	P4753-11	X			
MC0D62	P4753-12	X			
MC0D64	P4753-13	X			
MC0D66	P4753-14	X			
MC0D66D	P4753-15	X			
MC0D66S	P4753-16	X			
MC0D89	P4753-17	X			
MC0D90	P4753-18	X			
MC0D91	P4753-19	X			
MC0D92	P4753-20	X			
MC0D93	P4753-21	X			
MC0D95	P4753-22	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:

USEPA CLP COC (LAB COPY)
DateShipped: 11/6/2024
CarrierName: FedEx
AirbillNo: 779763140676

CHAIN OF CUSTODY RECORD
Case #: 51863
Cooler #: 2

No: 3-110524-191400-0171
Lab: Alliance Technical Group LLC
Lab Contact: Mohammad Amed
Lab Phone: 908-789-8900

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
SHI-SS-3,9-a	MC0D50	Soil/ START	Composite	Pb(7)	3407 (4 C) (1)	Pile 3,9	11/05/2024 15:50	1
SHI-SS-3,9-b	MC0D51	Soil/ START	Composite	Pb(7)	3408 (4 C) (1)	Pile 3,9	11/05/2024 15:52	2
SHI-SS-3,9-c	MC0D52	Soil/ START	Composite	Pb(7)	3409 (4 C) (1)	Pile 3,9	11/05/2024 15:55	3
SHI-SS-3,9-d	MC0D53	Soil/ START	Composite	Pb(7)	3410 (4 C) (1)	Pile 3,9	11/05/2024 15:59	4
SHI-SS-3,9-e	MC0D54	Soil/ START	Composite	Pb(7)	3411 (4 C) (1)	Pile 3,9	11/05/2024 16:03	5
SHI-SS-3,9	MC0D55	Soil/ START	Composite	TCLP Metals - Cd+Pb(14)	3524 (4 C) (1)	Pile 3,9	11/05/2024 16:08	
SHI-SS-HR-a	MC0D56	Soil/ START	Composite	Pb(7)	3413 (4 C) (1)	Haul Road	11/05/2024 15:40	6
SHI-SS-HR-b	MC0D57	Soil/ START	Composite	Pb(7)	3414 (4 C) (1)	Haul Road	11/05/2024 15:42	7
SHI-SS-HR-c	MC0D58	Soil/ START	Composite	Pb(7)	3415 (4 C) (1)	Haul Road	11/05/2024 15:47	8
SHI-SS-HR-d	MC0D59	Soil/ START	Composite	Pb(7)	3416 (4 C) (1)	Haul Road	11/05/2024 15:51	9
SHI-SS-HR-e	MC0D60	Soil/ START	Composite	Pb(7)	3417 (4 C) (1)	Haul Road	11/05/2024 15:54	10
SHI-SS-HR-c-D	MC0D61	Soil/ START	Composite	Pb(7)	3418 (4 C) (1)	Haul Road	11/05/2024 15:48	11
SHI-SS-HR-d-D	MC0D62	Soil/ START	Composite	Pb(7)	3419 (4 C) (1)	Haul Road	11/05/2024 15:52	12
SHI-SS-HR	MC0D63	Soil/ START	Composite	TCLP Metals - Cd+Pb(14)	3479 (4 C) (1)	Haul Road	11/05/2024 15:56	
SHI-SS-11-a	MC0D64	Soil/ START	Composite	Pb(7)	3421 (4 C) (1)	Pile 11	11/05/2024 16:22	13
SHI-SS-11	MC0D65	Soil/ START	Composite	TCLP Metals - Cd+Pb(14)	3469 (4 C) (1)	Pile 11	11/05/2024 16:24	
SHI-SS-20,21-a	MC0D66	Soil/ START	Composite	Pb(7)	3423 (4 C) (1)	Pile 20,21	11/05/2024 17:05	14 - QC
SHI-SS-20,21	MC0D67	Soil/ START	Composite	TCLP Metals - Cd+Pb(14)	3473 (4 C) (1)	Pile 20,21	11/05/2024 17:00	

Sample(s) to be used for Lab QC: SHI-SS-20,21-a Tag 3423

Shipment for Case Complete? N
Samples Transferred From Chain of Custody #

Analysis Key: Pb=Pb by ICP-AES, TCLP Metals - Cd+Pb=TCLP Metals - Cd and Pb

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	Tyler J Cain TT/START	11/6/24 1640		9:15 11-7-24	IR-Cont#1 2.8 C Custody Seal Intact Temp Blk present

USEPA CLP COC (LAB COPY)
DateShipped: 11/6/2024
CarrierName: FedEx
AirbillNo: 779772897863

CHAIN OF CUSTODY RECORD

Case #: 51863
Cooler #: 4

No: 3-110624-075354-0175
Lab: Alliance Technical Group LLC
Lab Contact: Mohammad Amed
Lab Phone: 908-789-8900

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
SHI-SS-17-a	MC0D89	Soil/ START	Composite	Pb(7)	3446 (4 C) (1)	Pile 17	11/05/2024 16:39	15
SHI-SS-17-b	MC0D90	Soil/ START	Composite	Pb(7)	3447 (4 C) (1)	Pile 17	11/05/2024 16:45	16
SHI-SS-17-c	MC0D91	Soil/ START	Composite	Pb(7)	3448 (4 C) (1)	Pile 17	11/05/2024 16:52	17
SHI-SS-17-d	MC0D92	Soil/ START	Composite	Pb(7)	3449 (4 C) (1)	Pile 17	11/05/2024 16:55	18
SHI-SS-17-e	MC0D93	Soil/ START	Composite	Pb(7)	3450 (4 C) (1)	Pile 17	11/05/2024 17:02	19
SHI-SS-17	MC0D94	Soil/ START	Composite	TCLP Metals - Cd+Pb(14)	3470 (4 C) (1)	Pile 17	11/05/2024 17:03	
SHI-SS-8-a	MC0D95	Soil/ START	Composite	Pb(7)	3452 (4 C) (1)	Pile 8	11/05/2024 16:28	29
SHI-SS-8-b	MC0D96	Soil/ START	Composite	Pb(7)	3453 (4 C) (1)	Pile 8	11/05/2024 16:33	
SHI-SS-8-c	MC0D97	Soil/ START	Composite	Pb(7)	3454 (4 C) (1)	Pile 8	11/05/2024 16:45	
SHI-SS-8-d	MC0D98	Soil/ START	Composite	Pb(7)	3455 (4 C) (1)	Pile 8	11/05/2024 16:49	
SHI-SS-8-e	MC0D99	Soil/ START	Composite	Pb(7)	3456 (4 C) (1)	Pile 8	11/05/2024 16:53	
SHI-SS-8	MC0DA0	Soil/ START	Composite	TCLP Metals - Cd+Pb(14)	3478 (4 C) (1)	Pile 8	11/05/2024 16:58	
SHI-SS-10-a	MC0DA1	Soil/ START	Composite	Pb(7)	3458 (4 C) (1)	Pile 10	11/05/2024 16:30	
SHI-SS-10-b	MC0DA2	Soil/ START	Composite	Pb(7)	3459 (4 C) (1)	Pile 10	11/05/2024 16:35	
SHI-SS-10-c	MC0DA3	Soil/ START	Composite	Pb(7)	3460 (4 C) (1)	Pile 10	11/05/2024 16:40	
SHI-SS-10-d	MC0DA4	Soil/ START	Composite	Pb(7)	3461 (4 C) (1)	Pile 10	11/05/2024 16:45	
SHI-SS-10-e	MC0DA5	Soil/ START	Composite	Pb(7)	3462 (4 C) (1)	Pile 10	11/05/2024 16:50	
SHI-SS-10	MC0DA6	Soil/ START	Composite	TCLP Metals - Cd+Pb(14)	3467 (4 C) (1)	Pile 10	11/05/2024 16:55	

Sample(s) to be used for Lab QC: SHI-SS-8-e Tag 3456, SHI-SS-10-d Tag 3461

Shipment for Case Complete? Y
Samples Transferred From Chain of Custody #

Analysis Key: Pb=Pb by ICP-AES, TCLP Metals - Cd+Pb=TCLP Metals - Cd and Pb

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	TT/START	11/6/24 1650		9:15 11-7-24	IR Cont #1 2.4 Custody Seal Intact - Temp Blank present

FORM DC-1

SAMPLE LOG-IN SHEET

Lab Name : Alliance Technical Group, LLC		Page 1 of 2
Received By (Print Name) Cassandra Rios		Log-in Date 11/7/2024
Received By (Signature)		
Case Number 51863	SDG No. MC0D50	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.	779763140676 1
6. Shipping Container Temperature Indicator Bottle	Present
7. Shipping Container Temperature	2.8 Degree C
8. Sample Condition	Intact
9. Sample Tags Sample Tag Numbers	Absent Listed on Traffic Report
10. Does information on Traffic Reports/Chain of Custody Records and Sample Tags agree ?	Yes
11. Date Received at Lab	11/07/2024
12.Time Received	09:15

	EPA Sample #	Aqueous/ Water Sample pH	Corresponding		Remarks: Condition of Sample Shipment, etc.
			Sample Tag #	Assigned Lab #	
1	MC0D50	N/A	3407	P4753-01	Intact
2	MC0D51	N/A	3408	P4753-02	Intact
3	MC0D52	N/A	3409	P4753-03	Intact
4	MC0D53	N/A	3410	P4753-04	Intact
5	MC0D54	N/A	3411	P4753-05	Intact
6	MC0D56	N/A	3413	P4753-06	Intact
7	MC0D57	N/A	3414	P4753-07	Intact
8	MC0D58	N/A	3415	P4753-08	Intact
9	MC0D59	N/A	3416	P4753-09	Intact
10	MC0D60	N/A	3417	P4753-10	Intact
11	MC0D61	N/A	3418	P4753-11	Intact
12	MC0D62	N/A	3419	P4753-12	Intact
13	MC0D64	N/A	3421	P4753-13	Intact
14	MC0D66	N/A	3423	P4753-14	Intact
15	MC0D66D	N/A	3423	P4753-15	Intact
16	MC0D66S	N/A	3423	P4753-16	Intact
17	N/A	N/A	N/A	N/A	N/A
18	N/A	N/A	N/A	N/A	N/A
19	N/A	N/A	N/A	N/A	N/A
20	N/A	N/A	N/A	N/A	N/A
21	N/A	N/A	N/A	N/A	N/A
22	N/A	N/A	N/A	N/A	N/A
23	N/A	N/A	N/A	N/A	N/A

* Contact SMO and attach record of resolution

Reviewed By	Logbook No. N/A
Date 11/7/24	Logbook Page No. N/A

FORM DC-1

SAMPLE LOG-IN SHEET

Lab Name : Alliance Technical Group, LLC		Page 2 of 2
Received By (Print Name)		Log-in Date 11/7/2024
Received By (Signature)		
Case Number 51863	SDG No. MC0D50	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.	779772897863 2
6. Shipping Container Temperature Indicator Bottle	Present
7. Shipping Container Temperature	2.4 Degree C
8. Sample Condition	Intact
9. Sample Tags Sample Tag Numbers	Absent Listed on Traffic Report
10. Does information on Traffic Reports/Chain of Custody Records and Sample Tags agree ?	Yes
11. Date Received at Lab	11/07/2024
12.Time Received	09:15

	EPA Sample #	Aqueous/ Water Sample pH	Corresponding		Remarks: Condition of Sample Shipment, etc.
			Sample Tag #	Assigned Lab #	
1	MC0D89	N/A	3446	P4753-17	Intact
2	MC0D90	N/A	3447	P4753-18	Intact
3	MC0D91	N/A	3448	P4753-19	Intact
4	MC0D92	N/A	3449	P4753-20	Intact
5	MC0D93	N/A	3450	P4753-21	Intact
6	MC0D95	N/A	3452	P4753-22	Intact
7	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
9	N/A	N/A	N/A	N/A	N/A
10	N/A	N/A	N/A	N/A	N/A
11	N/A	N/A	N/A	N/A	N/A
12	N/A	N/A	N/A	N/A	N/A
13	N/A	N/A	N/A	N/A	N/A
14	N/A	N/A	N/A	N/A	N/A
15	N/A	N/A	N/A	N/A	N/A
16	N/A	N/A	N/A	N/A	N/A
17	N/A	N/A	N/A	N/A	N/A
18	N/A	N/A	N/A	N/A	N/A
19	N/A	N/A	N/A	N/A	N/A
20	N/A	N/A	N/A	N/A	N/A
21	N/A	N/A	N/A	N/A	N/A
22	N/A	N/A	N/A	N/A	N/A
23	N/A	N/A	N/A	N/A	N/A

* Contact SMO and attach record of resolution

Reviewed By		Logbook No.	N/A
Date	11/7/24	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.	**51863**	SDG NO.	**MC0D50**
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	3	✓	
3. Sample Log-In Sheet (DC-1)	4	5	✓	
4. CSF Inventory Sheet (DC-2)	6	8	✓	
5. SDG Narrative	9	11	✓	
6. Communication Logs	NA	NA	✓	
7. Percent Solids Log	12	14	✓	
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	15	34	✓	
9. Instrument raw data by instrument in analysis order	35	259	✓	
Other Data				
10. Standard and Reagent Preparation Logs	260	395	✓	
11. Original Preparation and Cleanup forms or copies of Preparation and Cleanup Logbooks	396	397	✓	
12. Original Analysis or Instrument Run forms or copies of Analysis or Instrument Logbooks	398	404	✓	
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 2)	405	406	✓	
Sample Tags	NA	NA	✓	
Sample Log-In Sheet (Lab)	407	408	✓	
45. Misc. Shipping/Receiving Records (list all individual records)				
	NA	NA	✓	
46. Internal Lab Sample Transfer Records and Tracking Sheets (describe or list)				
	409	410	✓	
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 # MC0D50
CASE # 51863
CONTRACT # 68HERH20D0011
SOW# SFAM01.1
LAB NAME: Alliance Technical Group, LLC
LAB CODE: ACE
LAB ORDER ID # P4753

A. Number of Samples and Date of Receipt

20 Soil samples were delivered to the laboratory intact on 11/07/2024.

B. Parameters

Test requested for Metals CLP4 = Lead

C. Cooler Temp

Indicator Bottle**: Presence/**Absence

Cooler: 2.8C, 2.4^{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 MC0D50 For Lead:

If C = 0.2338532 ppm
Vf = 100 ml
W = 1.22g
S = 0.944(94.4/100)
DF = 1

$$\text{Concentration (mg/kg)} = 0.2338532 \times \frac{100}{1.22 \times 0.944} \times 1$$

$$= 20.30539 \text{mg/kg}$$

= 20 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. Duplicate sample did meet requirements except for Lead. Serial Dilution did meet requirements.

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: 11/11/2024

OVENTEMP IN Celsius(°C): 107
Time IN: 13:10
In Date: 11/08/2024
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 07:50
Out Date: 11/09/2024
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLID- OVEN

QC: LB133349

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
P4753-01	MC0D50	1	1.18	8.57	9.75	9.27	94.4	
P4753-02	MC0D51	2	1.18	8.50	9.68	9.48	97.6	
P4753-03	MC0D52	3	1.19	8.52	9.71	9.45	96.9	
P4753-04	MC0D53	4	1.17	8.43	9.6	9.43	98.0	
P4753-05	MC0D54	5	1.14	8.43	9.57	9.35	97.4	
P4753-06	MC0D56	6	1.18	8.49	9.67	8.98	91.9	
P4753-07	MC0D57	7	1.18	8.48	9.66	8.61	87.6	
P4753-08	MC0D58	8	1.12	8.47	9.59	9.42	98.0	
P4753-09	MC0D59	9	1.15	8.36	9.51	9.36	98.2	
P4753-10	MC0D60	10	1.15	8.74	9.89	9.63	97.0	
P4753-11	MC0D61	11	1.13	8.70	9.83	9.67	98.2	
P4753-12	MC0D62	12	1.15	8.40	9.55	9.37	97.9	
P4753-13	MC0D64	13	1.14	8.81	9.95	8.97	88.9	
P4753-14	MC0D66	14	1.17	8.40	9.57	9.41	98.1	
P4753-15	MC0D66D	15	1.17	8.40	9.57	9.41	98.1	
P4753-16	MC0D66S	16	1.17	8.40	9.57	9.41	98.1	
P4753-17	MC0D89	17	1.18	8.44	9.62	9.25	95.6	
P4753-18	MC0D90	18	1.16	8.49	9.65	9.3	95.9	
P4753-19	MC0D91	19	1.17	8.58	9.75	8.89	90.0	
P4753-20	MC0D92	20	1.18	8.40	9.58	9.11	94.4	
P4753-21	MC0D93	21	1.19	8.50	9.69	8.66	87.9	
P4753-22	MC0D95	22	1.13	8.60	9.73	9.51	97.4	

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

WORKLIST(Hardcopy Internal Chain)

B133349

WorkList Name : %1-P4753 **WorkList ID :** 185237 **Department :** Wet-Chemistry **Date :** 11-08-2024 08:07:07

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P4753-01	MC0D50	Solid	Percent Solids	Cool 4 deg C	USEP01	Q12	11/05/2024	Chemtech -SO
P4753-02	MC0D51	Solid	Percent Solids	Cool 4 deg C	USEP01	Q12	11/05/2024	Chemtech -SO
P4753-03	MC0D52	Solid	Percent Solids	Cool 4 deg C	USEP01	Q12	11/05/2024	Chemtech -SO
P4753-04	MC0D53	Solid	Percent Solids	Cool 4 deg C	USEP01	Q12	11/05/2024	Chemtech -SO
P4753-05	MC0D54	Solid	Percent Solids	Cool 4 deg C	USEP01	Q12	11/05/2024	Chemtech -SO
P4753-06	MC0D56	Solid	Percent Solids	Cool 4 deg C	USEP01	Q12	11/05/2024	Chemtech -SO
P4753-07	MC0D57	Solid	Percent Solids	Cool 4 deg C	USEP01	Q12	11/05/2024	Chemtech -SO
P4753-08	MC0D58	Solid	Percent Solids	Cool 4 deg C	USEP01	Q12	11/05/2024	Chemtech -SO
P4753-09	MC0D59	Solid	Percent Solids	Cool 4 deg C	USEP01	Q12	11/05/2024	Chemtech -SO
P4753-10	MC0D60	Solid	Percent Solids	Cool 4 deg C	USEP01	Q12	11/05/2024	Chemtech -SO
P4753-11	MC0D61	Solid	Percent Solids	Cool 4 deg C	USEP01	Q12	11/05/2024	Chemtech -SO
P4753-12	MC0D62	Solid	Percent Solids	Cool 4 deg C	USEP01	Q12	11/05/2024	Chemtech -SO
P4753-13	MC0D64	Solid	Percent Solids	Cool 4 deg C	USEP01	Q12	11/05/2024	Chemtech -SO
P4753-14	MC0D66	Solid	Percent Solids	Cool 4 deg C	USEP01	Q12	11/05/2024	Chemtech -SO
P4753-15	MC0D66D	Solid	Percent Solids	Cool 4 deg C	USEP01	Q12	11/05/2024	Chemtech -SO
P4753-16	MC0D66S	Solid	Percent Solids	Cool 4 deg C	USEP01	Q12	11/05/2024	Chemtech -SO
P4753-17	MC0D89	Solid	Percent Solids	Cool 4 deg C	USEP01	Q12	11/05/2024	Chemtech -SO
P4753-18	MC0D90	Solid	Percent Solids	Cool 4 deg C	USEP01	Q12	11/05/2024	Chemtech -SO
P4753-19	MC0D91	Solid	Percent Solids	Cool 4 deg C	USEP01	Q12	11/05/2024	Chemtech -SO
P4753-20	MC0D92	Solid	Percent Solids	Cool 4 deg C	USEP01	Q12	11/05/2024	Chemtech -SO
P4753-21	MC0D93	Solid	Percent Solids	Cool 4 deg C	USEP01	Q12	11/05/2024	Chemtech -SO

13

Date/Time 11/08/24 12:45

Raw Sample Received by: [signature]

Raw Sample Relinquished by: [signature] SH

Date/Time 11/08/24 13:15

Raw Sample Received by: [signature] SH

Raw Sample Relinquished by: [signature]

WORKLIST(Hardcopy Internal Chain)

UB 133349

WorkList Name : %1-P4753 **WorkList ID :** 185237 **Department :** Wet-Chemistry **Date :** 11-08-2024 08:07:07

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P4753-22	MC0D95	Solid	Percent Solids	Cool 4 deg C	USEP01	Q12	11/05/2024	Chemtech -SO

14

Date/Time 11/08/24 12:45

Raw Sample Received by:

Raw Sample Relinquished by:

Date/Time 11/08/24 13:15

Raw Sample Received by:

Raw Sample Relinquished by:

EPA SAMPLE NO.

MC0D50

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51863 MA No. : SDG No.: MC0D50

Matrix: SOIL Lab Sample ID: P4753-01

% Solids: 94.4 Date Received: 11/07/2024

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
7439-92-1	Lead	20	*	11/14/2024	0727

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

Comments:

EPA SAMPLE NO.

MC0D51

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51863 MA No. : SDG No.: MC0D50

Matrix: SOIL Lab Sample ID: P4753-02

% Solids: 97.6 Date Received: 11/07/2024

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
7439-92-1	Lead	140	*	11/14/2024	0731

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

Comments:

EPA SAMPLE NO.

MC0D52

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51863 MA No. : SDG No.: MC0D50

Matrix: SOIL Lab Sample ID: P4753-03

% Solids: 96.9 Date Received: 11/07/2024

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
7439-92-1	Lead	120	*	11/14/2024	0736

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

Comments:

EPA SAMPLE NO.

MC0D53

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51863 MA No. : SDG No.: MC0D50

Matrix: SOIL Lab Sample ID: P4753-04

% Solids: 98 Date Received: 11/07/2024

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
7439-92-1	Lead	95	*	11/14/2024	0740

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

Comments:

EPA SAMPLE NO.

MC0D54

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51863 MA No. : SDG No.: MC0D50

Matrix: SOIL Lab Sample ID: P4753-05

% Solids: 97.4 Date Received: 11/07/2024

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
7439-92-1	Lead	110	*	11/14/2024	0745

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

Comments:

EPA SAMPLE NO.

MC0D56

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51863 MA No. : SDG No.: MC0D50

Matrix: SOIL Lab Sample ID: P4753-06

% Solids: 91.9 Date Received: 11/07/2024

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
7439-92-1	Lead	350	*	11/14/2024	0749

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

Comments:

EPA SAMPLE NO.

MC0D57

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51863 MA No. : SDG No.: MC0D50

Matrix: SOIL Lab Sample ID: P4753-07

% Solids: 87.6 Date Received: 11/07/2024

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
7439-92-1	Lead	250	*	11/14/2024	0754

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

Comments:

EPA SAMPLE NO.

MC0D58

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51863 MA No. : SDG No.: MC0D50

Matrix: SOIL Lab Sample ID: P4753-08

% Solids: 98 Date Received: 11/07/2024

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
7439-92-1	Lead	120	*	11/14/2024	0758

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

Comments:

EPA SAMPLE NO.

MC0D59

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51863 MA No. : SDG No.: MC0D50

Matrix: SOIL Lab Sample ID: P4753-09

% Solids: 98.2 Date Received: 11/07/2024

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
7439-92-1	Lead	80	*	11/14/2024	0803

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

Comments:

EPA SAMPLE NO.

MC0D60

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51863 MA No. : SDG No.: MC0D50

Matrix: SOIL Lab Sample ID: P4753-10

% Solids: 97 Date Received: 11/07/2024

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
7439-92-1	Lead	92	*	11/14/2024	0816

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

Comments:

EPA SAMPLE NO.

MC0D61

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51863 MA No. : SDG No.: MC0D50

Matrix: SOIL Lab Sample ID: P4753-11

% Solids: 98.2 Date Received: 11/07/2024

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
7439-92-1	Lead	83	*	11/14/2024	0820

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

Comments:

EPA SAMPLE NO.

MC0D62

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51863 MA No. : SDG No.: MC0D50

Matrix: SOIL Lab Sample ID: P4753-12

% Solids: 97.9 Date Received: 11/07/2024

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
7439-92-1	Lead	110	*	11/14/2024	0825

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

Comments:

EPA SAMPLE NO.

MC0D64

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51863 MA No. : SDG No.: MC0D50

Matrix: SOIL Lab Sample ID: P4753-13

% Solids: 88.9 Date Received: 11/07/2024

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
7439-92-1	Lead	230	*	11/14/2024	0829

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

Comments:

EPA SAMPLE NO.

MC0D66

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51863 MA No. : SDG No.: MC0D50

Matrix: SOIL Lab Sample ID: P4753-14

% Solids: 98.1 Date Received: 11/07/2024

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
7439-92-1	Lead	240	*	11/14/2024	0834

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

Comments:

EPA SAMPLE NO.

MC0D89

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51863 MA No. : SDG No.: MC0D50

Matrix: SOIL Lab Sample ID: P4753-17

% Solids: 95.6 Date Received: 11/07/2024

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
7439-92-1	Lead	200	*	11/14/2024	0852

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

Comments:

EPA SAMPLE NO.

MC0D90

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51863 MA No. : SDG No.: MC0D50

Matrix: SOIL Lab Sample ID: P4753-18

% Solids: 95.9 Date Received: 11/07/2024

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
7439-92-1	Lead	160	*	11/14/2024	0856

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

Comments:

EPA SAMPLE NO.

MC0D91

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51863 MA No. : SDG No.: MC0D50

Matrix: SOIL Lab Sample ID: P4753-19

% Solids: 90 Date Received: 11/07/2024

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
7439-92-1	Lead	77	*	11/14/2024	0900

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

Comments:

EPA SAMPLE NO.

MC0D92

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51863 MA No. : SDG No.: MC0D50

Matrix: SOIL Lab Sample ID: P4753-20

% Solids: 94.4 Date Received: 11/07/2024

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
7439-92-1	Lead	180	*	11/14/2024	0905

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

Comments:

EPA SAMPLE NO.

MC0D93

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51863 MA No. : SDG No.: MC0D50

Matrix: SOIL Lab Sample ID: P4753-21

% Solids: 87.9 Date Received: 11/07/2024

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
7439-92-1	Lead	200	*	11/14/2024	0909

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

Comments:

EPA SAMPLE NO.

MC0D95

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51863 MA No. : SDG No.: MC0D50

Matrix: SOIL Lab Sample ID: P4753-22

% Solids: 97.4 Date Received: 11/07/2024

Analytical Method: ICP_AES

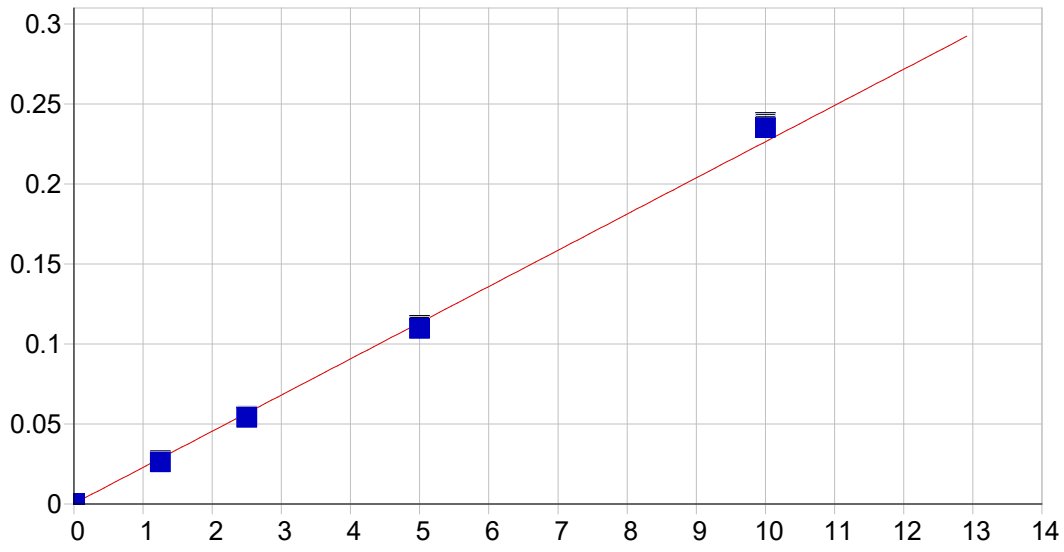
Concentration Units (µg/L, mg/L, mg/kg dry weight, µg, or µg/cm²): mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-92-1	Lead	150	*	11/14/2024	0914

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

Comments:

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5



As 189.042 {479}

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A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999092	Status:	OK.
Std Error of Est:	0.000016		
Predicted MDL:	0.010096		
Predicted MQL:	0.033655		

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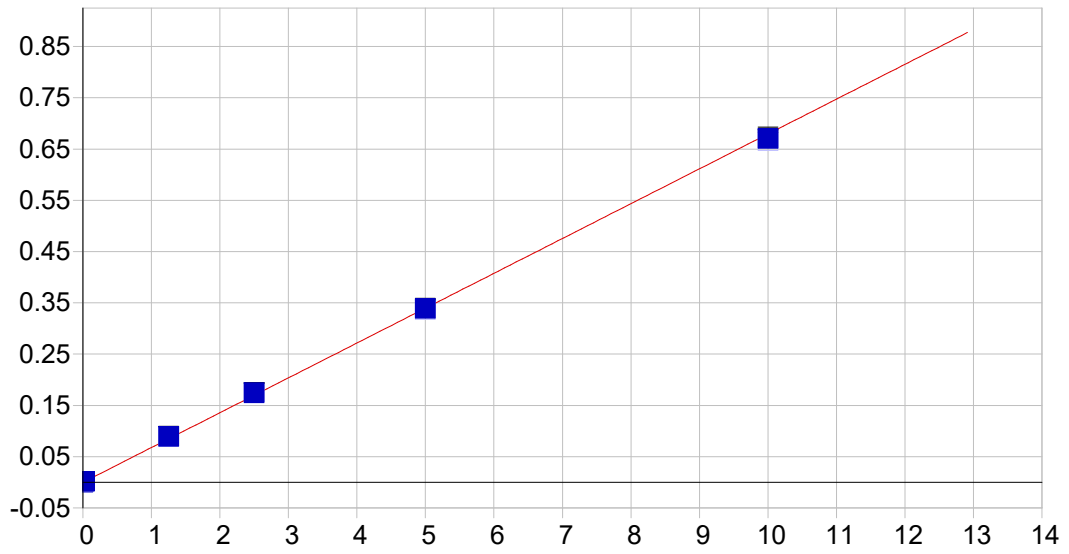
S1	.01000	.01210	.002	21.0	.00050	.000	1
S2	1.2500	1.1515	-.099	-7.88	.02661	.000	1
S3	2.5000	2.3748	-.125	-5.01	.05462	.000	1
S4	5.0000	4.8345	-.165	-3.31	.11094	.001	1
S5	10.000	10.387	.387	3.87	.23789	.001	1



Tl 190.856 {477}

Date of Fit:	11/14/2024 12:17:59	Type of Fit:	Linear	Weighting:	1/Conc

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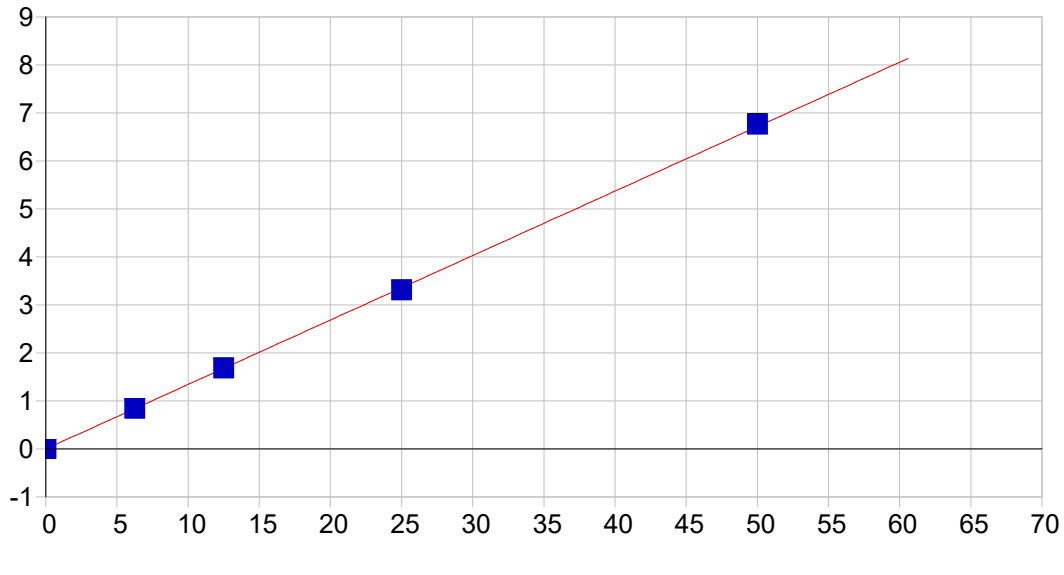
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999795	Status:	OK.
Std Error of Est:	0.000036		
Predicted MDL:	0.003087		
Predicted MQL:	0.010291		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00024	.000	1
S1	.02500	.02631	.001	5.25	.00150	.000	1
S2	1.2500	1.3171	.067	5.36	.08868	.000	1
S3	2.5000	2.5744	.074	2.97	.17354	.000	1
S4	5.0000	4.9865	-.014	-.271	.33630	.001	1
S5	10.000	9.8708	-.129	-1.29	.66590	.003	1



Pb 220.353 {453}

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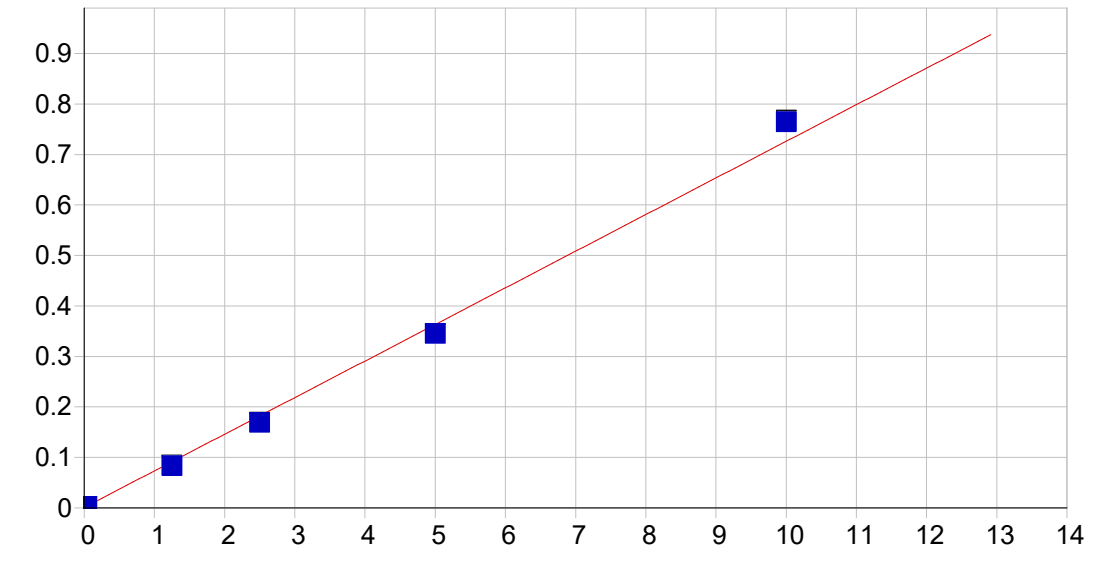
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999954	Status:	OK.
Std Error of Est:	0.000048		
Predicted MDL:	0.003390		
Predicted MQL:	0.011300		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00015	.000	1
S1	.01000	.00845	-.002	-15.5	.00099	.000	1
S2	6.2500	6.2475	-.003	-.040	.83846	.001	1
S3	12.500	12.519	.019	.153	1.6803	.003	1
S4	25.000	24.621	-.379	-1.51	3.3048	.006	1
S5	50.000	50.363	.363	.727	6.7602	.014	1

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5



Se 196.090 {472}

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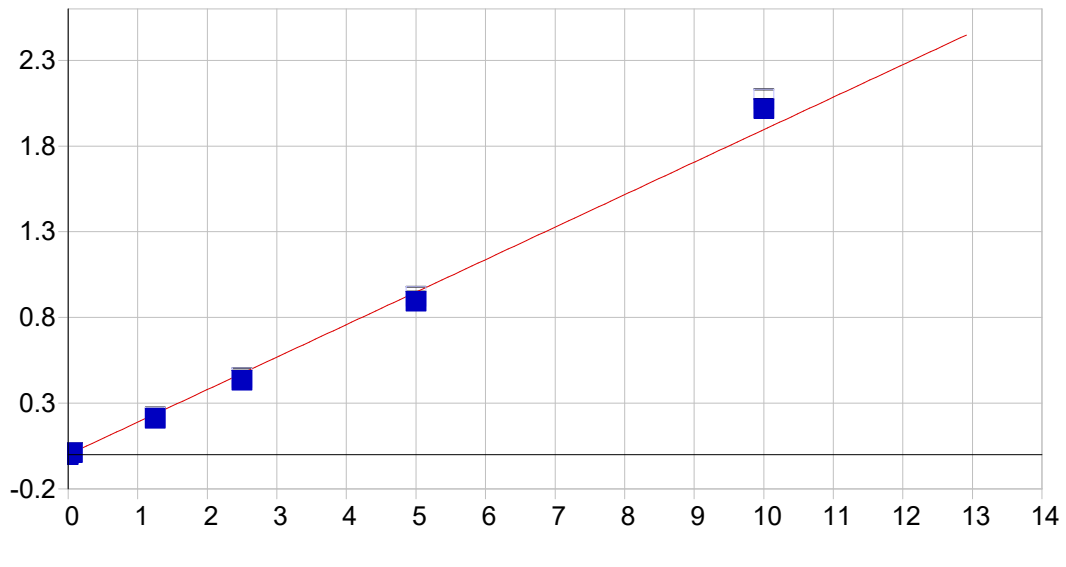
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998270	Status:	OK.
Std Error of Est:	0.000134		
Predicted MDL:	0.005556		
Predicted MQL:	0.018519		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00084	.000	1
S1	.03500	.02658	-.008	-24.1	.00276	.000	1
S2	1.2500	1.1456	-.104	-8.35	.08374	.001	1
S3	2.5000	2.3236	-.176	-7.06	.16899	.000	1
S4	5.0000	4.7492	-.251	-5.02	.34454	.000	1
S5	10.000	10.540	.540	5.40	.76378	.003	1

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5



Sb 206.833 {463}

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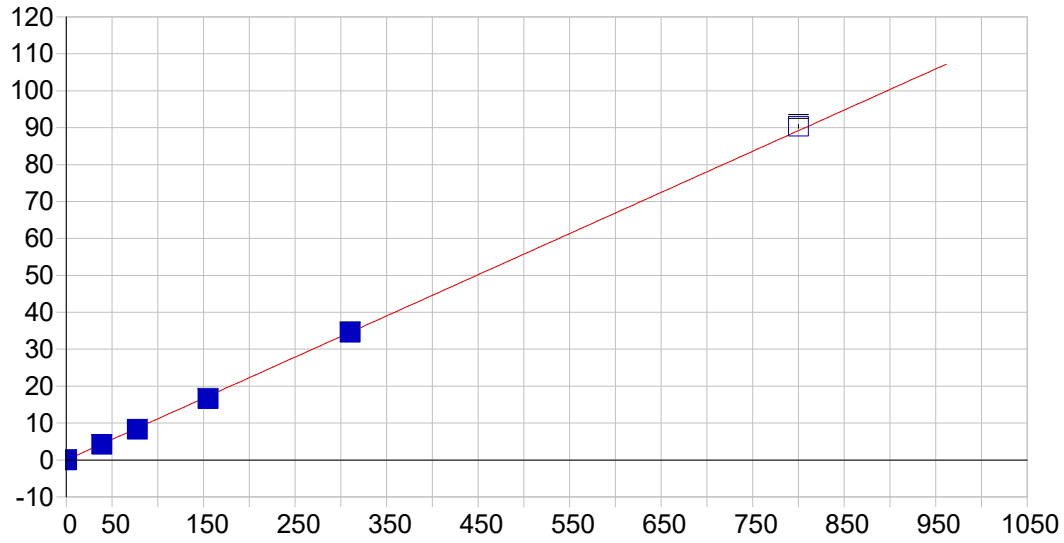
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.997738	Status:	OK.
Std Error of Est:	0.000541		
Predicted MDL:	0.002580		
Predicted MQL:	0.008601		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00002	.000	.000	-.00006	.000	1
S1	.06000	.05499	-.005	-8.35	.01036	.000	1
S2	1.2500	1.1138	-.136	-10.9	.21807	.001	1
S3	2.5000	2.2874	-.213	-8.51	.44752	.001	1
S4	5.0000	4.7147	-.285	-5.71	.92164	.002	1
S5	10.000	10.639	.639	6.39	2.0727	.003	1

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5



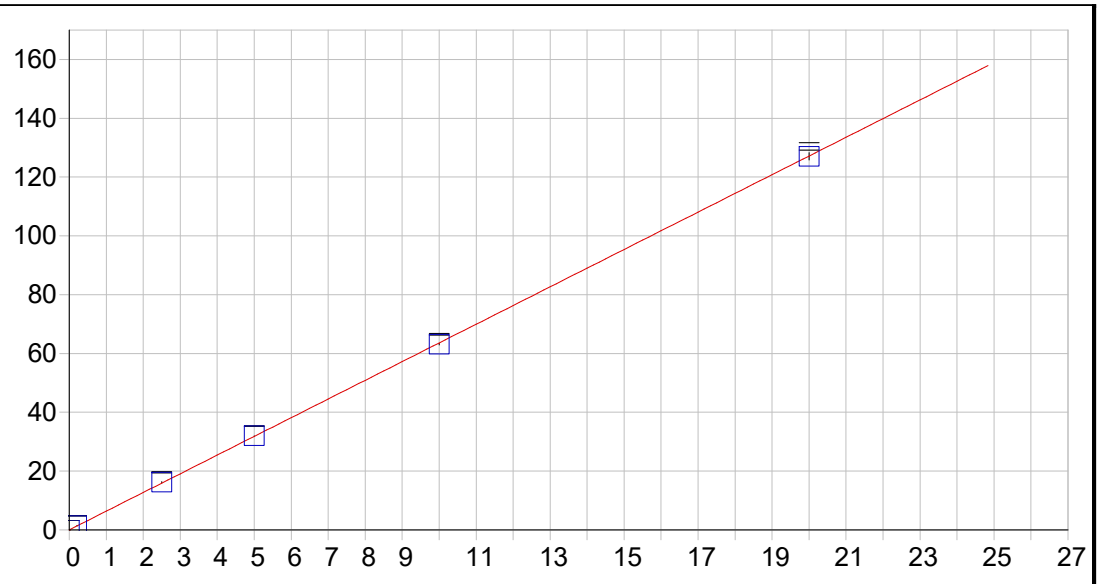
Al 396.152 { 85}

Date of Fit:	11/14/2024 12:17:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000788	Re-Slope:	1.000000
A1 (Gain):	0.111493	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999799	Status:	OK.
Std Error of Est:	0.001392		
Predicted MDL:	0.014555		
Predicted MQL:	0.048516		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00005	.000	.000	-.00078	.001	1
S1	.20000	.17454	-.025	-12.7	.01871	.001	1
S2	38.750	37.575	-1.17	-3.03	4.1938	.062	1
S3	77.500	74.303	-3.20	-4.13	8.2938	.021	1
S4	155.00	148.81	-6.19	-4.00	16.611	.069	1
S5	310.00	310.07	.071	.023	34.611	.066	1
S6	800.00	810.53	10.5	1.32	90.368	.494	1

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5



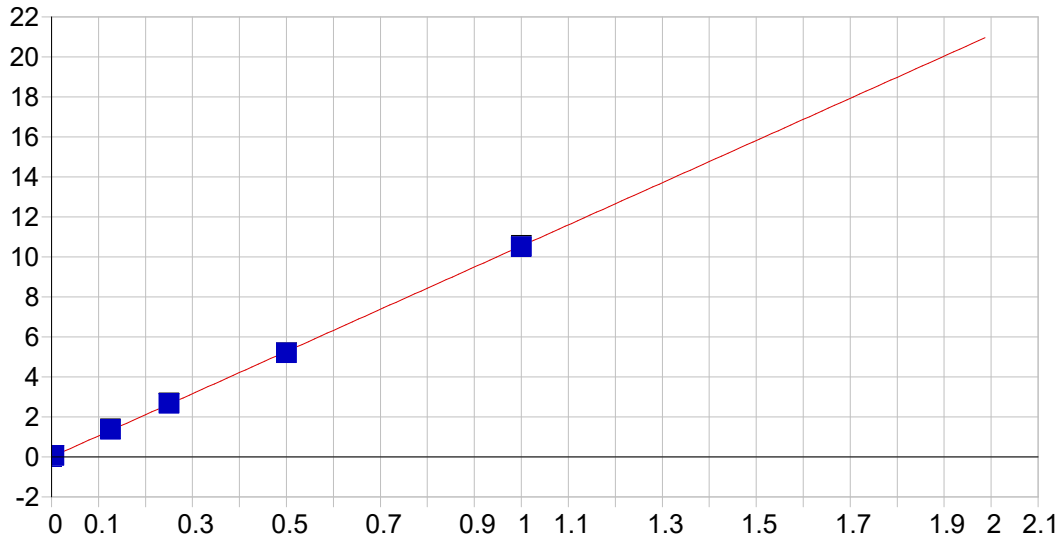
Ba 493.409 { 68}

Date of Fit:	11/14/2024 12:17:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.018395	Re-Slope:	1.000000
A1 (Gain):	6.357593	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999964	Status:	OK.
Std Error of Est:	0.005730		
Predicted MDL:	0.000861		
Predicted MQL:	0.002869		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00002	-.000	.000	.01827	.003	1
S1	.20000	.21571	.016	7.85	1.3898	.006	1
S2	2.5000	2.5480	.048	1.92	16.218	.230	1
S3	5.0000	5.0226	.023	.452	31.950	.036	1
S4	10.000	9.9343	-.066	-.657	63.177	.242	1
S5	20.000	19.979	-.021	-.103	127.04	1.28	1

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

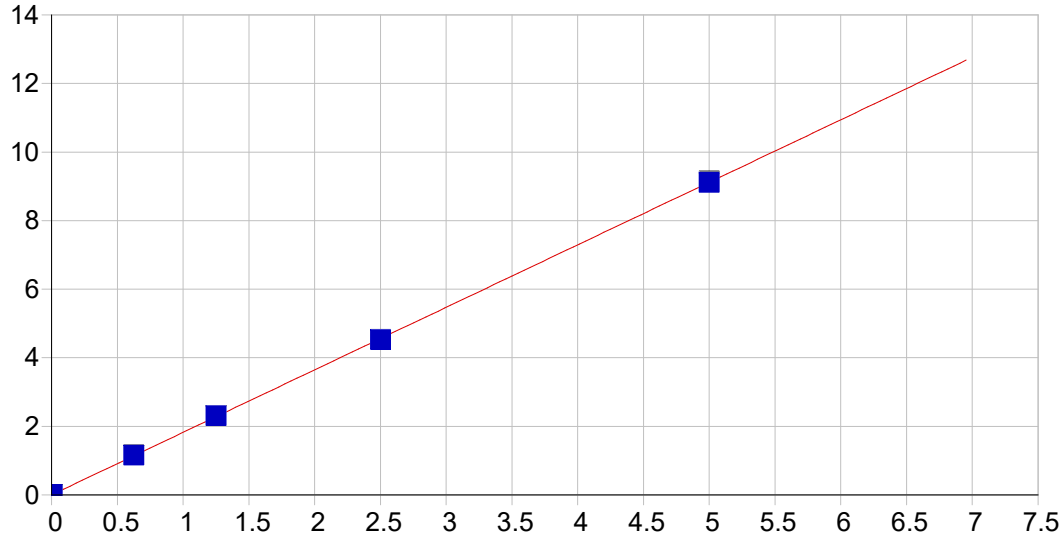


Be 234.861 {144}

Date of Fit:	11/14/2024 12:17:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001202	Re-Slope:	1.000000
A1 (Gain):	10.546929	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999896	Status:	OK.
Std Error of Est:	0.000569		
Predicted MDL:	0.000093		
Predicted MQL:	0.000310		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00121	.000	1
S1	.00500	.00551	.001	10.2	.05689	.001	1
S2	.12500	.12990	.005	3.92	1.3667	.021	1
S3	.25000	.25380	.004	1.52	2.6714	.012	1
S4	.50000	.49381	-.006	-1.24	5.1984	.006	1
S5	1.0000	.99698	-.003	-.302	10.497	.054	1



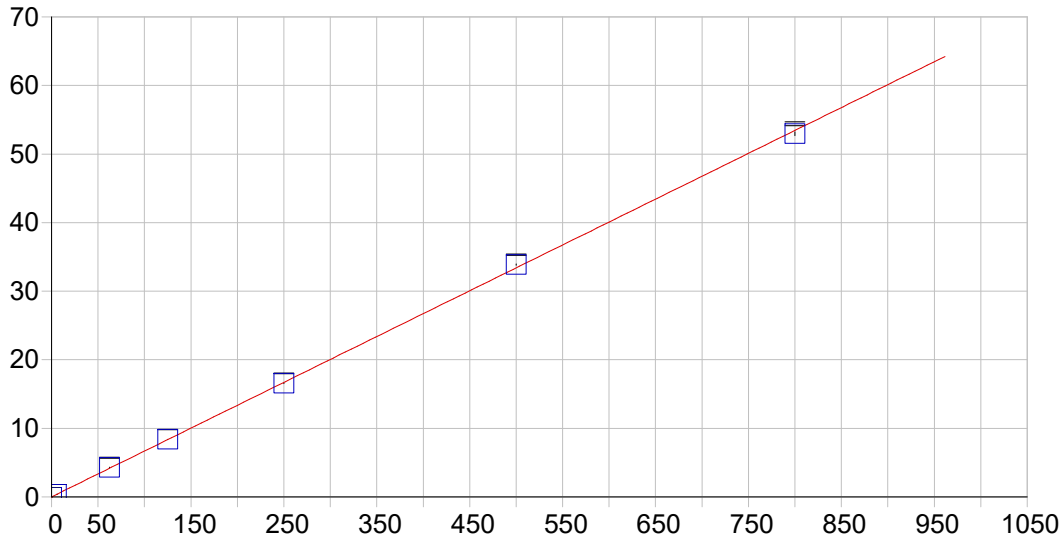
Cd 214.438 {457}

Date of Fit:	11/14/2024 12:17:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000870	Re-Slope:	1.000000
A1 (Gain):	1.823386	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999976	Status:	OK.
Std Error of Est:	0.000107		
Predicted MDL:	0.000151		
Predicted MQL:	0.000504		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00087	.000	1
S1	.00500	.00538	.000	7.58	.01068	.000	1
S2	.62500	.63265	.008	1.22	1.1572	.002	1
S3	1.2500	1.2655	.015	1.24	2.3138	.002	1
S4	2.5000	2.4812	-.019	-.751	4.5360	.001	1
S5	5.0000	4.9953	-.005	-.095	9.1311	.023	1

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5



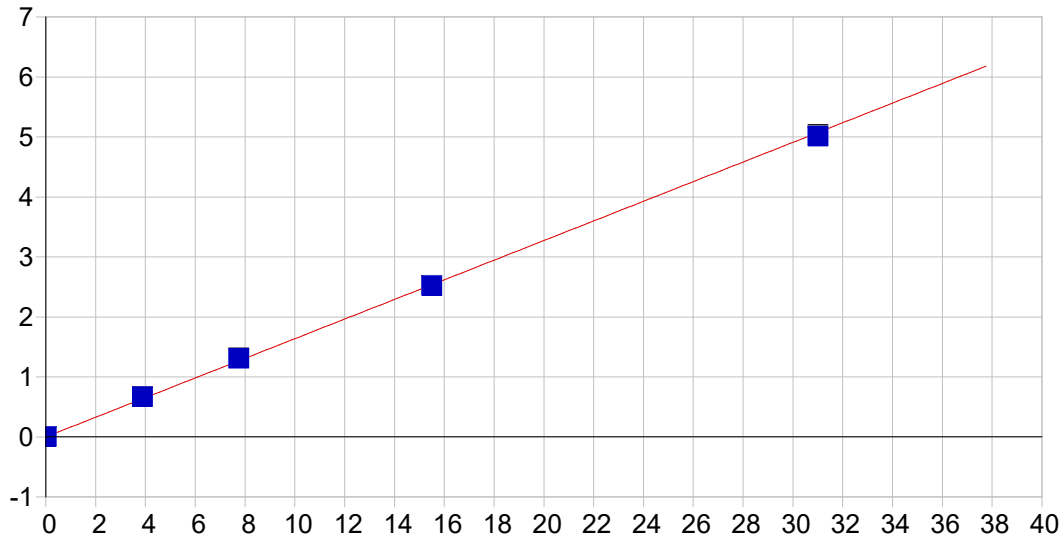
Ca 373.690 { 90}

Date of Fit:	11/14/2024 12:17:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.007557	Re-Slope:	1.000000
A1 (Gain):	0.066794	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999920	Status:	OK.
Std Error of Est:	0.002950		
Predicted MDL:	0.019103		
Predicted MQL:	0.063676		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00060	-.001	.000	.00752	.001	1
S1	5.0000	5.4854	.485	9.71	.37395	.002	1
S2	62.500	63.965	1.47	2.34	4.2800	.075	1
S3	125.00	125.32	.320	.256	8.3781	.036	1
S4	250.00	247.72	-2.28	-.914	16.553	.046	1
S5	500.00	507.36	7.36	1.47	33.896	.098	1
S6	800.00	792.66	-7.34	-.918	52.952	.272	1

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5



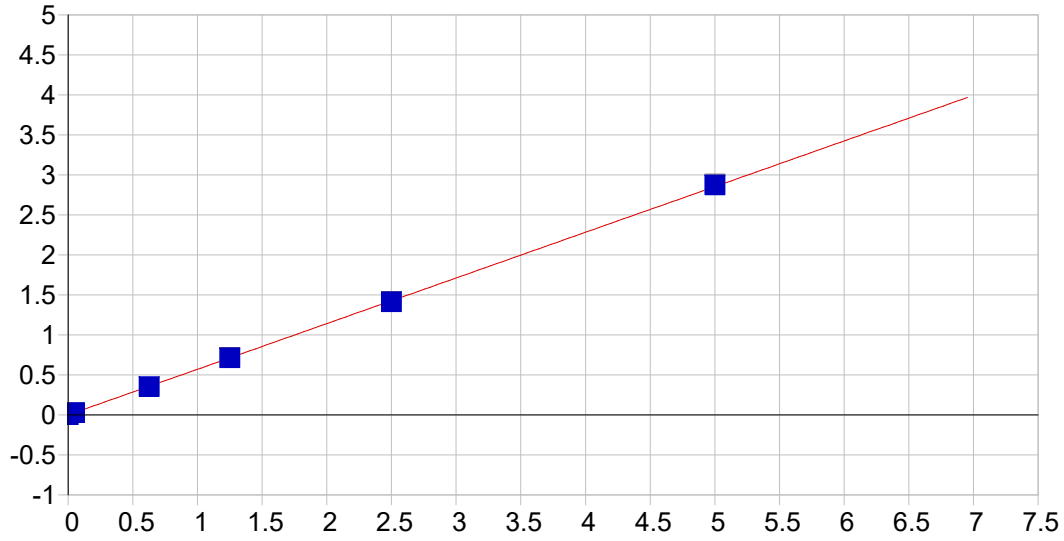
Cr 267.716 {126}

Date of Fit:	11/14/2024 12:17:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000058	Re-Slope:	1.000000
A1 (Gain):	0.163632	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999788	Status:	OK.
Std Error of Est:	0.000100		
Predicted MDL:	0.001021		
Predicted MQL:	0.003403		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00006	.000	1
S1	.01000	.01093	.001	9.34	.00185	.000	1
S2	3.8750	4.0894	.214	5.53	.66993	.001	1
S3	7.7500	7.9972	.247	3.19	1.3101	.002	1
S4	15.500	15.403	-.097	-.626	2.5233	.001	1
S5	31.000	30.635	-.365	-1.18	5.0185	.018	1

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5



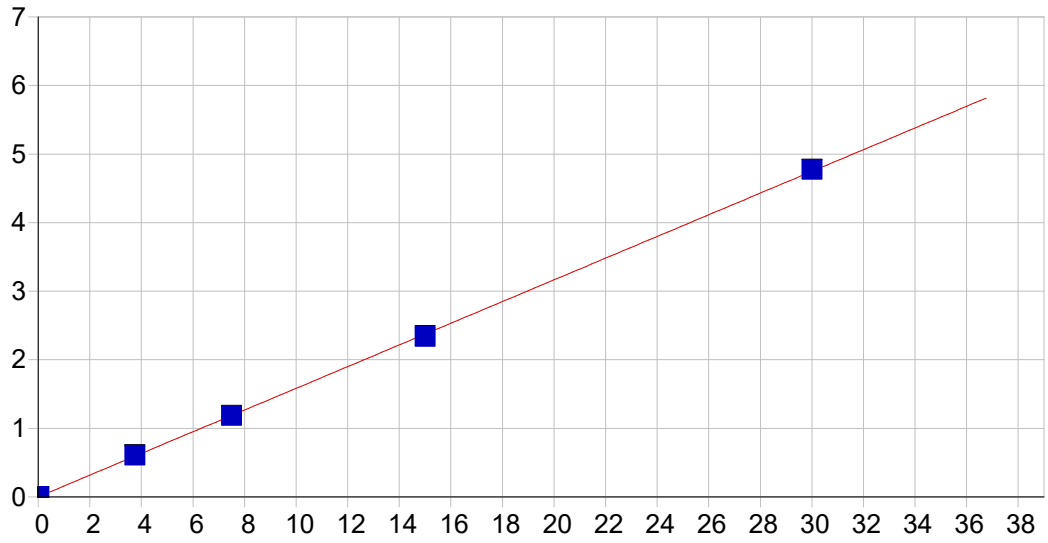
Co 228.616 {448}

Date of Fit:	11/14/2024 12:17:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000054	Re-Slope:	1.000000
A1 (Gain):	0.570696	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999972	Status:	OK.
Std Error of Est:	0.000114		
Predicted MDL:	0.000556		
Predicted MQL:	0.001854		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00005	.000	1
S1	.05000	.05011	.000	.213	.02864	.000	1
S2	.62500	.62038	-.005	-.739	.35443	.001	1
S3	1.2500	1.2494	-.001	-.052	.71382	.001	1
S4	2.5000	2.4729	-.027	-1.08	1.4130	.001	1
S5	5.0000	5.0322	.032	.644	2.8753	.008	1

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5



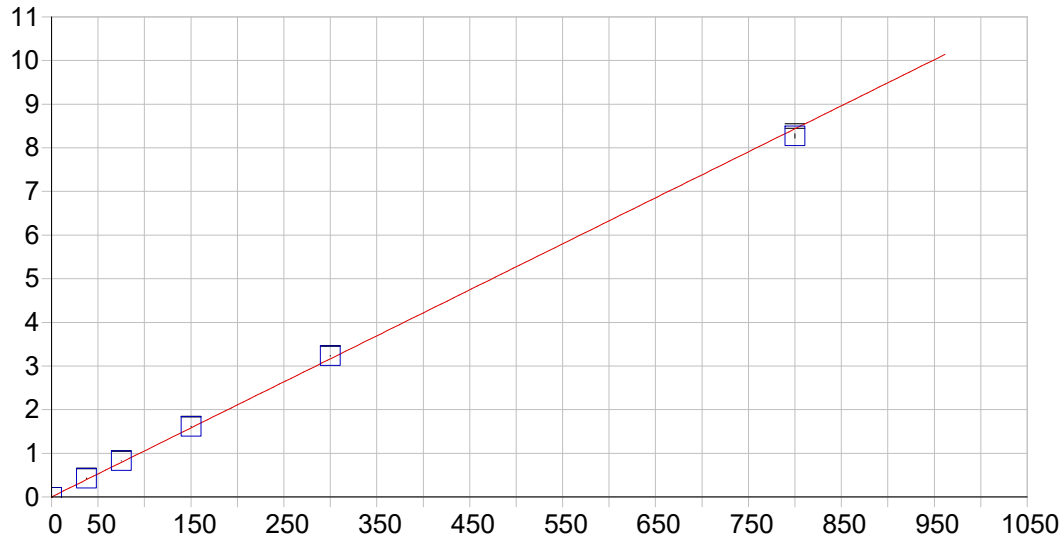
Cu 324.754 {104}

Date of Fit:	11/14/2024 12:17:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001316	Re-Slope:	1.000000
A1 (Gain):	0.158202	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999943	Status:	OK.
Std Error of Est:	0.000078		
Predicted MDL:	0.004808		
Predicted MQL:	0.016025		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00132	.001	1
S1	.02500	.02531	.000	1.26	.00532	.001	1
S2	3.7500	3.8246	.075	1.99	.60599	.009	1
S3	7.5000	7.4858	-.014	-.189	1.1848	.005	1
S4	15.000	14.759	-.241	-1.61	2.3347	.015	1
S5	30.000	30.180	.180	.600	4.7728	.004	1

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

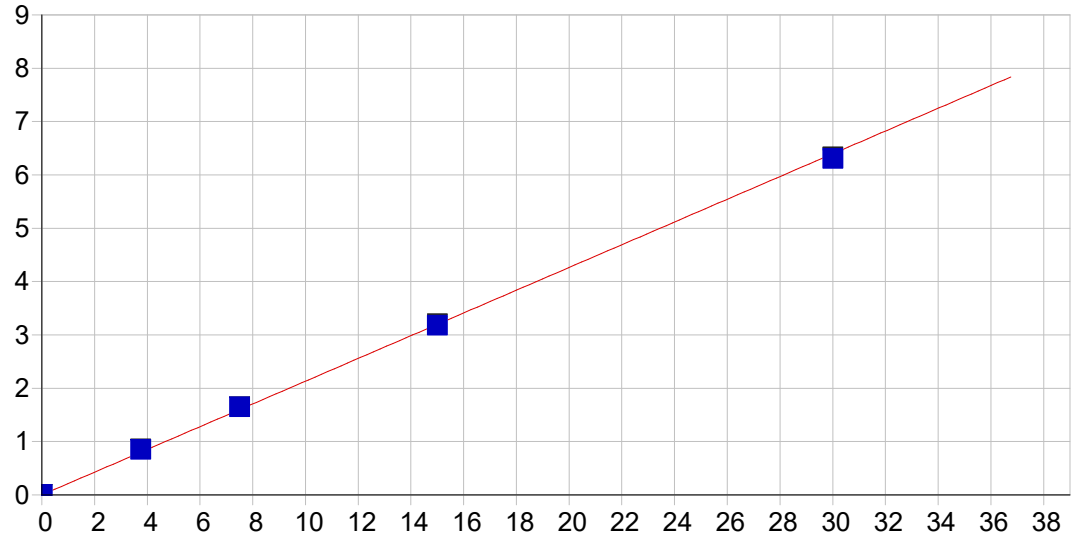


Fe 259.837 {130}

Date of Fit:	11/14/2024 12:17:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000227	Re-Slope:	1.000000
A1 (Gain):	0.010545	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999688	Status:	OK.
Std Error of Est:	0.000115		
Predicted MDL:	0.034802		
Predicted MQL:	0.116006		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00023	.000	1
S1	.10000	.08724	-.013	-12.8	.00115	.000	1
S2	37.500	40.269	2.77	7.38	.42485	.006	1
S3	75.000	78.384	3.38	4.51	.82675	.005	1
S4	150.00	152.85	2.85	1.90	1.6120	.008	1
S5	300.00	306.46	6.46	2.15	3.2318	.008	1
S6	800.00	784.55	-15.5	-1.93	8.2729	.050	1

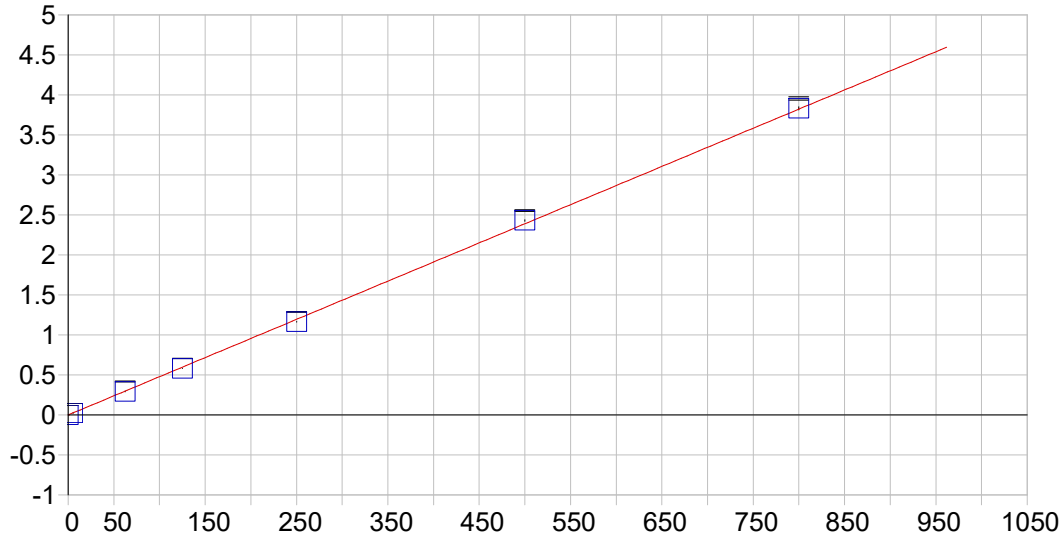


Mn 257.610 {131}

Date of Fit:	11/14/2024 12:17:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000203	Re-Slope:	1.000000
A1 (Gain):	0.213205	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999735	Status:	OK.
Std Error of Est:	0.000175		
Predicted MDL:	0.001810		
Predicted MQL:	0.006032		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00020	.000	1
S1	.01500	.01633	.001	8.88	.00369	.000	1
S2	3.7500	3.9895	.239	6.39	.85090	.009	1
S3	7.5000	7.7504	.250	3.34	1.6529	.000	1
S4	15.000	14.922	-.078	-.520	3.1821	.020	1
S5	30.000	29.587	-.413	-1.38	6.3092	.025	1



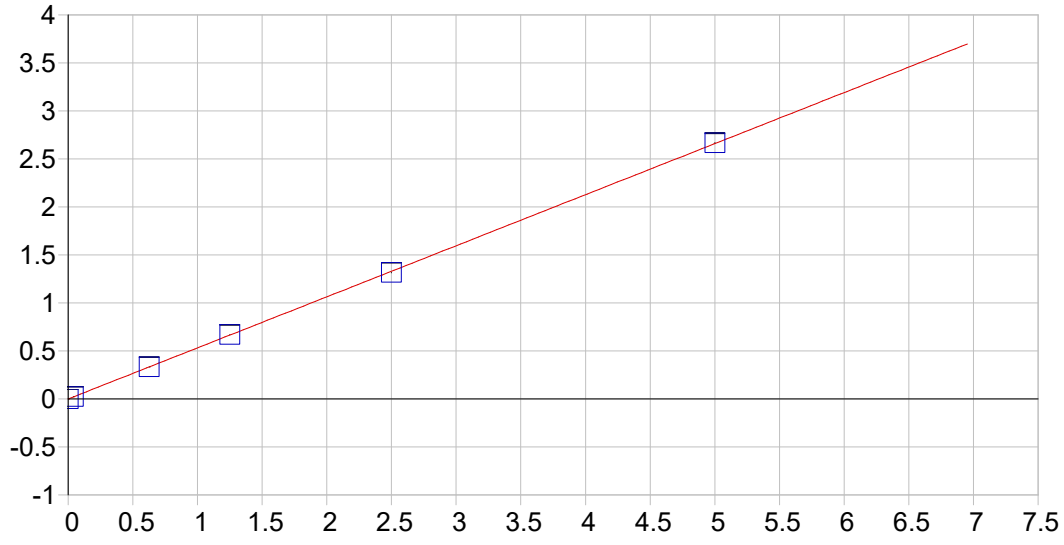
Mg 279.079 {121}

Date of Fit:	11/14/2024 12:17:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000359	Re-Slope:	1.000000
A1 (Gain):	0.004779	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999878	Status:	OK.
Std Error of Est:	0.000261		
Predicted MDL:	0.089181		
Predicted MQL:	0.297271		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00005	.000	.000	-.00036	.000	1
S1	5.0000	5.2012	.201	4.02	.02450	.000	1
S2	62.500	61.270	-1.23	-1.97	.29243	.006	1
S3	125.00	121.76	-3.24	-2.59	.58149	.001	1
S4	250.00	243.78	-6.22	-2.49	1.1646	.005	1
S5	500.00	508.68	8.68	1.74	2.4305	.009	1
S6	800.00	801.81	1.81	.226	3.8313	.020	1

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5



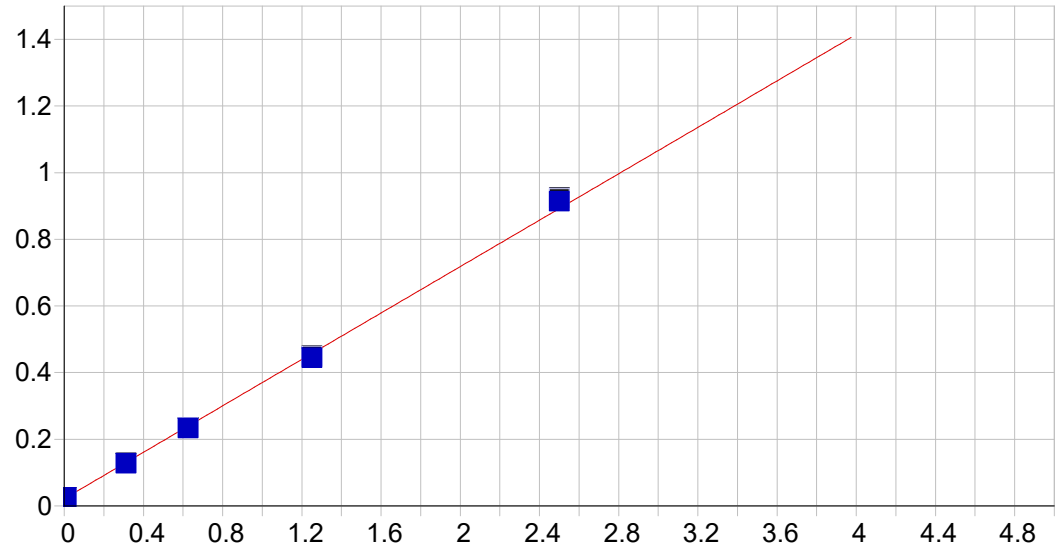
Ni 231.604 {446}

Date of Fit:	11/14/2024 12:17:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000020	Re-Slope:	1.000000
A1 (Gain):	0.531796	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999970	Status:	OK.
Std Error of Est:	0.000098		
Predicted MDL:	0.000635		
Predicted MQL:	0.002117		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00002	.000	1
S1	.04000	.04268	.003	6.69	.02272	.000	1
S2	.62500	.62895	.004	.632	.33449	.000	1
S3	1.2500	1.2582	.008	.655	.66912	.002	1
S4	2.5000	2.4736	-.026	-1.06	1.3154	.002	1
S5	5.0000	5.0116	.012	.233	2.6652	.006	1

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5



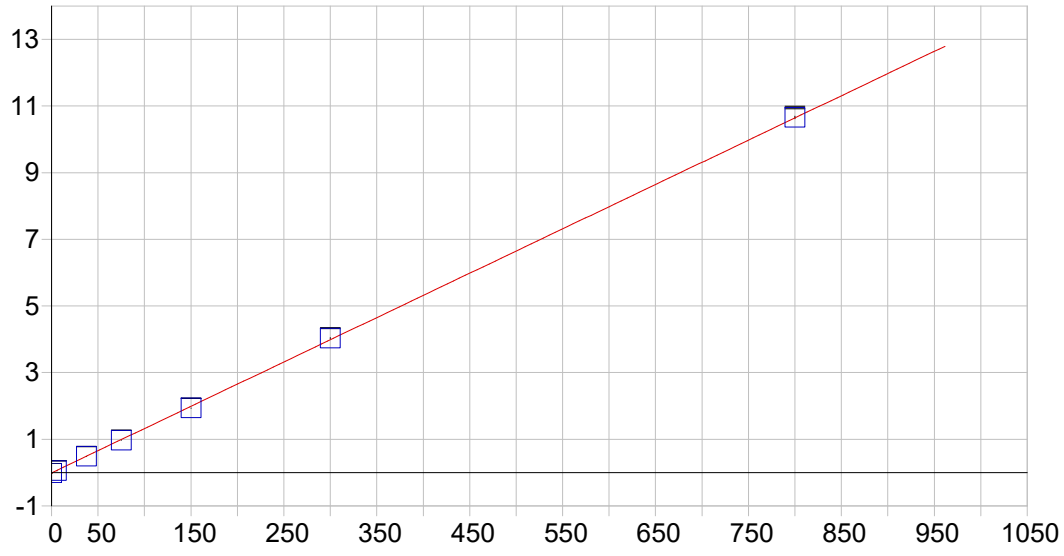
Ag 328.068 {103}

Date of Fit:	11/14/2024 12:17:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.021830	Re-Slope:	1.000000
A1 (Gain):	0.348232	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999629	Status:	OK.
Std Error of Est:	0.000080		
Predicted MDL:	n/a		
Predicted MQL:	n/a		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.02183	.000	1
S1	.01000	.01123	.001	12.3	.02573	.000	1
S2	.31250	.30336	-.009	-2.93	.12864	.000	1
S3	.62500	.60619	-.019	-3.01	.23527	.000	1
S4	1.2500	1.2143	-.036	-2.85	.44939	.001	1
S5	2.5000	2.5624	.062	2.50	.92352	.003	1

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5



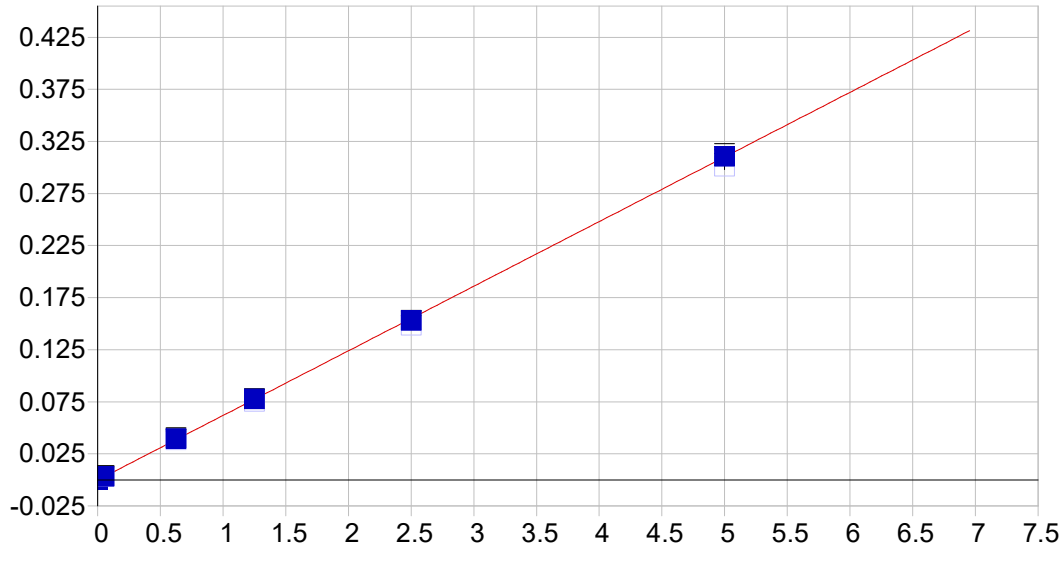
Na 818.326 { 41}

Date of Fit:	11/14/2024 12:17:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.009154	Re-Slope:	1.000000
A1 (Gain):	0.013315	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999933	Status:	OK.
Std Error of Est:	0.000477		
Predicted MDL:	0.291784		
Predicted MQL:	0.972614		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00004	-.000	.000	-.00915	.002	1
S1	5.0000	5.2164	.216	4.33	.06030	.000	1
S2	37.500	37.266	-.234	-.624	.48705	.006	1
S3	75.000	73.642	-1.36	-1.81	.97140	.004	1
S4	150.00	146.19	-3.81	-2.54	1.9373	.006	1
S5	300.00	303.84	3.84	1.28	4.0365	.012	1
S6	800.00	801.35	1.35	.168	10.661	.040	1

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5



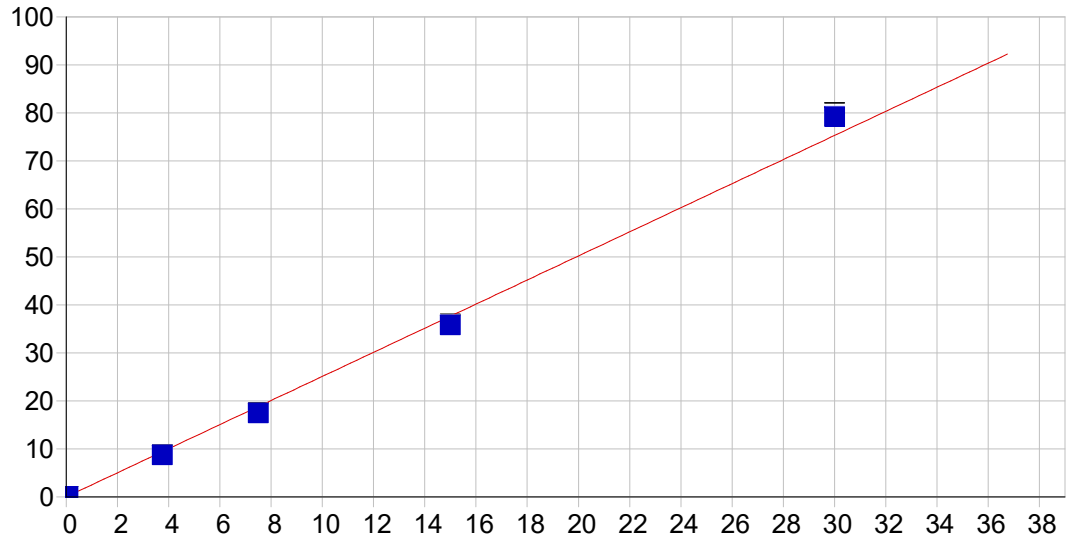
V 292.402 {115}

Date of Fit:	11/14/2024 12:17:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000189	Re-Slope:	1.000000
A1 (Gain):	0.062058	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999890	Status:	OK.
Std Error of Est:	0.000024		
Predicted MDL:	0.012166		
Predicted MQL:	0.040552		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	-.00019	.000	1
S1	.05000	.05792	.008	15.8	.00340	.000	1
S2	.62500	.63824	.013	2.12	.03823	.001	1
S3	1.2500	1.2547	.005	.374	.07529	.000	1
S4	2.5000	2.4685	-.031	-1.26	.14824	.000	1
S5	5.0000	5.0054	.005	.108	.30091	.003	1

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5



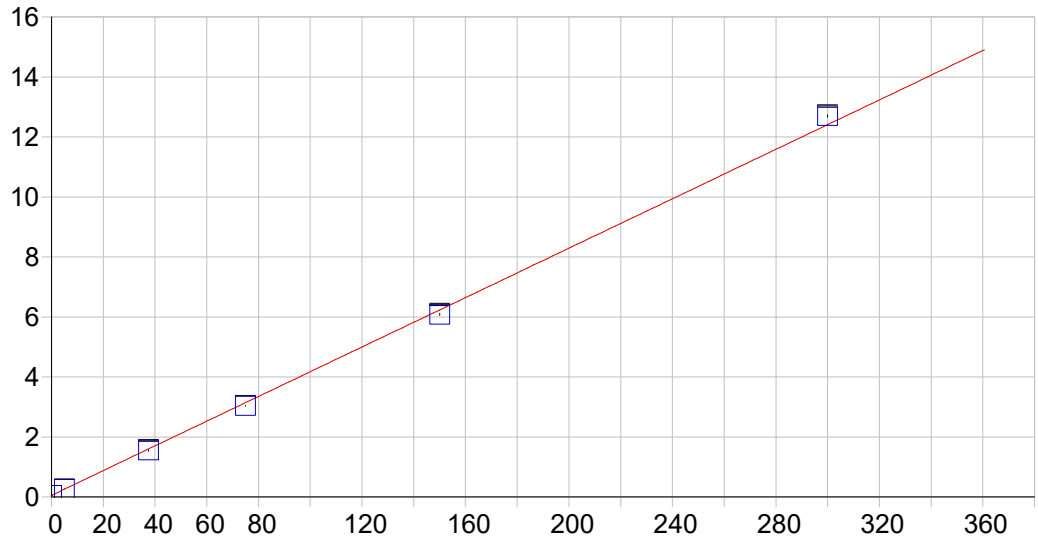
Zn 213.856 {158}

Date of Fit:	11/14/2024 12:17:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.006522	Re-Slope:	1.000000
A1 (Gain):	2.509704	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998421	Status:	OK.
Std Error of Est:	0.010060		
Predicted MDL:	0.000501		
Predicted MQL:	0.001671		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00655	.001	1
S1	.06000	.05618	-.004	-6.36	.14825	.001	1
S2	3.7500	3.4715	-.279	-7.43	8.7304	.022	1
S3	7.5000	6.9494	-.551	-7.34	17.470	.116	1
S4	15.000	14.268	-.732	-4.88	35.861	.160	1
S5	30.000	31.565	1.57	5.22	79.317	.777	1

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5



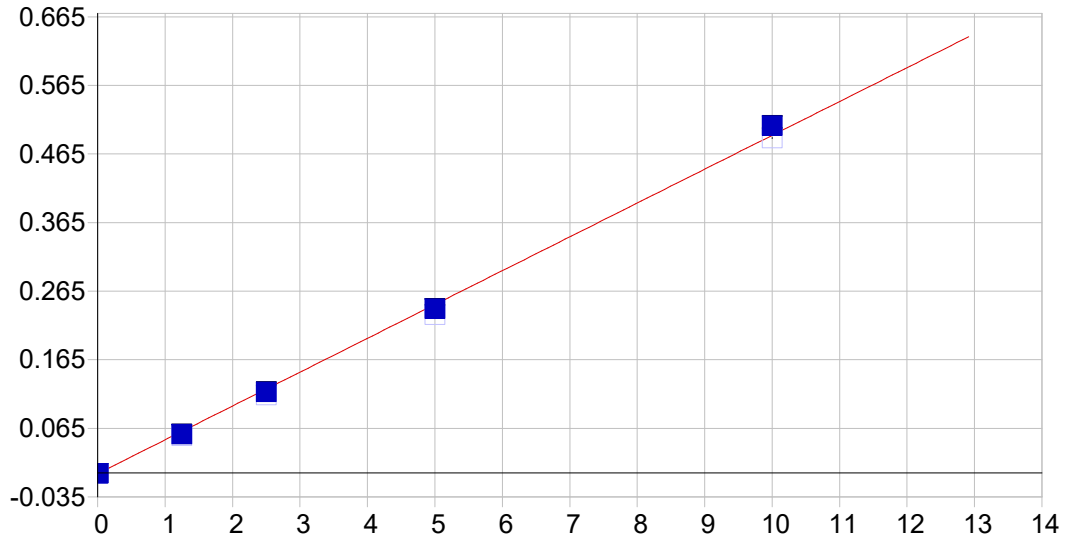
K 769.896 { 44}

Date of Fit:	11/14/2024 12:17:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.054057	Re-Slope:	1.000000
A1 (Gain):	0.041184	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999686	Status:	OK.
Std Error of Est:	0.002127		
Predicted MDL:	0.123045		
Predicted MQL:	0.410149		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00033	.000	.000	.05407	.003	1
S1	5.0000	4.9640	-.036	-.720	.25849	.004	1
S2	37.500	36.493	-1.01	-2.69	1.5570	.027	1
S3	75.000	72.564	-2.44	-3.25	3.0425	.008	1
S4	150.00	146.44	-3.56	-2.37	6.0850	.033	1
S5	300.00	307.04	7.04	2.35	12.699	.033	1

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

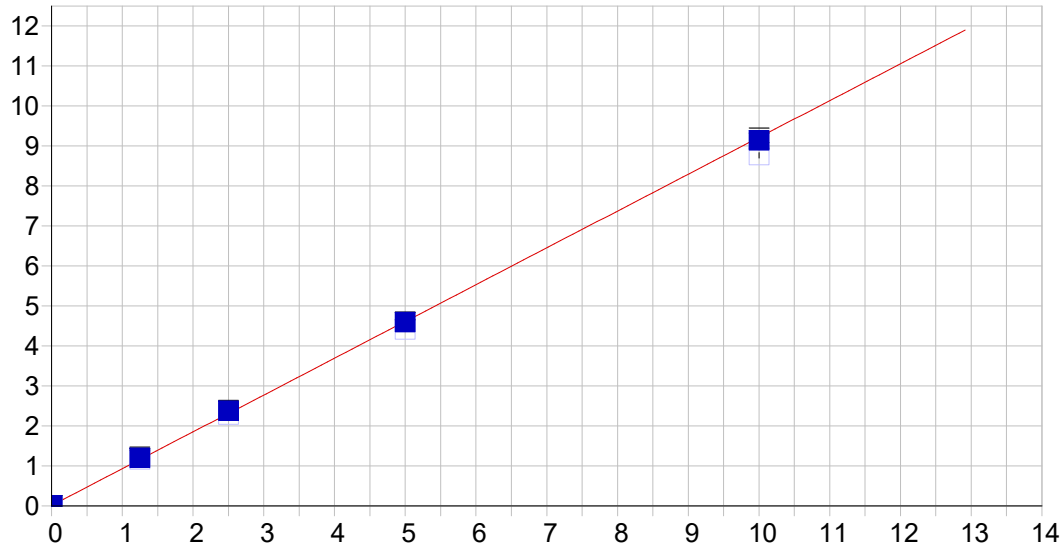


P 177.495 {490}

Date of Fit:	11/14/2024 12:17:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001119	Re-Slope:	1.000000
A1 (Gain):	0.049328	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999428	Status:	OK.
Std Error of Est:	0.000027		
Predicted MDL:	0.003738		
Predicted MQL:	0.012460		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00112	.000	1
S1	.01000	.01180	.002	18.0	-.00055	.000	1
S2	1.2500	1.1675	-.082	-6.60	.05421	.000	1
S3	2.5000	2.4144	-.086	-3.42	.11344	.001	1
S4	5.0000	4.8785	-.122	-2.43	.23046	.000	1
S5	10.000	10.288	.288	2.88	.48822	.001	1



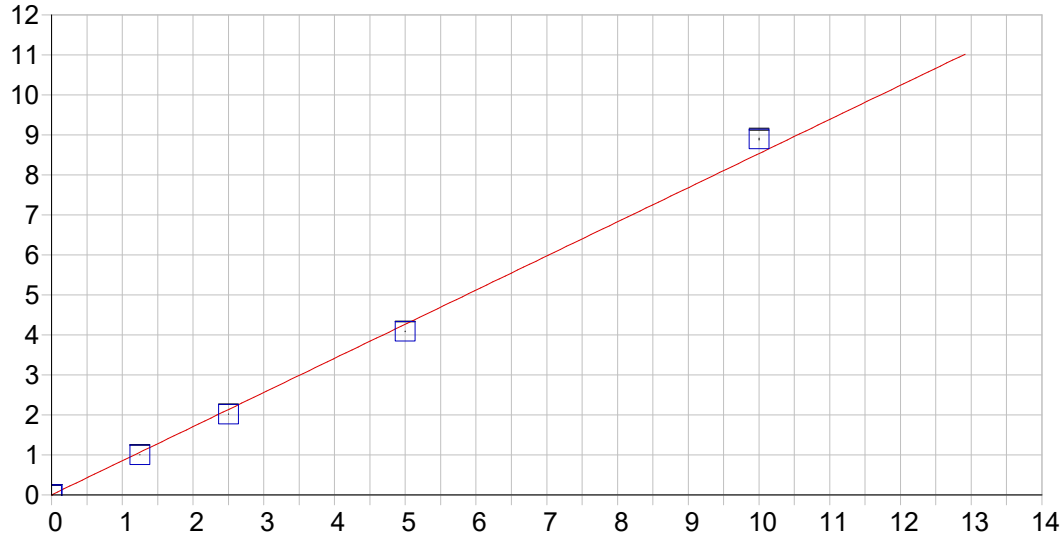
B 249.678 {135}

Date of Fit:	11/14/2024 12:17:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.010287	Re-Slope:	1.000000
A1 (Gain):	0.920498	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999378	Status:	OK.
Std Error of Est:	0.000523		
Predicted MDL:	0.001213		
Predicted MQL:	0.004042		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.01030	.000	1
S1	.01000	-.00305	-.013	-130.	.00740	.001	1
S2	1.2500	1.2956	.046	3.65	1.1565	.019	1
S3	2.5000	2.5716	.072	2.86	2.2846	.013	1
S4	5.0000	4.9782	-.022	-.436	4.4070	.009	1
S5	10.000	9.9181	-.082	-.819	8.7683	.067	1

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5



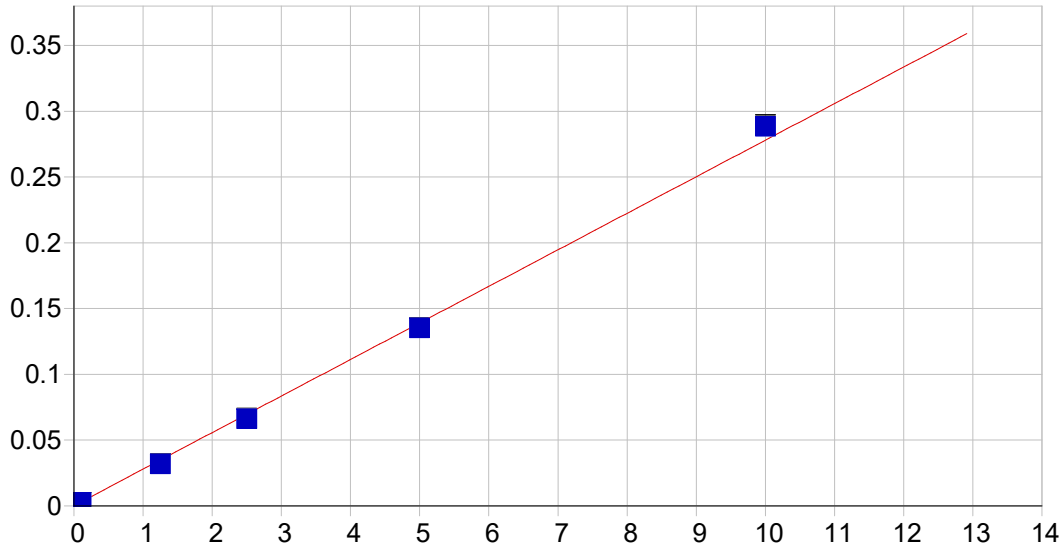
Mo 202.030 {467}

Date of Fit:	11/14/2024 12:17:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000610	Re-Slope:	1.000000
A1 (Gain):	0.853289	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998969	Status:	OK.
Std Error of Est:	0.000650		
Predicted MDL:	0.000513		
Predicted MQL:	0.001711		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00061	.001	1
S1	.01000	.00905	-.001	-9.45	.00834	.000	1
S2	1.2500	1.1727	-.077	-6.18	1.0013	.004	1
S3	2.5000	2.3652	-.135	-5.39	2.0188	.002	1
S4	5.0000	4.7906	-.209	-4.19	4.0884	.010	1
S5	10.000	10.422	.422	4.22	8.8940	.023	1

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5



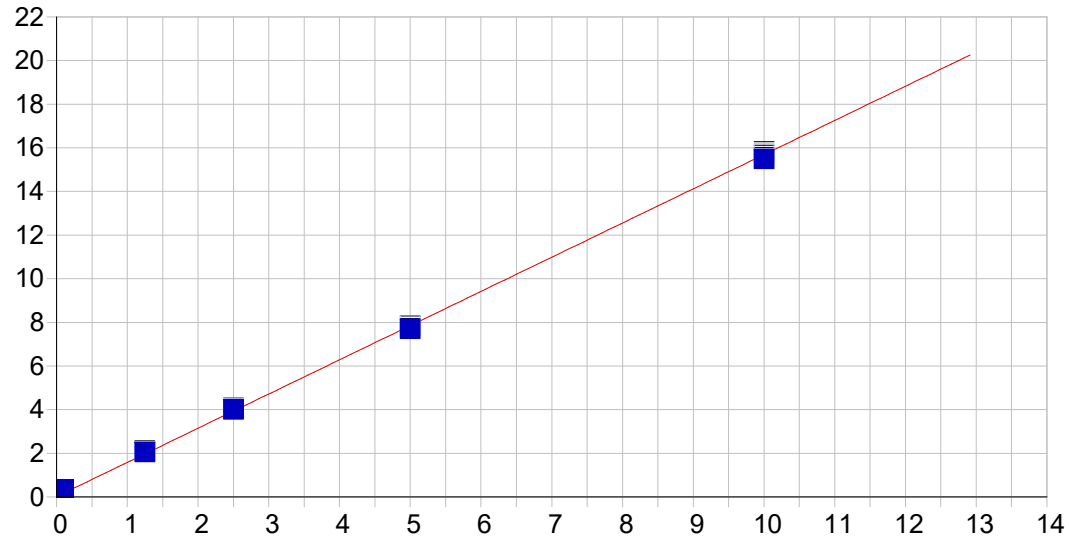
S 182.034 {485}

Date of Fit:	11/14/2024 12:17:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000187	Re-Slope:	1.000000
A1 (Gain):	0.027785	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999092	Status:	OK.
Std Error of Est:	0.000063		
Predicted MDL:	0.006418		
Predicted MQL:	0.021392		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00002	.000	.000	.00019	.000	1
S1	.10000	.09090	-.009	-9.10	.00271	.000	1
S2	1.2500	1.1423	-.108	-8.62	.03193	.000	1
S3	2.5000	2.3753	-.125	-4.99	.06619	.000	1
S4	5.0000	4.8641	-.136	-2.72	.13535	.000	1
S5	10.000	10.377	.377	3.77	.28855	.001	1

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

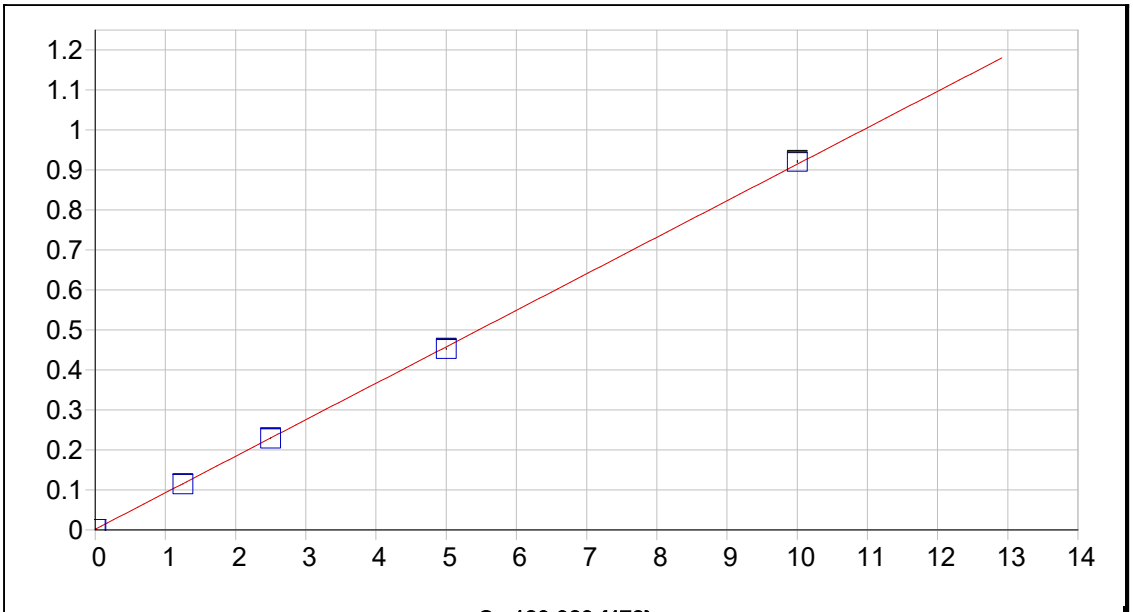


Si 251.611 {134}

Date of Fit:	11/14/2024 12:17:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.014023	Re-Slope:	1.000000
A1 (Gain):	1.567402	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.995660	Status:	OK.
Std Error of Est:	0.007911		
Predicted MDL:	0.000616		
Predicted MQL:	0.002053		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00013	-.000	.000	.01382	.001	1
S1	.10000	.22794	.128	128.	.37234	.001	1
S2	1.2500	1.3014	.051	4.11	2.0855	.028	1
S3	2.5000	2.5420	.042	1.68	4.0617	.022	1
S4	5.0000	4.9074	-.093	-1.85	7.8326	.005	1
S5	10.000	9.8725	-.128	-1.28	15.742	.079	1



Sn 189.989 {478}

Date of Fit:	11/14/2024 12:17:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001633	Re-Slope:	1.000000
A1 (Gain):	0.091271	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999952	Status:	OK.
Std Error of Est:	0.000013		
Predicted MDL:	0.001930		
Predicted MQL:	0.006432		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00163	.000	1
S1	.00700	.00523	-.002	-25.3	.00211	.000	1
S2	1.2500	1.2387	-.011	-.902	.11469	.000	1
S3	2.5000	2.4927	-.007	-.293	.22914	.001	1
S4	5.0000	4.9434	-.057	-1.13	.45282	.002	1
S5	10.000	10.077	.077	.769	.92137	.003	1

Reviewed By:Mohan
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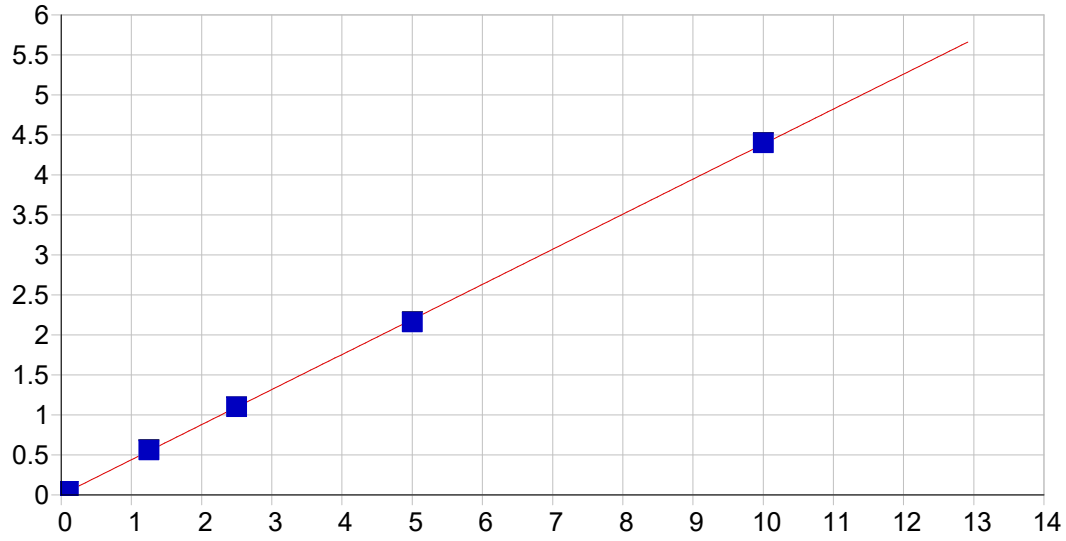
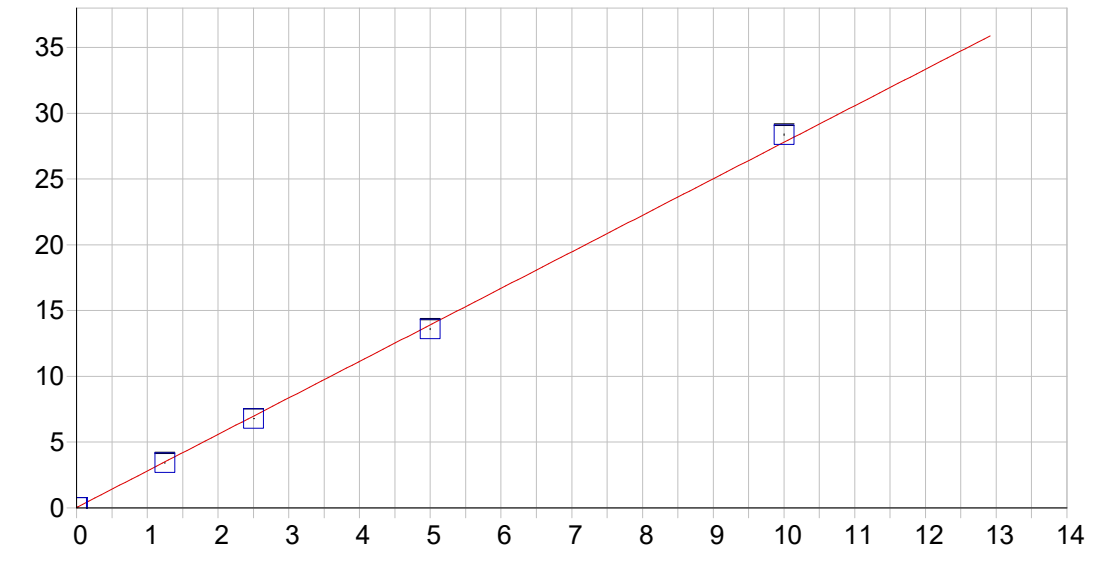


Ti 336.121 {100}

Date of Fit:	11/14/2024 12:17:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000913	Re-Slope:	1.000000
A1 (Gain):	0.438367	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999946	Status:	OK.
Std Error of Est:	0.000243		
Predicted MDL:	0.002012		
Predicted MQL:	0.006706		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00091	.000	1
S1	.10000	.10579	.006	5.79	.04727	.001	1
S2	1.2500	1.2764	.026	2.11	.56017	.009	1
S3	2.5000	2.5043	.004	.170	1.0982	.001	1
S4	5.0000	4.9284	-.072	-1.43	2.1603	.007	1
S5	10.000	10.035	.035	.352	4.3978	.004	1

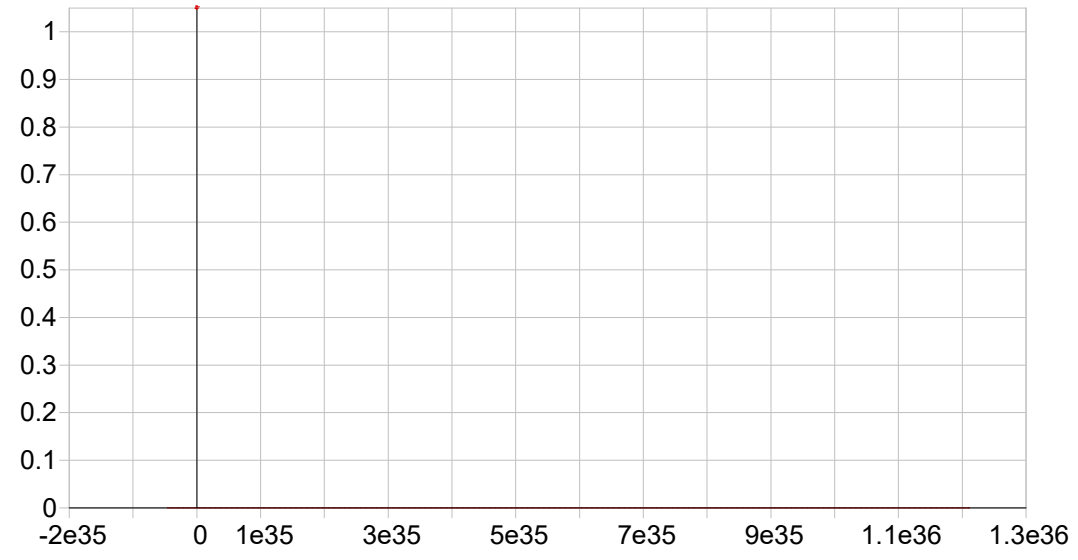


Li 670.784 { 50}

Date of Fit:	11/14/2024 12:17:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.033260	Re-Slope:	1.000000
A1 (Gain):	2.776322	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999746	Status:	OK.
Std Error of Est:	0.001284		
Predicted MDL:	0.001416		
Predicted MQL:	0.004720		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.03327	.002	1
S5	10.000	10.209	.209	2.09	28.375	.055	1
S4	5.0000	4.8882	-.112	-2.24	13.604	.053	1
S3	2.5000	2.4333	-.067	-2.67	6.7890	.005	1
S2	1.2500	1.2220	-.028	-2.24	3.4258	.044	1
S1	.01500	.01301	-.002	-13.3	.06939	.001	1

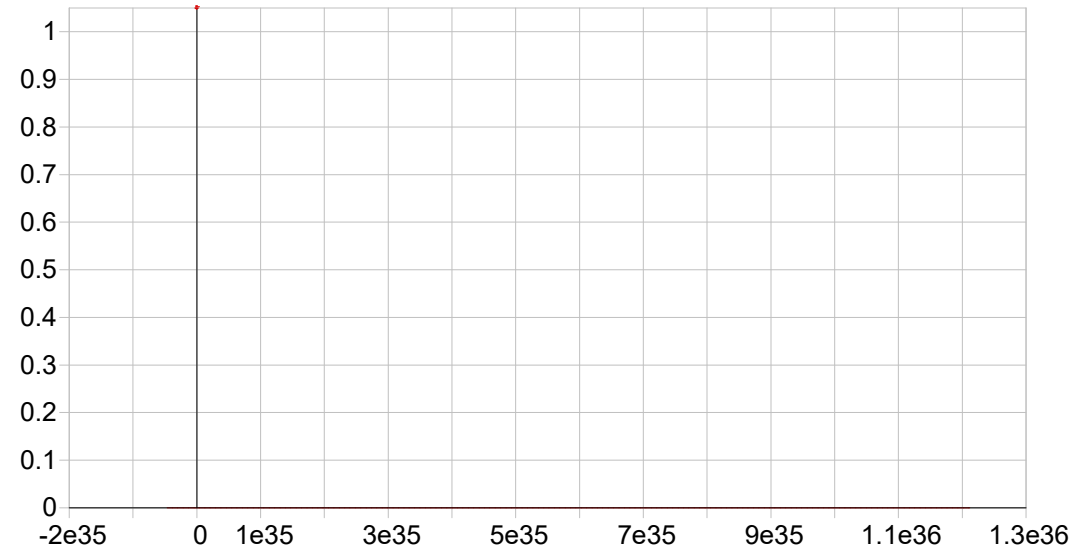


Y 224.306 {450}*

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

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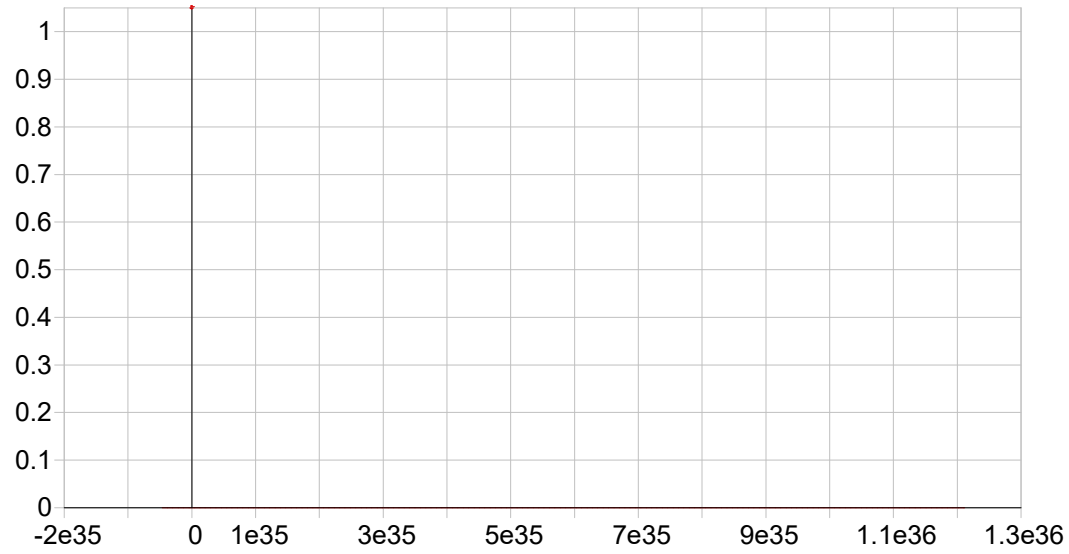
A2 (Curvature):	0.000000					
n (Exponent):	1.000000					
Correlation:	0.000000		Status:	Warning	Zero Gain	
Std Error of Est:	0.000000					
Predicted MDL:	n/a					
Predicted MQL:	n/a					

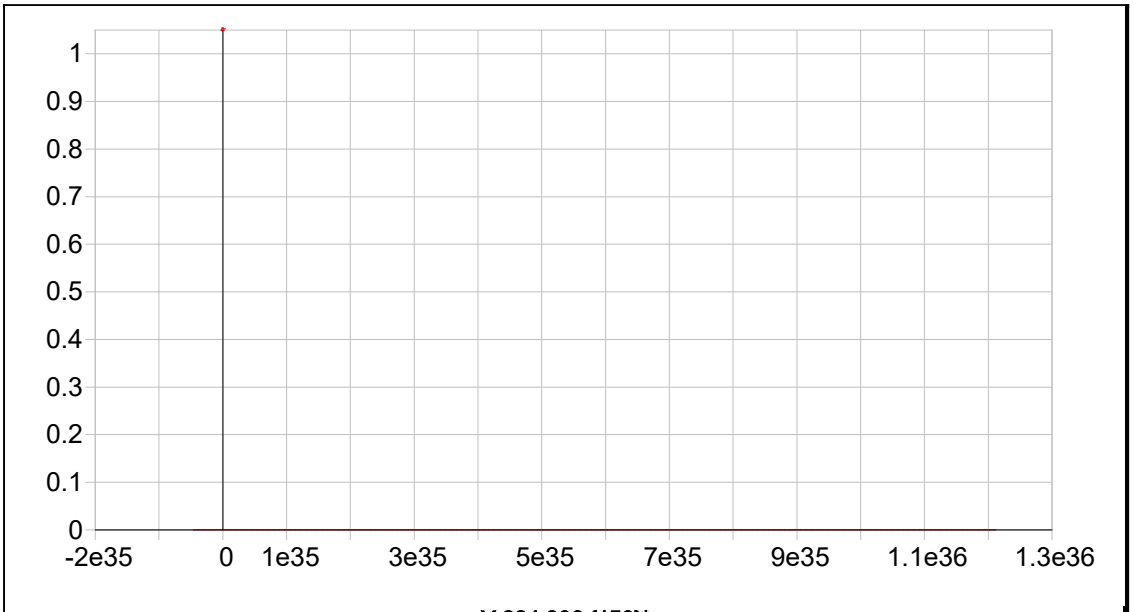
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis



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				

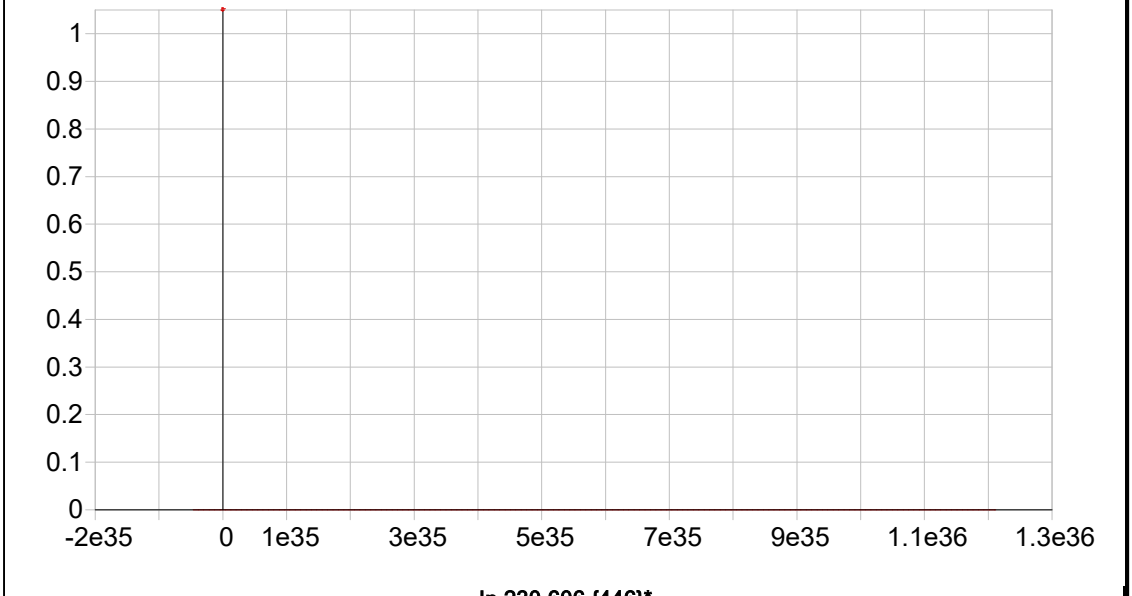
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis



Y 224.306 {150}*

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

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



In 230.606 {446}*

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

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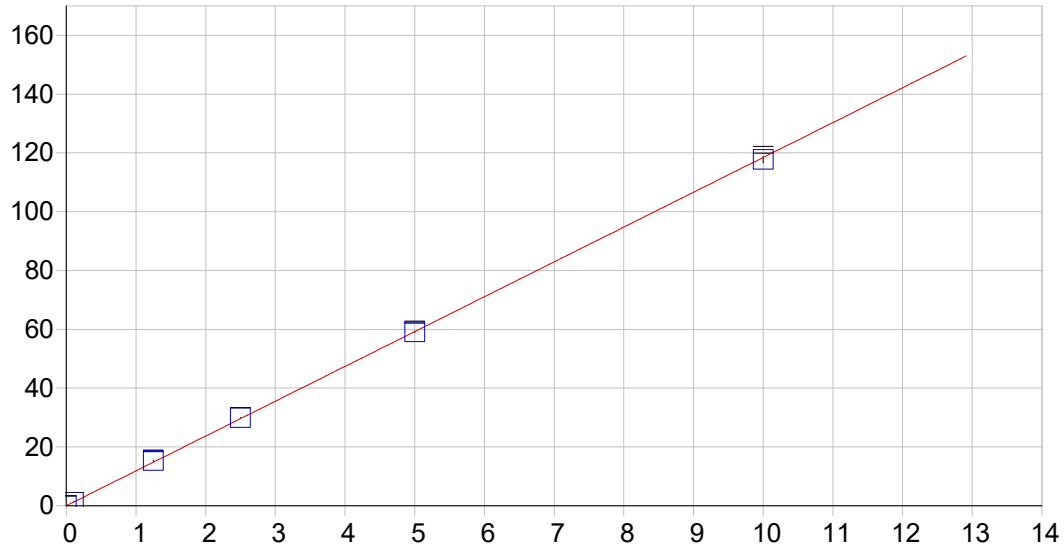
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.000000	Status:	Warning	Zero Gain	
Std Error of Est:	0.000000				
Predicted MDL:	n/a				
Predicted MQL:	n/a				

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



Sr 407.771 { 83}

Date of Fit:	11/14/2024 12:17:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.008088	Re-Slope:	1.000000
A1 (Gain):	11.845765	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999923	Status:	OK.
Std Error of Est:	0.007793		
Predicted MDL:	0.000125		
Predicted MQL:	0.000417		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00794	.001	1
S1	.10000	.10858	.009	8.58	1.2943	.006	1
S2	1.2500	1.2907	.041	3.25	15.297	.233	1
S3	2.5000	2.5304	.030	1.22	29.983	.036	1
S4	5.0000	4.9842	-.016	-.316	59.050	.323	1
S5	10.000	9.9362	-.064	-.638	117.71	1.10	1

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: S0 Acquired: 11/14/2024 1:30:26 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) 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	.00023	-.00024	-.00015	.00084	-.00006	-.00078	.01827	-.00121
Stddev	.00008	.00013	.00022	.00019	.00045	.00068	.00325	.00012
%RSD	35.006	54.148	147.69	22.454	724.78	86.253	17.811	10.175
#1	.00016	-.00026	-.00040	.00087	-.00057	-.00100	.02024	-.00120
#2	.00032	-.00037	-.00008	.00101	.00024	-.00002	.01452	-.00109
#3	.00020	-.00010	.00002	.00064	.00015	-.00132	.02007	-.00134

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	.00087	.00752	.00006	-.00005	.00132	.00023	.00020	-.00036
Stddev	.00032	.00063	.00011	.00010	.00055	.00019	.00009	.00039
%RSD	37.117	8.4033	194.07	194.89	41.725	84.551	43.788	108.76
#1	.00096	.00773	-.00007	.00005	.00068	.00042	.00023	-.00026
#2	.00051	.00681	.00009	-.00016	.00167	.00022	.00010	-.00079
#3	.00114	.00802	.00015	-.00006	.00160	.00004	.00027	-.00003

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	.00002	.02183	-.00915	-.00019	.00655	.05407	-.00112	.01030
Stddev	.00025	.00009	.00236	.00034	.00131	.00308	.00000	.00033
%RSD	1316.6	.40269	25.735	177.61	20.009	5.6956	.14180	3.1583
#1	-.00026	.02174	-.00805	.00007	.00590	.05176	-.00112	.01067
#2	.00011	.02192	-.00756	-.00057	.00806	.05288	-.00112	.01013
#3	.00021	.02183	-.01186	-.00007	.00570	.05757	-.00112	.01009

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00061	.00019	.01382	.00163	.00091	.03327	.00794
Stddev	.00055	.00012	.00056	.00015	.00039	.00230	.00128
%RSD	90.650	61.884	4.0385	8.9172	43.345	6.9274	16.158
#1	.00064	.00005	.01321	.00150	.00047	.03167	.00941
#2	.00115	.00024	.01394	.00162	.00124	.03591	.00701
#3	.00004	.00027	.01430	.00179	.00101	.03223	.00742

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: S0 Acquired: 11/14/2024 1:30:26 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) 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	954.79	25033.	2472.9	846.82	1895.1
Stddev	.96	27.	18.0	3.57	2.1
%RSD	.10100	.10809	.72715	.42128	.11070
#1	955.89	25058.	2460.7	850.52	1894.8
#2	954.38	25036.	2464.5	846.51	1897.3
#3	954.09	25004.	2493.6	843.41	1893.1

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: S1 Acquired: 11/14/2024 1:35:02 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) 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	.00050	.00150	.00099	.00276	.01036	.01871	1.3898	.05689
Stddev	.00011	.00007	.00029	.00017	.00031	.00064	.0058	.00070
%RSD	22.261	4.3633	29.604	6.1017	2.9465	3.3995	.41806	1.2323
#1	.00062	.00155	.00074	.00282	.01053	.01804	1.3921	.05653
#2	.00040	.00154	.00091	.00290	.01001	.01930	1.3940	.05645
#3	.00049	.00143	.00131	.00257	.01054	.01880	1.3831	.05770

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	.01068	.37395	.00185	.02864	.00532	.00115	.00369	.02450
Stddev	.00029	.00248	.00025	.00022	.00065	.00013	.00027	.00018
%RSD	2.6756	.66193	13.771	.75995	12.291	11.056	7.2186	.75107
#1	.01072	.37680	.00203	.02859	.00537	.00101	.00356	.02445
#2	.01038	.37266	.00156	.02845	.00464	.00116	.00352	.02470
#3	.01095	.37238	.00197	.02888	.00595	.00127	.00400	.02434

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	.02272	.02573	.06030	.00340	.14825	.25849	-.00055	.00740
Stddev	.00009	.00009	.00044	.00039	.00146	.00448	.00018	.00149
%RSD	.40089	.33996	.72435	11.462	.98742	1.7320	33.358	20.193
#1	.02281	.02582	.05996	.00368	.14706	.25607	-.00076	.00567
#2	.02270	.02574	.06015	.00295	.14989	.25576	-.00046	.00824
#3	.02263	.02564	.06079	.00356	.14781	.26366	-.00043	.00828

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00834	.00271	.37234	.00211	.04727	.06939	1.2943
Stddev	.00035	.00005	.00059	.00012	.00090	.00148	.0061
%RSD	4.1754	2.0126	.15807	5.9197	1.8947	2.1368	.46798
#1	.00848	.00276	.37192	.00219	.04636	.06969	1.3013
#2	.00859	.00265	.37208	.00217	.04815	.06777	1.2914
#3	.00794	.00273	.37301	.00197	.04731	.07069	1.2903

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: S1 Acquired: 11/14/2024 1:35:02 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) 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	953.95	24974.	2463.8	849.95	1876.8
Stddev	1.41	18.	1.8	.69	4.2
%RSD	.14801	.07021	.07224	.08123	.22341
#1	952.74	24994.	2463.9	849.85	1872.4
#2	953.61	24961.	2462.0	850.68	1877.3
#3	955.50	24968.	2465.6	849.31	1880.8

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: S2 Acquired: 11/14/2024 1:39:36 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) 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	.02661	.08868	.83846	.08374	.21807	4.1938	16.218	1.3667
Stddev	.00038	.00028	.00071	.00079	.00125	.0616	.230	.0215
%RSD	1.4170	.31454	.08414	.93897	.57541	1.4694	1.4200	1.5718
#1	.02655	.08900	.83768	.08373	.21765	4.2648	16.481	1.3915
#2	.02702	.08849	.83863	.08296	.21948	4.1542	16.056	1.3531
#3	.02627	.08854	.83906	.08454	.21708	4.1624	16.115	1.3556

Elem	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1.1572	4.2800	.66993	.35443	.60599	.42485	.85090	.29243
Stddev	.0023	.0749	.00096	.00072	.00876	.00630	.00938	.00601
%RSD	.19655	1.7500	.14316	.20328	1.4457	1.4836	1.1020	2.0554
#1	1.1553	4.3664	.67027	.35405	.61545	.43202	.86136	.29907
#2	1.1566	4.2407	.67067	.35398	.59816	.42020	.84324	.29087
#3	1.1597	4.2330	.66884	.35526	.60437	.42231	.84811	.28736

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	.33449	.12864	.48705	.03823	8.7304	1.5570	.05421	1.1565
Stddev	.00003	.00013	.00579	.00093	.0223	.0269	.00013	.0191
%RSD	.01000	.10094	1.1887	2.4332	.25585	1.7253	.23909	1.6484
#1	.33446	.12866	.49361	.03927	8.7324	1.5875	.05435	1.1784
#2	.33449	.12850	.48266	.03792	8.7516	1.5370	.05412	1.1438
#3	.33453	.12876	.48488	.03749	8.7071	1.5465	.05415	1.1472

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1.0013	.03193	2.0855	.11469	.56017	3.4258	15.297
Stddev	.0036	.00018	.0280	.00042	.00915	.0440	.233
%RSD	.36290	.56280	1.3422	.36950	1.6332	1.2851	1.5254
#1	.99722	.03197	2.1178	.11467	.57072	3.4766	15.565
#2	1.0042	.03173	2.0693	.11513	.55533	3.3978	15.135
#3	1.0025	.03209	2.0693	.11428	.55446	3.4032	15.191

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: S2 Acquired: 11/14/2024 1:39:36 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) 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	908.37	24475.	2401.5	795.39	1702.8
Stddev	2.12	32.	29.1	2.39	.6
%RSD	.23352	.13076	1.2132	.30051	.03736
#1	910.03	24511.	2368.0	797.78	1703.3
#2	905.98	24450.	2421.1	793.00	1702.1
#3	909.11	24463.	2415.4	795.39	1703.0

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: S3 Acquired: 11/14/2024 1:43:55 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) 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	.05462	.17354	1.6803	.16899	.44752	8.2938	31.950	2.6714
Stddev	.00011	.00015	.0033	.00034	.00102	.0206	.036	.0122
%RSD	.20814	.08898	.19449	.20376	.22716	.24817	.11163	.45578
#1	.05468	.17350	1.6765	.16875	.44636	8.2701	31.980	2.6607
#2	.05449	.17371	1.6820	.16939	.44800	8.3046	31.911	2.6846
#3	.05470	.17341	1.6824	.16885	.44821	8.3067	31.959	2.6689

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	2.3138	8.3781	1.3101	.71382	1.1848	.82675	1.6529	.58149
Stddev	.0016	.0359	.0021	.00073	.0052	.00480	.0004	.00096
%RSD	.07090	.42879	.15868	.10210	.43978	.58096	.02640	.16518
#1	2.3124	8.3402	1.3077	.71298	1.1907	.82254	1.6524	.58201
#2	2.3134	8.4117	1.3115	.71420	1.1832	.83199	1.6532	.58208
#3	2.3156	8.3825	1.3110	.71427	1.1807	.82573	1.6529	.58039

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	.66912	.23527	.97140	.07529	17.470	3.0425	.11344	2.2846
Stddev	.00165	.00039	.00406	.00041	.116	.0079	.00059	.0131
%RSD	.24725	.16448	.41823	.54739	.66577	.25887	.51594	.57393
#1	.66755	.23569	.97173	.07528	17.577	3.0342	.11375	2.2727
#2	.67085	.23493	.96718	.07571	17.346	3.0499	.11277	2.2986
#3	.66896	.23518	.97529	.07489	17.488	3.0435	.11382	2.2824

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2.0188	.06619	4.0617	.22914	1.0982	6.7890	29.983
Stddev	.0018	.00039	.0219	.00128	.0014	.0047	.036
%RSD	.08795	.58354	.54010	.55955	.12628	.06995	.11997
#1	2.0168	.06620	4.0443	.22767	1.0967	6.7886	29.996
#2	2.0200	.06657	4.0864	.22975	1.0995	6.7939	29.942
#3	2.0196	.06580	4.0545	.23000	1.0983	6.7844	30.010

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: S3 Acquired: 11/14/2024 1:43:55 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) 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	868.18	24080.	2402.5	755.67	1613.9
Stddev	.94	55.	7.4	6.49	1.1
%RSD	.10822	.23020	.30968	.85824	.06798
#1	868.06	24051.	2410.0	750.27	1615.2
#2	867.31	24144.	2395.1	762.86	1613.2
#3	869.18	24045.	2402.4	753.86	1613.3

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: S4 Acquired: 11/14/2024 1:48:11 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) 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	.11094	.33630	3.3048	.34454	.92164	16.611	63.177	5.1984
Stddev	.00070	.00078	.0055	.00031	.00163	.069	.242	.0063
%RSD	.62691	.23076	.16741	.09139	.17708	.41458	.38377	.12186
#1	.11020	.33665	3.3014	.34449	.92088	16.639	63.261	5.2016
#2	.11103	.33541	3.3018	.34426	.92053	16.532	62.903	5.2026
#3	.11158	.33683	3.3112	.34488	.92352	16.661	63.366	5.1912

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	4.5360	16.553	2.5233	1.4130	2.3347	1.6120	3.1821	1.1646
Stddev	.0006	.046	.0011	.0015	.0151	.0082	.0198	.0046
%RSD	.01437	.27853	.04488	.10375	.64729	.51043	.62191	.39070
#1	4.5365	16.565	2.5242	1.4120	2.3416	1.6179	3.1834	1.1641
#2	4.5363	16.503	2.5220	1.4123	2.3174	1.6026	3.1617	1.1603
#3	4.5353	16.593	2.5237	1.4147	2.3452	1.6155	3.2012	1.1694

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	1.3154	.44939	1.9373	.14824	35.861	6.0850	.23046	4.4070
Stddev	.0021	.00079	.0058	.00024	.160	.0328	.00045	.0093
%RSD	.15732	.17607	.29814	.16357	.44659	.53938	.19427	.21066
#1	1.3140	.44969	1.9397	.14850	35.697	6.0920	.23020	4.4156
#2	1.3146	.44998	1.9308	.14802	35.867	6.0493	.23020	4.4081
#3	1.3178	.44849	1.9416	.14819	36.017	6.1138	.23098	4.3971

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4.0884	.13535	7.8326	.45282	2.1603	13.604	59.050
Stddev	.0096	.00014	.0053	.00155	.0070	.053	.323
%RSD	.23448	.10659	.06708	.34258	.32636	.38720	.54656
#1	4.0852	.13552	7.8272	.45103	2.1667	13.619	59.149
#2	4.0808	.13528	7.8377	.45364	2.1527	13.546	58.689
#3	4.0992	.13525	7.8329	.45380	2.1614	13.648	59.311

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: S4 Acquired: 11/14/2024 1:48:11 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) 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	805.71	23392.	2385.0	674.43	1511.8
Stddev	1.27	24.	4.7	3.44	.9
%RSD	.15794	.10472	.19681	.51037	.05885
#1	805.37	23407.	2388.3	678.00	1510.8
#2	807.11	23406.	2387.1	674.18	1512.5
#3	804.63	23364.	2379.7	671.13	1512.0

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: S5 Acquired: 11/14/2024 1:52:23 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) 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	.23789	.66590	6.7602	.76378	2.0727	34.611	127.04	10.497
Stddev	.00060	.00267	.0141	.00316	.0028	.066	1.28	.054
%RSD	.25236	.40085	.20937	.41315	.13448	.19103	1.0072	.51867
#1	.23810	.66341	6.7505	.76224	2.0718	34.547	127.08	10.442
#2	.23836	.66556	6.7537	.76170	2.0705	34.608	125.74	10.497
#3	.23721	.66872	6.7764	.76741	2.0758	34.680	128.30	10.551

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	9.1311	33.896	5.0185	2.8753	4.7728	3.2318	6.3092	2.4305
Stddev	.0233	.098	.0177	.0080	.0036	.0076	.0245	.0093
%RSD	.25543	.28864	.35236	.27803	.07485	.23535	.38885	.38192
#1	9.1226	33.790	5.0122	2.8707	4.7691	3.2239	6.2888	2.4198
#2	9.1131	33.914	5.0049	2.8707	4.7763	3.2391	6.3024	2.4357
#3	9.1574	33.984	5.0385	2.8845	4.7731	3.2322	6.3364	2.4360

Elem	Ni2316	Ag3280	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2.6652	.92352	4.0365	.30091	79.317	12.699	.48822	8.7683
Stddev	.0059	.00264	.0119	.00287	.777	.033	.00057	.0670
%RSD	.22057	.28606	.29381	.95505	.97990	.26220	.11680	.76400
#1	2.6643	.92254	4.0289	.29759	78.533	12.666	.48884	8.7123
#2	2.6598	.92151	4.0305	.30241	80.087	12.699	.48812	8.7502
#3	2.6715	.92651	4.0502	.30271	79.330	12.733	.48771	8.8425

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	8.8940	.28855	15.742	.92137	4.3978	28.375	117.71
Stddev	.0228	.00113	.079	.00285	.0041	.055	1.10
%RSD	.25670	.39205	.49976	.30882	.09370	.19455	.93220
#1	8.8893	.28783	15.655	.92010	4.3948	28.312	116.90
#2	8.8738	.28797	15.762	.91937	4.3961	28.409	117.27
#3	8.9187	.28985	15.808	.92462	4.4025	28.406	118.96

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: S5 Acquired: 11/14/2024 1:52:23 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) 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	713.37	22688.	2360.4	546.81	1405.7
Stddev	.84	30.	9.7	5.06	.2
%RSD	.11789	.13405	.40986	.92549	.01543
#1	713.47	22692.	2371.5	551.20	1405.6
#2	714.15	22716.	2355.2	541.28	1405.9
#3	712.48	22656.	2354.4	547.96	1405.5

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: S6 Acquired: 11/14/2024 1:56:50 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) 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	90.368	52.952	8.2729	3.8313	10.661
Stddev	.494	.272	.0502	.0203	.040
%RSD	.54627	.51332	.60636	.53041	.37940
#1	90.776	52.848	8.2535	3.8239	10.645
#2	89.819	53.261	8.3299	3.8543	10.707
#3	90.509	52.748	8.2354	3.8157	10.631

Int. Std.	Y_3710
Units	Cts/S
Avg	2293.9
Stddev	10.1
%RSD	.44178
#1	2293.1
#2	2284.1
#3	2304.4

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: ICV011 Acquired: 11/14/2024 2:50:21 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICV011 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9285542	1.072424	.9851764	1.007233	.9482391	2.304457
Stddev	.0157833	.002131	.0015022	.003231	.0016005	.038043
%RSD	1.699768	.1987192	.1524817	.3207471	.1687854	1.650844
#1	.9363604	1.072844	.9855864	1.010265	.9467120	2.336619
#2	.9103889	1.070114	.9835118	1.003835	.9481013	2.314290
#3	.9389132	1.074314	.9864311	1.007599	.9499041	2.262463

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5175189	.5225680	.5074169	9.896770	.5649419	.4994152
Stddev	.0086179	.0057752	.0013354	.201746	.0031049	.0008765
%RSD	1.665239	1.105162	.2631800	2.038501	.5496004	.1755049
#1	.5224291	.5250406	.5059106	9.990556	.5676393	.4985573
#2	.5225596	.5266953	.5078843	10.03455	.5656386	.4993791
#3	.5075681	.5159681	.5084558	9.66520	.5615478	.5003092

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4847497	10.64653	.5363128	5.576679	.5103343	.2402035
Stddev	.0095602	.21640	.0074117	.049829	.0014398	.0024222
%RSD	1.972184	2.032561	1.381975	.8935264	.2821228	1.008392
#1	.4946378	10.64262	.5400460	5.627152	.5086999	.2422986
#2	.4840560	10.86486	.5411156	5.575366	.5114150	.2407606
#3	.4755553	10.43212	.5277768	5.527520	.5108881	.2375513

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.966894	.5297704	.9546986	8.985038	F .0021854	F .0034046
Stddev	.277289	.0096097	.0060778	.248383	.0040669	.0006817
%RSD	2.782103	1.813927	.6366196	2.764407	186.0953	20.02170
#1	10.08787	.5375824	.9604896	9.173399	-.001854	.0031497
#2	10.16314	.5326890	.9552366	9.078165	.002131	.0041770
#3	9.64967	.5190398	.9483698	8.703549	.006279	.0028871

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: ICV011 Acquired: 11/14/2024 2:50:21 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICV011 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F -.001669	F .0125429	F .0017828	F -.002821	F -.000933	F -.002875
Stddev	.000753	.0015795	.0016829	.000515	.001880	.001465
%RSD	45.12069	12.59287	94.39333	18.26235	201.5624	50.96374
#1	-.000799	.0142502	.0005570	-.003362	-.002770	-.003825
#2	-.002095	.0111337	.0010900	-.002336	.000987	-.003613
#3	-.002113	.0122447	.0037015	-.002765	-.001015	-.001188

Elem	Sr4077
Units	ppm
Avg	F .0008735
Stddev	.0000548
%RSD	6.277624
#1	.0008740
#2	.0009280
#3	.0008184

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	946.4865	25010.34	2484.060	842.3976	1853.852
Stddev	1.0268	175.06	34.972	9.5284	.237
%RSD	.1084868	.6999587	1.407862	1.131105	.0127915
#1	947.6454	24844.62	2465.972	833.4910	1854.079
#2	945.6901	24992.96	2461.837	841.2568	1853.870
#3	946.1240	25193.44	2524.372	852.4451	1853.606

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: ICB011 Acquired: 11/14/2024 2:54:45 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICB011 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000750	-.000337	-.001042	-.007195	-.002585	-.012537	-.000516
Stddev	.001752	.002474	.001708	.002595	.000762	.003986	.000780
%RSD	233.5681	734.7390	163.8738	36.06840	29.46642	31.79073	151.2568
#1	-.002096	.002076	-.001485	-.005716	-.002062	-.013560	.000147
#2	.001230	-.000219	-.002484	-.005677	-.003459	-.015912	-.001376
#3	-.001384	-.002867	.000843	-.010191	-.002233	-.008140	-.000319

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000039	-.000134	-.000950	-.000833	-.000550	-.001705	.0085013
Stddev	.000085	.000020	.023570	.000357	.000097	.004323	.0152004
%RSD	218.9111	14.90528	2480.151	42.87902	17.62390	253.5666	178.8003
#1	.000059	-.000118	.002333	-.000544	-.000460	.002523	.0195272
#2	-.000092	-.000157	.020806	-.001232	-.000538	-.001520	-.008838
#3	-.000084	-.000128	-.025990	-.000723	-.000652	-.006117	.014815

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001023	-.033751	-.000463	.0007026	.1623658	-.003898	-.001578
Stddev	.002238	.083332	.000116	.0000474	.3260264	.011631	.000168
%RSD	218.7775	246.9019	24.96170	6.747610	200.7975	298.3512	10.64306
#1	.001348	-.088147	-.000593	.0006507	.5128038	-.006027	-.001677
#2	-.003098	-.075292	-.000373	.0007437	.1062606	.008650	-.001384
#3	-.001319	.062186	-.000423	.0007133	-.131967	-.014318	-.001674

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.003456	-.001939	-.005870	-.000752	-.002998	-.000508	-.001961
Stddev	.086989	.004140	.001028	.000400	.007349	.000447	.002621
%RSD	2516.706	213.5022	17.50594	53.19284	245.1013	87.91179	133.6512
#1	-.058951	-.004647	-.004746	-.000916	-.001679	-.000285	-.000108
#2	-.048217	.002827	-.006105	-.001044	.003602	-.001022	-.004960
#3	.096799	-.003998	-.006761	-.000296	-.010918	-.000217	-.000815

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: ICB011 Acquired: 11/14/2024 2:54:45 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICB011 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0006331	-.002726	-.000463
Stddev	.0010845	.002195	.000060
%RSD	171.2921	80.52161	12.90392
#1	.0018097	-.004951	-.000491
#2	-.000326	-.002667	-.000395
#3	.000416	-.000561	-.000504

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	945.9905	24900.95	2440.067	843.9952	1893.859
Stddev	.3944	30.20	5.914	3.8465	3.831
%RSD	.0416902	.1212753	.2423899	.4557443	.2022980
#1	946.3805	24909.08	2446.775	841.4086	1892.694
#2	945.9993	24926.24	2435.604	842.1617	1898.137
#3	945.5919	24867.51	2437.821	848.4154	1890.745

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: ICSA011 Acquired: 11/14/2024 3:05:08 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSA011 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0045908	-.019959	-.007330	-.014661	.0031282	243.6322
Stddev	.0084266	.002936	.003157	.004640	.0022742	.2619
%RSD	183.5530	14.70897	43.06582	31.64924	72.70050	.1075026
#1	-.001980	-.021352	-.009589	-.009432	.0017141	243.8875
#2	.001661	-.021939	-.008676	-.018287	.0019189	243.6449
#3	.014091	-.016586	-.003723	-.016264	.0057516	243.3641

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0044571	-.000221	.0003491	254.3175	.0506457	.0003949
Stddev	.0001425	.000067	.0000803	.2938	.0005081	.0003461
%RSD	3.198058	30.34830	23.00683	.1155398	1.003202	87.63499
#1	.0042968	-.000299	.0002564	254.5350	.0501884	.0007941
#2	.0045047	-.000176	.0003924	254.4343	.0505560	.0002111
#3	.0045697	-.000190	.0003984	253.9833	.0511926	.0001795

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.004546	106.2141	.0106129	248.7703	.0038592	.0026489
Stddev	.004760	.3227	.0017364	.7774	.0006299	.0001864
%RSD	104.6909	.3037932	16.36149	.3125112	16.32158	7.038450
#1	.000579	106.5827	.0122884	249.6581	.0031335	.0028072
#2	-.008828	105.9830	.0107289	248.2111	.0041800	.0024434
#3	-.005390	106.0766	.0088214	248.4417	.0042641	.0026961

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3047466	-.006975	.0111474	-.080610	.0049464	F .0848677
Stddev	.3152948	.007789	.0004822	.026854	.0078530	.0017765
%RSD	103.4613	111.6683	4.325492	33.31356	158.7633	2.093232
#1	.6460406	.001950	.0106714	-.106754	-.000856	.0868559
#2	.2438704	-.010478	.0116356	-.053098	.001813	.0843111
#3	.0243289	-.012396	.0111353	-.081978	.013882	.0834362

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: ICSA011 Acquired: 11/14/2024 3:05:08 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSA011 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002116	.0059253	-.001274	F -.008205	-.002219	.0003616
Stddev	.000590	.0079550	.000374	.000828	.000923	.0006722
%RSD	27.85764	134.2547	29.34381	10.09519	41.58795	185.9026
#1	-.002785	-.002567	-.001609	-.008840	-.002184	.0002450
#2	-.001672	.013204	-.000871	-.008507	-.003158	-.000245
#3	-.001892	.007139	-.001342	-.007268	-.001313	.001084

Elem	Sr4077
Units	ppm
Avg	F .1056504
Stddev	.0003889
%RSD	.3680690
#1	.1060859
#2	.1053380
#3	.1055273

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	876.6844	23495.19	2398.934	790.0333	1570.620
Stddev	1.2561	24.16	7.653	6.9824	3.600
%RSD	.1432790	.1028472	.3190191	.8838082	.2292140
#1	876.3616	23498.66	2398.357	795.0300	1567.531
#2	875.6212	23517.44	2391.585	793.0148	1569.754
#3	878.0704	23469.48	2406.859	782.0551	1574.573

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: ICSAB011 Acquired: 11/14/2024 3:09:38 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSAB011 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1051083	.0882556	.0481167	.0406583	.5696241	246.5187
Stddev	.0074701	.0019615	.0056990	.0070817	.0064859	.0967
%RSD	7.107065	2.222545	11.84419	17.41762	1.138630	.0392196
#1	.0988749	.0904877	.0419532	.0356567	.5635482	246.4087
#2	.1133884	.0868068	.0531954	.0487616	.5764541	246.5901
#3	.1030617	.0874722	.0492013	.0375565	.5688701	246.5573

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5363189	.5349088	1.056437	257.8469	.6073628	.5230070
Stddev	.0015712	.0009110	.002382	.1993	.0022507	.0010807
%RSD	.2929600	.1703167	.2254368	.0772882	.3705718	.2066312
#1	.5352438	.5345908	1.057948	257.7123	.6047992	.5217674
#2	.5381221	.5341993	1.053691	257.7524	.6082749	.5235024
#3	.5355909	.5359362	1.057671	258.0758	.6090143	.5237512

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4931729	107.6530	.5424624	251.6600	1.050721	.1918995
Stddev	.0083495	.4052	.0056744	.4478	.004833	.0018989
%RSD	1.693015	.3763920	1.046041	.1779227	.4600017	.9895532
#1	.4919707	107.3993	.5394103	252.0072	1.052118	.1909167
#2	.5020583	108.1203	.5490096	251.1546	1.045343	.1940884
#3	.4854896	107.4394	.5389673	251.8181	1.054701	.1906933

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2895639	.5549257	.9408957	-.098765	.0063795	F .0882205
Stddev	.2641682	.0076950	.0027295	.043993	.0004245	.0008821
%RSD	91.22966	1.386668	.2901006	44.54287	6.654437	.9998461
#1	.1141542	.5636695	.9381723	-.084033	.0063722	.0881128
#2	.5933901	.5519221	.9436313	-.148234	.0059587	.0873973
#3	.1611475	.5491855	.9408836	-.064030	.0068077	.0891515

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: ICSAB011 Acquired: 11/14/2024 3:09:38 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSAB011 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002740	.0150653	.0004900	F -.013165	-.005291	-.001174
Stddev	.000725	.0009478	.0002298	.002201	.001098	.001910
%RSD	26.45693	6.291334	46.89047	16.72128	20.75375	162.6222
#1	-.001914	.0146411	.0005648	-.015234	-.004886	-.001090
#2	-.003271	.0161511	.0002322	-.013409	-.004454	-.003125
#3	-.003034	.0144036	.0006730	-.010852	-.006534	.000692

Elem	Sr4077
Units	ppm
Avg	F .1068065
Stddev	.0002016
%RSD	.1887133
#1	.1065841
#2	.1069771
#3	.1068583

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	876.5437	23640.38	2412.817	788.1727	1578.584
Stddev	.6708	76.97	5.611	2.3114	1.811
%RSD	.0765243	.3255922	.2325357	.2932609	.1147121
#1	875.7887	23703.74	2418.342	789.9430	1577.389
#2	876.7714	23554.72	2407.124	785.5578	1580.667
#3	877.0710	23662.68	2412.984	789.0172	1577.695

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: CCV079 Acquired: 11/14/2024 3:14:01 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV079 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.999868	4.878208	24.57506	4.809483	4.835155	398.7973	10.14236
Stddev	.033472	.016979	.03847	.018564	.005540	1.3638	.03495
%RSD	.6694524	.3480571	.1565211	.3859786	.1145693	.3419809	.3446331
#1	4.983454	4.895297	24.60221	4.812745	4.838666	397.3047	10.10512
#2	4.977772	4.877984	24.53104	4.789504	4.838029	399.9784	10.17446
#3	5.038379	4.861341	24.59193	4.826199	4.828769	399.1089	10.14750

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4969210	2.487233	403.0404	15.27110	2.491890	14.95954	406.8439
Stddev	.0004545	.005284	1.0854	.02098	.005317	.02800	1.2728
%RSD	.0914692	.2124560	.2693143	.1374049	.2133687	.1871682	.3128489
#1	.4968222	2.487627	401.8982	15.25481	2.495710	14.93150	406.1079
#2	.4974169	2.481762	404.0585	15.26371	2.485818	14.98750	408.3136
#3	.4965241	2.492309	403.1645	15.29477	2.494143	14.95961	406.1102

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	14.88527	400.3703	2.484123	1.245942	401.9190	2.467139	14.57661
Stddev	.02861	.3005	.008024	.004191	1.6506	.024624	.07976
%RSD	.1921978	.0750555	.3230065	.3363697	.4106729	.9980966	.5471770
#1	14.85308	400.5583	2.488664	1.242145	400.2421	2.445798	14.57470
#2	14.90780	400.0237	2.474858	1.245243	403.5419	2.494082	14.65730
#3	14.89493	400.5289	2.488846	1.250439	401.9730	2.461537	14.49782

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	153.2765	4.986590	5.107554	4.790056	5.070246	4.954374	4.971804
Stddev	.2965	.012819	.018367	.002715	.010774	.005348	.004363
%RSD	.1934688	.2570603	.3596031	.0566752	.2124965	.1079376	.0877530
#1	153.1715	5.000598	5.091772	4.792585	5.067054	4.949591	4.971508
#2	153.6113	4.975446	5.127714	4.787187	5.082256	4.960148	4.967596
#3	153.0467	4.983727	5.103176	4.790397	5.061429	4.953382	4.976307

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: CCV079 Acquired: 11/14/2024 3:14:01 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV079 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.953300	5.072510	5.070092
Stddev	.010832	.019461	.010285
%RSD	.2186767	.3836657	.2028634
#1	4.942474	5.051556	5.059534
#2	4.964138	5.090019	5.080082
#3	4.953288	5.075954	5.070659

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	771.6916	22686.46	2351.163	646.6755	1419.770
Stddev	.8024	42.70	3.195	2.9693	1.954
%RSD	.1039773	.1882327	.1359013	.4591597	.1376524
#1	772.4293	22711.74	2353.315	646.9780	1420.718
#2	770.8373	22710.48	2347.492	643.5666	1421.069
#3	771.8081	22637.16	2352.682	649.4820	1417.522

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: CCB079 Acquired: 11/14/2024 3:18:13 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB079 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002274	-.000670	-.002967	-.001404	.0006534	-.006798	-.000496
Stddev	.009980	.001727	.003126	.006395	.0032665	.016850	.000637
%RSD	438.8607	257.9557	105.3656	455.4781	499.9160	247.8654	128.6208
#1	.008001	-.002113	-.001491	.005315	-.002309	.009398	-.000062
#2	-.011930	.001244	-.000852	-.007416	.004157	-.005558	-.001227
#3	-.002893	-.001140	-.006558	-.002112	.000112	-.024235	-.000198

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000021	.0000369	.0121974	-.001050	-.000470	-.001244	.0522162
Stddev	.000087	.0001596	.0283940	.000714	.000360	.000442	.0689009
%RSD	422.5528	432.9205	232.7872	67.95690	76.62911	35.54286	131.9531
#1	.000078	-.000141	.0344706	-.000260	-.000197	-.001291	.1259925
#2	-.000088	.000168	.0218969	-.001649	-.000878	-.001661	.0411184
#3	-.000051	.000084	-.019775	-.001243	-.000335	-.000780	-.010462

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003492	-.019708	-.000800	-.000261	.3835771	.0007602	-.000677
Stddev	.0004278	.049973	.000331	.000089	.0439239	.0075933	.000514
%RSD	122.5148	253.5639	41.44450	34.02136	11.45113	998.7973	75.97647
#1	.0008347	-.070847	-.001133	-.000226	.3504619	-.007711	-.000895
#2	.0000278	.029010	-.000471	-.000195	.3668655	.006956	-.001046
#3	.0001850	-.017287	-.000795	-.000362	.4334040	.003035	-.000089

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0549660	-.000793	.0013234	-.000518	.0017253	-.000692	-.002235
Stddev	.0296776	.003305	.0009669	.000509	.0030511	.000681	.001438
%RSD	53.99259	416.9907	73.06142	98.36815	176.8446	98.44188	64.34977
#1	.0563055	-.004281	.0003684	-.000891	-.001796	.000094	-.002717
#2	.0246413	-.000387	.0023017	-.000726	.003588	-.001060	-.000617
#3	.0839510	.002290	.0013000	.000063	.003383	-.001109	-.003369

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: CCB079 Acquired: 11/14/2024 3:18:13 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB079 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.000644	-.000090	-.000215
Stddev	.003066	.001132	.000073
%RSD	475.7883	1254.540	34.22439
#1	.002576	.000936	-.000238
#2	-.000980	-.001305	-.000273
#3	-.003529	.000098	-.000132

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	942.8821	24866.32	2445.111	841.8982	1879.386
Stddev	.6761	49.69	14.088	6.2063	3.799
%RSD	.0717099	.1998145	.5761567	.7371781	.2021558
#1	943.6061	24825.22	2438.096	836.5155	1882.569
#2	942.2671	24852.19	2461.329	840.4923	1875.180
#3	942.7730	24921.54	2435.907	848.6868	1880.409

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: PB164595BL Acquired: 11/14/2024 3:22:47 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS595 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001141	.0001064	-.001059	-.005507	.0011651	-.005613
Stddev	.009333	.0036651	.002157	.005113	.0023900	.008502
%RSD	817.7361	3445.374	203.5825	92.85483	205.1350	151.4768
#1	.004624	.0019778	.001036	.000397	.0018471	-.006735
#2	.003861	.0024579	-.000941	-.008363	.0031399	-.013498
#3	-.011909	-.004117	-.003273	-.008554	-.001492	.003395

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001635	-.000041	-.000056	-.027670	-.001547	-.000461
Stddev	.0004282	.000069	.000055	.014336	.000799	.000187
%RSD	261.8112	168.1497	96.86830	51.81153	51.66238	40.50528
#1	-.000167	.000038	-.000097	-.019210	-.001260	-.000287
#2	.000647	-.000075	.000006	-.044223	-.000930	-.000658
#3	.000010	-.000087	-.000077	-.019577	-.002449	-.000437

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0012277	.0144638	-.002220	-.051066	-.000374	-.000394
Stddev	.0035711	.0280063	.001133	.023481	.000549	.000257
%RSD	290.8762	193.6309	51.05840	45.98054	146.7571	65.27322
#1	.0036507	-.010868	-.003027	-.074126	.000166	-.000456
#2	.0029058	.044539	-.000924	-.051887	-.000932	-.000112
#3	-.002873	.009721	-.002708	-.027186	-.000357	-.000615

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2015578	-.005287	-.001741	.1149426	-.000713	-.003771
Stddev	.1330799	.008818	.000341	.1340866	.000651	.000761
%RSD	66.02568	166.7925	19.59005	116.6552	91.18836	20.16786
#1	.2408035	-.014533	-.001412	.2629672	-.000927	-.003732
#2	.0532684	.003029	-.002093	.0016141	.000017	-.004551
#3	.3106016	-.004357	-.001718	.0802467	-.001230	-.003031

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: PB164595BL Acquired: 11/14/2024 3:22:47 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS595 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000830	.0018449	-.000010	F -.013847	-.001983	-.001513
Stddev	.000101	.0013860	.000937	.000656	.002327	.001241
%RSD	12.16816	75.12749	9114.352	4.736857	117.3492	82.00924
#1	-.000866	.0013458	-.001003	-.013099	-.004668	-.000980
#2	-.000715	.0034113	.000112	-.014325	-.000723	-.002932
#3	-.000907	.0007776	.000860	-.014116	-.000558	-.000628

Elem	Sr4077
Units	ppm
Avg	-.000461
Stddev	.000149
%RSD	32.27838
#1	-.000530
#2	-.000564
#3	-.000291

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	948.0337	24906.59	2442.720	844.5548	1887.281
Stddev	1.9781	40.93	21.748	3.0019	3.372
%RSD	.2086563	.1643164	.8903305	.3554374	.1786643
#1	950.1354	24884.91	2454.646	841.1838	1891.128
#2	947.7576	24881.07	2417.618	845.5412	1885.875
#3	946.2081	24953.79	2455.896	846.9393	1884.839

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: PB164595BS Acquired: 11/14/2024 3:27:20 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS595 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0172890	.0600886	.0174981	.0657869	.1187078	.4022264
Stddev	.0058425	.0017738	.0014418	.0049816	.0030156	.0051365
%RSD	33.79313	2.951969	8.239483	7.572381	2.540335	1.277017
#1	.0208826	.0581407	.0183964	.0636083	.1218424	.4061946
#2	.0204367	.0605143	.0158351	.0714867	.1158274	.3964247
#3	.0105475	.0616108	.0182629	.0622657	.1184535	.4040598

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4529601	.0114239	.0112693	11.37018	.0220494	.1062602
Stddev	.0008466	.0001760	.0002579	.07001	.0003134	.0004152
%RSD	.1868957	1.540331	2.288584	.6157717	1.421237	.3907563
#1	.4521743	.0114867	.0114396	11.41023	.0219086	.1064340
#2	.4528495	.0115599	.0109725	11.41096	.0224085	.1057863
#3	.4538565	.0112251	.0113956	11.28933	.0218312	.1065603

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0538945	.2360360	.0339741	10.79137	.0894845	.0228286
Stddev	.0049631	.0275221	.0013731	.18041	.0011573	.0006605
%RSD	9.208940	11.66012	4.041654	1.671836	1.293349	2.893188
#1	.0556270	.2410810	.0340982	10.64810	.0885618	.0223956
#2	.0482974	.2606866	.0325432	10.99398	.0891085	.0235888
#3	.0577591	.2063404	.0352810	10.73202	.0907831	.0225013

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.83240	.1187619	.1177231	10.38942	.0190274	F -.003135
Stddev	.21894	.0036775	.0011956	.08656	.0012050	.000420
%RSD	2.021159	3.096516	1.015598	.8331322	6.332987	13.38685
#1	10.74812	.1193837	.1185250	10.34731	.0176467	-.002699
#2	11.08095	.1220889	.1163489	10.33198	.0198674	-.003537
#3	10.66812	.1148132	.1182953	10.48898	.0195681	-.003169

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: PB164595BS Acquired: 11/14/2024 3:27:20 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS595 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .0197393	.1896388	F .4778666	F -.000150	.2185714	.0307581
Stddev	.0003926	.0054637	.0011892	.000901	.0040435	.0020784
%RSD	1.988933	2.881121	.2488470	598.9678	1.849969	6.757093
#1	.0196991	.1921793	.4772650	.000809	.2204020	.0302377
#2	.0201505	.1833673	.4770984	-.000283	.2213759	.0289894
#3	.0193684	.1933697	.4792363	-.000977	.2139364	.0330472

Elem	Sr4077
Units	ppm
Avg	.2275379
Stddev	.0006442
%RSD	.2830995
#1	.2277980
#2	.2280114
#3	.2268044

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	944.1187	24809.47	2458.188	837.0254	1839.548
Stddev	4.8223	34.37	2.472	3.0771	9.934
%RSD	.5107725	.1385298	.1005538	.3676193	.5400299
#1	941.4564	24793.88	2455.502	834.0823	1834.395
#2	949.6853	24785.66	2458.696	840.2209	1851.000
#3	941.2145	24848.87	2460.367	836.7729	1833.249

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: PB164595BSD Acquired: 11/14/2024 3:31:50 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCSD595 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0046717	.0268086	.0092394	.0344846	.0608122	.1876893	.2250992
Stddev	.0113772	.0011870	.0026494	.0019037	.0043038	.0098426	.0071500
%RSD	243.5335	4.427744	28.67488	5.520332	7.077250	5.244084	3.176390
#1	.0023980	.0276260	.0080093	.0343404	.0596251	.1979306	.2284511
#2	.0170140	.0254471	.0122802	.0326571	.0572265	.1868362	.2299574
#3	-.005397	.0273526	.0074287	.0364563	.0655850	.1783009	.2168889

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0056520	.0056904	5.638728	.0101178	.0534483	.0264424	.1210061
Stddev	.0002338	.0001990	.175200	.0001266	.0003559	.0055766	.0461554
%RSD	4.136471	3.496642	3.107086	1.251161	.6657938	21.08948	38.14300
#1	.0058383	.0057852	5.694417	.0100162	.0531119	.0322423	.1618867
#2	.0057282	.0058244	5.779314	.0102596	.0538209	.0259648	.0709533
#3	.0053897	.0054618	5.442452	.0100776	.0534120	.0211199	.1301784

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0157536	5.321402	.0446205	.0110755	5.326935	.0693162	.0594354
Stddev	.0016916	.189208	.0006030	.0004539	.588438	.0086389	.0005947
%RSD	10.73778	3.555611	1.351315	4.097938	11.04646	12.46296	1.000613
#1	.0146090	5.293460	.0452684	.0106891	5.144594	.0680823	.0588685
#2	.0176967	5.523027	.0445174	.0109621	5.984959	.0785056	.0593833
#3	.0149552	5.147717	.0440758	.0115753	4.851253	.0613606	.0600545

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.089645	.0090248	-.004904	.0094234	.0918995	.2392421	-.006077
Stddev	.099834	.0020156	.000557	.0001161	.0041359	.0065675	.000784
%RSD	1.961504	22.33404	11.35249	1.232491	4.500443	2.745131	12.89789
#1	5.188255	.0112625	-.005531	.0095388	.0935893	.2440502	-.005172
#2	5.092051	.0073518	-.004468	.0094249	.0871862	.2419169	-.006552
#3	4.988631	.0084601	-.004713	.0093065	.0949229	.2317593	-.006506

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: PB164595BSD Acquired: 11/14/2024 3:31:50 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCSD595 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.1081529	.0146687	.1126733
Stddev	.0032098	.0006926	.0032143
%RSD	2.967831	4.721401	2.852780
#1	.1102971	.0153234	.1143866
#2	.1096989	.0147390	.1146680
#3	.1044627	.0139437	.1089653

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	943.1724	24885.90	2487.708	843.9640	1854.980
Stddev	.4772	34.42	56.719	2.3040	2.433
%RSD	.0505914	.1383120	2.279961	.2729987	.1311713
#1	943.5650	24858.86	2456.475	841.4336	1852.183
#2	942.6413	24874.19	2453.471	845.9407	1856.153
#3	943.3109	24924.65	2553.179	844.5177	1856.606

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4523-01DLX2 Acquired: 11/14/2024 3:54:02 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE4T2 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5039607	-.034894	.3802607	-.046391	.0146823	108.4961	1.605864
Stddev	.0133246	.005361	.0045695	.005258	.0034078	.1161	.007001
%RSD	2.643983	15.36312	1.201670	11.33339	23.21027	.1070258	.4359577
#1	.5056785	-.032228	.3772980	-.052462	.0161686	108.5991	1.604669
#2	.4898605	-.041065	.3855232	-.043404	.0170945	108.5190	1.613385
#3	.5163431	-.031389	.3779609	-.043307	.0107838	108.3702	1.599538

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0035805	.0115606	22.60440	.2380393	.1726093	1.075759	297.8915
Stddev	.0000753	.0004817	.05527	.0017955	.0010940	.003208	.3243
%RSD	2.103721	4.166707	.2445132	.7542773	.6337815	.2981645	.1088651
#1	.0036673	.0113005	22.64674	.2363221	.1738140	1.079364	297.8589
#2	.0035321	.0121164	22.54187	.2399039	.1723362	1.073222	297.5847
#3	.0035422	.0112648	22.62459	.2378920	.1716778	1.074691	298.2308

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.120538	52.92030	.3215129	-.023267	1.420393	.5884037	.9164445
Stddev	.021686	.21348	.0003790	.000306	.124397	.0115970	.0075703
%RSD	.3045504	.4033999	.1178723	1.314399	8.757944	1.970932	.8260495
#1	7.131134	52.92460	.3211825	-.023558	1.509752	.5947334	.9082514
#2	7.095591	52.70470	.3219266	-.022948	1.473109	.5954586	.9231800
#3	7.134888	53.13160	.3214297	-.023295	1.278318	.5750192	.9179022

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	21.13842	5.680454	.2730294	-.002229	.7588478	8.046040	-.006393
Stddev	.04125	.006671	.0006135	.000093	.0143364	.070217	.001931
%RSD	.1951257	.1174416	.2246930	4.167402	1.889237	.8726901	30.21203
#1	21.09712	5.688033	.2737375	-.002186	.7729460	8.073048	-.004350
#2	21.13852	5.675472	.2726602	-.002335	.7442844	7.966329	-.006640
#3	21.17961	5.677855	.2726904	-.002165	.7593130	8.098743	-.008189

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4523-01DLX2 Acquired: 11/14/2024 3:54:02 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE4T2 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	3.050988	.0919624	.2695792
Stddev	.006446	.0008059	.0015274
%RSD	.2112799	.8763681	.5665855
#1	3.051785	.0924619	.2699759
#2	3.056999	.0923927	.2708691
#3	3.044181	.0910327	.2678926

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1007.213	26905.70	2719.554	896.6394	1732.649
Stddev	1.016	121.59	19.121	6.3579	1.399
%RSD	.1008855	.4519075	.7031083	.7090785	.0807329
#1	1008.308	27021.08	2704.285	901.9281	1734.022
#2	1006.301	26778.73	2741.000	889.5854	1732.699
#3	1007.030	26917.27	2713.376	898.4048	1731.226

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4523-02DLX2 Acquired: 11/14/2024 3:58:28 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE4T3 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4013942	-.028040	.3271939	-.046810	.0128749	83.90457	1.227307
Stddev	.0039284	.004349	.0064224	.002147	.0015695	1.75153	.027519
%RSD	.9786905	15.51037	1.962875	4.586069	12.19036	2.087525	2.242268
#1	.4058571	-.023746	.3345574	-.047590	.0114653	85.90377	1.258421
#2	.3998657	-.027930	.3242744	-.044382	.0145661	82.63990	1.206161
#3	.3984598	-.032442	.3227498	-.048458	.0125933	83.17006	1.217338

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0031630	.0082279	16.57768	.2126845	.1433824	.9169267	266.5771
Stddev	.0001781	.0000867	.33158	.0001580	.0008455	.0190828	5.4038
%RSD	5.631555	1.053117	2.000156	.0742920	.5896845	2.081166	2.027101
#1	.0033186	.0083034	16.95030	.2126284	.1430894	.9374879	272.8000
#2	.0029687	.0082470	16.31515	.2125623	.1443354	.8997846	263.0695
#3	.0032019	.0081333	16.46759	.2128630	.1427223	.9135075	263.8617

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.264990	40.89463	.2793954	-.021446	1.277188	.5245654	.7111606
Stddev	.130960	.60506	.0007875	.000213	.168114	.0101148	.0038251
%RSD	2.090342	1.479568	.2818477	.9950056	13.16284	1.928233	.5378616
#1	6.410914	41.50836	.2792500	-.021561	1.367093	.5361145	.7078423
#2	6.157675	40.29862	.2802454	-.021199	1.381234	.5172826	.7153442
#3	6.226381	40.87691	.2786907	-.021577	1.083239	.5202993	.7102952

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.11213	4.462650	.2412874	-.001588	.5508629	7.388271	-.003837
Stddev	.38820	.005279	.0075512	.000798	.0103124	.110542	.001527
%RSD	2.568821	.1183017	3.129525	50.22962	1.872044	1.496187	39.81225
#1	15.55295	4.468514	.2499717	-.002509	.5596710	7.514355	-.004072
#2	14.96213	4.458275	.2376216	-.001113	.5533985	7.308006	-.005233
#3	14.82130	4.461161	.2362690	-.001142	.5395192	7.342451	-.002205

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4523-02DLX2 Acquired: 11/14/2024 3:58:28 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE4T3 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.868495	.0718610	.2086676
Stddev	.062004	.0016286	.0046108
%RSD	2.161560	2.266356	2.209631
#1	2.939861	.0737399	.2138732
#2	2.827837	.0708540	.2050977
#3	2.837788	.0709889	.2070317

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1000.525	26751.35	2655.016	890.1110	1760.653
Stddev	3.177	43.83	49.855	4.8400	7.549
%RSD	.3175709	.1638598	1.877758	.5437575	.4287572
#1	997.721	26722.79	2597.892	891.1548	1754.979
#2	999.877	26729.44	2689.750	884.8343	1757.759
#3	1003.976	26801.82	2677.406	894.3440	1769.221

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4523-03DLX2 Acquired: 11/14/2024 4:02:54 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE4T4 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3022016	-.025163	.2884303	-.031802	.0096837	86.30511	1.649297
Stddev	.0124619	.000684	.0028268	.002488	.0032596	.64333	.014261
%RSD	4.123720	2.718248	.9800790	7.824384	33.66052	.7454092	.8646873
#1	.2911299	-.024443	.2852283	-.029106	.0094858	85.57767	1.634706
#2	.2997773	-.025241	.2894823	-.032291	.0130377	86.79919	1.663204
#3	.3156975	-.025805	.2905803	-.034010	.0065276	86.53847	1.649983

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0027888	.0083513	22.50573	.1970081	.1289215	.7950068	228.2797
Stddev	.0000792	.0002118	.17397	.0009923	.0008752	.0054749	1.7646
%RSD	2.839165	2.536349	.7730182	.5036720	.6788394	.6886597	.7729813
#1	.0028236	.0084598	22.31059	.1978208	.1293624	.7901752	226.4091
#2	.0028446	.0084870	22.56195	.1959023	.1294886	.7938918	229.9145
#3	.0026982	.0081073	22.64464	.1973013	.1279136	.8009533	228.5156

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.714275	47.61091	.2938585	-.017838	1.095512	.4671172	.7205487
Stddev	.083523	.55452	.0002615	.000311	.238008	.0173493	.0026543
%RSD	.9584604	1.164686	.0889920	1.744267	21.72573	3.714120	.3683734
#1	8.629501	46.97598	.2941493	-.017760	1.356056	.4482919	.7231372
#2	8.796487	48.00003	.2937835	-.018181	.889507	.4824632	.7178331
#3	8.716838	47.85674	.2936426	-.017574	1.040972	.4705965	.7206759

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	13.60358	6.015327	.2091320	-.001644	.7184309	8.119915	-.008999
Stddev	.18034	.013626	.0019574	.000219	.0062316	.023557	.000475
%RSD	1.325663	.2265158	.9359392	13.34934	.8673947	.2901152	5.278901
#1	13.48365	6.024517	.2068718	-.001820	.7150622	8.118263	-.008573
#2	13.81097	6.021792	.2102640	-.001713	.7256218	8.144255	-.008913
#3	13.51611	5.999673	.2102602	-.001398	.7146087	8.097228	-.009511

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4523-03DLX2 Acquired: 11/14/2024 4:02:54 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE4T4 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.316967	.0792300	.2857260
Stddev	.022550	.0001956	.0028685
%RSD	.9732619	.2468708	1.003945
#1	2.291722	.0793758	.2827858
#2	2.335115	.0793065	.2885171
#3	2.324064	.0790077	.2858752

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	994.1804	26579.02	2682.305	885.3636	1746.819
Stddev	1.4683	39.21	13.275	2.2849	.919
%RSD	.1476913	.1475407	.4948917	.2580750	.0526035
#1	993.9097	26617.25	2692.599	887.8397	1746.507
#2	995.7652	26538.89	2667.323	884.9143	1746.097
#3	992.8662	26580.92	2686.995	883.3367	1747.854

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4523-04DLX2 Acquired: 11/14/2024 4:07:18 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE4T5 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3317593	-.032595	.3717963	-.040792	.0084964	111.9359	1.681530
Stddev	.0144320	.006291	.0047199	.008997	.0062185	.2226	.002878
%RSD	4.350132	19.30060	1.269488	22.05648	73.18940	.1988905	.1711673
#1	.3152093	-.028429	.3664164	-.049825	.0055329	111.7045	1.678304
#2	.3383451	-.029525	.3752414	-.031831	.0043140	112.1485	1.683836
#3	.3417236	-.039832	.3737310	-.040719	.0156423	111.9548	1.682450

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0036100	.0106912	27.73058	.2550937	.1658267	1.192887	278.9029
Stddev	.0001198	.0002327	.04332	.0009972	.0004280	.002421	.8583
%RSD	3.318774	2.176514	.1562337	.3909170	.2581115	.2029161	.3077501
#1	.0036789	.0107939	27.73200	.2560075	.1662204	1.194728	278.0263
#2	.0036795	.0104248	27.77318	.2540301	.1658887	1.193787	279.7417
#3	.0034717	.0108549	27.68657	.2552436	.1653711	1.190145	278.9405

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.360657	59.95400	.3768868	-.021338	1.591915	.5612153	.8389477
Stddev	.024784	.31745	.0007458	.000201	.126898	.0100975	.0021453
%RSD	.3367135	.5294825	.1978889	.9431439	7.971429	1.799220	.2557102
#1	7.332979	59.99642	.3774026	-.021392	1.498641	.5650568	.8413108
#2	7.380799	60.24810	.3760316	-.021508	1.540683	.5688282	.8384097
#3	7.368193	59.61747	.3772261	-.021116	1.736420	.5497608	.8371227

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.64074	7.035961	.2545477	-.002295	.8269399	8.651072	-.005297
Stddev	.13186	.031103	.0026974	.000519	.0093013	.027330	.001003
%RSD	.8430779	.4420600	1.059683	22.61825	1.124781	.3159097	18.93790
#1	15.62710	7.029753	.2547247	-.001699	.8257399	8.621751	-.005203
#2	15.51623	7.008431	.2571522	-.002650	.8182968	8.675837	-.004344
#3	15.77889	7.069700	.2517661	-.002537	.8367829	8.655629	-.006343

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4523-04DLX2 Acquired: 11/14/2024 4:07:18 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE4T5 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	3.152085	.1013252	.3436407
Stddev	.003686	.0011280	.0006503
%RSD	.1169377	1.113241	.1892446
#1	3.147842	.1020711	.3429243
#2	3.153923	.1000275	.3441937
#3	3.154491	.1018769	.3438041

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1005.900	26990.65	2731.786	901.2658	1725.602
Stddev	1.686	104.02	3.646	2.0691	6.034
%RSD	.1676096	.3853856	.1334584	.2295767	.3496795
#1	1005.599	26935.43	2733.677	898.9367	1727.220
#2	1007.716	27110.63	2727.583	902.8915	1730.663
#3	1004.385	26925.88	2734.098	901.9691	1718.924

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4523-05DLX2 Acquired: 11/14/2024 4:11:43 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE4T6 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3317443	-.032515	.4214292	-.038292	.0129662	88.97289	1.384676
Stddev	.0154828	.004269	.0036834	.006148	.0021721	.89467	.015029
%RSD	4.667099	13.12981	.8740154	16.05527	16.75202	1.005552	1.085353
#1	.3485701	-.036453	.4252474	-.031239	.0111803	89.86044	1.397857
#2	.3180982	-.027978	.4178974	-.041119	.0123340	88.98696	1.387861
#3	.3285645	-.033115	.4211429	-.042518	.0153842	88.07127	1.368310

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0031087	.0095076	18.25453	.2116473	.1412553	1.149298	258.7640
Stddev	.0001309	.0003235	.19261	.0014761	.0010277	.006885	2.4119
%RSD	4.211810	3.402787	1.055144	.6974149	.7275323	.5990530	.9320940
#1	.0029582	.0092148	18.44130	.2100483	.1416226	1.152005	260.7901
#2	.0031965	.0094530	18.26573	.2119358	.1400944	1.154418	259.4057
#3	.0031713	.0098549	18.05656	.2129578	.1420489	1.141471	256.0961

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.615688	45.57139	.2883166	-.020539	1.403379	.4973930	.7803829
Stddev	.073820	.44196	.0014756	.000543	.163654	.0193766	.0040479
%RSD	1.115827	.9698202	.5118052	2.642471	11.66141	3.895626	.5187086
#1	6.666911	45.76583	.2887981	-.020976	1.592007	.5036277	.7812441
#2	6.649081	45.88280	.2866604	-.020711	1.318929	.4756665	.7759737
#3	6.531072	45.06555	.2894914	-.019931	1.299202	.5128847	.7839309

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	16.33487	5.105602	.2310830	-.001385	.4848248	7.817897	-.006234
Stddev	.23292	.035134	.0019988	.001202	.0012169	.067171	.001210
%RSD	1.425892	.6881481	.8649614	86.77678	.2509906	.8591908	19.40558
#1	16.58362	5.121244	.2333582	-.001315	.4847386	7.859217	-.007117
#2	16.29904	5.065363	.2302808	-.000220	.4836533	7.854082	-.006731
#3	16.12194	5.130198	.2296099	-.002621	.4860825	7.740391	-.004855

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4523-05DLX2 Acquired: 11/14/2024 4:11:43 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE4T6 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	3.055314	.0812772	.2253071
Stddev	.027249	.0013350	.0031058
%RSD	.8918656	1.642531	1.378468
#1	3.083719	.0801191	.2280749
#2	3.052832	.0827374	.2258980
#3	3.029391	.0809750	.2219483

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1004.779	26917.95	2716.603	895.1765	1756.508
Stddev	5.952	27.85	20.794	5.3668	8.595
%RSD	.5923761	.1034774	.7654406	.5995205	.4893257
#1	1002.074	26933.92	2706.914	898.0919	1753.240
#2	1011.603	26934.15	2702.421	898.4546	1766.258
#3	1000.659	26885.79	2740.473	888.9831	1750.027

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4523-06DLX2 Acquired: 11/14/2024 4:16:08 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE4T7 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2513198	-.029887	.1983816	-.035059	.0117196	99.83413	1.244877
Stddev	.0129344	.000468	.0031746	.000975	.0012647	.41107	.003220
%RSD	5.146580	1.566303	1.600259	2.780357	10.79097	.4117575	.2586877
#1	.2583209	-.029363	.1986965	-.035830	.0131522	99.72417	1.243526
#2	.2592444	-.030264	.2013871	-.033964	.0112481	100.2890	1.248553
#3	.2363939	-.030034	.1950613	-.035384	.0107584	99.4892	1.242553

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0029397	.0049019	26.79623	.2044896	.1336777	.4669638	246.6949
Stddev	.0000924	.0001772	.05648	.0017920	.0006450	.0018992	1.0179
%RSD	3.143407	3.615277	.2107735	.8763538	.4824833	.4067013	.4126155
#1	.0028457	.0047554	26.75872	.2024304	.1344224	.4686147	246.6593
#2	.0030305	.0048514	26.86119	.2053425	.1333067	.4673884	247.7301
#3	.0029429	.0050989	26.76879	.2056959	.1333040	.4648883	245.6952

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.776737	48.96572	.2794766	-.020769	1.408762	.5147187	.6030909
Stddev	.010559	.18103	.0008962	.000286	.184406	.0167639	.0017545
%RSD	.1827836	.3697030	.3206758	1.376494	13.08997	3.256897	.2909196
#1	5.776278	48.94259	.2804266	-.021055	1.449056	.5014577	.6011542
#2	5.787518	49.15720	.2793570	-.020770	1.569690	.5335614	.6035444
#3	5.766415	48.79737	.2786462	-.020483	1.207540	.5091372	.6045742

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.28542	6.335332	.2240647	-.001922	.8502806	8.270331	-.008067
Stddev	.12590	.015540	.0007213	.000397	.0053003	.050358	.001590
%RSD	.8236603	.2452972	.3219012	20.64117	.6233565	.6089030	19.71211
#1	15.14076	6.352811	.2232390	-.002365	.8563678	8.297764	-.006716
#2	15.37025	6.330111	.2245720	-.001600	.8477874	8.301017	-.007666
#3	15.34525	6.323074	.2243831	-.001800	.8466867	8.212213	-.009820

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4523-06DLX2 Acquired: 11/14/2024 4:16:08 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE4T7 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.652302	.0834390	.2260460
Stddev	.005614	.0021201	.0015120
%RSD	.2116474	2.540923	.6688705
#1	2.657878	.0810772	.2259176
#2	2.652374	.0851778	.2276180
#3	2.646652	.0840620	.2246023

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1001.201	26871.06	2691.570	895.3829	1747.654
Stddev	1.686	126.55	12.392	2.7331	4.876
%RSD	.1684174	.4709593	.4603834	.3052454	.2790022
#1	999.396	27005.45	2684.349	898.5341	1742.041
#2	1001.469	26853.56	2684.483	893.6578	1750.847
#3	1002.737	26754.17	2705.879	893.9568	1750.073

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4523-10DLX2 Acquired: 11/14/2024 4:20:32 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE4T9 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3614410	-.032033	.3231774	-.039987	.0113505	92.81860	1.358993
Stddev	.0052612	.003299	.0026255	.002081	.0030704	.70655	.008978
%RSD	1.455609	10.29942	.8124171	5.204897	27.05101	.7612165	.6606589
#1	.3590650	-.028305	.3260785	-.041861	.0079131	93.07168	1.360236
#2	.3674712	-.034579	.3224892	-.037747	.0123171	92.02037	1.349458
#3	.3577870	-.033214	.3209645	-.040354	.0138214	93.36376	1.367285

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0031856	.0088844	19.25101	.2260065	.1387176	.9074733	264.4286
Stddev	.0001604	.0004146	.13099	.0090378	.0003062	.0078996	2.1531
%RSD	5.034693	4.666155	.6804186	3.998912	.2207280	.8705079	.8142474
#1	.0031424	.0089867	19.30582	.2156634	.1390697	.9118711	265.1851
#2	.0030513	.0092382	19.10152	.2323813	.1385693	.8983535	261.9994
#3	.0033632	.0084283	19.34569	.2299748	.1385138	.9121952	266.1014

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.854445	45.88439	.2954819	-.020670	1.409916	.5258128	.7306800
Stddev	.055532	.38936	.0016274	.001852	.149430	.0172851	.0229204
%RSD	.8101601	.8485685	.5507688	8.958121	10.59849	3.287321	3.136858
#1	6.840397	46.03348	.2967870	-.022767	1.238268	.5194171	.7042878
#2	6.807285	45.44252	.2936584	-.019259	1.480508	.5126368	.7455884
#3	6.915651	46.17717	.2960002	-.019984	1.510971	.5453843	.7421639

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	16.80754	4.966075	.2439173	-.002309	.7294955	7.772985	-.005190
Stddev	.07072	.027302	.0028813	.000251	.0072604	.083919	.001455
%RSD	.4207427	.5497675	1.181248	10.88270	.9952633	1.079629	28.03874
#1	16.87643	4.981002	.2452907	-.002418	.7235404	7.684854	-.006856
#2	16.73513	4.934564	.2406063	-.002022	.7375835	7.782163	-.004552
#3	16.81104	4.982659	.2458549	-.002488	.7273627	7.851938	-.004163

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4523-10DLX2 Acquired: 11/14/2024 4:20:32 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE4T9 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	3.074096	.0822351	.2326538
Stddev	.013914	.0009832	.0016392
%RSD	.4526205	1.195648	.7045562
#1	3.074661	.0829072	.2328236
#2	3.059909	.0811066	.2309363
#3	3.087719	.0826916	.2342015

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1001.166	26930.21	2702.010	900.9426	1751.732
Stddev	1.034	729.47	15.737	23.9962	4.321
%RSD	.1032576	2.708757	.5824202	2.663453	.2466521
#1	1001.808	27768.65	2698.742	928.5572	1749.583
#2	1001.717	26440.99	2719.124	885.1628	1756.706
#3	999.973	26581.00	2688.163	889.1077	1748.907

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4523-11DLX2 Acquired: 11/14/2024 4:24:58 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE4W8 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2075174	-.027412	.1629090	-.039536	.0090315	95.16423	1.135331
Stddev	.0069863	.002012	.0054906	.005308	.0011078	1.82159	.022614
%RSD	3.366616	7.339513	3.370317	13.42542	12.26600	1.914153	1.991880
#1	.2141605	-.029396	.1651424	-.042752	.0101608	93.08968	1.109838
#2	.2081595	-.025373	.1669309	-.042447	.0079465	95.90093	1.143180
#3	.2002322	-.027468	.1566537	-.033410	.0089873	96.50210	1.152976

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0028295	.0045178	36.19458	.1941890	.1199022	.4068015	227.9106
Stddev	.0001188	.0002073	.71711	.0054642	.0007117	.0119640	4.1363
%RSD	4.197437	4.589139	1.981258	2.813849	.5935452	2.940990	1.814873
#1	.0027217	.0047317	35.37010	.2004985	.1206213	.3933337	223.1657
#2	.0028101	.0043177	36.54034	.1910569	.1191982	.4108707	229.8108
#3	.0029568	.0045040	36.67330	.1910117	.1198869	.4162002	230.7554

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.676870	45.00587	.2455451	-.017520	1.381809	.5102094	.4996552
Stddev	.095355	.92879	.0005223	.001622	.070149	.0141254	.0103261
%RSD	2.038856	2.063709	.2127175	9.258153	5.076611	2.768553	2.066653
#1	4.566835	43.95058	.2457215	-.015656	1.411020	.4950037	.5113769
#2	4.728460	45.36796	.2459563	-.018294	1.432633	.5127015	.4956867
#3	4.735314	45.69909	.2449574	-.018611	1.301775	.5229228	.4919020

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.52305	5.411530	.2054699	-.002778	.8264126	8.931893	-.008919
Stddev	.24057	.010165	.0050009	.000103	.0137723	.088832	.003034
%RSD	1.920981	.1878355	2.433864	3.716432	1.666513	.9945517	34.01495
#1	12.25426	5.401276	.1997392	-.002897	.8153744	8.830767	-.012029
#2	12.59671	5.421603	.2089496	-.002711	.8220173	8.997332	-.008760
#3	12.71817	5.411711	.2077210	-.002725	.8418461	8.967579	-.005967

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4523-11DLX2 Acquired: 11/14/2024 4:24:58 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE4W8 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.472356	.0771476	.2057531
Stddev	.049433	.0002036	.0040574
%RSD	1.999447	.2639571	1.971987
#1	2.415290	.0772525	.2010930
#2	2.499759	.0772774	.2076641
#3	2.502020	.0769129	.2085021

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	999.7727	26371.64	2685.105	876.9636	1755.247
Stddev	1.9711	464.90	37.007	15.9531	3.138
%RSD	.1971530	1.762870	1.378239	1.819128	.1787878
#1	1000.772	25834.94	2727.740	858.6209	1755.763
#2	997.502	26630.38	2661.300	884.6652	1751.883
#3	1001.044	26649.61	2666.274	887.6046	1758.096

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4523-12DLX2 Acquired: 11/14/2024 4:29:24 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE4W9 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2654320	-.031538	.3089264	-.040433	.0089134	97.84556	1.437299
Stddev	.0220929	.001327	.0023409	.004952	.0013277	1.27980	.016651
%RSD	8.323372	4.206249	.7577548	12.24713	14.89521	1.307980	1.158468
#1	.2504825	-.032922	.3114484	-.037610	.0073936	99.00405	1.452460
#2	.2908087	-.030278	.3085079	-.037538	.0098477	96.47176	1.419479
#3	.2550047	-.031413	.3068230	-.046151	.0094989	98.06087	1.439958

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0030827	.0085249	21.35764	.2204075	.1507416	.8080488	265.6293
Stddev	.0000354	.0001342	.33179	.0007920	.0009854	.0104053	3.2877
%RSD	1.147878	1.573731	1.553475	.3593207	.6537059	1.287709	1.237696
#1	.0030482	.0086498	21.66172	.2205063	.1516628	.8172214	268.4516
#2	.0030811	.0085418	21.00378	.2211454	.1497026	.7967418	262.0194
#3	.0031189	.0083831	21.40743	.2195708	.1508593	.8101831	266.4170

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.395217	48.94801	.3166281	-.021076	1.148597	.5416311	.7556504
Stddev	.081501	.68502	.0003212	.000560	.072475	.0085624	.0054342
%RSD	1.274407	1.399478	.1014516	2.655215	6.309903	1.580850	.7191469
#1	6.471310	49.46331	.3162627	-.021581	1.087327	.5475602	.7539027
#2	6.309214	48.17065	.3168661	-.020474	1.228599	.5455184	.7617435
#3	6.405126	49.21007	.3167555	-.021173	1.129863	.5318146	.7513051

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.86794	5.708099	.2400935	-.001991	.8361280	8.081825	-.005956
Stddev	.23635	.010149	.0018552	.000530	.0071027	.093088	.001842
%RSD	1.489503	.1777975	.7727119	26.63178	.8494737	1.151818	30.91755
#1	16.08729	5.705908	.2422355	-.002474	.8304380	8.171273	-.004702
#2	15.61764	5.699225	.2390437	-.002074	.8338577	7.985481	-.008071
#3	15.89890	5.719165	.2390011	-.001424	.8440883	8.088722	-.005096

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4523-12DLX2 Acquired: 11/14/2024 4:29:24 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE4W9 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.903166	.0867895	.2344967
Stddev	.040829	.0015443	.0023756
%RSD	1.406378	1.779409	1.013044
#1	2.941932	.0871814	.2367214
#2	2.860546	.0850869	.2319946
#3	2.907021	.0881001	.2347739

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	999.8235	26823.44	2710.622	895.6945	1746.947
Stddev	2.3709	85.34	34.629	5.6612	1.830
%RSD	.2371350	.3181446	1.277525	.6320409	.1047423
#1	1001.517	26776.24	2676.739	895.9496	1748.694
#2	1000.839	26772.12	2745.952	889.9101	1745.044
#3	997.114	26921.95	2709.175	901.2238	1747.104

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4523-13DLX2 Acquired: 11/14/2024 4:33:48 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE4X0 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4823123	-.036595	.4095609	-.047775	.0147155	95.74004	1.298609
Stddev	.0036185	.005605	.0035248	.002212	.0038357	.15018	.000383
%RSD	.7502469	15.31695	.8606206	4.630114	26.06589	.1568601	.0294666
#1	.4785529	-.032666	.4124248	-.045931	.0107001	95.69401	1.298938
#2	.4826129	-.034106	.4106334	-.047167	.0183419	95.61825	1.298189
#3	.4857712	-.043014	.4056244	-.050227	.0151044	95.90784	1.298699

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0032420	.0115071	17.99212	.2314807	.1561874	.9594488	303.5524
Stddev	.0000519	.0000862	.13427	.0008078	.0011648	.0035598	1.2809
%RSD	1.600694	.7487260	.7462596	.3489517	.7457611	.3710260	.4219677
#1	.0032969	.0115295	18.02278	.2323846	.1569831	.9555898	303.0298
#2	.0032352	.0115798	17.84517	.2312279	.1548505	.9626044	302.6154
#3	.0031938	.0114119	18.10841	.2308295	.1567286	.9601520	305.0120

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.294355	49.81546	.3111623	-.023259	1.545722	.6362361	.9102180
Stddev	.010390	.34333	.0013716	.000688	.085208	.0086030	.0046483
%RSD	.1650624	.6892035	.4408009	2.957873	5.512521	1.352176	.5106854
#1	6.303267	49.43292	.3118579	-.023002	1.486248	.6320300	.9117557
#2	6.282944	49.91663	.3120467	-.022736	1.507581	.6305453	.9139027
#3	6.296854	50.09684	.3095822	-.024038	1.643338	.6461329	.9049957

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	14.83033	5.237395	.2728414	-.002035	.6562336	7.653810	-.002772
Stddev	.04031	.017163	.0031037	.000198	.0092428	.044615	.002476
%RSD	.2718047	.3276972	1.137535	9.724967	1.408460	.5829081	89.31997
#1	14.79444	5.256908	.2699922	-.002195	.6599141	7.673717	-.005180
#2	14.87394	5.230638	.2723834	-.001814	.6457175	7.602707	-.002903
#3	14.82262	5.224638	.2761486	-.002096	.6630691	7.685006	-.000233

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4523-13DLX2 Acquired: 11/14/2024 4:33:48 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE4X0 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.931324	.0854968	.2003830
Stddev	.005984	.0010475	.0003033
%RSD	.2041549	1.225207	.1513603
#1	2.936825	.0858042	.2003481
#2	2.924952	.0843300	.2000987
#3	2.932195	.0863562	.2007023

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	996.0581	26649.91	2693.268	887.1096	1742.230
Stddev	1.5039	163.98	14.463	4.8053	1.637
%RSD	.1509866	.6153160	.5370102	.5416834	.0939349
#1	996.8555	26628.26	2693.024	884.0355	1742.208
#2	996.9955	26497.83	2707.852	884.6461	1743.878
#3	994.3235	26823.64	2678.928	892.6471	1740.605

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4523-14DLX2 Acquired: 11/14/2024 4:38:13 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE4X1 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2932376	-.025507	.3587196	-.035809	.0059022	89.55546	1.361441
Stddev	.0216304	.000966	.0031121	.002399	.0031393	.27938	.004983
%RSD	7.376412	3.786794	.8675533	6.700492	53.18736	.3119634	.3659784
#1	.2794588	-.024904	.3558688	-.038244	.0058771	89.23288	1.356299
#2	.2820859	-.024996	.3582503	-.033447	.0090540	89.72022	1.366247
#3	.3181682	-.026621	.3620397	-.035736	.0027756	89.71327	1.361777

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0035209	.0095351	19.23541	.2080963	.1579723	1.144384	237.3916
Stddev	.0000821	.0003369	.07197	.0010390	.0008990	.003703	.3593
%RSD	2.332422	3.533787	.3741457	.4993002	.5691207	.3235386	.1513704
#1	.0035108	.0093415	19.20271	.2089772	.1577711	1.148474	236.9831
#2	.0034443	.0099241	19.31792	.2069505	.1571909	1.141261	237.6590
#3	.0036076	.0093395	19.18560	.2083612	.1589549	1.143417	237.5328

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.808022	42.42789	.2768384	-.018500	1.267058	.5337419	.7067463
Stddev	.057290	.07749	.0004610	.000718	.081179	.0118780	.0035534
%RSD	.7337316	.1826288	.1665117	3.883583	6.406880	2.225424	.5027834
#1	7.770358	42.34163	.2763549	-.018246	1.358606	.5212479	.7075784
#2	7.873952	42.45045	.2768875	-.019311	1.238727	.5448892	.7098099
#3	7.779755	42.49159	.2772729	-.017942	1.203842	.5350885	.7028507

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	17.60170	3.833397	.2115851	-.002763	.6686620	8.558899	-.007363
Stddev	.13531	.018917	.0010487	.000456	.0009360	.021072	.000933
%RSD	.7687125	.4934749	.4956487	16.51905	.1399778	.2462038	12.66585
#1	17.50630	3.826337	.2127863	-.002259	.6679205	8.542733	-.008393
#2	17.75655	3.819026	.2111177	-.003149	.6697137	8.582731	-.007121
#3	17.54225	3.854829	.2108514	-.002880	.6683519	8.551233	-.006575

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4523-14DLX2 Acquired: 11/14/2024 4:38:13 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE4X1 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.399742	.0714101	.1761484
Stddev	.010230	.0007887	.0004172
%RSD	.4263040	1.104518	.2368647
#1	2.387942	.0720916	.1757112
#2	2.405180	.0715926	.1765423
#3	2.406105	.0705461	.1761917

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1007.656	26866.39	2694.701	894.1391	1752.722
Stddev	2.716	36.05	6.680	1.9367	5.677
%RSD	.2695366	.1341844	.2478919	.2165957	.3238730
#1	1006.342	26824.99	2694.440	895.9663	1758.086
#2	1010.779	26883.39	2688.155	892.1089	1753.303
#3	1005.846	26890.81	2701.507	894.3420	1746.777

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4523-15DLX2 Acquired: 11/14/2024 4:42:39 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE4X2 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2003667	-.028354	.2707015	-.034981	.0081141	99.94155	1.367699
Stddev	.0058049	.004036	.0055946	.007380	.0045349	.04944	.002748
%RSD	2.897159	14.23369	2.066700	21.09722	55.88971	.0494737	.2009099
#1	.1958260	-.029278	.2749304	-.043503	.0028828	99.92418	1.370815
#2	.2069071	-.031848	.2728163	-.030668	.0105278	99.90313	1.366663
#3	.1983668	-.023937	.2643578	-.030773	.0109317	99.99733	1.365620

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0032888	.0074726	22.63749	.2290078	.1395286	.7174070	241.1008
Stddev	.0001561	.0000291	.07713	.0003859	.0016095	.0054355	.7831
%RSD	4.747519	.3890959	.3407116	.1685271	1.153552	.7576586	.3247836
#1	.0032041	.0075018	22.57246	.2293413	.1398738	.7134273	240.2434
#2	.0031933	.0074436	22.72271	.2285851	.1377744	.7151937	241.2809
#3	.0034690	.0074724	22.61731	.2290970	.1409374	.7235999	241.7781

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.802582	49.63392	.2816437	-.019401	.9351328	.5175735	.8489056
Stddev	.025425	.19686	.0009386	.000142	.1820624	.0072621	.0035887
%RSD	.3737539	.3966160	.3332586	.7333495	19.46916	1.403112	.4227418
#1	6.818910	49.40899	.2819009	-.019564	1.040530	.5219860	.8529208
#2	6.773288	49.71793	.2806033	-.019303	1.039963	.5215428	.8477850
#3	6.815549	49.77483	.2824269	-.019335	.724905	.5091918	.8460108

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	14.40914	4.178164	.2184036	-.002714	.9400234	8.147727	-.008399
Stddev	.16396	.010340	.0031239	.000374	.0167085	.052730	.003103
%RSD	1.137901	.2474772	1.430353	13.79540	1.777451	.6471791	36.94172
#1	14.57145	4.189994	.2196105	-.003033	.9220407	8.120733	-.004818
#2	14.24358	4.173645	.2207440	-.002301	.9429615	8.113959	-.010108
#3	14.41238	4.170852	.2148562	-.002807	.9550679	8.208489	-.010272

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4523-15DLX2 Acquired: 11/14/2024 4:42:39 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE4X2 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.956796	.0836147	.1928925
Stddev	.005204	.0008142	.0005412
%RSD	.2659660	.9737944	.2805515
#1	1.956239	.0835003	.1934257
#2	1.951893	.0844801	.1923437
#3	1.962257	.0828637	.1929081

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	998.4499	26618.27	2676.873	886.7210	1746.087
Stddev	1.0636	63.02	8.683	.6293	1.704
%RSD	.1065255	.2367531	.3243680	.0709643	.0975659
#1	998.2204	26637.07	2682.810	886.0602	1746.041
#2	999.6096	26547.99	2680.901	886.7896	1747.814
#3	997.5199	26669.75	2666.907	887.3131	1744.407

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4523-16DLX2 Acquired: 11/14/2024 4:47:05 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE4X3 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2983354	-.035780	.2594487	-.043159	.0164636	100.6578	1.240021
Stddev	.0160292	.002010	.0025659	.000148	.0016932	2.4246	.026329
%RSD	5.372879	5.617345	.9889864	.3425944	10.28467	2.408764	2.123295
#1	.2866261	-.033599	.2600875	-.043269	.0145240	101.5245	1.250815
#2	.2917762	-.036182	.2616348	-.043218	.0172205	102.5299	1.259237
#3	.3166040	-.037558	.2566237	-.042991	.0176464	97.9189	1.210009

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0039221	.0081243	20.81491	.2587969	.1648489	.7643715	298.8200
Stddev	.0001239	.0004364	.58423	.0006212	.0011031	.0198893	8.1398
%RSD	3.159819	5.371831	2.806787	.2400393	.6691416	2.602040	2.723981
#1	.0040493	.0082149	20.94672	.2580997	.1649319	.7749555	300.5737
#2	.0039152	.0076497	21.32197	.2589996	.1637067	.7767306	305.9399
#3	.0038018	.0085083	20.17603	.2592915	.1659082	.7414282	289.9462

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.951257	43.47131	.3040401	-.024243	1.641769	.6703938	.8713767
Stddev	.160674	1.04704	.0012597	.001195	.185549	.0229434	.0037411
%RSD	2.311434	2.408581	.4143275	4.929351	11.30176	3.422376	.4293338
#1	7.020662	43.76442	.3046743	-.024987	1.831813	.6797053	.8672665
#2	7.065561	44.34056	.3025893	-.024878	1.632424	.6872177	.8745831
#3	6.767546	42.30895	.3048567	-.022865	1.461069	.6442585	.8722806

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	20.51645	4.555585	.2770178	-.001889	.9364636	9.022326	-.006054
Stddev	.45588	.020481	.0117542	.000058	.0103812	.196712	.000929
%RSD	2.222040	.4495904	4.243106	3.083668	1.108548	2.180281	15.34504
#1	20.68991	4.535080	.2773222	-.001822	.9284099	9.066687	-.007099
#2	20.86015	4.555632	.2886168	-.001930	.9328013	9.193070	-.005320
#3	19.99930	4.576043	.2651144	-.001915	.9481795	8.807222	-.005743

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4523-16DLX2 Acquired: 11/14/2024 4:47:05 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE4X3 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.930713	.0850761	.1927349
Stddev	.076405	.0029157	.0047149
%RSD	2.607040	3.427145	2.446327
#1	2.965671	.0863698	.1949523
#2	2.983384	.0871211	.1959324
#3	2.843083	.0817374	.1873201

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1002.264	26878.24	2711.330	897.7828	1736.556
Stddev	2.377	45.41	56.595	2.5688	4.731
%RSD	.2371455	.1689573	2.087344	.2861218	.2724555
#1	999.533	26900.62	2697.034	900.6576	1735.465
#2	1003.392	26908.11	2663.255	895.7129	1741.738
#3	1003.866	26825.98	2773.702	896.9780	1732.466

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: CCV080 Acquired: 11/14/2024 4:51:30 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV080 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.985972	4.921456	24.40768	4.796976	4.782408	395.3653	10.16372
Stddev	.015820	.002159	.02479	.009712	.008521	7.3067	.17145
%RSD	.3172958	.0438751	.1015843	.2024655	.1781666	1.848088	1.686891
#1	4.975267	4.923713	24.42405	4.792712	4.786893	387.2165	9.97004
#2	4.978505	4.919410	24.37915	4.790126	4.787750	401.3334	10.29609
#3	5.004144	4.921245	24.41984	4.808091	4.772582	397.5460	10.22503

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4854315	2.463975	395.6089	15.18271	2.470686	14.78786	398.9557
Stddev	.0083674	.003206	7.1813	.02215	.002452	.22994	7.4889
%RSD	1.723695	.1301004	1.815256	.1458932	.0992373	1.554954	1.877119
#1	.4767302	2.467601	387.8588	15.20281	2.473213	14.53228	390.7135
#2	.4934191	2.462807	402.0380	15.15896	2.470528	14.97797	405.3425
#3	.4861453	2.461517	396.9300	15.18636	2.468317	14.85333	400.8109

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	14.84632	392.7234	2.460616	1.229012	397.7340	2.440072	14.49225
Stddev	.23998	7.1007	.002272	.001708	7.5888	.060591	.03142
%RSD	1.616455	1.808064	.0923302	.1389452	1.908003	2.483178	.2168091
#1	14.57880	385.0518	2.460666	1.230978	389.4518	2.371669	14.51931
#2	15.04266	399.0651	2.458320	1.228156	404.3537	2.487003	14.49965
#3	14.91750	394.0534	2.462863	1.227902	399.3964	2.461545	14.45779

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	152.8948	4.886489	4.937427	4.738012	5.059327	4.858500	4.937392
Stddev	2.4176	.007466	.090914	.002051	.009521	.089120	.016050
%RSD	1.581233	.1527787	1.841318	.0432949	.1881799	1.834303	.3250666
#1	150.2340	4.894555	4.847945	4.736418	5.048375	4.764368	4.940863
#2	154.9566	4.885088	5.029707	4.737291	5.063971	4.941576	4.919891
#3	153.4939	4.879822	4.934628	4.740327	5.065634	4.869556	4.951423

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: CCV080 Acquired: 11/14/2024 4:51:30 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV080 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.894541	5.073852	5.048290
Stddev	.080338	.086868	.084649
%RSD	1.641384	1.712077	1.676777
#1	4.803669	4.974822	4.954612
#2	4.956128	5.137180	5.119289
#3	4.923827	5.109556	5.070969

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	774.6449	22620.71	2372.448	644.5351	1422.105
Stddev	.6178	48.25	38.420	.6653	1.215
%RSD	.0797582	.2133038	1.619439	.1032171	.0854445
#1	774.8728	22575.03	2412.464	643.9810	1421.154
#2	775.1164	22671.18	2335.853	644.3515	1423.474
#3	773.9455	22615.92	2369.026	645.2730	1421.686

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: CCB080 Acquired: 11/14/2024 4:55:43 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB080 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000850	.0024467	-.001560	-.000580	.0005904	.0072539	-.000898
Stddev	.007042	.0026465	.002809	.001524	.0021740	.0151483	.000498
%RSD	828.4173	108.1654	180.0378	262.7272	368.2148	208.8296	55.39484
#1	.005659	.0039122	.001449	-.001477	-.000196	.0211983	-.001451
#2	.000115	.0040362	-.002016	.001180	-.001081	-.008864	-.000487
#3	-.008325	-.000608	-.004113	-.001442	.003048	.009427	-.000756

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000035	-.000171	.0269171	-.000346	-.000687	-.000850	.0309590
Stddev	.000081	.000108	.0310644	.000330	.000456	.003528	.0472088
%RSD	229.4576	63.30689	115.4074	95.10437	66.41379	414.9564	152.4883
#1	-.000091	-.000066	.0619675	-.000378	-.001214	.002961	.0758524
#2	-.000073	-.000282	.0027888	-.000003	-.000447	-.001511	-.018267
#3	.000058	-.000165	.0159952	-.000659	-.000401	-.004000	.035291

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000045	-.009977	-.000480	-.001075	.0528605	-.005202	-.001008
Stddev	.001239	.112722	.000527	.000436	.3961010	.006930	.000292
%RSD	2765.294	1129.872	109.6467	40.56889	749.3318	133.2231	28.96164
#1	-.001217	.010123	-.000788	-.000689	-.063422	-.012136	-.001323
#2	-.000169	-.131396	.000128	-.001548	.494088	-.005191	-.000953
#3	.001251	.091343	-.000780	-.000987	-.272084	.001723	-.000747

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0737570	-.000422	-.000699	-.000671	.0075558	.0000113	-.002762
Stddev	.1258599	.001420	.000569	.000097	.0055053	.0003584	.002119
%RSD	170.6412	336.5041	81.49706	14.49067	72.86288	3164.846	76.70737
#1	-.067535	-.002045	-.000383	-.000758	.0138801	.0001540	-.003562
#2	.173868	.000192	-.001356	-.000690	.0038365	.0002765	-.000360
#3	.114938	.000588	-.000357	-.000566	.0049506	-.000396	-.004364

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: CCB080 Acquired: 11/14/2024 4:55:43 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB080 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.001056	-.002048	-.000193
Stddev	.000427	.000235	.000102
%RSD	40.38163	11.48049	52.69310
#1	-.000586	-.001812	-.000302
#2	-.001165	-.002049	-.000099
#3	-.001418	-.002282	-.000180

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	950.3836	24957.06	2452.170	844.5115	1890.071
Stddev	.6731	20.42	10.149	3.3215	3.323
%RSD	.0708199	.0818323	.4138759	.3933074	.1758116
#1	951.1606	24948.35	2443.654	848.0520	1893.577
#2	949.9800	24980.39	2449.457	841.4640	1889.668
#3	950.0103	24942.44	2463.400	844.0184	1886.968

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4523-18DLX2 Acquired: 11/14/2024 5:04:39 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE4X5 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4085693	-.034052	.5248925	-.053177	.0115494	93.39606	1.361932
Stddev	.0196131	.006171	.0046918	.006156	.0015201	.34867	.006526
%RSD	4.800426	18.12181	.8938671	11.57701	13.16151	.3733190	.4791682
#1	.4236856	-.036056	.5301808	-.048460	.0128983	93.47219	1.363321
#2	.4156158	-.027128	.5212290	-.060141	.0118475	93.70037	1.367651
#3	.3864065	-.038971	.5232678	-.050929	.0099024	93.01562	1.354823

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0036161	.0114325	16.71446	.2544760	.1702038	1.109422	334.5865
Stddev	.0001959	.0001835	.06186	.0009543	.0009407	.008930	.2727
%RSD	5.418228	1.605336	.3700755	.3749876	.5526748	.8049102	.0815131
#1	.0036402	.0114092	16.76166	.2537378	.1712810	1.100073	334.8719
#2	.0037988	.0112618	16.73727	.2541367	.1695439	1.117863	334.5591
#3	.0034092	.0116266	16.64443	.2555536	.1697867	1.110331	334.3285

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.407813	43.23626	.2895860	-.025508	1.670222	.7060587	.8606857
Stddev	.026006	.26407	.0007487	.000382	.064218	.0024069	.0081423
%RSD	.2764287	.6107703	.2585323	1.496639	3.844887	.3408917	.9460232
#1	9.397727	43.18683	.2887452	-.025803	1.650946	.7062646	.8549376
#2	9.437351	43.52156	.2898326	-.025077	1.617850	.7083561	.8571164
#3	9.388360	43.00040	.2901803	-.025644	1.741871	.7035555	.8700031

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	18.69075	4.970957	.3019113	-.002697	.6222882	8.602024	-.004493
Stddev	.05672	.015312	.0023924	.001136	.0138360	.042413	.001992
%RSD	.3034462	.3080262	.7924134	42.11916	2.223405	.4930607	44.33812
#1	18.66700	4.966447	.3033747	-.003713	.6080278	8.628613	-.002223
#2	18.64976	4.988017	.3032087	-.002906	.6356566	8.553111	-.005952
#3	18.75548	4.958406	.2991505	-.001471	.6231802	8.624346	-.005303

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4523-18DLX2 Acquired: 11/14/2024 5:04:39 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE4X5 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	3.074625	.0835117	.1803264
Stddev	.002857	.0007346	.0011269
%RSD	.0929158	.8796084	.6249008
#1	3.076530	.0842393	.1800545
#2	3.076004	.0835254	.1815643
#3	3.071340	.0827704	.1793604

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	997.7349	26731.72	2675.844	887.1497	1745.686
Stddev	1.5007	5.24	4.576	3.0860	2.915
%RSD	.1504138	.0196095	.1710112	.3478529	.1670053
#1	996.1880	26732.19	2671.495	889.6224	1746.397
#2	999.1847	26726.26	2675.421	888.1356	1742.481
#3	997.8320	26736.71	2680.617	883.6913	1748.180

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4523-19DLX2 Acquired: 11/14/2024 5:09:04 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE4X6 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2543637	-.027094	.2846085	-.030887	.0089586	97.97814	1.202416
Stddev	.0113250	.004515	.0038443	.002509	.0042356	.46743	.004232
%RSD	4.452291	16.66267	1.350731	8.122044	47.27950	.4770790	.3519759
#1	.2557159	-.028079	.2886030	-.027992	.0087940	97.59064	1.199088
#2	.2649519	-.022168	.2809345	-.032248	.0048078	97.84650	1.200980
#3	.2424233	-.031035	.2842881	-.032421	.0132742	98.49727	1.207179

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0031302	.0070055	25.07933	.2254548	.1273551	.8396706	219.3666
Stddev	.0000907	.0002224	.16243	.0004980	.0010396	.0034579	1.4036
%RSD	2.896629	3.174310	.6476747	.2208717	.8163305	.4118216	.6398483
#1	.0030545	.0067825	24.89696	.2252951	.1266742	.8413645	217.7463
#2	.0032306	.0070069	25.13255	.2250563	.1268392	.8356923	220.2082
#3	.0031054	.0072272	25.20847	.2260130	.1285517	.8419550	220.1454

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.115599	47.66583	.2645637	-.017540	1.160689	.4904806	.6349331
Stddev	.017867	.21886	.0007723	.000330	.099505	.0142015	.0012407
%RSD	.3492572	.4591489	.2919346	1.878695	8.572905	2.895417	.1954118
#1	5.099334	47.41329	.2636829	-.017370	1.069680	.4746772	.6349719
#2	5.112740	47.78402	.2651252	-.017920	1.145453	.5021731	.6336733
#3	5.134723	47.80019	.2648830	-.017329	1.266933	.4945914	.6361539

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	13.68198	4.469571	.2034155	-.002780	.9256058	9.232640	-.007725
Stddev	.02046	.005409	.0037122	.000358	.0063005	.026530	.005043
%RSD	.1495367	.1210293	1.824952	12.87806	.6806916	.2873519	65.28533
#1	13.65846	4.475817	.1992682	-.002795	.9229942	9.215217	-.012309
#2	13.69183	4.466416	.2064276	-.003131	.9210309	9.263173	-.008543
#3	13.69565	4.466479	.2045507	-.002415	.9327921	9.219530	-.002323

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4523-19DLX2 Acquired: 11/14/2024 5:09:04 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE4X6 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.031769	.0803459	.1880668
Stddev	.008572	.0013338	.0004685
%RSD	.4218747	1.660071	.2491416
#1	2.027214	.0789479	.1875295
#2	2.026437	.0816046	.1882802
#3	2.041657	.0804851	.1883906

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	996.9535	26587.70	2657.276	888.1291	1749.266
Stddev	1.9028	89.66	7.929	3.0495	1.624
%RSD	.1908612	.3372087	.2983834	.3433570	.0928110
#1	996.0123	26616.76	2663.997	885.3917	1749.360
#2	999.1435	26659.22	2648.532	891.4159	1747.597
#3	995.7047	26487.11	2659.301	887.5797	1750.840

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4523-20DLX2 Acquired: 11/14/2024 5:13:30 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE4X7 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2160668	-.027331	.2808345	-.033077	.0088427	78.43994	1.034453
Stddev	.0216654	.001314	.0018439	.003418	.0008416	1.11939	.012646
%RSD	10.02715	4.806592	.6565693	10.33236	9.517127	1.427062	1.222521
#1	.2369346	-.025817	.2787272	-.033338	.0089310	79.05753	1.038911
#2	.2175823	-.028004	.2816242	-.029537	.0096365	77.14781	1.020182
#3	.1936835	-.028171	.2821519	-.036357	.0079604	79.11449	1.044267

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0030105	.0077948	13.49843	.1943714	.1277869	.7404040	224.8552
Stddev	.0000582	.0000949	.20439	.0013215	.0005208	.0084092	3.0117
%RSD	1.932684	1.217743	1.514161	.6798580	.4075843	1.135762	1.339403
#1	.0029746	.0077642	13.68036	.1929061	.1274462	.7446272	226.7474
#2	.0029792	.0077189	13.27727	.1954727	.1283865	.7307201	221.3823
#3	.0030776	.0079012	13.53767	.1947354	.1275281	.7458645	226.4360

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.793037	38.47581	.2277082	-.018771	1.205794	.4974837	.6304223
Stddev	.087068	.81806	.0007109	.000331	.170843	.0135754	.0036735
%RSD	1.502980	2.126163	.3122123	1.763045	14.16851	2.728814	.5827078
#1	5.838153	39.02058	.2279052	-.019146	1.076198	.5076331	.6282260
#2	5.692670	37.53512	.2269195	-.018521	1.399398	.4820633	.6283778
#3	5.848289	38.87173	.2282998	-.018645	1.141787	.5027547	.6346632

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.56782	3.694378	.2018217	-.002546	.5164634	8.185370	-.009043
Stddev	.28894	.014374	.0030248	.000599	.0067881	.089100	.001365
%RSD	1.856026	.3890682	1.498758	23.54907	1.314351	1.088524	15.09989
#1	15.72357	3.692140	.2009387	-.002844	.5195836	8.264416	-.010581
#2	15.23442	3.709739	.1993366	-.001856	.5086762	8.088816	-.008570
#3	15.74548	3.681254	.2051898	-.002938	.5211304	8.202877	-.007976

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4523-20DLX2 Acquired: 11/14/2024 5:13:30 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE4X7 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.383816	.0655340	.1257097
Stddev	.032384	.0012367	.0016568
%RSD	1.358483	1.887087	1.317953
#1	2.401290	.0647781	.1266242
#2	2.346448	.0648627	.1237972
#3	2.403710	.0669611	.1267077

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	993.2771	26644.85	2669.167	887.2909	1773.851
Stddev	.7882	79.78	32.502	2.8762	3.202
%RSD	.0793491	.2994232	1.217691	.3241499	.1805110
#1	993.6734	26661.26	2638.058	890.2324	1772.584
#2	993.7885	26715.15	2702.903	887.1556	1771.477
#3	992.3694	26558.14	2666.539	884.4848	1777.493

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4523-21DLX2 Acquired: 11/14/2024 5:17:55 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE4X8 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2224144	-.026819	.3188421	-.039691	.0094180	91.41605	1.328295
Stddev	.0035562	.003360	.0032915	.003928	.0042003	.22254	.002642
%RSD	1.598926	12.52756	1.032314	9.897046	44.59853	.2434365	.1989368
#1	.2193238	-.030476	.3169371	-.035179	.0063177	91.55505	1.330114
#2	.2216181	-.023869	.3169465	-.041542	.0077382	91.53373	1.329506
#3	.2263013	-.026112	.3226428	-.042351	.0141983	91.15938	1.325264

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0030898	.0083896	17.70630	.2344857	.1471872	.8036924	245.2898
Stddev	.0001466	.0000502	.03376	.0005718	.0009409	.0043737	.7761
%RSD	4.743221	.5985449	.1906484	.2438562	.6392634	.5441986	.3164203
#1	.0029354	.0084312	17.74525	.2350665	.1465688	.8080635	245.8669
#2	.0032269	.0083338	17.68545	.2339233	.1467228	.7993162	245.5951
#3	.0031071	.0084038	17.68822	.2344673	.1482701	.8036975	244.4074

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.402887	49.40779	.2857687	-.020099	1.275996	.5913213	.7365340
Stddev	.025180	.20858	.0010920	.000271	.092679	.0015056	.0060739
%RSD	.3401434	.4221562	.3821116	1.349642	7.263275	.2546222	.8246626
#1	7.419138	49.64001	.2852858	-.020306	1.341331	.5917902	.7386777
#2	7.415641	49.34703	.2870188	-.020200	1.169926	.5896371	.7296789
#3	7.373881	49.23635	.2850014	-.019792	1.316731	.5925368	.7412454

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	17.12518	4.535272	.2211992	-.002832	.7769156	9.189427	-.005277
Stddev	.09758	.017569	.0013062	.000140	.0044143	.030496	.003107
%RSD	.5697777	.3873859	.5905057	4.957569	.5681824	.3318586	58.88427
#1	17.23772	4.532914	.2204074	-.002943	.7730747	9.212066	-.006497
#2	17.07375	4.553902	.2227068	-.002674	.7817380	9.201465	-.007588
#3	17.06408	4.519002	.2204835	-.002878	.7759340	9.154749	-.001745

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4523-21DLX2 Acquired: 11/14/2024 5:17:55 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE4X8 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.285703	.0820534	.1826255
Stddev	.005643	.0012822	.0005766
%RSD	.2468857	1.562680	.3157121
#1	2.281521	.0828924	.1831599
#2	2.292122	.0826903	.1827023
#3	2.283467	.0805774	.1820144

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	996.2104	26729.91	2674.637	890.4247	1753.315
Stddev	.9228	22.13	7.457	5.2641	1.544
%RSD	.0926320	.0828052	.2788046	.5911900	.0880523
#1	996.7919	26715.78	2672.968	888.2274	1751.840
#2	995.1464	26755.42	2668.156	896.4314	1753.186
#3	996.6930	26718.52	2682.787	886.6151	1754.919

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4523-22DLX2 Acquired: 11/14/2024 5:22:21 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE4X9 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2359313	-.034154	.1595521	-.039153	.0071626	104.0265	1.099684
Stddev	.0051039	.004183	.0032769	.002826	.0002325	.3599	.004092
%RSD	2.163316	12.24888	2.053825	7.216595	3.246468	.3460032	.3721479
#1	.2397793	-.029852	.1578761	-.035891	.0070941	104.2013	1.099640
#2	.2301414	-.038208	.1633280	-.040809	.0074216	104.2657	1.103799
#3	.2378731	-.034402	.1574521	-.040760	.0069720	103.6126	1.095614

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0034480	.0042808	20.82872	.2152833	.1352491	.4203531	261.0472
Stddev	.0001091	.0001214	.13139	.0020482	.0006334	.0029751	.9753
%RSD	3.163301	2.835579	.6308262	.9514065	.4683495	.7077722	.3736083
#1	.0035656	.0043468	20.90828	.2176433	.1352727	.4232505	261.5769
#2	.0034280	.0041407	20.90081	.2142382	.1346042	.4205029	261.6431
#3	.0033502	.0043549	20.67706	.2139684	.1358704	.4173058	259.9217

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.898914	38.36638	.2380250	-.021166	1.366206	.5917260	.4881976
Stddev	.014714	.15967	.0014052	.000212	.238292	.0145558	.0027811
%RSD	.3003592	.4161796	.5903398	1.003212	17.44189	2.459888	.5696587
#1	4.891914	38.49944	.2364672	-.021044	1.598504	.5952116	.4870138
#2	4.915821	38.18932	.2384107	-.021412	1.122341	.6042225	.4862043
#3	4.889006	38.41038	.2391970	-.021044	1.377773	.5757438	.4913747

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	16.06179	3.668158	.2383139	-.002684	.7370338	9.286801	-.007226
Stddev	.03607	.013981	.0010050	.000549	.0080766	.077737	.000718
%RSD	.2245534	.3811469	.4217196	20.45236	1.095829	.8370703	9.935025
#1	16.09042	3.663474	.2377014	-.002057	.7284422	9.350779	-.007987
#2	16.02128	3.657121	.2394738	-.002922	.7444713	9.309340	-.006560
#3	16.07367	3.683880	.2377666	-.003074	.7381879	9.200285	-.007132

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4523-22DLX2 Acquired: 11/14/2024 5:22:21 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE4X9 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.696364	.0763182	.1684656
Stddev	.008346	.0004270	.0007643
%RSD	.3095178	.5594550	.4536565
#1	2.702222	.0758518	.1684051
#2	2.700061	.0764129	.1692583
#3	2.686808	.0766899	.1677334

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	996.3223	26540.77	2667.753	885.4194	1754.639
Stddev	.8587	95.19	19.560	4.2804	2.712
%RSD	.0861848	.3586644	.7332002	.4834356	.1545677
#1	996.3644	26573.44	2646.272	884.7477	1757.696
#2	997.1591	26615.33	2672.450	889.9960	1753.703
#3	995.4433	26433.55	2684.537	881.5146	1752.520

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4754-01 Acquired: 11/14/2024 5:26:48 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D96 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.021979	-.019234	1.727936	-.017969	.0089466	90.48403	.4515824
Stddev	.006404	.001697	.006761	.004963	.0029691	2.91465	.0151970
%RSD	29.13694	8.820252	.3912963	27.61779	33.18698	3.221182	3.365278
#1	-.023617	-.021187	1.733377	-.019592	.0123596	87.15332	.4342070
#2	-.027405	-.018118	1.720367	-.012398	.0075211	92.56772	.4623967
#3	-.014915	-.018398	1.730066	-.021917	.0069590	91.73105	.4581434

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0017153	.0009464	1.395059	.0604928	.0327179	.0487514	161.5936
Stddev	.0000926	.0001917	.051616	.0006809	.0004877	.0033713	5.0381
%RSD	5.399812	20.25070	3.699903	1.125589	1.490701	6.915278	3.117765
#1	.0016622	.0010921	1.344914	.0612654	.0322885	.0489523	155.8297
#2	.0016615	.0010179	1.392233	.0599803	.0326170	.0520178	165.1579
#3	.0018223	.0007293	1.448030	.0602326	.0332481	.0452842	163.7931

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.989581	4.229692	.0238544	-.018963	.8200325	.3550897	.2489285
Stddev	.050646	.158256	.0004978	.000345	.1466535	.0146290	.0022973
%RSD	2.545566	3.741546	2.086781	1.817251	17.88387	4.119805	.9228741
#1	1.931866	4.118926	.0232826	-.018619	.7322133	.3386210	.2510976
#2	2.026610	4.410944	.0241914	-.019308	.7385502	.3600694	.2491665
#3	2.010267	4.159205	.0240892	-.018963	.9893338	.3665789	.2465215

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.474720	.6947428	.1412138	.0002000	.7372514	9.124399	-.001884
Stddev	.199713	.0085844	.0048522	.0003136	.0081643	.226261	.003024
%RSD	4.463131	1.235618	3.436054	156.8620	1.107398	2.479731	160.5206
#1	4.255503	.6903121	.1358674	.0002898	.7325936	8.863729	-.002737
#2	4.646321	.7046372	.1453382	-.000149	.7324822	9.269962	-.004391
#3	4.522337	.6892792	.1424358	.000459	.7466785	9.239508	.001475

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4754-01 Acquired: 11/14/2024 5:26:48 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D96 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	3.064691	.0140827	.0152004
Stddev	.099782	.0000690	.0004442
%RSD	3.255865	.4899837	2.922643
#1	2.951031	.0141313	.0147083
#2	3.137880	.0141129	.0155720
#3	3.105161	.0140037	.0153208

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1042.784	27663.49	2814.850	926.4319	1832.653
Stddev	1.153	91.89	69.780	5.0914	3.232
%RSD	.1105834	.3321795	2.478985	.5495673	.1763640
#1	1042.813	27578.25	2894.377	922.2278	1828.949
#2	1043.922	27651.38	2763.868	924.9751	1834.109
#3	1041.616	27760.83	2786.307	932.0929	1834.902

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4754-02 Acquired: 11/14/2024 5:31:16 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D97 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.012528	-.019334	.4413278	-.024491	.0050555	83.56441	.3494408
Stddev	.005635	.003825	.0046946	.005900	.0055368	.94650	.0036436
%RSD	44.97911	19.78267	1.063746	24.09043	109.5199	1.132657	1.042703
#1	-.017023	-.023089	.4415544	-.022069	.0073824	82.88891	.3465035
#2	-.006206	-.019471	.4459050	-.031217	.0090490	84.64623	.3535181
#3	-.014356	-.015443	.4365240	-.020188	-.001265	83.15809	.3483007

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0014102	.0014893	1.601576	.0657702	.0318034	.0653346	166.6426
Stddev	.0000630	.0002370	.036154	.0025589	.0006439	.0037151	1.8462
%RSD	4.470220	15.91578	2.257397	3.890588	2.024667	5.686291	1.107894
#1	.0014130	.0013251	1.562783	.0640716	.0324732	.0610750	165.2408
#2	.0013458	.0017610	1.607616	.0645257	.0317482	.0679049	168.7345
#3	.0014718	.0013817	1.634330	.0687132	.0311889	.0670239	165.9525

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.533288	3.965734	.0422915	-.018675	.8183144	.3134104	.4049797
Stddev	.020269	.121580	.0006170	.000746	.2000881	.0105613	.0075760
%RSD	1.321953	3.065769	1.458808	3.995881	24.45125	3.369808	1.870719
#1	1.521079	4.080133	.0424574	-.018717	1.047765	.3207225	.4056126
#2	1.556685	3.979008	.0428085	-.019399	.680148	.3013020	.3971070
#3	1.522099	3.838062	.0416085	-.017908	.727029	.3182066	.4122193

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.094320	.6511744	.1464525	.0010436	.7556118	7.250445	-.001706
Stddev	.027449	.0018421	.0022048	.0008070	.0080967	.067297	.001663
%RSD	.6704273	.2828826	1.505437	77.32718	1.071545	.9281744	97.46505
#1	4.062634	.6531277	.1454819	.0007837	.7466250	7.221113	.000026
#2	4.109485	.6509268	.1489760	.0019486	.7623379	7.327430	-.001854
#3	4.110841	.6494686	.1448996	.0003986	.7578725	7.202793	-.003291

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4754-02 Acquired: 11/14/2024 5:31:16 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D97 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.524354	.0137896	.0141712
Stddev	.023936	.0004511	.0001028
%RSD	.9482087	3.271603	.7253192
#1	2.509824	.0132780	.0142572
#2	2.551980	.0141301	.0141989
#3	2.511256	.0139609	.0140573

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1025.984	27120.13	2747.201	910.2684	1836.027
Stddev	4.005	383.10	31.079	14.4160	9.889
%RSD	.3903766	1.412596	1.131301	1.583714	.5386088
#1	1021.818	27220.80	2764.031	911.9392	1830.003
#2	1026.326	27442.84	2711.336	923.7762	1830.639
#3	1029.807	26696.75	2766.235	895.0897	1847.440

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4754-03 Acquired: 11/14/2024 5:35:46 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D98 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.023223	-.021587	.8670695	-.019568	.0056508	59.17566	.2680434
Stddev	.005128	.001977	.0042610	.002427	.0014636	.59738	.0030565
%RSD	22.08100	9.160094	.4914300	12.40408	25.90024	1.009496	1.140296
#1	-.024912	-.019793	.8661565	-.018300	.0039610	59.60747	.2712740
#2	-.017464	-.021260	.8717130	-.018037	.0064707	58.49390	.2651974
#3	-.027294	-.023707	.8633389	-.022367	.0065206	59.42560	.2676589

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009144	.0017398	1.780750	.0727837	.0253395	.0934779	172.4296
Stddev	.0002072	.0000998	.050338	.0006297	.0003188	.0039817	1.7669
%RSD	22.66048	5.736331	2.826785	.8651926	1.258078	4.259482	1.024683
#1	.0011390	.0016777	1.748221	.0723230	.0249890	.0890848	173.3833
#2	.0007307	.0016868	1.755296	.0735013	.0256122	.0944998	170.3909
#3	.0008735	.0018550	1.838731	.0725269	.0254172	.0968490	173.5148

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.358883	2.864481	.0481499	-.020089	.7967113	.2208223	.3880979
Stddev	.011556	.083673	.0008631	.000305	.2031448	.0128613	.0013235
%RSD	.8504053	2.921049	1.792504	1.517486	25.49792	5.824291	.3410313
#1	1.369427	2.768405	.0474214	-.020418	.5639105	.2132316	.3888262
#2	1.346529	2.921364	.0491031	-.019816	.9380246	.2135632	.3865701
#3	1.360695	2.903674	.0479252	-.020034	.8881989	.2356720	.3888973

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.931131	.6111724	.1488895	.0016627	.7935858	9.102078	.0446244
Stddev	.125557	.0051590	.0025423	.0008036	.0058468	.090279	.0029260
%RSD	4.283567	.8441179	1.707517	48.32746	.7367506	.9918500	6.556975
#1	3.074405	.6075420	.1489469	.0014176	.7870117	9.178157	.0475665
#2	2.878698	.6170779	.1463189	.0025603	.7982035	9.002319	.0445921
#3	2.840288	.6088974	.1514026	.0010103	.7955422	9.125759	.0417148

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4754-03 Acquired: 11/14/2024 5:35:46 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D98 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.914711	.0067424	.0129783
Stddev	.025772	.0017374	.0001658
%RSD	1.345996	25.76884	1.277398
#1	1.931165	.0048010	.0130970
#2	1.885010	.0072750	.0127889
#3	1.927957	.0081511	.0130490

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1017.278	27165.62	2730.389	905.8045	1846.365
Stddev	4.748	38.83	24.047	4.6971	12.298
%RSD	.4667841	.1429557	.8807197	.5185605	.6660595
#1	1018.482	27139.02	2713.058	905.2258	1853.053
#2	1012.044	27210.18	2757.842	910.7642	1832.172
#3	1021.309	27147.65	2720.267	901.4236	1853.870

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4754-04 Acquired: 11/14/2024 5:40:15 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D99 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.036473	-.027008	1.887535	-.035356	.0160045	81.14919	.5194514
Stddev	.005808	.003872	.003526	.006238	.0032840	2.03199	.0140811
%RSD	15.92281	14.33649	.1867905	17.64236	20.51910	2.504012	2.710770
#1	-.031536	-.023080	1.891588	-.042558	.0194376	82.53811	.5284994
#2	-.042872	-.030822	1.885179	-.031787	.0128934	82.09244	.5266270
#3	-.035011	-.027123	1.885838	-.031722	.0156825	78.81700	.5032279

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0014422	.0087249	5.119817	.0996341	.0376936	.4516900	224.6020
Stddev	.0001626	.0001456	.097995	.0006705	.0000916	.0076609	5.0668
%RSD	11.27663	1.668464	1.914031	.6729367	.2429671	1.696041	2.255893
#1	.0015214	.0086435	5.217849	.0988672	.0376057	.4582424	228.1471
#2	.0015500	.0086381	5.119742	.0999258	.0377884	.4535605	226.8601
#3	.0012551	.0088929	5.021860	.1001093	.0376866	.4432672	218.7988

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.565524	3.729597	.0708460	-.024876	1.120814	.3056926	1.772851
Stddev	.071032	.023881	.0004348	.000567	.212939	.0131744	.018952
%RSD	2.768732	.6403009	.6136841	2.280662	18.99861	4.309699	1.069035
#1	2.614935	3.703249	.0712726	-.025287	1.072065	.3204975	1.794730
#2	2.597515	3.735726	.0704035	-.025112	.936476	.3013195	1.761516
#3	2.484121	3.749816	.0708620	-.024229	1.353900	.2952609	1.762305

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.695406	.9495448	.1975322	.0028653	1.086243	7.558316	.0071993
Stddev	.167663	.0027575	.0055075	.0008052	.000250	.146295	.0010973
%RSD	4.537062	.2904023	2.788164	28.10310	.0230334	1.935547	15.24207
#1	3.784444	.9508738	.2010009	.0024846	1.086078	7.673401	.0083371
#2	3.799767	.9463745	.2004140	.0037903	1.086531	7.607867	.0071132
#3	3.502008	.9513861	.1911817	.0023209	1.086120	7.393681	.0061475

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4754-04 Acquired: 11/14/2024 5:40:15 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D99 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.194752	.0097126	.0319413
Stddev	.051796	.0009046	.0008695
%RSD	2.359991	9.313524	2.722228
#1	2.228790	.0094021	.0325614
#2	2.220324	.0107315	.0323150
#3	2.135144	.0090042	.0309474

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1044.382	27950.91	2813.630	931.9329	1822.536
Stddev	3.117	17.77	52.252	8.7496	4.292
%RSD	.2985002	.0635901	1.857111	.9388689	.2355089
#1	1043.427	27939.53	2775.681	922.0215	1818.921
#2	1047.865	27971.39	2791.982	938.5856	1827.280
#3	1041.854	27941.80	2873.227	935.1917	1821.407

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4754-05 Acquired: 11/14/2024 5:44:40 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D99D Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.052896	-.027856	1.973508	-.031084	.0149148	78.52347	.5132396
Stddev	.001571	.003452	.007283	.004573	.0013083	.38280	.0021761
%RSD	2.970013	12.39397	.3690213	14.71089	8.772069	.4875002	.4239988
#1	-.051088	-.024470	1.969783	-.033798	.0160842	78.31257	.5133062
#2	-.053664	-.031372	1.981900	-.025805	.0135018	78.29249	.5110310
#3	-.053934	-.027726	1.968842	-.033649	.0151585	78.96534	.5153817

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015077	.0081430	5.282083	.0966951	.0422457	.5133447	236.9130
Stddev	.0000710	.0003070	.036357	.0002815	.0000631	.0078521	1.0220
%RSD	4.709435	3.769813	.6883113	.2911763	.1494494	1.529591	.4313809
#1	.0014257	.0078452	5.306106	.0964644	.0421825	.5046185	235.8431
#2	.0015479	.0081256	5.240256	.0966121	.0422457	.5198399	237.0168
#3	.0015495	.0084584	5.299889	.0970088	.0423088	.5155755	237.8791

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.775427	3.613655	.0802226	-.025654	.9962721	.2928883	2.022059
Stddev	.002172	.105052	.0004856	.000278	.3047386	.0205478	.007147
%RSD	.0782719	2.907088	.6052562	1.085494	30.58788	7.015586	.3534293
#1	2.773077	3.608812	.0803288	-.025399	.8516026	.2834077	2.027255
#2	2.777362	3.511108	.0796927	-.025612	.7908145	.2787924	2.013909
#3	2.775842	3.721044	.0806462	-.025951	1.346399	.3164648	2.025012

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.598072	.9036046	.2124110	.0039066	1.058996	9.863165	.0143141
Stddev	.052028	.0132349	.0021934	.0004682	.009831	.051173	.0023264
%RSD	1.445988	1.464682	1.032609	11.98410	.9283570	.5188325	16.25282
#1	3.648621	.9154832	.2106574	.0041906	1.049682	9.830437	.0165874
#2	3.600914	.9059921	.2148704	.0041629	1.069274	9.836922	.0144170
#3	3.544682	.8893384	.2117052	.0033662	1.058032	9.922136	.0119379

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4754-05 Acquired: 11/14/2024 5:44:40 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D99D Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.141122	.0105170	.0327913
Stddev	.005393	.0011463	.0003050
%RSD	.2518792	10.89918	.9299580
#1	2.139584	.0117732	.0326269
#2	2.136664	.0102500	.0326038
#3	2.147117	.0095278	.0331432

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1034.064	27630.80	2779.964	916.2804	1816.248
Stddev	2.140	54.46	9.154	3.9493	3.398
%RSD	.2069524	.1970913	.3292930	.4310105	.1871160
#1	1031.806	27571.21	2779.197	913.6899	1814.378
#2	1034.324	27677.98	2789.478	920.8259	1814.195
#3	1036.063	27643.21	2771.217	914.3256	1820.171

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4754-06 Acquired: 11/14/2024 5:49:05 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D99S Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0406502	.0780290	1.912551	.1248637	.1805441	84.83373	4.507683
Stddev	.0012919	.0040398	.006480	.0068204	.0016686	.28246	.009378
%RSD	3.177995	5.177322	.3387933	5.462305	.9241931	.3329628	.2080517
#1	.0398848	.0738537	1.918698	.1234190	.1818035	84.95979	4.512107
#2	.0421418	.0819181	1.905783	.1188813	.1811773	85.03121	4.514030
#3	.0399241	.0783151	1.913171	.1322907	.1786517	84.51018	4.496911

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0945789	.1111974	5.266219	.5180909	1.062480	.9063704	226.5838
Stddev	.0003825	.0002213	.035341	.0006400	.000292	.0016951	.7025
%RSD	.4043813	.1989793	.6710951	.1235258	.0274734	.1870252	.3100418
#1	.0947555	.1113137	5.260662	.5174197	1.062786	.9045544	227.1058
#2	.0948412	.1113363	5.304010	.5181587	1.062451	.9066461	226.8604
#3	.0941401	.1109423	5.233986	.5186942	1.062205	.9079109	225.7850

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.560888	3.686382	1.107909	.0659194	.7070299	1.322029	2.590870
Stddev	.020650	.084475	.001916	.0006986	.0822499	.003999	.025798
%RSD	.5799161	2.291554	.1729400	1.059786	11.63315	.3024854	.9957211
#1	3.580409	3.642392	1.105699	.0661535	.6799035	1.317441	2.581135
#2	3.562987	3.632979	1.109105	.0651338	.7994167	1.324778	2.571356
#3	3.539269	3.783774	1.108923	.0664708	.6417696	1.323866	2.620119

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.755317	.9506375	.1972139	.0027691	1.104044	7.558509	.0083556
Stddev	.054718	.0040157	.0008849	.0004892	.000911	.043047	.0024421
%RSD	1.457070	.4224202	.4487187	17.66462	.0825592	.5695140	29.22754
#1	3.816204	.9518704	.1967932	.0024165	1.103048	7.601735	.0092173
#2	3.710259	.9538923	.1982307	.0033275	1.104837	7.558148	.0055995
#3	3.739488	.9461500	.1966177	.0025632	1.104247	7.515644	.0102502

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4754-06 Acquired: 11/14/2024 5:49:05 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D99S Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.195973	.0100692	.0318517
Stddev	.003324	.0011537	.0000905
%RSD	.1513662	11.45732	.2841812
#1	2.198542	.0089356	.0318508
#2	2.192219	.0112420	.0319427
#3	2.197159	.0100300	.0317617

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1042.827	28010.90	2802.494	926.7317	1819.564
Stddev	2.044	49.05	12.519	7.8445	2.125
%RSD	.1960090	.1751009	.4467103	.8464669	.1167830
#1	1040.468	28050.78	2791.307	931.3936	1817.338
#2	1043.956	28025.79	2800.159	931.1265	1819.784
#3	1044.057	27956.14	2816.016	917.6750	1821.570

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4754-04LX5 Acquired: 11/14/2024 5:53:25 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D99L Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0059490	-.005709	.3670395	-.006040	.0047308	17.09532	.1082894
Stddev	.0052600	.002392	.0021605	.002251	.0018023	.08501	.0008695
%RSD	88.41784	41.89303	.5886327	37.27360	38.09639	.4972954	.8029191
#1	.0027340	-.004793	.3694674	-.005371	.0063826	17.12252	.1073012
#2	.0030939	-.008423	.3663227	-.008550	.0028086	17.00003	.1089370
#3	.0120191	-.003911	.3653286	-.004199	.0050012	17.16340	.1086301

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002464	.0014591	1.083508	.0200442	.0067408	.0977756	47.65208
Stddev	.0000410	.0001292	.033987	.0008872	.0003402	.0061403	.38828
%RSD	16.63930	8.853002	3.136753	4.426158	5.046500	6.279948	.8148148
#1	.0002348	.0014360	1.078489	.0191909	.0064147	.0983155	47.63233
#2	.0002919	.0013430	1.052309	.0199799	.0067143	.0913832	47.27405
#3	.0002124	.0015982	1.119725	.0209618	.0070935	.1036281	48.04985

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5442298	.8055918	.0127230	-.006467	.5651181	.0556184	.3794935
Stddev	.0030858	.0537169	.0002627	.000139	.2173547	.0057937	.0019879
%RSD	.5669990	6.668005	2.064745	2.143691	38.46182	10.41678	.5238365
#1	.5407263	.8615698	.0124620	-.006517	.8122795	.0594703	.3776743
#2	.5454192	.7544651	.0129874	-.006311	.4793063	.0489555	.3816155
#3	.5465438	.8007406	.0127196	-.006574	.4037685	.0584294	.3791907

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7100164	.1790723	.0369516	-.000334	.2117061	1.696260	-.010171
Stddev	.1244165	.0022960	.0005857	.000088	.0041226	.013352	.002097
%RSD	17.52305	1.282174	1.584983	26.29532	1.947311	.7871288	20.61961
#1	.6051194	.1767955	.0368840	-.000361	.2085970	1.694479	-.008788
#2	.6774536	.1790344	.0364026	-.000236	.2101388	1.683888	-.012584
#3	.8474763	.1813871	.0375681	-.000405	.2163824	1.710413	-.009142

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4754-04LX5 Acquired: 11/14/2024 5:53:25 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D99L Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.4639591	-.000291	.0062308
Stddev	.0035818	.001281	.0000442
%RSD	.7720006	439.7388	.7085567
#1	.4655677	.001187	.0062597
#2	.4598550	-.001075	.0061800
#3	.4664545	-.000987	.0062527

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	976.2569	25733.50	2544.273	867.7118	1876.532
Stddev	1.3562	9.60	19.304	4.1291	5.302
%RSD	.1389171	.0373103	.7587047	.4758619	.2825401
#1	975.4096	25724.42	2543.100	872.2272	1871.091
#2	975.5399	25732.53	2564.136	864.1283	1876.823
#3	977.8211	25743.55	2525.582	866.7799	1881.682

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4754-07 Acquired: 11/14/2024 5:57:56 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D68 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0085410	-.013919	.6255934	-.011125	.0033129	64.58929	.5844285
Stddev	.0003453	.002443	.0001984	.002987	.0011396	.45294	.0042752
%RSD	4.042769	17.54901	.0317057	26.84479	34.39973	.7012662	.7315168
#1	.0087501	-.011427	.6254389	-.007683	.0038363	64.11181	.5810145
#2	.0087304	-.016309	.6258171	-.012660	.0020056	64.64317	.5830474
#3	.0081424	-.014022	.6255243	-.013033	.0040967	65.01288	.5892235

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0020077	.0009456	1.593070	.0579691	.0507691	.0499280	87.40041
Stddev	.0000816	.0001393	.029582	.0004189	.0004723	.0017910	.65762
%RSD	4.066603	14.72838	1.856925	.7227016	.9302010	3.587202	.7524165
#1	.0019599	.0010997	1.566272	.0583829	.0502719	.0489004	86.64167
#2	.0019612	.0008287	1.588126	.0575452	.0508240	.0519961	87.75349
#3	.0021020	.0009084	1.624813	.0579790	.0512116	.0488876	87.80607

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.339668	1.799623	.0248680	-.018228	.4601840	.1766264	1.093578
Stddev	.016605	.042081	.0004445	.000181	.1301796	.0054946	.009067
%RSD	.7097346	2.338336	1.787295	.9950825	28.28860	3.110851	.8290702
#1	2.323050	1.847600	.0246165	-.018077	.3341993	.1808430	1.084096
#2	2.339693	1.782304	.0253812	-.018178	.4521651	.1786237	1.094476
#3	2.356260	1.768965	.0246064	-.018429	.5941877	.1704125	1.102162

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.218377	.6058962	.0732070	.0003785	.9095239	7.053931	-.009217
Stddev	.063284	.0060834	.0008407	.0004271	.0105908	.060820	.001221
%RSD	2.852718	1.004031	1.148347	112.8414	1.164434	.8622108	13.25015
#1	2.238675	.6129002	.0737214	-.000039	.8994009	6.983841	-.009240
#2	2.269022	.6019293	.0722369	.000814	.9205275	7.092786	-.007985
#3	2.147435	.6028592	.0736627	.000361	.9086433	7.085167	-.010427

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4754-07 Acquired: 11/14/2024 5:57:56 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D68 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.104956	.0130081	.0131959
Stddev	.007305	.0007509	.0002036
%RSD	.6611213	5.772914	1.542752
#1	1.097738	.0122645	.0130922
#2	1.104785	.0137662	.0130650
#3	1.112346	.0129936	.0134304

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1135.814	30170.61	2995.764	1014.007	1853.491
Stddev	1.309	94.77	19.025	4.113	1.594
%RSD	.1152279	.3141084	.6350795	.4055862	.0860206
#1	1134.876	30279.42	3017.658	1015.544	1853.083
#2	1137.309	30106.15	2986.389	1017.129	1852.140
#3	1135.257	30126.26	2983.246	1009.347	1855.249

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4754-08 Acquired: 11/14/2024 6:02:23 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D69 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010319	-.018993	.9575208	-.020120	.0063443	85.32679	.5477946
Stddev	.0050567	.003436	.0068765	.001825	.0020343	.15360	.0020781
%RSD	490.0448	18.09280	.7181589	9.070122	32.06427	.1800182	.3793487
#1	.0063715	-.017240	.9593829	-.019283	.0079554	85.50166	.5501888
#2	-.003684	-.016787	.9499050	-.018864	.0070192	85.21367	.5464602
#3	.000408	-.022953	.9632745	-.022213	.0040584	85.26505	.5467346

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0021186	.0021156	2.600465	.0745790	.0405699	.1722953	149.3144
Stddev	.0001968	.0000760	.019793	.0001663	.0013254	.0015979	.2032
%RSD	9.289446	3.592401	.7611504	.2229809	3.267049	.9273876	.1360696
#1	.0023221	.0020279	2.590668	.0743988	.0417544	.1704527	149.4781
#2	.0021043	.0021617	2.587481	.0746114	.0391383	.1732981	149.0871
#3	.0019293	.0021572	2.623246	.0747266	.0408171	.1731352	149.3782

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.779713	2.597242	.0321856	-.020721	.6577826	.3189114	.7301048
Stddev	.003788	.162025	.0003513	.000354	.1680381	.0101035	.0006345
%RSD	.2128511	6.238339	1.091434	1.708838	25.54614	3.168119	.0869025
#1	1.781544	2.558476	.0317852	-.020732	.7605140	.3111714	.7301677
#2	1.775357	2.775133	.0323296	-.021069	.4638634	.3152216	.7294412
#3	1.782237	2.458116	.0324420	-.020361	.7489703	.3303411	.7307055

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.139894	.6151406	.1302691	.0006764	1.338227	10.11359	.0088822
Stddev	.031799	.0031999	.0007167	.0009658	.002318	.01931	.0020611
%RSD	1.012753	.5201859	.5501922	142.7871	.1732009	.1909535	23.20441
#1	3.176537	.6182056	.1294857	-.000096	1.339056	10.11368	.0082677
#2	3.123606	.6153952	.1304297	.000366	1.340017	10.09423	.0071983
#3	3.119538	.6118210	.1308919	.001759	1.335609	10.13285	.0111806

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4754-08 Acquired: 11/14/2024 6:02:23 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D69 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.002503	.0144800	.0192637
Stddev	.006177	.0001185	.0000336
%RSD	.3084807	.8186644	.1746108
#1	2.009438	.0145961	.0192255
#2	1.997592	.0144847	.0192769
#3	2.000478	.0143591	.0192888

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1084.084	28908.24	2880.828	966.2156	1832.164
Stddev	2.336	42.84	5.543	.5392	7.313
%RSD	.2154457	.1481971	.1924209	.0558051	.3991385
#1	1081.785	28873.89	2875.777	965.6799	1823.747
#2	1084.011	28894.60	2886.758	966.7582	1835.782
#3	1086.455	28956.24	2879.947	966.2088	1836.962

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4754-09 Acquired: 11/14/2024 6:06:51 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D70 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.021723	-.022393	.9722970	-.019508	.0085765	86.01959	.5511740
Stddev	.004536	.001296	.0008954	.008971	.0021921	.60495	.0025197
%RSD	20.88165	5.787551	.0920920	45.98854	25.55890	.7032672	.4571562
#1	-.019393	-.022286	.9713809	-.014355	.0108635	85.86945	.5504857
#2	-.026951	-.023738	.9731702	-.014301	.0083723	86.68546	.5539664
#3	-.018826	-.021153	.9723400	-.029867	.0064937	85.50384	.5490700

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0022731	.0032378	1.964055	.0894242	.0382378	.1398962	173.7508
Stddev	.0000688	.0002130	.038135	.0009445	.0007204	.0063554	1.2617
%RSD	3.026641	6.578297	1.941621	1.056181	1.884121	4.542915	.7261476
#1	.0022997	.0034795	1.927425	.0897150	.0382281	.1454876	173.5399
#2	.0021950	.0031563	2.003534	.0901891	.0389631	.1412168	175.1047
#3	.0023247	.0030776	1.961207	.0883686	.0375223	.1329843	172.6079

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.546834	2.691921	.0412556	-.021564	.8279871	.4040497	.4160441
Stddev	.013204	.074249	.0002140	.000213	.1188045	.0138026	.0024147
%RSD	.5184588	2.758215	.5187132	.9893135	14.34860	3.416065	.5804004
#1	2.550892	2.749489	.0410088	-.021319	.8990063	.3882297	.4137216
#2	2.557532	2.718159	.0413682	-.021665	.6908324	.4136353	.4185415
#3	2.532076	2.608116	.0413898	-.021708	.8941226	.4102841	.4158691

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.017195	.6872134	.1507729	.0010243	1.168383	8.306231	-.006696
Stddev	.058997	.0119608	.0023491	.0002545	.016085	.038929	.003092
%RSD	1.955369	1.740484	1.558074	24.84989	1.376701	.4686716	46.17787
#1	2.971199	.6764402	.1493997	.0013152	1.169210	8.334839	-.003899
#2	3.083713	.7000843	.1534853	.0009153	1.184039	8.321954	-.010017
#3	2.996674	.6851158	.1494335	.0008425	1.151901	8.261900	-.006174

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4754-09 Acquired: 11/14/2024 6:06:51 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D70 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.310348	.0118628	.0181711
Stddev	.022880	.0003752	.0000208
%RSD	.9903399	3.162650	.1144784
#1	2.303335	.0118639	.0181496
#2	2.335913	.0114871	.0181911
#3	2.291794	.0122374	.0181727

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1066.825	28395.61	2820.400	949.3724	1844.270
Stddev	2.928	83.44	14.052	4.2457	9.233
%RSD	.2745044	.2938484	.4982161	.4472117	.5006332
#1	1069.114	28307.13	2811.065	952.0979	1850.117
#2	1063.525	28406.84	2813.573	944.4805	1833.626
#3	1067.837	28472.87	2836.560	951.5388	1849.067

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4754-10 Acquired: 11/14/2024 6:11:20 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D71 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.036583	-.028998	.7701984	-.027115	.0047482	101.9504	.5323932
Stddev	.012375	.003174	.0049697	.005047	.0022074	.3879	.0023404
%RSD	33.82796	10.94600	.6452502	18.61484	46.48981	.3804487	.4395986
#1	-.039041	-.032037	.7671845	-.032313	.0056667	101.5647	.5327152
#2	-.047545	-.029252	.7759344	-.022233	.0022298	101.9463	.5299084
#3	-.023163	-.025704	.7674763	-.026798	.0063480	102.3404	.5345559

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0025224	.0029812	2.431691	.0810979	.0434884	.0659514	218.3252
Stddev	.0000463	.0001152	.034218	.0012321	.0008413	.0012614	1.3639
%RSD	1.834282	3.864820	1.407163	1.519261	1.934583	1.912657	.6247307
#1	.0024889	.0028560	2.448465	.0797341	.0429889	.0645938	216.9351
#2	.0025752	.0030828	2.454286	.0821307	.0444597	.0670873	218.3790
#3	.0025032	.0030048	2.392323	.0814290	.0430165	.0661732	219.6614

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.030283	3.494701	.0354441	-.024333	.9867099	.5377114	.3791965
Stddev	.010236	.014053	.0002070	.000411	.1638942	.0083386	.0064354
%RSD	.3377937	.4021194	.5841088	1.688881	16.61017	1.550757	1.697104
#1	3.018567	3.497351	.0352058	-.024288	.8555953	.5286416	.3724576
#2	3.034785	3.479512	.0355795	-.023946	.9340807	.5450457	.3852778
#3	3.037496	3.507241	.0355470	-.024765	1.170454	.5394468	.3798543

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.589212	.7488773	.1897862	.0019151	1.424867	9.411874	-.002259
Stddev	.031812	.0085377	.0011687	.0001869	.005629	.079971	.001949
%RSD	.8863285	1.140072	.6157809	9.759595	.3950677	.8496847	86.30239
#1	3.598847	.7416285	.1907732	.0017089	1.426752	9.338007	-.003638
#2	3.553696	.7582882	.1884957	.0020733	1.418537	9.400814	-.003111
#3	3.615093	.7467150	.1900897	.0019632	1.429312	9.496799	-.000028

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4754-10 Acquired: 11/14/2024 6:11:20 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D71 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.854210	.0172934	.0222406
Stddev	.010882	.0017796	.0001377
%RSD	.3812615	10.29066	.6190707
#1	2.843600	.0191350	.0222639
#2	2.853684	.0171622	.0220928
#3	2.865345	.0155831	.0223652

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1061.957	28311.24	2831.353	946.2741	1815.250
Stddev	2.785	227.74	16.092	11.0817	10.435
%RSD	.2622381	.8044138	.5683356	1.171091	.5748289
#1	1064.302	28563.07	2844.400	956.9043	1824.027
#2	1058.879	28119.75	2836.286	934.7902	1803.713
#3	1062.688	28250.89	2813.372	947.1279	1818.011

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4754-11 Acquired: 11/14/2024 6:15:49 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D72 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0039143	-.017552	.5552626	-.015120	.0108941	72.95565	.4975182
Stddev	.0132998	.003651	.0020584	.007515	.0018610	.12690	.0007805
%RSD	339.7728	20.80178	.3706983	49.69988	17.08279	.1739461	.1568851
#1	.0088154	-.013503	.5547481	-.017630	.0117464	73.09493	.4984193
#2	.0140681	-.020594	.5535103	-.021058	.0121763	72.84656	.4970544
#3	-.011141	-.018560	.5575294	-.006672	.0087596	72.92546	.4970809

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0019395	.0032276	1.808037	.0617697	.0319123	.0718893	124.9650
Stddev	.0000424	.0000710	.019895	.0002895	.0010061	.0045169	.1914
%RSD	2.184617	2.201097	1.100387	.4686243	3.152677	6.283060	.1531850
#1	.0018910	.0031504	1.786751	.0618624	.0311912	.0736627	125.1312
#2	.0019691	.0032903	1.826164	.0614453	.0314841	.0667549	124.7557
#3	.0019584	.0032420	1.811197	.0620016	.0330617	.0752503	125.0081

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.592757	2.144911	.0276010	-.019874	.5616097	.2744987	.5137988
Stddev	.007082	.044656	.0007190	.000213	.0712278	.0079228	.0033117
%RSD	.1541906	2.081970	2.604924	1.073527	12.68279	2.886278	.6445451
#1	4.600103	2.098894	.0280482	-.019906	.5278932	.2829016	.5100698
#2	4.585973	2.188069	.0267716	-.019647	.5135004	.2671645	.5149299
#3	4.592195	2.147771	.0279831	-.020070	.6434356	.2734301	.5163967

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.384846	1.024315	.1072312	.0005111	.9786364	8.195350	-.003343
Stddev	.046935	.008377	.0006986	.0004729	.0115279	.002567	.001185
%RSD	1.968060	.8177889	.6515297	92.53643	1.177956	.0313176	35.44764
#1	2.438846	1.024858	.1066399	.0002522	.9654093	8.194980	-.002313
#2	2.361839	1.015679	.1070517	.0002241	.9865442	8.192989	-.004638
#3	2.353853	1.032406	.1080021	.0010570	.9839558	8.198082	-.003078

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4754-11 Acquired: 11/14/2024 6:15:49 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D72 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.574533	.0103933	.0163578
Stddev	.002962	.0006470	.0001006
%RSD	.1881377	6.225045	.6152822
#1	1.573385	.0097735	.0164683
#2	1.572316	.0110644	.0162714
#3	1.577897	.0103419	.0163337

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1107.039	29429.51	2933.802	987.7918	1842.382
Stddev	2.834	34.28	3.327	3.5997	3.001
%RSD	.2560217	.1164677	.1134083	.3644203	.1628612
#1	1110.309	29392.20	2930.247	991.8977	1845.727
#2	1105.531	29436.72	2936.842	986.2993	1839.928
#3	1105.278	29459.61	2934.315	985.1784	1841.491

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4754-12 Acquired: 11/14/2024 6:20:16 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D74 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.024621	-.019821	1.684293	-.027453	.0115021	38.44488	.5858358
Stddev	.015878	.002867	.004808	.006315	.0034408	.06179	.0008693
%RSD	64.48958	14.46300	.2854403	23.00338	29.91453	.1607127	.1483799
#1	-.011368	-.021554	1.686630	-.022267	.0096996	38.49445	.5851379
#2	-.020276	-.016512	1.678764	-.025606	.0154697	38.37566	.5855600
#3	-.042220	-.021397	1.687486	-.034485	.0093371	38.46453	.5868095

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008107	.0295802	4.307728	.0730849	.0257033	.2806566	162.3287
Stddev	.0000530	.0000919	.024828	.0003452	.0004414	.0035967	.6348
%RSD	6.540377	.3107810	.5763657	.4723752	1.717190	1.281541	.3910830
#1	.0008328	.0294759	4.336385	.0727073	.0253036	.2768622	161.9285
#2	.0008492	.0296492	4.292666	.0731629	.0256292	.2840162	161.9970
#3	.0007502	.0296155	4.294134	.0733844	.0261770	.2810913	163.0607

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.485776	1.878651	.0512371	-.018306	.8106913	.1266302	1.861772
Stddev	.010983	.034429	.0003775	.000277	.1200942	.0170870	.018825
%RSD	.4418382	1.832634	.7366974	1.514968	14.81381	13.49365	1.011144
#1	2.473519	1.870172	.0508921	-.018617	.7802826	.1262781	1.840764
#2	2.494726	1.916527	.0516403	-.018216	.9430669	.1097220	1.867439
#3	2.489082	1.849254	.0511789	-.018085	.7087243	.1438906	1.877113

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.345975	.5988253	.1428361	.0023616	.8186385	8.583422	.0196380
Stddev	.016505	.0045334	.0023507	.0003924	.0015919	.058722	.0013560
%RSD	1.226236	.7570399	1.645698	16.61622	.1944598	.6841375	6.904814
#1	1.327059	.5957613	.1446834	.0019382	.8197568	8.578461	.0181443
#2	1.353419	.6040329	.1401902	.0024336	.8168159	8.527337	.0199783
#3	1.357446	.5966818	.1436347	.0027130	.8193428	8.644467	.0207914

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4754-12 Acquired: 11/14/2024 6:20:16 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D74 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.8437782	.0004589	.0270713
Stddev	.0040229	.0003775	.0002144
%RSD	.4767712	82.26966	.7920046
#1	.8465580	.0001012	.0268288
#2	.8391653	.0008534	.0272356
#3	.8456114	.0004219	.0271496

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1000.937	26671.59	2655.882	890.4358	1855.861
Stddev	1.946	141.41	9.786	7.7164	5.921
%RSD	.1944092	.5302010	.3684512	.8665923	.3190282
#1	999.502	26834.83	2654.548	899.3201	1849.100
#2	1003.152	26593.61	2666.266	886.5810	1858.366
#3	1000.159	26586.33	2646.831	885.4063	1860.119

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4754-13 Acquired: 11/14/2024 6:24:44 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D75 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.003032	-.017963	1.003202	-.013752	.0080854	66.08233	.3526942
Stddev	.008368	.000820	.001984	.003480	.0034788	.45464	.0026216
%RSD	275.9860	4.564766	.1977317	25.30324	43.02626	.6879936	.7432999
#1	-.000073	-.018766	1.000964	-.015368	.0061973	65.56234	.3504255
#2	-.012478	-.017995	1.003899	-.009758	.0059587	66.27988	.3520930
#3	.003454	-.017127	1.004744	-.016129	.0121000	66.40479	.3555642

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0014438	.0037465	2.076770	.1508776	.0297294	.1056280	128.9458
Stddev	.0000686	.0004001	.049330	.0009870	.0005512	.0022492	.8030
%RSD	4.748766	10.67823	2.375303	.6541749	1.854098	2.129361	.6227520
#1	.0014431	.0041781	2.026734	.1509169	.0292865	.1037237	128.0436
#2	.0013756	.0036734	2.078215	.1498716	.0303467	.1050508	129.2116
#3	.0015128	.0033881	2.125361	.1518444	.0295549	.1081096	129.5823

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.186019	2.184560	.0293443	-.017767	.5155143	.3095195	.3474408
Stddev	.011791	.050334	.0002902	.000460	.0716263	.0018075	.0046286
%RSD	.9941516	2.304085	.9889785	2.590255	13.89414	.5839681	1.332207
#1	1.174980	2.227132	.0293395	-.017838	.4799247	.3087639	.3511021
#2	1.184637	2.129007	.0296368	-.018187	.5979648	.3115821	.3422381
#3	1.198440	2.197540	.0290565	-.017275	.4686534	.3082123	.3489821

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.316200	.5617522	.1117608	.0003872	.6539642	9.899797	-.001045
Stddev	.088322	.0057941	.0019445	.0002383	.0094086	.059259	.001372
%RSD	3.813209	1.031438	1.739872	61.54266	1.438710	.5985906	131.2824
#1	2.254447	.5678573	.1096508	.0006191	.6504851	9.831623	-.001136
#2	2.417366	.5563294	.1121508	.0003994	.6646169	9.928796	-.002369
#3	2.276787	.5610699	.1134807	.0001430	.6467905	9.938972	.000370

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4754-13 Acquired: 11/14/2024 6:24:44 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D75 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.576192	.0059142	.0160491
Stddev	.008167	.0009577	.0001861
%RSD	.5181169	16.19371	1.159696
#1	1.569715	.0066692	.0159320
#2	1.573495	.0048369	.0159515
#3	1.585366	.0062364	.0162637

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1055.755	28167.87	2810.023	943.9700	1845.638
Stddev	1.421	113.41	21.821	6.4746	2.605
%RSD	.1346356	.4026045	.7765412	.6858916	.1411481
#1	1054.803	28191.89	2835.004	940.1545	1842.698
#2	1055.074	28267.34	2794.682	951.4457	1846.560
#3	1057.389	28044.38	2800.384	940.3097	1847.657

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: CCV081 Acquired: 11/14/2024 6:29:14 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV081 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.026817	4.963690	24.62674	4.813944	4.831538	400.3042	10.24097
Stddev	.019354	.017332	.10660	.030458	.020451	1.3719	.02442
%RSD	.3850086	.3491725	.4328573	.6326959	.4232828	.3427215	.2384305
#1	5.014130	4.977621	24.72364	4.778869	4.825989	399.4147	10.22496
#2	5.017229	4.944281	24.51256	4.833716	4.814433	401.8842	10.26908
#3	5.049093	4.969168	24.64403	4.829247	4.854190	399.6137	10.22888

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4934133	2.488083	402.5429	15.21381	2.493553	14.95679	402.9651
Stddev	.0037110	.009921	2.0091	.04949	.008556	.06434	1.7166
%RSD	.7521106	.3987515	.4990984	.3253283	.3431371	.4301946	.4259859
#1	.4915547	2.494950	401.3689	15.17278	2.501093	14.88526	401.6681
#2	.4976864	2.476708	404.8627	15.26878	2.484254	15.00996	404.9116
#3	.4909989	2.492592	401.3970	15.19988	2.495313	14.97514	402.3154

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	14.91947	398.4820	2.480749	1.236312	403.4098	2.460454	14.55243
Stddev	.05969	2.3226	.009493	.003490	1.5586	.003809	.12256
%RSD	.4000990	.5828526	.3826503	.2822881	.3863514	.1548275	.8421869
#1	14.87180	396.5582	2.487124	1.235876	403.0793	2.464823	14.42267
#2	14.98642	401.0621	2.469840	1.240000	405.1071	2.457828	14.66623
#3	14.90020	397.8258	2.485284	1.233062	402.0429	2.458709	14.56838

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	154.4792	4.932433	5.012326	4.775621	5.107286	4.931914	4.973510
Stddev	.1059	.009093	.029850	.009739	.018237	.027612	.016841
%RSD	.0685247	.1843542	.5955270	.2039337	.3570816	.5598568	.3386120
#1	154.4144	4.929734	4.991994	4.773643	5.107758	4.918270	4.979596
#2	154.6014	4.924995	5.046595	4.767022	5.125283	4.963692	4.954472
#3	154.4219	4.942570	4.998388	4.786197	5.088817	4.913781	4.986461

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: CCV081 Acquired: 11/14/2024 6:29:14 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV081 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.963036	5.121647	5.099840
Stddev	.013458	.009122	.012020
%RSD	.2711665	.1781072	.2356888
#1	4.956671	5.114944	5.089347
#2	4.978496	5.132035	5.112954
#3	4.953942	5.117962	5.097219

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	771.3513	22608.42	2344.186	643.5061	1414.623
Stddev	.9004	59.68	13.622	4.3849	4.258
%RSD	.1167338	.2639703	.5810824	.6814107	.3009758
#1	771.5684	22643.24	2350.155	648.1555	1410.625
#2	772.1234	22539.51	2328.599	639.4451	1419.100
#3	770.3622	22642.50	2353.804	642.9177	1414.143

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: CCB081 Acquired: 11/14/2024 6:33:27 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB081 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002119	.0004973	-.005705	-.003140	.0006914	.0344602	-.000310
Stddev	.008308	.0008561	.002343	.004823	.0013381	.0018770	.000068
%RSD	392.1565	172.1307	41.06787	153.5922	193.5337	5.446921	22.06408
#1	.007336	-.000486	-.003202	-.008410	-.000306	.0366276	-.000386
#2	-.005437	.001077	-.006068	.001054	.000169	.0333867	-.000254
#3	-.008254	.000901	-.007846	-.002064	.002212	.0333664	-.000289

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000075	-.000080	.0232934	.0000018	-.000146	.0001202	.0295030
Stddev	.000048	.000187	.0171205	.0003524	.000176	.0052814	.0361974
%RSD	63.92073	235.3828	73.49937	19132.88	120.6326	4394.230	122.6907
#1	-.000073	-.000120	.0415927	.0003561	.000057	-.003898	-.007229
#2	-.000028	-.000243	.0076658	-.000349	-.000261	-.001844	.030597
#3	-.000124	.000125	.0206218	-.000002	-.000235	.006102	.065141

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010179	-.069907	-.000579	-.001465	.2601639	-.004760	-.000125
Stddev	.0011288	.153078	.000227	.001700	.1207395	.004320	.000264
%RSD	110.8951	218.9734	39.21556	116.0719	46.40902	90.75718	211.2432
#1	.0018053	-.012922	-.000333	-.003426	.1378567	.000055	-.000154
#2	-.000275	.046505	-.000781	-.000394	.3792721	-.006040	-.000373
#3	.001524	-.243305	-.000624	-.000576	.2633629	-.008295	.000152

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.021338	-.000527	.0006244	-.000792	.0025330	.0002571	-.001629
Stddev	.073416	.001484	.0010909	.000186	.0020631	.0007464	.000413
%RSD	344.0629	281.2668	174.7010	23.53384	81.45211	290.3550	25.34991
#1	-.098428	.000642	.0013713	-.000997	.0045630	.0010161	-.002058
#2	-.013335	-.000027	.0011295	-.000747	.0025975	-.000476	-.001596
#3	.047749	-.002197	-.000627	-.000632	.0004383	.000231	-.001234

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: CCB081 Acquired: 11/14/2024 6:33:27 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB081 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.002021	-.002454	-.000104
Stddev	.001656	.001545	.000037
%RSD	81.93786	62.93810	35.51999
#1	-.000604	-.001354	-.000072
#2	-.001617	-.001788	-.000144
#3	-.003841	-.004220	-.000096

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	947.3127	25156.26	2444.782	851.0883	1884.952
Stddev	2.1659	576.20	8.235	21.3041	3.057
%RSD	.2286408	2.290472	.3368273	2.503160	.1621865
#1	946.1865	25815.71	2437.836	875.2747	1884.145
#2	945.9418	24750.06	2442.632	835.1059	1888.332
#3	949.8097	24903.01	2453.879	842.8842	1882.379

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4754-14 Acquired: 11/14/2024 6:37:59 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D76 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002681	-.016273	.8150670	-.018349	.0114569	71.59433	.4454108
Stddev	.0060399	.001498	.0025139	.005458	.0016767	2.40039	.0159421
%RSD	2253.090	9.206894	.3084334	29.74274	14.63485	3.352772	3.579198
#1	-.005062	-.017983	.8121856	-.024648	.0107119	72.01844	.4475367
#2	-.000962	-.015645	.8168126	-.015372	.0102819	73.75439	.4601832
#3	.006828	-.015191	.8162027	-.015028	.0133770	69.01014	.4285123

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0018333	.0050928	1.117854	.1015837	.0281574	.0904657	110.5938
Stddev	.0000353	.0002294	.055520	.0021392	.0007042	.0043870	3.6059
%RSD	1.926041	4.505438	4.966667	2.105851	2.501063	4.849327	3.260481
#1	.0018736	.0052857	1.125414	.0996023	.0274076	.0936360	110.7898
#2	.0018185	.0048391	1.169206	.1038518	.0282599	.0923023	114.0977
#3	.0018077	.0051538	1.058941	.1012971	.0288048	.0854589	106.8940

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.156092	2.268673	.0602528	-.016825	.6294208	.2246851	.3670855
Stddev	.033050	.160694	.0001832	.001107	.2372829	.0109719	.0077254
%RSD	2.858785	7.083185	.3040671	6.578058	37.69861	4.883252	2.104512
#1	1.165693	2.386776	.0600597	-.017870	.7269041	.2260931	.3608075
#2	1.183278	2.333562	.0604241	-.015665	.3589227	.2348851	.3757128
#3	1.119304	2.085680	.0602747	-.016939	.8024355	.2130771	.3647361

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.312388	.5130916	.0990480	.0002856	.6631806	6.314656	-.007238
Stddev	.098435	.0087523	.0019823	.0004705	.0041642	.197901	.000886
%RSD	4.256860	1.705805	2.001317	164.7279	.6279193	3.133999	12.24646
#1	2.374320	.5204563	.0993185	.0007791	.6679886	6.335344	-.006599
#2	2.363962	.5034155	.1008812	.0002357	.6608319	6.501400	-.008250
#3	2.198882	.5154029	.0969445	-.000158	.6607212	6.107223	-.006866

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4754-14 Acquired: 11/14/2024 6:37:59 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D76 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.450336	.0098490	.0121015
Stddev	.048593	.0017566	.0003924
%RSD	3.350453	17.83491	3.242882
#1	1.460965	.0089819	.0121473
#2	1.492735	.0118704	.0124691
#3	1.397309	.0086945	.0116882

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1062.440	27973.71	2704.333	939.1442	1847.393
Stddev	2.375	503.43	79.997	15.5613	3.279
%RSD	.2235142	1.799653	2.958109	1.656967	.1774905
#1	1063.814	28333.44	2684.170	950.9241	1847.804
#2	1063.807	27398.38	2636.347	921.5035	1850.447
#3	1059.697	28189.30	2792.483	945.0050	1843.928

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4754-15 Acquired: 11/14/2024 6:42:29 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D77 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0140977	-.015268	.4318854	-.014779	.0135455	59.57924	.3386664
Stddev	.0082675	.001403	.0034148	.002243	.0028881	.09659	.0009409
%RSD	58.64415	9.189974	.7906707	15.17771	21.32157	.1621257	.2778174
#1	.0214134	-.016885	.4295670	-.015245	.0167220	59.54303	.3375810
#2	.0051284	-.014370	.4358067	-.016752	.0128370	59.68870	.3392511
#3	.0157515	-.014550	.4302823	-.012339	.0110776	59.50598	.3391670

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015096	.0019098	1.321184	.0708705	.0388862	.0563395	95.04852
Stddev	.0000822	.0002105	.014562	.0006858	.0005290	.0011447	.27917
%RSD	5.441657	11.02322	1.102214	.9677072	1.360386	2.031810	.2937150
#1	.0016006	.0020585	1.304745	.0716540	.0387440	.0576057	94.80634
#2	.0014409	.0016689	1.326336	.0703792	.0384427	.0553780	95.35386
#3	.0014874	.0020019	1.332469	.0705783	.0394717	.0560347	94.98536

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.374222	1.704550	.0296815	-.017069	.7012576	.1884182	.2294765
Stddev	.005373	.069571	.0008669	.000374	.0469099	.0013789	.0002218
%RSD	.3909902	4.081473	2.920686	2.189091	6.689393	.7318451	.0966494
#1	1.377658	1.762221	.0286940	-.017365	.7095731	.1868697	.2292854
#2	1.376977	1.724147	.0303170	-.016650	.6507460	.1888718	.2297197
#3	1.368030	1.627283	.0300336	-.017193	.7434536	.1895133	.2294244

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.920132	.4895702	.0809747	.0003988	.4460250	6.525466	-.008315
Stddev	.079214	.0055392	.0007273	.0003683	.0075792	.016548	.001533
%RSD	4.125463	1.131438	.8981683	92.35361	1.699278	.2535953	18.44330
#1	1.917913	.4902082	.0817577	.0005343	.4446285	6.521743	-.006547
#2	2.000433	.4837396	.0808462	-.000018	.4392412	6.511097	-.009293
#3	1.842051	.4947627	.0803202	.000680	.4542054	6.543559	-.009103

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4754-15 Acquired: 11/14/2024 6:42:29 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D77 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.192794	.0086450	.0132078
Stddev	.004301	.0007979	.0000551
%RSD	.3605411	9.229467	.4174433
#1	1.188969	.0088162	.0132410
#2	1.197449	.0077754	.0132383
#3	1.191964	.0093434	.0131442

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1092.415	28972.91	2889.667	967.5075	1860.472
Stddev	.134	76.46	2.088	2.0674	.474
%RSD	.0123058	.2638854	.0722689	.2136782	.0254666
#1	1092.456	28983.36	2887.813	969.0559	1860.872
#2	1092.523	28891.77	2891.929	965.1598	1860.595
#3	1092.264	29043.61	2889.260	968.3067	1859.949

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4754-16 Acquired: 11/14/2024 6:46:59 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D78 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0075800	-.006794	.3791408	-.006219	.0052801	26.41009	.1877197
Stddev	.0051623	.003012	.0030619	.001794	.0025107	1.64082	.0112919
%RSD	68.10437	44.32531	.8075934	28.85242	47.54906	6.212848	6.015295
#1	.0023837	-.010164	.3805267	-.008252	.0028743	26.99352	.1919143
#2	.0076487	-.004366	.3756310	-.005550	.0078839	24.55729	.1749308
#3	.0127076	-.005853	.3812648	-.004856	.0050822	27.67946	.1963140

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007559	.0001421	.9131458	.0275980	.0159657	.0187561	38.52640
Stddev	.0001499	.0001316	.0693360	.0012990	.0001360	.0026016	2.42701
%RSD	19.82891	92.58328	7.593092	4.706976	.8519804	13.87082	6.299595
#1	.0007334	.0000161	.9490385	.0290970	.0160126	.0160667	39.36836
#2	.0006186	.0001316	.8332215	.0268968	.0160720	.0189416	35.79054
#3	.0009158	.0002787	.9571775	.0268003	.0158124	.0212600	40.42031

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9913261	.8960740	.0077728	-.010082	.4604318	.0795794	.0783104
Stddev	.0584917	.0716618	.0001733	.000197	.2519475	.0141259	.0006148
%RSD	5.900351	7.997311	2.230020	1.954139	54.71983	17.75064	.7851319
#1	1.010238	.8163903	.0075751	-.009873	.2683284	.0695859	.0777289
#2	.925718	.9165951	.0078445	-.010109	.3672752	.0734120	.0782484
#3	1.038022	.9552368	.0078988	-.010264	.7456917	.0957402	.0789539

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9136196	.2699740	.0291300	-.000492	.2185378	6.098080	-.003165
Stddev	.1454895	.0024069	.0021762	.000538	.0067860	.301784	.002525
%RSD	15.92452	.8915291	7.470593	109.3377	3.105200	4.948834	79.77851
#1	1.050253	.2727370	.0301462	-.001109	.2117018	6.186343	-.000548
#2	.760652	.2688523	.0266316	-.000243	.2252727	5.762005	-.003360
#3	.929954	.2683327	.0306121	-.000124	.2186390	6.345891	-.005587

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4754-16 Acquired: 11/14/2024 6:46:59 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D78 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.7194989	-.001785	.0076518
Stddev	.0424452	.001419	.0004908
%RSD	5.899266	79.46867	6.414501
#1	.7336545	-.001296	.0078995
#2	.6717848	-.003384	.0070865
#3	.7530573	-.000676	.0079694

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1028.616	27331.52	2761.640	917.0218	1888.572
Stddev	.626	133.68	135.651	2.8536	4.989
%RSD	.0608619	.4890939	4.911957	.3111864	.2641910
#1	1028.921	27199.39	2715.994	914.2857	1883.739
#2	1029.030	27466.69	2914.227	919.9800	1888.272
#3	1027.895	27328.48	2654.701	916.7996	1893.704

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4754-17 Acquired: 11/14/2024 6:51:29 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D81 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.055647	-.052630	1.942858	-.040858	.0093960	202.2552	.5938625
Stddev	.001793	.007620	.004942	.007769	.0022077	.9492	.0037073
%RSD	3.222269	14.47791	.2543729	19.01461	23.49610	.4693038	.6242631
#1	-.057381	-.061428	1.939329	-.043639	.0111194	201.1811	.5902961
#2	-.053800	-.048329	1.948506	-.032082	.0101611	202.9813	.5976961
#3	-.055758	-.048133	1.940737	-.046854	.0069076	202.6030	.5935952

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0029201	.0027443	1.147159	.1210017	.0471222	.1165424	335.5799
Stddev	.0000322	.0002302	.034197	.0012866	.0011493	.0041499	.9185
%RSD	1.100856	8.388084	2.981008	1.063291	2.438875	3.560805	.2737138
#1	.0029450	.0029401	1.186492	.1195601	.0482542	.1120962	334.5728
#2	.0028838	.0024907	1.130516	.1214113	.0471558	.1203131	336.3716
#3	.0029314	.0028021	1.124470	.1220336	.0459565	.1172180	335.7953

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.260267	9.811744	.0426028	-.031173	1.383261	.7333913	.2184119
Stddev	.007397	.075990	.0008532	.000662	.182368	.0001237	.0030785
%RSD	.5869733	.7744836	2.002781	2.123144	13.18391	.0168711	1.409491
#1	1.253418	9.783865	.0419579	-.031838	1.359102	.7333083	.2149522
#2	1.268112	9.753631	.0422802	-.030514	1.576504	.7333320	.2208488
#3	1.259272	9.897736	.0435703	-.031167	1.214176	.7335335	.2194346

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.67280	.7630498	.2952938	.0014621	2.339703	9.378312	.0030848
Stddev	.11823	.0073270	.0020075	.0002299	.020772	.052532	.0037998
%RSD	.9329604	.9602263	.6798146	15.72497	.8878098	.5601441	123.1800
#1	12.56884	.7697560	.2967774	.0014361	2.363034	9.318703	-.001198
#2	12.64815	.7641638	.2930096	.0017040	2.332855	9.417849	.006052
#3	12.80141	.7552295	.2960945	.0012463	2.323219	9.398384	.004400

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4754-17 Acquired: 11/14/2024 6:51:29 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D81 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	7.812232	.0289394	.0171479
Stddev	.028702	.0004176	.0001504
%RSD	.3674006	1.443082	.8768805
#1	7.779725	.0286403	.0170071
#2	7.834080	.0287614	.0173063
#3	7.822891	.0294165	.0171305

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1060.222	28238.78	2863.213	943.1302	1769.846
Stddev	.536	256.51	8.289	8.6300	4.747
%RSD	.0505123	.9083562	.2894852	.9150413	.2682302
#1	1060.208	28521.25	2872.659	952.5424	1765.355
#2	1059.694	28020.37	2857.157	935.5894	1769.371
#3	1060.765	28174.73	2859.822	941.2587	1774.813

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4754-18 Acquired: 11/14/2024 6:55:58 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D82 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.054124	-.050362	1.638805	-.046894	.0131792	181.0468	.6047909
Stddev	.009554	.001463	.009215	.005530	.0020149	.5364	.0015968
%RSD	17.65275	2.904180	.5623096	11.79212	15.28859	.2962517	.2640288
#1	-.057981	-.050226	1.639706	-.050877	.0134947	180.4962	.6032171
#2	-.061147	-.048973	1.629173	-.040580	.0110252	181.5676	.6064097
#3	-.043244	-.051888	1.647537	-.049225	.0150178	181.0766	.6047459

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0028022	.0032414	1.320289	.1066375	.0480783	.1089684	331.8288
Stddev	.0000722	.0002111	.028813	.0045306	.0005527	.0080986	1.6508
%RSD	2.577153	6.511127	2.182349	4.248590	1.149563	7.432098	.4974966
#1	.0028622	.0033419	1.325823	.1033180	.0479098	.1081965	329.9437
#2	.0027220	.0029989	1.289110	.1047956	.0476296	.1174253	333.0161
#3	.0028223	.0033834	1.345934	.1117989	.0486957	.1012833	332.5268

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.322237	8.851392	.0428448	-.030752	1.240055	.7305840	.2075084
Stddev	.005069	.225508	.0007435	.001224	.099591	.0180956	.0059920
%RSD	.3833720	2.547709	1.735392	3.980795	8.031172	2.476863	2.887575
#1	1.321221	8.603794	.0425594	-.031579	1.125735	.7490770	.2042111
#2	1.327736	8.905365	.0422862	-.031331	1.286415	.7297611	.2038894
#3	1.317752	9.045015	.0436887	-.029345	1.308014	.7129140	.2144248

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.82601	.8539930	.2880167	.0009124	2.526239	9.707885	.0036399
Stddev	.06003	.0050420	.0016898	.0001522	.017869	.088324	.0013613
%RSD	.5545127	.5904027	.5866890	16.68388	.7073240	.9098197	37.40023
#1	10.76106	.8567140	.2860846	.0009297	2.526547	9.612650	.0051974
#2	10.87946	.8481750	.2892183	.0007522	2.508219	9.723896	.0030451
#3	10.83750	.8570899	.2887472	.0010552	2.543952	9.787108	.0026772

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4754-18 Acquired: 11/14/2024 6:55:58 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D82 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	6.915619	.0280960	.0174644
Stddev	.024075	.0004604	.0000570
%RSD	.3481194	1.638773	.3266525
#1	6.895768	.0278313	.0174264
#2	6.942398	.0286276	.0175300
#3	6.908691	.0278290	.0174368

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1077.536	28169.31	2895.808	942.4965	1778.119
Stddev	1.707	701.91	11.554	22.6942	2.694
%RSD	.1584111	2.491737	.3989990	2.407886	.1515130
#1	1076.372	28650.14	2908.719	953.0220	1778.260
#2	1076.741	28493.95	2886.442	958.0170	1775.357
#3	1079.496	27363.85	2892.262	916.4507	1780.739

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4754-19 Acquired: 11/14/2024 7:00:27 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D83 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.051486	-.047858	1.155275	-.045765	.0140104	174.7377	.5481634
Stddev	.017641	.002023	.003787	.002404	.0031051	.4630	.0021380
%RSD	34.26282	4.226095	.3278062	5.253942	22.16303	.2649916	.3900206
#1	-.052645	-.049123	1.159512	-.047381	.0138228	174.3848	.5458859
#2	-.033295	-.045525	1.152219	-.043002	.0172050	174.5664	.5484772
#3	-.068519	-.048925	1.154095	-.046913	.0110033	175.2620	.5501272

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0024047	.0030371	1.572991	.0956421	.0408152	.0810918	317.6269
Stddev	.0001893	.0002814	.024111	.0005193	.0008675	.0036288	1.4305
%RSD	7.871903	9.266112	1.532790	.5429494	2.125324	4.474880	.4503806
#1	.0022311	.0032979	1.598887	.0953045	.0411569	.0851720	317.3888
#2	.0026065	.0027388	1.551190	.0962401	.0398290	.0798776	316.3304
#3	.0023764	.0030747	1.568896	.0953817	.0414599	.0782259	319.1616

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.097110	7.518846	.0372359	-.031050	1.080652	.6853857	.2140603
Stddev	.004660	.131702	.0009112	.000309	.385999	.0119399	.0011909
%RSD	.4247586	1.751630	2.447146	.9937911	35.71907	1.742065	.5563579
#1	1.098056	7.455177	.0372528	-.031251	1.500076	.6990922	.2153081
#2	1.092049	7.431077	.0381385	-.030694	1.001547	.6772447	.2139370
#3	1.101224	7.670285	.0363163	-.031204	.740334	.6798202	.2129358

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.562059	.7654150	.2769504	.0008275	2.346703	8.099679	.0043233
Stddev	.027194	.0026169	.0014873	.0003861	.016012	.017526	.0021747
%RSD	.2843911	.3418932	.5370377	46.66333	.6823326	.2163828	50.30113
#1	9.575419	.7623955	.2759980	.0008006	2.364750	8.088248	.0023708
#2	9.530770	.7668236	.2761888	.0012264	2.341165	8.090931	.0039320
#3	9.579989	.7670258	.2786642	.0004555	2.334196	8.119857	.0066671

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4754-19 Acquired: 11/14/2024 7:00:27 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D83 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	6.327834	.0263157	.0180987
Stddev	.018684	.0013313	.0001458
%RSD	.2952703	5.058992	.8054023
#1	6.314115	.0264652	.0180293
#2	6.320273	.0275660	.0180005
#3	6.349113	.0249160	.0182661

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1064.229	28398.31	2875.882	947.5668	1777.679
Stddev	3.642	60.38	4.950	3.7304	6.770
%RSD	.3422146	.2126340	.1721384	.3936822	.3808457
#1	1060.561	28385.93	2879.675	944.8654	1769.901
#2	1067.844	28345.08	2877.689	946.0120	1782.249
#3	1064.282	28463.93	2870.282	951.8232	1780.886

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4754-20 Acquired: 11/14/2024 7:04:56 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D84 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.023542	-.029646	.6900890	-.019054	.0062588	113.3086	.4893018
Stddev	.006496	.006157	.0103228	.010782	.0018788	8.5012	.0368358
%RSD	27.59265	20.76981	1.495860	56.58681	30.01834	7.502683	7.528233
#1	-.016591	-.036638	.6946728	-.015957	.0068110	104.3106	.4504032
#2	-.024576	-.025036	.6973261	-.031046	.0041658	121.2057	.5236525
#3	-.029459	-.027263	.6782681	-.010159	.0077996	114.4094	.4938497

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0021646	.0015245	1.234878	.0685376	.0376295	.0724131	189.4897
Stddev	.0000084	.0005499	.088267	.0020949	.0009469	.0086966	14.2609
%RSD	.3873190	36.07282	7.147808	3.056585	2.516312	12.00968	7.525950
#1	.0021693	.0020904	1.140200	.0708749	.0386165	.0625242	174.3696
#2	.0021696	.0009921	1.314899	.0679087	.0375432	.0788700	202.6986
#3	.0021550	.0014910	1.249536	.0668292	.0367287	.0758450	191.4010

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.606861	4.541831	.0307636	-.023743	.8362573	.4010964	.1439717
Stddev	.124961	.362585	.0000974	.001362	.2005001	.0270464	.0010870
%RSD	7.776712	7.983242	.3166867	5.738150	23.97588	6.743107	.7550404
#1	1.475693	4.181646	.0307942	-.022461	1.066842	.3706042	.1452190
#2	1.724517	4.906770	.0306545	-.025174	.702984	.4221884	.1432262
#3	1.620375	4.537076	.0308419	-.023596	.738946	.4104966	.1434698

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.460385	.7003649	.1645786	.0010247	.9960425	7.131257	-.003822
Stddev	.488657	.0064008	.0145479	.0006012	.0038246	.423491	.001329
%RSD	8.949141	.9139300	8.839509	58.66988	.3839771	5.938514	34.78390
#1	4.970839	.6967050	.1487245	.0008289	.9963586	6.690930	-.002388
#2	5.948149	.7077559	.1773148	.0016994	.9920696	7.535617	-.004064
#3	5.462166	.6966339	.1676967	.0005458	.9996991	7.167224	-.005013

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4754-20 Acquired: 11/14/2024 7:04:56 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D84 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	3.374013	.0169678	.0154694
Stddev	.254486	.0022354	.0011914
%RSD	7.542521	13.17472	7.701937
#1	3.105583	.0144690	.0142232
#2	3.611775	.0187778	.0165972
#3	3.404681	.0176565	.0155879

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1095.209	29231.98	2959.142	983.7283	1810.239
Stddev	3.359	40.20	179.532	2.2786	6.680
%RSD	.3066941	.1375307	6.067031	.2316261	.3689923
#1	1094.132	29242.17	3146.859	983.2253	1812.052
#2	1092.520	29266.10	2789.102	986.2163	1802.840
#3	1098.974	29187.66	2941.466	981.7433	1815.825

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4754-21 Acquired: 11/14/2024 7:09:26 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D86 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.054549	-.052018	1.391086	-.037828	.0118662	182.5723	.5851963
Stddev	.002493	.003521	.006557	.000960	.0004841	.2986	.0002618
%RSD	4.569976	6.768728	.4713909	2.538616	4.079365	.1635402	.0447391
#1	-.051726	-.051731	1.392020	-.037998	.0114521	182.3425	.5854554
#2	-.056447	-.048649	1.384112	-.036794	.0117481	182.9098	.5852019
#3	-.055474	-.055673	1.397126	-.038691	.0123983	182.4647	.5849318

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0025476	.0033765	1.266607	.1085998	.0463319	.1016515	338.7286
Stddev	.0000575	.0003003	.052700	.0007239	.0009372	.0016568	1.0946
%RSD	2.256759	8.893602	4.160758	.6665628	2.022807	1.629885	.3231559
#1	.0025909	.0032240	1.325947	.1078677	.0465721	.1002462	337.5664
#2	.0024823	.0031830	1.225255	.1093152	.0452980	.1034783	339.7401
#3	.0025694	.0037224	1.248620	.1086166	.0471256	.1012299	338.8794

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.155888	9.041321	.0451162	-.031951	1.336961	.7318086	.1999738
Stddev	.001213	.118709	.0006679	.000624	.257868	.0078494	.0008387
%RSD	.1049337	1.312963	1.480431	1.953171	19.28764	1.072599	.4194300
#1	1.157281	9.140844	.0445846	-.032595	1.062278	.7282281	.2005938
#2	1.155312	9.073188	.0448980	-.031910	1.573841	.7263879	.2003081
#3	1.155070	8.909931	.0458659	-.031349	1.374764	.7408098	.1990194

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.16998	.8020775	.2968621	.0016351	2.706492	9.985093	.0051262
Stddev	.11704	.0063964	.0024103	.0002594	.008343	.051377	.0021737
%RSD	1.047813	.7974752	.8119100	15.86732	.3082650	.5145393	42.40382
#1	11.24753	.8091533	.2942529	.0014031	2.704176	9.932422	.0071533
#2	11.22705	.7967057	.2990054	.0015869	2.699552	10.03507	.0028308
#3	11.03535	.8003735	.2973281	.0019153	2.715749	9.98779	.0053947

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4754-21 Acquired: 11/14/2024 7:09:26 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D86 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	7.135785	.0256672	.0169553
Stddev	.006648	.0000939	.0001028
%RSD	.0931699	.3658048	.6064928
#1	7.129234	.0256606	.0168401
#2	7.142527	.0257643	.0169879
#3	7.135594	.0255768	.0170379

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1066.760	28504.93	2879.880	950.7570	1771.013
Stddev	4.273	69.41	13.567	2.4630	5.462
%RSD	.4005500	.2435039	.4710824	.2590609	.3084275
#1	1063.370	28582.79	2894.880	950.8973	1769.917
#2	1071.560	28482.48	2868.470	953.1468	1776.940
#3	1065.352	28449.52	2876.288	948.2268	1766.181

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4754-22 Acquired: 11/14/2024 7:13:55 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D87 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.025458	-.028095	2.124796	-.027025	.0092379	102.6789	.5132711
Stddev	.006913	.001818	.001753	.004777	.0024223	.1015	.0014734
%RSD	27.15505	6.472662	.0824930	17.67787	26.22131	.0988362	.2870538
#1	-.033438	-.028727	2.126619	-.025042	.0108547	102.5841	.5123656
#2	-.021670	-.029513	2.124646	-.032474	.0064529	102.6667	.5149712
#3	-.021268	-.026045	2.123123	-.023559	.0104060	102.7860	.5124764

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0022009	.0031598	2.404611	.1135765	.0273511	.0528673	199.1654
Stddev	.0001061	.0002216	.026657	.0009022	.0007584	.0070418	.6401
%RSD	4.821417	7.013431	1.108566	.7943153	2.772790	13.31988	.3214057
#1	.0021305	.0033929	2.424019	.1141210	.0278974	.0448759	198.5237
#2	.0023229	.0031346	2.374217	.1140735	.0264852	.0581635	199.1685
#3	.0021491	.0029518	2.415596	.1125352	.0276708	.0555624	199.8040

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.244595	2.153609	.0324046	-.023567	.8165502	.4332188	.2515255
Stddev	.011443	.128456	.0001144	.000582	.1295247	.0072724	.0007143
%RSD	.3526912	5.964668	.3529127	2.469269	15.86243	1.678696	.2839716
#1	3.232614	2.116636	.0322917	-.023052	.9045275	.4396660	.2507575
#2	3.255412	2.047695	.0324016	-.023451	.8773072	.4253355	.2516491
#3	3.245760	2.296497	.0325204	-.024198	.6678160	.4346550	.2521699

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.964695	.9418033	.1753722	.0017728	1.374749	10.62411	.0182809
Stddev	.116889	.0047276	.0011526	.0006697	.004681	.01422	.0026169
%RSD	5.949448	.5019690	.6572265	37.77578	.3405019	.1338514	14.31482
#1	1.846930	.9472427	.1741322	.0021987	1.369347	10.64005	.0211235
#2	2.080687	.9386841	.1755735	.0021188	1.377279	10.61274	.0177472
#3	1.966468	.9394831	.1764109	.0010009	1.377619	10.61952	.0159721

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4754-22 Acquired: 11/14/2024 7:13:55 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D87 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.665897	.0182878	.0258086
Stddev	.005373	.0002991	.0002077
%RSD	.3225329	1.635561	.8047450
#1	1.660027	.0179839	.0256225
#2	1.670572	.0185819	.0257708
#3	1.667091	.0182977	.0260326

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1066.477	28387.17	2859.514	948.2219	1819.038
Stddev	3.684	84.85	3.313	3.3201	2.147
%RSD	.3454008	.2989144	.1158605	.3501447	.1180462
#1	1067.679	28338.09	2863.118	951.4485	1818.251
#2	1062.342	28338.28	2856.600	948.4016	1817.394
#3	1069.409	28485.15	2858.824	944.8155	1821.467

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: PB164831BL Acquired: 11/14/2024 7:18:23 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS831 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0040384	.0002243	-.002989	-.005116	-.000612	.0035561
Stddev	.0065188	.0031523	.002875	.004776	.001655	.0113463
%RSD	161.4173	1405.673	96.17480	93.35566	270.5904	319.0626
#1	.0085176	.0027253	-.002691	-.006182	.001281	-.000313
#2	-.003440	.0012641	-.006001	-.009269	-.001788	-.005349
#3	.007038	-.003317	-.000275	.000103	-.001328	.016331

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001506	-.000007	-.000204	-.012816	-.001285	-.000337
Stddev	.000644	.000056	.000091	.020919	.000715	.000674
%RSD	42.76380	783.2501	44.60541	163.2290	55.68200	199.8719
#1	-.001732	.000053	-.000114	-.017187	-.000916	.000326
#2	-.000780	-.000059	-.000203	.009944	-.002109	-.000316
#3	-.002007	-.000016	-.000296	-.031205	-.000829	-.001021

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007757	.0052565	-.002033	-.004459	-.000312	-.000921
Stddev	.0041479	.0145526	.001683	.111109	.000952	.000407
%RSD	534.7704	276.8508	82.77856	2491.809	305.0176	44.25246
#1	.0049902	.0090545	-.003323	-.086279	.000762	-.001324
#2	.0006389	-.010819	-.000129	-.049131	-.000645	-.000510
#3	-.003302	.017533	-.002647	.122033	-.001053	-.000928

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1747753	-.004001	-.002402	-.011433	-.001719	-.006360
Stddev	.1238147	.008192	.000236	.084174	.003750	.001075
%RSD	70.84223	204.7447	9.831777	736.2182	218.1839	16.89936
#1	.0819492	-.002277	-.002426	-.093703	-.001980	-.005176
#2	.1270206	.003191	-.002625	-.015120	-.005331	-.006629
#3	.3153562	-.012917	-.002155	.074523	.002155	-.007274

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: PB164831BL Acquired: 11/14/2024 7:18:23 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS831 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000907	.0068801	.0022288	F -.014141	-.001646	-.004664
Stddev	.000393	.0037655	.0009364	.002230	.001506	.002321
%RSD	43.28892	54.72991	42.01243	15.76876	91.53643	49.77527
#1	-.001354	.0026293	.0024840	-.015749	.000093	-.007275
#2	-.000748	.0097974	.0011913	-.015080	-.002564	-.003884
#3	-.000619	.0082136	.0030112	-.011595	-.002466	-.002833

Elem	Sr4077
Units	ppm
Avg	-.000507
Stddev	.000123
%RSD	24.22056
#1	-.000469
#2	-.000645
#3	-.000409

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	945.1923	24875.36	2441.777	839.4324	1881.310
Stddev	1.0404	87.79	9.282	5.4239	1.332
%RSD	.1100759	.3529122	.3801437	.6461447	.0708043
#1	943.9949	24957.04	2431.871	845.2144	1882.596
#2	945.8756	24782.53	2443.186	834.4568	1879.936
#3	945.7065	24886.51	2450.275	838.6259	1881.399

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: PB164831BS Acquired: 11/14/2024 7:22:56 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS831 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0189036	.0589785	.0189726	.0687407	.1176780	.4280224
Stddev	.0031952	.0050891	.0023751	.0003794	.0042100	.0112431
%RSD	16.90256	8.628796	12.51842	.5520048	3.577526	2.626758
#1	.0194048	.0646889	.0205806	.0691777	.1183604	.4313441
#2	.0218185	.0549221	.0200926	.0684953	.1131686	.4154927
#3	.0154874	.0573245	.0162446	.0685490	.1215051	.4372304

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4567284	.0114761	.0111987	11.36571	.0229011	.1072002
Stddev	.0014670	.0001618	.0000983	.05686	.0001462	.0002263
%RSD	.3212048	1.410152	.8779531	.5002864	.6383984	.2111048
#1	.4552364	.0113183	.0112658	11.30603	.0230562	.1069674
#2	.4581691	.0116417	.0112445	11.41925	.0227658	.1072138
#3	.4567795	.0114684	.0110859	11.37185	.0228813	.1074194

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0497917	.2426256	.0347589	10.61040	.0900584	.0224998
Stddev	.0043818	.0140141	.0031963	.11957	.0008871	.0002748
%RSD	8.800311	5.776008	9.195662	1.126874	.9850812	1.221346
#1	.0540007	.2303124	.0318064	10.47313	.0910607	.0222456
#2	.0501189	.2578752	.0343172	10.66625	.0897406	.0224624
#3	.0452554	.2396891	.0381531	10.69183	.0893739	.0227913

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.93525	.1024584	.1189092	10.55786	.0194285	F -.006109
Stddev	.29162	.0121435	.0008906	.13303	.0013145	.000325
%RSD	2.666815	11.85213	.7489522	1.259985	6.765631	5.315695
#1	10.82520	.1163821	.1182815	10.45676	.0192292	-.006063
#2	11.26589	.0940604	.1199285	10.50825	.0182250	-.006455
#3	10.71467	.0969327	.1185176	10.70856	.0208312	-.005811

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: PB164831BS Acquired: 11/14/2024 7:22:56 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS831 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .0199511	.1935344	F .4829964	F .0015064	.2176442	.0291476
Stddev	.0006629	.0035798	.0026534	.0009714	.0008760	.0008801
%RSD	3.322832	1.849687	.5493617	64.48886	.4024804	3.019444
#1	.0192511	.1969106	.4827027	.0003847	.2169293	.0287145
#2	.0200327	.1939116	.4857844	.0020730	.2186213	.0285680
#3	.0205694	.1897809	.4805021	.0020614	.2173819	.0301603

Elem	Sr4077
Units	ppm
Avg	.2288231
Stddev	.0008357
%RSD	.3652218
#1	.2278832
#2	.2294825
#3	.2291036

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	944.8531	24841.94	2449.629	838.8306	1842.900
Stddev	2.9815	22.92	13.090	2.6749	3.507
%RSD	.3155504	.0922536	.5343845	.3188865	.1902782
#1	943.2027	24848.59	2455.191	841.4719	1841.618
#2	943.0617	24816.43	2434.676	836.1233	1840.215
#3	948.2948	24860.80	2459.020	838.8967	1846.867

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4753-01 Acquired: 11/14/2024 7:27:26 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D50 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.021901	-.034647	.2338532	-.030534	.0043785	116.4274	.5004392
Stddev	.006441	.002491	.0056129	.005392	.0004979	.0806	.0014918
%RSD	29.41136	7.190015	2.400193	17.65726	11.37076	.0691851	.2980958
#1	-.023919	-.032104	.2402888	-.029120	.0038041	116.4118	.4994490
#2	-.014692	-.034752	.2313004	-.025991	.0046455	116.5146	.5021550
#3	-.027092	-.037083	.2299704	-.036492	.0046858	116.3557	.4997137

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0021785	.0020012	.6484022	.0653227	.0380267	.0469606	220.0248
Stddev	.0001263	.0002324	.0100461	.0050282	.0007161	.0037880	.5437
%RSD	5.798783	11.61413	1.549363	7.697545	1.883178	8.066382	.2471032
#1	.0021073	.0022614	.6434121	.0681228	.0387168	.0444938	219.3997
#2	.0023244	.0018142	.6418280	.0683274	.0380761	.0450659	220.3871
#3	.0021039	.0019281	.6599663	.0595178	.0372872	.0513222	220.2877

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.554851	11.62073	.0395811	-.024956	.7702195	.4645748	.2211460
Stddev	.006898	.08225	.0012270	.002728	.1916355	.0067324	.0127935
%RSD	.2699881	.7077912	3.099923	10.93068	24.88064	1.449146	5.785068
#1	2.550594	11.58859	.0409236	-.023838	.6103984	.4635993	.2291050
#2	2.551150	11.71420	.0393020	-.022965	.9826710	.4583834	.2279444
#3	2.562810	11.55940	.0385177	-.028065	.7175893	.4717417	.2063886

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	16.91351	.9681381	.1929705	.0019984	1.014521	11.08156	.0019692
Stddev	.03673	.0136526	.0029885	.0006816	.014174	.11171	.0010139
%RSD	.2171638	1.410190	1.548669	34.10646	1.397147	1.008036	51.48860
#1	16.87128	.9815080	.1904069	.0027723	1.030888	11.17589	.0014964
#2	16.93119	.9542194	.1922519	.0017354	1.006331	11.11059	.0012781
#3	16.93805	.9686868	.1962528	.0014875	1.006343	10.95821	.0031332

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4753-01 Acquired: 11/14/2024 7:27:26 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D50 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	6.149076	.0212932	.0136519
Stddev	.003483	.0014343	.0000505
%RSD	.0566457	6.735963	.3700048
#1	6.146720	.0208927	.0135959
#2	6.153077	.0201018	.0136659
#3	6.147430	.0228852	.0136940

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1050.736	29153.46	2821.842	973.6363	1753.000
Stddev	11.607	1538.67	6.274	49.9179	23.800
%RSD	1.104668	5.277833	.2223341	5.126959	1.357679
#1	1037.559	28243.33	2817.232	942.1828	1725.593
#2	1055.203	28287.07	2828.987	947.5324	1768.468
#3	1059.446	30929.99	2819.308	1031.194	1764.938

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4753-02 Acquired: 11/14/2024 7:31:55 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D51 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.003406	-.012833	1.825880	-.021320	.0076299	62.07995	.5791934
Stddev	.010890	.000535	.003517	.006903	.0019224	4.56753	.0428381
%RSD	319.7535	4.168482	.1926216	32.37995	25.19514	7.357492	7.396168
#1	.007872	-.012956	1.826260	-.024496	.0068722	57.10271	.5323960
#2	-.013862	-.013297	1.822189	-.013400	.0098156	66.07940	.6164704
#3	-.004228	-.012248	1.829192	-.026064	.0062018	63.05773	.5887136

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0017895	.0028421	5.581716	.1639204	.0505987	.1358704	101.2112
Stddev	.0000403	.0004403	.420257	.0010776	.0001465	.0146040	7.3883
%RSD	2.254470	15.49117	7.529179	.6573709	.2894422	10.74846	7.299921
#1	.0017461	.0033474	5.126941	.1650039	.0507581	.1201822	93.1863
#2	.0017963	.0025409	5.955735	.1628489	.0505679	.1490704	107.7313
#3	.0018260	.0026380	5.662473	.1639083	.0504701	.1383586	102.7161

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.339268	2.406164	.0684973	-.016476	.7891252	.1659702	.3370635
Stddev	.247352	.263440	.0005805	.001180	.1765280	.0099917	.0014313
%RSD	7.407378	10.94854	.8474342	7.163806	22.37008	6.020177	.4246249
#1	3.070413	2.103065	.0684242	-.015326	.9769016	.1544598	.3354273
#2	3.557187	2.580051	.0679568	-.017684	.6265555	.1710421	.3376802
#3	3.390205	2.535375	.0691109	-.016417	.7639186	.1724087	.3380831

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.942874	1.100246	.0886730	.0032999	.9526491	8.600435	.0069896
Stddev	.335005	.002057	.0071839	.0006078	.0115854	.502107	.0011535
%RSD	11.38362	.1869437	8.101507	18.41759	1.216124	5.838163	16.50238
#1	2.565346	1.101173	.0807001	.0029720	.9497450	8.048095	.0082789
#2	3.204667	1.101676	.0946424	.0029265	.9427922	9.029255	.0066342
#3	3.058607	1.097889	.0906766	.0040012	.9654103	8.723954	.0060557

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4753-02 Acquired: 11/14/2024 7:31:55 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D51 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.284331	.0141247	.0379418
Stddev	.092649	.0022839	.0030295
%RSD	7.213827	16.16954	7.984481
#1	1.183634	.0125007	.0347183
#2	1.365968	.0167362	.0407302
#3	1.303390	.0131371	.0383771

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1083.586	28781.44	2893.003	956.5903	1817.835
Stddev	.743	115.08	169.721	1.7045	3.864
%RSD	.0686098	.3998278	5.866619	.1781839	.2125695
#1	1082.879	28663.40	3079.926	957.8921	1813.395
#2	1084.362	28893.30	2748.548	954.6610	1820.434
#3	1083.516	28787.63	2850.536	957.2178	1819.677

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4753-03 Acquired: 11/14/2024 7:36:22 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D52 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0172347	-.011446	1.361193	-.011770	.0072939	60.68762	.5307657
Stddev	.0063205	.005418	.004061	.005311	.0006529	.15737	.0037417
%RSD	36.67304	47.33241	.2983331	45.12579	8.951334	.2593179	.7049554
#1	.0139572	-.008857	1.358338	-.009316	.0069706	60.79256	.5342975
#2	.0245208	-.007808	1.359399	-.008129	.0080453	60.50667	.5268446
#3	.0132262	-.017672	1.365842	-.017864	.0068657	60.76363	.5311551

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0017646	.0013708	2.152254	.0558286	.0628051	.0757297	90.47129
Stddev	.0000915	.0001066	.012631	.0005349	.0012525	.0043995	.27828
%RSD	5.182301	7.775754	.5868581	.9581462	1.994306	5.809521	.3075905
#1	.0017246	.0012942	2.166778	.0553729	.0635708	.0795317	90.66429
#2	.0016999	.0013257	2.146145	.0564176	.0613597	.0709107	90.15230
#3	.0018692	.0014925	2.143839	.0556955	.0634849	.0767468	90.59728

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.010741	2.373188	.0281968	-.017200	.4997322	.1832633	.2282891
Stddev	.003530	.115970	.0011582	.000546	.1443134	.0057457	.0013962
%RSD	.1755347	4.886655	4.107649	3.175991	28.87814	3.135223	.6115979
#1	2.013146	2.412084	.0271422	-.017413	.5507445	.1790936	.2298954
#2	2.006689	2.464710	.0280118	-.016580	.3368410	.1808789	.2273661
#3	2.012389	2.242771	.0294364	-.017608	.6116112	.1898173	.2276059

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.089046	.7588414	.0776652	.0015156	.9206440	9.166696	-.001398
Stddev	.046641	.0085099	.0011524	.0003054	.0033330	.032071	.002083
%RSD	1.509894	1.121438	1.483808	20.15206	.3620338	.3498597	148.9589
#1	3.121293	.7579860	.0763346	.0013559	.9227160	9.166965	-.002075
#2	3.035566	.7507915	.0783403	.0013231	.9167992	9.134492	-.003059
#3	3.110280	.7677468	.0783207	.0018678	.9224168	9.198631	.000939

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4753-03 Acquired: 11/14/2024 7:36:22 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D52 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.433504	.0129399	.0188811
Stddev	.003980	.0017674	.0001577
%RSD	.2776149	13.65852	.8350912
#1	1.433115	.0140726	.0189928
#2	1.429733	.0109034	.0187007
#3	1.437664	.0138438	.0189497

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1101.276	29343.81	2884.984	981.5976	1815.680
Stddev	2.772	124.64	2.641	6.4592	6.981
%RSD	.2517162	.4247433	.0915569	.6580271	.3844789
#1	1101.278	29394.28	2884.096	980.3589	1817.128
#2	1104.047	29201.85	2887.955	975.8475	1821.824
#3	1098.503	29435.29	2882.901	988.5864	1808.089

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4753-04 Acquired: 11/14/2024 7:40:51 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D53 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0145885	-.014525	1.364278	-.014680	.0071786	63.56328	.7770515
Stddev	.0040746	.001342	.012318	.003046	.0009447	.39029	.0028318
%RSD	27.93053	9.236047	.9028898	20.74763	13.15952	.6140243	.3644349
#1	.0106914	-.014632	1.351676	-.014311	.0069575	63.19889	.7743996
#2	.0188200	-.013133	1.364868	-.011836	.0063641	63.51582	.7767207
#3	.0142540	-.015810	1.376291	-.017893	.0082142	63.97513	.7800342

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0023484	.0013301	2.289655	.0618731	.0571356	.0675061	97.92416
Stddev	.0001051	.0001291	.041803	.0003167	.0004850	.0026364	.60568
%RSD	4.473940	9.709573	1.825736	.5118759	.8488746	3.905395	.6185175
#1	.0023200	.0014484	2.242393	.0615473	.0566040	.0678947	97.33121
#2	.0024648	.0011923	2.304788	.0621798	.0575540	.0646970	97.89946
#3	.0022605	.0013495	2.321784	.0618923	.0572489	.0699266	98.54181

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.637501	2.151399	.0274091	-.017915	.4101666	.1753049	.2477833
Stddev	.025284	.109516	.0010331	.000357	.2811393	.0094323	.0012086
%RSD	.9586511	5.090472	3.769162	1.994051	68.54269	5.380518	.4877435
#1	2.622578	2.187760	.0263305	-.017543	.7230763	.1646837	.2465901
#2	2.623230	2.028327	.0283897	-.018256	.1788457	.1785276	.2490066
#3	2.666694	2.238110	.0275071	-.017944	.3285779	.1827036	.2477533

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.953518	.9079680	.0837715	.0011242	1.307498	9.546696	-.003151
Stddev	.063124	.0077291	.0019155	.0003869	.007880	.059390	.000222
%RSD	2.137239	.8512569	2.286579	34.41872	.6026769	.6221039	7.046541
#1	3.012858	.8999236	.0825947	.0012483	1.299810	9.478295	-.003184
#2	2.960504	.9153377	.0827380	.0014338	1.307129	9.576640	-.002915
#3	2.887192	.9086425	.0859817	.0006904	1.315557	9.585154	-.003355

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4753-04 Acquired: 11/14/2024 7:40:51 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D53 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.333989	.0143537	.0227387
Stddev	.007876	.0014594	.0001331
%RSD	.5904454	10.16767	.5853589
#1	1.325161	.0148014	.0226251
#2	1.336511	.0155368	.0227058
#3	1.340297	.0127228	.0228852

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1108.687	29387.70	2909.788	977.1626	1824.539
Stddev	2.590	25.57	19.326	1.9579	9.407
%RSD	.2336249	.0870188	.6641695	.2003631	.5155821
#1	1111.626	29407.24	2930.812	978.6713	1835.352
#2	1106.737	29397.09	2905.755	977.8664	1820.027
#3	1107.698	29358.75	2892.797	974.9502	1818.238

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4753-05 Acquired: 11/14/2024 7:45:20 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D54 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0195736	-.017609	1.528217	-.019564	.0112574	89.40989	.8471348
Stddev	.0085173	.002665	.004706	.005394	.0011207	.25156	.0005649
%RSD	43.51453	15.13220	.3079417	27.57040	9.955058	.2813611	.0666815
#1	.0101955	-.019921	1.524214	-.017905	.0116584	89.21824	.8471241
#2	.0268285	-.014695	1.533401	-.015195	.0121225	89.31668	.8477049
#3	.0216967	-.018210	1.527035	-.025593	.0099914	89.69476	.8465753

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0028954	.0013134	1.231398	.1010051	.1728325	.0448791	126.2717
Stddev	.0001710	.0001330	.028965	.0012716	.0006863	.0030124	1.1339
%RSD	5.906771	10.12653	2.352168	1.258896	.3971067	6.712211	.8979605
#1	.0030828	.0014639	1.219852	.1021105	.1720464	.0452912	124.9677
#2	.0028556	.0012645	1.209986	.1012892	.1733126	.0476643	126.8226
#3	.0027478	.0012117	1.264354	.0996155	.1731384	.0416819	127.0250

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.720151	2.325499	.0414069	-.019756	.4253552	.2773552	.1551472
Stddev	.026691	.036693	.0005725	.000600	.2629336	.0178730	.0023278
%RSD	.7174721	1.577836	1.382727	3.038936	61.81505	6.444083	1.500404
#1	3.694861	2.354225	.0416241	-.019396	.1976930	.2877514	.1567022
#2	3.748051	2.284165	.0418391	-.020449	.7131447	.2567174	.1562685
#3	3.717541	2.338108	.0407575	-.019423	.3652280	.2875967	.1524709

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.312630	.8975605	.1081758	.0012355	1.327226	9.873650	-.003690
Stddev	.101948	.0043008	.0005182	.0003730	.011194	.028893	.002131
%RSD	3.077565	.4791666	.4790453	30.19503	.8434385	.2926298	57.75488
#1	3.315280	.8946291	.1078183	.0011055	1.318293	9.883071	-.002119
#2	3.209382	.9024978	.1079389	.0009448	1.339783	9.896657	-.002835
#3	3.413227	.8955545	.1087701	.0016561	1.323602	9.841222	-.006115

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4753-05 Acquired: 11/14/2024 7:45:20 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D54 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.449932	.0251374	.0192300
Stddev	.007543	.0013990	.0001835
%RSD	.5202465	5.565553	.9540180
#1	1.443988	.0235435	.0190419
#2	1.447392	.0261622	.0194085
#3	1.458418	.0257065	.0192396

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1108.432	29332.88	2926.475	979.8629	1805.660
Stddev	1.049	166.44	6.361	8.1309	2.598
%RSD	.0946552	.5674099	.2173668	.8298024	.1438580
#1	1107.273	29141.79	2933.253	972.3330	1804.916
#2	1108.704	29446.17	2920.635	978.7712	1803.516
#3	1109.318	29410.68	2925.538	988.4846	1808.549

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4753-06 Acquired: 11/14/2024 7:49:48 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D56 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.110583	-.056205	3.716182	-.064370	.0255014	127.1718	.6416115
Stddev	.012507	.001684	.010418	.005156	.0014955	.3024	.0013106
%RSD	11.30993	2.996576	.2803460	8.010505	5.864463	.2377775	.2042635
#1	-.124918	-.056775	3.716534	-.069069	.0242265	126.8398	.6411033
#2	-.104927	-.057531	3.705592	-.065189	.0251302	127.2440	.6406311
#3	-.101902	-.054310	3.726420	-.058854	.0271476	127.4315	.6431000

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0045082	.0034867	4.771668	.1105811	.1319407	.1696861	407.5740
Stddev	.0000750	.0000644	.035069	.0033001	.0007975	.0014760	1.0391
%RSD	1.664725	1.848531	.7349476	2.984345	.6044095	.8698504	.2549465
#1	.0044865	.0034337	4.777331	.1143882	.1320155	.1681856	406.4445
#2	.0045917	.0035585	4.803562	.1088196	.1311085	.1697361	407.7881
#3	.0044464	.0034680	4.734112	.1085355	.1326981	.1711364	408.4893

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.113933	11.15539	.0517883	-.033112	1.608435	1.176204	.2246633
Stddev	.018511	.08689	.0011173	.001087	.106930	.010693	.0032181
%RSD	.5944587	.7789372	2.157333	3.283388	6.648096	.9090696	1.432406
#1	3.124375	11.17363	.0527987	-.031858	1.554311	1.187887	.2283589
#2	3.092561	11.23171	.0505885	-.033704	1.731607	1.173820	.2231508
#3	3.124865	11.06082	.0519777	-.033775	1.539388	1.166905	.2224800

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	13.49162	2.217262	.3532993	.0010412	1.600944	11.78916	.0139378
Stddev	.13545	.010760	.0005079	.0004523	.004458	.01789	.0010574
%RSD	1.003978	.4852731	.1437600	43.44321	.2784452	.1517489	7.586874
#1	13.34140	2.206603	.3527224	.0013128	1.605940	11.79067	.0127664
#2	13.60446	2.217065	.3536793	.0005190	1.597372	11.77056	.0148219
#3	13.52899	2.228119	.3534962	.0012917	1.599520	11.80624	.0142250

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4753-06 Acquired: 11/14/2024 7:49:48 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D56 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	9.901287	.0143245	.0345255
Stddev	.028333	.0000582	.0000469
%RSD	.2861531	.4065222	.1358506
#1	9.872188	.0143908	.0345636
#2	9.902887	.0143012	.0345397
#3	9.928786	.0142816	.0344731

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1014.160	27117.67	2719.015	903.5324	1752.536
Stddev	1.032	365.19	5.537	14.7366	3.514
%RSD	.1017876	1.346680	.2036408	1.630995	.2005169
#1	1015.340	26697.17	2723.107	886.7896	1752.146
#2	1013.717	27300.61	2721.224	909.2722	1756.229
#3	1013.423	27355.24	2712.715	914.5355	1749.233

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4753-07 Acquired: 11/14/2024 7:54:15 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D57 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.080545	-.065730	2.699946	-.060127	.0238252	189.2818	1.109140
Stddev	.005544	.006549	.016309	.007227	.0020972	.4815	.000211
%RSD	6.883238	9.963075	.6040630	12.02035	8.802307	.2543738	.0190054
#1	-.082930	-.061858	2.685047	-.055957	.0260775	189.5688	1.109149
#2	-.084498	-.073291	2.697420	-.068472	.0234693	188.7259	1.109346
#3	-.074208	-.062040	2.717371	-.055951	.0219287	189.5507	1.108925

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0054366	.0046967	.1548163	.1555601	.1923545	.1590930	361.4159
Stddev	.0001540	.0001611	.0320443	.0027934	.0016780	.0012234	1.0161
%RSD	2.832744	3.428964	20.69829	1.795681	.8723512	.7689991	.2811309
#1	.0054286	.0046084	.1906930	.1523347	.1905150	.1589227	362.3453
#2	.0052868	.0048825	.1447192	.1571964	.1938015	.1603927	360.3311
#3	.0055945	.0045990	.1290366	.1571492	.1927471	.1579637	361.5713

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.966747	28.90945	.1415024	-.032797	1.394619	.8069728	.2884644
Stddev	.014419	.18512	.0013058	.000899	.157948	.0031325	.0043098
%RSD	.4860242	.6403542	.9228248	2.740821	11.32554	.3881824	1.494046
#1	2.957031	28.89726	.1402314	-.033834	1.227027	.8090245	.2835042
#2	2.959895	28.73072	.1414354	-.032324	1.540723	.8033671	.2912926
#3	2.983314	29.10037	.1428404	-.032233	1.416108	.8085268	.2905965

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	41.84870	1.462989	.3123139	.0023930	2.293268	10.21192	.0134977
Stddev	.15356	.014663	.0009803	.0008374	.003689	.06570	.0021207
%RSD	.3669512	1.002281	.3138719	34.99177	.1608790	.6433472	15.71197
#1	42.02513	1.448326	.3133350	.0029514	2.295312	10.18913	.0153588
#2	41.74515	1.462988	.3122265	.0027975	2.289009	10.16065	.0139455
#3	41.77581	1.477652	.3113803	.0014302	2.295484	10.28598	.0111888

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4753-07 Acquired: 11/14/2024 7:54:15 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D57 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	15.07389	.0250138	.0122900
Stddev	.03421	.0008339	.0000928
%RSD	.2269781	3.333556	.7553832
#1	15.10288	.0250399	.0122853
#2	15.03616	.0241672	.0123851
#3	15.08264	.0258343	.0121996

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1124.123	29993.63	3019.488	998.2137	1708.918
Stddev	.383	299.23	18.960	12.0887	4.718
%RSD	.0340336	.9976592	.6279294	1.211035	.2760595
#1	1124.075	30339.10	3003.053	1011.964	1714.268
#2	1123.766	29815.57	3040.232	989.257	1707.129
#3	1124.527	29826.22	3015.179	993.420	1705.356

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4753-08 Acquired: 11/14/2024 7:58:44 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D58 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0123909	-.012971	1.527369	-.013289	.0085179	65.30233	.6167036
Stddev	.0029708	.004734	.001927	.005675	.0020512	.29521	.0014888
%RSD	23.97590	36.49765	.1261813	42.70836	24.08105	.4520733	.2414162
#1	.0092185	-.010040	1.525312	-.016447	.0108814	65.64042	.6181772
#2	.0151075	-.018432	1.529133	-.016682	.0074689	65.17100	.6167337
#3	.0128468	-.010440	1.527662	-.006737	.0072033	65.09557	.6152000

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0019222	.0014926	1.446115	.0770563	.0605053	.0916021	96.84853
Stddev	.0000123	.0001208	.018966	.0009949	.0006418	.0064596	.10474
%RSD	.6386409	8.094357	1.311545	1.291162	1.060798	7.051831	.1081435
#1	.0019082	.0013561	1.437316	.0762409	.0609775	.0890624	96.92716
#2	.0019276	.0015359	1.467883	.0767631	.0607639	.0989456	96.72964
#3	.0019309	.0015857	1.433147	.0781648	.0597745	.0867983	96.88878

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.308783	1.868094	.0306643	-.016874	.6935813	.1936524	.2771145
Stddev	.007701	.112906	.0007614	.000117	.0608891	.0084823	.0003899
%RSD	.3335674	6.043914	2.483113	.6947438	8.778940	4.380192	.1407124
#1	2.317010	1.995084	.0304252	-.016804	.6232733	.1856044	.2770972
#2	2.307593	1.830151	.0315166	-.016808	.7284690	.2025109	.2767335
#3	2.301746	1.779047	.0300511	-.017009	.7290017	.1928418	.2775128

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.507442	.6599368	.0827356	.0009639	1.050355	7.426813	-.002482
Stddev	.145960	.0036552	.0010303	.0009524	.010671	.025051	.001671
%RSD	5.821069	.5538718	1.245262	98.80534	1.015981	.3373063	67.30570
#1	2.647600	.6586356	.0838995	-.000107	1.043669	7.454601	-.003009
#2	2.356301	.6571103	.0819405	.001715	1.062662	7.405961	-.003826
#3	2.518425	.6640646	.0823667	.001284	1.044733	7.419878	-.000612

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4753-08 Acquired: 11/14/2024 7:58:44 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D58 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.209110	.0154302	.0152679
Stddev	.006505	.0011563	.0000549
%RSD	.5380348	7.493674	.3596663
#1	1.216490	.0157445	.0152069
#2	1.204208	.0163968	.0153134
#3	1.206632	.0141492	.0152833

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1086.899	28770.99	2863.063	961.1403	1824.678
Stddev	.707	40.96	5.872	.5383	1.714
%RSD	.0650817	.1423720	.2050843	.0560038	.0939446
#1	1086.566	28796.97	2857.706	961.1665	1823.580
#2	1087.712	28792.22	2862.143	961.6650	1823.800
#3	1086.420	28723.77	2869.340	960.5894	1826.653

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4753-09 Acquired: 11/14/2024 8:03:14 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D59 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0078773	-.009526	.9541521	-.011975	.0079227	58.19338	.5491508
Stddev	.0035272	.001759	.0206075	.001219	.0024452	.16698	.0032558
%RSD	44.77634	18.46529	2.159772	10.17652	30.86364	.2869389	.5928889
#1	.0039954	-.011494	.9676021	-.012829	.0079003	58.26776	.5510177
#2	.0087510	-.008975	.9644269	-.012517	.0054887	58.31025	.5510435
#3	.0108856	-.008108	.9304273	-.010580	.0103791	58.00214	.5453913

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0020367	.0024461	3.093273	.0643060	.0563742	.0515066	91.11696
Stddev	.0001418	.0000575	.020449	.0010907	.0017791	.0049848	.48692
%RSD	6.964340	2.349161	.6610756	1.696070	3.155887	9.677918	.5343850
#1	.0020454	.0024086	3.070153	.0648289	.0574801	.0510572	91.50817
#2	.0021740	.0025122	3.108986	.0650368	.0573205	.0467617	91.27106
#3	.0018907	.0024174	3.100680	.0630523	.0543219	.0567009	90.57163

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.821392	3.333197	.0307244	-.017772	.6582641	.1773116	.3484884
Stddev	.004470	.082055	.0018805	.000419	.0683632	.0021256	.0029159
%RSD	.1584378	2.461738	6.120625	2.358912	10.38538	1.198768	.8367299
#1	2.823705	3.238551	.0327690	-.017946	.6020399	.1755046	.3505539
#2	2.816239	3.376691	.0303356	-.017294	.7343622	.1767768	.3497585
#3	2.824232	3.384348	.0290687	-.018077	.6383902	.1796535	.3451529

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.468243	.6569027	.0756340	.0009392	.7026515	8.472712	-.002886
Stddev	.018469	.0123273	.0006243	.0005978	.0144965	.038775	.000528
%RSD	.7482711	1.876573	.8253896	63.64742	2.063115	.4576428	18.30793
#1	2.476881	.6661128	.0757784	.0015592	.7016476	8.514292	-.003110
#2	2.480810	.6616966	.0761734	.0008923	.7176239	8.466303	-.003265
#3	2.447038	.6428986	.0749501	.0003663	.6886831	8.437541	-.002282

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4753-09 Acquired: 11/14/2024 8:03:14 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D59 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.463685	.0131815	.0215875
Stddev	.007295	.0006424	.0002121
%RSD	.4984189	4.873575	.9823535
#1	1.465675	.0124533	.0217067
#2	1.469778	.0136680	.0217131
#3	1.455601	.0134231	.0213427

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1127.725	29826.61	2942.705	997.6114	1838.042
Stddev	11.593	138.13	13.519	7.7561	31.707
%RSD	1.028037	.4630934	.4594144	.7774694	1.725035
#1	1120.300	29778.49	2928.230	992.4477	1819.127
#2	1121.791	29718.99	2944.882	993.8561	1820.351
#3	1141.084	29982.36	2955.004	1006.530	1874.647

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: CCV082 Acquired: 11/14/2024 8:07:42 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV082 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.047408	4.944641	24.69943	4.802001	4.821591	394.4327	10.13105
Stddev	.028231	.024302	.06862	.014986	.006658	13.0337	.33426
%RSD	.5593071	.4914806	.2778073	.3120813	.1380970	3.304406	3.299400
#1	5.026837	4.927572	24.65736	4.795843	4.820971	379.3883	9.74521
#2	5.035794	4.933885	24.66232	4.791075	4.828538	402.3118	10.33297
#3	5.079593	4.972464	24.77861	4.819085	4.815264	401.5978	10.31496

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4889193	2.493313	395.1281	15.32747	2.500433	14.72105	395.7088
Stddev	.0149065	.003658	13.2575	.03096	.007397	.49260	12.8544
%RSD	3.048878	.1467077	3.355247	.2019820	.2958088	3.346216	3.248453
#1	.4717590	2.491139	379.8425	15.32899	2.496870	14.15412	380.8659
#2	.4986606	2.491264	403.4944	15.29578	2.495493	15.04449	403.1882
#3	.4963383	2.497536	402.0475	15.35764	2.508937	14.96453	403.0722

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	14.75500	391.9343	2.488877	1.237392	398.5753	2.425842	14.63921
Stddev	.51517	13.2636	.003015	.001522	12.7523	.088611	.11945
%RSD	3.491519	3.384139	.1211445	.1229865	3.199478	3.652778	.8159728
#1	14.16014	376.6254	2.486154	1.238876	383.8572	2.323906	14.50219
#2	15.05609	399.1992	2.488358	1.235835	406.3289	2.484461	14.69402
#3	15.04877	399.9782	2.492117	1.237467	405.5397	2.469160	14.72141

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	153.0823	4.985675	4.961218	4.788454	5.101714	4.882421	5.006170
Stddev	4.6471	.011889	.150846	.003923	.015460	.145834	.015872
%RSD	3.035699	.2384720	3.040513	.0819212	.3030400	2.986923	.3170529
#1	147.7210	4.971988	4.787309	4.792759	5.096277	4.715176	4.992855
#2	155.9589	4.993447	5.056621	4.787522	5.089706	4.983061	5.001921
#3	155.5669	4.991590	5.039724	4.785081	5.119158	4.949024	5.023734

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: CCV082 Acquired: 11/14/2024 8:07:42 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV082 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.880704	5.077410	5.036854
Stddev	.166317	.170383	.164819
%RSD	3.407648	3.355706	3.272256
#1	4.688687	4.880743	4.846712
#2	4.979635	5.180429	5.138972
#3	4.973789	5.171058	5.124878

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	773.0714	22572.21	2370.276	642.1099	1415.496
Stddev	.5398	44.17	72.985	5.3170	2.767
%RSD	.0698263	.1956612	3.079164	.8280582	.1954446
#1	772.4491	22563.61	2454.400	648.2054	1416.966
#2	773.3520	22620.04	2323.837	639.6985	1417.216
#3	773.4131	22532.98	2332.592	638.4258	1412.304

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: CCB082 Acquired: 11/14/2024 8:11:54 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB082 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0016133	.0004105	-.000597	-.004596	-.002123	.0072681	-.001677
Stddev	.0042764	.0024467	.002053	.002603	.001636	.0069438	.000371
%RSD	265.0799	596.0390	343.8798	56.62833	77.05442	95.53800	22.10060
#1	.0063650	-.001198	.000014	-.005309	-.003783	.0024110	-.001537
#2	-.001926	.003226	.001081	-.001711	-.002074	.0041719	-.001396
#3	.000401	-.000797	-.002885	-.006768	-.000512	.0152213	-.002097

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000040	.0000548	.0221808	-.000121	-.000198	-.003002	-.007023
Stddev	.000054	.0000382	.0054572	.000431	.000500	.002816	.008097
%RSD	135.3121	69.70222	24.60341	356.9196	252.0622	93.82430	115.2921
#1	.000015	.0000841	.0271153	-.000596	.000369	.000201	-.016300
#2	-.000041	.0000116	.0231075	-.000010	-.000578	-.004114	-.001373
#3	-.000094	.0000687	.0163195	.000244	-.000386	-.005092	-.003397

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002270	.0152812	-.000649	-.000910	.1358694	-.011933	-.000885
Stddev	.001051	.0679496	.000143	.000894	.0479371	.011156	.000849
%RSD	46.30202	444.6612	22.03828	98.27316	35.28173	93.49027	95.91194
#1	-.003209	-.026639	-.000532	-.001864	.1364035	-.014836	-.001865
#2	-.002465	.093680	-.000606	-.000092	.1835373	.000388	-.000350
#3	-.001135	-.021197	-.000808	-.000773	.0876675	-.021351	-.000442

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0438118	-.001619	-.000183	-.000700	.0015103	.0004548	-.000837
Stddev	.0682118	.002341	.000765	.000523	.0037566	.0008599	.000218
%RSD	155.6928	144.6497	418.3151	74.70333	248.7288	189.0846	26.10113
#1	-.020133	-.000003	.000413	-.000432	-.001227	-.000356	-.001002
#2	.035958	-.000549	.000084	-.000365	.005793	.000364	-.000919
#3	.115610	-.004304	-.001045	-.001303	-.000035	.001356	-.000589

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: CCB082 Acquired: 11/14/2024 8:11:54 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB082 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.000446	-.002368	-.000156
Stddev	.001745	.001126	.000140
%RSD	391.5414	47.55210	90.12900
#1	-.001009	-.003667	-.000191
#2	.001511	-.001670	-.000275
#3	-.001840	-.001768	-.000001

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	948.8556	24876.45	2438.583	841.4578	1886.314
Stddev	3.0037	71.41	6.137	6.5464	6.214
%RSD	.3165567	.2870407	.2516438	.7779824	.3294370
#1	949.0377	24945.70	2434.814	843.0459	1888.248
#2	951.7641	24803.07	2435.271	834.2635	1891.331
#3	945.7650	24880.58	2445.664	847.0641	1879.363

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4753-10 Acquired: 11/14/2024 8:16:26 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D60 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.005996	-.021033	1.011114	-.016156	.0093421	77.58364	.4836766
Stddev	.004158	.002071	.002337	.003593	.0012800	.20740	.0012239
%RSD	69.34505	9.847009	.2311258	22.23634	13.70144	.2673263	.2530492
#1	-.004173	-.018676	1.009049	-.016094	.0101746	77.39012	.4848200
#2	-.003061	-.021860	1.010642	-.012595	.0078682	77.80258	.4838243
#3	-.010753	-.022562	1.013651	-.019779	.0099835	77.55821	.4823855

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0019734	.0026399	2.849747	.0588611	.0332062	.0488593	134.6661
Stddev	.0001700	.0001174	.017385	.0011149	.0003959	.0034594	.2520
%RSD	8.613246	4.445299	.6100677	1.894179	1.192279	7.080378	.1871380
#1	.0019397	.0026395	2.829781	.0589729	.0333078	.0528351	134.3976
#2	.0021577	.0027575	2.861537	.0576945	.0327694	.0472069	134.7034
#3	.0018228	.0025228	2.857924	.0599159	.0335414	.0465360	134.8974

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.103114	3.369229	.0258805	-.019110	.8113561	.3092104	.2533065
Stddev	.005393	.104861	.0003507	.000348	.1078290	.0182805	.0010076
%RSD	.2564529	3.112317	1.355274	1.821251	13.28997	5.912006	.3977897
#1	2.107584	3.345842	.0254983	-.018777	.8944269	.3235133	.2539124
#2	2.104636	3.278036	.0261876	-.019471	.6894993	.3155031	.2521433
#3	2.097123	3.483809	.0259555	-.019081	.8501419	.2886147	.2538637

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.402362	.6647115	.1178158	.0008709	.8589056	10.00094	.0003767
Stddev	.062056	.0048018	.0008747	.0001159	.0093806	.03410	.0023611
%RSD	1.823923	.7223862	.7424606	13.30396	1.092160	.3410064	626.7552
#1	3.340638	.6596453	.1183687	.0007580	.8547578	10.02432	.0021340
#2	3.401700	.6652934	.1182714	.0009895	.8696452	10.01670	-.002307
#3	3.464746	.6691958	.1168073	.0008653	.8523140	9.96181	.001303

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4753-10 Acquired: 11/14/2024 8:16:26 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D60 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.004520	.0160009	.0214588
Stddev	.009845	.0002938	.0001031
%RSD	.4911277	1.836181	.4802329
#1	1.994843	.0156683	.0213795
#2	2.004193	.0161091	.0215753
#3	2.014524	.0162252	.0214217

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1069.877	28354.84	2826.127	943.5755	1805.931
Stddev	3.512	56.01	8.493	4.7560	6.822
%RSD	.3282301	.1975219	.3005342	.5040365	.3777310
#1	1070.484	28290.91	2818.596	938.1107	1801.953
#2	1073.045	28395.24	2824.450	946.7782	1813.808
#3	1066.101	28378.37	2835.333	945.8375	1802.033

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4753-11 Acquired: 11/14/2024 8:20:55 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D61 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0038258	-.015530	1.046508	-.016458	.0077677	68.52356	.5470338
Stddev	.0049578	.003389	.003414	.008304	.0016723	4.06131	.0332711
%RSD	129.5903	21.82557	.3261868	50.45585	21.52906	5.926887	6.082084
#1	.0080132	-.019444	1.049581	-.017480	.0091558	70.46105	.5623661
#2	.0051128	-.013581	1.047109	-.007690	.0082360	63.85632	.5088611
#3	-.001649	-.013565	1.042834	-.024203	.0059111	71.25331	.5698743

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0017267	.0012362	1.279418	.0592932	.0406410	.0680036	104.5838
Stddev	.0001122	.0004523	.100442	.0013402	.0003834	.0055475	6.2192
%RSD	6.496783	36.58517	7.850630	2.260344	.9434555	8.157610	5.946634
#1	.0018017	.0010085	1.316400	.0579811	.0405711	.0718172	107.3863
#2	.0015977	.0017571	1.165727	.0606599	.0410546	.0616396	97.4564
#3	.0017806	.0009431	1.356125	.0592388	.0402974	.0705539	108.9086

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.757054	2.752847	.0292722	-.016923	.7914018	.2139985	.1929578
Stddev	.105449	.226863	.0003336	.000768	.0350143	.0136469	.0003057
%RSD	6.001443	8.241023	1.139576	4.539304	4.424338	6.377104	.1584304
#1	1.809086	2.806435	.0296216	-.017641	.8139309	.2201286	.1931617
#2	1.635703	2.503988	.0289571	-.016113	.7510627	.1983615	.1926063
#3	1.826374	2.948119	.0292380	-.017015	.8092118	.2235054	.1931054

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.293818	.6497915	.0896873	.0012648	.8113347	8.643234	-.003824
Stddev	.174434	.0032084	.0069761	.0003078	.0049975	.419680	.000245
%RSD	5.295788	.4937573	7.778289	24.33975	.6159590	4.855588	6.397107
#1	3.351115	.6528877	.0926055	.0009765	.8129046	8.827776	-.004009
#2	3.097942	.6464816	.0817259	.0015890	.8153586	8.162904	-.003916
#3	3.432396	.6500051	.0947304	.0012289	.8057407	8.939021	-.003547

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4753-11 Acquired: 11/14/2024 8:20:55 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D61 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.844249	.0134988	.0142595
Stddev	.107156	.0011859	.0009015
%RSD	5.810286	8.785502	6.321972
#1	1.894464	.0130071	.0148629
#2	1.721206	.0126378	.0132232
#3	1.917077	.0148515	.0146923

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1078.423	28566.42	2884.923	957.9467	1821.625
Stddev	.246	20.87	140.994	2.2849	4.281
%RSD	.0227780	.0730635	4.887263	.2385163	.2350346
#1	1078.244	28589.74	2815.122	957.5773	1816.681
#2	1078.322	28560.00	3047.201	960.3938	1824.103
#3	1078.703	28549.50	2792.445	955.8691	1824.090

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4753-12 Acquired: 11/14/2024 8:25:25 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D62 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0090107	-.012499	1.266148	-.013650	.0052721	68.99266	.5981197
Stddev	.0080172	.004368	.042444	.004624	.0023835	3.38218	.0287615
%RSD	88.97475	34.94320	3.352249	33.87488	45.20920	4.902238	4.808648
#1	.0007834	-.007551	1.241719	-.014408	.0076798	72.87335	.6312473
#2	.0167999	-.015818	1.241567	-.008694	.0052230	67.43223	.5835910
#3	.0094487	-.014128	1.315159	-.017849	.0029136	66.67240	.5795207

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0026708	.0031218	3.457667	.1101386	.0642174	.0594336	107.7891
Stddev	.0001477	.0003938	.177450	.0012198	.0023081	.0029824	4.9437
%RSD	5.530089	12.61332	5.132068	1.107513	3.594156	5.018018	4.586452
#1	.0028412	.0026858	3.662568	.1092937	.0627630	.0598085	113.4264
#2	.0025801	.0032284	3.355347	.1095851	.0630104	.0562814	105.7486
#3	.0025910	.0034514	3.355086	.1115370	.0668786	.0622108	104.1923

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.046019	3.832780	.0316047	-.019758	.7018334	.2467743	.4238822
Stddev	.145749	.129725	.0003711	.000583	.0685638	.0142660	.0023595
%RSD	4.784917	3.384618	1.174252	2.950291	9.769239	5.781003	.5566319
#1	3.213498	3.981732	.0315123	-.020430	.7144879	.2582395	.4247530
#2	2.976637	3.772033	.0312885	-.019450	.6278239	.2512852	.4212111
#3	2.947923	3.744575	.0320133	-.019393	.7631884	.2307981	.4256825

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.926955	.7963258	.0922374	.0003575	.8100860	8.904431	-.002187
Stddev	.238669	.0250867	.0056098	.0003288	.0293485	.384919	.000504
%RSD	8.154175	3.150308	6.081908	91.96654	3.622890	4.322777	23.02997
#1	3.202389	.7816656	.0983151	.0002756	.7873612	9.345491	-.002684
#2	2.781192	.7820190	.0911391	.0007196	.7996764	8.731459	-.001677
#3	2.797282	.8252927	.0872580	.0000774	.8432205	8.636342	-.002201

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4753-12 Acquired: 11/14/2024 8:25:25 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D62 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.702751	.0164945	.0246472
Stddev	.081053	.0015510	.0013527
%RSD	4.760133	9.403353	5.488104
#1	1.795676	.0181069	.0262014
#2	1.665942	.0163637	.0240035
#3	1.646633	.0150131	.0237365

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1113.357	30041.69	2890.157	1003.257	1773.406
Stddev	25.699	25.85	121.057	2.042	52.190
%RSD	2.308223	.0860315	4.188612	.2035343	2.942947
#1	1125.422	30026.98	2752.104	1001.745	1799.263
#2	1130.803	30026.56	2940.182	1005.580	1807.619
#3	1083.846	30071.53	2978.185	1002.446	1713.335

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4753-13 Acquired: 11/14/2024 8:29:51 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D64 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.094183	-.061588	2.651995	-.049377	.0211489	194.0323	.8570959
Stddev	.023856	.004321	.015843	.010758	.0019982	6.6744	.0322534
%RSD	25.32972	7.015865	.5974167	21.78667	9.448427	3.439846	3.763096
#1	-.091550	-.062489	2.666326	-.047837	.0221485	190.7792	.8407652
#2	-.071753	-.065388	2.654679	-.039472	.0188481	189.6081	.8362740
#3	-.119247	-.056888	2.634982	-.060821	.0224502	201.7095	.8942485

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0041968	.0038270	1.506297	.0852062	.1015651	.1350091	395.9585
Stddev	.0002084	.0006288	.035240	.0020307	.0014918	.0021621	12.5326
%RSD	4.965436	16.43152	2.339512	2.383300	1.468772	1.601420	3.165142
#1	.0042718	.0040693	1.496231	.0871251	.1031772	.1343906	390.6163
#2	.0039613	.0042988	1.545475	.0854141	.1012848	.1332237	386.9822
#3	.0043573	.0031131	1.477185	.0830796	.1002334	.1374130	410.2771

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.926094	27.07493	.0519216	-.031999	1.688210	.8387883	.2794171
Stddev	.073794	1.02788	.0008146	.001268	.287181	.0375048	.0031291
%RSD	3.831292	3.796426	1.568874	3.961499	17.01096	4.471303	1.119879
#1	1.884094	26.55471	.0521773	-.031866	1.384894	.8298351	.2816612
#2	1.882886	26.41116	.0510098	-.030803	1.955939	.8065703	.2758426
#3	2.011301	28.25893	.0525776	-.033328	1.723796	.8799594	.2807476

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	33.90898	1.226067	.3465152	.0014561	1.603692	13.27007	.0150315
Stddev	1.29373	.007105	.0119868	.0004892	.024082	.35293	.0029047
%RSD	3.815298	.5794842	3.459230	33.59568	1.501681	2.659625	19.32395
#1	33.16255	1.234094	.3408503	.0015520	1.614376	13.19087	.0183414
#2	33.16155	1.220586	.3384108	.0009260	1.620584	12.96346	.0129071
#3	35.40285	1.223520	.3602844	.0018902	1.576116	13.65587	.0138459

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4753-13 Acquired: 11/14/2024 8:29:51 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D64 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	14.24284	.0305207	.0229415
Stddev	.48208	.0007104	.0009348
%RSD	3.384685	2.327704	4.074579
#1	14.00835	.0303031	.0224074
#2	13.92288	.0299445	.0223962
#3	14.79731	.0313145	.0240209

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1045.597	27678.31	2767.725	921.3095	1720.065
Stddev	1.766	51.36	72.690	4.3007	8.600
%RSD	.1689399	.1855539	2.626334	.4668078	.4999973
#1	1044.419	27625.61	2793.258	916.3510	1711.752
#2	1044.743	27681.11	2824.203	923.5515	1719.517
#3	1047.628	27728.22	2685.714	924.0260	1728.926

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4753-14 Acquired: 11/14/2024 8:34:19 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D66 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.078477	-.037320	3.308512	-.057919	.0113669	72.32610	.5890925
Stddev	.002807	.003276	.008152	.003278	.0022538	3.70958	.0327839
%RSD	3.576854	8.778183	.2463985	5.659416	19.82760	5.128959	5.565149
#1	-.080431	-.040922	3.313662	-.061631	.0092964	76.57505	.6267641
#2	-.075261	-.034518	3.312761	-.056706	.0110367	70.67151	.5734844
#3	-.079740	-.036521	3.299113	-.055421	.0137676	69.73175	.5670289

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013172	.0635570	5.839877	.1407840	.0431497	.3909103	364.4645
Stddev	.0001212	.0006303	.244728	.0088387	.0006046	.0195494	17.5542
%RSD	9.202757	.9917078	4.190633	6.278177	1.401193	5.000995	4.816438
#1	.0013279	.0628940	6.110946	.1438981	.0434839	.4130435	384.5535
#2	.0014328	.0636284	5.773502	.1476442	.0435134	.3836866	356.7597
#3	.0011910	.0641485	5.635184	.1308098	.0424518	.3760007	352.0803

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.440886	2.769766	.1581999	-.029119	1.424450	.3058748	1.637840
Stddev	.227163	.147238	.0007261	.001960	.087797	.0160243	.080095
%RSD	5.115266	5.315889	.4589871	6.732117	6.163596	5.238840	4.890278
#1	4.702151	2.933575	.1589659	-.029417	1.475782	.3242662	1.677375
#2	4.330467	2.648443	.1581124	-.027027	1.323073	.2949197	1.690481
#3	4.290040	2.727278	.1575216	-.030913	1.474494	.2984386	1.545665

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.429539	2.154931	.3197051	.0097255	1.207668	8.181734	.3830277
Stddev	.272454	.003303	.0180969	.0001815	.007021	.349897	.0021522
%RSD	11.21423	.1532609	5.660492	1.866040	.5813299	4.276562	.5618952
#1	2.743362	2.158331	.3403542	.0099257	1.206646	8.578043	.3825260
#2	2.253460	2.154726	.3121571	.0096793	1.215143	8.051635	.3811707
#3	2.291794	2.151735	.3066040	.0095716	1.201214	7.915522	.3853865

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4753-14 Acquired: 11/14/2024 8:34:19 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D66 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.213810	.0213603	.0365710
Stddev	.062809	.0008447	.0020167
%RSD	5.174562	3.954602	5.514619
#1	1.285794	.0223270	.0388956
#2	1.185480	.0207647	.0355292
#3	1.170155	.0209892	.0352883

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1030.350	28185.41	2660.889	940.2984	1789.940
Stddev	2.428	1218.70	107.750	39.6077	3.529
%RSD	.2356473	4.323873	4.049414	4.212243	.1971400
#1	1027.912	27489.67	2536.887	920.5159	1785.875
#2	1030.370	27473.95	2714.072	914.4789	1791.731
#3	1032.768	29592.62	2731.709	985.9004	1792.214

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4753-15 Acquired: 11/14/2024 8:38:45 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D66D Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.042435	-.029460	1.812180	-.041783	.0066289	68.77576	.5016229
Stddev	.005348	.001026	.020647	.002021	.0012889	.28899	.0012231
%RSD	12.60385	3.483593	1.139321	4.836866	19.44271	.4201900	.2438229
#1	-.041304	-.029072	1.799159	-.043943	.0067289	69.06077	.5015520
#2	-.048259	-.028684	1.835986	-.039938	.0078649	68.78356	.5028798
#3	-.037742	-.030623	1.801396	-.041468	.0052930	68.48295	.5004367

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0014328	.0520360	5.584145	.1418064	.0339558	.3263123	251.7838
Stddev	.0000769	.0006861	.083450	.0013689	.0006300	.0069151	1.6980
%RSD	5.369774	1.318596	1.494413	.9653145	1.855490	2.119159	.6743692
#1	.0013471	.0512837	5.659227	.1426066	.0334066	.3207004	253.5286
#2	.0014958	.0526273	5.598911	.1425867	.0346436	.3340374	251.6860
#3	.0014556	.0521971	5.494298	.1402258	.0338173	.3241991	250.1369

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.660385	3.078961	.1451322	-.022104	1.072748	.2837952	1.316907
Stddev	.006944	.105150	.0016040	.000528	.175455	.0056602	.015378
%RSD	.1897021	3.415113	1.105181	2.389384	16.35561	1.994462	1.167747
#1	3.667897	3.195839	.1433224	-.021694	1.226161	.2799616	1.325301
#2	3.654202	3.049004	.1463781	-.021919	.881444	.2811277	1.326261
#3	3.659056	2.992041	.1456961	-.022700	1.110639	.2902962	1.299158

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.453401	2.125686	.2204845	.0085002	1.040605	8.534536	.1832278
Stddev	.056852	.018865	.0017601	.0006421	.020065	.041785	.0020050
%RSD	2.317256	.8874960	.7982873	7.554604	1.928214	.4896006	1.094248
#1	2.462430	2.112020	.2224840	.0077871	1.018279	8.570773	.1813181
#2	2.392575	2.147210	.2197995	.0086808	1.057130	8.544006	.1853161
#3	2.505198	2.117827	.2191698	.0090327	1.046407	8.488829	.1830493

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4753-15 Acquired: 11/14/2024 8:38:45 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D66D Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.365623	.0205783	.0410815
Stddev	.001144	.0012224	.0001700
%RSD	.0837583	5.940438	.4137491
#1	1.366886	.0204383	.0410676
#2	1.365328	.0218647	.0412580
#3	1.364656	.0194319	.0409189

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1021.789	27546.80	2722.368	916.0364	1787.639
Stddev	6.975	350.04	15.913	12.4430	15.494
%RSD	.6826406	1.270724	.5845131	1.358351	.8667312
#1	1025.877	27391.89	2707.897	910.8460	1798.463
#2	1013.735	27300.94	2719.797	907.0289	1769.891
#3	1025.755	27947.57	2739.409	930.2343	1794.564

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4753-16 Acquired: 11/14/2024 8:43:09 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D66S Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0816513	.1602316	2.016931	.2583139	.2695288	71.21871	7.734532
Stddev	.0058703	.0063004	.048013	.0016329	.0052506	1.16019	.114029
%RSD	7.189501	3.932060	2.380486	.6321243	1.948082	1.629051	1.474284
#1	.0808998	.1532613	1.971731	.2564451	.2643106	70.10761	7.629495
#2	.0761930	.1619124	2.067333	.2590317	.2748113	72.42244	7.855811
#3	.0878613	.1655212	2.011730	.2594649	.2694645	71.12608	7.718289

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1676709	.2465877	5.659070	.8972109	1.933663	1.193197	261.5260
Stddev	.0012097	.0066028	.075351	.0013518	.049800	.030262	4.2748
%RSD	.7214519	2.677672	1.331509	.1506675	2.575410	2.536215	1.634541
#1	.1663518	.2405939	5.587471	.8980138	1.887537	1.164476	257.6925
#2	.1687284	.2536654	5.737683	.8979688	1.986463	1.224795	266.1357
#3	.1679324	.2455039	5.652058	.8956502	1.926989	1.190319	260.7499

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.623721	2.640255	2.065477	.1407533	1.190859	2.074025	3.282870
Stddev	.091537	.073128	.055442	.0006862	.200855	.020343	.014537
%RSD	1.627690	2.769714	2.684230	.4875375	16.86643	.9808651	.4428022
#1	5.538390	2.629146	2.015921	.1414597	1.268131	2.050937	3.298851
#2	5.720404	2.573317	2.125355	.1400892	.962843	2.089320	3.270433
#3	5.612369	2.718301	2.055155	.1407109	1.341603	2.081817	3.279328

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.257620	2.165324	.2283295	.0098815	1.141098	9.086861	.0370971
Stddev	.106537	.049417	.0048005	.0014909	.029121	.063232	.0010688
%RSD	4.719006	2.282196	2.102430	15.08770	2.551981	.6958600	2.881134
#1	2.143708	2.116915	.2236586	.0108475	1.120830	9.020111	.0369656
#2	2.354804	2.215690	.2332498	.0081645	1.174468	9.145861	.0382256
#3	2.274348	2.163368	.2280801	.0106326	1.127995	9.094610	.0361002

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4753-16 Acquired: 11/14/2024 8:43:09 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D66S Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.106583	.0181502	.0336582
Stddev	.019226	.0013805	.0003859
%RSD	1.737434	7.605954	1.146559
#1	1.088642	.0173841	.0333254
#2	1.126878	.0197439	.0340812
#3	1.104229	.0173227	.0335681

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1004.365	27402.02	2749.430	899.8404	1748.912
Stddev	18.204	46.55	24.122	4.4492	39.638
%RSD	1.812439	.1698742	.8773306	.4944480	2.266448
#1	1020.147	27378.44	2769.968	894.7092	1785.766
#2	984.450	27371.98	2722.867	902.6282	1706.979
#3	1008.497	27455.64	2755.454	902.1837	1753.992

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4753-14LX5 Acquired: 11/14/2024 8:47:29 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D66L Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001659	-.008341	.6596678	-.015583	.0033976	15.18615	.1223883
Stddev	.006066	.001600	.0041144	.005700	.0026575	.35636	.0025073
%RSD	365.5255	19.18499	.6237134	36.57730	78.21729	2.346627	2.048675
#1	-.008654	-.006510	.6640260	-.018264	.0063100	15.59571	.1252833
#2	.001526	-.009474	.6558507	-.009037	.0027783	15.01582	.1209723
#3	.002150	-.009038	.6591265	-.019447	.0011044	14.94691	.1209093

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002994	.0121883	1.171418	.0299775	.0086759	.0836448	76.61571
Stddev	.0001431	.0001408	.058152	.0001202	.0002161	.0054063	1.72410
%RSD	47.79865	1.154784	4.964273	.4010169	2.490812	6.463439	2.250325
#1	.0004632	.0120604	1.238454	.0299269	.0084537	.0866358	78.60552
#2	.0001982	.0123391	1.134533	.0298909	.0088853	.0774039	75.56583
#3	.0002369	.0121654	1.141266	.0301148	.0086887	.0868948	75.67577

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9359623	.5952964	.0310443	-.006445	.5767586	.0562003	.3670374
Stddev	.0219136	.1169676	.0003210	.000374	.2946979	.0003384	.0016811
%RSD	2.341286	19.64863	1.034091	5.809121	51.09553	.6020811	.4580097
#1	.9611830	.7284627	.0309920	-.006040	.5945952	.0563499	.3676950
#2	.9215789	.5091818	.0313882	-.006779	.2735476	.0564381	.3682903
#3	.9251251	.5482448	.0307526	-.006515	.8621331	.0558129	.3651270

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5692865	.4249354	.0609078	.0010380	.2300895	1.987931	.0624865
Stddev	.1619024	.0026290	.0020200	.0004181	.0078155	.034481	.0008079
%RSD	28.43954	.6186699	3.316541	40.27724	3.396714	1.734497	1.292899
#1	.6981815	.4254592	.0624622	.0013102	.2211514	2.027715	.0621129
#2	.3875702	.4272630	.0586245	.0012473	.2334794	1.966665	.0619331
#3	.6221077	.4220840	.0616367	.0005566	.2356377	1.969415	.0634136

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4753-14LX5 Acquired: 11/14/2024 8:47:29 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D66L Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.2673526	.0013200	.0070920
Stddev	.0060723	.0012614	.0002603
%RSD	2.271263	95.56407	3.669607
#1	.2738514	-.000130	.0073815
#2	.2663828	.002169	.0068775
#3	.2618236	.001921	.0070170

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	972.1140	25540.99	2446.074	858.3619	1852.913
Stddev	.4329	42.59	47.546	1.4509	2.643
%RSD	.0445323	.1667511	1.943788	.1690364	.1426556
#1	971.8436	25496.87	2391.286	856.7609	1849.977
#2	971.8852	25581.86	2470.407	859.5901	1855.103
#3	972.6133	25544.25	2476.529	858.7348	1853.660

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4753-17 Acquired: 11/14/2024 8:52:00 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D89 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0202731	-.012212	2.726287	-.015230	.0106466	54.58509	.2760560
Stddev	.0080073	.002505	.005885	.004819	.0017866	6.83831	.0345044
%RSD	39.49738	20.50995	.2158674	31.63958	16.78138	12.52780	12.49906
#1	.0269547	-.014387	2.722361	-.015228	.0098486	48.66633	.2457347
#2	.0113974	-.009474	2.733054	-.020051	.0093980	62.07092	.3136001
#3	.0224672	-.012774	2.723447	-.010413	.0126931	53.01802	.2688333

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015433	.0016540	2.570755	.0766672	.0248215	.0375582	72.74901
Stddev	.0001887	.0003237	.323273	.0063013	.0007076	.0046264	8.95204
%RSD	12.22593	19.57111	12.57502	8.219036	2.850835	12.31798	12.30538
#1	.0014067	.0018150	2.300095	.0714966	.0256386	.0335479	65.14811
#2	.0017586	.0012813	2.928712	.0836859	.0244164	.0426198	82.61648
#3	.0014647	.0018655	2.483459	.0748191	.0244094	.0365069	70.48245

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.948216	1.435379	.0184697	-.013894	.4225669	.1414872	.1332783
Stddev	.236838	.129754	.0004904	.003079	.1381814	.0101261	.0130733
%RSD	12.15665	9.039735	2.655139	22.16383	32.70048	7.156915	9.809042
#1	1.738512	1.300748	.0190270	-.016333	.4386398	.1411207	.1223377
#2	2.205089	1.559634	.0181039	-.010434	.5520090	.1517916	.1477563
#3	1.901046	1.445756	.0182784	-.014915	.2770519	.1315493	.1297409

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.676681	1.784671	.0613514	.0017754	.6292942	9.050929	-.002082
Stddev	.342054	.003924	.0080664	.0005161	.0040090	1.074009	.002225
%RSD	20.40067	.2198901	13.14782	29.06902	.6370698	11.86628	106.8459
#1	1.347165	1.782410	.0536747	.0023709	.6256930	8.154262	-.001038
#2	2.030027	1.782401	.0697579	.0014954	.6336139	10.24121	-.000572
#3	1.652852	1.789202	.0606216	.0014598	.6285756	8.75731	-.004637

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4753-17 Acquired: 11/14/2024 8:52:00 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D89 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.9086747	.0133137	.0148304
Stddev	.1110804	.0028393	.0019902
%RSD	12.22444	21.32637	13.41980
#1	.8100849	.0121363	.0130878
#2	1.029025	.0165524	.0169991
#3	.886914	.0112525	.0144043

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1030.217	28475.66	2820.324	946.5158	1824.122
Stddev	2.360	2055.56	282.492	70.4290	3.817
%RSD	.2290594	7.218652	10.01631	7.440872	.2092317
#1	1027.627	30166.71	3069.424	1009.472	1820.817
#2	1030.779	26187.71	2513.390	870.455	1823.250
#3	1032.245	29072.57	2878.157	959.621	1828.300

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4753-18 Acquired: 11/14/2024 8:56:29 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D90 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000614	-.015146	2.046951	-.020634	.0074665	66.92857	.3685964
Stddev	.007457	.001855	.003461	.005713	.0034311	1.42686	.0082655
%RSD	1215.406	12.24475	.1690647	27.68901	45.95395	2.131913	2.242417
#1	.007556	-.013143	2.044556	-.021492	.0107915	65.40844	.3599626
#2	-.007053	-.016804	2.050919	-.025871	.0039382	68.23894	.3764363
#3	-.002344	-.015491	2.045379	-.014541	.0076697	67.13835	.3693902

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0026520	.0011620	1.769183	.2923248	.0288464	.0444002	102.3517
Stddev	.0000363	.0001873	.042606	.0013530	.0003294	.0041808	2.1264
%RSD	1.368082	16.11916	2.408238	.4628267	1.141818	9.416175	2.077537
#1	.0026830	.0013628	1.736688	.2928887	.0287426	.0406166	100.1185
#2	.0026121	.0009921	1.817420	.2933046	.0285813	.0488886	104.3521
#3	.0026609	.0011310	1.753440	.2907811	.0292151	.0436955	102.5845

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.670359	1.482636	.0195795	-.016111	.5190746	.1862790	.1372383
Stddev	.052281	.084602	.0002599	.000140	.2800760	.0049290	.0022838
%RSD	1.957840	5.706160	1.327420	.8718290	53.95679	2.646009	1.664101
#1	2.621023	1.531025	.0194234	-.015955	.2012615	.1872015	.1378755
#2	2.725157	1.531936	.0194356	-.016150	.7298335	.1809540	.1391357
#3	2.664897	1.384948	.0198795	-.016228	.6261290	.1906815	.1347035

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.795729	1.564813	.0864565	.0031460	.7539352	9.361273	-.005045
Stddev	.123137	.009399	.0018588	.0002041	.0052059	.177498	.001050
%RSD	6.857223	.6006321	2.150001	6.488308	.6904974	1.896084	20.81529
#1	1.849444	1.562835	.0843340	.0030609	.7563054	9.207281	-.005322
#2	1.882885	1.575043	.0872411	.0033789	.7575342	9.555403	-.003885
#3	1.654860	1.556560	.0877943	.0029981	.7479659	9.321136	-.005930

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4753-18 Acquired: 11/14/2024 8:56:29 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D90 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.9775137	.0161915	.0138346
Stddev	.0184716	.0011041	.0004478
%RSD	1.889652	6.819306	3.236833
#1	.9588150	.0151889	.0133176
#2	.9957495	.0173749	.0140898
#3	.9779767	.0160107	.0140966

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1066.773	28326.86	2771.250	947.1405	1828.119
Stddev	.457	145.98	48.999	4.8274	2.273
%RSD	.0428036	.5153517	1.768116	.5096792	.1243121
#1	1066.246	28377.32	2817.095	948.1311	1825.560
#2	1067.032	28162.34	2719.612	941.8947	1828.893
#3	1067.041	28440.91	2777.042	951.3958	1829.903

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4753-19 Acquired: 11/14/2024 9:00:58 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D91 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0229868	-.009563	.9365536	-.012154	.0054904	70.60647	.5096791
Stddev	.0077385	.001355	.0022505	.002613	.0013855	.06115	.0002707
%RSD	33.66506	14.16609	.2402972	21.50121	25.23556	.0866108	.0531164
#1	.0140797	-.009863	.9347301	-.015099	.0069395	70.67539	.5094325
#2	.0268217	-.010743	.9358620	-.011251	.0053531	70.58534	.5096361
#3	.0280589	-.008084	.9390688	-.010112	.0041786	70.55869	.5099688

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0024760	.0014395	1.046705	.0916702	.0469828	.0294369	84.27550
Stddev	.0000468	.0001988	.009462	.0005578	.0004178	.0019258	.14979
%RSD	1.891725	13.81089	.9040224	.6085327	.8893744	6.542043	.1777372
#1	.0024968	.0015304	1.047331	.0918803	.0465418	.0316511	84.18754
#2	.0025089	.0015767	1.055839	.0920924	.0473728	.0285076	84.44845
#3	.0024224	.0012115	1.036945	.0910378	.0470339	.0281519	84.19050

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.633009	1.785273	.0371319	-.019153	.3704031	.1869740	.1337634
Stddev	.002484	.103040	.0011605	.000525	.1725156	.0023877	.0003819
%RSD	.0374461	5.771665	3.125336	2.739021	46.57511	1.277014	.2854877
#1	6.635057	1.720322	.0361357	-.019484	.2804825	.1859609	.1340618
#2	6.633724	1.731416	.0368538	-.019426	.5693028	.1852599	.1333330
#3	6.630246	1.904081	.0384062	-.018548	.2614238	.1897012	.1338953

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.783295	1.353247	.0720554	.0020248	1.158684	6.886295	-.002031
Stddev	.015591	.001920	.0004272	.0004178	.008042	.027157	.001743
%RSD	.8742788	.1418725	.5928502	20.63617	.6940714	.3943697	85.79045
#1	1.781689	1.355028	.0725447	.0023957	1.154625	6.917301	-.004033
#2	1.799627	1.353499	.0717567	.0015721	1.167947	6.874859	-.001214
#3	1.768569	1.351214	.0718648	.0021066	1.153480	6.866727	-.000847

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4753-19 Acquired: 11/14/2024 9:00:58 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D91 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.061882	.0158152	.0124109
Stddev	.001076	.0003393	.0001405
%RSD	.1012885	2.145672	1.132204
#1	1.061856	.0161409	.0124084
#2	1.062970	.0158409	.0125527
#3	1.060820	.0154637	.0122717

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1177.628	31373.90	3077.921	1046.582	1823.361
Stddev	1.480	34.68	7.881	1.955	.039
%RSD	.1256386	.1105293	.2560352	.1868307	.0021653
#1	1177.769	31377.87	3068.826	1048.152	1823.337
#2	1176.083	31406.42	3082.240	1047.203	1823.407
#3	1179.032	31337.40	3082.698	1044.392	1823.340

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4753-20 Acquired: 11/14/2024 9:05:27 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D92 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0031461	-.014520	2.207972	-.012435	.0058521	76.13968	.4712990
Stddev	.0122551	.003652	.004936	.004885	.0004405	.28459	.0029315
%RSD	389.5403	25.15494	.2235714	39.28679	7.526918	.3737775	.6220033
#1	-.010506	-.012961	2.203962	-.015381	.0054246	76.03537	.4697597
#2	.013197	-.018693	2.206468	-.015128	.0063045	75.92197	.4694578
#3	.006748	-.011905	2.213485	-.006796	.0058271	76.46171	.4746795

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0021719	.0183518	2.086096	.0686693	.0570634	.1253291	111.4277
Stddev	.0001211	.0001441	.010868	.0006433	.0005950	.0016804	.2232
%RSD	5.576109	.7851719	.5209741	.9368544	1.042664	1.340771	.2002729
#1	.0023113	.0183812	2.093879	.0693582	.0567315	.1267743	111.1903
#2	.0021120	.0184789	2.073679	.0680842	.0567084	.1234853	111.6332
#3	.0020924	.0181952	2.090731	.0685654	.0577503	.1257279	111.4594

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.185490	2.366765	.0451481	-.016155	.4443330	.2397115	.8925205
Stddev	.016424	.096752	.0008620	.000153	.2526293	.0106129	.0040217
%RSD	.3924106	4.087937	1.909287	.9497831	56.85585	4.427342	.4505985
#1	4.181700	2.395420	.0450504	-.016162	.7291007	.2299848	.8881063
#2	4.171292	2.258923	.0443391	-.015998	.3567402	.2381192	.8959767
#3	4.203478	2.445953	.0460548	-.016305	.2471581	.2510306	.8934785

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.559187	1.007326	.0966834	.0018086	.7295627	9.000899	.0013600
Stddev	.134295	.007372	.0003649	.0006450	.0100867	.044711	.0026459
%RSD	5.247576	.7318681	.3774407	35.66306	1.382562	.4967376	194.5593
#1	2.415944	.999628	.0968204	.0024837	.7191183	9.031198	.0025857
#2	2.682252	1.008027	.0962698	.0017434	.7392488	8.949548	.0031707
#3	2.579365	1.014323	.0969599	.0011987	.7303209	9.021950	-.001677

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4753-20 Acquired: 11/14/2024 9:05:27 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D92 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.493781	.0167918	.0182638
Stddev	.004992	.0014731	.0001515
%RSD	.3341901	8.772918	.8293284
#1	1.496752	.0152778	.0180892
#2	1.488017	.0168775	.0183434
#3	1.496572	.0182203	.0183590

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1065.007	28474.74	2787.923	947.8414	1816.389
Stddev	1.378	73.96	8.793	3.5164	3.246
%RSD	.1293621	.2597295	.3154043	.3709883	.1786841
#1	1063.956	28448.77	2780.342	948.8069	1818.591
#2	1064.497	28417.27	2797.563	943.9432	1812.662
#3	1066.566	28558.18	2785.864	950.7742	1817.914

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4753-21 Acquired: 11/14/2024 9:09:54 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D93 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0059758	-.010984	2.228309	-.017950	.0127679	57.01407	.3358168
Stddev	.0046529	.002775	.000761	.003541	.0008762	.89246	.0054794
%RSD	77.86173	25.26294	.0341308	19.72586	6.862797	1.565339	1.631649
#1	.0029113	-.014189	2.229007	-.013867	.0132104	55.98364	.3294980
#2	.0036863	-.009383	2.227498	-.019815	.0133346	57.54160	.3386963
#3	.0113298	-.009382	2.228422	-.020168	.0117587	57.51697	.3392560

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015506	.0139774	2.017742	.1013223	.0283363	.2873918	109.8852
Stddev	.0000652	.0003573	.040327	.0005697	.0006779	.0061914	1.4767
%RSD	4.202744	2.556272	1.998642	.5622236	2.392468	2.154328	1.343849
#1	.0015076	.0143101	1.978961	.1014058	.0277663	.2806918	108.1801
#2	.0015187	.0135997	2.014810	.1018456	.0290859	.2885818	110.7346
#3	.0016256	.0140224	2.059456	.1007155	.0281565	.2929018	110.7410

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.798008	1.861584	.0590677	-.011953	.4243874	.1985796	.9865876
Stddev	.043889	.107172	.0005668	.000650	.2412193	.0154547	.0038450
%RSD	1.568567	5.757041	.9595521	5.435274	56.83942	7.782639	.3897300
#1	2.747424	1.745501	.0596203	-.011412	.1782370	.1809315	.9837797
#2	2.820627	1.956767	.0584877	-.011772	.4345723	.2096966	.9909700
#3	2.825974	1.882483	.0590950	-.012673	.6603530	.2051108	.9850132

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.940704	1.572001	.0962583	.0025755	.5532818	8.957884	.0132588
Stddev	.023878	.002892	.0021007	.0006212	.0018713	.100775	.0006024
%RSD	1.230390	.1839675	2.182353	24.11890	.3382157	1.124992	4.543230
#1	1.913953	1.569589	.0946003	.0019616	.5549142	8.849963	.0129262
#2	1.959866	1.575207	.0955541	.0025611	.5536915	8.974157	.0128960
#3	1.948292	1.571207	.0986207	.0032037	.5512396	9.049533	.0139541

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4753-21 Acquired: 11/14/2024 9:09:54 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D93 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.262435	.0100737	.0163417
Stddev	.017199	.0006225	.0002453
%RSD	1.362371	6.179090	1.500960
#1	1.242990	.0104106	.0160726
#2	1.268660	.0104550	.0165527
#3	1.275654	.0093554	.0163998

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1031.046	27458.59	2707.475	917.0555	1831.717
Stddev	2.279	70.36	27.086	2.9773	2.159
%RSD	.2210860	.2562530	1.000405	.3246542	.1178871
#1	1029.972	27387.88	2738.183	915.6100	1829.736
#2	1029.502	27459.29	2697.258	915.0769	1834.019
#3	1033.664	27528.61	2686.984	920.4795	1831.396

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4753-22 Acquired: 11/14/2024 9:14:20 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D95 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.016512	-.023763	1.826864	-.019104	.0170905	83.81028	.4053418
Stddev	.004117	.000039	.005953	.001721	.0010445	.07394	.0010755
%RSD	24.93144	.1657655	.3258618	9.010735	6.111853	.0882286	.2653232
#1	-.014085	-.023759	1.831461	-.017593	.0159738	83.86618	.4044756
#2	-.021265	-.023804	1.828991	-.020978	.0172539	83.83823	.4065455
#3	-.014186	-.023726	1.820140	-.018740	.0180437	83.72644	.4050042

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0017652	.0006406	1.711174	.0602831	.0293427	.0930969	168.8362
Stddev	.0000451	.0002370	.030120	.0017078	.0005311	.0015787	.3436
%RSD	2.556955	36.99172	1.760222	2.832998	1.809852	1.695735	.2035324
#1	.0017243	.0006349	1.711555	.0622539	.0299554	.0947867	168.9605
#2	.0017577	.0004066	1.680865	.0592391	.0290574	.0916599	168.4477
#3	.0018136	.0008804	1.741102	.0593562	.0290153	.0928440	169.1004

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.495671	2.799980	.0237666	-.017975	.7422484	.3790778	.3893552
Stddev	.018341	.140539	.0008773	.000398	.3014462	.0049679	.0029872
%RSD	.7349138	5.019292	3.691153	2.215526	40.61257	1.310523	.7672240
#1	2.479287	2.661788	.0246583	-.017851	.6261796	.3797855	.3926925
#2	2.492241	2.942754	.0229045	-.018420	.5160896	.3737941	.3884415
#3	2.515485	2.795397	.0237372	-.017653	1.084476	.3836540	.3869315

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.117223	.8063827	.1487258	.0011831	1.444793	12.31710	-.002452
Stddev	.070159	.0039421	.0023624	.0004872	.010258	.02589	.001144
%RSD	2.250700	.4888670	1.588458	41.17846	.7100126	.2102077	46.65880
#1	3.188512	.8109145	.1503359	.0012266	1.434549	12.30730	-.001141
#2	3.048251	.8037457	.1460137	.0016471	1.444765	12.29755	-.002967
#3	3.114906	.8044880	.1498279	.0006757	1.455066	12.34647	-.003247

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4753-22 Acquired: 11/14/2024 9:14:20 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D95 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.633622	.0155092	.0172762
Stddev	.003536	.0007646	.0000593
%RSD	.1342616	4.930140	.3435445
#1	2.633477	.0146320	.0172553
#2	2.637228	.0158614	.0173431
#3	2.630161	.0160344	.0172301

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1005.617	26750.84	2659.284	895.3537	1805.323
Stddev	1.304	6.87	3.971	5.4469	2.591
%RSD	.1296630	.0256908	.1493132	.6083546	.1435219
#1	1005.237	26758.70	2660.350	890.8841	1804.609
#2	1004.545	26747.82	2662.612	893.7562	1803.163
#3	1007.069	26745.99	2654.889	901.4207	1808.196

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: PB164781BL Acquired: 11/14/2024 9:18:49 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS781 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.006915	-.001976	-.004210	.0022943	-.000228	.0002710
Stddev	.002862	.003765	.002038	.0054474	.002464	.0181302
%RSD	41.39012	190.5920	48.40966	237.4297	1082.825	6689.320
#1	-.009559	.002157	-.005200	.0066912	-.000768	.0040662
#2	-.003876	-.002871	-.005564	.0039913	.002462	.0162032
#3	-.007310	-.005213	-.001866	-.003800	-.002377	-.019456

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001035	-.000061	-.000157	-.028318	-.001775	-.000832
Stddev	.000487	.000049	.000145	.009472	.000711	.000319
%RSD	47.02918	80.48839	92.28716	33.44782	40.08087	38.37363
#1	-.000773	-.000071	-.000017	-.021584	-.002230	-.001199
#2	-.001597	-.000008	-.000307	-.039149	-.000955	-.000676
#3	-.000735	-.000105	-.000149	-.024222	-.002139	-.000620

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002633	.0234199	-.002307	.0858039	-.000615	-.000425
Stddev	.0009284	.0236893	.000464	.0611619	.000493	.000359
%RSD	352.6481	101.1502	20.11255	71.28107	80.26825	84.39182
#1	.0004775	.0022454	-.001889	.1116562	-.001179	-.000580
#2	.0010658	.0190101	-.002226	.0159609	-.000397	-.000680
#3	-.000754	.0490042	-.002806	.1297945	-.000268	-.000015

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0866021	-.011419	-.002508	.0049502	-.001369	-.006181
Stddev	.0684173	.008934	.000429	.0522172	.001973	.000522
%RSD	79.00187	78.24007	17.10302	1054.845	144.1085	8.447564
#1	.0336586	-.021670	-.002347	-.028972	-.000785	-.005669
#2	.0622933	-.007294	-.002183	.065081	-.003567	-.006160
#3	.1638543	-.005292	-.002994	-.021258	.000246	-.006713

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: PB164781BL Acquired: 11/14/2024 9:18:49 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS781 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000691	-.000197	.0004817	F -.014681	-.000931	-.005799
Stddev	.000151	.004312	.0004115	.001069	.000794	.000893
%RSD	21.85014	2191.945	85.42237	7.280955	85.33252	15.40522
#1	-.000517	-.002168	.0006411	-.014262	-.000904	-.005092
#2	-.000783	.004749	.0007896	-.015896	-.001738	-.005503
#3	-.000774	-.003171	.0000144	-.013885	-.000150	-.006803

Elem	Sr4077
Units	ppm
Avg	-.000531
Stddev	.000095
%RSD	17.83105
#1	-.000639
#2	-.000462
#3	-.000492

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	949.8785	24802.67	2423.735	837.9103	1884.520
Stddev	1.6057	43.77	5.768	4.2102	4.681
%RSD	.1690477	.1764756	.2379780	.5024664	.2484160
#1	948.1377	24791.19	2430.300	840.8275	1880.259
#2	950.1962	24765.78	2419.482	833.0837	1889.531
#3	951.3017	24851.04	2421.421	839.8196	1883.769

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: PB164781BS Acquired: 11/14/2024 9:23:23 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS781 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0168892	.0572376	.0188289	.0659276	.1174025	.3848572
Stddev	.0019940	.0014523	.0014109	.0010858	.0038986	.0054094
%RSD	11.80644	2.537240	7.493242	1.646921	3.320738	1.405547
#1	.0182781	.0587265	.0183278	.0665381	.1132438	.3787549
#2	.0177851	.0571614	.0204219	.0665707	.1209745	.3890625
#3	.0146044	.0558250	.0177369	.0646740	.1179891	.3867544

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4496676	.0113431	.0111033	11.21115	.0222490	.1053734
Stddev	.0011184	.0000480	.0001565	.04655	.0006440	.0002985
%RSD	.2487250	.4228077	1.409458	.4152031	2.894384	.2833032
#1	.4484151	.0113409	.0110883	11.16447	.0215848	.1057077
#2	.4500212	.0112963	.0112667	11.21141	.0228707	.1052789
#3	.4505665	.0113922	.0109548	11.25757	.0222916	.1051336

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0502487	.2439017	.0324929	10.60212	.0881075	.0223042
Stddev	.0029172	.0117148	.0032788	.12230	.0004417	.0001678
%RSD	5.805556	4.803073	10.09097	1.153498	.5013711	.7523064
#1	.0470145	.2363558	.0287317	10.71470	.0884563	.0222428
#2	.0526814	.2379521	.0339983	10.47200	.0882554	.0224941
#3	.0510503	.2573974	.0347487	10.61964	.0876108	.0221758

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.82946	.1169281	.1168767	10.33365	.0167590	F -.006053
Stddev	.43633	.0057615	.0014697	.05795	.0029750	.001231
%RSD	4.029125	4.927384	1.257492	.5607439	17.75183	20.33027
#1	10.54377	.1231001	.1152568	10.26766	.0195961	-.006048
#2	11.33171	.1116915	.1181250	10.35708	.0136630	-.004824
#3	10.61290	.1159928	.1172481	10.37621	.0170180	-.007286

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: PB164781BS Acquired: 11/14/2024 9:23:23 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS781 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .0193072	.1907047	F .4760529	F -.000069	.2146436	.0257444
Stddev	.0006010	.0072532	.0015848	.001229	.0008464	.0002652
%RSD	3.112715	3.803358	.3328953	1786.755	.3943139	1.029939
#1	.0195283	.1824852	.4743462	-.001205	.2151794	.0260150
#2	.0186270	.1962067	.4763344	.001236	.2136679	.0257331
#3	.0197663	.1934222	.4774780	-.000238	.2150835	.0254850

Elem	Sr4077
Units	ppm
Avg	.2249437
Stddev	.0004108
%RSD	.1826424
#1	.2246332
#2	.2247882
#3	.2254096

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	943.5853	24711.99	2429.659	835.4792	1834.613
Stddev	2.0613	57.48	3.812	1.6072	2.956
%RSD	.2184544	.2325950	.1569109	.1923696	.1611249
#1	943.0384	24660.73	2425.325	836.9782	1831.539
#2	945.8648	24701.12	2432.497	833.7822	1837.435
#3	941.8525	24774.14	2431.155	835.6772	1834.865

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4752-01 Acquired: 11/14/2024 9:27:54 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D32 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0207099	-.013733	.8309195	-.015975	.0065261	78.51552	.2593298
Stddev	.0087774	.000989	.0092129	.003042	.0008234	.23427	.0013128
%RSD	42.38251	7.203586	1.108756	19.04089	12.61671	.2983708	.5062447
#1	.0233196	-.014837	.8259179	-.012464	.0073130	78.56631	.2583634
#2	.0109237	-.012927	.8252892	-.017834	.0065948	78.72022	.2608245
#3	.0278865	-.013435	.8415514	-.017625	.0056705	78.26002	.2588015

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0020086	.0003902	1.140884	.5377575	.0290092	.0158858	121.8744
Stddev	.0000128	.0000852	.056334	.0056004	.0004532	.0048175	.7021
%RSD	.6356192	21.83706	4.937787	1.041442	1.562255	30.32598	.5760902
#1	.0020211	.0003833	1.204721	.5439623	.0287014	.0212838	121.9655
#2	.0019956	.0003086	1.098138	.5362332	.0295296	.0143511	122.5265
#3	.0020089	.0004786	1.119794	.5330770	.0287966	.0120227	121.1312

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.011417	1.270880	.0167302	-.013865	.5177724	.2650972	.0864454
Stddev	.017995	.072093	.0001775	.000663	.0956557	.0045122	.0018180
%RSD	.3590810	5.672718	1.061071	4.781157	18.47446	1.702083	2.103038
#1	5.004572	1.261686	.0167166	-.013140	.4168426	.2688196	.0885122
#2	5.031829	1.203825	.0165600	-.014014	.5293800	.2600788	.0857302
#3	4.997848	1.347130	.0169142	-.014440	.6070946	.2663932	.0850937

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.522294	.8881169	.1032124	.0010076	.9480395	6.809246	-.005640
Stddev	.032585	.0203589	.0007444	.0003235	.0171108	.028879	.000463
%RSD	2.140495	2.292368	.7212362	32.11132	1.804856	.4241112	8.201474
#1	1.546137	.8915125	.1039526	.0008803	.9381061	6.840611	-.005673
#2	1.485165	.8662737	.1032205	.0013754	.9382152	6.803369	-.005162
#3	1.535579	.9065645	.1024639	.0007670	.9677972	6.783757	-.006085

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4752-01 Acquired: 11/14/2024 9:27:54 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D32 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.9653575	.0150895	.0128559
Stddev	.0025283	.0012347	.0000863
%RSD	.2619028	8.182695	.6716343
#1	.9672965	.0146539	.0129487
#2	.9662781	.0164829	.0128411
#3	.9624979	.0141315	.0127779

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	983.2666	26190.21	2612.877	875.9209	1798.068
Stddev	8.0582	179.53	7.531	7.8172	21.985
%RSD	.8195360	.6854717	.2882265	.8924508	1.222693
#1	986.5199	25995.25	2606.637	867.1859	1810.199
#2	989.1895	26226.69	2610.751	878.3177	1811.315
#3	974.0903	26348.70	2621.242	882.2590	1772.690

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4752-02 Acquired: 11/14/2024 9:32:23 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D33 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0169763	-.011390	.7988076	-.011852	.0004107	62.88188	.3746115
Stddev	.0087188	.002838	.0030386	.010400	.0015905	.03932	.0012806
%RSD	51.35865	24.91309	.3803895	87.75150	387.2474	.0625312	.3418537
#1	.0270361	-.011967	.8021230	-.010871	.0017786	62.88822	.3760806
#2	.0122870	-.013895	.7961554	-.022707	-.001334	62.91765	.3740231
#3	.0116057	-.008308	.7981446	-.001977	.000788	62.83977	.3737308

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015667	.0005788	1.238239	.0718946	.0222050	.0285767	85.44719
Stddev	.0001399	.0001974	.027283	.0002536	.0003350	.0009442	.04736
%RSD	8.929699	34.09629	2.203335	.3526810	1.508874	3.303936	.0554217
#1	.0017275	.0007688	1.259888	.0716245	.0225880	.0275257	85.39394
#2	.0014727	.0003749	1.207594	.0719317	.0220603	.0288512	85.48460
#3	.0014999	.0005927	1.247235	.0721275	.0219666	.0293531	85.46301

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.001523	1.569642	.0184554	-.014358	1.051953	.1730165	.1078165
Stddev	.004378	.114112	.0005891	.000228	.126421	.0063644	.0009298
%RSD	.4371609	7.269905	3.191983	1.586132	12.01772	3.678495	.8623638
#1	1.006537	1.585580	.0178360	-.014204	1.195277	.1670653	.1078179
#2	.998454	1.448400	.0185217	-.014249	.956293	.1797261	.1068860
#3	.999579	1.674947	.0190086	-.014619	1.004289	.1722581	.1087455

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.879189	.6941322	.0718964	.0015689	.7225576	7.013250	-.002561
Stddev	.084257	.0007409	.0008912	.0003139	.0059337	.009317	.000603
%RSD	4.483668	.1067303	1.239582	20.00675	.8212037	.1328447	23.56389
#1	1.801495	.6935423	.0709645	.0012155	.7201581	7.023915	-.002337
#2	1.867321	.6949637	.0719842	.0016760	.7181994	7.006690	-.002102
#3	1.968750	.6938905	.0727404	.0018153	.7293152	7.009146	-.003244

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4752-02 Acquired: 11/14/2024 9:32:23 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D33 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.9926978	.0161877	.0147721
Stddev	.0031729	.0008847	.0000569
%RSD	.3196227	5.465288	.3853582
#1	.9941469	.0171000	.0148163
#2	.9948874	.0153334	.0147079
#3	.9890591	.0161298	.0147920

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1049.179	27735.23	2755.769	927.8082	1822.712
Stddev	4.177	79.38	6.598	4.4692	8.095
%RSD	.3980867	.2862174	.2394417	.4816966	.4441024
#1	1046.089	27676.22	2748.320	925.8225	1818.584
#2	1047.516	27703.99	2758.111	932.9262	1817.514
#3	1053.930	27825.48	2760.878	924.6760	1832.039

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4752-03 Acquired: 11/14/2024 9:36:53 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D34 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0099907	-.011103	.2492872	-.007418	.0029408	60.97327	.2866876
Stddev	.0047263	.003276	.0016604	.004270	.0020131	.13365	.0003844
%RSD	47.30745	29.50882	.6660607	57.56559	68.45363	.2191943	.1340816
#1	.0153566	-.014735	.2477844	-.003138	.0009893	60.92310	.2868226
#2	.0064454	-.010206	.2490074	-.007438	.0050103	60.87196	.2862539
#3	.0081701	-.008369	.2510697	-.011678	.0028228	61.12474	.2869864

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015051	.0001539	.5308424	.0525719	.0187120	.0193408	80.07130
Stddev	.0000630	.0000962	.0137079	.0005123	.0001146	.0030679	.32302
%RSD	4.184770	62.54898	2.582285	.9744105	.6122859	15.86239	.4034103
#1	.0015602	.0001480	.5233485	.0530457	.0185848	.0228829	79.86946
#2	.0015188	.0000607	.5466635	.0526416	.0188072	.0175268	79.90058
#3	.0014364	.0002529	.5225150	.0520283	.0187438	.0176126	80.44385

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9028899	1.280509	.0158239	-.012428	.6464774	.1638649	.0950827
Stddev	.0028797	.019352	.0002470	.000324	.2379967	.0065808	.0006553
%RSD	.3189435	1.511282	1.561109	2.609694	36.81440	4.015972	.6892395
#1	.9001594	1.267020	.0160494	-.012793	.6642828	.1608799	.0943878
#2	.9026116	1.302682	.0158624	-.012173	.8750714	.1593055	.0956896
#3	.9058987	1.271824	.0155598	-.012317	.4000780	.1714091	.0951706

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.682454	.6010313	.0659424	.0013017	.5926309	6.666405	-.000218
Stddev	.102463	.0036778	.0002398	.0003264	.0063037	.003365	.001883
%RSD	6.090074	.6119094	.3636185	25.07468	1.063682	.0504733	863.6398
#1	1.570943	.6047929	.0662192	.0016631	.5854527	6.662807	.000727
#2	1.772452	.5974435	.0658028	.0010283	.5951751	6.666937	.001005
#3	1.703969	.6008574	.0658051	.0012137	.5972648	6.669473	-.002386

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4752-03 Acquired: 11/14/2024 9:36:53 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D34 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.9633186	.0164275	.0101337
Stddev	.0055239	.0013062	.0000749
%RSD	.5734288	7.951184	.7391033
#1	.9670258	.0154190	.0100475
#2	.9569699	.0159606	.0101825
#3	.9659602	.0179030	.0101711

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1041.754	27387.90	2692.999	915.4179	1834.427
Stddev	.400	89.28	2.414	1.8952	3.271
%RSD	.0383788	.3259889	.0896325	.2070308	.1783170
#1	1041.301	27322.42	2692.678	915.0849	1837.638
#2	1041.907	27351.67	2695.557	913.7113	1834.542
#3	1042.055	27489.60	2690.762	917.4575	1831.099

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4752-04 Acquired: 11/14/2024 9:41:23 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D35 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0197220	-.008143	.2386304	-.010352	.0024319	40.87311	.1733681
Stddev	.0049571	.000329	.0056635	.005626	.0021410	.26948	.0018329
%RSD	25.13484	4.045758	2.373315	54.34656	88.03725	.6593157	1.057249
#1	.0143494	-.008516	.2330821	-.014554	.0012488	40.84958	.1731000
#2	.0206982	-.008022	.2444024	-.003960	.0011435	40.61617	.1716840
#3	.0241184	-.007891	.2384066	-.012543	.0049033	41.15359	.1753203

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008650	-.000246	.4266928	.0441181	.0146648	.0164900	54.50373
Stddev	.0000855	.000142	.0127565	.0008092	.0003922	.0042640	.32262
%RSD	9.880163	57.69258	2.989625	1.834222	2.674467	25.85797	.5919243
#1	.0007725	-.000176	.4362542	.0448032	.0142860	.0214040	54.58847
#2	.0009410	-.000153	.4122083	.0432253	.0146394	.0137671	54.14719
#3	.0008816	-.000409	.4316157	.0443258	.0150691	.0142988	54.77552

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7495413	.9181826	.0086932	-.009331	.5680956	.0997082	.0552351
Stddev	.0052386	.1501072	.0005230	.000353	.4191848	.0110063	.0007731
%RSD	.6989026	16.34829	6.016215	3.782179	73.78771	11.03852	1.399652
#1	.7486585	.7618750	.0086030	-.009509	.7845010	.0963990	.0558386
#2	.7448003	.9314665	.0082213	-.008924	.8348494	.1119895	.0555028
#3	.7551652	1.061206	.0092555	-.009559	.0849364	.0907362	.0543637

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.147984	.3608487	.0440494	.0005340	.3313345	6.094981	-.006174
Stddev	.100994	.0044583	.0011880	.0000570	.0088295	.046834	.001878
%RSD	8.797520	1.235517	2.696959	10.67952	2.664816	.7684018	30.41572
#1	1.223010	.3622100	.0429515	.0005293	.3413184	6.130288	-.004058
#2	1.033152	.3558684	.0438862	.0005933	.3245536	6.041853	-.007643
#3	1.187790	.3644676	.0453106	.0004795	.3281315	6.112802	-.006820

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: P4752-04 Acquired: 11/14/2024 9:41:23 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MC0D35 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.7558017	.0089368	.0069561
Stddev	.0008108	.0008341	.0000245
%RSD	.1072770	9.333477	.3516737
#1	.7555596	.0096281	.0069302
#2	.7551396	.0080103	.0069594
#3	.7567060	.0091719	.0069787

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	995.0157	26444.18	2584.163	882.3844	1851.988
Stddev	1.5980	73.65	23.325	5.0962	3.368
%RSD	.1605997	.2785280	.9026160	.5775530	.1818528
#1	994.5488	26372.43	2567.369	876.5204	1849.343
#2	993.7032	26440.49	2610.795	884.8901	1850.840
#3	996.7952	26519.60	2574.326	885.7428	1855.779

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: CCV083 Acquired: 11/14/2024 9:45:53 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV083 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.993094	4.805386	24.72623	4.739012	4.812728	401.0389	10.26596
Stddev	.076940	.036729	.28007	.055931	.060252	.5781	.02407
%RSD	1.540922	.7643279	1.132677	1.180234	1.251933	.1441429	.2344534
#1	4.908378	4.763642	24.40290	4.676212	4.745366	401.5892	10.26684
#2	5.012277	4.832748	24.88209	4.757354	4.831341	401.0910	10.28957
#3	5.058627	4.819768	24.89369	4.783469	4.861478	400.4366	10.24146

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5067026	2.488284	401.1226	15.48590	2.502316	15.11022	401.0442
Stddev	.0022914	.026952	.5148	.01544	.028889	.07930	.7971
%RSD	.4522242	1.083176	.1283384	.0996852	1.154509	.5247788	.1987659
#1	.5041202	2.457170	401.7073	15.48239	2.469071	15.15816	401.8805
#2	.5084930	2.504478	400.7376	15.47252	2.521323	15.15380	400.2930
#3	.5074945	2.503203	400.9229	15.50279	2.516554	15.01869	400.9592

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.02785	398.6504	2.494082	1.246275	407.9403	2.469127	14.63563
Stddev	.00630	1.1257	.028688	.001533	1.2632	.017870	.14769
%RSD	.0419456	.2823689	1.150226	.1230322	.3096587	.7237493	1.009106
#1	15.03503	398.6664	2.461711	1.247353	409.2468	2.483019	14.46644
#2	15.02322	399.7680	2.504181	1.244520	407.8487	2.475395	14.73870
#3	15.02531	397.5169	2.516355	1.246953	406.7253	2.448967	14.70176

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	154.2110	5.082792	5.234864	4.814837	5.030176	5.020156	5.001037
Stddev	.3067	.049437	.014533	.054697	.072617	.012445	.052353
%RSD	.1988997	.9726420	.2776285	1.136015	1.443632	.2478971	1.046840
#1	154.4208	5.030069	5.219069	4.752367	4.948585	5.008023	4.940585
#2	154.3531	5.128108	5.247672	4.838010	5.054222	5.032890	5.031133
#3	153.8589	5.090199	5.237852	4.854133	5.087719	5.019556	5.031393

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: CCV083 Acquired: 11/14/2024 9:45:53 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV083 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.975138	5.189166	5.109810
Stddev	.003814	.007979	.010516
%RSD	.0766658	.1537710	.2057906
#1	4.979325	5.197557	5.115760
#2	4.971861	5.188268	5.116002
#3	4.974227	5.181674	5.097669

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	769.1691	22529.55	2304.479	640.6133	1409.061
Stddev	6.5914	43.08	3.409	5.6713	11.102
%RSD	.8569548	.1912368	.1479347	.8852879	.7879290
#1	776.7769	22485.53	2305.549	647.0573	1421.877
#2	765.5586	22571.63	2300.663	636.3818	1402.374
#3	765.1717	22531.51	2307.224	638.4009	1402.932

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: CCB083 Acquired: 11/14/2024 9:50:05 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB083 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.008287	-.000834	-.004336	-.004890	-.001180	.0258718	-.000392
Stddev	.007150	.000963	.002029	.005159	.001710	.0038712	.000992
%RSD	86.28644	115.3759	46.79325	105.5103	144.9465	14.96291	253.2590
#1	-.011053	-.001505	-.006472	-.007302	-.001049	.0271508	.000746
#2	-.013641	-.001267	-.004102	-.008401	.000461	.0289417	-.000849
#3	-.000167	.000269	-.002434	.001034	-.002951	.0215230	-.001072

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000124	.0000556	.0153707	-.000700	-.000560	-.000670	.0205729
Stddev	.000061	.0000575	.0203966	.000286	.000174	.001832	.0204769
%RSD	49.25425	103.3717	132.6977	40.83996	31.02302	273.5377	99.53371
#1	-.000143	.0001039	-.007203	-.000428	-.000667	-.001645	.0062156
#2	-.000056	-.000008	.020840	-.000673	-.000360	-.001808	.0114817
#3	-.000174	.000071	.032475	-.000998	-.000654	.001444	.0440213

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002523	.0248954	-.000753	.0002893	.2663853	-.013544	-.000460
Stddev	.001591	.1039725	.000124	.0003401	.0261552	.007666	.000745
%RSD	63.05457	417.6374	16.44051	117.5437	9.818568	56.59950	162.1236
#1	-.001250	-.046491	-.000735	.0001175	.2449860	-.005212	-.001157
#2	-.004307	.144184	-.000639	.0000695	.2955416	-.015120	.000325
#3	-.002013	-.023007	-.000885	.0006811	.2586282	-.020299	-.000547

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0348064	-.004896	.0005037	-.000776	.0020150	.0002580	-.001620
Stddev	.0921709	.002218	.0005415	.000454	.0032285	.0009114	.001366
%RSD	264.8100	45.29290	107.4947	58.58291	160.2227	353.2659	84.30966
#1	.1194808	-.002424	.0006656	-.001168	.0019311	-.000466	-.000994
#2	.0483097	-.005553	-.000100	-.000278	-.001171	-.000042	-.000679
#3	-.063371	-.006711	.000946	-.000880	.005285	.001281	-.003186

Reviewed By:Mohan
On:11/14/2024 1:14:17 PM
Inst Id :P5

Sample Name: CCB083 Acquired: 11/14/2024 9:50:05 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v730) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB083 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.000219	-.001619	-.000217
Stddev	.002626	.000754	.000029
%RSD	1197.726	46.54304	13.10783
#1	-.002673	-.002490	-.000211
#2	-.000534	-.001183	-.000249
#3	.002550	-.001185	-.000193

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	942.2302	24781.98	2397.668	837.8628	1876.818
Stddev	1.1782	62.32	2.507	1.5146	3.696
%RSD	.1250435	.2514595	.1045700	.1807724	.1969447
#1	941.0794	24740.15	2395.818	836.7896	1872.564
#2	942.1772	24853.60	2396.664	837.2035	1878.643
#3	943.4341	24752.20	2400.521	839.5954	1879.246

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Prep Standard - Chemical Standard Summary

Order ID : P4753

Test : Metals CLP4

Prepbatch ID : PB164781,

Sequence ID/Qc Batch ID: LB133447,

Standard ID :
MP83122,MP83134,MP83136,MP83137,MP83138,MP83139,MP83140,MP83141,MP83142,MP83143,MP83144,MP83145,MP83146,MP83147,MP83148,MP83149,

Chemical ID :
M5130,M5218,M5223,M5289,M5295,M5296,M5390,M5395,M5429,M5476,M5498,M5513,M5515,M5519,M5634,M5658,M5698,M5751,M5768,M5798,M5799,M5800,M5801,M5802,M5806,M5815,M5816,M5817,M5818,M5819,M5820,M5875,M5960,M5962,M5970,M5976,M5978,M5982,M5984,M5985,M5990,M5999,M6021,M6023,M6025,M6028,M6030,M6033,M6111,M6116,M6117,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	MP83122	11/07/2024	12/07/2024	Janvi Patel	None	None	Sarabjit Jaswal 11/07/2024

FROM 1000.00000ml of M6116 + 1000.00000ml of W3112 = Final Quantity: 2000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
902	ICP AES CAL BLK (SO/ICB/CCB)	MP83134	10/30/2024	11/30/2024	Kareem Khairalla	None	None	Mohan Bera 11/08/2024

FROM 125.00000ml of M6111 + 2350.00000ml of W3112 + 25.00000ml of M6117 = Final Quantity: 2500.000 ml

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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	MP83136	10/30/2024	11/30/2024	Kareem Khairalla	None	None	Mohan Bera 11/08/2024

FROM 4.00000ml of M5289 + 4.00000ml of M5498 + 4.00000ml of M5515 + 4.00000ml of M5768 + 4.00000ml of M5806 + 30.00000ml of MP83134 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1004	ICPAES ISM01.2 (S5)	MP83137	10/30/2024	11/30/2024	Kareem Khairalla	None	None	Mohan Bera 11/08/2024

FROM 0.25000ml of M5798 + 0.50000ml of M5429 + 0.50000ml of M5476 + 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 M5751 + 14.50000ml of M5515 + 14.50000ml of M5658 + 14.50000ml of M6033 + 2.00000ml of M5513 + 22.50000ml of M5498 + 22.50000ml of M5768 + 5.00000ml of M5296 + 5.00000ml of M5395 + 5.00000ml of M5802 + 5.00000ml of M5818 + 5.00000ml of M5875 + 303.50000ml of MP83134 = 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)	MP83138	10/30/2024	11/30/2024	Kareem Khairalla	None	None	Mohan Bera 11/08/2024

FROM 250.00000ml of MP83134 + 250.00000ml of MP83137 = Final Quantity: 500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1007	ICPAES ISM01.2(S3)	MP83139	10/30/2024	11/30/2024	Kareem Khairalla	None	None	Mohan Bera 11/08/2024

FROM 25.00000ml of MP83137 + 75.00000ml of MP83134 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1008	ICPAES ISM01.2(S2)	MP83140	10/30/2024	11/30/2024	Kareem Khairalla	None	None	Mohan Bera 11/08/2024

FROM 12.50000ml of MP83137 + 87.50000ml of MP83134 = 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.)	MP83141	10/30/2024	11/30/2024	Kareem Khairalla	None	None	Mohan Bera 11/08/2024

FROM 0.02000ml of M5815 + 0.03000ml of M5429 + 0.10000ml of M5798 + 0.10000ml of M6028 + 0.14000ml of M5799 + 0.20000ml of M5476 + 0.20000ml of M5515 + 0.20000ml of M5658 + 0.20000ml of M5801 + 0.20000ml of M5817 + 0.20000ml of M5976 + 0.20000ml of M6025 + 0.20000ml of M6030 + 0.30000ml of M5698 + 0.40000ml of M6033 + 0.50000ml of M5751 + 0.50000ml of M6023 + 0.70000ml of M5962 + 0.80000ml of M5960 + 1.00000ml of M5800 + 1.00000ml of M6021 + 1.20000ml of M5802 + 1.20000ml of M5819 + 10.00000ml of M5498 + 10.00000ml of M5519 + 10.00000ml of M5768 + 10.00000ml of M5806 + 10.00000ml of M5818 + 2.00000ml of M5978 + 4.00000ml of M5390 + 34.24000ml of MP83134 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1003	ICPAES ISM01.2 S1	MP83142	10/30/2024	11/30/2024	Kareem Khairalla	None	None	Mohan Bera 11/08/2024

FROM 0.50000ml of MP83141 + 99.50000ml of MP83134 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2054	ICV-ICPAES	MP83143	10/30/2024	11/30/2024	Kareem Khairalla	None	None	Mohan Bera 11/08/2024

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 MP83134 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
904	ICP AES ICSA SOLN	MP83144	10/30/2024	11/19/2024	Kareem Khairalla	None	None	Mohan Bera 11/08/2024

FROM 25.00000ml of M5130 + 225.00000ml of MP83134 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
905	ICP AES ICSAB SOLN	MP83145	10/30/2024	11/19/2024	Kareem Khairalla	None	None	Mohan Bera 11/08/2024

FROM 25.00000ml of M5130 + 25.00000ml of M5223 + 200.00000ml of MP83134 = 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)	MP83146	10/30/2024	11/30/2024	Kareem Khairalla	None	None	Mohan Bera 11/08/2024

FROM 0.75000ml of M5498 + 0.75000ml of M5768 + 1.22500ml of M6033 + 1.25000ml of M5515 + 1.25000ml of M5806 + 19.77500ml of MP83134 + 25.00000ml of MP83137 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
921	ICPAES SPIKE SOL#6	MP83147	10/30/2024	11/30/2024	Kareem Khairalla	None	None	Mohan Bera 11/08/2024

FROM 2.50000ml of M5962 + 50.00000ml of M5990 + 50.00000ml of M5999 + 147.50000ml of MP83134 = Final Quantity: 250.000 ml

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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	MP83148	10/30/2024	11/30/2024	Kareem Khairalla	None	None	Mohan Bera 11/08/2024

FROM 1.00000ml of M5984 + 10.00000ml of M5985 + 1969.00000ml of W3112 + 20.00000ml of M6117 = Final Quantity: 2000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
903	ICP AES RINSE SOLN	MP83149	10/30/2024	11/30/2024	Kareem Khairalla	None	None	Mohan Bera 11/08/2024

FROM 200.00000ml of M6117 + 9800.00000ml of W3112 = Final Quantity: 10000.000 ml

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	PART A / ICSA (ICP) STOCK SOLN	ICSA-1211	11/19/2024	05/20/2024 / bin	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	11/19/2024	05/20/2024 / jaswal	04/20/2021 / bin	M5223

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58113 / Aluminum (Al) 10,000PPM	070622	07/06/2025	09/02/2022 / jaswal	07/12/2022 / jaswal	M5289

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	ICV-1 / ICV (ICP/ICPMS) STOCK SOLN	ICV-1014	02/05/2025	08/07/2024 / jaswal	02/20/2020 / bin	M5295

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	Z9651Q / CHEM-CLP-4/.25L	S2-MEB711673	11/02/2026	09/19/2022 / jaswal	08/20/2022 / jaswal	M5296

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57056 / Ba, 1000 PPM, 125 ml	072122	07/21/2025	08/07/2024 / jaswal	09/18/2022 / bin	M5390

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CLPP-CAL-3 / CLP CAL SOLUTION #3, 125mL	T2-MEB714159	01/13/2027	01/30/2024 / bin	09/19/2022 / bin	M5395

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	08/09/2025	07/29/2024 / jaswal	03/16/2023 / jaswal	M5476

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	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

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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.	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 #
PCI Scientific Supply, Inc.	1403 / Hydrogen Peroxide, 30% 1 gal	820803	02/03/2025	04/18/2024 / jaswal	08/03/2022 / Al-Terek	M5634

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.	58025 / Mn, 1000 PPM, 500 ml	102623	10/26/2026	04/18/2024 / jaswal	10/27/2023 / jaswal	M5698

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58029 / Cu, 1000 PPM, 500 ml	071723	07/17/2026	10/01/2024 / Jaswal	08/25/2023 / jaswal	M5751

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58112 / Mg, 10000 PPM, 500 ml	091823	09/18/2026	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.	57004 / Be, 1000 PPM, 125 ml	102523	10/25/2026	02/09/2024 / bin	02/09/2024 / bin	M5798

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57050 / Sn, 1000 PPM, 125 ml	071123	07/11/2026	02/09/2024 / bin	02/09/2024 / bin	M5799

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57027 / CO, 1000 PPM, 125 ml	091923	09/19/2026	05/31/2024 / bin	02/09/2024 / bin	M5800

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57033 / As, 1000 PPM, 125 ml	111323	11/13/2026	02/09/2024 / bin	02/09/2024 / bin	M5801

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57051 / Sb, 1000 PPM, 125 ml	120523	12/05/2026	08/07/2024 / jaswal	01/03/2024 / jaswal	M5802

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58111 / Na, 10000 PPM, 500 ml	122223	12/22/2026	08/01/2024 / Jaswal	01/03/2024 / jaswal	M5806

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57115 / P, 10000 PPM, 125 ml	041723	04/17/2026	05/21/2024 / Jaswal	02/09/2024 / jaswal	M5815

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57016 / S, 1000 PPM, 125 ml	122923	12/29/2026	05/20/2024 / Jaswal	02/09/2024 / jaswal	M5816

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57116 / S, 10000 PPM, 125 ml	071123	07/11/2026	03/01/2024 / jaswal	02/09/2024 / jaswal	M5817

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57014 / Si, 1000 PPM, 125 ml	122023	12/20/2026	03/06/2024 / jaswal	02/09/2024 / jaswal	M5818

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

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57015 / P, 1000 PPM, 125 ml	091123	09/11/2026	05/01/2024 / jaswal	02/09/2024 / jaswal	M5820

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
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 #
Absolute Standards, Inc.	57028 / Ni, 1000 PPM, 125 ml	041124	04/11/2027	07/03/2024 / kareem	06/11/2024 / kareem	M5960

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57034 / Se, 1000 PPM, 125 ml	060624	06/06/2027	07/02/2024 / Jaswal	06/14/2024 / Jaswal	M5962

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57003 / Li, 1000 PPM, 125 ml	061224	06/21/2027	07/01/2024 / Jaswal	07/01/2024 / Jaswal	M5970

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGMO1-1 / MOLYBDENUM 125mL 1000ug/mL	T2-MO720876	07/17/2027	08/07/2024 / jaswal	02/22/2024 / Jaswal	M5976

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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	CGY10-1 / YTTRIUM 125mL 10,000ug/mL	V2-Y740548	02/20/2029	08/05/2024 / kareem	06/14/2024 / Jaswal	M5984

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGIN10-5 / INDIUM 1 x 500 ml	U2-IN729349	02/21/2028	10/08/2024 / Jaswal	06/14/2024 / Jaswal	M5985

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CLPP-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

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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.	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	06/12/2027	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	01/25/2019 / Jaswal	M6028

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57047 / Ag, 1000 PPM, 125 ml	122823	12/28/2026	08/05/2024 / kareem	08/05/2024 / Jaswal	M6030

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58113 / Al, 10000 PPM, 500 ml	011623	01/16/2026	08/07/2024 / Jaswal	01/03/2024 / Jaswal	M6033

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9530-33 / Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L)	22F0762009	05/09/2027	11/04/2024 / Eman	09/29/2024 / Janvi	M6111

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	24B1362001	05/03/2025	11/04/2024 / Janvi	09/29/2024 / Eman	M6116

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	24B1362001	05/06/2025	11/06/2024 / Janvi	09/29/2024 / Eman	M6117

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	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 8/15/24

M6028

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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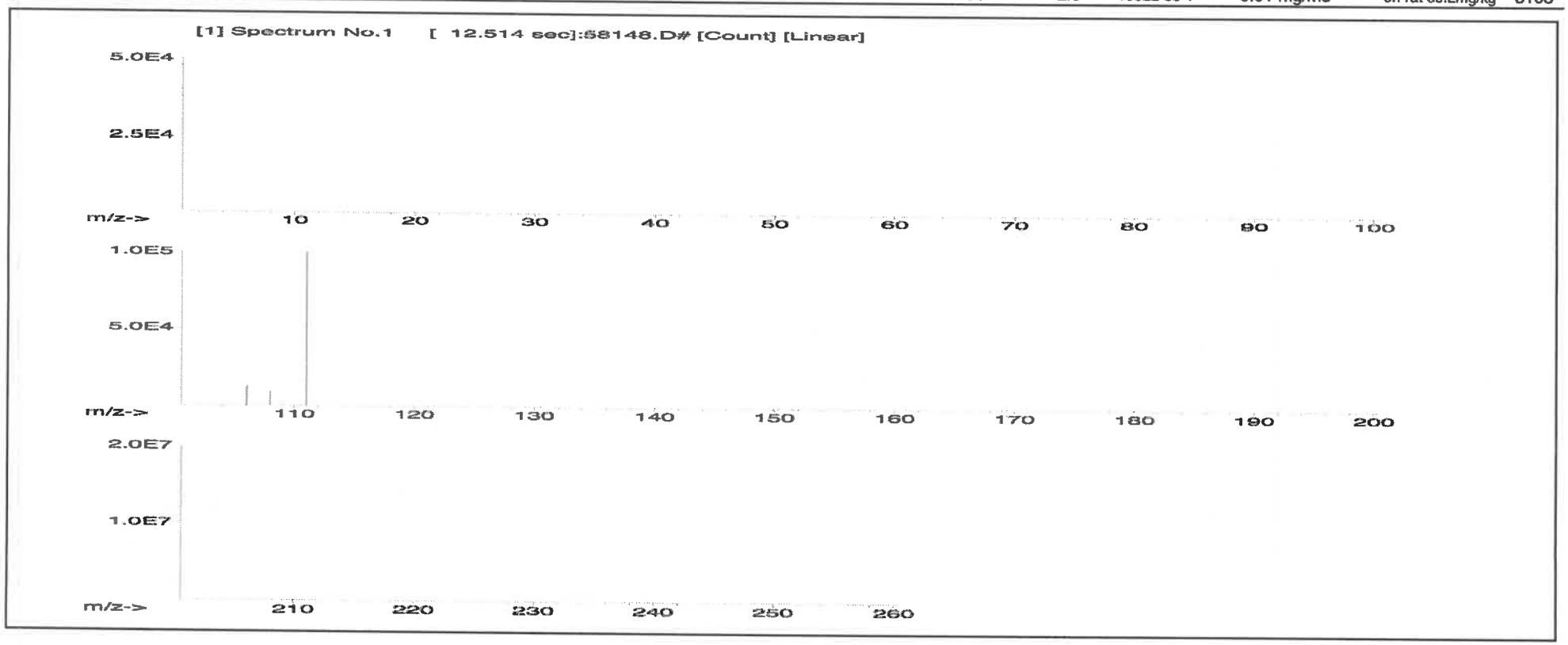
CERTIFIED WEIGHT REPORT:

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:

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).

M5296 OP: 09/19/2022 BH

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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CHEM-CLP-4
Lot Number:	S2-MEB711673
Matrix:	3% (v/v) HNO3 3% (v/v) HF
Value / Analyte(s):	1 000 µg/mL ea: Boron, Molybdenum, Silicon, Tin, Titanium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Boron, B	**1 000 ± 6 µg/mL**	**Molybdenum, Mo**	**1 000 ± 6 µg/mL**
Silicon, Si	**1 000 ± 7 µg/mL**	**Tin, Sn**	**1 000 ± 6 µg/mL**
Titanium, Ti	**1 000 ± 7 µg/mL**		

Density: 1.030 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
B	ICP Assay	3107	110830
Mo	ICP Assay	3134	130418
Si	ICP Assay	3150	130912
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	3162a	130925

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 02, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **November 02, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Refine your results. Redefine your industry.

Certificate of Analysis

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Christiansburg, VA 24073 USA
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F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CLPP-CAL-1
Lot Number:	T2-MEB714417
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	5 000 µg/mL ea: Calcium, Potassium, Magnesium, Sodium, 2 000 µg/mL ea: Aluminum, Barium, 1 000 µg/mL ea: Iron, 500 µg/mL ea: Nickel, Vanadium, Zinc, Cobalt, Manganese, 250 µg/mL ea: Silver, Copper, 200 µg/mL ea: Chromium, 50 µg/mL ea: Beryllium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	**2 000 ± 7 µg/mL**	**Barium, Ba**	**2 000 ± 9 µg/mL**
Beryllium, Be	**50.00 ± 0.26 µg/mL**	**Calcium, Ca**	**5 000 ± 22 µg/mL**
Chromium, Cr	**200.0 ± 1.0 µg/mL**	**Cobalt, Co**	**500.0 ± 2.4 µg/mL**
Copper, Cu	**250.0 ± 1.0 µg/mL**	**Iron, Fe**	**1 000 ± 4 µg/mL**
Magnesium, Mg	**5 000 ± 20 µg/mL**	**Manganese, Mn**	**500.0 ± 2.0 µg/mL**
Nickel, Ni	**500.0 ± 2.2 µg/mL**	**Potassium, K**	**5 000 ± 19 µg/mL**
Silver, Ag	**250.0 ± 1.1 µg/mL**	**Sodium, Na**	**5 000 ± 18 µg/mL**
Vanadium, V	**499.7 ± 2.2 µg/mL**	**Zinc, Zn**	**500.0 ± 2.2 µg/mL**

Density: 1.118 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cr	Calculated		See Sec. 4.2
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
V	IC Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Note: This solution contains Silver (Ag), please refer to our Sample Preparation Guide for more information.

https://www.inorganicventures.com/sample-preparation-guide/samples-containing-silver

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 27, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 27, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

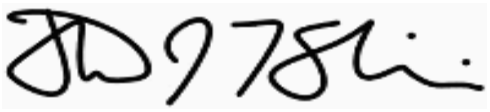
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CLPP-CAL-3
Lot Number:	T2-MEB714159
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Arsenic, Lead, Selenium, Thallium, 500 µg/mL ea: Cadmium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Arsenic, As	**1 000 ± 8 µg/mL**	**Cadmium, Cd**	**500.0 ± 2.1 µg/mL**
Lead, Pb	**1 000 ± 5 µg/mL**	**Selenium, Se**	**1 000 ± 8 µg/mL**
Thallium, Tl	**1 000 ± 7 µg/mL**		

Density: 1.043 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
As	ICP Assay	3103a	100818
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Tl	ICP Assay	3158	151215

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

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- 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.

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- 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

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 13, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 13, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

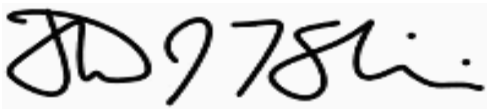
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

R: 8/5/24

294

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

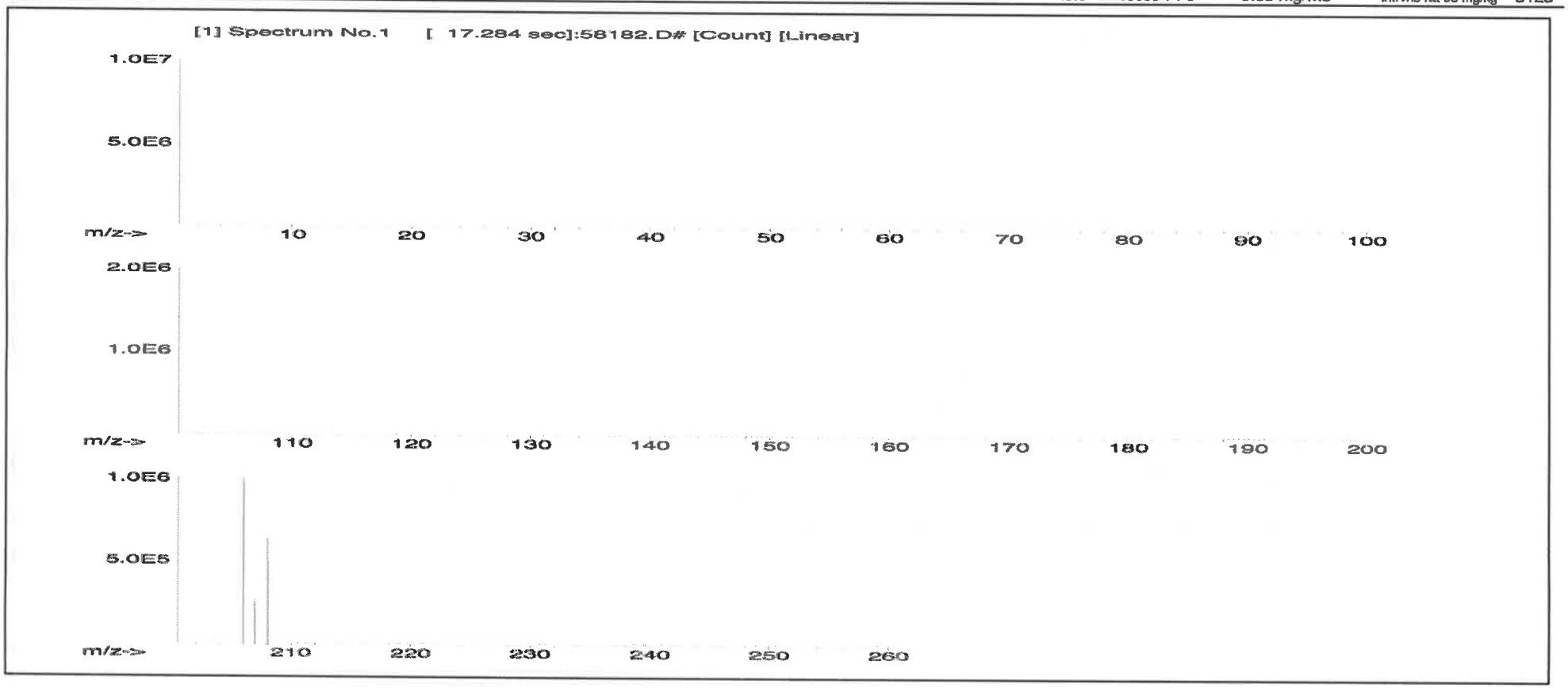
Weight shown below was diluted to (mL): 2000.02 0.058 Flask Uncertainty

		Lot #	
Solvent:	24002546		Nitric Acid
	2%	40.0 (mL)	Nitric Acid

5E-05 Balance 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



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

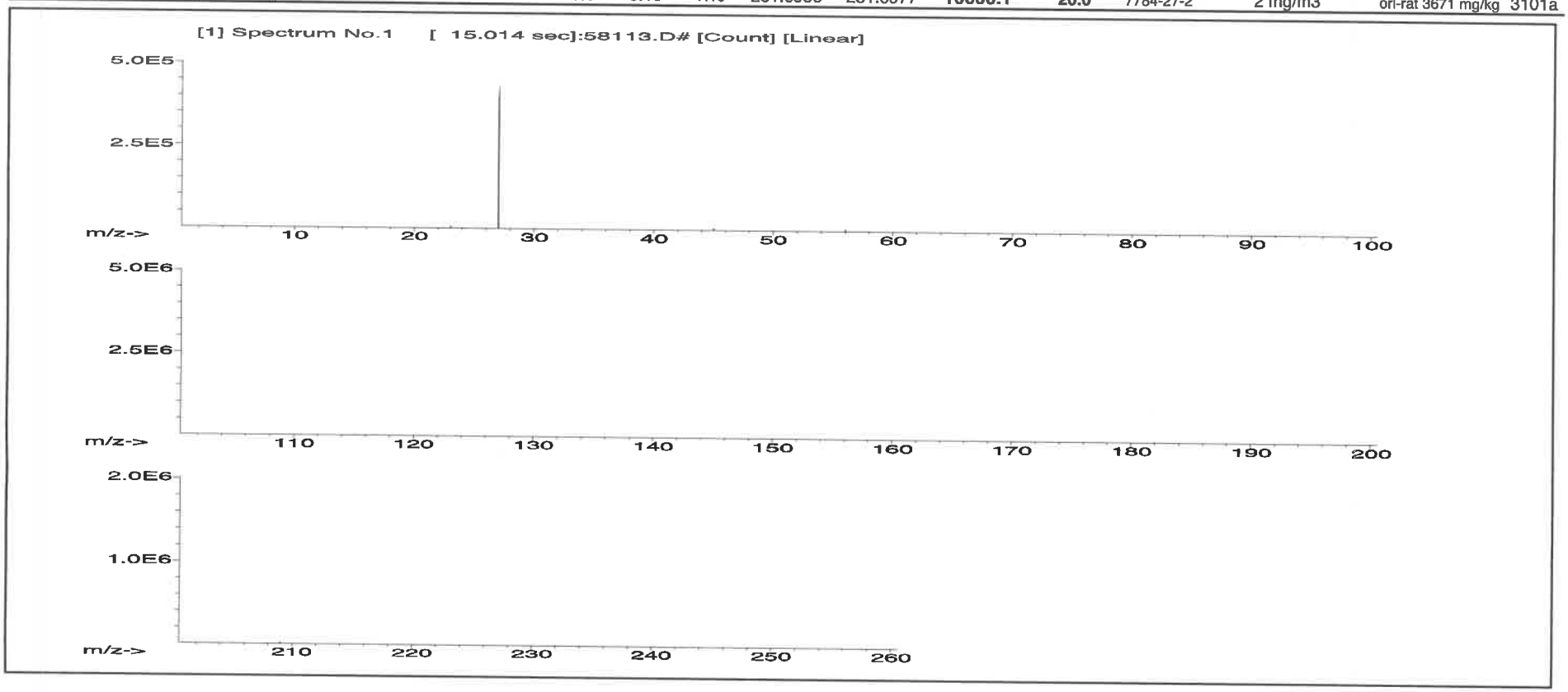
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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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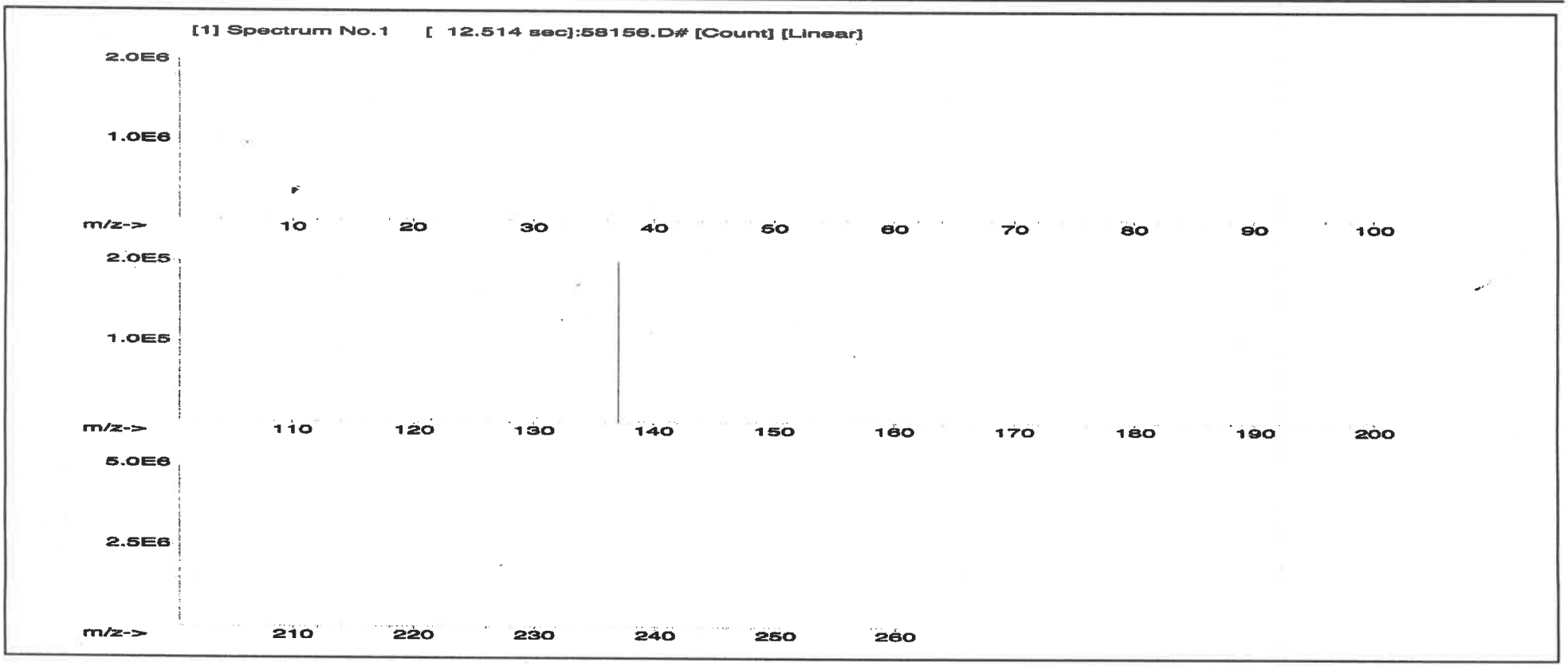
CERTIFIED WEIGHT REPORT:

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)

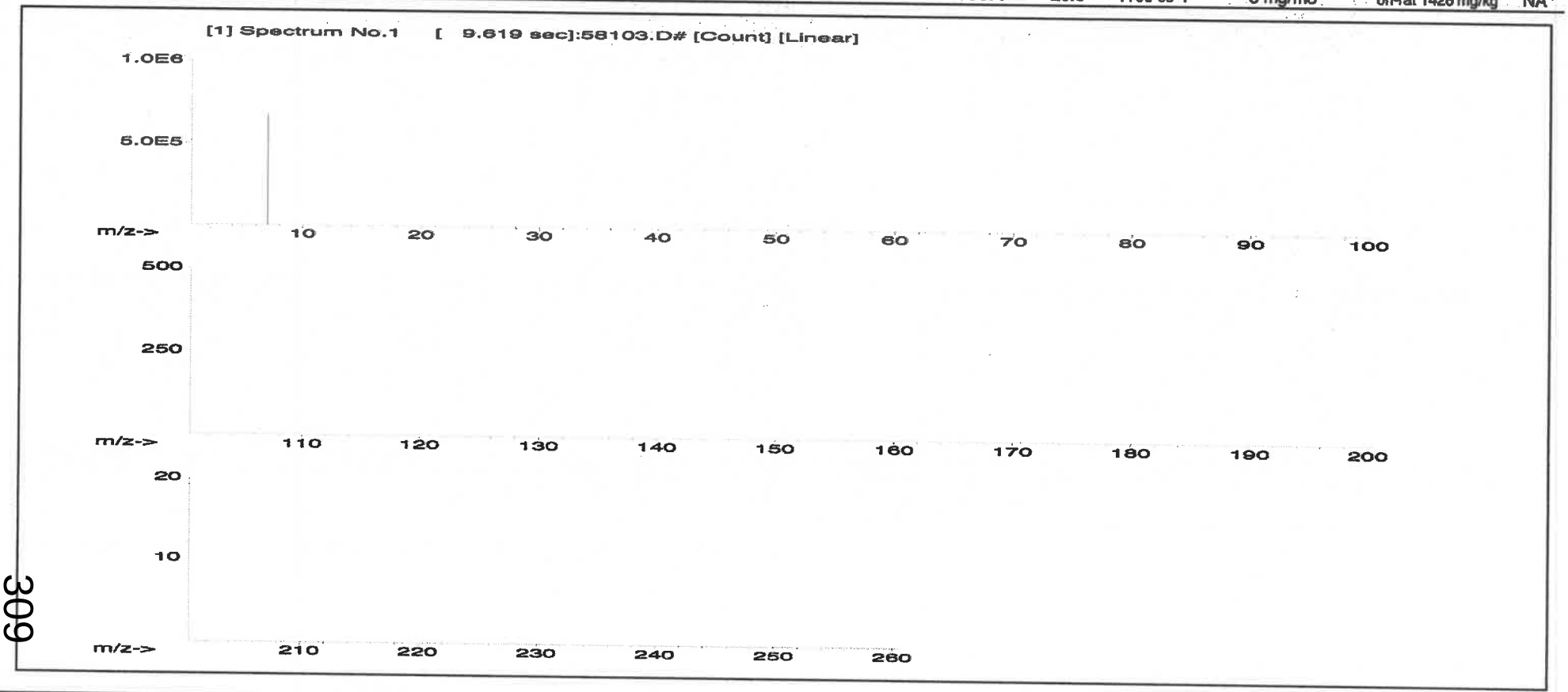
Expiration Date: 070625
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 1000.12

	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.
* 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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M5497 - M5498 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

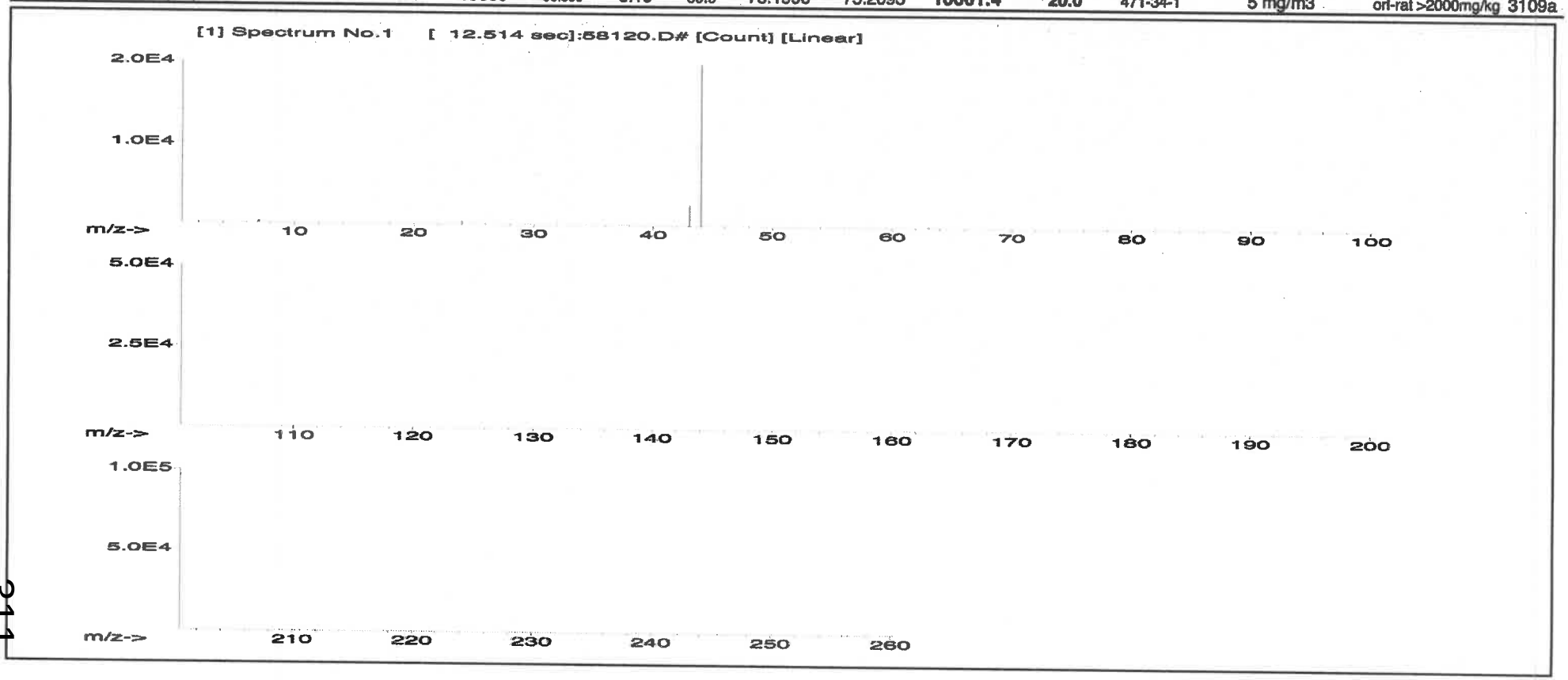
		Lot #	
Solvent:	21110221	Nitric Acid	
2%	60.0 (mL)	Nitric Acid	

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



311

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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MS513 R:03/17/23

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CERTIFIED WEIGHT REPORT:

Part Number: 57182
Lot Number: 061522
Description: Lead (Pb)

Expiration Date: 061525
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.02

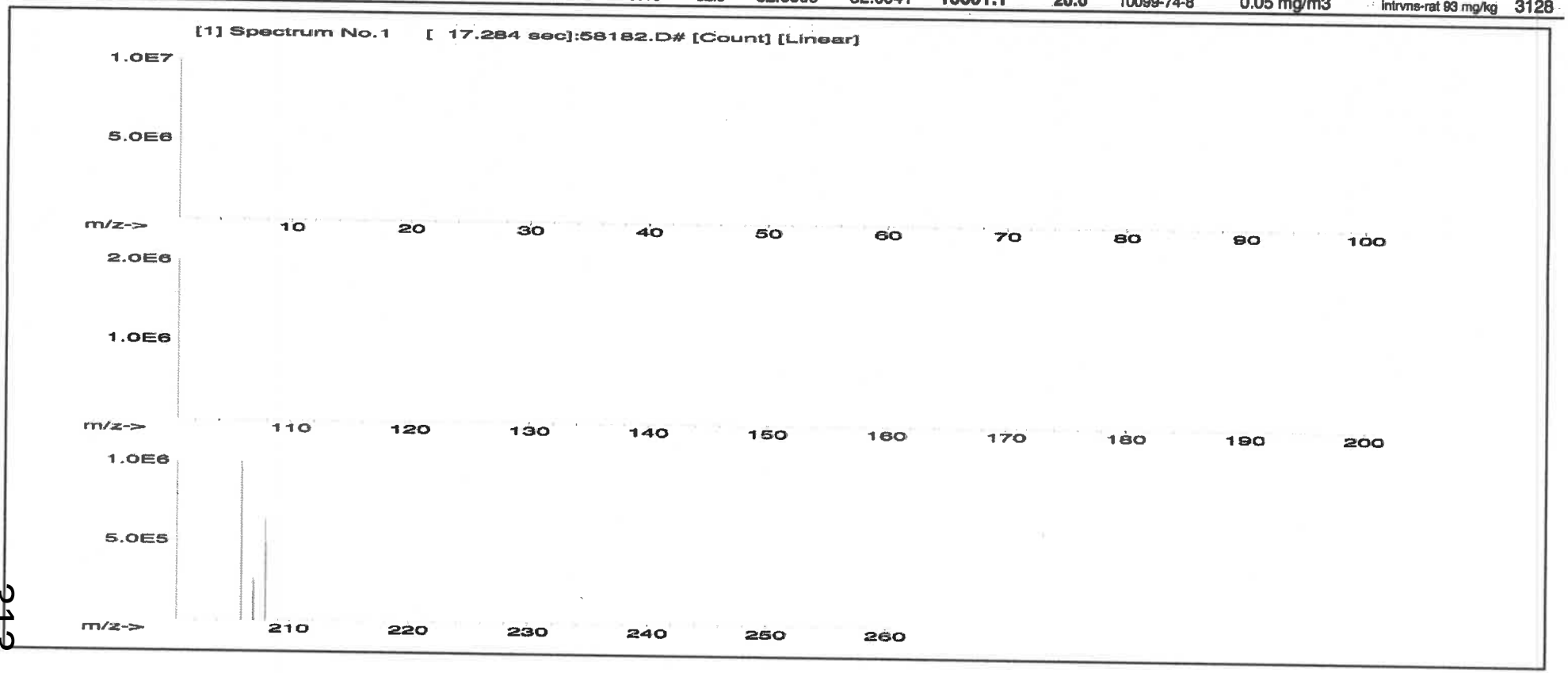
	Lot #		
Solvent:	20510011	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Giovanni Esposito

Formulated By:	Giovanni Esposito	061522
Reviewed By:	Pedro L. Rentas	061522

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lead(II) nitrate (Pb)	IN029	PBD122016A1	10000	99.999	0.10	62.5	32.0006	32.0041	**10001.1**	**20.0**	10099-74-8	0.05 mg/m3	Intrvns-rat 93 mg/kg	3128



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	T	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* 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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M5514 - M5515 R: 03/17/22

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CERTIFIED WEIGHT REPORT:

Part Number: 58126
Lot Number: 092122
Description: Iron (Fe)

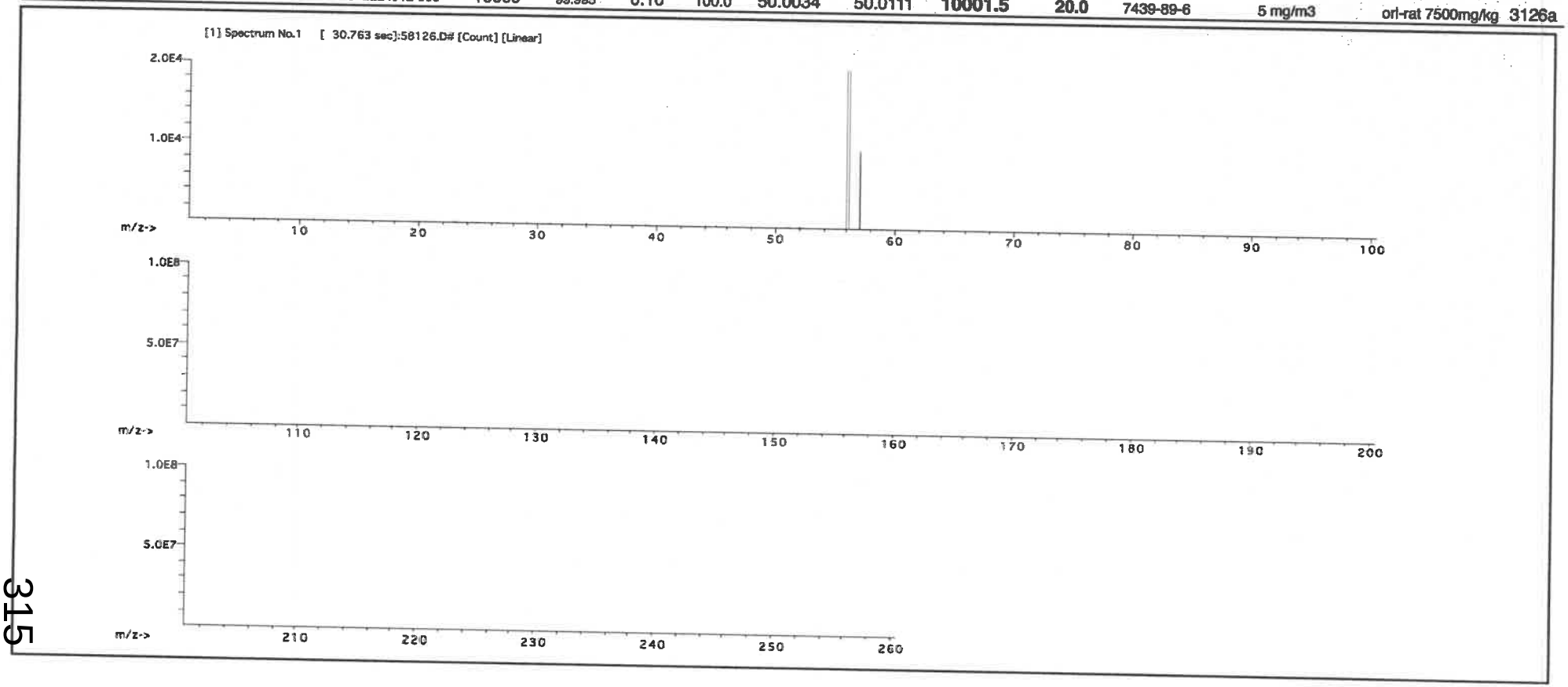
Expiration Date: 092125
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 5000.1

	Lot #		
Solvent:	20510011	Nitric Acid	
7.0%	350.0 (mL)	Nitric Acid	
5E-05	Balance Uncertainty		
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



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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	<0.10	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.10	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.05	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.10	Ge	<0.10	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.05
B	<0.02	Cu	<0.10	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* 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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M5519. M5520 (BH) R:03/17/23

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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

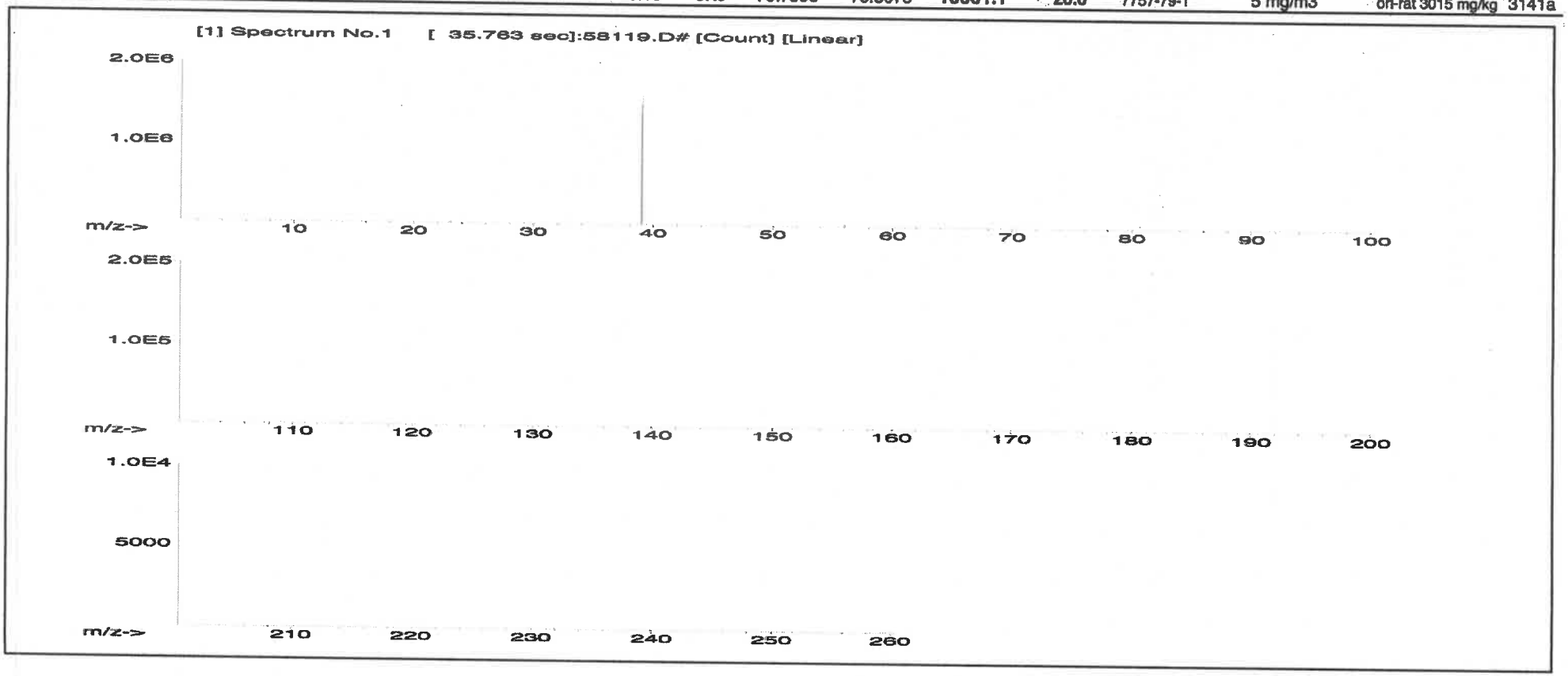
	Lot #		
Solvent:	20510011	Nitric Acid	
2%	60.0 (mL)	Nitric Acid	

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



318

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	T	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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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).

CORCO CHEMICAL CORPORATION

Manufacturers of ACS Reagents and Semiconductor Grade Chemicals

CERTIFICATE OF ANALYSIS

Date: 8/3/2022 MS631 MS632 MS633 MS634 **Lot No 820803**

Hydrogen Peroxide, ACS
Reagent Grade

TEST	MAXIMUM LIMITS	RESULT
Appearance	Colorless and free from suspended matter or sediment	Pass
Assay	29-32%	31.4%
Color (APHA)	10	5
Residue after Evaporation	0.002%	.0001%
Titratable Acid	0.0006 meq/g	< .0006 meq/g
Chloride (Cl)	2 ppm	< 1 ppm
Nitrate (NO_3)	2 ppm	< 1 ppm
Phosphate	2 ppm	< 1 ppm
Sulfate (SO_4)	5 ppm	< .5 ppm
Ammonium (NH_4)	5 ppm	< 1 ppm
Heavy Metals (as Pb)	1 ppm	< .1 ppm
Iron (Fe)	0.5 ppm	< .1 ppm
Sodium Stannate	200 – 300 ppb	Pass

***Our Hydrogen Peroxide is considered un-stabilized because it is very slightly stabilized with Sodium Stannate, 500 ppb maximum, just for safety purposes.

Date of MFG: 8/2022
Retest date: 8/2024

Gina M. Rambo
Office Manager

CORCO CHEMICAL CORPORATION. 299 CEDAR LANE. FAIRLESS HILLS, PA 19030. 215-295-5006. FAX 215-295-0781

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M5658 R! 8/25/23

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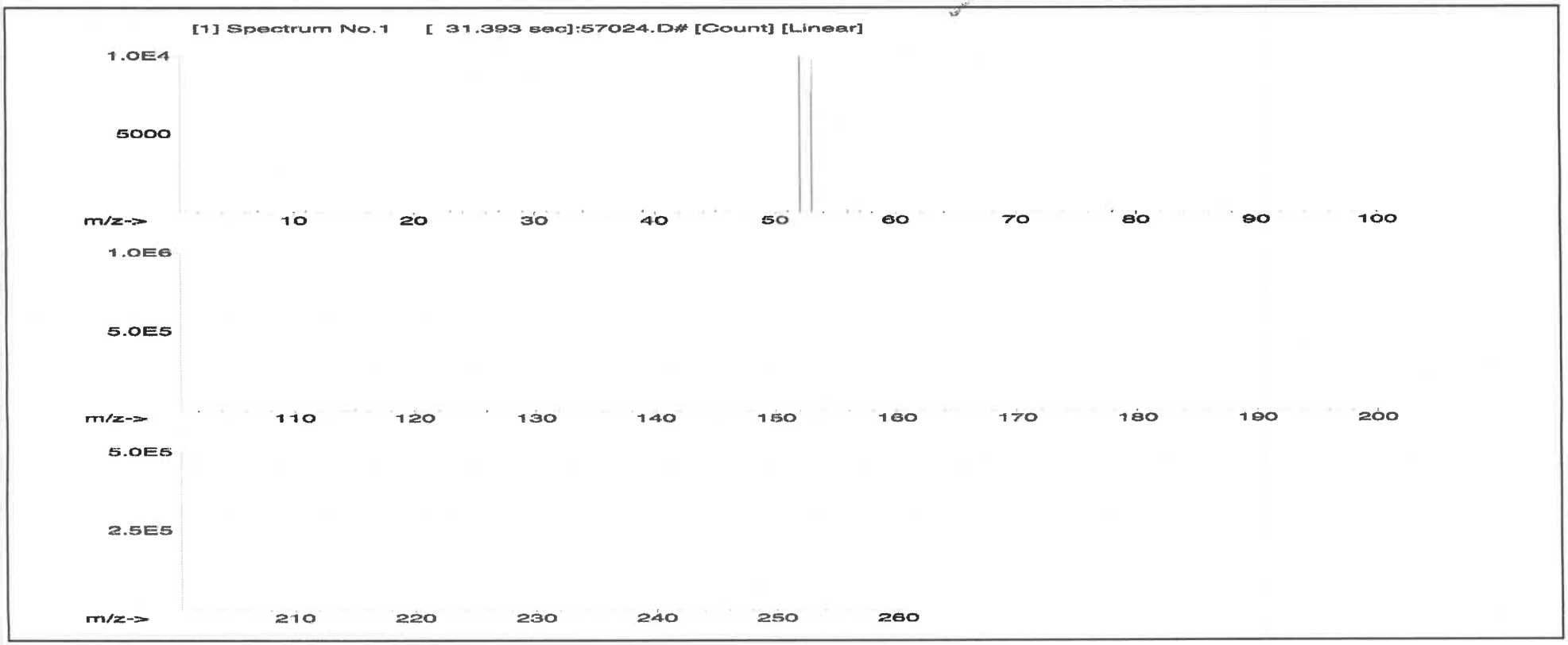
320

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



321

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	T	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* 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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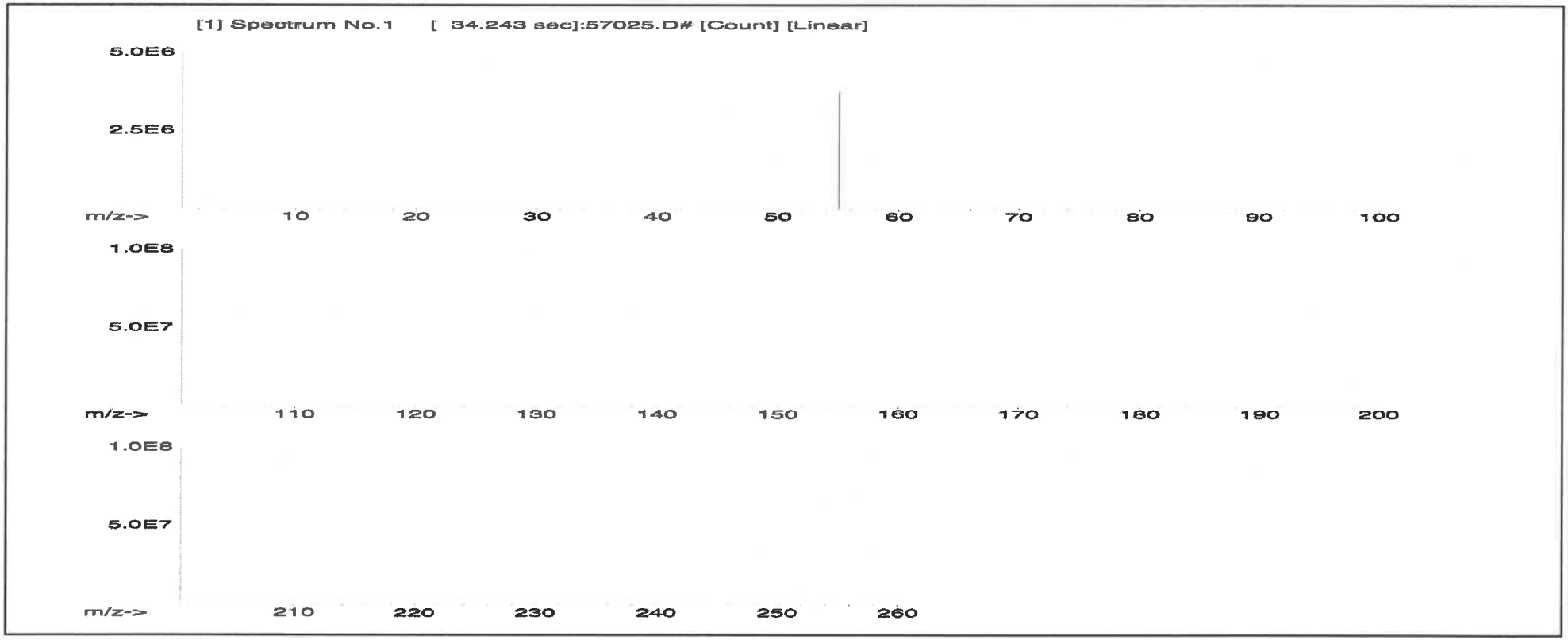
322

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



323

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	T	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

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 balances that are calibrated with weights traceable to NIST (see above).
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R: 8/25/23 M5751

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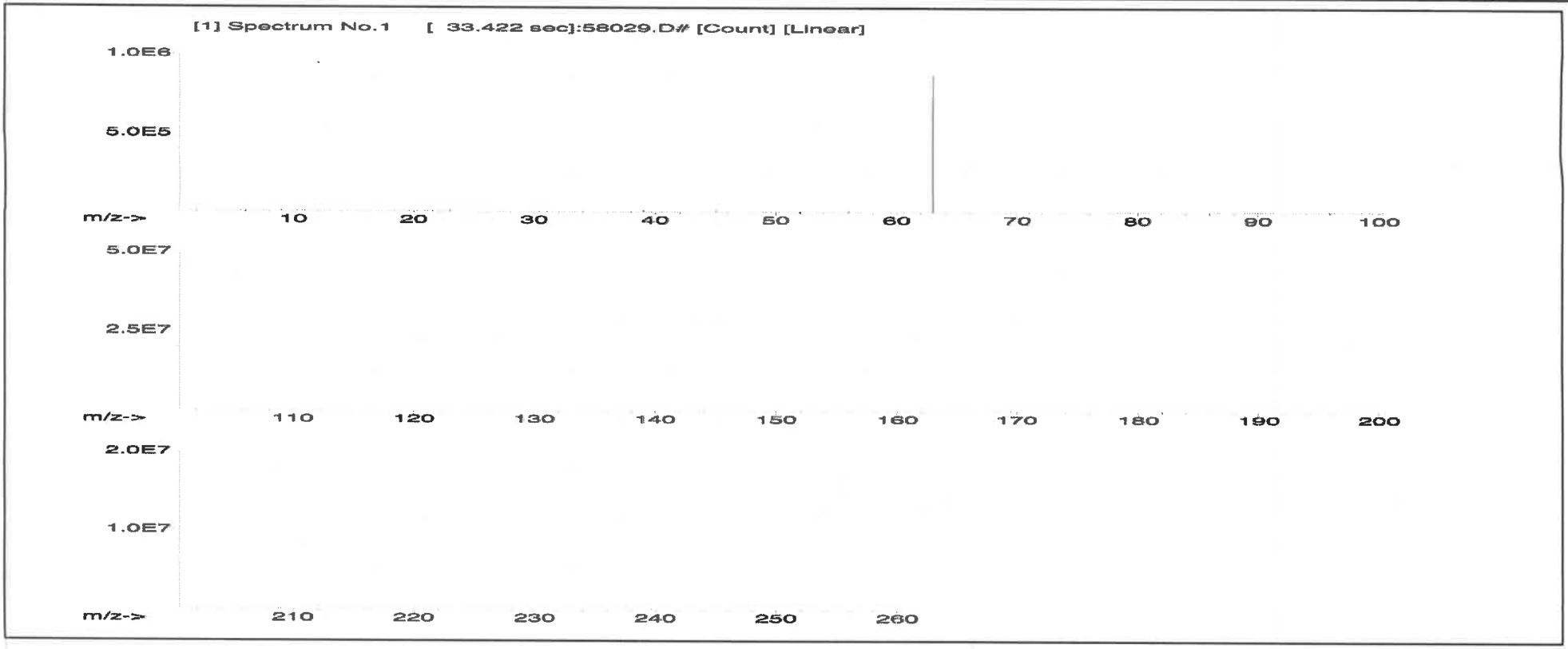
324

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**58029**	21110221	Nitric Acid	
Lot Number:	**071723**			
Description:	**Copper (Cu)**	2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	071726			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Benson Chan	071723
Reviewed By:	Pedro L. Rentas	071723

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Copper(II) nitrate trihydrate (Cu)	58129	022723	0.1000	200.0	0.084	1000	10000.5	**1000.0**	**2.2**	10031-43-3	1 mg/m3	orl-rat 794 mg/kg	3114



325

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	T	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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M5768 M5769 (BP) R:1/3/24

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326

CERTIFIED WEIGHT REPORT:

Part Number: 58112
Lot Number: 091823
Description: Magnesium (Mg)

Expiration Date: 091826
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB

Weight shown below was diluted to (mL): 2000.02 0.058 Flask Uncertainty

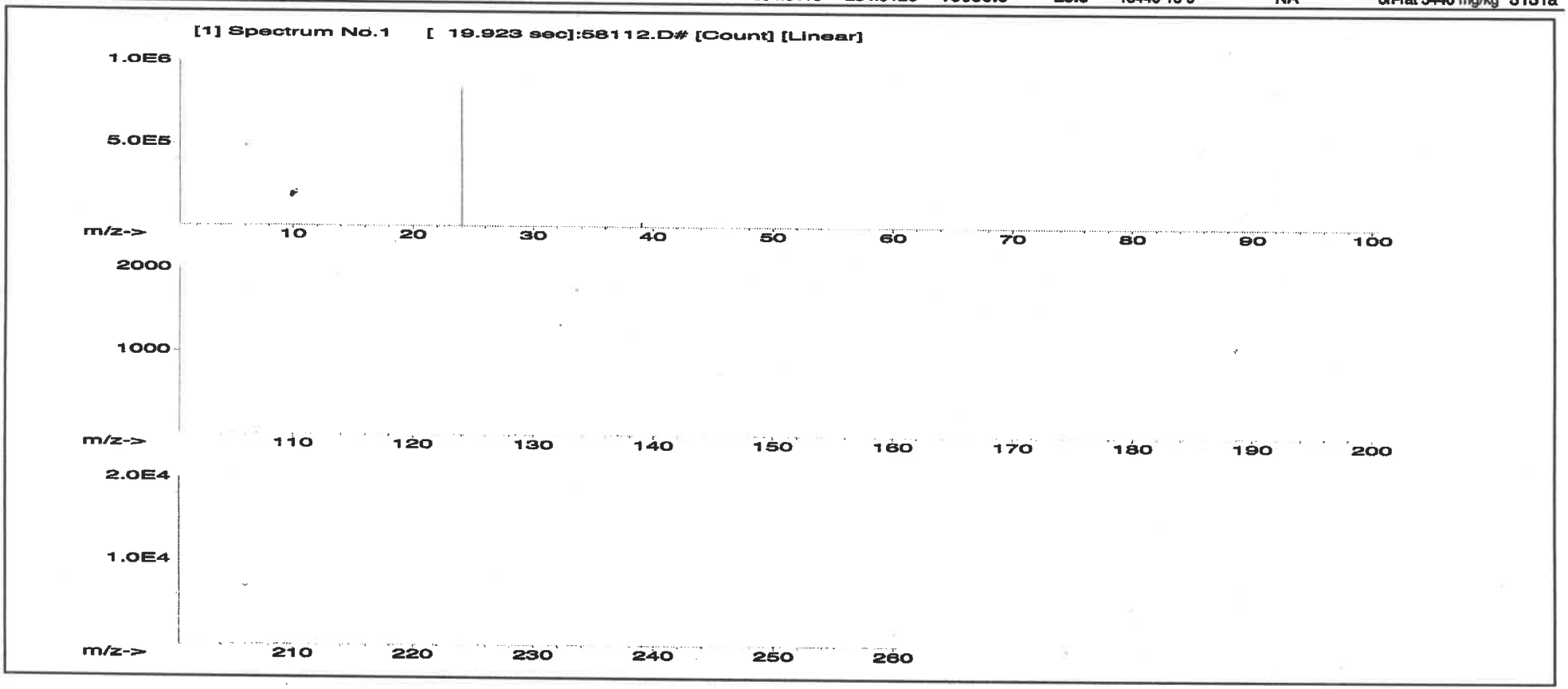
		Lot #	
Solvent:	24002546	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

M5768, M5769 (BP) R: 1/3/24

Formulated By:	Lawrence Barry	091823
Reviewed By:	Pedro L. Rentas	091823

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Magnesium nitrate hexahydrate (Mg)	IN030	MGD052023A1	10000	99.999	0.10	8.51	234.9118	234.9126	**10000.0**	**20.0**	13446-18-9	NA	orl-rat 5440 mg/kg	3131a



327

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:

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R: 02/09/24 M5798

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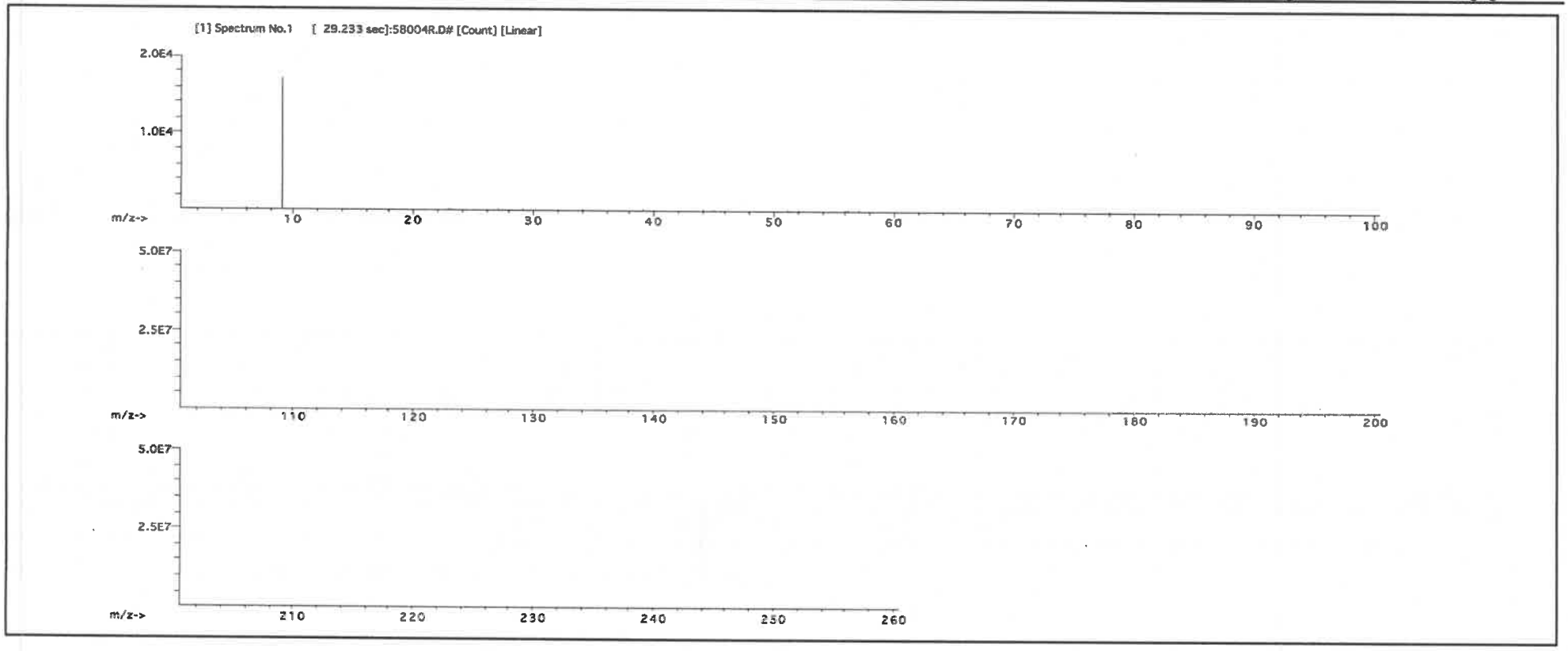
328

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.

* 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.
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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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330

CERTIFIED WEIGHT REPORT:

Part Number: 57050
Lot Number: 071123
Description: Tin (Sn)

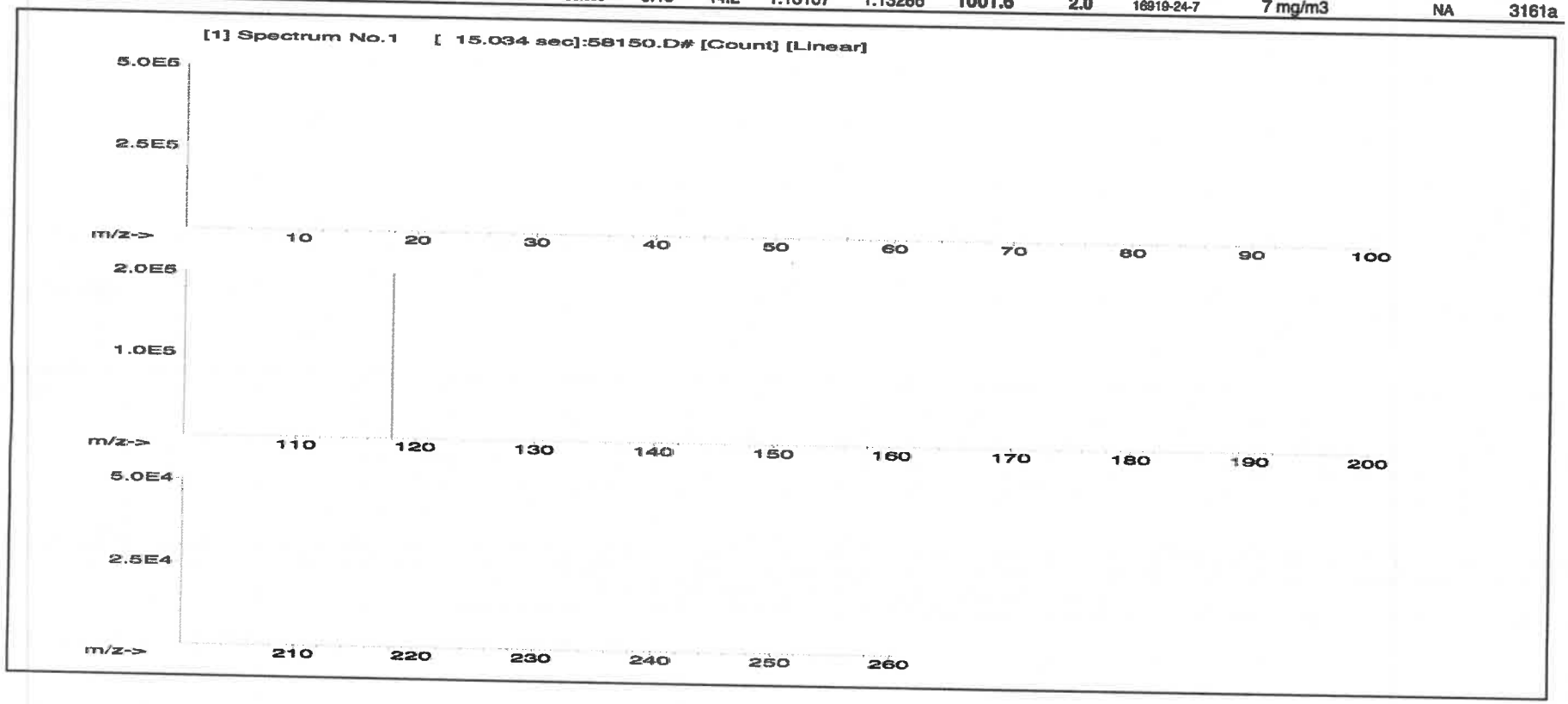
Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 499.93

	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



331

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<500	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	T	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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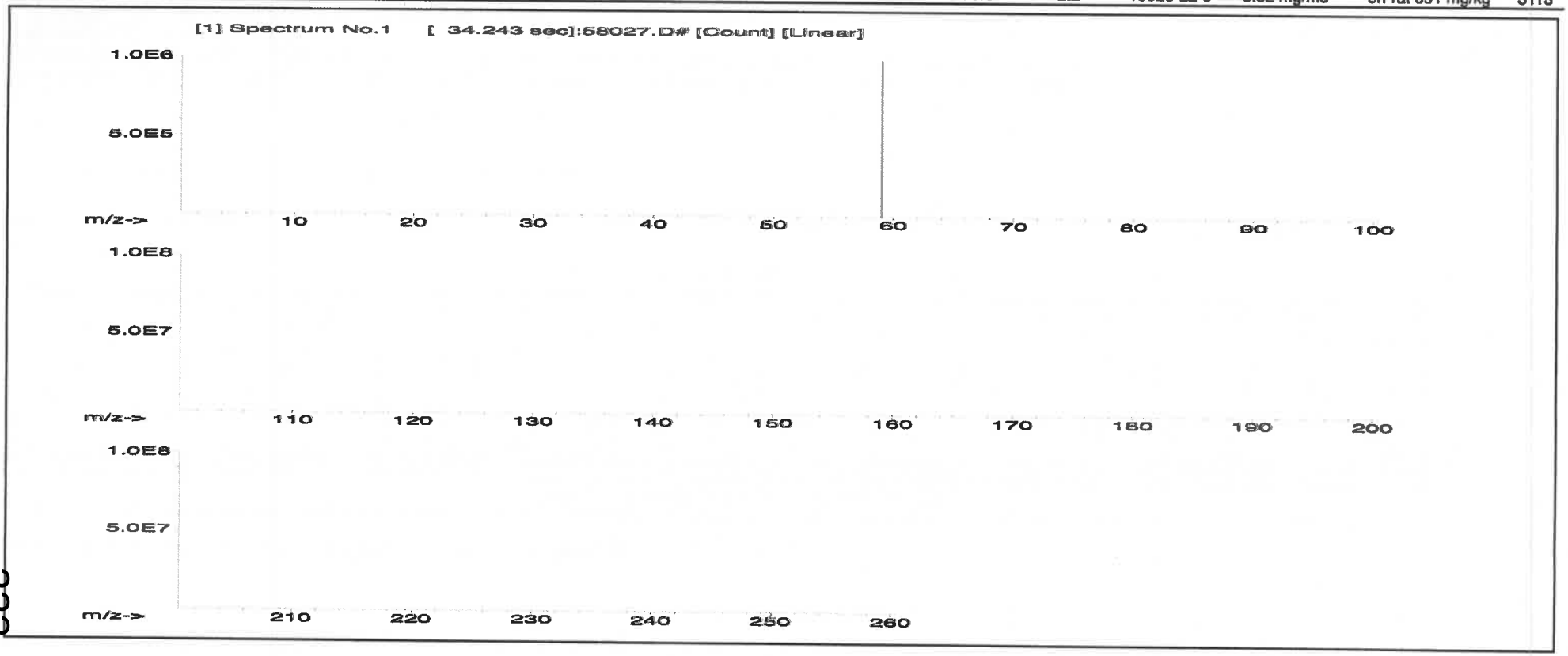
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:		
Part Number:	**57027**	24002546	Nitric Acid		
Lot Number:	**091923**				
Description:	**Cobalt (Co)**				
		2.0%	40.0 (mL)	Nitric Acid	
Expiration Date:	091926				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Formulated By:	Lawrence Barry	091923
Reviewed By:	Pedro L. Rentas	091923

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Cobalt(II) nitrate hexahydrate (Co)	58127	050923	0.1000	200.0	0.084	1000	10000.0	**1000.0**	2.2	10026-22-9	0.02 mg/m3	orl-rat 691 mg/kg	3113



332

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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* 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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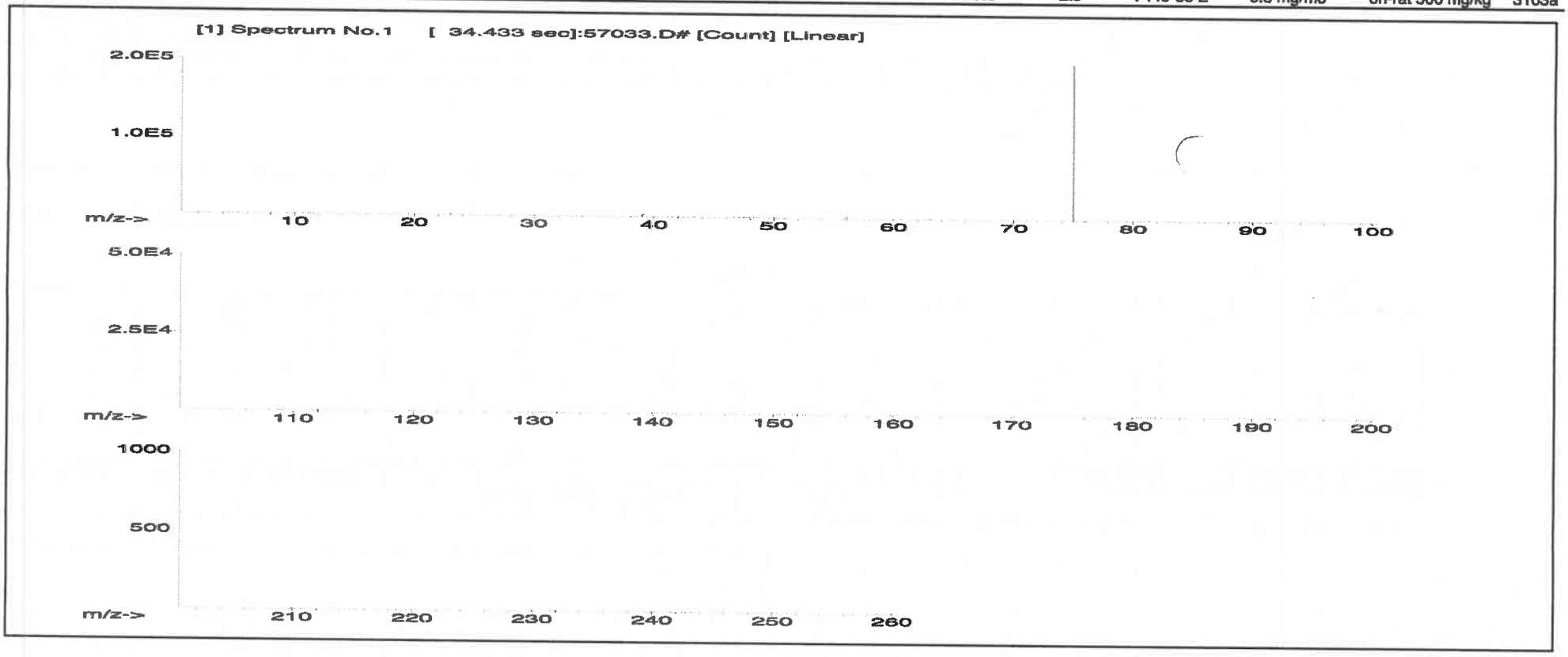
334

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



335

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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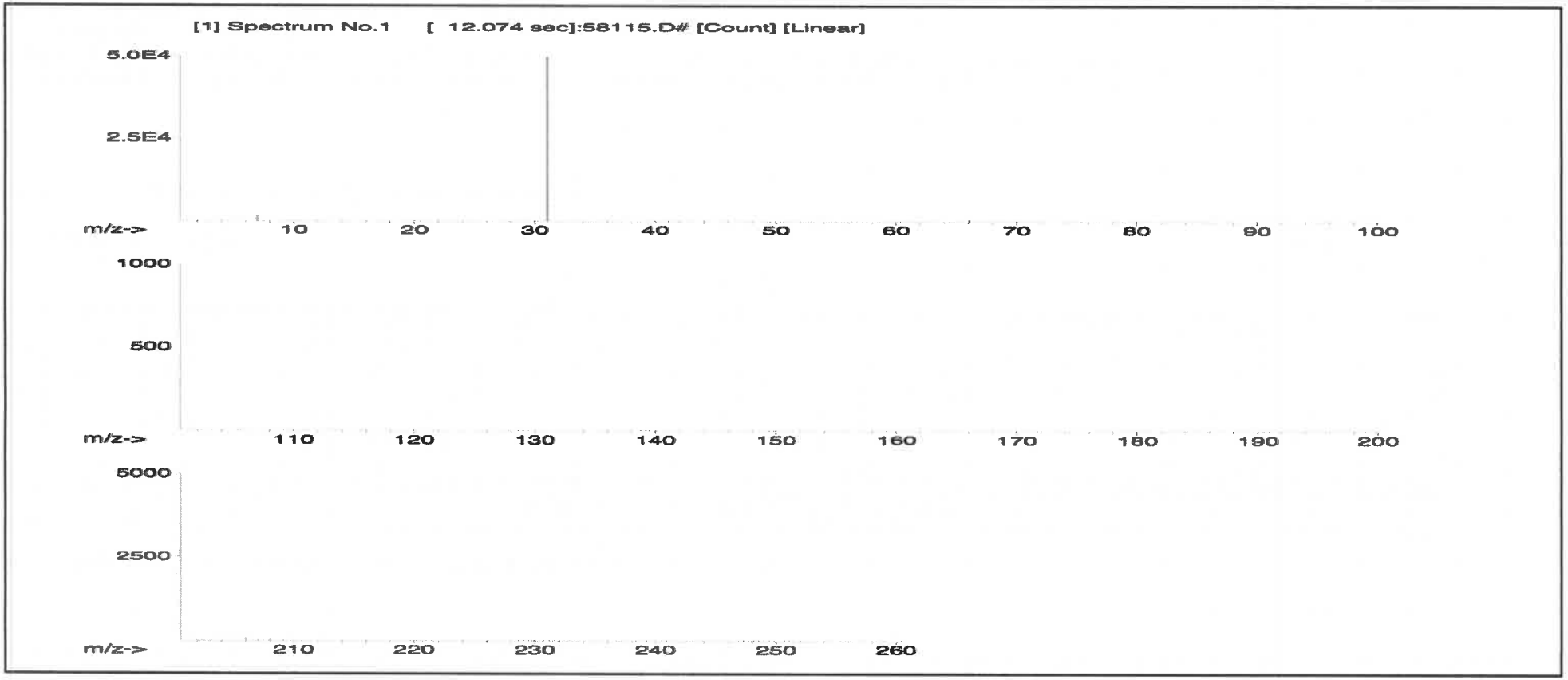
336

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



337

Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	T	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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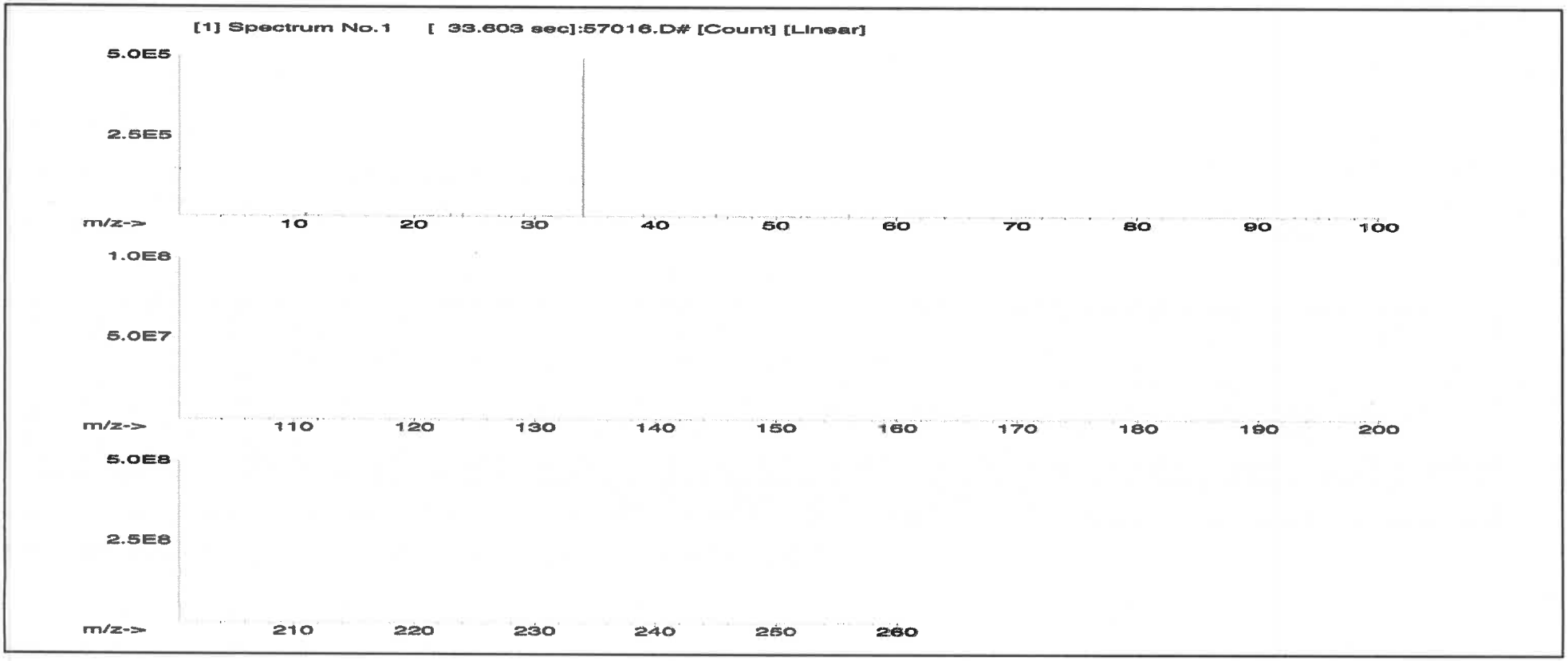
CERTIFIED WEIGHT REPORT:

Part Number:	**57016**	**Solvent:**	**Lot #** 122923	ASTM Type 1 Water
Lot Number:	**122923**			
Description:	**Sulfur (S)**			
Expiration Date:	122926			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	4000.0	0.06	Flask Uncertainty	

Formulated By:	Benson Chan	122923
Reviewed By:	Pedro L. Rentas	122923

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium sulfate (S)	IN117	SLBR7225V	1000	99.9	0.10	24.3	16.4979	16.4980	**1000.0**	**2.0**	7783-20-2	NA	orl-rat 4250mg/kg	3181



339

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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340

CERTIFIED WEIGHT REPORT:

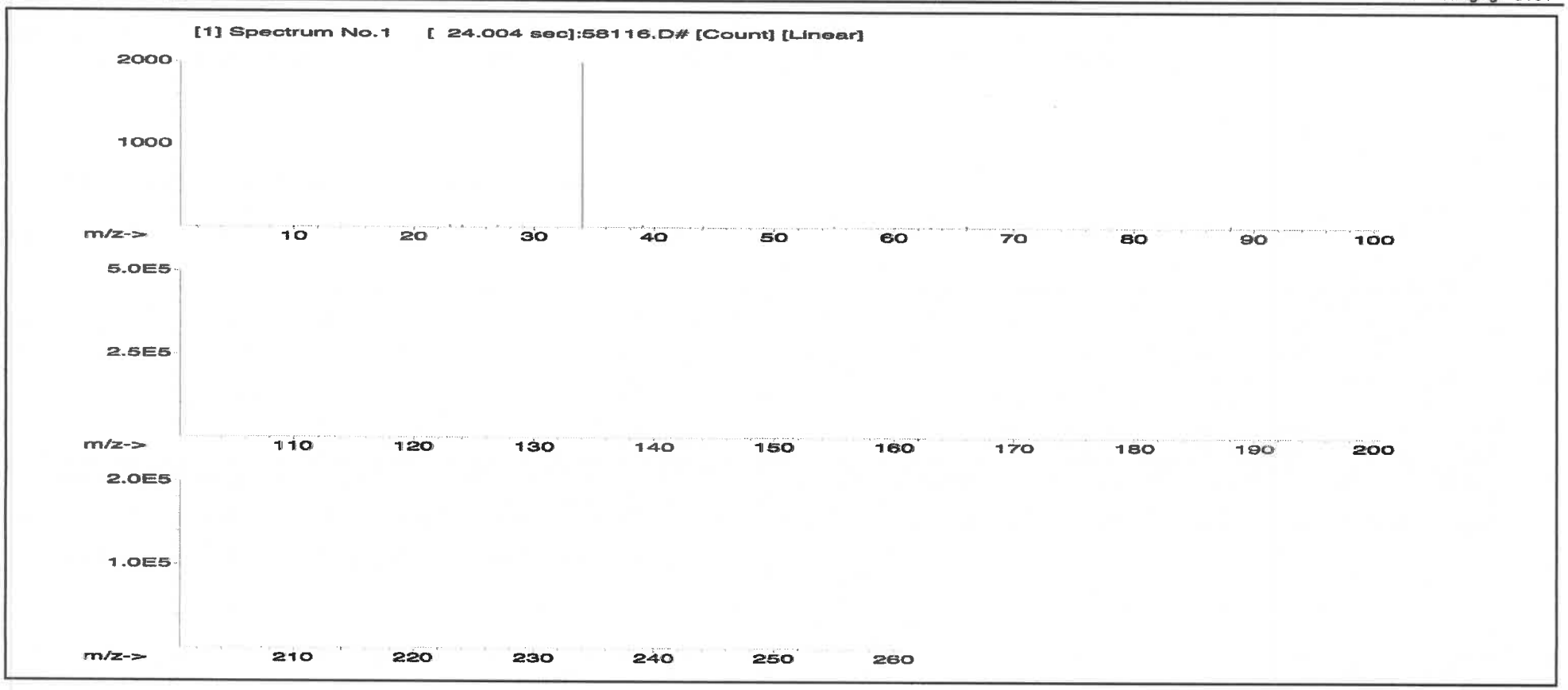
Part Number: 57116
Lot Number: 071123
Description: Sulfur (S)

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



341

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	T	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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R: 02/09/24 M.5818

Lot #

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342

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

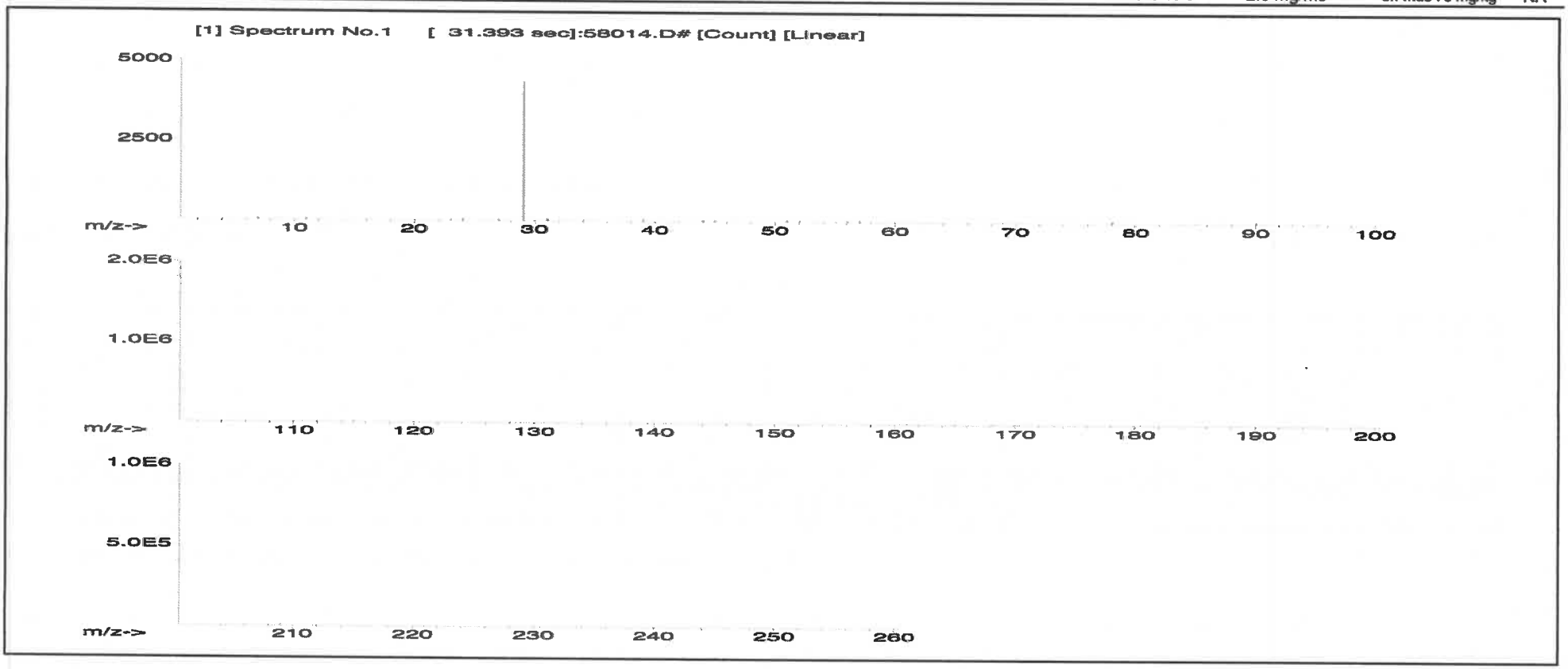
Aleah O'Brady

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



343

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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344

CERTIFIED WEIGHT REPORT:

Part Number: 58030
Lot Number: 111623
Description: Zinc (Zn)

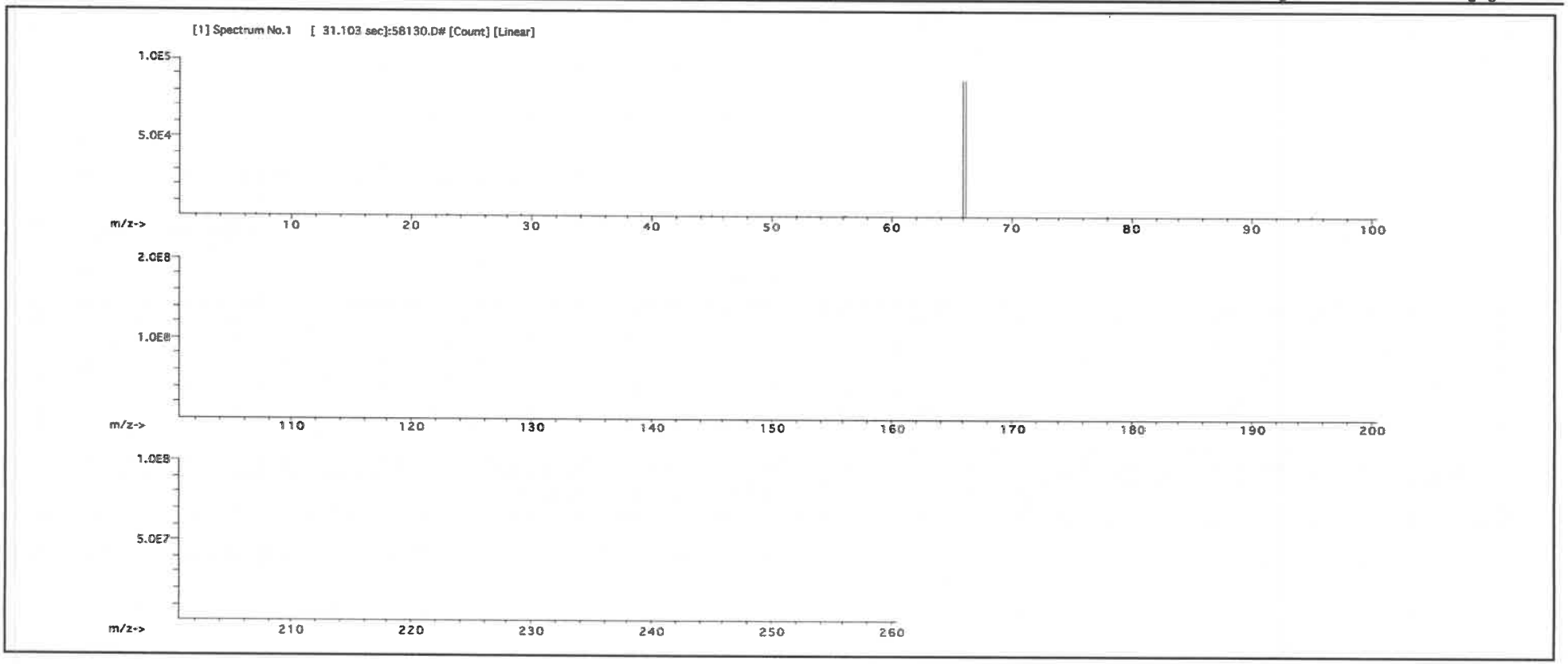
Expiration Date: 111626
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

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



345

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	T
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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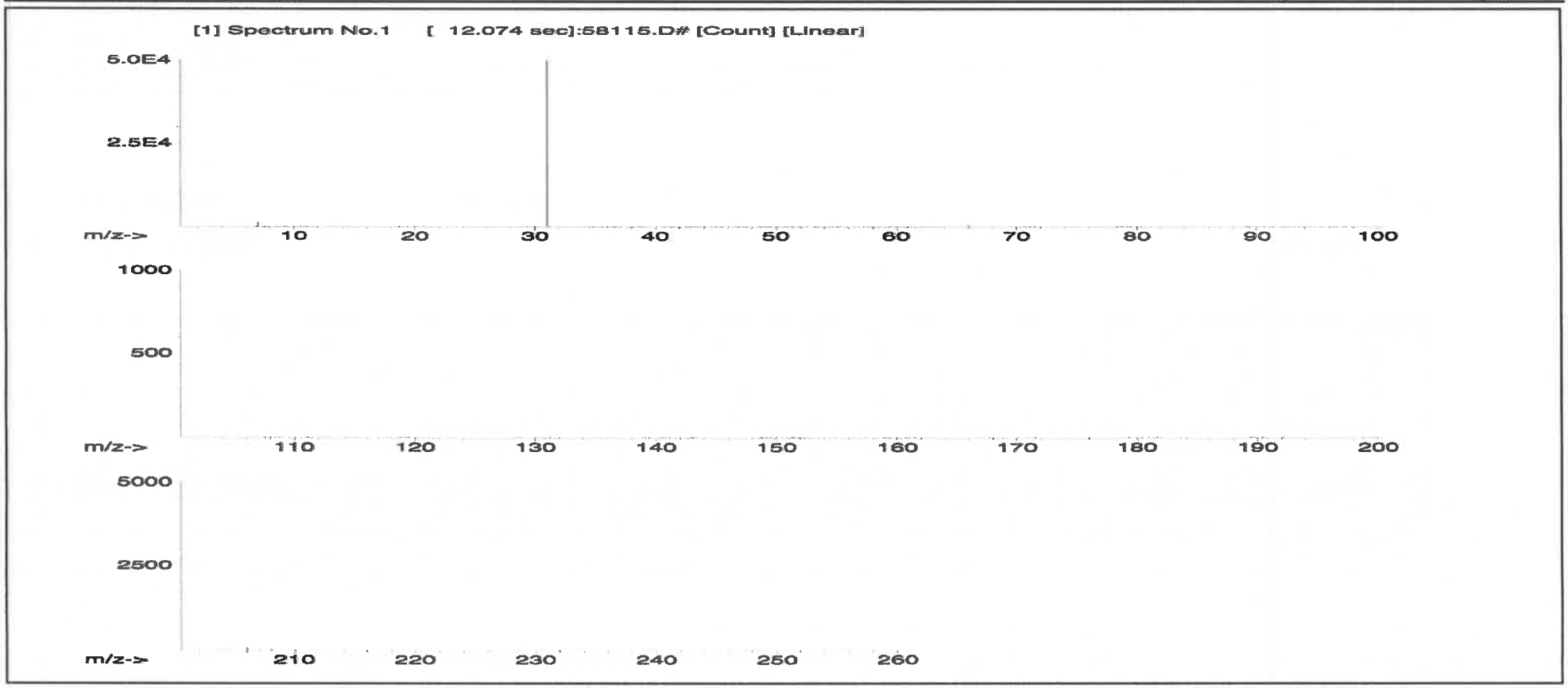
346

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



347

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	T	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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M5962 R! 06/14/24.

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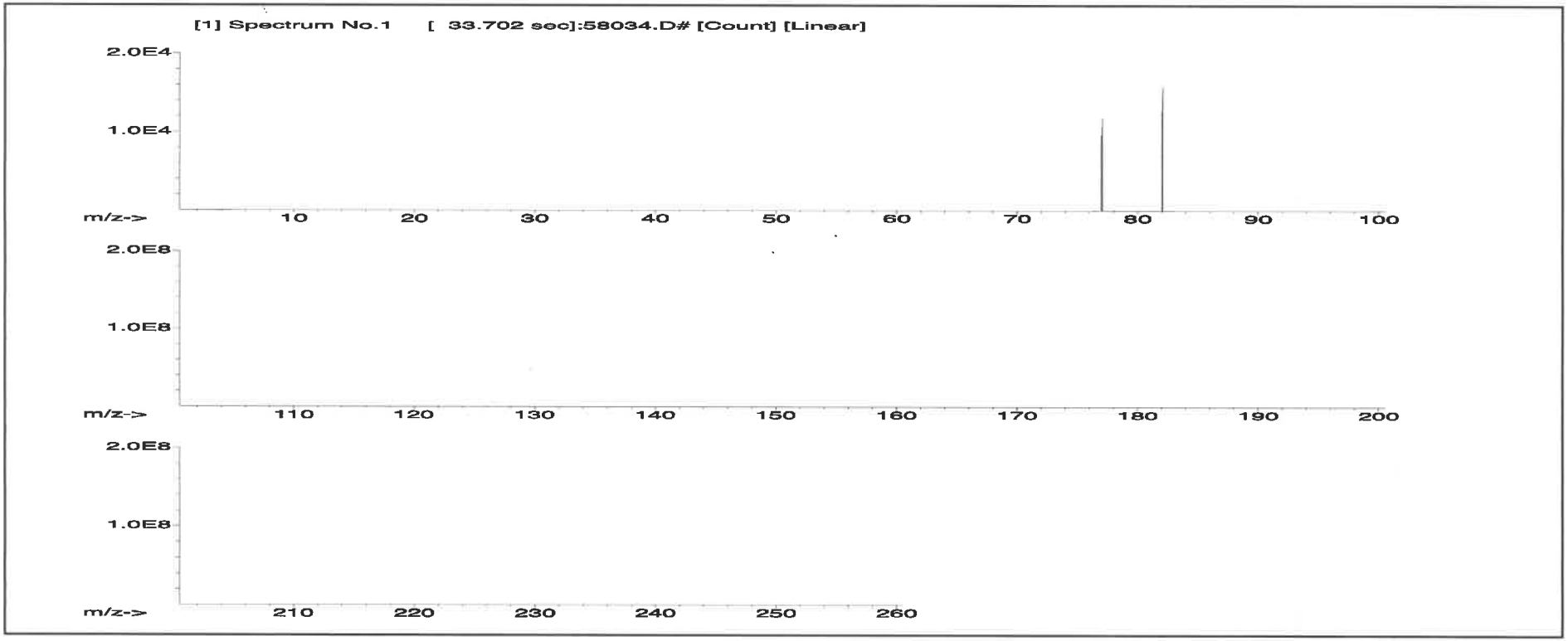
348

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



349

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:

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M5970, M5971 R: 7/01/24

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CERTIFIED WEIGHT REPORT:

Part Number: 57003
Lot Number: 062124
Description: Lithium (Li)
Expiration Date: 062127
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Volume shown below was diluted to (mL): 250.11

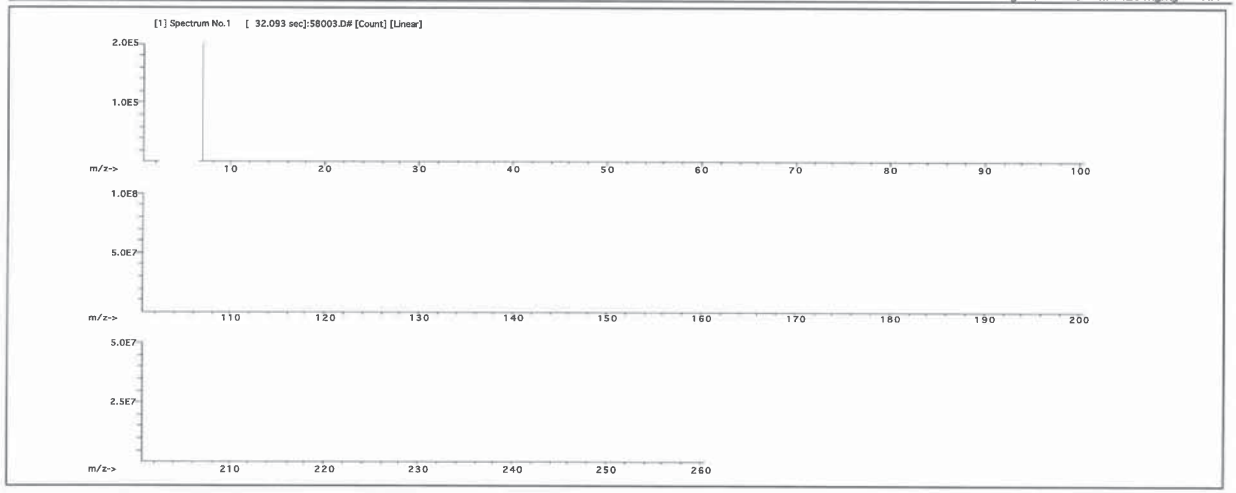
Lot #	Solvent:		
24002546	Nitric Acid		
2.0%	5.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty
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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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:

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Certified by:

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R: 02/22/24

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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

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

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inorganicventures.com

R: 2/22/24

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGTI1
Lot Number:	T2-TI719972
Matrix:	2% (v/v) HNO3 tr. HF
Value / Analyte(s):	1 000 µg/mL ea: Titanium
Starting Material:	Ti Metal
Starting Material Lot#:	2094
Starting Material Purity:	99.9975%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1002 ± 5 µg/mL

Density: 1.012 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **1002 ± 4 µg/mL**
ICP Assay NIST SRM 3162a Lot Number: 130925

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$
w_i = the weighting factors for each method calculated using the inverse square of the variance

$w_i = (1/u_{char\ i}^2) / (\Sigma(1/u_{char\ i}^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = (\Sigma(w_i)^2\ (u_{char\ i})^2)^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with
$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000536	M	Eu	<	0.000268	O	Na	<	0.032670	M	Se		0.001204	O	Zn	<	0.003267
O	Al		0.000872	O	Fe		0.003225	O	Nb	<	0.043560	O	Si		0.004735	O	Zr	<	0.043560
M	As	<	0.008586	M	Ga	<	0.000268	M	Nd	<	0.000268	M	Sm	<	0.000268				
M	Au	<	0.004577	M	Gd	<	0.000268	O	Ni	<	0.010890	M	Sn		0.000096				
O	B	<	0.008929	M	Ge	<	0.002146	M	Os	<	0.000269	O	Sr		0.000096				
M	Ba	<	0.002683	M	Hf		0.002161	O	P	<	0.054450	M	Ta		0.010560				
M	Be	<	0.005366	M	Hg	<	0.003231	M	Pb	<	0.001073	M	Tb	<	0.000268				
M	Bi	<	0.001609	M	Ho	<	0.000268	M	Pd	<	0.000268	M	Te	<	0.001341				
O	Ca		0.000676	M	In	<	0.002683	M	Pr	<	0.000268	M	Th	<	0.053663				
M	Cd	<	0.000268	M	Ir	<	0.000269	M	Pt	<	0.000536	s	Ti	<					
M	Ce	<	0.000268	M	K		0.001172	M	Rb	<	0.000268	M	Tl	<	0.000268				
M	Co	<	0.004293	M	La	<	0.000268	M	Re	<	0.000268	M	Tm	<	0.000268				
M	Cr		0.000752	O	Li	<	0.027225	M	Rh	<	0.000268	M	U	<	0.000268				
M	Cs	<	0.000268	M	Lu	<	0.000268	M	Ru	<	0.000269	M	V	<	0.019855				
O	Cu	<	0.010890	O	Mg	<	0.005445	i	S	<		M	W		0.000473				
M	Dy	<	0.000268	O	Mn	<	0.003267	M	Sb	<	0.006976	M	Y	<	0.002146				
M	Er	<	0.000268	M	Mo		0.000774	O	Sc	<	0.004900	M	Yb	<	0.000536				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 47.87 +4 6 Ti(F)6-2

Chemical Compatibility - Soluble in concentrated HCl, HF, H3PO4 H2SO4 and HNO3. Avoid neutral to basic media. Unstable at ppm levels with metals that would pull F- away (i.e. Do not mix with Alkaline or Rare Earths or high levels of transition elements unless they are fluorinated). Stable with most inorganic anions with a tendency to hydrolyze forming the hydrated oxide in all dilute acids except HF.

Stability - 2-100 ppb levels stable (Alone or mixed with all other metals) as the Ti(F)6-2 for months in 1% HNO3 / LDPE container. 1-10,000 ppm single element solutions as the Ti(F)6-2 chemically stable for years in 2-5% HNO3 / trace HF in an LDPE container.

Ti Containing Samples (Preparation and Solution) - Metal (Soluble in H2O / HF caution -powder reacts violently); Oxide - low temperature history anatase or rutile (Dissolved by heating in 1:1:1 H2O / HF / H2SO4); Oxide - high temperature history (~800EC) brookite (fuse in Pt0 with K2S2O7); Ores (fuse in Pt0 with KF + K2S2O7 - no KF if silica not present); Organic Matrices (Dry ash at 450EC in Pt0 and dissolve by heating with 1:1:1 H2O / HF / H2SO4 or fuse ash with pyrosulfate if oxide is as plastic pigment and likely in brookite crystalline form).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 48 amu	14 ppt	N/A	32S16O, 32S14N, 14N16O18O, 14N17N2, 36Ar12C, 48Ca, [96X=2 (where X = Zr, Mo, Ru)]
ICP-OES 323.452 nm	0.0054 / 0.00092 µg/mL	1	Ce, Ar, Ni
ICP-OES 334.941 nm	0.0038 / 0.000028 µg/mL	1	Nb, Ta, Cr, U
ICP-OES 336.121 nm	0.0053 / 0.000034 µg/mL	1	W, Mo, Co

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 17, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- June 17, 2027

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

45982 R: 6/11/24

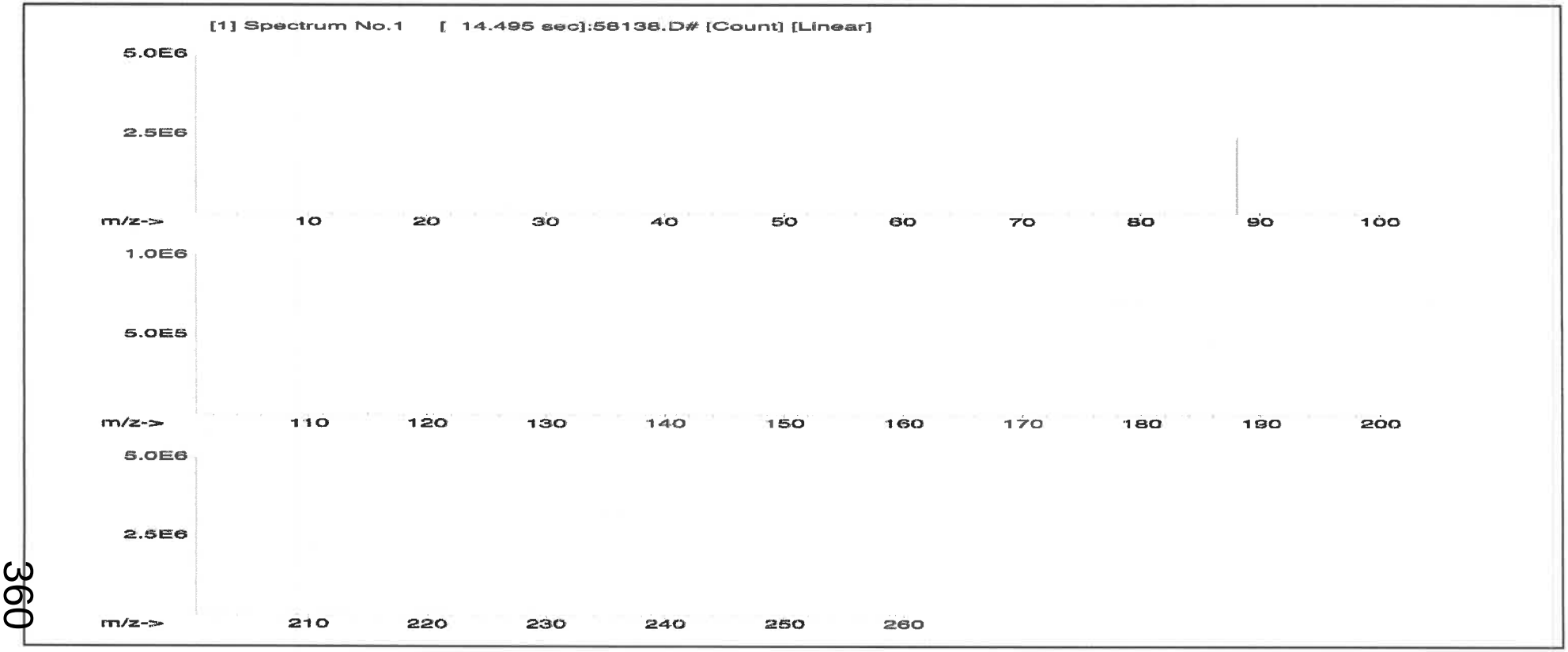
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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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Certificate of Analysis

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGY10
Lot Number:	V2-Y740548
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Yttrium
Starting Material:	Yttrium Oxide
Starting Material Lot#:	2661 and 06230520YL
Starting Material Purity:	99.9984%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10000 ± 30 µg/mL

Density: 1.032 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	**10011 ± 25 µg/mL** EDTA NIST SRM 928 Lot Number: 928
Assay Method #2	**9997 ± 50 µg/mL** ICP Assay NIST SRM 3167a Lot Number: 190730
Assay Method #3	**9984 ± 31 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.004600	M	Eu		0.009037	M	Na		0.086360	M	Se	<	0.005200	M	Zn		0.030125
M	Al		0.014862	O	Fe		0.002410	M	Nb	<	0.000570	O	Si		0.024100	O	Zr	<	0.002600
M	As	<	0.003500	M	Ga	<	0.000570	M	Nd		0.000923	M	Sm		0.000461				
M	Au	<	0.001700	M	Gd	<	0.003500	M	Ni	<	0.005700	M	Sn	<	0.002300				
O	B		0.002209	M	Ge	<	0.005200	M	Os	<	0.001200	M	Sr	<	0.004600				
O	Ba	<	0.002500	M	Hf	<	0.000570	n	P	<		M	Ta	<	0.000570				
O	Be	<	0.001400	M	Hg	<	0.000570	M	Pb		0.005020	M	Tb		0.001044				
M	Bi	<	0.003500	M	Ho		0.009037	M	Pd	<	0.005100	M	Te	<	0.002300				
O	Ca		0.009841	M	In	<	0.002300	M	Pr	<	0.002300	M	Th	<	0.000570				
M	Cd	<	0.000570	M	Ir	<	0.000570	M	Pt	<	0.000570	M	Ti	<	0.003500				
M	Ce	<	0.002300	O	K		0.018677	M	Rb	<	0.000570	M	Tl	<	0.000570				
M	Co	<	0.000570	M	La		0.000461	M	Re	<	0.000570	M	Tm	<	0.003500				
M	Cr	<	0.004000	O	Li	<	0.009300	M	Rh	<	0.008000	M	U	<	0.000570				
M	Cs	<	0.000570	M	Lu		0.000582	M	Ru	<	0.000570	M	V		0.001265				
M	Cu		0.002610	O	Mg		0.001486	n	S	<		M	W	<	0.002300				
M	Dy		0.003815	M	Mn		0.000582	M	Sb		0.005422	s	Y	<					
M	Er		0.003615	M	Mo	<	0.005700	M	Sc	<	0.001200	M	Yb		0.001827				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 88.91 +3 6 Y(OH)(H2O)x+2

Chemical Compatibility -Soluble in HCl, H2SO4 and HNO3. Avoid HF, H3PO4 and neutral to basic media. Stable with most metals and inorganic anions forming an insoluble carbonate, oxide, oxalate, and fluoride. Avoid mixing with elements / solutions containing moderate amounts of fluoride.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.

Y Containing Samples (Preparation and Solution) - Metal (Soluble in acids); Oxide (Dissolve by heating in H2O/ HNO3); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Dry ash and dissolve in 1:1 H2O / HCl or HNO3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 89 amu	0.8 ppt	N/A	73Ge16O, 178Hf+2
ICP-OES 360.073 nm	0.005 / 0.000036 µg/mL	1	Ce, Th
ICP-OES 371.030 nm	0.004 / 0.00007 µg/mL	1	Ce
ICP-OES 377.433 nm	0.005 / 0.0009 µg/mL	1	Ta, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 20, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- February 20, 2029

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Custom Processing Supervisor

Certificate Approved By:

Muzzammil Khan
Stock Laboratory Supervisor

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 863.01
ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGIN10
Lot Number:	U2-IN729349
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Indium
Starting Material:	Indium Metal
Starting Material Lot#:	2511
Starting Material Purity:	99.9995%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10022 ± 30 µg/mL

Density: 1.044 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	**10021 ± 56 µg/mL** ICP Assay NIST SRM 3124a Lot Number: 110516
Assay Method #2	**10035 ± 25 µg/mL** EDTA NIST SRM 928 Lot Number: 928
Assay Method #3	**10001 ± 33 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000760	M	Eu	<	0.000760	O	Na		0.012771	M	Se	<	0.023000	M	Zn	<	0.006100
M	Al		0.003385	O	Fe		0.004462	M	Nb	<	0.000760	O	Si		0.024619	M	Zr	<	0.000760
M	As	<	0.004600	M	Ga	<	0.000760	M	Nd	<	0.000760	M	Sm	<	0.000760				
M	Au	<	0.002300	M	Gd	<	0.000760	O	Ni	<	0.005100	M	Sn	<	0.000760				
O	B		0.003692	M	Ge	<	0.001600	M	Os	<	0.000760	O	Sr	<	0.000610				
M	Ba	<	0.001600	M	Hf	<	0.000760	n	P	<		M	Ta	<	0.000760				
O	Be	<	0.000130	M	Hg	<	0.003100	M	Pb		0.001400	M	Tb	<	0.000760				
M	Bi	<	0.000760	M	Ho	<	0.000760	M	Pd	<	0.001600	M	Te	<	0.000760				
O	Ca		0.004616	s	In	<		M	Pr	<	0.000760	M	Th	<	0.000760				
M	Cd	<	0.000760	M	Ir	<	0.000760	M	Pt	<	0.000760	O	Ti	<	0.001100				
M	Ce	<	0.000760	O	K		0.007078	M	Rb	<	0.000760	M	Tl	<	0.000760				
M	Co	<	0.000760	M	La	<	0.000760	M	Re	<	0.000760	M	Tm	<	0.000760				
O	Cr	<	0.001300	O	Li	<	0.000130	M	Rh	<	0.000760	M	U	<	0.000760				
M	Cs	<	0.000760	M	Lu	<	0.000760	M	Ru	<	0.000760	M	V	<	0.001600				
M	Cu	<	0.003800	O	Mg		0.000707	n	S	<		M	W	<	0.001600				
M	Dy	<	0.000760	O	Mn		0.000149	M	Sb	<	0.000760	M	Y	<	0.000760				
M	Er	<	0.000760	M	Mo	<	0.002300	M	Sc	<	0.000760	M	Yb	<	0.000760				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 114.82 +3 6 In(H2O)6+3

Chemical Compatibility -Soluble in HCl, HNO3, and H2SO4. Avoid neutral and basic media. Stable with most metals and inorganic anions. The oxalate, sulfide, carbonate, hydroxide and phosphate are insoluble in water.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.

In Containing Samples (Preparation and Solution) -Metal (Best dissolved in HCl / HNO3); Oxide (Soluble in mineral acids); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Sulfuric/peroxide digestion or dry ash and dissolution in dilute HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 115 amu	1 ppt	n/a	115Sn, 99Ru16O
ICP-OES 158.583 nm	0.05 / 0.002 µg/mL	1	
ICP-OES 230.606 nm	0.1 / 0.03 µg/mL	1	Ni, Os
ICP-OES 325.609 nm	0.2 / 0.05 µg/mL	1	Mn, Mo, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 21, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- February 21, 2028

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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1.0 ACCREDITATION / REGISTRATION

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:

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 (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Note: This solution contains Silver (Ag), please refer to our Sample Preparation Guide for more information.

https://www.inorganicventures.com/sample-preparation-guide/samples-containing-silver

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 27, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- July 27, 2027

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 01/03/24 M6033

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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CERTIFIED WEIGHT REPORT:

Part Number:	**58113**			**Lot #**	
Lot Number:	**011623**		**Solvent:**	20510011	Nitric Acid
Description:	**Aluminum (Al)**				
			2%	40.0 (mL)	Nitric Acid
Expiration Date:	011626				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**10000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

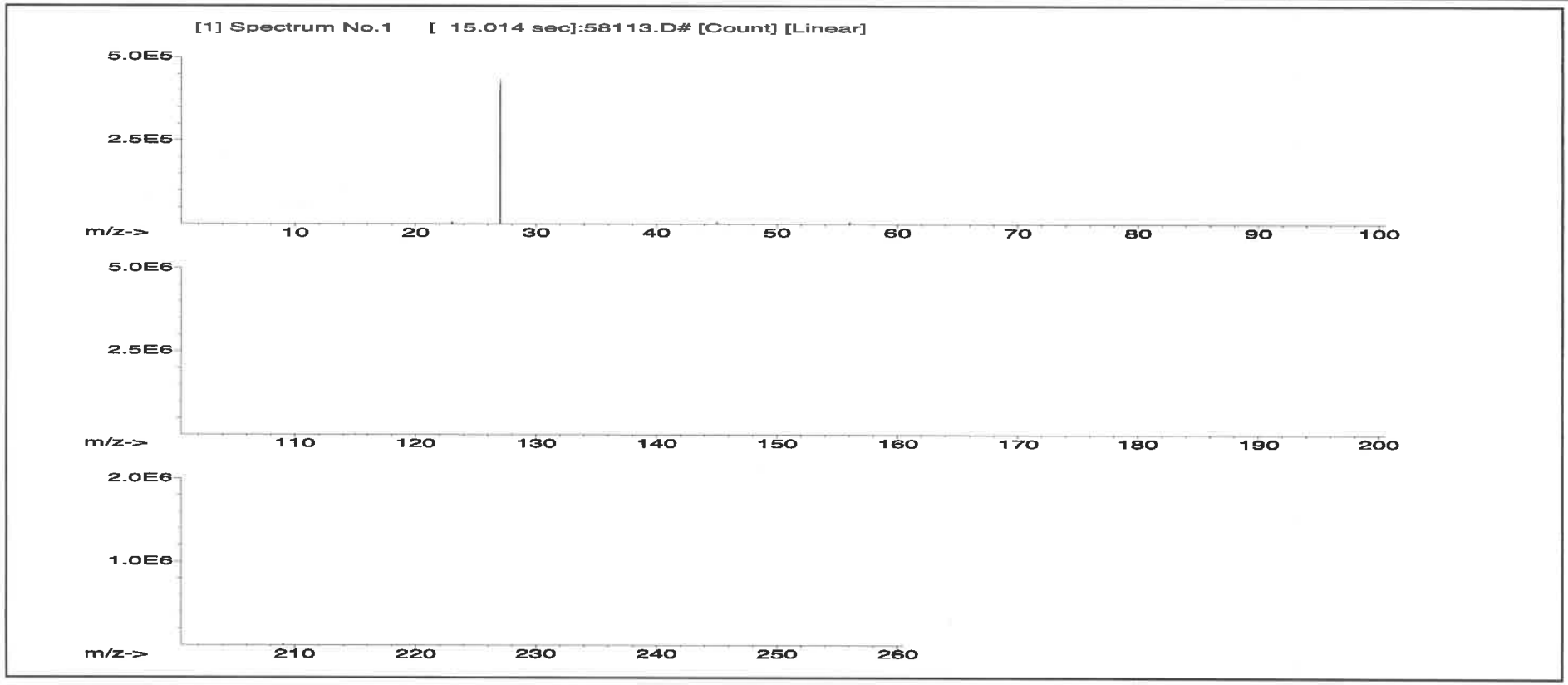
Giovanni Esposito

Formulated By:	Giovanni Esposito	011623

Pedro Rentas

Reviewed By:	Pedro L. Rentas	011623

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Aluminum nitrate nonahydrate (Al)	IN022	ALM112021A1	10000	99.999	0.10	7.30	273.9779	274.0078	**10001.1**	**20.0**	7784-27-2	2 mg/m3	orl-rat 3671 mg/kg	3101a



Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

M6109
M6110
M6111

Received date 9/29/24 Met dig.

avantor™ | J.T.Baker®

Material No.: 9530-33
Batch No.: 22F0762009
Manufactured Date: 2022-05-10
Retest Date: 2027-05-09
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
ACS – Assay (as HCl) (by acid-base titrn)	36.5 – 38.0 %	37.6 %
ACS – Color (APHA)	≤ 10	5
ACS – Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS – Specific Gravity at 60°/60°F	1.185 – 1.192	1.190
ACS – Bromide (Br)	≤ 0.005 %	< 0.005 %
ACS – Extractable Organic Substances	≤ 5 ppm	< 1 ppm
ACS – Free Chlorine (as Cl_2)	≤ 0.5 ppm	< 0.5 ppm
Phosphate (PO_4)	≤ 0.05 ppm	< 0.03 ppm
Sulfate (SO_4)	≤ 0.5 ppm	< 0.3 ppm
Sulfite (SO_3)	≤ 0.8 ppm	0.3 ppm
Ammonium (NH_4)	≤ 3 ppm	< 1 ppm
Trace Impurities – Arsenic (As)	≤ 0.010 ppm	< 0.003 ppm
Trace Impurities – Aluminum (Al)	≤ 10.0 ppb	0.8 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 3.0 ppb
Trace Impurities – Barium (Ba)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Beryllium (Be)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Bismuth (Bi)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Boron (B)	≤ 20.0 ppb	< 5.0 ppb
Trace Impurities – Cadmium (Cd)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities – Calcium (Ca)	≤ 50.0 ppb	14.9 ppb
Trace Impurities – Chromium (Cr)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities – Cobalt (Co)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities – Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities – Gallium (Ga)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Germanium (Ge)	≤ 3.0 ppb	< 2.0 ppb
Trace Impurities – Gold (Au)	≤ 4.0 ppb	0.2 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities – Iron (Fe)	≤ 15 ppb	6 ppb

>>> Continued on page 2 >>>

For questions on this Certificate of Analysis please contact Technical Services at 855 282 6867 or +1 610 386 1700

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

Material No.: 9530-33
Batch No.: 22F0762009

Test	Specification	Result
Trace Impurities - Lead (Pb)	≤ 1.0 ppb	< 0.5 ppb
Trace Impurities - Lithium (Li)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Magnesium (Mg)	≤ 10.0 ppb	0.8 ppb
Trace Impurities - Manganese (Mn)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities - Mercury (Hg)	≤ 0.5 ppb	0.1 ppb
Trace Impurities - Molybdenum (Mo)	≤ 10.0 ppb	< 3.0 ppb
Trace Impurities - Nickel (Ni)	≤ 4.0 ppb	< 0.3 ppb
Trace Impurities - Niobium (Nb)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Potassium (K)	≤ 9.0 ppb	< 2.0 ppb
Trace Impurities - Selenium (Se), For Information Only		< 1.0 ppb
Trace Impurities - Silicon (Si)	≤ 100.0 ppb	1.0 ppb
Trace Impurities - Silver (Ag)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities - Sodium (Na)	≤ 100.0 ppb	0.7 ppb
Trace Impurities - Strontium (Sr)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Tantalum (Ta)	≤ 1.0 ppb	< 0.9 ppb
Trace Impurities - Thallium (Tl)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities - Tin (Sn)	≤ 5.0 ppb	< 0.8 ppb
Trace Impurities - Titanium (Ti)	≤ 1.0 ppb	0.2 ppb
Trace Impurities - Vanadium (V)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Zinc (Zn)	≤ 5.0 ppb	0.8 ppb
Trace Impurities - Zirconium (Zr)	≤ 1.0 ppb	< 0.1 ppb

>>> Continued on page 3 >>>

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

Material No.: 9530-33
Batch No.: 22F0762009

Test	Specification	Result

For Laboratory,Research,or Manufacturing Use
Product Information (not specifications):
Appearance (clear, fuming liquid)
Meets ACS Specifications
Storage Condition: Store below 25 °C.

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

James T Ethier

Jamie Ethier
Vice President Global Quality

Nitric Acid 69%
CMOS

M6112
M6113
M6114
M6115
M6116
M6117

Receive:
9/29/24
Met dig

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24B1362001
Manufactured Date: 2024-01-25
Retest Date: 2029-01-23
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (HNO_3)	69.0 - 70.0 %	69.6 %
Appearance	Passes Test	Passes Test
Color (APHA)	≤ 10	5
Residue after Ignition	≤ 2 ppm	< 1 ppm
Chloride (Cl)	≤ 0.08 ppm	< 0.03 ppm
Phosphate (PO_4)	≤ 0.10 ppm	< 0.03 ppm
Sulfate (SO_4)	≤ 0.2 ppm	< 0.2 ppm
Trace Impurities - Aluminum (Al)	≤ 40.0 ppb	< 1.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities - Barium (Ba)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Beryllium (Be)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Bismuth (Bi)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Boron (B)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities - Cadmium (Cd)	≤ 50 ppb	< 1 ppb
Trace Impurities - Calcium (Ca)	≤ 50.0 ppb	< 0.2 ppb
Trace Impurities - Chromium (Cr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities - Cobalt (Co)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Copper (Cu)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Gallium (Ga)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Germanium (Ge)	≤ 20 ppb	< 10 ppb
Trace Impurities - Gold (Au)	≤ 20 ppb	< 5 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities - Iron (Fe)	≤ 40.0 ppb	< 1.0 ppb
Trace Impurities - Lead (Pb)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Lithium (Li)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Magnesium (Mg)	≤ 20 ppb	< 1 ppb
Trace Impurities - Manganese (Mn)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Nickel (Ni)	≤ 20.0 ppb	< 5.0 ppb

>>> Continued on page 2 >>>

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24B1362001

Test	Specification	Result
Trace Impurities – Niobium (Nb)	≤ 50.0 ppb	< 1.0 ppb
Trace Impurities – Potassium (K)	≤ 50 ppb	< 10 ppb
Trace Impurities – Silicon (Si)	≤ 50 ppb	< 10 ppb
Trace Impurities – Silver (Ag)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Sodium (Na)	≤ 150.0 ppb	< 5.0 ppb
Trace Impurities – Strontium (Sr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities – Tantalum (Ta)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Thallium (Tl)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Tin (Sn)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities – Titanium (Ti)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Vanadium (V)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Zinc (Zn)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Zirconium (Zr)	≤ 10.0 ppb	< 1.0 ppb
Particle Count – 0.5 µm and greater	≤ 60 par/ml	3 par/ml
Particle Count – 1.0 µm and greater	≤ 10 par/ml	1 par/ml

>>> Continued on page 3 >>>

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24B1362001

Test	Specification	Result

For Microelectronic Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Ken Koehnlein
Sr. Manager, Quality Assurance

Nitric Acid 69%
CMOS

M6112
M6113
M6114
M6115
M6116
M6117

Receive:
9/29/24
Met dig

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24B1362001
Manufactured Date: 2024-01-25
Retest Date: 2029-01-23
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (HNO_3)	69.0 - 70.0 %	69.6 %
Appearance	Passes Test	Passes Test
Color (APHA)	≤ 10	5
Residue after Ignition	≤ 2 ppm	< 1 ppm
Chloride (Cl)	≤ 0.08 ppm	< 0.03 ppm
Phosphate (PO_4)	≤ 0.10 ppm	< 0.03 ppm
Sulfate (SO_4)	≤ 0.2 ppm	< 0.2 ppm
Trace Impurities - Aluminum (Al)	≤ 40.0 ppb	< 1.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities - Barium (Ba)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Beryllium (Be)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Bismuth (Bi)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Boron (B)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities - Cadmium (Cd)	≤ 50 ppb	< 1 ppb
Trace Impurities - Calcium (Ca)	≤ 50.0 ppb	< 0.2 ppb
Trace Impurities - Chromium (Cr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities - Cobalt (Co)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Copper (Cu)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Gallium (Ga)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Germanium (Ge)	≤ 20 ppb	< 10 ppb
Trace Impurities - Gold (Au)	≤ 20 ppb	< 5 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities - Iron (Fe)	≤ 40.0 ppb	< 1.0 ppb
Trace Impurities - Lead (Pb)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Lithium (Li)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Magnesium (Mg)	≤ 20 ppb	< 1 ppb
Trace Impurities - Manganese (Mn)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Nickel (Ni)	≤ 20.0 ppb	< 5.0 ppb

>>> Continued on page 2 >>>

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24B1362001

Test	Specification	Result
Trace Impurities – Niobium (Nb)	≤ 50.0 ppb	< 1.0 ppb
Trace Impurities – Potassium (K)	≤ 50 ppb	< 10 ppb
Trace Impurities – Silicon (Si)	≤ 50 ppb	< 10 ppb
Trace Impurities – Silver (Ag)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Sodium (Na)	≤ 150.0 ppb	< 5.0 ppb
Trace Impurities – Strontium (Sr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities – Tantalum (Ta)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Thallium (Tl)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Tin (Sn)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities – Titanium (Ti)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Vanadium (V)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Zinc (Zn)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Zirconium (Zr)	≤ 10.0 ppb	< 1.0 ppb
Particle Count – 0.5 µm and greater	≤ 60 par/ml	3 par/ml
Particle Count – 1.0 µm and greater	≤ 10 par/ml	1 par/ml

>>> Continued on page 3 >>>

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24B1362001

Test	Specification	Result

For Microelectronic Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Ken Koehnlein
Sr. Manager, Quality Assurance

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 01/03/24 M5806, M5807

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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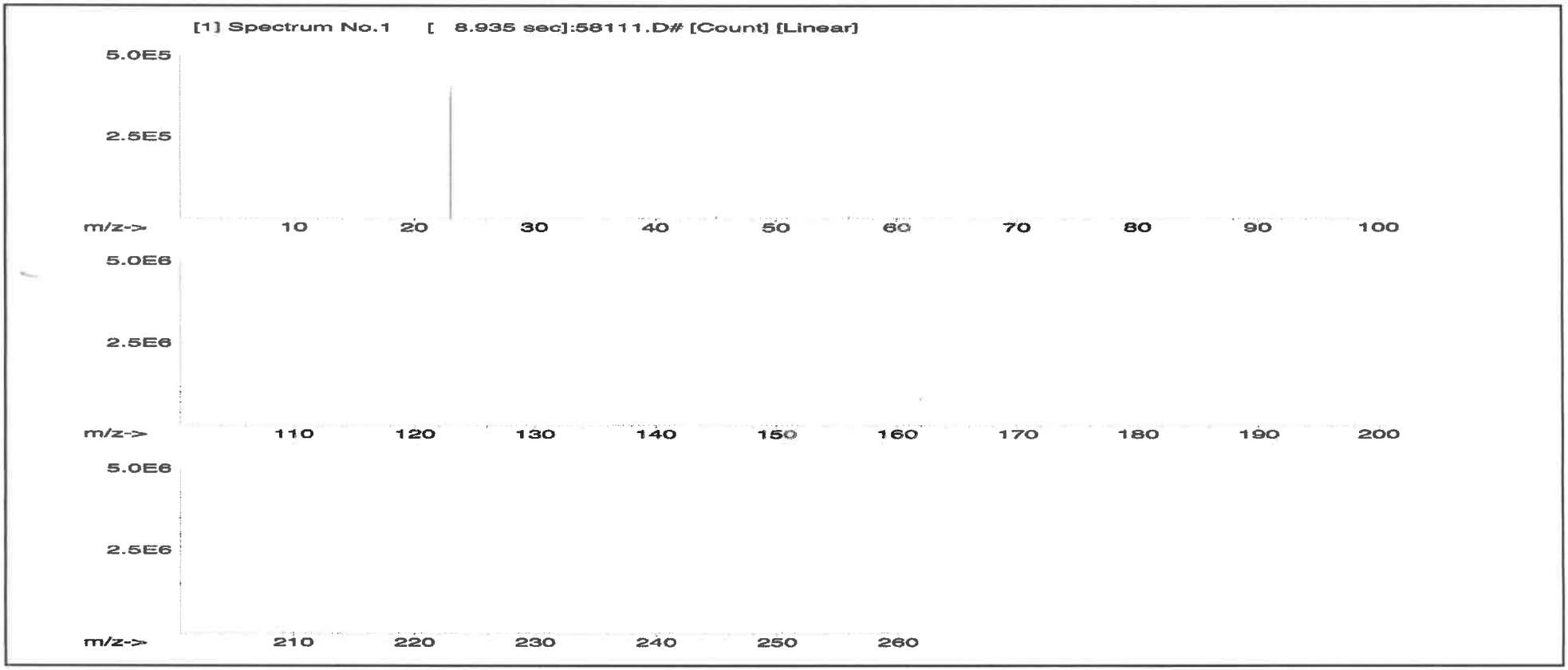
CERTIFIED WEIGHT REPORT:

			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



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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	T	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
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R: 01/03/24 M5802, M5803

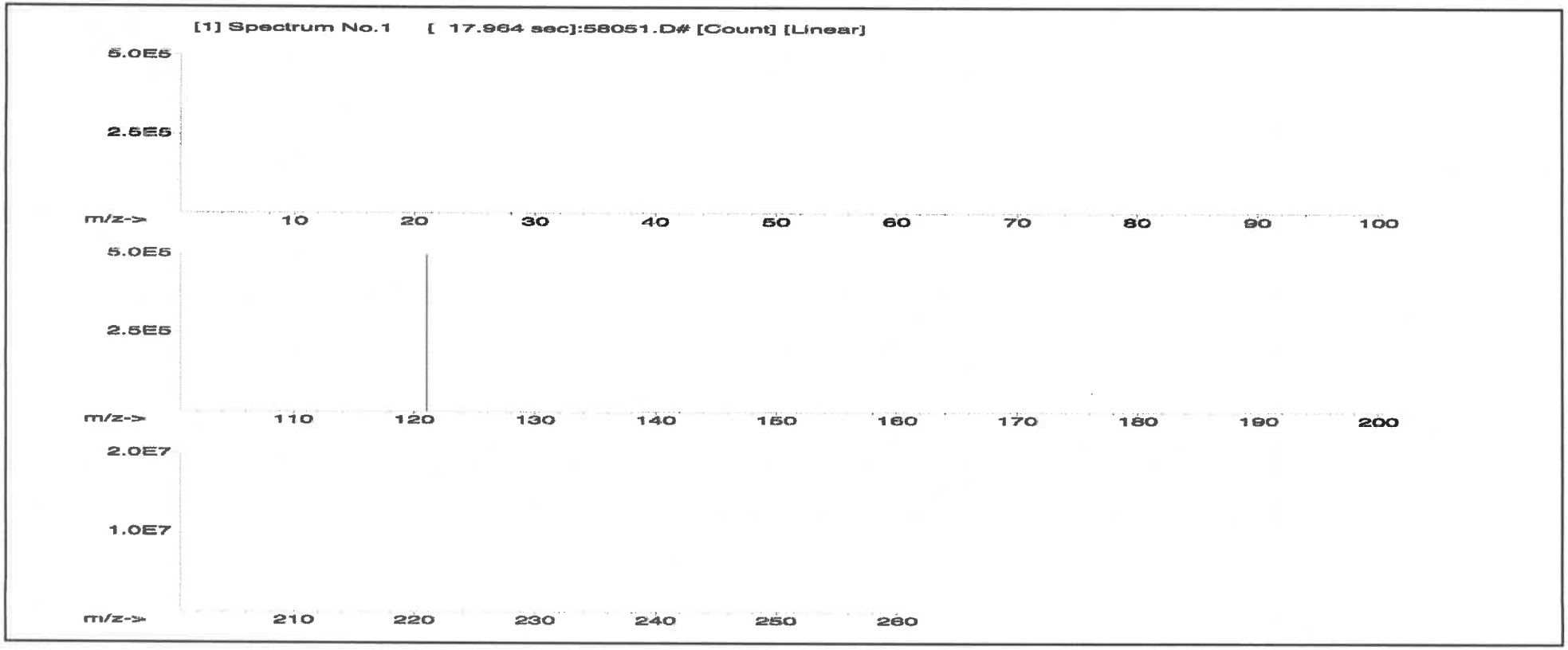
386

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



387

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	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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* 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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M6030

R: 8/5/24

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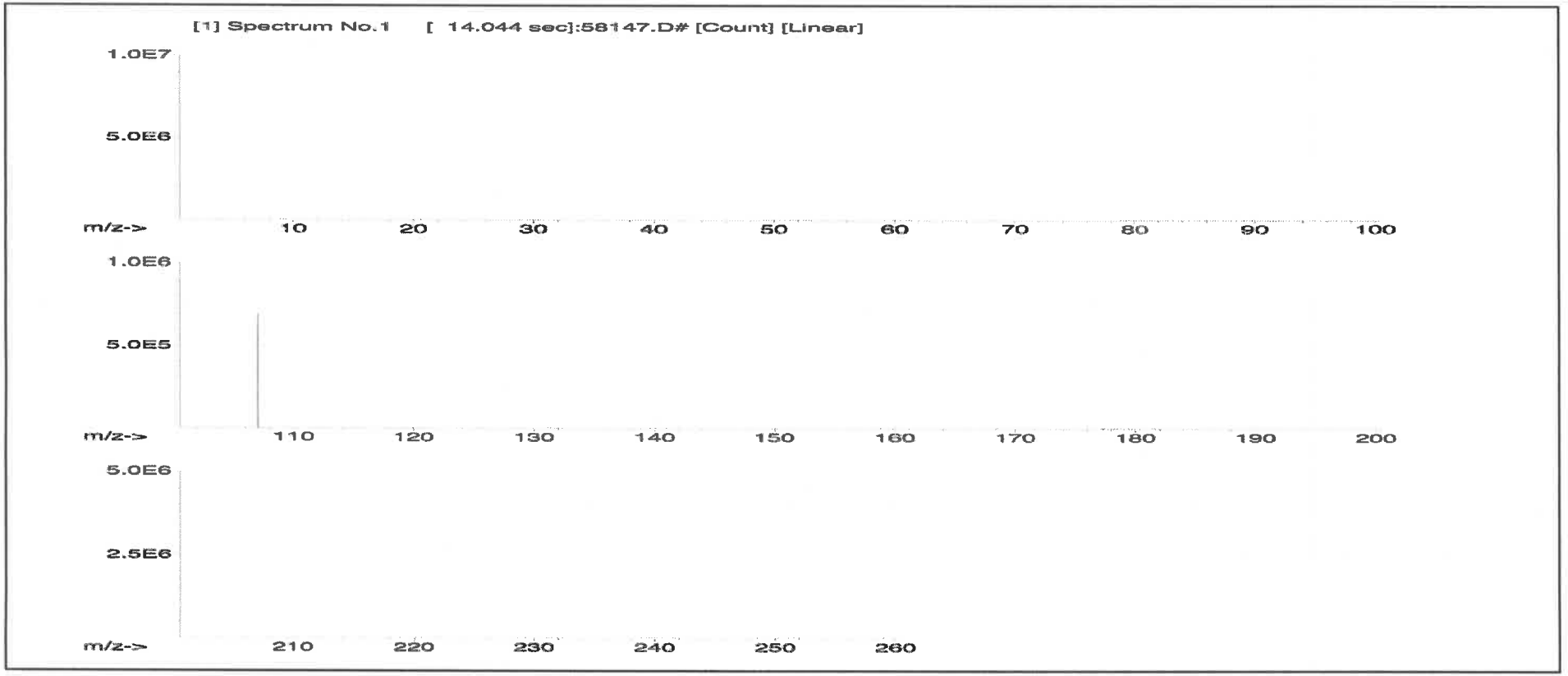
388

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



389

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	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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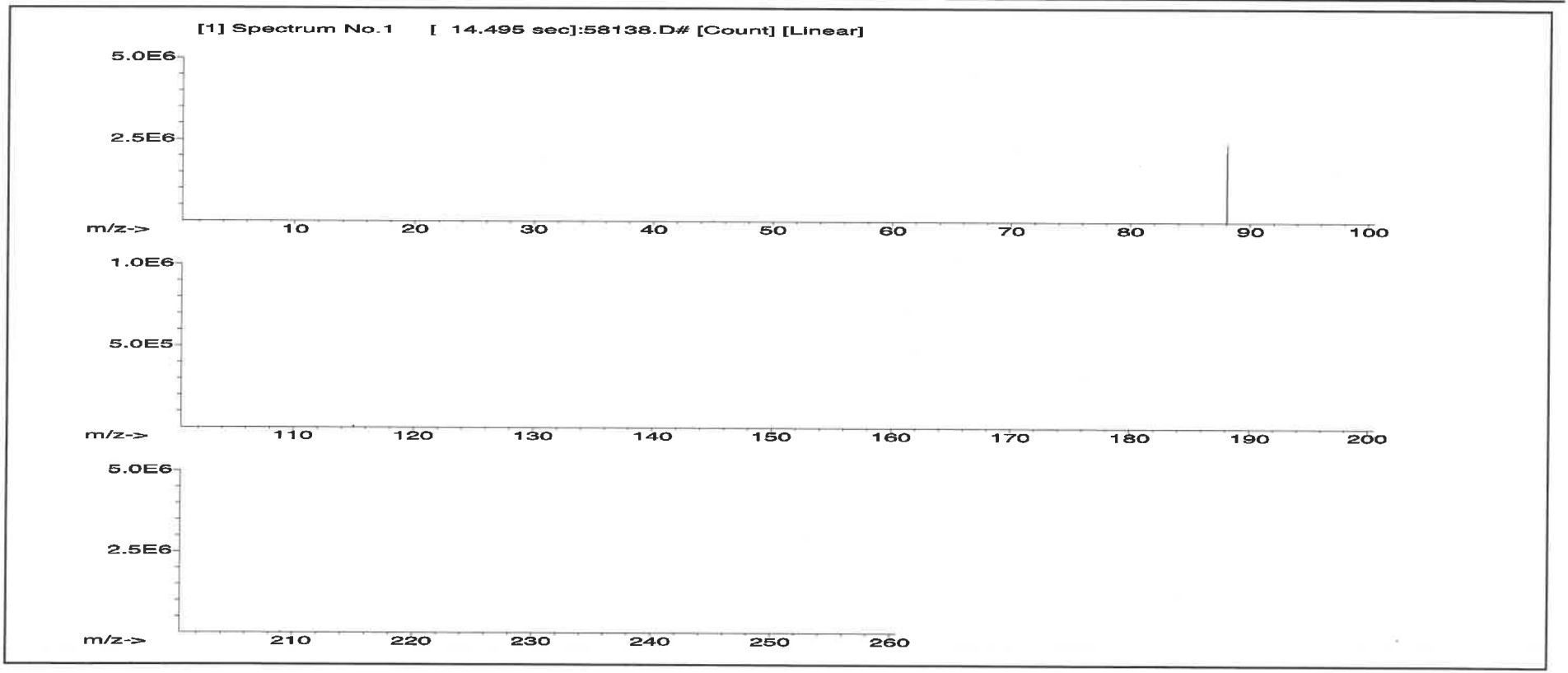
390

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



391

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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R ! 8/5/24

392

CERTIFIED WEIGHT REPORT:

Part Number:	**57081**		**Lot #**		
Lot Number:	**062724**	**Solvent:**	24002546	Nitric Acid	
Description:	**Thallium (Tl)**	2%	40.0 (mL)	Nitric Acid	
Expiration Date:	062727				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.1	0.10	Flask Uncertainty		

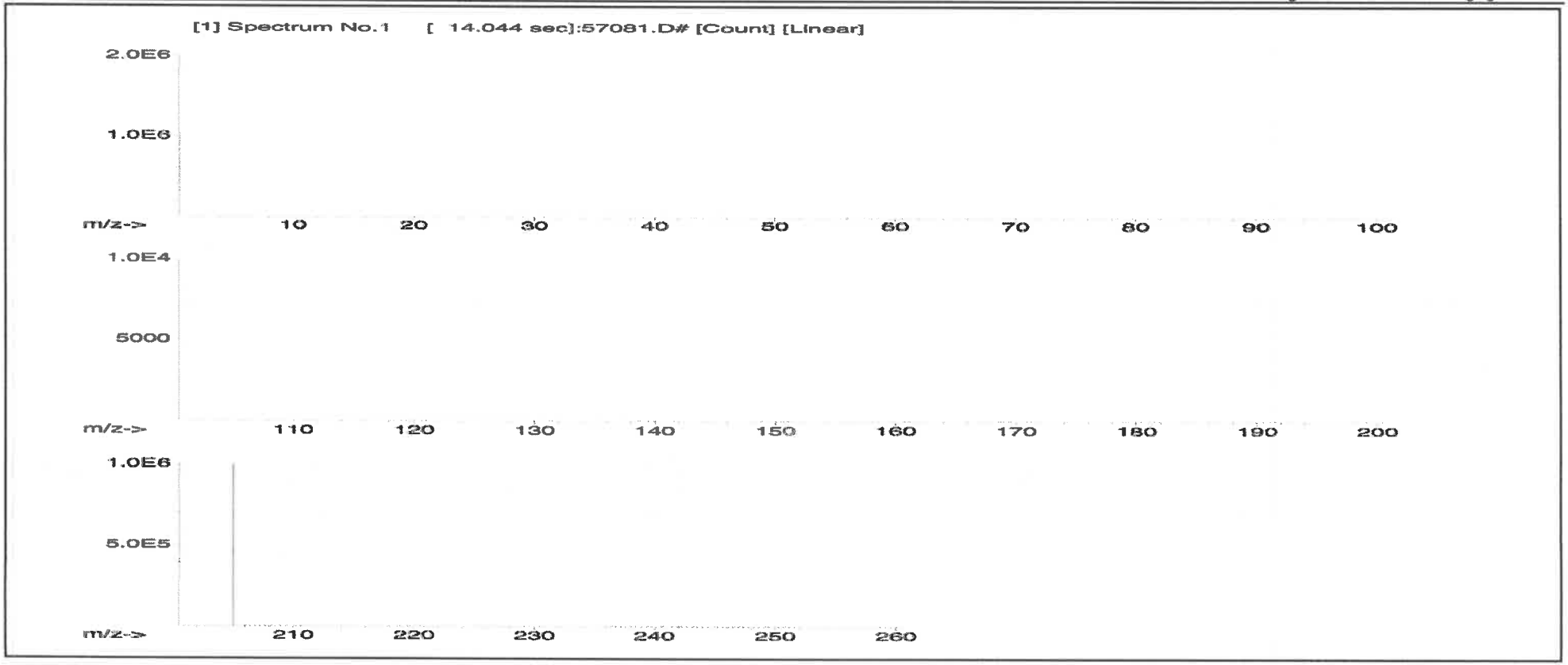
Aleah O'Brady

Formulated By:	Aleah O'Brady	062724

Pedro Rentas

Reviewed By:	Pedro L. Rentas	062724

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Thallium nitrate (Tl)	IN037	BCCF4399	1000	99.999	0.10	77.0	2.5975	2.5977	**1000.1**	**2.0**	10102-45-1	0.1 mg/m3	orl-mus 15mg/kg	3158



393

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	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:

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Rc. 8/5/24

394

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57023**			
Lot Number:	**062424**			
Description:	**Vanadium (V)**	24002546	Nitric Acid	
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	062427			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.3	0.06	Flask Uncertainty	

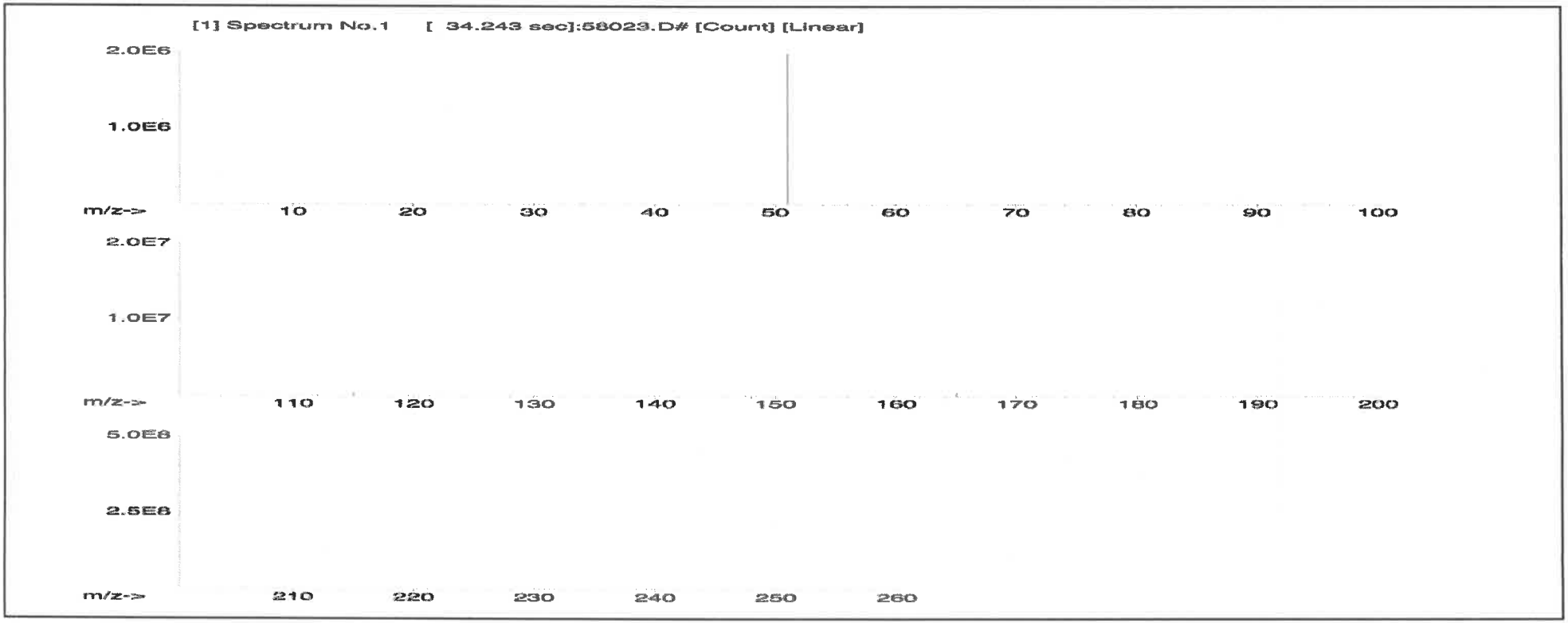
Aleah O'Brady

Formulated By:	Aleah O'Brady	062424

Pedro Rentas

Reviewed By:	Pedro L. Rentas	062424

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium metavanadate (V)	58123	021224	0.1000	200.0	0.084	1000	10000.3	**1000.0**	**2.2**	7803-55-6	0.05 mg/m3	orl-rat 58.1mg/kg	3165



395

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	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

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Alliance TECHNICAL GROUP

Soil/Sludge Metals Preparation Sheet

PB164781

SOP ID : M3050B-Digestion-20, MSFAM01.1-Trace Metals-2

SDG No : MC0D50

Matrix : SOIL

Pippete ID: ICP A

Balance ID : M SC-2

Filter paper ID : N/A

pH Strip ID : N/A

Hood ID : #3

Block ID: 1. HOT BLOCK #5 2. N/A

Start Digest Date: 11/08/2024 **Time :** 09:15 **Temp :** 95 °C

End Digest Date: 11/08/2024 **Time :** 11:25 **Temp :** 95 °C

Digestion tube ID: M6054

Block thermometer ID: MET-DIG. #5

Dig Technician Signature: JSP

Supervisor Signature:

Temp : 1. 95°C 2. N/A

Standared Name	MLS USED	STD REF. # FROM LOG
LCSS	1.00	MP83141
Spike Sol 6	1.00	MP83147
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Chemical Used	ML/SAMPLE USED	Lot Number
1:1 HNO3	10.00	MP83122
Conc. HNO3	5.00	M6116
30% H2O2	3.00	M5634
Conc. HCL	10.00	M6111
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 #5 CELL #34 : 95 C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
11/8/24 12:00	JSP Met dig.	
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

Soil/Sludge Metals Preparation Sheet

PB164781

Lab Sample ID	Client Sample ID	pH	Initial Weight (g)	Final Vol (ml)	Color Before	Color After	Texture	Artifact	Comment	Prep Pos
P4753-01	MC0D50	N/A	1.22	100	Brown	Yellow	Medium	N/A	N/A	1
P4753-02	MC0D51	N/A	1.31	100	Brown	Yellow	Medium	N/A	N/A	2
P4753-03	MC0D52	N/A	1.18	100	Brown	Yellow	Medium	N/A	N/A	3
P4753-04	MC0D53	N/A	1.47	100	Brown	Yellow	Medium	N/A	N/A	4
P4753-05	MC0D54	N/A	1.41	100	Brown	Yellow	Medium	N/A	N/A	5
P4753-06	MC0D56	N/A	1.17	100	Brown	Yellow	Medium	N/A	N/A	6
P4753-07	MC0D57	N/A	1.24	100	Brown	Yellow	Medium	N/A	N/A	7
P4753-08	MC0D58	N/A	1.31	100	Brown	Yellow	Medium	N/A	N/A	8
P4753-09	MC0D59	N/A	1.22	100	Brown	Yellow	Medium	N/A	N/A	9
P4753-10	MC0D60	N/A	1.13	100	Brown	Yellow	Medium	N/A	N/A	10
P4753-11	MC0D61	N/A	1.29	100	Brown	Yellow	Medium	N/A	N/A	11
P4753-12	MC0D62	N/A	1.21	100	Brown	Yellow	Medium	N/A	N/A	12
P4753-13	MC0D64	N/A	1.29	100	Brown	Yellow	Medium	N/A	N/A	13
P4753-14	MC0D66	N/A	1.43	100	Brown	Yellow	Medium	N/A	N/A	14
P4753-15	MC0D66D	N/A	1.33	100	Brown	Yellow	Medium	N/A	N/A	15
P4753-16	MC0D66S	N/A	1.37	100	Brown	Yellow	Medium	N/A	MP83147	16
P4753-17	MC0D89	N/A	1.43	100	Brown	Yellow	Medium	N/A	N/A	17
P4753-18	MC0D90	N/A	1.35	100	Brown	Yellow	Medium	N/A	N/A	18
P4753-19	MC0D91	N/A	1.36	100	Brown	Yellow	Medium	N/A	N/A	19
P4753-20	MC0D92	N/A	1.34	100	Brown	Yellow	Medium	N/A	N/A	20
P4753-21	MC0D93	N/A	1.25	100	Brown	Yellow	Medium	N/A	N/A	21
P4753-22	MC0D95	N/A	1.27	100	Brown	Yellow	Medium	N/A	N/A	22
PB164781BL	PBS781	N/A	1.00	100	Colorless	Colorless	Fine	N/A	N/A	23
PB164781BS	LCS781	N/A	1.00	100	Colorless	Colorless	Fine	N/A	MP83141	24

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 # LB133447

Review By	Sarabjit Jaswal	Review On	11/14/2024 1:13:21 PM
Supervise By	Mohan Bera	Supervise On	11/14/2024 1:14:17 PM

STD. NAME	STD REF.#
ICAL Standard	MP83134,MP83142,MP83140,MP83139,MP83138,MP83137,MP83136
ICV Standard	MP83143
CCV Standard	MP83146
ICSA Standard	MP83144,MP83145
CRI Standard	
LCS Standard	MP83141
Chk Standard	MP83148,MP83149

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	11/14/24 01:30		Kareem	OK
2	S1	S01	CAL2	11/14/24 01:35		Kareem	OK
3	S2	S02	CAL3	11/14/24 01:39		Kareem	OK
4	S3	S03	CAL4	11/14/24 01:43		Kareem	OK
5	S4	S04	CAL5	11/14/24 01:48		Kareem	OK
6	S5	S05	CAL6	11/14/24 01:52		Kareem	OK
7	S6	S06	CAL7	11/14/24 01:56		Kareem	OK
8	ICV011	ICV011	ICV	11/14/24 02:50		Kareem	OK
9	ICB011	ICB011	ICB	11/14/24 02:54		Kareem	OK
10	ICSA011	ICSA011	ICSA	11/14/24 03:05		Kareem	OK
11	ICSAB011	ICSAB011	ICSAB	11/14/24 03:09		Kareem	OK
12	CCV079	CCV079	CCV	11/14/24 03:14		Kareem	OK
13	CCB079	CCB079	CCB	11/14/24 03:18		Kareem	OK
14	PB164595BL	PBS595	MB	11/14/24 03:22		Kareem	OK
15	PB164595BS	LCS595	LCS	11/14/24 03:27		Kareem	OK
16	PB164595BSD	LCSD595	LCSD	11/14/24 03:31		Kareem	OK
17	P4523-01DL	MYE4T2	SAM	11/14/24 03:54		Kareem	OK
18	P4523-02DL	MYE4T3	SAM	11/14/24 03:58		Kareem	OK

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CCV Standard	MP83146
ICSA Standard	MP83144,MP83145
CRI Standard	
LCS Standard	MP83141
Chk Standard	MP83148,MP83149

19	P4523-03DL	MYE4T4	SAM	11/14/24 04:02		Kareem	OK
20	P4523-04DL	MYE4T5	SAM	11/14/24 04:07		Kareem	OK
21	P4523-05DL	MYE4T6	SAM	11/14/24 04:11		Kareem	OK
22	P4523-06DL	MYE4T7	SAM	11/14/24 04:16		Kareem	OK
23	P4523-10DL	MYE4T9	SAM	11/14/24 04:20		Kareem	OK
24	P4523-11DL	MYE4W8	SAM	11/14/24 04:24		Kareem	OK
25	P4523-12DL	MYE4W9	SAM	11/14/24 04:29		Kareem	OK
26	P4523-13DL	MYE4X0	SAM	11/14/24 04:33		Kareem	OK
27	P4523-14DL	MYE4X1	SAM	11/14/24 04:38		Kareem	OK
28	P4523-15DL	MYE4X2	SAM	11/14/24 04:42		Kareem	OK
29	P4523-16DL	MYE4X3	SAM	11/14/24 04:47		Kareem	OK
30	CCV080	CCV080	CCV	11/14/24 04:51		Kareem	OK
31	CCB080	CCB080	CCB	11/14/24 04:55		Kareem	OK
32	P4523-18DL	MYE4X5	SAM	11/14/24 05:04		Kareem	OK
33	P4523-19DL	MYE4X6	SAM	11/14/24 05:09		Kareem	OK
34	P4523-20DL	MYE4X7	SAM	11/14/24 05:13		Kareem	OK
35	P4523-21DL	MYE4X8	SAM	11/14/24 05:17		Kareem	OK
36	P4523-22DL	MYE4X9	SAM	11/14/24 05:22		Kareem	OK
37	P4754-01	MC0D96	SAM	11/14/24 05:26		Kareem	OK
38	P4754-02	MC0D97	SAM	11/14/24 05:31		Kareem	OK

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ICV Standard	MP83143
CCV Standard	MP83146
ICSA Standard	MP83144,MP83145
CRI Standard	
LCS Standard	MP83141
Chk Standard	MP83148,MP83149

39	P4754-03	MC0D98	SAM	11/14/24 05:35		Kareem	OK
40	P4754-04	MC0D99	SAM	11/14/24 05:40		Kareem	OK
41	P4754-05	MC0D99D	DUP	11/14/24 05:44		Kareem	OK
42	P4754-06	MC0D99S	MS	11/14/24 05:49		Kareem	OK
43	P4754-04L	MC0D99L	SD	11/14/24 05:53		Kareem	OK
44	P4754-07	MC0D68	SAM	11/14/24 05:57		Kareem	OK
45	P4754-08	MC0D69	SAM	11/14/24 06:02		Kareem	OK
46	P4754-09	MC0D70	SAM	11/14/24 06:06		Kareem	OK
47	P4754-10	MC0D71	SAM	11/14/24 06:11		Kareem	OK
48	P4754-11	MC0D72	SAM	11/14/24 06:15		Kareem	OK
49	P4754-12	MC0D74	SAM	11/14/24 06:20		Kareem	OK
50	P4754-13	MC0D75	SAM	11/14/24 06:24		Kareem	OK
51	CCV081	CCV081	CCV	11/14/24 06:29		Kareem	OK
52	CCB081	CCB081	CCB	11/14/24 06:33		Kareem	OK
53	P4754-14	MC0D76	SAM	11/14/24 06:37		Kareem	OK
54	P4754-15	MC0D77	SAM	11/14/24 06:42		Kareem	OK
55	P4754-16	MC0D78	SAM	11/14/24 06:46		Kareem	OK
56	P4754-17	MC0D81	SAM	11/14/24 06:51		Kareem	OK
57	P4754-18	MC0D82	SAM	11/14/24 06:55		Kareem	OK
58	P4754-19	MC0D83	SAM	11/14/24 07:00		Kareem	OK

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CCV Standard	MP83146
ICSA Standard	MP83144,MP83145
CRI Standard	
LCS Standard	MP83141
Chk Standard	MP83148,MP83149

59	P4754-20	MC0D84	SAM	11/14/24 07:04		Kareem	OK
60	P4754-21	MC0D86	SAM	11/14/24 07:09		Kareem	OK
61	P4754-22	MC0D87	SAM	11/14/24 07:13		Kareem	OK
62	PB164831BL	PBS831	MB	11/14/24 07:18		Kareem	OK
63	PB164831BS	LCS831	LCS	11/14/24 07:22		Kareem	OK
64	P4753-01	MC0D50	SAM	11/14/24 07:27		Kareem	OK
65	P4753-02	MC0D51	SAM	11/14/24 07:31		Kareem	OK
66	P4753-03	MC0D52	SAM	11/14/24 07:36		Kareem	OK
67	P4753-04	MC0D53	SAM	11/14/24 07:40		Kareem	OK
68	P4753-05	MC0D54	SAM	11/14/24 07:45		Kareem	OK
69	P4753-06	MC0D56	SAM	11/14/24 07:49		Kareem	OK
70	P4753-07	MC0D57	SAM	11/14/24 07:54		Kareem	OK
71	P4753-08	MC0D58	SAM	11/14/24 07:58		Kareem	OK
72	P4753-09	MC0D59	SAM	11/14/24 08:03		Kareem	OK
73	CCV082	CCV082	CCV	11/14/24 08:07		Kareem	OK
74	CCB082	CCB082	CCB	11/14/24 08:11		Kareem	OK
75	P4753-10	MC0D60	SAM	11/14/24 08:16		Kareem	OK
76	P4753-11	MC0D61	SAM	11/14/24 08:20		Kareem	OK
77	P4753-12	MC0D62	SAM	11/14/24 08:25		Kareem	OK
78	P4753-13	MC0D64	SAM	11/14/24 08:29		Kareem	OK

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ICV Standard	MP83143
CCV Standard	MP83146
ICSA Standard	MP83144,MP83145
CRI Standard	
LCS Standard	MP83141
Chk Standard	MP83148,MP83149

79	P4753-14	MC0D66	SAM	11/14/24 08:34		Kareem	OK
80	P4753-15	MC0D66D	DUP	11/14/24 08:38		Kareem	OK
81	P4753-16	MC0D66S	MS	11/14/24 08:43		Kareem	OK
82	P4753-14L	MC0D66L	SD	11/14/24 08:47		Kareem	OK
83	P4753-17	MC0D89	SAM	11/14/24 08:52		Kareem	OK
84	P4753-18	MC0D90	SAM	11/14/24 08:56		Kareem	OK
85	P4753-19	MC0D91	SAM	11/14/24 09:00		Kareem	OK
86	P4753-20	MC0D92	SAM	11/14/24 09:05		Kareem	OK
87	P4753-21	MC0D93	SAM	11/14/24 09:09		Kareem	OK
88	P4753-22	MC0D95	SAM	11/14/24 09:14		Kareem	OK
89	PB164781BL	PBS781	MB	11/14/24 09:18		Kareem	OK
90	PB164781BS	LCS781	LCS	11/14/24 09:23		Kareem	OK
91	P4752-01	MC0D32	SAM	11/14/24 09:27		Kareem	OK
92	P4752-02	MC0D33	SAM	11/14/24 09:32		Kareem	OK
93	P4752-03	MC0D34	SAM	11/14/24 09:36		Kareem	OK
94	P4752-04	MC0D35	SAM	11/14/24 09:41		Kareem	OK
95	CCV083	CCV083	CCV	11/14/24 09:45		Kareem	OK
96	CCB083	CCB083	CCB	11/14/24 09:50		Kareem	OK
97	P4752-05	MC0D36	SAM	11/14/24 09:54		Kareem	OK
98	P4752-06	MC0D38	SAM	11/14/24 09:59		Kareem	OK

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Daily Analysis Runlog For Sequence/QCBatch ID # LB133447

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Supervise By	Mohan Bera	Supervise On	11/14/2024 1:14:17 PM

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ICAL Standard	MP83134,MP83142,MP83140,MP83139,MP83138,MP83137,MP83136
ICV Standard	MP83143
CCV Standard	MP83146
ICSA Standard	MP83144,MP83145
CRI Standard	
LCS Standard	MP83141
Chk Standard	MP83148,MP83149

99	P4752-07	MC0D39	SAM	11/14/24 10:03		Kareem	OK
100	P4752-08	MC0D40	SAM	11/14/24 10:08		Kareem	OK
101	P4752-09	MC0D41	SAM	11/14/24 10:12		Kareem	OK
102	P4752-10	MC0D42	SAM	11/14/24 10:17		Kareem	OK
103	P4752-11	MC0D44	SAM	11/14/24 10:21		Kareem	OK
104	P4752-12	MC0D45	SAM	11/14/24 10:25		Kareem	OK
105	P4752-13	MC0D46	SAM	11/14/24 10:30		Kareem	OK
106	P4752-14	MC0D47	SAM	11/14/24 10:34		Kareem	OK
107	P4752-15	MC0D48	SAM	11/14/24 10:39		Kareem	OK
108	P4752-16	MC0DA1	SAM	11/14/24 10:43		Kareem	OK
109	P4752-18	MC0DA3	SAM	11/14/24 10:48		Kareem	OK
110	P4752-19	MC0DA4	SAM	11/14/24 10:52		Kareem	OK
111	P4752-20	MC0DA4D	DUP	11/14/24 10:57		Kareem	OK
112	PB164780BS	LCS780	LCS	11/14/24 11:01		Kareem	OK
113	P4752-21	MC0DA4S	MS	11/14/24 11:06		Kareem	OK
114	P4752-19L	MC0DA4L	SD	11/14/24 11:10		Kareem	OK
115	P4752-22	MC0DA5	SAM	11/14/24 11:14		Kareem	OK
116	PB164780BL	PBS780	MB	11/14/24 11:19		Kareem	OK
117	CCV084	CCV084	CCV	11/14/24 11:23		Kareem	OK
118	CCB084	CCB084	CCB	11/14/24 11:28		Kareem	OK

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Instrument ID: P5

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ICV Standard	MP83143
CCV Standard	MP83146
ICSA Standard	MP83144,MP83145
CRI Standard	
LCS Standard	MP83141
Chk Standard	MP83148,MP83149

119	P4752-17	MC0DA2	SAM	11/14/24 11:32		Kareem	OK
120	CCV085	CCV085	CCV	11/14/24 11:37		Kareem	OK
121	CCB085	CCB085	CCB	11/14/24 11:41		Kareem	OK

After printing this label:
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2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: IMPORTANT: TRANSMIT YOUR SHIPPING DATA AND PRINT A MANIFEST:
At the end of each shipping day, you should perform the FedEx Ground End of Day Close procedure to transmit your shipping data to FedEx. To do so, click on the Ground End of Day Close Button. If required, print the pickup manifest that appears. A printed manifest is required to be tendered along with your packages if they are being picked up by FedEx Ground. If you are dropping your packages off at a FedEx drop off location, the manifest is not required.

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide and applicable tariff, available upon request. FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations, including limitations on our liability, can be found in the current FedEx Service Guide and applicable tariff apply. In no event shall FedEx Ground be liable for any special, incidental, or consequential damages, including, without limitation, loss of profit, loss to the intrinsic value of the package, loss of sale, interest income or attorney's fees. Recovery cannot exceed actual documented loss. Items of extraordinary value are subject to separate limitations of liability set forth in the Service Guide and tariff. Written claims must be filed within strict time limits, see current FedEx Service Guide.

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Soils

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

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Cooler #4
Soil

Alliance TECHNICAL GROUP 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Login Summary Report

Order ID :	P4753	Order Date :	11/7/2024 9:15:00 AM	Project Mgr :	Deepak
Client :	USEPA CLP SMO	Project :	51863	Report Type :	USEPA CLP
Contact :	Anita Kapadia	Receive Date :	11/7/2024 9:15:00 AM	EDD Type :	EPA CLP
Date Sign Off :	11/7/2024 4:08:48 PM				

Sample ID	Client ID	Matrix	Sampling Date	Test	Test Group	Method	TAT Days	Fax Due Date	HC Due Date
P4753-01	MC0D50	Solid	11/05/2024						
				Metals CLP4		SFAM_AES	5	11/14/2024	11/14/2024
				Percent Solids		Chemtech -SOP	5	11/14/2024	11/14/2024
P4753-02	MC0D51	Solid	11/05/2024						
				Metals CLP4		SFAM_AES	5	11/14/2024	11/14/2024
				Percent Solids		Chemtech -SOP	5	11/14/2024	11/14/2024
P4753-03	MC0D52	Solid	11/05/2024						
				Metals CLP4		SFAM_AES	5	11/14/2024	11/14/2024
				Percent Solids		Chemtech -SOP	5	11/14/2024	11/14/2024
P4753-04	MC0D53	Solid	11/05/2024						
				Metals CLP4		SFAM_AES	5	11/14/2024	11/14/2024
				Percent Solids		Chemtech -SOP	5	11/14/2024	11/14/2024
P4753-05	MC0D54	Solid	11/05/2024						
				Metals CLP4		SFAM_AES	5	11/14/2024	11/14/2024
				Percent Solids		Chemtech -SOP	5	11/14/2024	11/14/2024
P4753-06	MC0D56	Solid	11/05/2024						
				Metals CLP4		SFAM_AES	5	11/14/2024	11/14/2024
				Percent Solids		Chemtech -SOP	5	11/14/2024	11/14/2024
P4753-07	MC0D57	Solid	11/05/2024						
				Metals CLP4		SFAM_AES	5	11/14/2024	11/14/2024
				Percent Solids		Chemtech -SOP	5	11/14/2024	11/14/2024
P4753-08	MC0D58	Solid	11/05/2024						
				Metals CLP4		SFAM_AES	5	11/14/2024	11/14/2024
				Percent Solids		Chemtech -SOP	5	11/14/2024	11/14/2024
P4753-09	MC0D59	Solid	11/05/2024						
				Metals CLP4		SFAM_AES	5	11/14/2024	11/14/2024
				Percent Solids		Chemtech -SOP	5	11/14/2024	11/14/2024
P4753-10	MC0D60	Solid	11/05/2024						
				Metals CLP4		SFAM_AES	5	11/14/2024	11/14/2024
				Percent Solids		Chemtech -SOP	5	11/14/2024	11/14/2024

P4753-11	MC0D61	Solid	11/05/2024					
				Metals CLP4	SFAM_AES	5	11/14/2024	11/14/2024
				Percent Solids	Chemtech -SOP	5	11/14/2024	11/14/2024
P4753-12	MC0D62	Solid	11/05/2024					
				Metals CLP4	SFAM_AES	5	11/14/2024	11/14/2024
				Percent Solids	Chemtech -SOP	5	11/14/2024	11/14/2024
P4753-13	MC0D64	Solid	11/05/2024					
				Metals CLP4	SFAM_AES	5	11/14/2024	11/14/2024
				Percent Solids	Chemtech -SOP	5	11/14/2024	11/14/2024
P4753-14	MC0D66	Solid	11/05/2024					
				Metals CLP4	SFAM_AES	5	11/14/2024	11/14/2024
				Percent Solids	Chemtech -SOP	5	11/14/2024	11/14/2024
P4753-15	MC0D66D	Solid	11/05/2024					
				Metals CLP4	SFAM_AES	5	11/14/2024	11/14/2024
				Percent Solids	Chemtech -SOP	5	11/14/2024	11/14/2024
P4753-16	MC0D66S	Solid	11/05/2024					
				Metals CLP4	SFAM_AES	5	11/14/2024	11/14/2024
				Percent Solids	Chemtech -SOP	5	11/14/2024	11/14/2024
P4753-17	MC0D89	Solid	11/05/2024					
				Metals CLP4	SFAM_AES	5	11/14/2024	11/14/2024
				Percent Solids	Chemtech -SOP	5	11/14/2024	11/14/2024
P4753-18	MC0D90	Solid	11/05/2024					
				Metals CLP4	SFAM_AES	5	11/14/2024	11/14/2024
				Percent Solids	Chemtech -SOP	5	11/14/2024	11/14/2024
P4753-19	MC0D91	Solid	11/05/2024					
				Metals CLP4	SFAM_AES	5	11/14/2024	11/14/2024
				Percent Solids	Chemtech -SOP	5	11/14/2024	11/14/2024
P4753-20	MC0D92	Solid	11/05/2024					
				Metals CLP4	SFAM_AES	5	11/14/2024	11/14/2024
				Percent Solids	Chemtech -SOP	5	11/14/2024	11/14/2024
P4753-21	MC0D93	Solid	11/05/2024					
				Metals CLP4	SFAM_AES	5	11/14/2024	11/14/2024
				Percent Solids	Chemtech -SOP	5	11/14/2024	11/14/2024
P4753-22	MC0D95	Solid	11/05/2024					
				Metals CLP4	SFAM_AES	5	11/14/2024	11/14/2024
				Percent Solids	Chemtech -SOP	5	11/14/2024	11/14/2024

WORKLIST(Hardcopy Internal Chain)

WorkList Name : PB164781 **WorkList ID :** 185244 **Department :** Digestion **Date :** 11-08-2024 08:18:40

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Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P4753-01	MC0D50	Solid	Metals CLP4	Cool 4 deg C	USEP01	Q12	11/05/2024	SFAM_AES
P4753-02	MC0D51	Solid	Metals CLP4	Cool 4 deg C	USEP01	Q12	11/05/2024	SFAM_AES
P4753-03	MC0D52	Solid	Metals CLP4	Cool 4 deg C	USEP01	Q12	11/05/2024	SFAM_AES
P4753-04	MC0D53	Solid	Metals CLP4	Cool 4 deg C	USEP01	Q12	11/05/2024	SFAM_AES
P4753-05	MC0D54	Solid	Metals CLP4	Cool 4 deg C	USEP01	Q12	11/05/2024	SFAM_AES
P4753-06	MC0D56	Solid	Metals CLP4	Cool 4 deg C	USEP01	Q12	11/05/2024	SFAM_AES
P4753-07	MC0D57	Solid	Metals CLP4	Cool 4 deg C	USEP01	Q12	11/05/2024	SFAM_AES
P4753-08	MC0D58	Solid	Metals CLP4	Cool 4 deg C	USEP01	Q12	11/05/2024	SFAM_AES
P4753-09	MC0D59	Solid	Metals CLP4	Cool 4 deg C	USEP01	Q12	11/05/2024	SFAM_AES
P4753-10	MC0D60	Solid	Metals CLP4	Cool 4 deg C	USEP01	Q12	11/05/2024	SFAM_AES
P4753-11	MC0D61	Solid	Metals CLP4	Cool 4 deg C	USEP01	Q12	11/05/2024	SFAM_AES
P4753-12	MC0D62	Solid	Metals CLP4	Cool 4 deg C	USEP01	Q12	11/05/2024	SFAM_AES
P4753-13	MC0D64	Solid	Metals CLP4	Cool 4 deg C	USEP01	Q12	11/05/2024	SFAM_AES
P4753-14	MC0D66	Solid	Metals CLP4	Cool 4 deg C	USEP01	Q12	11/05/2024	SFAM_AES
P4753-15	MC0D66D	Solid	Metals CLP4	Cool 4 deg C	USEP01	Q12	11/05/2024	SFAM_AES
P4753-16	MC0D66S	Solid	Metals CLP4	Cool 4 deg C	USEP01	Q12	11/05/2024	SFAM_AES
P4753-17	MC0D89	Solid	Metals CLP4	Cool 4 deg C	USEP01	Q12	11/05/2024	SFAM_AES
P4753-18	MC0D90	Solid	Metals CLP4	Cool 4 deg C	USEP01	Q12	11/05/2024	SFAM_AES
P4753-19	MC0D91	Solid	Metals CLP4	Cool 4 deg C	USEP01	Q12	11/05/2024	SFAM_AES
P4753-20	MC0D92	Solid	Metals CLP4	Cool 4 deg C	USEP01	Q12	11/05/2024	SFAM_AES
P4753-21	MC0D93	Solid	Metals CLP4	Cool 4 deg C	USEP01	Q12	11/05/2024	SFAM_AES

Date/Time 11/8/24 8:20

Raw Sample Received by: JSP (Met dig)

Raw Sample Relinquished by: SM

Date/Time 11/8/24 18:30

Raw Sample Received by: SM

Raw Sample Relinquished by: JSP (Met dig)

WORKLIST(Hardcopy Internal Chain)

WorkList Name : PB164781 **WorkList ID :** 185244 **Department :** Digestion **Date :** 11-08-2024 08:18:40

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Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P4753-22	MC0D95	Solid	Metals CLP4	Cool 4 deg C	USEP01	Q12	11/05/2024	SFAM_AES

Date/Time 11/8/24 8:20

Raw Sample Received by: JSP CMet dig

Raw Sample Relinquished by:

Date/Time 11/8/24 10:30

Raw Sample Received by:

Raw Sample Relinquished by: JSP CMet dig