EPA SAMPLE NO.

MYE531

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51817 MA No. : 3226.1 SDG No.: MYE531

Matrix: SOIL Lab Sample ID: P4570-01

% Solids: 96 Date Received: 10/25/2024

Analytical Method: ICP_AES

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	23000	D	11/11/2024	0127
7440-36-0	Antimony	10	UD	11/11/2024	0127
7440-38-2	Arsenic	38	D	11/11/2024	0127
7440-39-3	Barium	240	D	11/11/2024	0127
7440-41-7	Beryllium	1.1	D	11/11/2024	0127
7440-43-9	Cadmium	1.5	D	11/11/2024	0127
7440-70-2	Calcium	24000	D	11/11/2024	0127
7440-47-3	Chromium	45	D	11/11/2024	0127
7440-48-4	Cobalt	25	D	11/11/2024	0127
7440-50-8	Copper	85	D	11/11/2024	0127
7439-89-6	Iron	43000	D	11/11/2024	0127
7439-92-1	Lead	33	D	11/11/2024	0127
7439-95-4	Magnesium	9000	D	11/11/2024	0127
7439-96-5	Manganese	1200	D	11/11/2024	0127
7440-02-0	Nickel	55	D	11/11/2024	0127
7440-09-7	Potassium	3800	D	11/11/2024	0127
7782-49-2	Selenium	5.9	UD	11/11/2024	0127
7440-22-4	Silver	1.7	UD	11/11/2024	0127
7440-23-5	Sodium	290	JD	11/11/2024	0127
7440-28-0	Thallium	4.2	UD	11/11/2024	0127
7440-62-2	Vanadium	79	D	11/11/2024	0127
7440-66-6	Zinc	100	D	11/11/2024	0127

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

Comments:

EPA SAMPLE NO.

MYE537

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51817 MA No. : 3226.1 SDG No.: MYE531

Matrix: SOIL Lab Sample ID: P4570-04

% Solids: 95.8 Date Received: 10/25/2024

Analytical Method: ICP_AES

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	13000	D	11/11/2024	0145
7440-36-0	Antimony	11	UD	11/11/2024	0145
7440-38-2	Arsenic	20	D	11/11/2024	0145
7440-39-3	Barium	130	D	11/11/2024	0145
7440-41-7	Beryllium	0.62	JD	11/11/2024	0145
7440-43-9	Cadmium	1.0	D	11/11/2024	0145
7440-70-2	Calcium	4100	D	11/11/2024	0145
7440-47-3	Chromium	22	D	11/11/2024	0145
7440-48-4	Cobalt	15	D	11/11/2024	0145
7440-50-8	Copper	90	D	11/11/2024	0145
7439-89-6	Iron	28000	D	11/11/2024	0145
7439-92-1	Lead	24	D	11/11/2024	0145
7439-95-4	Magnesium	5100	D	11/11/2024	0145
7439-96-5	Manganese	710	D	11/11/2024	0145
7440-02-0	Nickel	23	D	11/11/2024	0145
7440-09-7	Potassium	3200	D	11/11/2024	0145
7782-49-2	Selenium	6.3	UD	11/11/2024	0145
7440-22-4	Silver	1.8	UD	11/11/2024	0145
7440-23-5	Sodium	900	UD	11/11/2024	0145
7440-28-0	Thallium	4.5	UD	11/11/2024	0145
7440-62-2	Vanadium	45	D	11/11/2024	0145
7440-66-6	Zinc	83	D	11/11/2024	0145

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

Comments:

EPA SAMPLE NO.

MYE538

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51817 MA No. : 3226.1 SDG No.: MYE531

Matrix: SOIL Lab Sample ID: P4570-05

% Solids: 91 Date Received: 10/25/2024

Analytical Method: ICP_AES

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	10000	D	11/11/2024	0149
7440-36-0	Antimony	0.96	JD	11/11/2024	0149
7440-38-2	Arsenic	14	D	11/11/2024	0149
7440-39-3	Barium	140	D	11/11/2024	0149
7440-41-7	Beryllium	0.49	JD	11/11/2024	0149
7440-43-9	Cadmium	0.75	JD	11/11/2024	0149
7440-70-2	Calcium	9800	D	11/11/2024	0149
7440-47-3	Chromium	18	D	11/11/2024	0149
7440-48-4	Cobalt	12	D	11/11/2024	0149
7440-50-8	Copper	58	D	11/11/2024	0149
7439-89-6	Iron	24000	D	11/11/2024	0149
7439-92-1	Lead	20	D	11/11/2024	0149
7439-95-4	Magnesium	4900	D	11/11/2024	0149
7439-96-5	Manganese	650	D	11/11/2024	0149
7440-02-0	Nickel	19	D	11/11/2024	0149
7440-09-7	Potassium	2800	D	11/11/2024	0149
7782-49-2	Selenium	6.2	UD	11/11/2024	0149
7440-22-4	Silver	1.8	UD	11/11/2024	0149
7440-23-5	Sodium	190	JD	11/11/2024	0149
7440-28-0	Thallium	4.4	UD	11/11/2024	0149
7440-62-2	Vanadium	37	D	11/11/2024	0149
7440-66-6	Zinc	81	D	11/11/2024	0149

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

Comments:

EPA SAMPLE NO.

MYE539

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51817 MA No. : 3226.1 SDG No.: MYE531

Matrix: SOIL Lab Sample ID: P4570-06

% Solids: 75.6 Date Received: 10/25/2024

Analytical Method: ICP_AES

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	14000	D	11/11/2024	0154
7440-36-0	Antimony	12	UD	11/11/2024	0154
7440-38-2	Arsenic	17	D	11/11/2024	0154
7440-39-3	Barium	120	D	11/11/2024	0154
7440-41-7	Beryllium	0.57	JD	11/11/2024	0154
7440-43-9	Cadmium	0.65	JD	11/11/2024	0154
7440-70-2	Calcium	14000	D	11/11/2024	0154
7440-47-3	Chromium	28	D	11/11/2024	0154
7440-48-4	Cobalt	14	D	11/11/2024	0154
7440-50-8	Copper	45	D	11/11/2024	0154
7439-89-6	Iron	26000	D	11/11/2024	0154
7439-92-1	Lead	15	D	11/11/2024	0154
7439-95-4	Magnesium	7800	D	11/11/2024	0154
7439-96-5	Manganese	600	D	11/11/2024	0154
7440-02-0	Nickel	33	D	11/11/2024	0154
7440-09-7	Potassium	2200	D	11/11/2024	0154
7782-49-2	Selenium	6.8	UD	11/11/2024	0154
7440-22-4	Silver	1.9	UD	11/11/2024	0154
7440-23-5	Sodium	370	JD	11/11/2024	0154
7440-28-0	Thallium	4.8	UD	11/11/2024	0154
7440-62-2	Vanadium	48	D	11/11/2024	0154
7440-66-6	Zinc	75	D	11/11/2024	0154

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

Comments:

EPA SAMPLE NO.

MYE540

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51817 MA No. : 3226.1 SDG No.: MYE531

Matrix: SOIL Lab Sample ID: P4570-07

% Solids: 97.8 Date Received: 10/25/2024

Analytical Method: ICP_AES

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	9900	D	11/11/2024	0158
7440-36-0	Antimony	9.2	UD	11/11/2024	0158
7440-38-2	Arsenic	64	D	11/11/2024	0158
7440-39-3	Barium	140	D	11/11/2024	0158
7440-41-7	Beryllium	0.57	JD	11/11/2024	0158
7440-43-9	Cadmium	0.68	JD	11/11/2024	0158
7440-70-2	Calcium	31000	D	11/11/2024	0158
7440-47-3	Chromium	40	D	11/11/2024	0158
7440-48-4	Cobalt	13	D	11/11/2024	0158
7440-50-8	Copper	30	D	11/11/2024	0158
7439-89-6	Iron	24000	D	11/11/2024	0158
7439-92-1	Lead	17	D	11/11/2024	0158
7439-95-4	Magnesium	6000	D	11/11/2024	0158
7439-96-5	Manganese	1100	D	11/11/2024	0158
7440-02-0	Nickel	35	D	11/11/2024	0158
7440-09-7	Potassium	1600	D	11/11/2024	0158
7782-49-2	Selenium	5.3	UD	11/11/2024	0158
7440-22-4	Silver	1.5	UD	11/11/2024	0158
7440-23-5	Sodium	380	JD	11/11/2024	0158
7440-28-0	Thallium	3.8	UD	11/11/2024	0158
7440-62-2	Vanadium	39	D	11/11/2024	0158
7440-66-6	Zinc	62	D	11/11/2024	0158

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

Comments:

EPA SAMPLE NO.

MYE541

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51817 MA No. : 3226.1 SDG No.: MYE531

Matrix: SOIL Lab Sample ID: P4570-08

% Solids: 99.3 Date Received: 10/25/2024

Analytical Method: ICP_AES

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	12000	D	11/11/2024	0203
7440-36-0	Antimony	11	UD	11/11/2024	0203
7440-38-2	Arsenic	22	D	11/11/2024	0203
7440-39-3	Barium	120	D	11/11/2024	0203
7440-41-7	Beryllium	0.60	JD	11/11/2024	0203
7440-43-9	Cadmium	1.0	D	11/11/2024	0203
7440-70-2	Calcium	2100	D	11/11/2024	0203
7440-47-3	Chromium	30	D	11/11/2024	0203
7440-48-4	Cobalt	13	D	11/11/2024	0203
7440-50-8	Copper	66	D	11/11/2024	0203
7439-89-6	Iron	28000	D	11/11/2024	0203
7439-92-1	Lead	25	D	11/11/2024	0203
7439-95-4	Magnesium	4600	D	11/11/2024	0203
7439-96-5	Manganese	620	D	11/11/2024	0203
7440-02-0	Nickel	25	D	11/11/2024	0203
7440-09-7	Potassium	2400	D	11/11/2024	0203
7782-49-2	Selenium	6.1	UD	11/11/2024	0203
7440-22-4	Silver	1.8	UD	11/11/2024	0203
7440-23-5	Sodium	880	UD	11/11/2024	0203
7440-28-0	Thallium	4.4	UD	11/11/2024	0203
7440-62-2	Vanadium	47	D	11/11/2024	0203
7440-66-6	Zinc	88	D	11/11/2024	0203

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

Comments:

EPA SAMPLE NO.

MYE542

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51817 MA No. : 3226.1 SDG No.: MYE531

Matrix: SOIL Lab Sample ID: P4570-09

% Solids: 96.2 Date Received: 10/25/2024

Analytical Method: ICP_AES

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	11000	D	11/11/2024	0207
7440-36-0	Antimony	1.0	JD	11/11/2024	0207
7440-38-2	Arsenic	18	D	11/11/2024	0207
7440-39-3	Barium	120	D	11/11/2024	0207
7440-41-7	Beryllium	0.53	JD	11/11/2024	0207
7440-43-9	Cadmium	0.73	JD	11/11/2024	0207
7440-70-2	Calcium	4500	D	11/11/2024	0207
7440-47-3	Chromium	23	D	11/11/2024	0207
7440-48-4	Cobalt	13	D	11/11/2024	0207
7440-50-8	Copper	49	D	11/11/2024	0207
7439-89-6	Iron	26000	D	11/11/2024	0207
7439-92-1	Lead	19	D	11/11/2024	0207
7439-95-4	Magnesium	4900	D	11/11/2024	0207
7439-96-5	Manganese	580	D	11/11/2024	0207
7440-02-0	Nickel	20	D	11/11/2024	0207
7440-09-7	Potassium	2600	D	11/11/2024	0207
7782-49-2	Selenium	6.0	UD	11/11/2024	0207
7440-22-4	Silver	1.7	UD	11/11/2024	0207
7440-23-5	Sodium	210	JD	11/11/2024	0207
7440-28-0	Thallium	4.3	UD	11/11/2024	0207
7440-62-2	Vanadium	39	D	11/11/2024	0207
7440-66-6	Zinc	74	D	11/11/2024	0207

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

Comments:

EPA SAMPLE NO.

MYE563

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51817 MA No. : 3226.1 SDG No.: MYE531

Matrix: SOIL Lab Sample ID: P4570-10

% Solids: 97.4 Date Received: 10/25/2024

Analytical Method: ICP_AES

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	18000	D	11/11/2024	0212
7440-36-0	Antimony	1.2	JD	11/11/2024	0212
7440-38-2	Arsenic	50	D	11/11/2024	0212
7440-39-3	Barium	260	D	11/11/2024	0212
7440-41-7	Beryllium	0.98	D	11/11/2024	0212
7440-43-9	Cadmium	1.5	D	11/11/2024	0212
7440-70-2	Calcium	6900	D	11/11/2024	0212
7440-47-3	Chromium	48	D	11/11/2024	0212
7440-48-4	Cobalt	33	D	11/11/2024	0212
7440-50-8	Copper	66	D	11/11/2024	0212
7439-89-6	Iron	55000	D	11/11/2024	0212
7439-92-1	Lead	48	D	11/11/2024	0212
7439-95-4	Magnesium	9700	D	11/11/2024	0212
7439-96-5	Manganese	1600	D	11/11/2024	0212
7440-02-0	Nickel	61	D	11/11/2024	0212
7440-09-7	Potassium	2900	D	11/11/2024	0212
7782-49-2	Selenium	6.4	UD	11/11/2024	0212
7440-22-4	Silver	1.8	UD	11/11/2024	0212
7440-23-5	Sodium	290	JD	11/11/2024	0212
7440-28-0	Thallium	4.5	UD	11/11/2024	0212
7440-62-2	Vanadium	120	D	11/11/2024	0212
7440-66-6	Zinc	110	D	11/11/2024	0212

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

Comments:

EPA SAMPLE NO.

MYE564

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51817 MA No. : 3226.1 SDG No.: MYE531

Matrix: SOIL Lab Sample ID: P4570-11

% Solids: 97.2 Date Received: 10/25/2024

Analytical Method: ICP_AES

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	17000	D	11/11/2024	0216
7440-36-0	Antimony	1.7	JD	11/11/2024	0216
7440-38-2	Arsenic	42	D	11/11/2024	0216
7440-39-3	Barium	190	D	11/11/2024	0216
7440-41-7	Beryllium	0.86	D	11/11/2024	0216
7440-43-9	Cadmium	1.3	D	11/11/2024	0216
7440-70-2	Calcium	3000	D	11/11/2024	0216
7440-47-3	Chromium	49	D	11/11/2024	0216
7440-48-4	Cobalt	22	D	11/11/2024	0216
7440-50-8	Copper	54	D	11/11/2024	0216
7439-89-6	Iron	47000	D	11/11/2024	0216
7439-92-1	Lead	24	D	11/11/2024	0216
7439-95-4	Magnesium	9200	D	11/11/2024	0216
7439-96-5	Manganese	1000	D	11/11/2024	0216
7440-02-0	Nickel	54	D	11/11/2024	0216
7440-09-7	Potassium	2500	D	11/11/2024	0216
7782-49-2	Selenium	5.7	UD	11/11/2024	0216
7440-22-4	Silver	1.6	UD	11/11/2024	0216
7440-23-5	Sodium	220	JD	11/11/2024	0216
7440-28-0	Thallium	4.1	UD	11/11/2024	0216
7440-62-2	Vanadium	94	D	11/11/2024	0216
7440-66-6	Zinc	84	D	11/11/2024	0216

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

Comments:

EPA SAMPLE NO.

MYE565

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51817 MA No. : 3226.1 SDG No.: MYE531

Matrix: SOIL Lab Sample ID: P4570-12

% Solids: 97.8 Date Received: 10/25/2024

Analytical Method: ICP_AES

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	15000	D	11/11/2024	0221
7440-36-0	Antimony	1.1	JD	11/11/2024	0221
7440-38-2	Arsenic	35	D	11/11/2024	0221
7440-39-3	Barium	190	D	11/11/2024	0221
7440-41-7	Beryllium	0.79	JD	11/11/2024	0221
7440-43-9	Cadmium	1.3	D	11/11/2024	0221
7440-70-2	Calcium	3000	D	11/11/2024	0221
7440-47-3	Chromium	40	D	11/11/2024	0221
7440-48-4	Cobalt	21	D	11/11/2024	0221
7440-50-8	Copper	60	D	11/11/2024	0221
7439-89-6	Iron	41000	D	11/11/2024	0221
7439-92-1	Lead	27	D	11/11/2024	0221
7439-95-4	Magnesium	7400	D	11/11/2024	0221
7439-96-5	Manganese	980	D	11/11/2024	0221
7440-02-0	Nickel	46	D	11/11/2024	0221
7440-09-7	Potassium	3000	D	11/11/2024	0221
7782-49-2	Selenium	6.1	UD	11/11/2024	0221
7440-22-4	Silver	1.8	UD	11/11/2024	0221
7440-23-5	Sodium	210	JD	11/11/2024	0221
7440-28-0	Thallium	4.4	UD	11/11/2024	0221
7440-62-2	Vanadium	76	D	11/11/2024	0221
7440-66-6	Zinc	94	D	11/11/2024	0221

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

Comments:

EPA SAMPLE NO.

MYE566

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51817 MA No. : 3226.1 SDG No.: MYE531

Matrix: SOIL Lab Sample ID: P4570-13

% Solids: 98.2 Date Received: 10/25/2024

Analytical Method: ICP_AES

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	14000	D	11/11/2024	0225
7440-36-0	Antimony	0.81	JD	11/11/2024	0225
7440-38-2	Arsenic	54	D	11/11/2024	0225
7440-39-3	Barium	180	D	11/11/2024	0225
7440-41-7	Beryllium	0.82	JD	11/11/2024	0225
7440-43-9	Cadmium	1.5	D	11/11/2024	0225
7440-70-2	Calcium	2200	D	11/11/2024	0225
7440-47-3	Chromium	36	D	11/11/2024	0225
7440-48-4	Cobalt	21	D	11/11/2024	0225
7440-50-8	Copper	73	D	11/11/2024	0225
7439-89-6	Iron	44000	D	11/11/2024	0225
7439-92-1	Lead	36	D	11/11/2024	0225
7439-95-4	Magnesium	7300	D	11/11/2024	0225
7439-96-5	Manganese	1000	D	11/11/2024	0225
7440-02-0	Nickel	45	D	11/11/2024	0225
7440-09-7	Potassium	2500	D	11/11/2024	0225
7782-49-2	Selenium	5.8	UD	11/11/2024	0225
7440-22-4	Silver	1.7	UD	11/11/2024	0225
7440-23-5	Sodium	220	JD	11/11/2024	0225
7440-28-0	Thallium	4.2	UD	11/11/2024	0225
7440-62-2	Vanadium	83	D	11/11/2024	0225
7440-66-6	Zinc	97	D	11/11/2024	0225

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

Comments:

EPA SAMPLE NO.

MYE567

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51817 MA No. : 3226.1 SDG No.: MYE531

Matrix: SOIL Lab Sample ID: P4570-14

% Solids: 97.3 Date Received: 10/25/2024

Analytical Method: ICP_AES

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	14000	D	11/11/2024	0230
7440-36-0	Antimony	1.4	JD	11/11/2024	0230
7440-38-2	Arsenic	43	D	11/11/2024	0230
7440-39-3	Barium	220	D	11/11/2024	0230
7440-41-7	Beryllium	0.81	JD	11/11/2024	0230
7440-43-9	Cadmium	1.6	D	11/11/2024	0230
7440-70-2	Calcium	2200	D	11/11/2024	0230
7440-47-3	Chromium	39	D	11/11/2024	0230
7440-48-4	Cobalt	23	D	11/11/2024	0230
7440-50-8	Copper	79	D	11/11/2024	0230
7439-89-6	Iron	43000	D	11/11/2024	0230
7439-92-1	Lead	40	D	11/11/2024	0230
7439-95-4	Magnesium	7800	D	11/11/2024	0230
7439-96-5	Manganese	1500	D	11/11/2024	0230
7440-02-0	Nickel	50	D	11/11/2024	0230
7440-09-7	Potassium	2600	D	11/11/2024	0230
7782-49-2	Selenium	6.5	UD	11/11/2024	0230
7440-22-4	Silver	1.9	UD	11/11/2024	0230
7440-23-5	Sodium	240	JD	11/11/2024	0230
7440-28-0	Thallium	4.7	UD	11/11/2024	0230
7440-62-2	Vanadium	80	D	11/11/2024	0230
7440-66-6	Zinc	100	D	11/11/2024	0230

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

Comments:

EPA SAMPLE NO.

MYE568

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51817 MA No. : 3226.1 SDG No.: MYE531

Matrix: SOIL Lab Sample ID: P4570-15

% Solids: 96.7 Date Received: 10/25/2024

Analytical Method: ICP_AES

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	15000	D	11/11/2024	0234
7440-36-0	Antimony	0.88	JD	11/11/2024	0234
7440-38-2	Arsenic	40	D	11/11/2024	0234
7440-39-3	Barium	220	D	11/11/2024	0234
7440-41-7	Beryllium	0.84	JD	11/11/2024	0234
7440-43-9	Cadmium	1.3	D	11/11/2024	0234
7440-70-2	Calcium	7900	D	11/11/2024	0234
7440-47-3	Chromium	39	D	11/11/2024	0234
7440-48-4	Cobalt	25	D	11/11/2024	0234
7440-50-8	Copper	65	D	11/11/2024	0234
7439-89-6	Iron	41000	D	11/11/2024	0234
7439-92-1	Lead	27	D	11/11/2024	0234
7439-95-4	Magnesium	7800	D	11/11/2024	0234
7439-96-5	Manganese	1300	D	11/11/2024	0234
7440-02-0	Nickel	49	D	11/11/2024	0234
7440-09-7	Potassium	3000	D	11/11/2024	0234
7782-49-2	Selenium	6.3	UD	11/11/2024	0234
7440-22-4	Silver	1.8	UD	11/11/2024	0234
7440-23-5	Sodium	180	JD	11/11/2024	0234
7440-28-0	Thallium	4.5	UD	11/11/2024	0234
7440-62-2	Vanadium	80	D	11/11/2024	0234
7440-66-6	Zinc	86	D	11/11/2024	0234

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

Comments:

EPA SAMPLE NO.

MYE569

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51817 MA No. : 3226.1 SDG No.: MYE531

Matrix: SOIL Lab Sample ID: P4570-16

% Solids: 97.5 Date Received: 10/25/2024

Analytical Method: ICP_AES

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	14000	D	11/11/2024	0238
7440-36-0	Antimony	10	UD	11/11/2024	0238
7440-38-2	Arsenic	35	D	11/11/2024	0238
7440-39-3	Barium	180	D	11/11/2024	0238
7440-41-7	Beryllium	0.79	JD	11/11/2024	0238
7440-43-9	Cadmium	1.3	D	11/11/2024	0238
7440-70-2	Calcium	2700	D	11/11/2024	0238
7440-47-3	Chromium	35	D	11/11/2024	0238
7440-48-4	Cobalt	21	D	11/11/2024	0238
7440-50-8	Copper	78	D	11/11/2024	0238
7439-89-6	Iron	37000	D	11/11/2024	0238
7439-92-1	Lead	32	D	11/11/2024	0238
7439-95-4	Magnesium	7200	D	11/11/2024	0238
7439-96-5	Manganese	950	D	11/11/2024	0238
7440-02-0	Nickel	44	D	11/11/2024	0238
7440-09-7	Potassium	2800	D	11/11/2024	0238
7782-49-2	Selenium	5.9	UD	11/11/2024	0238
7440-22-4	Silver	1.7	UD	11/11/2024	0238
7440-23-5	Sodium	200	JD	11/11/2024	0238
7440-28-0	Thallium	4.2	UD	11/11/2024	0238
7440-62-2	Vanadium	69	D	11/11/2024	0238
7440-66-6	Zinc	100	D	11/11/2024	0238

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

Comments:

EPA SAMPLE NO.

MYE570

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51817 MA No. : 3226.1 SDG No.: MYE531

Matrix: SOIL Lab Sample ID: P4570-17

% Solids: 96.7 Date Received: 10/25/2024

Analytical Method: ICP_AES

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	17000	D	11/11/2024	0243
7440-36-0	Antimony	1.1	JD	11/11/2024	0243
7440-38-2	Arsenic	57	D	11/11/2024	0243
7440-39-3	Barium	220	D	11/11/2024	0243
7440-41-7	Beryllium	0.91	D	11/11/2024	0243
7440-43-9	Cadmium	1.6	D	11/11/2024	0243
7440-70-2	Calcium	3400	D	11/11/2024	0243
7440-47-3	Chromium	45	D	11/11/2024	0243
7440-48-4	Cobalt	24	D	11/11/2024	0243
7440-50-8	Copper	71	D	11/11/2024	0243
7439-89-6	Iron	48000	D	11/11/2024	0243
7439-92-1	Lead	32	D	11/11/2024	0243
7439-95-4	Magnesium	8100	D	11/11/2024	0243
7439-96-5	Manganese	1100	D	11/11/2024	0243
7440-02-0	Nickel	52	D	11/11/2024	0243
7440-09-7	Potassium	3300	D	11/11/2024	0243
7782-49-2	Selenium	5.5	UD	11/11/2024	0243
7440-22-4	Silver	1.6	UD	11/11/2024	0243
7440-23-5	Sodium	170	JD	11/11/2024	0243
7440-28-0	Thallium	4.0	UD	11/11/2024	0243
7440-62-2	Vanadium	89	D	11/11/2024	0243
7440-66-6	Zinc	120	D	11/11/2024	0243

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

Comments:

EPA SAMPLE NO.

MYE571

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51817 MA No. : 3226.1 SDG No.: MYE531

Matrix: SOIL Lab Sample ID: P4570-18

% Solids: 96.9 Date Received: 10/25/2024

Analytical Method: ICP_AES

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	17000	D	11/11/2024	0247
7440-36-0	Antimony	2.5	JD	11/11/2024	0247
7440-38-2	Arsenic	290	D	11/11/2024	0247
7440-39-3	Barium	280	D	11/11/2024	0247
7440-41-7	Beryllium	0.98	D	11/11/2024	0247
7440-43-9	Cadmium	2.2	D	11/11/2024	0247
7440-70-2	Calcium	3200	D	11/11/2024	0247
7440-47-3	Chromium	43	D	11/11/2024	0247
7440-48-4	Cobalt	32	D	11/11/2024	0247
7440-50-8	Copper	82	D	11/11/2024	0247
7439-89-6	Iron	55000	D	11/11/2024	0247
7439-92-1	Lead	39	D	11/11/2024	0247
7439-95-4	Magnesium	8300	D	11/11/2024	0247
7439-96-5	Manganese	1900	D	11/11/2024	0247
7440-02-0	Nickel	60	D	11/11/2024	0247
7440-09-7	Potassium	3100	D	11/11/2024	0247
7782-49-2	Selenium	5.7	UD	11/11/2024	0247
7440-22-4	Silver	1.6	UD	11/11/2024	0247
7440-23-5	Sodium	250	JD	11/11/2024	0247
7440-28-0	Thallium	4.1	UD	11/11/2024	0247
7440-62-2	Vanadium	93	D	11/11/2024	0247
7440-66-6	Zinc	130	D	11/11/2024	0247

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

Comments:

EPA SAMPLE NO.

MYE572

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51817 MA No. : 3226.1 SDG No.: MYE531

Matrix: SOIL Lab Sample ID: P4570-19

% Solids: 97.7 Date Received: 10/25/2024

Analytical Method: ICP_AES

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	17000	D	11/11/2024	0300
7440-36-0	Antimony	1.2	JD	11/11/2024	0300
7440-38-2	Arsenic	43	D	11/11/2024	0300
7440-39-3	Barium	180	D	11/11/2024	0300
7440-41-7	Beryllium	0.82	JD	11/11/2024	0300
7440-43-9	Cadmium	1.3	D	11/11/2024	0300
7440-70-2	Calcium	6600	D	11/11/2024	0300
7440-47-3	Chromium	37	D	11/11/2024	0300
7440-48-4	Cobalt	23	D	11/11/2024	0300
7440-50-8	Copper	61	D	11/11/2024	0300
7439-89-6	Iron	45000	D	11/11/2024	0300
7439-92-1	Lead	29	D	11/11/2024	0300
7439-95-4	Magnesium	8800	D	11/11/2024	0300
7439-96-5	Manganese	830	D	11/11/2024	0300
7440-02-0	Nickel	50	D	11/11/2024	0300
7440-09-7	Potassium	2600	D	11/11/2024	0300
7782-49-2	Selenium	5.8	UD	11/11/2024	0300
7440-22-4	Silver	1.7	UD	11/11/2024	0300
7440-23-5	Sodium	190	JD	11/11/2024	0300
7440-28-0	Thallium	4.1	UD	11/11/2024	0300
7440-62-2	Vanadium	97	D	11/11/2024	0300
7440-66-6	Zinc	93	D	11/11/2024	0300

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

Comments:

EPA SAMPLE NO.

MYE573

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51817 MA No. : 3226.1 SDG No.: MYE531

Matrix: SOIL Lab Sample ID: P4570-20

% Solids: 96.9 Date Received: 10/25/2024

Analytical Method: ICP_AES

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	16000	D	11/11/2024	0305
7440-36-0	Antimony	0.91	JD	11/11/2024	0305
7440-38-2	Arsenic	52	D	11/11/2024	0305
7440-39-3	Barium	220	D	11/11/2024	0305
7440-41-7	Beryllium	0.91	D	11/11/2024	0305
7440-43-9	Cadmium	1.5	D	11/11/2024	0305
7440-70-2	Calcium	3300	D	11/11/2024	0305
7440-47-3	Chromium	39	D	11/11/2024	0305
7440-48-4	Cobalt	24	D	11/11/2024	0305
7440-50-8	Copper	76	D	11/11/2024	0305
7439-89-6	Iron	43000	D	11/11/2024	0305
7439-92-1	Lead	33	D	11/11/2024	0305
7439-95-4	Magnesium	8400	D	11/11/2024	0305
7439-96-5	Manganese	990	D	11/11/2024	0305
7440-02-0	Nickel	53	D	11/11/2024	0305
7440-09-7	Potassium	2900	D	11/11/2024	0305
7782-49-2	Selenium	5.5	UD	11/11/2024	0305
7440-22-4	Silver	1.6	UD	11/11/2024	0305
7440-23-5	Sodium	200	JD	11/11/2024	0305
7440-28-0	Thallium	3.9	UD	11/11/2024	0305
7440-62-2	Vanadium	80	D	11/11/2024	0305
7440-66-6	Zinc	100	D	11/11/2024	0305

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

Comments:

EPA SAMPLE NO.

MYE574

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51817 MA No. : 3226.1 SDG No.: MYE531

Matrix: SOIL Lab Sample ID: P4570-21

% Solids: 94.6 Date Received: 10/25/2024

Analytical Method: ICP_AES

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	23000	D	11/11/2024	0309
7440-36-0	Antimony	11	UD	11/11/2024	0309
7440-38-2	Arsenic	52	D	11/11/2024	0309
7440-39-3	Barium	280	D	11/11/2024	0309
7440-41-7	Beryllium	1.1	D	11/11/2024	0309
7440-43-9	Cadmium	1.2	D	11/11/2024	0309
7440-70-2	Calcium	10000	D	11/11/2024	0309
7440-47-3	Chromium	45	D	11/11/2024	0309
7440-48-4	Cobalt	28	D	11/11/2024	0309
7440-50-8	Copper	60	D	11/11/2024	0309
7439-89-6	Iron	47000	D	11/11/2024	0309
7439-92-1	Lead	25	D	11/11/2024	0309
7439-95-4	Magnesium	10000	D	11/11/2024	0309
7439-96-5	Manganese	1100	D	11/11/2024	0309
7440-02-0	Nickel	61	D	11/11/2024	0309
7440-09-7	Potassium	3200	D	11/11/2024	0309
7782-49-2	Selenium	6.7	UD	11/11/2024	0309
7440-22-4	Silver	1.9	UD	11/11/2024	0309
7440-23-5	Sodium	230	JD	11/11/2024	0309
7440-28-0	Thallium	4.8	UD	11/11/2024	0309
7440-62-2	Vanadium	94	D	11/11/2024	0309
7440-66-6	Zinc	80	D	11/11/2024	0309

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

Comments:

EPA SAMPLE NO.

MYE575

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51817 MA No. : 3226.1 SDG No.: MYE531

Matrix: SOIL Lab Sample ID: P4570-22

% Solids: 95.6 Date Received: 10/25/2024

Analytical Method: ICP_AES

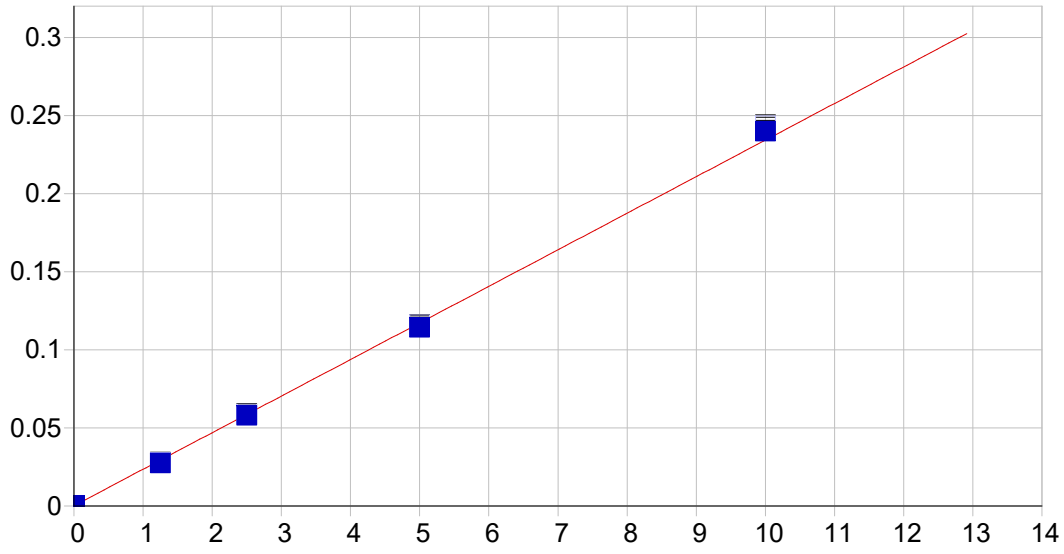
Concentration Units (µg/L, mg/L, mg/kg dry weight, µg, or µg/cm²): mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	24000	D	11/11/2024	0314
7440-36-0	Antimony	11	UD	11/11/2024	0314
7440-38-2	Arsenic	47	D	11/11/2024	0314
7440-39-3	Barium	310	D	11/11/2024	0314
7440-41-7	Beryllium	1.1	D	11/11/2024	0314
7440-43-9	Cadmium	1.3	D	11/11/2024	0314
7440-70-2	Calcium	10000	D	11/11/2024	0314
7440-47-3	Chromium	49	D	11/11/2024	0314
7440-48-4	Cobalt	28	D	11/11/2024	0314
7440-50-8	Copper	61	D	11/11/2024	0314
7439-89-6	Iron	49000	D	11/11/2024	0314
7439-92-1	Lead	25	D	11/11/2024	0314
7439-95-4	Magnesium	11000	D	11/11/2024	0314
7439-96-5	Manganese	1300	D	11/11/2024	0314
7440-02-0	Nickel	67	D	11/11/2024	0314
7440-09-7	Potassium	3600	D	11/11/2024	0314
7782-49-2	Selenium	6.4	UD	11/11/2024	0314
7440-22-4	Silver	1.8	UD	11/11/2024	0314
7440-23-5	Sodium	250	JD	11/11/2024	0314
7440-28-0	Thallium	4.6	UD	11/11/2024	0314
7440-62-2	Vanadium	98	D	11/11/2024	0314
7440-66-6	Zinc	91	D	11/11/2024	0314

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

Comments:

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5



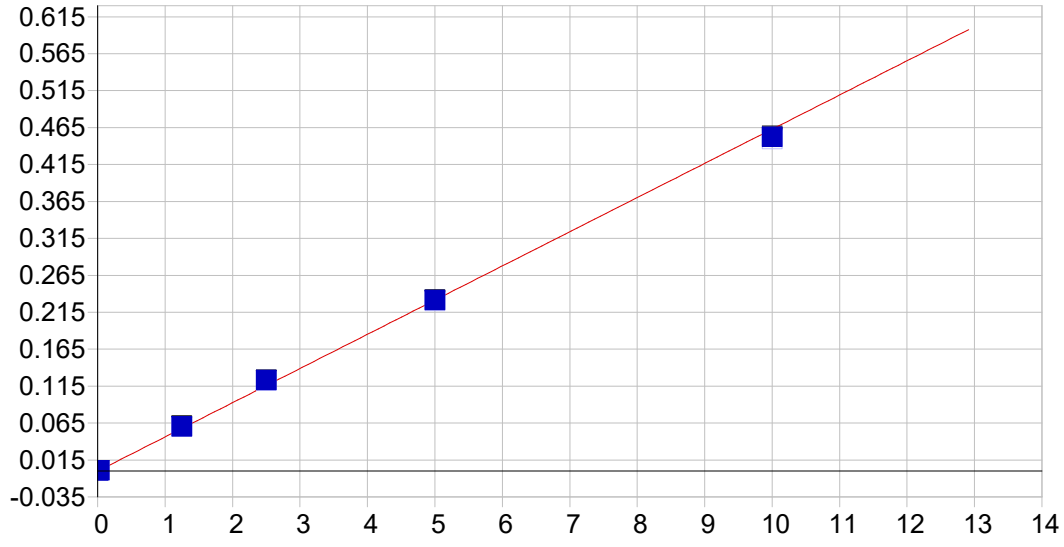
As 189.042 {479}

Date of Fit:	11/09/2024 15:55:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000113	Re-Slope:	1.000000
A1 (Gain):	0.023414	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999602	Status:	OK.
Std Error of Est:	0.000011		
Predicted MDL:	0.008950		
Predicted MQL:	0.029833		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00011	.000	1
S1	.01000	.01059	.001	5.91	.00036	.000	1
S2	1.2500	1.1639	-.086	-6.89	.02779	.000	1
S3	2.5000	2.4686	-.031	-1.25	.05876	.000	1
S4	5.0000	4.8746	-.125	-2.51	.11593	.000	1
S5	10.000	10.242	.242	2.42	.24329	.001	1

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5



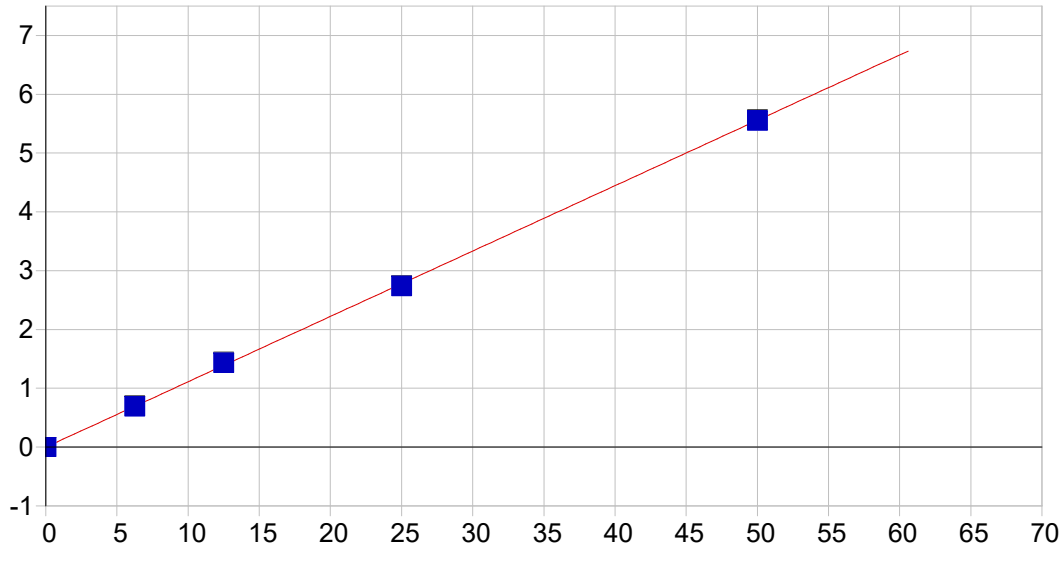
Tl 190.856 {477}

Date of Fit:	11/09/2024 15:55:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000081	Re-Slope:	1.000000
A1 (Gain):	0.046292	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999510	Status:	OK.
Std Error of Est:	0.000038		
Predicted MDL:	0.003589		
Predicted MQL:	0.011965		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00008	.000	1
S1	.02500	.02394	-.001	-4.23	.00100	.000	1
S2	1.2500	1.3081	.058	4.65	.06008	.001	1
S3	2.5000	2.6619	.162	6.48	.12235	.000	1
S4	5.0000	5.0029	.003	.058	.22992	.000	1
S5	10.000	9.7781	-.222	-2.22	.44938	.001	1

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5



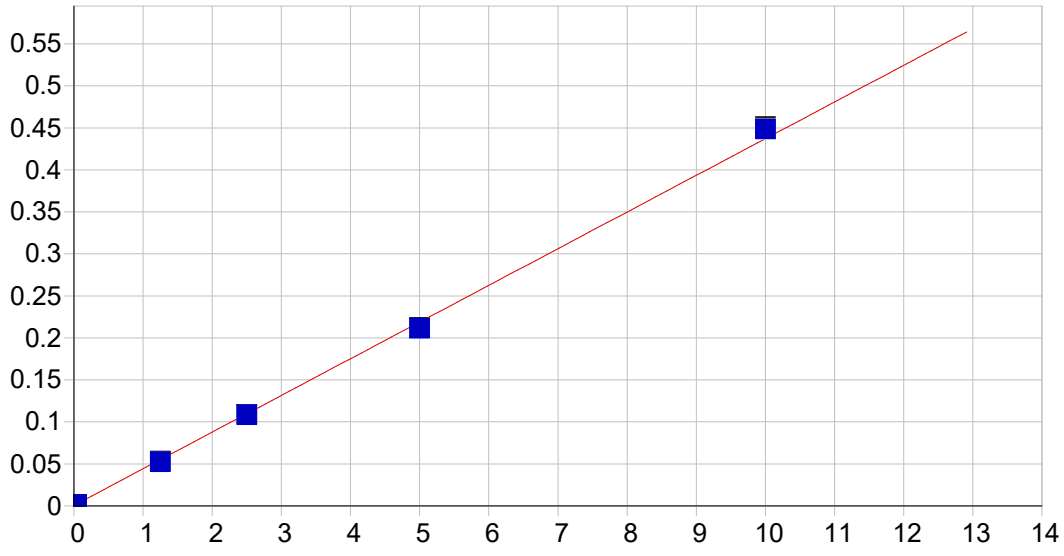
Pb 220.353 {453}

Date of Fit:	11/09/2024 15:55:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000509	Re-Slope:	1.000000
A1 (Gain):	0.111155	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999895	Status:	OK.
Std Error of Est:	0.000060		
Predicted MDL:	0.003701		
Predicted MQL:	0.012337		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00051	.000	1
S1	.01000	.00776	-.002	-22.4	.00036	.000	1
S2	6.2500	6.2474	-.003	-.042	.69375	.002	1
S3	12.500	12.914	.414	3.31	1.4346	.006	1
S4	25.000	24.634	-.366	-1.46	2.7370	.004	1
S5	50.000	49.956	-.044	-.088	5.5510	.012	1

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5



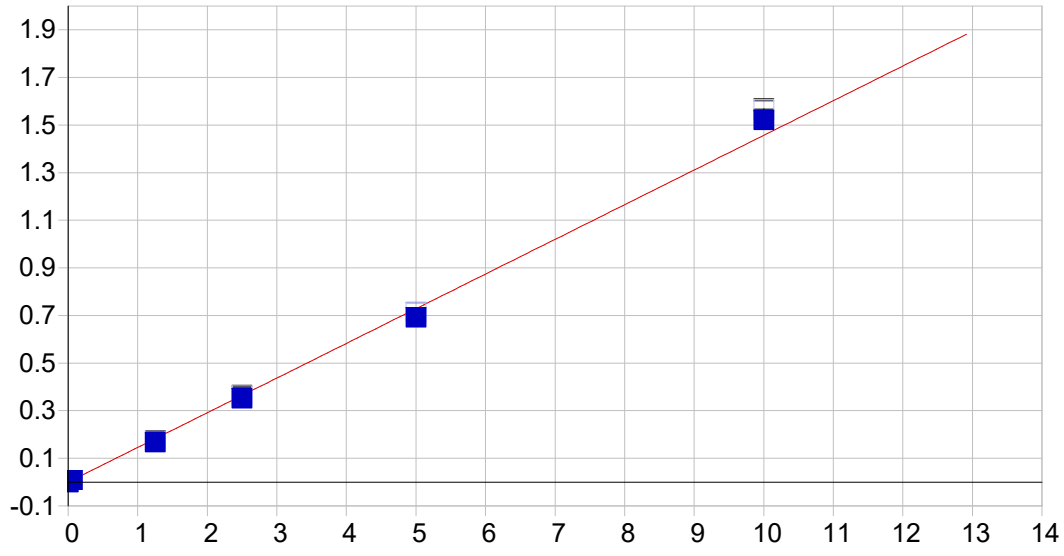
Se 196.090 {472}

Date of Fit:	11/09/2024 15:55:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000617	Re-Slope:	1.000000
A1 (Gain):	0.043652	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999536	Status:	OK.
Std Error of Est:	0.000042		
Predicted MDL:	0.007504		
Predicted MQL:	0.025013		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00062	.000	1
S1	.03500	.02886	-.006	-17.5	.00188	.000	1
S2	1.2500	1.1874	-.063	-5.00	.05235	.001	1
S3	2.5000	2.4710	-.029	-1.16	.10827	.000	1
S4	5.0000	4.8309	-.169	-3.38	.21108	.001	1
S5	10.000	10.267	.267	2.67	.44795	.002	1

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5



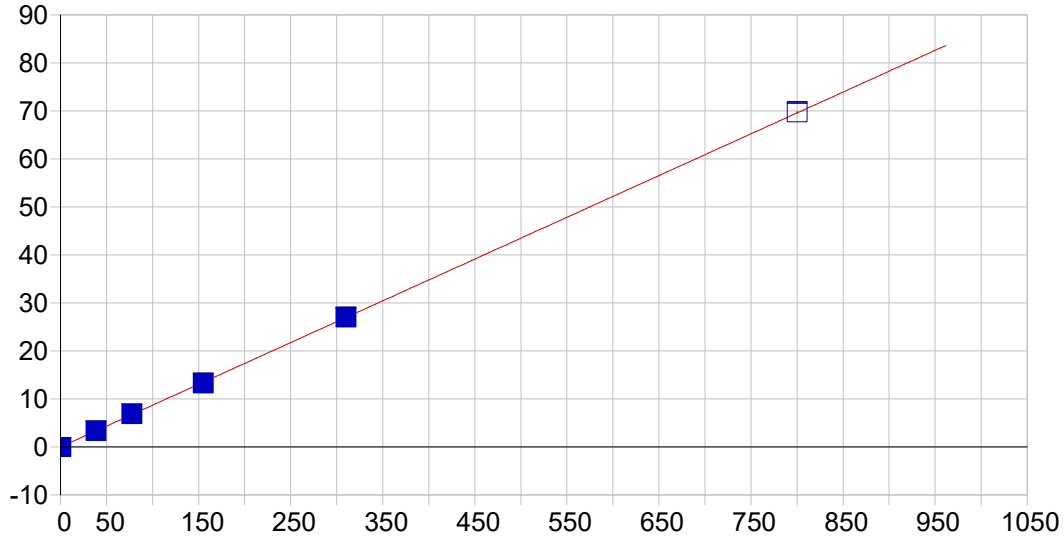
Sb 206.833 {463}

Date of Fit:	11/09/2024 15:55:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000001	Re-Slope:	1.000000
A1 (Gain):	0.145684	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998896	Status:	OK.
Std Error of Est:	0.000290		
Predicted MDL:	0.002927		
Predicted MQL:	0.009756		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00000	.001	1
S1	.06000	.05830	-.002	-2.84	.00849	.000	1
S2	1.2500	1.1492	-.101	-8.06	.17279	.001	1
S3	2.5000	2.4114	-.089	-3.55	.36205	.003	1
S4	5.0000	4.7459	-.254	-5.08	.71289	.001	1
S5	10.000	10.445	.445	4.45	1.5647	.004	1

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5



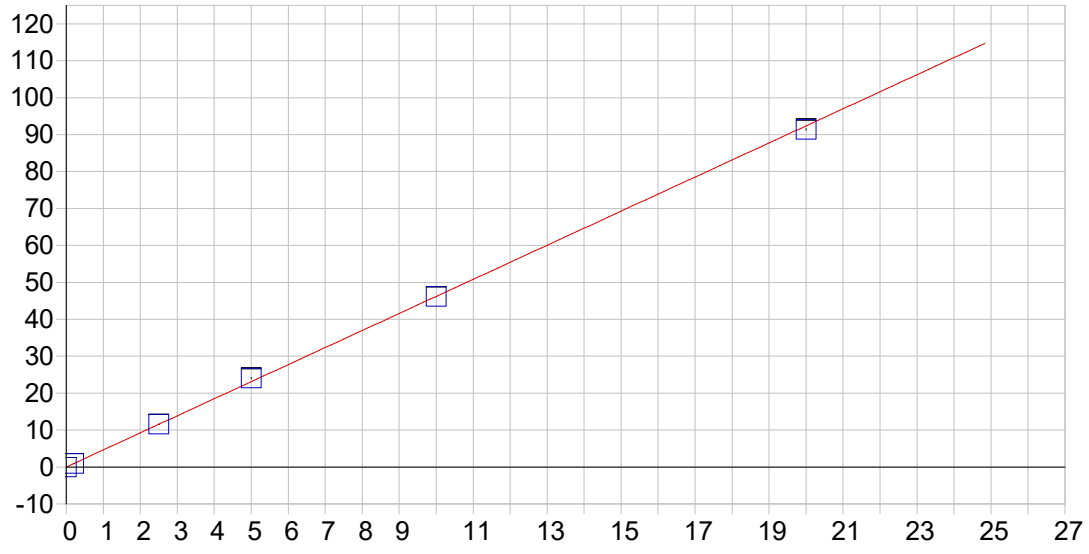
Al 396.152 { 85}

Date of Fit:	11/09/2024 15:55:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.003091	Re-Slope:	1.000000
A1 (Gain):	0.086977	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999973	Status:	OK.
Std Error of Est:	0.000397		
Predicted MDL:	0.016865		
Predicted MQL:	0.056215		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00309	.000	1
S1	.20000	.20726	.007	3.63	.01497	.001	1
S2	38.750	38.141	-.609	-1.57	3.3184	.007	1
S3	77.500	78.673	1.17	1.51	6.8478	.032	1
S4	155.00	152.41	-2.59	-1.67	13.269	.009	1
S5	310.00	310.50	.499	.161	27.036	.046	1
S6	800.00	801.52	1.52	.190	69.711	.181	1

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5



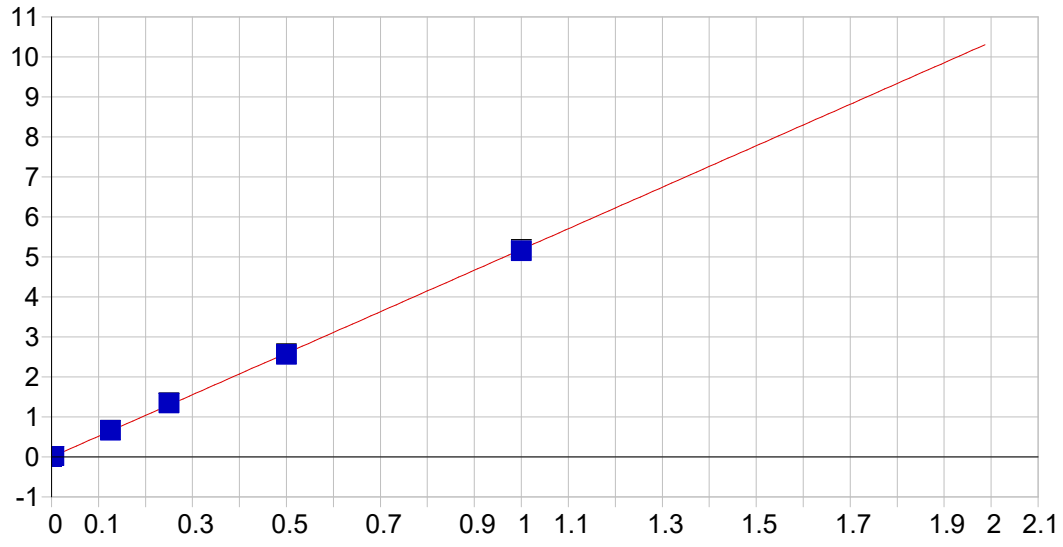
Ba 493.409 { 68}

Date of Fit:	11/09/2024 15:55:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002001	Re-Slope:	1.000000
A1 (Gain):	4.618208	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999853	Status:	OK.
Std Error of Est:	0.008409		
Predicted MDL:	0.000634		
Predicted MQL:	0.002114		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00194	.002	1
S1	.20000	.20664	.007	3.32	.95633	.001	1
S2	2.5000	2.5086	.009	.343	11.587	.023	1
S3	5.0000	5.2072	.207	4.14	24.050	.154	1
S4	10.000	9.9878	-.012	-.122	46.128	.048	1
S5	20.000	19.790	-.210	-1.05	91.395	.204	1

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5



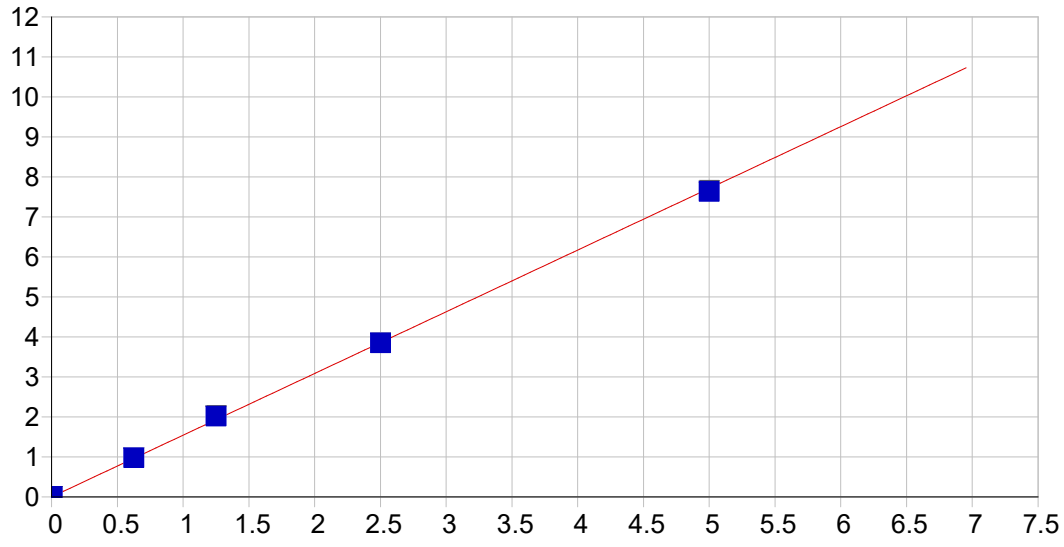
Be 234.861 {144}

Date of Fit:	11/09/2024 15:55:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001112	Re-Slope:	1.000000
A1 (Gain):	5.187017	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999865	Status:	OK.
Std Error of Est:	0.000319		
Predicted MDL:	0.000150		
Predicted MQL:	0.000501		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00111	.001	1
S1	.00500	.00528	.000	5.66	.02628	.001	1
S2	.12500	.12763	.003	2.10	.65984	.002	1
S3	.25000	.25906	.009	3.62	1.3405	.007	1
S4	.50000	.49424	-.006	-1.15	2.5583	.010	1
S5	1.0000	.99380	-.006	-.620	5.1454	.033	1

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5



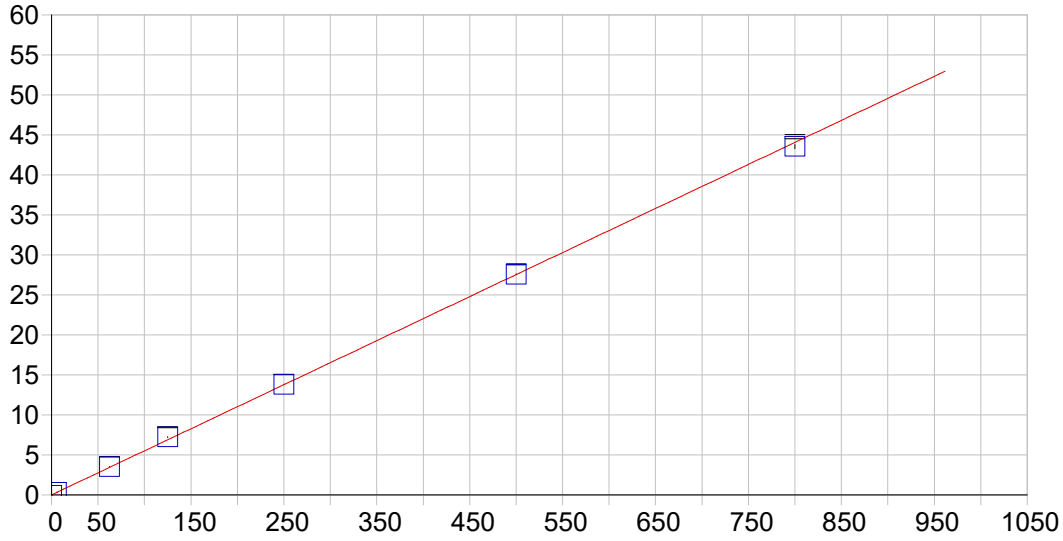
Cd 214.438 {457}

Date of Fit:	11/09/2024 15:55:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000681	Re-Slope:	1.000000
A1 (Gain):	1.543299	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999815	Status:	OK.
Std Error of Est:	0.000250		
Predicted MDL:	0.000160		
Predicted MQL:	0.000535		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00068	.000	1
S1	.00500	.00526	.000	5.23	.00881	.000	1
S2	.62500	.63326	.008	1.32	.98030	.003	1
S3	1.2500	1.3079	.058	4.63	2.0238	.010	1
S4	2.5000	2.4907	-.009	-.371	3.8539	.006	1
S5	5.0000	4.9429	-.057	-1.14	7.6475	.020	1

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5



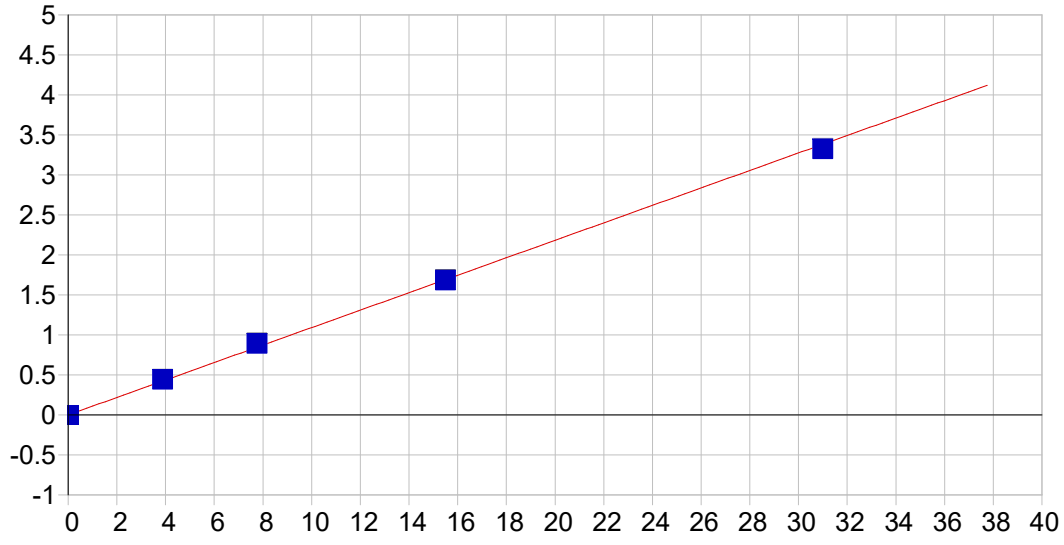
Ca 373.690 { 90}

Date of Fit:	11/09/2024 15:55:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.004423	Re-Slope:	1.000000
A1 (Gain):	0.055074	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999863	Status:	OK.
Std Error of Est:	0.003181		
Predicted MDL:	0.021081		
Predicted MQL:	0.070269		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00074	-.001	.000	.00438	.001	1
S1	5.0000	5.4150	.415	8.30	.30265	.000	1
S2	62.500	64.048	1.55	2.48	3.5318	.009	1
S3	125.00	131.07	6.07	4.86	7.2230	.043	1
S4	250.00	250.76	.762	.305	13.815	.019	1
S5	500.00	500.44	.442	.088	27.566	.062	1
S6	800.00	790.76	-9.24	-1.15	43.555	.260	1

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5



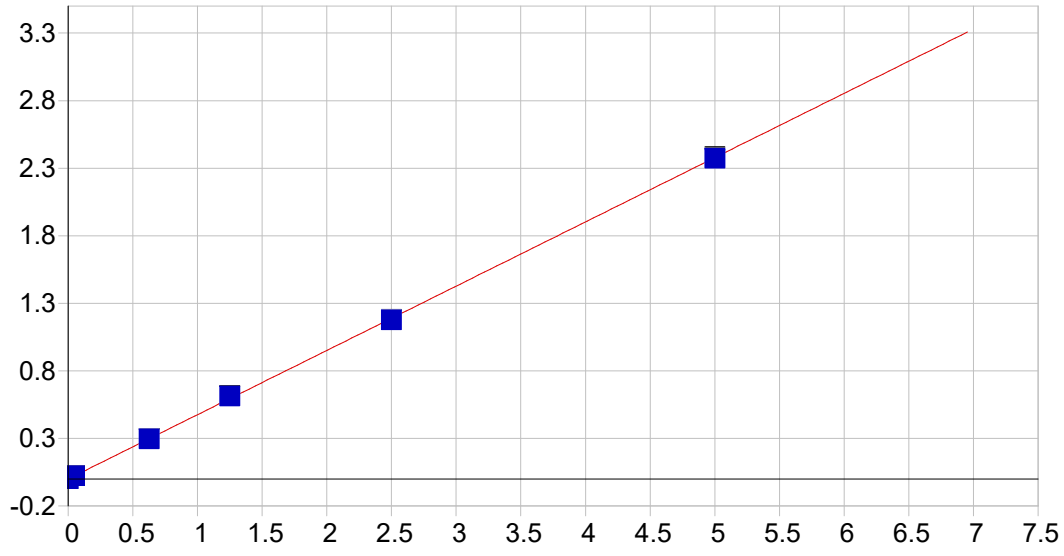
Cr 267.716 {126}

Date of Fit:	11/09/2024 15:55:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000167	Re-Slope:	1.000000
A1 (Gain):	0.109139	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999613	Status:	OK.
Std Error of Est:	0.000090		
Predicted MDL:	0.001338		
Predicted MQL:	0.004461		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00017	.000	1
S1	.01000	.01300	.003	30.0	.00125	.000	1
S2	3.8750	4.0629	.188	4.85	.44373	.001	1
S3	7.7500	8.1895	.440	5.67	.89458	.001	1
S4	15.500	15.421	-.079	-.513	1.6847	.000	1
S5	31.000	30.449	-.551	-1.78	3.3268	.004	1

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5



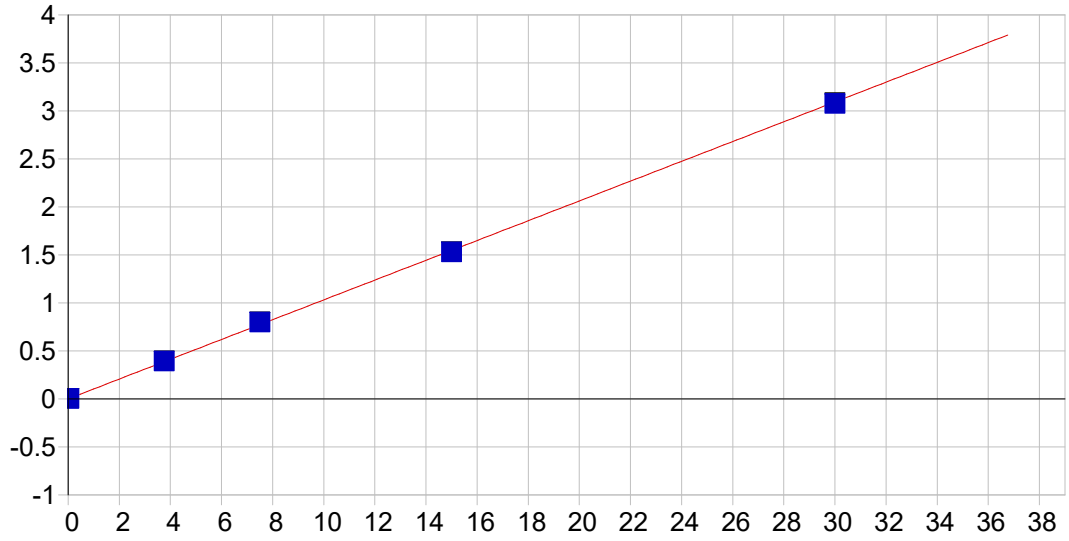
Co 228.616 {448}

Date of Fit:	11/09/2024 15:55:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000481	Re-Slope:	1.000000
A1 (Gain):	0.475710	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999920	Status:	OK.
Std Error of Est:	0.000160		
Predicted MDL:	0.000604		
Predicted MQL:	0.002014		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00048	.000	1
S1	.05000	.05015	.000	.308	.02346	.000	1
S2	.62500	.62312	-.002	-.301	.29630	.001	1
S3	1.2500	1.2890	.039	3.12	.61345	.003	1
S4	2.5000	2.4746	-.025	-1.02	1.1782	.003	1
S5	5.0000	4.9881	-.012	-.239	2.3753	.009	1

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5



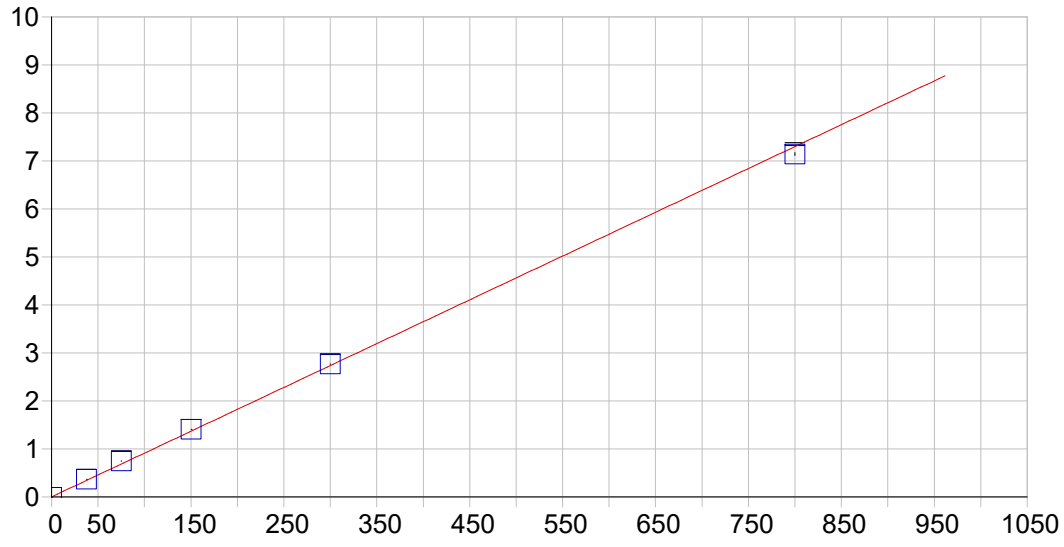
Cu 324.754 {104}

Date of Fit:	11/09/2024 15:55:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000784	Re-Slope:	1.000000
A1 (Gain):	0.103083	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999901	Status:	OK.
Std Error of Est:	0.000066		
Predicted MDL:	0.006269		
Predicted MQL:	0.020898		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00078	.001	1
S1	.02500	.02353	-.001	-5.88	.00321	.001	1
S2	3.7500	3.8122	.062	1.66	.39351	.001	1
S3	7.5000	7.7401	.240	3.20	.79817	.001	1
S4	15.000	14.847	-.153	-1.02	1.5303	.001	1
S5	30.000	29.852	-.148	-.492	3.0761	.007	1

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5



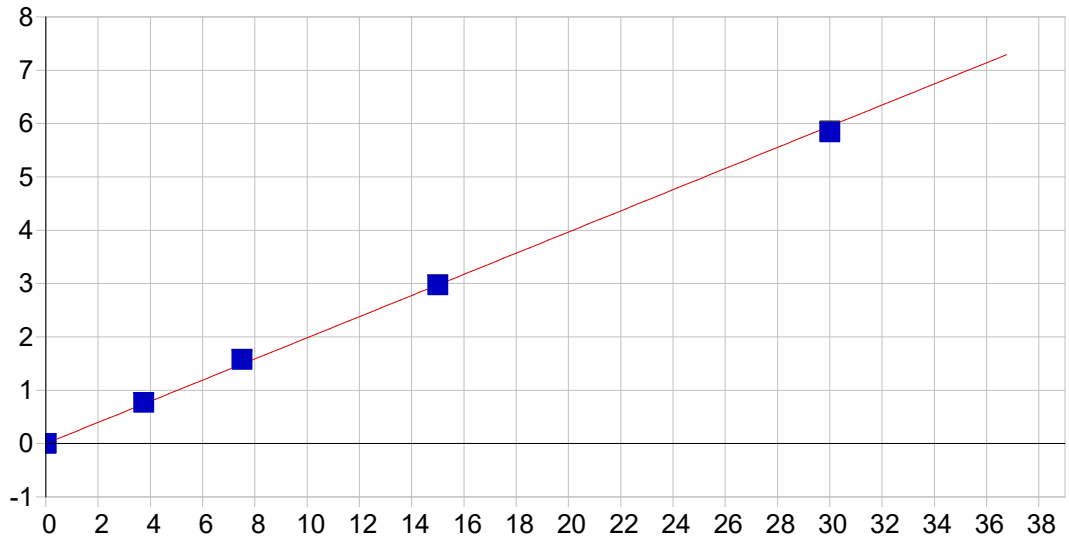
Fe 259.837 {130}

Date of Fit:	11/09/2024 15:55:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000181	Re-Slope:	1.000000
A1 (Gain):	0.009123	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999507	Status:	OK.
Std Error of Est:	0.000125		
Predicted MDL:	0.040380		
Predicted MQL:	0.134601		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00018	.000	1
S1	.10000	.09624	-.004	-3.76	.00106	.000	1
S2	37.500	40.138	2.64	7.04	.36636	.001	1
S3	75.000	81.844	6.84	9.12	.74684	.006	1
S4	150.00	154.31	4.31	2.87	1.4080	.002	1
S5	300.00	303.45	3.45	1.15	2.7686	.005	1
S6	800.00	782.76	-17.2	-2.16	7.1412	.030	1

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5



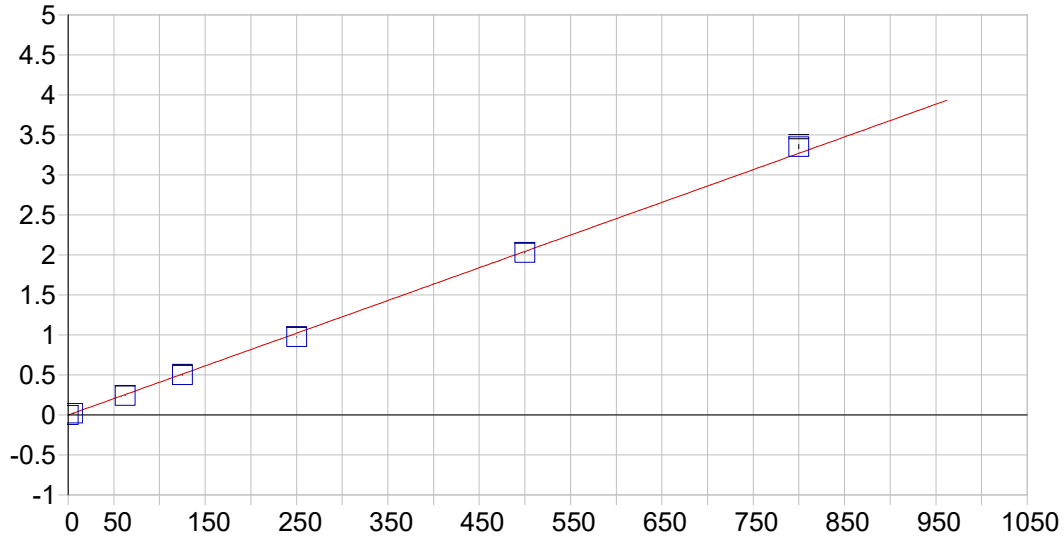
Mn 257.610 {131}

Date of Fit:	11/09/2024 15:55:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000378	Re-Slope:	1.000000
A1 (Gain):	0.198350	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999640	Status:	OK.
Std Error of Est:	0.000189		
Predicted MDL:	0.001753		
Predicted MQL:	0.005843		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00038	.000	1
S1	.01500	.01765	.003	17.7	.00313	.000	1
S2	3.7500	3.8884	.138	3.69	.77100	.001	1
S3	7.5000	7.9324	.432	5.76	1.5732	.008	1
S4	15.000	14.975	-.025	-.169	2.9703	.005	1
S5	30.000	29.452	-.548	-1.83	5.8423	.018	1

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5



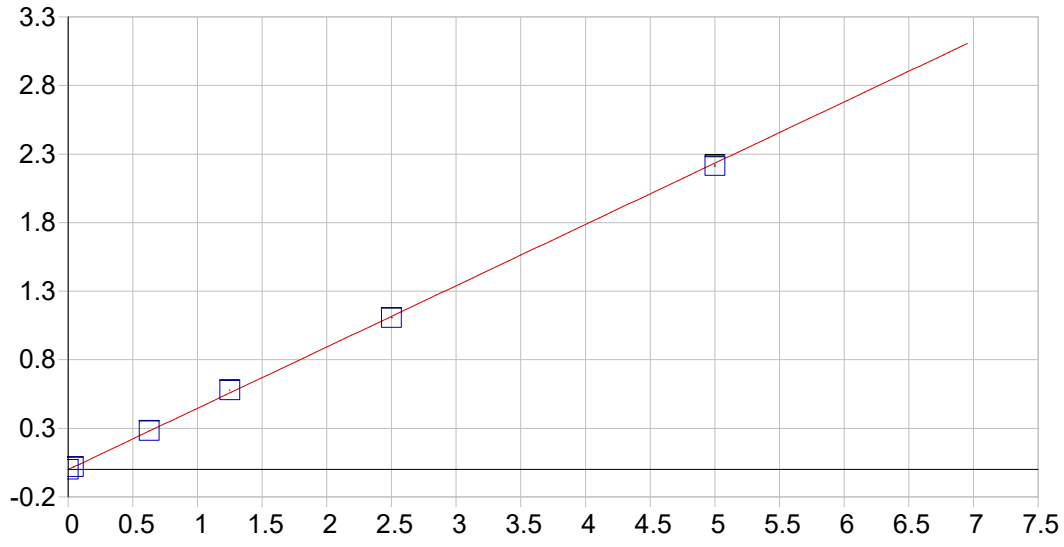
Mg 279.079 {121}

Date of Fit:	11/09/2024 15:55:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000713	Re-Slope:	1.000000
A1 (Gain):	0.004089	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999633	Status:	OK.
Std Error of Est:	0.000387		
Predicted MDL:	0.094056		
Predicted MQL:	0.313519		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00024	.000	.000	-.00071	.000	1
S1	5.0000	5.2435	.244	4.87	.02073	.000	1
S2	62.500	59.283	-3.22	-5.15	.24169	.001	1
S3	125.00	122.94	-2.06	-1.64	.50199	.005	1
S4	250.00	238.49	-11.5	-4.60	.97443	.003	1
S5	500.00	496.31	-3.69	-.739	2.0286	.003	1
S6	800.00	820.23	20.2	2.53	3.3531	.026	1

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5



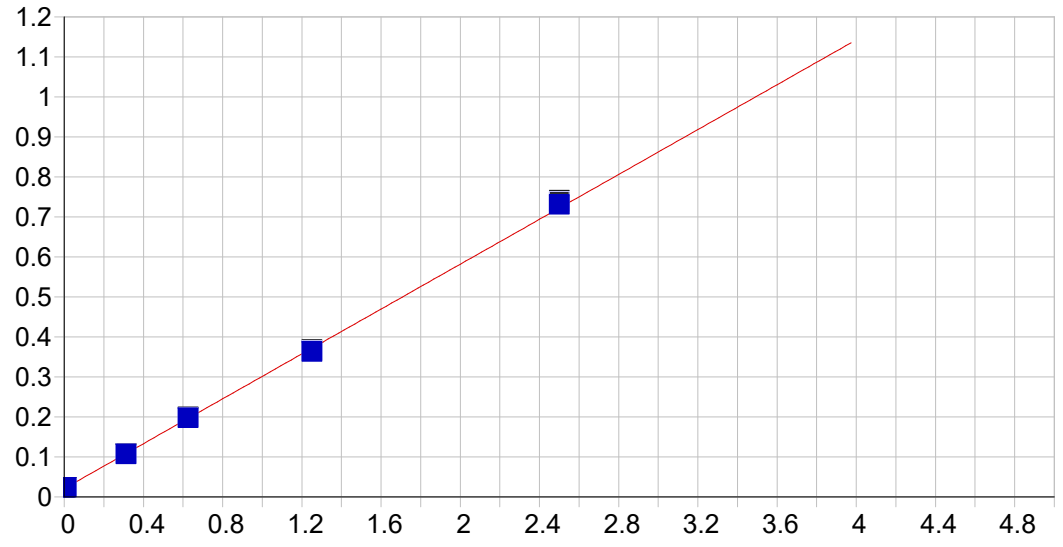
Ni 231.604 {446}

Date of Fit:	11/09/2024 15:55:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000328	Re-Slope:	1.000000
A1 (Gain):	0.446767	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999853	Status:	OK.
Std Error of Est:	0.000182		
Predicted MDL:	0.000683		
Predicted MQL:	0.002278		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00033	.000	1
S1	.04000	.04243	.002	6.08	.01863	.000	1
S2	.62500	.63607	.011	1.77	.28385	.002	1
S3	1.2500	1.2989	.049	3.91	.57997	.002	1
S4	2.5000	2.4780	-.022	-.878	1.1068	.001	1
S5	5.0000	4.9596	-.040	-.808	2.2154	.008	1

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5



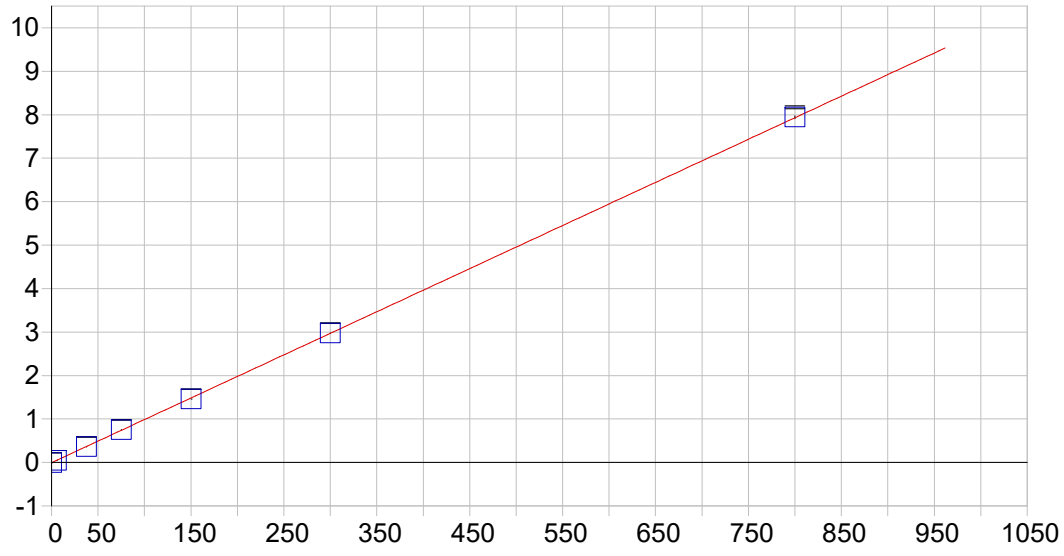
Ag 328.068 {103}

Date of Fit:	11/09/2024 15:55:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.021018	Re-Slope:	1.000000
A1 (Gain):	0.280416	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999858	Status:	OK.
Std Error of Est:	0.000040		
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	.02102	.000	1
S1	.01000	.01067	.001	6.65	.02400	.000	1
S2	.31250	.30622	-.006	-2.01	.10783	.000	1
S3	.62500	.62879	.004	.606	.19923	.001	1
S4	1.2500	1.2194	-.031	-2.45	.36673	.001	1
S5	2.5000	2.5325	.032	1.30	.73871	.003	1

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5



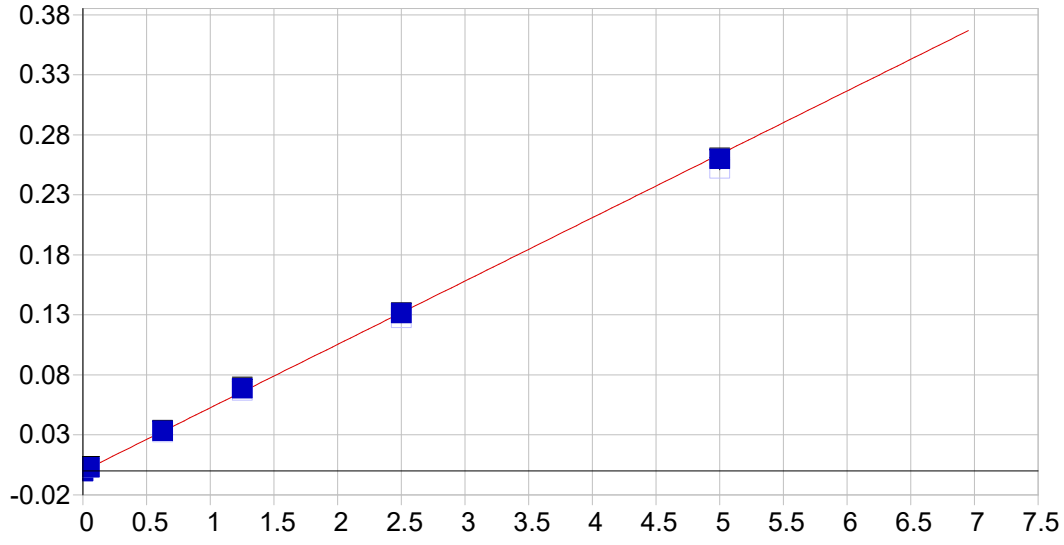
Na 818.326 { 41}

Date of Fit:	11/09/2024 15:55:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.005470	Re-Slope:	1.000000
A1 (Gain):	0.009921	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999972	Status:	OK.
Std Error of Est:	0.000229		
Predicted MDL:	0.342716		
Predicted MQL:	1.142386		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00010	.000	.000	-.00547	.002	1
S1	5.0000	4.9567	-.043	-.865	.04371	.002	1
S2	37.500	36.897	-.603	-1.61	.36059	.003	1
S3	75.000	76.394	1.39	1.86	.75243	.005	1
S4	150.00	147.61	-2.39	-1.59	1.4590	.001	1
S5	300.00	300.46	.463	.154	2.9754	.007	1
S6	800.00	801.18	1.18	.147	7.9430	.032	1

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5



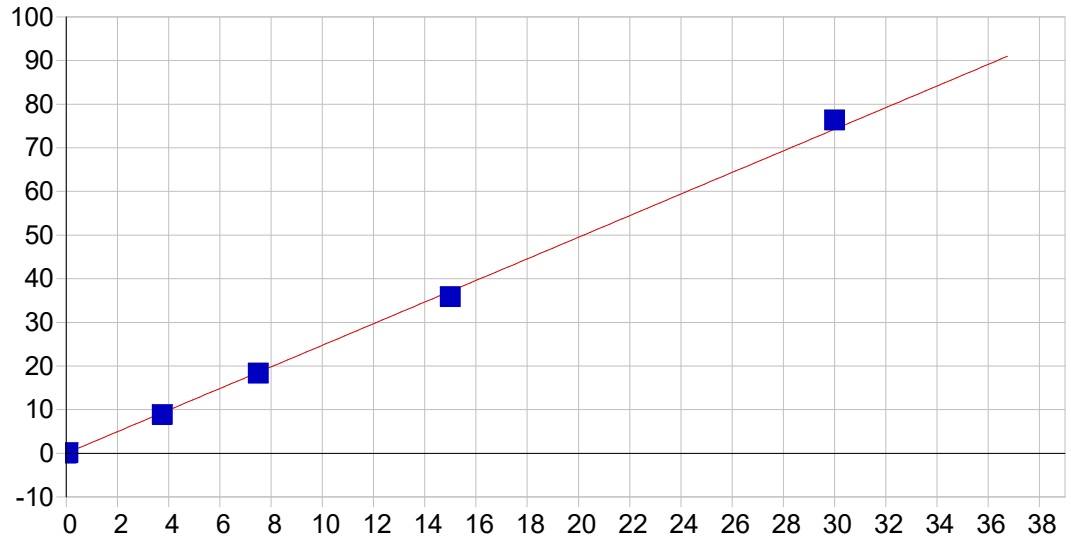
V 292.402 {115}

Date of Fit:	11/09/2024 15:55:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000158	Re-Slope:	1.000000
A1 (Gain):	0.052781	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999649	Status:	OK.
Std Error of Est:	0.000036		
Predicted MDL:	0.009923		
Predicted MQL:	0.033075		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	-.00016	.001	1
S1	.05000	.06067	.011	21.3	.00304	.001	1
S2	.62500	.63434	.009	1.49	.03231	.001	1
S3	1.2500	1.3086	.059	4.69	.06688	.001	1
S4	2.5000	2.4932	-.007	-.273	.12738	.000	1
S5	5.0000	4.9279	-.072	-1.44	.25184	.001	1

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5



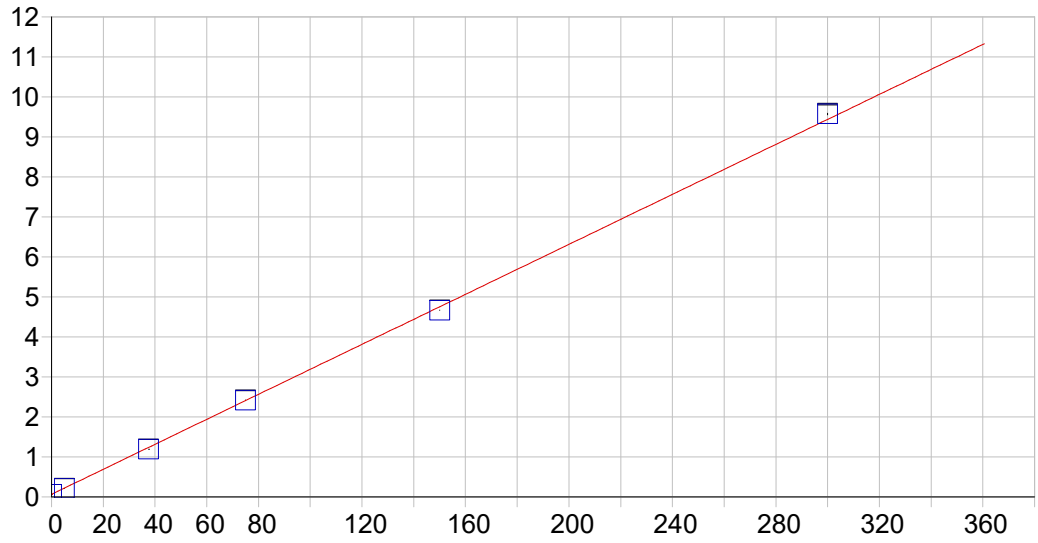
Zn 213.856 {158}

Date of Fit:	11/09/2024 15:55:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000333	Re-Slope:	1.000000
A1 (Gain):	2.475071	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999547	Status:	OK.
Std Error of Est:	0.005312		
Predicted MDL:	0.000452		
Predicted MQL:	0.001507		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00034	.000	1
S1	.06000	.06084	.001	1.40	.15163	.002	1
S2	3.7500	3.5747	-.175	-4.67	8.8593	.009	1
S3	7.5000	7.3918	-.108	-1.44	18.318	.043	1
S4	15.000	14.464	-.536	-3.57	35.845	.079	1
S5	30.000	30.818	.818	2.73	76.368	.045	1

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5



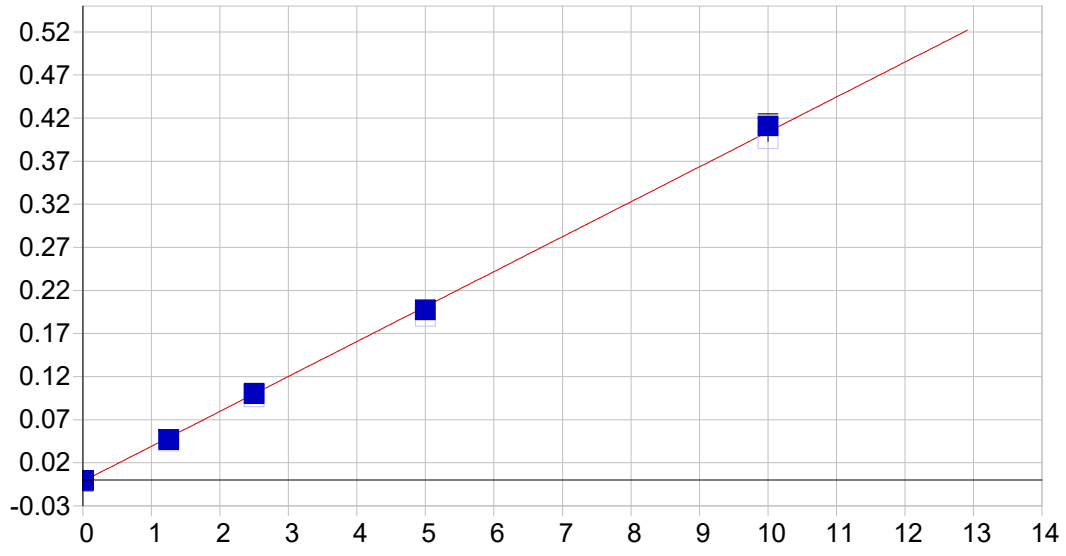
K 769.896 { 44}

Date of Fit: 11/09/2024 15:55:43 Type of Fit: Linear Weighting: 1/Conc

A0 (Offset):	0.065984	Re-Slope:	1.000000
A1 (Gain):	0.031240	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999834	Status:	OK.
Std Error of Est:	0.001174		
Predicted MDL:	0.141934		
Predicted MQL:	0.473112		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00051	.001	.000	.06600	.005	1
S1	5.0000	4.6913	-.309	-6.17	.21254	.001	1
S2	37.500	36.037	-1.46	-3.90	1.1918	.001	1
S3	75.000	75.200	.200	.267	2.4152	.010	1
S4	150.00	147.26	-2.74	-1.82	4.6665	.005	1
S5	300.00	304.31	4.31	1.44	9.5725	.019	1

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5



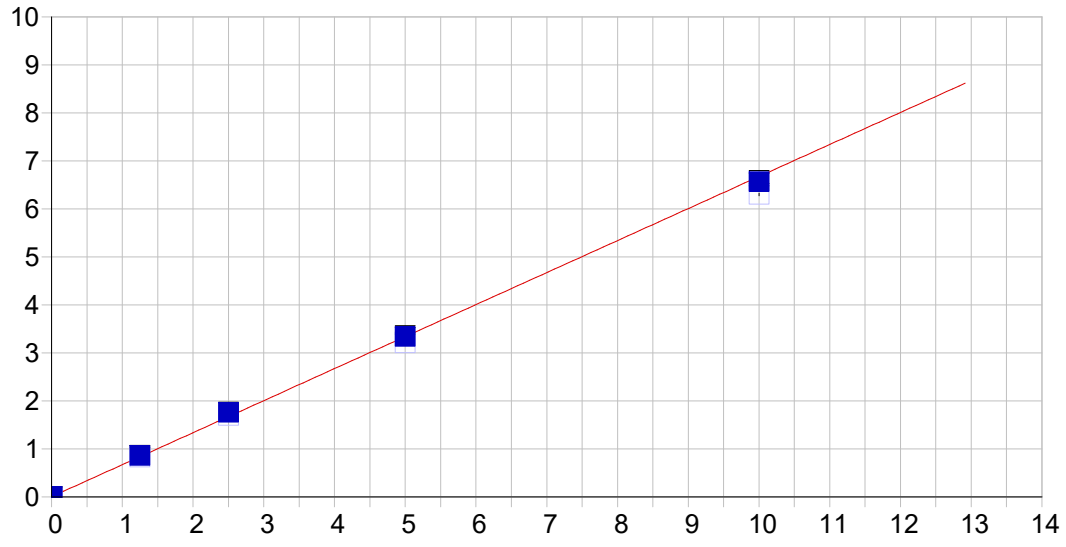
P 177.495 {490}

Date of Fit:	11/09/2024 15:55:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001340	Re-Slope:	1.000000
A1 (Gain):	0.040530	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999693	Status:	OK.
Std Error of Est:	0.000016		
Predicted MDL:	0.004039		
Predicted MQL:	0.013463		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00134	.000	1
S1	.01000	.01510	.005	51.0	-.00074	.000	1
S2	1.2500	1.1866	-.063	-5.07	.04489	.000	1
S3	2.5000	2.4965	-.003	-.140	.09612	.001	1
S4	5.0000	4.8965	-.103	-2.07	.18966	.000	1
S5	10.000	10.165	.165	1.65	.39575	.003	1

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5



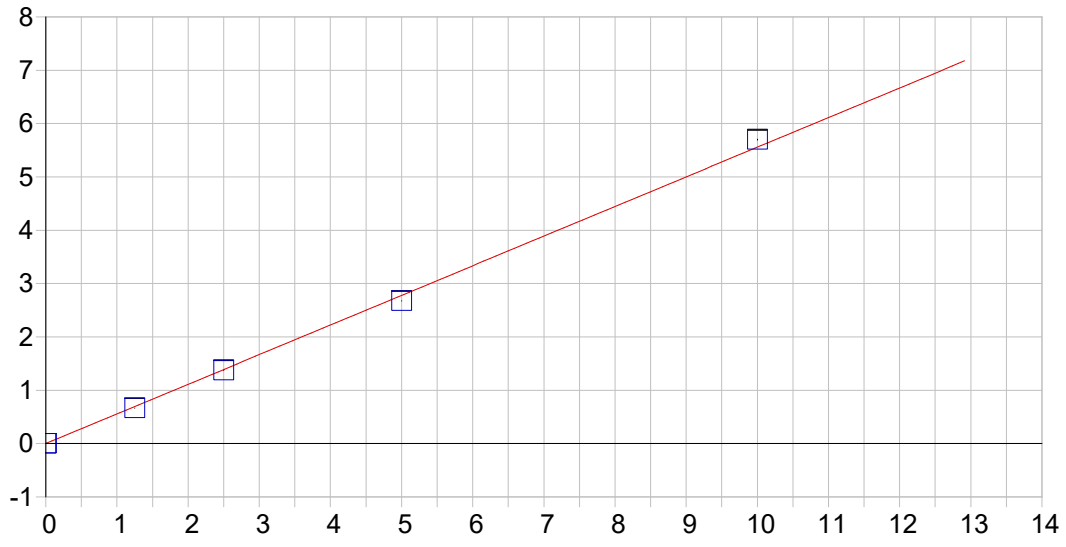
B 249.678 {135}

Date of Fit:	11/09/2024 15:55:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.004322	Re-Slope:	1.000000
A1 (Gain):	0.667027	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999358	Status:	OK.
Std Error of Est:	0.000385		
Predicted MDL:	0.001357		
Predicted MQL:	0.004524		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00433	.000	1
S1	.01000	-.00088	-.011	-109.	.00367	.001	1
S2	1.2500	1.2843	.034	2.75	.82734	.004	1
S3	2.5000	2.6316	.132	5.26	1.6924	.004	1
S4	5.0000	5.0030	.003	.059	3.2068	.019	1
S5	10.000	9.8424	-.158	-1.58	6.3002	.026	1

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5



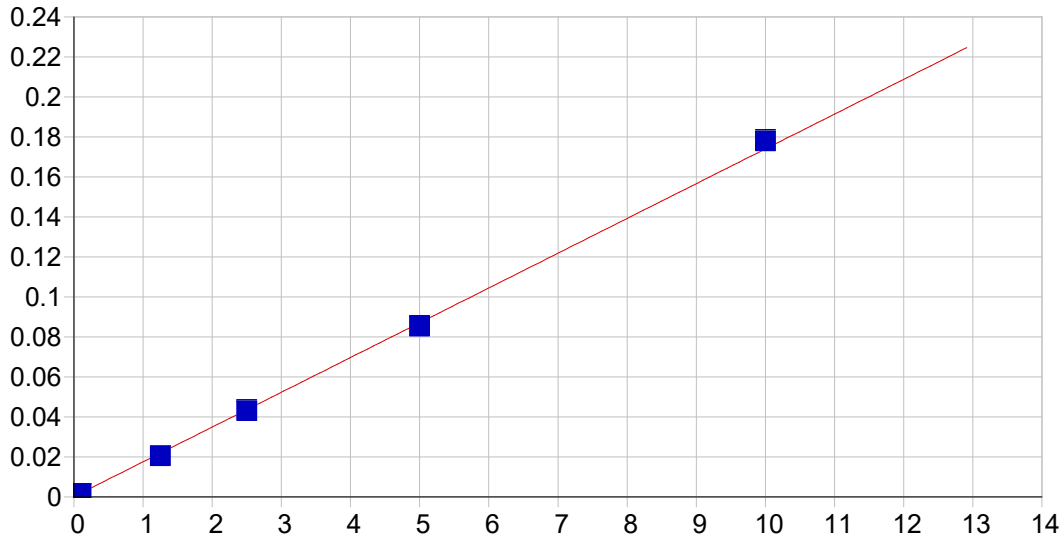
Mo 202.030 {467}

Date of Fit:	11/09/2024 15:55:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000070	Re-Slope:	1.000000
A1 (Gain):	0.555678	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999577	Status:	OK.
Std Error of Est:	0.000271		
Predicted MDL:	0.000644		
Predicted MQL:	0.002146		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00007	.000	1
S1	.01000	.01043	.000	4.30	.00573	.000	1
S2	1.2500	1.1974	-.053	-4.21	.66528	.003	1
S3	2.5000	2.4800	-.020	-.800	1.3780	.007	1
S4	5.0000	4.8149	-.185	-3.70	2.6754	.004	1
S5	10.000	10.257	.257	2.57	5.6997	.008	1

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5



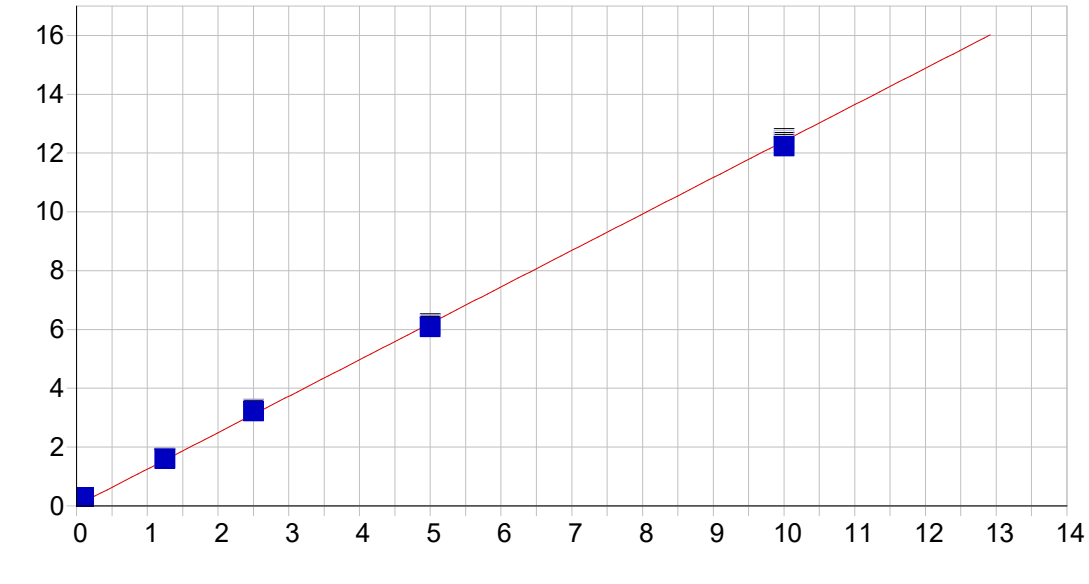
S 182.034 {485}

Date of Fit:	11/09/2024 15:55:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000165	Re-Slope:	1.000000
A1 (Gain):	0.017383	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999625	Status:	OK.
Std Error of Est:	0.000025		
Predicted MDL:	0.008418		
Predicted MQL:	0.028059		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00002	.000	.000	.00016	.000	1
S1	.10000	.09010	-.010	-9.90	.00173	.000	1
S2	1.2500	1.1679	-.082	-6.57	.02047	.000	1
S3	2.5000	2.4642	-.036	-1.43	.04300	.001	1
S4	5.0000	4.8993	-.101	-2.01	.08534	.000	1
S5	10.000	10.229	.229	2.29	.17799	.001	1

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5



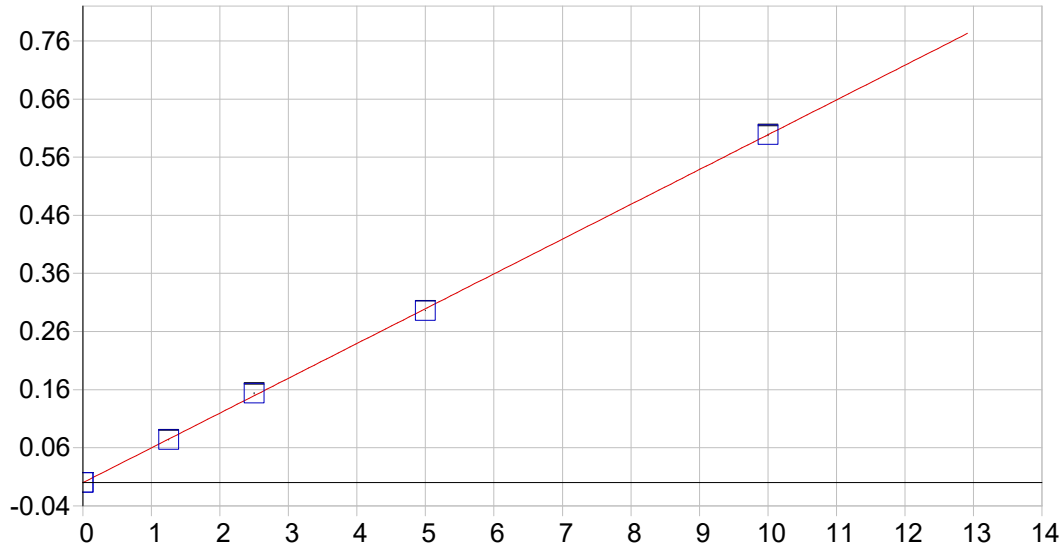
Si 251.611 {134}

Date of Fit:	11/09/2024 15:55:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.011282	Re-Slope:	1.000000
A1 (Gain):	1.239496	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.995576	Status:	OK.
Std Error of Est:	0.006317		
Predicted MDL:	0.000689		
Predicted MQL:	0.002297		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00013	-.000	.000	.01112	.001	1
S1	.10000	.22850	.128	128.	.29533	.001	1
S2	1.2500	1.2782	.028	2.26	1.6207	.006	1
S3	2.5000	2.5902	.090	3.61	3.2719	.013	1
S4	5.0000	4.8973	-.103	-2.05	6.1816	.024	1
S5	10.000	9.8571	-.143	-1.43	12.429	.070	1

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5



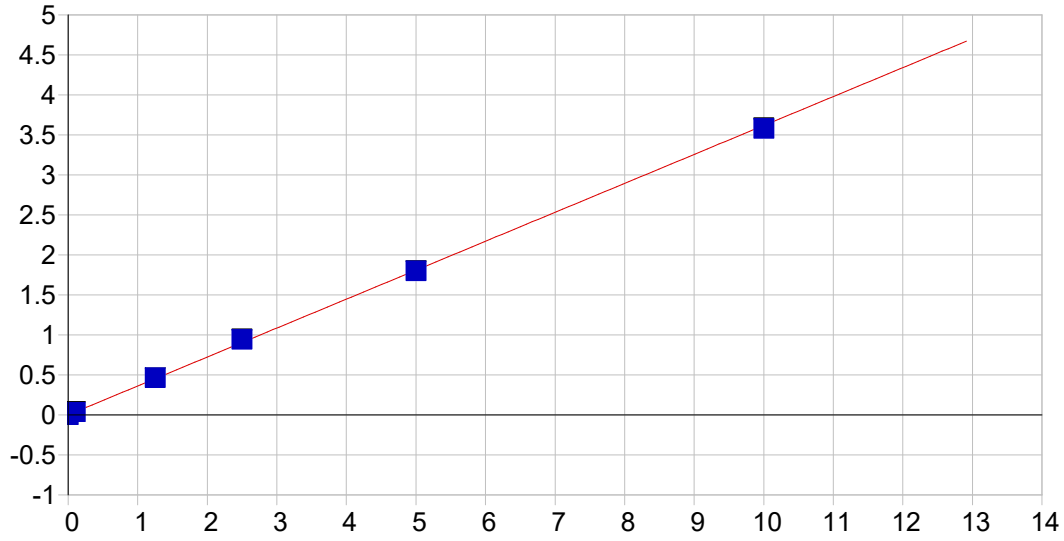
Sn 189.989 {478}

Date of Fit:	11/09/2024 15:55:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000016	Re-Slope:	1.000000
A1 (Gain):	0.059856	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999923	Status:	OK.
Std Error of Est:	0.000010		
Predicted MDL:	0.002448		
Predicted MQL:	0.008160		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00002	.000	1
S1	.00700	.00753	.001	7.53	.00047	.000	1
S2	1.2500	1.2355	-.015	-1.16	.07397	.000	1
S3	2.5000	2.5714	.071	2.85	.15393	.001	1
S4	5.0000	4.9438	-.056	-1.12	.29593	.000	1
S5	10.000	9.9988	-.001	-.012	.59850	.001	1

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5



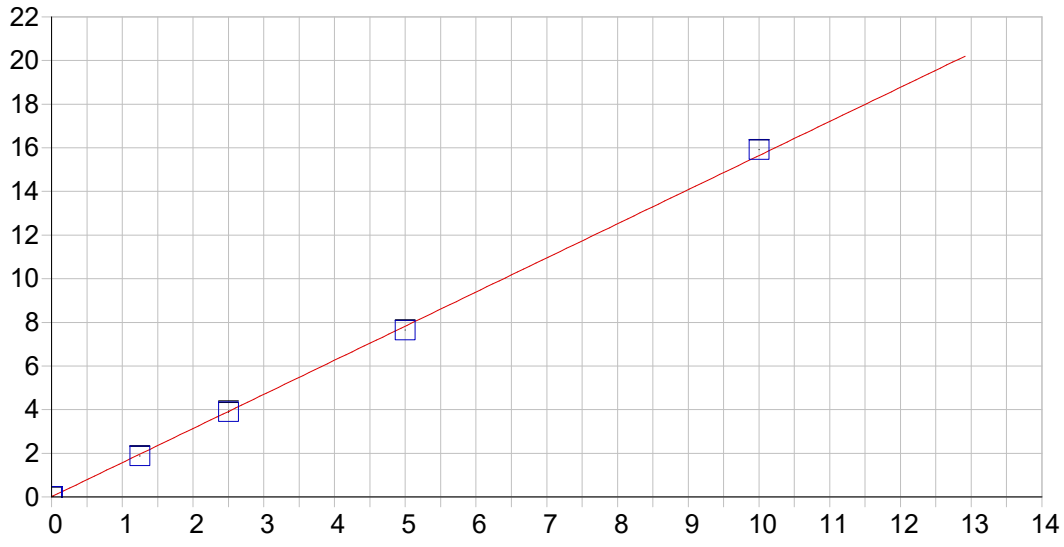
Ti 336.121 {100}

Date of Fit:	11/09/2024 15:55:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000149	Re-Slope:	1.000000
A1 (Gain):	0.361746	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999828	Status:	OK.
Std Error of Est:	0.000357		
Predicted MDL:	0.002232		
Predicted MQL:	0.007440		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00015	.001	1
S1	.10000	.10409	.004	4.09	.03779	.001	1
S2	1.2500	1.2780	.028	2.24	.46225	.001	1
S3	2.5000	2.6045	.104	4.18	.94185	.007	1
S4	5.0000	4.9706	-.029	-.589	1.7973	.004	1
S5	10.000	9.8928	-.107	-1.07	3.5770	.008	1

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5



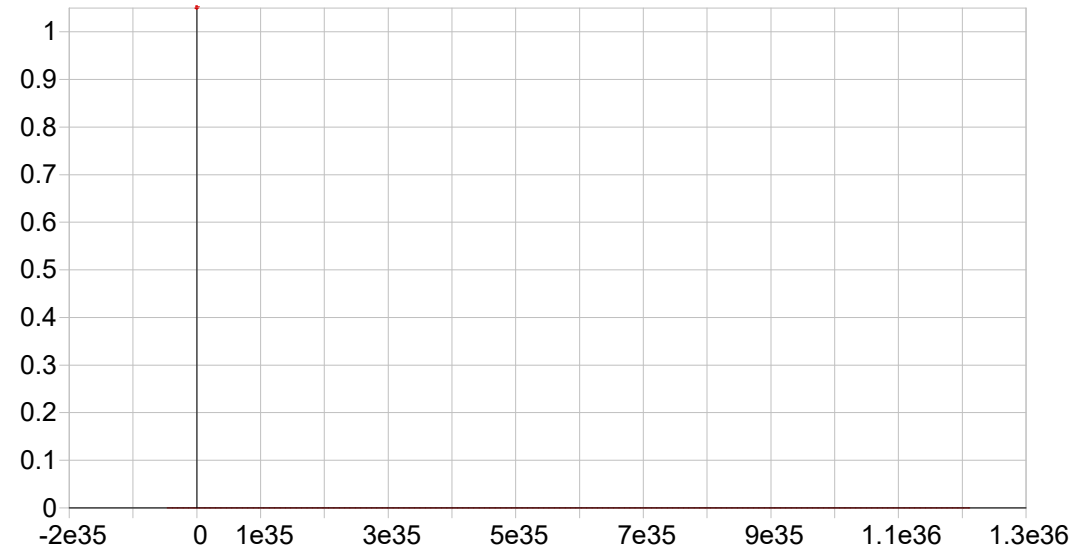
Li 670.784 { 50}

Date of Fit:	11/09/2024 15:55:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.007423	Re-Slope:	1.000000
A1 (Gain):	1.563781	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999779	Status:	OK.
Std Error of Est:	0.000676		
Predicted MDL:	0.002153		
Predicted MQL:	0.007176		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00742	.007	1
S5	10.000	10.176	.176	1.76	15.920	.011	1
S4	5.0000	4.8834	-.117	-2.33	7.6440	.009	1
S3	2.5000	2.4935	-.007	-.261	3.9067	.036	1
S2	1.2500	1.1960	-.054	-4.32	1.8778	.009	1
S1	.01500	.01658	.002	10.5	.03335	.002	1

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

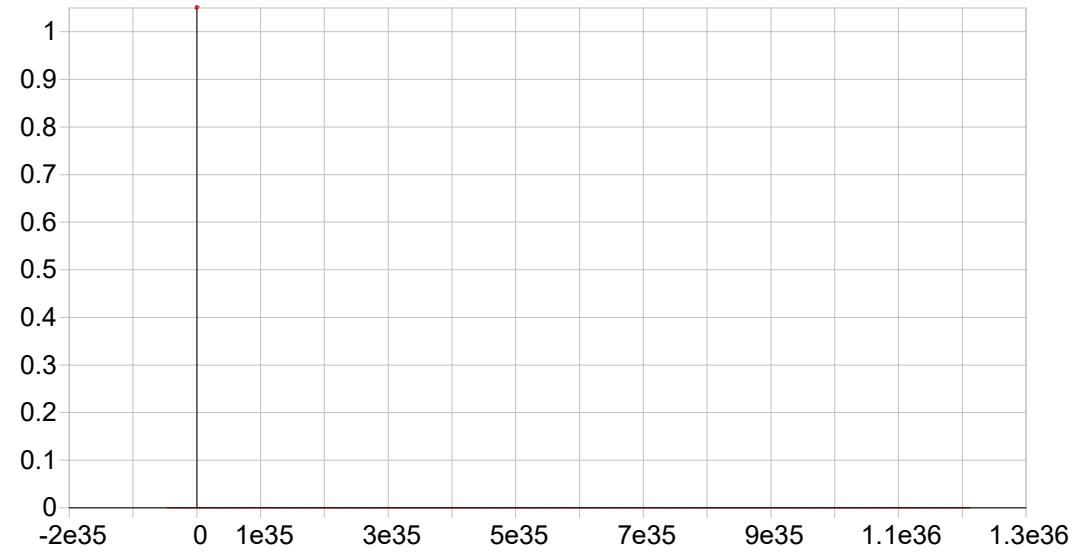


Y 224.306 {450}*

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

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

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



Y 360.073 { 94}*

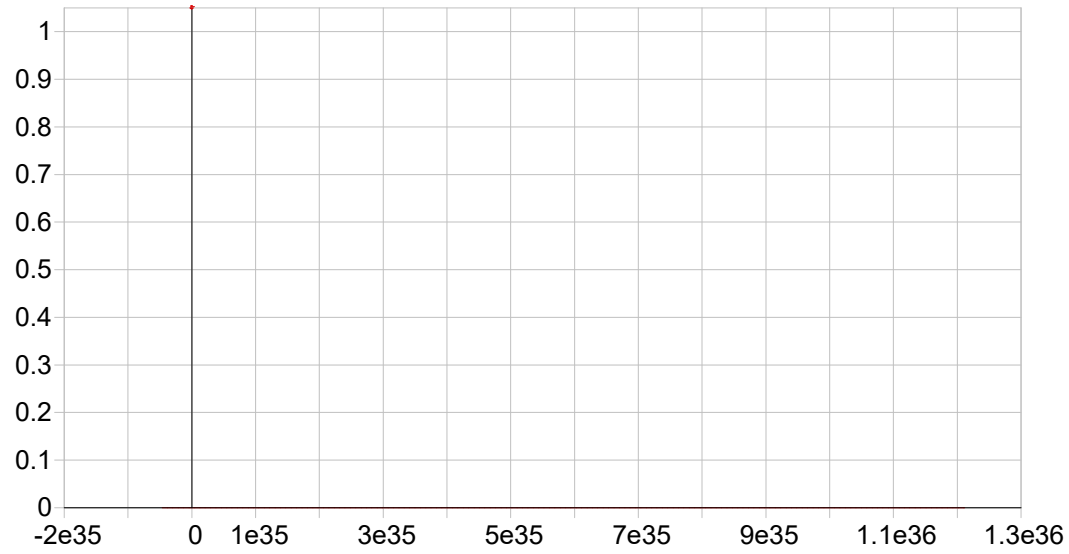
Date of Fit:	<not fit>	Type of Fit:	Linear	Weighting:	1/Conc

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

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

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

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



Y 371.030 { 91}*

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

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

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

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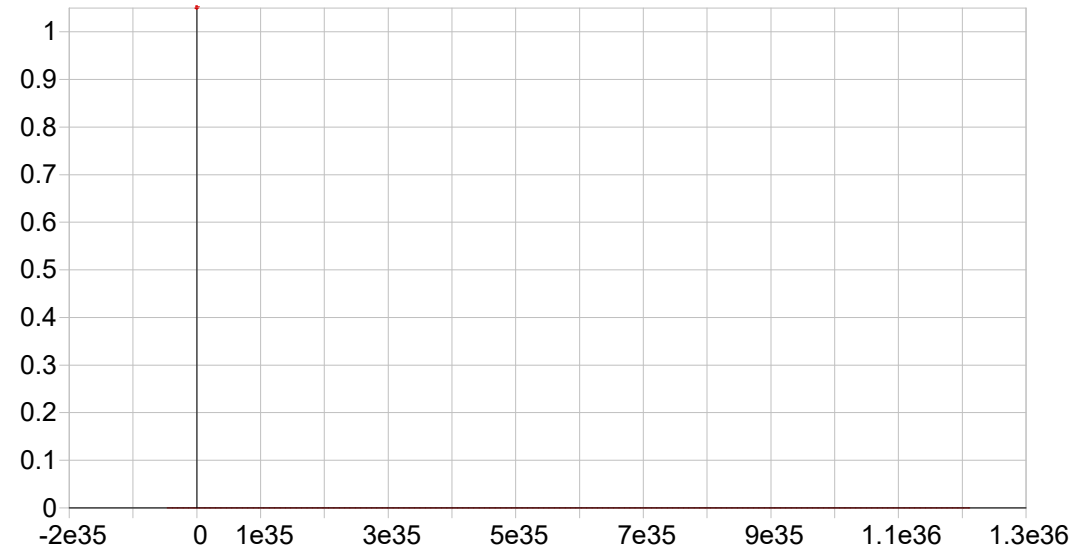
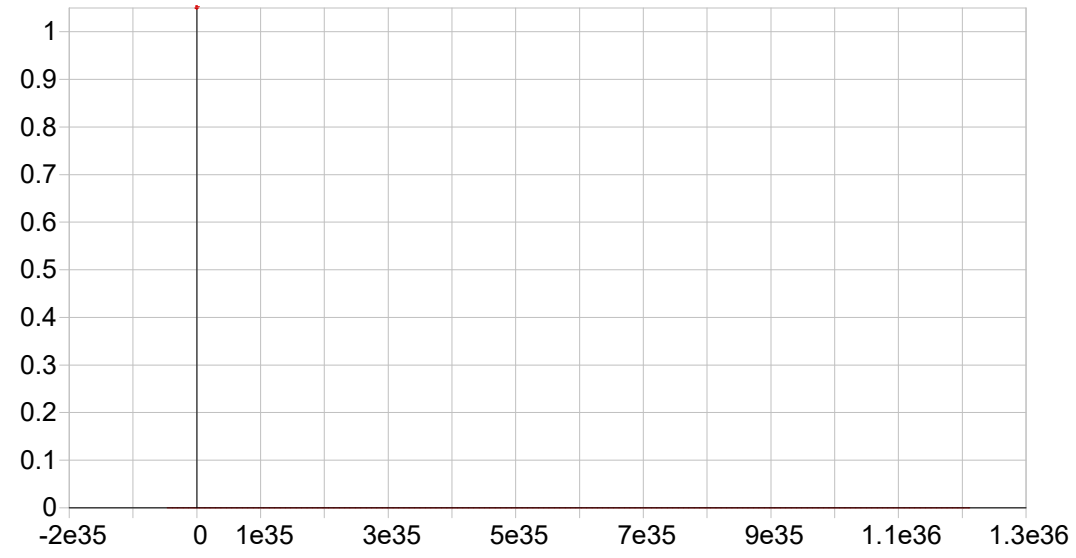


Y 224.306 {150}*

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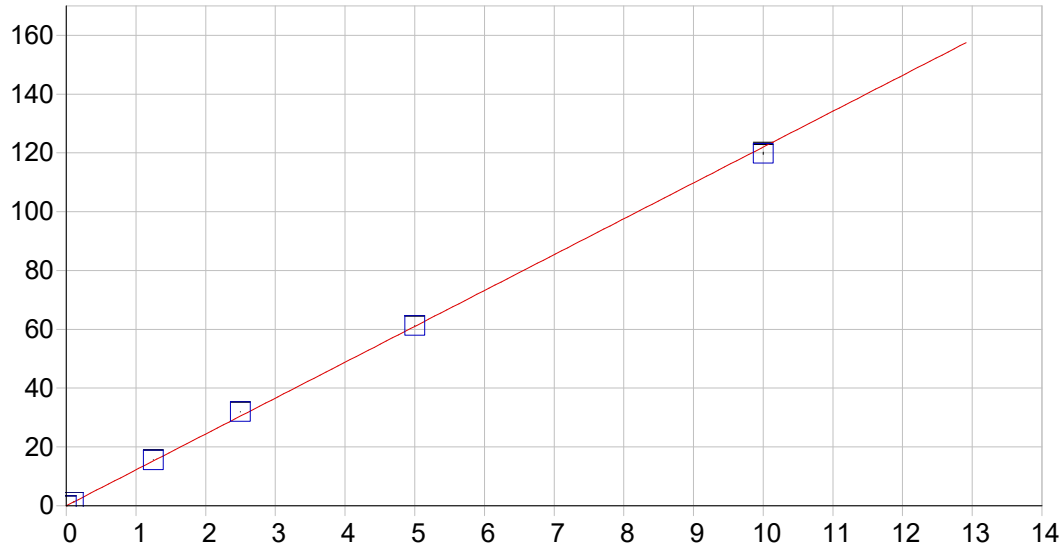
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.000000	Status:	Warning	Zero Gain	
Std Error of Est:	0.000000				
Predicted MDL:	n/a				
Predicted MQL:	n/a				

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



Sr 407.771 { 83}

Date of Fit:	11/09/2024 15:55:43	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001868	Re-Slope:	1.000000
A1 (Gain):	12.198082	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999741	Status:	OK.
Std Error of Est:	0.014757		
Predicted MDL:	0.000117		
Predicted MQL:	0.000390		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00174	.001	1
S1	.10000	.10485	.005	4.85	1.2808	.005	1
S2	1.2500	1.2802	.030	2.42	15.618	.016	1
S3	2.5000	2.6195	.119	4.78	31.955	.091	1
S4	5.0000	5.0192	.019	.384	61.226	.094	1
S5	10.000	9.8263	-.174	-1.74	119.86	.363	1

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: S0 Acquired: 11/09/2024 16:11:02 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) 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	.00011	-.00008	-.00051	.00062	.00000	-.00309	.00194	-.00111
Stddev	.00007	.00015	.00030	.00005	.00069	.00044	.00213	.00062
%RSD	58.616	188.05	58.291	7.5345	100800.	14.292	109.82	55.861
#1	.00019	.00007	-.00085	.00067	-.00019	-.00348	.00181	-.00072
#2	.00006	-.00009	-.00036	.00058	-.00057	-.00261	.00413	-.00080
#3	.00009	-.00023	-.00032	.00060	.00077	-.00318	-.00012	-.00183

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	.00068	.00438	-.00017	-.00048	.00078	.00018	-.00038	-.00071
Stddev	.00011	.00076	.00007	.00027	.00096	.00015	.00020	.00009
%RSD	16.132	17.262	39.318	55.196	122.61	82.585	53.663	13.326
#1	.00080	.00503	-.00021	-.00019	.00151	.00006	-.00015	-.00078
#2	.00058	.00457	-.00009	-.00071	-.00031	.00035	-.00052	-.00060
#3	.00067	.00355	-.00020	-.00054	.00115	.00014	-.00047	-.00075

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	-.00033	.02102	-.00547	-.00016	.00034	.06600	-.00134	.00433
Stddev	.00015	.00014	.00209	.00062	.00041	.00542	.00003	.00005
%RSD	44.720	.65773	38.201	387.68	118.82	8.2177	2.5588	1.1363
#1	-.00023	.02113	-.00787	.00033	.00000	.06268	-.00137	.00438
#2	-.00050	.02106	-.00442	.00005	.00079	.06307	-.00130	.00429
#3	-.00026	.02086	-.00411	-.00085	.00023	.07226	-.00135	.00432

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	-.00007	.00016	.01112	.00002	.00015	.00742	.00174
Stddev	.00008	.00008	.00108	.00004	.00060	.00669	.00076
%RSD	116.46	48.483	9.6957	274.04	413.62	90.141	43.702
#1	.00002	.00019	.01097	.00006	-.00029	.00560	.00251
#2	-.00013	.00007	.01226	.00000	-.00011	.00183	.00099
#3	-.00011	.00023	.01012	-.00002	.00083	.01483	.00172

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: S0 Acquired: 11/09/2024 16:11:02 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) 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	1145.3	29112.	2954.9	1050.7	2207.3
Stddev	2.2	136.	7.9	8.3	.7
%RSD	.18969	.46842	.26574	.79440	.03028
#1	1146.1	29040.	2963.3	1048.4	2206.6
#2	1146.9	29027.	2953.6	1043.8	2207.9
#3	1142.8	29269.	2947.7	1060.0	2207.3

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: S1 Acquired: 11/09/2024 16:15:41 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) 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	.00036	.00100	.00036	.00188	.00849	.01497	.95633	.02628
Stddev	.00012	.00022	.00037	.00026	.00032	.00055	.00055	.00059
%RSD	33.627	22.030	103.58	13.704	3.7695	3.6434	.05783	2.2528
#1	.00050	.00116	.00062	.00216	.00847	.01477	.95694	.02559
#2	.00028	.00075	-.00007	.00180	.00818	.01558	.95615	.02667
#3	.00031	.00110	.00052	.00167	.00882	.01455	.95588	.02656

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	.00881	.30265	.00125	.02346	.00321	.00106	.00313	.02073
Stddev	.00019	.00032	.00001	.00030	.00055	.00026	.00013	.00014
%RSD	2.1532	.10555	.66842	1.2743	17.016	24.992	4.2748	.68760
#1	.00862	.30282	.00125	.02327	.00381	.00085	.00299	.02086
#2	.00880	.30284	.00126	.02330	.00308	.00097	.00315	.02074
#3	.00900	.30228	.00125	.02380	.00274	.00136	.00325	.02058

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	.01863	.02400	.04371	.00304	.15163	.21254	-.00074	.00367
Stddev	.00028	.00020	.00164	.00065	.00193	.00114	.00008	.00089
%RSD	1.4920	.84204	3.7450	21.301	1.2722	.53421	10.164	24.310
#1	.01849	.02422	.04519	.00356	.15003	.21148	-.00082	.00283
#2	.01895	.02397	.04398	.00231	.15108	.21240	-.00067	.00461
#3	.01845	.02382	.04195	.00324	.15377	.21374	-.00073	.00357

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	.00573	.00173	.29533	.00047	.03779	.03335	1.2808
Stddev	.00049	.00019	.00123	.00011	.00098	.00163	.0046
%RSD	8.5323	10.707	.41630	23.230	2.5979	4.8743	.36106
#1	.00518	.00178	.29400	.00053	.03670	.03154	1.2756
#2	.00588	.00152	.29558	.00034	.03859	.03468	1.2824
#3	.00612	.00188	.29642	.00052	.03808	.03383	1.2845

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: S1 Acquired: 11/09/2024 16:15:41 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) 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	1147.7	29276.	2928.1	1059.0	2185.9
Stddev	1.6	98.	10.7	2.8	.7
%RSD	.13608	.33388	.36383	.26601	.03369
#1	1148.5	29179.	2937.7	1059.7	2186.4
#2	1145.9	29274.	2916.6	1055.8	2186.3
#3	1148.6	29374.	2930.0	1061.3	2185.1

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: S2 Acquired: 11/09/2024 16:20:21 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) 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	.02779	.06008	.69375	.05235	.17279	3.3184	11.587	.65984
Stddev	.00032	.00062	.00195	.00072	.00102	.0066	.023	.00193
%RSD	1.1383	1.0262	.28092	1.3706	.59155	.19909	.19423	.29305
#1	.02748	.05939	.69229	.05152	.17236	3.3160	11.592	.65773
#2	.02776	.06025	.69299	.05269	.17206	3.3258	11.607	.66028
#3	.02811	.06059	.69596	.05283	.17396	3.3133	11.563	.66152

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	.98030	3.5318	.44373	.29630	.39351	.36636	.77100	.24169
Stddev	.00347	.0087	.00057	.00117	.00068	.00107	.00059	.00127
%RSD	.35376	.24588	.12805	.39403	.17282	.29301	.07637	.52574
#1	.97774	3.5227	.44314	.29537	.39337	.36724	.77100	.24261
#2	.97892	3.5400	.44378	.29593	.39425	.36667	.77158	.24221
#3	.98425	3.5326	.44427	.29761	.39291	.36516	.77041	.24024

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	.28385	.10783	.36059	.03231	8.8593	1.1918	.04489	.82734
Stddev	.00171	.00017	.00269	.00053	.0089	.0014	.00026	.00427
%RSD	.60376	.15912	.74610	1.6270	.10081	.11895	.57949	.51634
#1	.28222	.10782	.36317	.03183	8.8631	1.1927	.04459	.82272
#2	.28368	.10766	.36078	.03287	8.8491	1.1924	.04503	.83115
#3	.28564	.10800	.35780	.03223	8.8658	1.1901	.04504	.82816

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	.66528	.02047	1.6207	.07397	.46225	1.8778	15.618
Stddev	.00337	.00018	.0056	.00031	.00133	.0090	.016
%RSD	.50691	.88101	.34803	.41311	.28717	.47718	.10277
#1	.66339	.02036	1.6153	.07364	.46115	1.8791	15.631
#2	.66328	.02036	1.6201	.07401	.46187	1.8860	15.622
#3	.66917	.02068	1.6266	.07425	.46373	1.8682	15.600

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: S2 Acquired: 11/09/2024 16:20:21 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) 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	1090.8	28709.	2930.5	1003.0	1995.0
Stddev	3.9	70.	7.3	3.9	4.8
%RSD	.36194	.24242	.24984	.38434	.23932
#1	1092.7	28666.	2937.7	999.88	1998.6
#2	1093.5	28671.	2923.1	1001.9	1996.9
#3	1086.3	28789.	2930.6	1007.3	1989.6

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: S3 Acquired: 11/09/2024 16:24:46 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) 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	.05876	.12235	1.4346	.10827	.36205	6.8478	24.050	1.3405
Stddev	.00046	.00004	.0060	.00019	.00265	.0319	.154	.0072
%RSD	.78167	.03584	.41934	.17882	.73163	.46563	.64202	.53770
#1	.05823	.12233	1.4286	.10818	.36177	6.8139	23.877	1.3467
#2	.05909	.12231	1.4347	.10814	.35955	6.8772	24.174	1.3423
#3	.05895	.12240	1.4406	.10849	.36482	6.8522	24.098	1.3326

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	2.0238	7.2230	.89458	.61345	.79817	.74684	1.5732	.50199
Stddev	.0103	.0433	.00138	.00313	.00094	.00587	.0084	.00459
%RSD	.50702	.59912	.15396	.50966	.11790	.78575	.53546	.91409
#1	2.0140	7.1739	.89299	.61048	.79710	.74088	1.5642	.49692
#2	2.0228	7.2556	.89535	.61317	.79853	.75261	1.5808	.50587
#3	2.0345	7.2394	.89541	.61671	.79888	.74703	1.5747	.50317

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	.57997	.19923	.75243	.06688	18.318	2.4152	.09612	1.6924
Stddev	.00245	.00097	.00545	.00081	.043	.0095	.00102	.0045
%RSD	.42248	.48623	.72482	1.2080	.23521	.39553	1.0568	.26295
#1	.57749	.19814	.74638	.06632	18.294	2.4042	.09517	1.6940
#2	.58002	.19955	.75696	.06652	18.292	2.4210	.09600	1.6958
#3	.58239	.20000	.75395	.06781	18.368	2.4204	.09719	1.6873

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	1.3780	.04300	3.2719	.15393	.94185	3.9067	31.955
Stddev	.0068	.00051	.0126	.00103	.00681	.0357	.091
%RSD	.49078	1.1879	.38536	.66741	.72302	.91377	.28608
#1	1.3753	.04267	3.2740	.15278	.93399	3.8661	31.870
#2	1.3731	.04275	3.2834	.15425	.94592	3.9333	32.051
#3	1.3857	.04359	3.2584	.15475	.94565	3.9207	31.943

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: S3 Acquired: 11/09/2024 16:24:46 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) 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	1044.3	28128.	2896.2	952.46	1888.0
Stddev	3.7	74.	9.1	3.94	4.0
%RSD	.35046	.26471	.31473	.41397	.20965
#1	1043.0	28213.	2901.6	956.05	1891.3
#2	1048.4	28096.	2885.7	953.08	1889.0
#3	1041.5	28074.	2901.3	948.24	1883.6

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: S4 Acquired: 11/09/2024 16:29:08 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) 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	.11593	.22992	2.7370	.21108	.71289	13.269	46.128	2.5583
Stddev	.00031	.00032	.0038	.00061	.00100	.009	.048	.0098
%RSD	.26312	.14122	.13725	.28786	.14018	.06946	.10430	.38287
#1	.11559	.23008	2.7379	.21038	.71223	13.259	46.083	2.5473
#2	.11603	.22955	2.7329	.21139	.71241	13.272	46.179	2.5619
#3	.11618	.23014	2.7402	.21146	.71404	13.277	46.122	2.5659

Elem	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3.8539	13.815	1.6847	1.1782	1.5303	1.4080	2.9703	.97443
Stddev	.0060	.019	.0005	.0030	.0015	.0019	.0047	.00253
%RSD	.15636	.14006	.02927	.25257	.09516	.13342	.15982	.25965
#1	3.8521	13.799	1.6842	1.1765	1.5290	1.4067	2.9655	.97155
#2	3.8489	13.836	1.6851	1.1764	1.5319	1.4101	2.9705	.97544
#3	3.8606	13.809	1.6849	1.1816	1.5299	1.4071	2.9749	.97630

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	1.1068	.36673	1.4590	.12738	35.845	4.6665	.18966	3.2068
Stddev	.0008	.00143	.0010	.00023	.079	.0047	.00010	.0186
%RSD	.07351	.38955	.06934	.17959	.21937	.10042	.05101	.58008
#1	1.1064	.36685	1.4578	.12723	35.756	4.6612	.18955	3.1880
#2	1.1062	.36809	1.4592	.12764	35.875	4.6682	.18970	3.2074
#3	1.1077	.36524	1.4598	.12727	35.905	4.6701	.18974	3.2251

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	2.6754	.08534	6.1816	.29593	1.7973	7.6440	61.226
Stddev	.0043	.00023	.0241	.00034	.0042	.0092	.094
%RSD	.15914	.27430	.38989	.11448	.23356	.11982	.15335
#1	2.6738	.08539	6.1564	.29587	1.8013	7.6353	61.204
#2	2.6722	.08554	6.1842	.29563	1.7929	7.6535	61.146
#3	2.6803	.08508	6.2044	.29630	1.7978	7.6431	61.329

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: S4 Acquired: 11/09/2024 16:29:08 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) 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	987.79	27421.	2861.1	877.86	1787.4
Stddev	1.48	94.	4.5	2.06	3.8
%RSD	.14950	.34106	.15777	.23469	.21134
#1	988.56	27341.	2865.5	878.65	1788.7
#2	988.73	27398.	2856.4	875.52	1790.3
#3	986.09	27524.	2861.3	879.41	1783.1

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: S5 Acquired: 11/09/2024 16:33:26 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) 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	.24329	.44938	5.5510	.44795	1.5647	27.036	91.395	5.1454
Stddev	.00068	.00089	.0116	.00247	.0043	.046	.204	.0332
%RSD	.27793	.19845	.20923	.55201	.27645	.17187	.22278	.64491
#1	.24288	.44926	5.5401	.44914	1.5666	27.060	91.510	5.1678
#2	.24292	.44856	5.5497	.44511	1.5597	27.064	91.515	5.1611
#3	.24407	.45033	5.5632	.44961	1.5677	26.982	91.160	5.1073

Elem	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7.6475	27.566	3.3268	2.3753	3.0761	2.7686	5.8423	2.0286
Stddev	.0198	.062	.0041	.0086	.0067	.0055	.0176	.0030
%RSD	.25891	.22589	.12333	.36119	.21657	.19748	.30065	.14752
#1	7.6288	27.603	3.3233	2.3660	3.0807	2.7691	5.8487	2.0301
#2	7.6455	27.600	3.3259	2.3770	3.0791	2.7738	5.8558	2.0305
#3	7.6683	27.494	3.3313	2.3829	3.0684	2.7629	5.8224	2.0252

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	2.2154	.73871	2.9754	.25184	76.368	9.5725	.39575	6.3002
Stddev	.0077	.00311	.0073	.00084	.045	.0195	.00265	.0263
%RSD	.34855	.42095	.24700	.33501	.05832	.20363	.67078	.41728
#1	2.2079	.73582	2.9789	.25224	76.334	9.5665	.39354	6.3115
#2	2.2152	.73831	2.9803	.25240	76.419	9.5942	.39501	6.3190
#3	2.2233	.74200	2.9670	.25087	76.351	9.5566	.39870	6.2702

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	5.6997	.17799	12.429	.59850	3.5770	15.920	119.86
Stddev	.0083	.00060	.070	.00130	.0084	.011	.36
%RSD	.14538	.33573	.56306	.21645	.23623	.07197	.30284
#1	5.7047	.17748	12.452	.59715	3.5793	15.920	119.57
#2	5.6901	.17782	12.485	.59864	3.5842	15.931	120.27
#3	5.7043	.17865	12.351	.59973	3.5677	15.908	119.75

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: S5 Acquired: 11/09/2024 16:33:26 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) 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	878.96	26591.	2806.5	744.09	1654.3
Stddev	.64	85.	11.5	.54	4.1
%RSD	.07306	.32038	.40967	.07246	.24599
#1	878.74	26608.	2796.4	743.88	1658.9
#2	879.68	26665.	2804.0	744.71	1652.7
#3	878.45	26498.	2819.0	743.70	1651.2

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: S6 Acquired: 11/09/2024 16:37:54 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) 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	69.711	43.555	7.1412	3.3531	7.9430
Stddev	.181	.260	.0295	.0256	.0321
%RSD	.26018	.59622	.41311	.76376	.40432
#1	69.824	43.752	7.1655	3.3738	7.9598
#2	69.502	43.260	7.1084	3.3244	7.9059
#3	69.806	43.652	7.1497	3.3610	7.9632

Int. Std.	Y_3710
Units	Cts/S
Avg	2745.8
Stddev	17.8
%RSD	.64939
#1	2730.8
#2	2765.5
#3	2741.2

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: ICV007 Acquired: 11/09/2024 16:52:22 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICV007 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.065991	1.040482	.9660102	.9860477	.9444190	2.442781
Stddev	.011578	.002304	.0037796	.0075258	.0076063	.009674
%RSD	1.086157	.2214079	.3912569	.7632313	.8053904	.3960380
#1	1.076122	1.039626	.9640182	.9843160	.9404217	2.443484
#2	1.068480	1.038730	.9703692	.9942884	.9396449	2.432774
#3	1.053370	1.043092	.9636434	.9795387	.9531905	2.452085

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5100541	.5204549	.4945258	10.04951	.5569412	.4892092
Stddev	.0006502	.0011829	.0007729	.02923	.0024216	.0011637
%RSD	.1274793	.2272767	.1562875	.2908785	.4347951	.2378653
#1	.5107490	.5218086	.4938032	10.07508	.5581420	.4883565
#2	.5099528	.5196206	.4944335	10.05579	.5585276	.4887363
#3	.5094605	.5199355	.4953406	10.01764	.5541539	.4905349

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4823018	10.69572	.5329777	6.045603	.4992950	.2394658
Stddev	.0033352	.09710	.0049721	.084665	.0010559	.0004673
%RSD	.6915214	.9078664	.9329004	1.400436	.2114848	.1951201
#1	.4836733	10.58588	.5291641	6.128147	.4995064	.2398329
#2	.4784995	10.77011	.5386013	5.958966	.4981493	.2396246
#3	.4847325	10.73119	.5311677	6.049698	.5002292	.2389398

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.373609	.5312356	.9869910	10.16259	F .0075920	F .0139688
Stddev	.018608	.0056238	.0039274	.16531	.0037363	.0007791
%RSD	.1985144	1.058620	.3979188	1.626611	49.21374	5.577206
#1	9.395077	.5374972	.9824619	9.98911	.0093882	.0135358
#2	9.363640	.5295952	.9890547	10.31828	.0032968	.0148682
#3	9.362108	.5266145	.9894563	10.18038	.0100910	.0135025

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: ICV007 Acquired: 11/09/2024 16:52:22 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICV007 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F -.000294	F .0157144	F .0016184	F -.001203	F .0006656	F .0053203
Stddev	.000836	.0048182	.0009020	.001711	.0014376	.0010737
%RSD	283.7620	30.66120	55.73419	142.1881	215.9810	20.18112
#1	-.001058	.0133166	.0005769	-.002122	.0022151	.0063050
#2	.000598	.0125655	.0021450	.000771	.0004063	.0054804
#3	-.000424	.0212611	.0021334	-.002259	-.000625	.0041756

Elem	Sr4077
Units	ppm
Avg	F .0014232
Stddev	.0000947
%RSD	6.655394
#1	.0014456
#2	.0015047
#3	.0013192

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1135.866	29040.00	2919.442	1048.672	2153.315
Stddev	1.656	39.81	14.113	3.922	3.294
%RSD	.1457964	.1370758	.4834043	.3739692	.1529531
#1	1134.374	29011.10	2903.600	1052.974	2154.090
#2	1137.648	29023.50	2924.055	1045.296	2156.153
#3	1135.577	29085.41	2930.671	1047.747	2149.703

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: ICB007 Acquired: 11/09/2024 16:56:49 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICB007 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0047610	-.005166	.0012382	.0030553	-.000415	.0186092	.0000447
Stddev	.0032038	.001089	.0037814	.0059716	.000638	.0076215	.0003611
%RSD	67.29174	21.07339	305.3853	195.4520	153.6646	40.95551	807.6908
#1	.0015665	-.006331	.0051467	.0039409	-.000764	.0199959	.0003129
#2	.0079739	-.004995	.0009697	-.003310	.000321	.0103896	.0001872
#3	.0047426	-.004174	-.002402	.008535	-.000801	.0254422	-.000366

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000149	-.000114	.0051566	-.000269	.0002785	-.001706	-.002941
Stddev	.000098	.000067	.0253089	.000394	.0006189	.003801	.031090
%RSD	65.96189	58.65281	490.8027	146.5686	222.1947	222.8736	1057.253
#1	-.000044	-.000136	-.024067	.000060	.0004222	.002358	-.035076
#2	-.000238	-.000039	.019954	-.000161	-.000400	-.002300	.026987
#3	-.000165	-.000168	.019583	-.000706	.000813	-.005174	-.000734

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0022136	.1162663	-.000067	.0002266	-.084323	-.005485	.0003675
Stddev	.0003951	.0987772	.000330	.0002920	.310500	.008974	.0007256
%RSD	17.85013	84.95773	496.5399	128.8397	368.2258	163.6164	197.4713
#1	.0020744	.2170738	-.000183	.0000081	.041851	-.007649	.0011764
#2	.0019068	.0196529	.000306	.0001136	.143228	.004373	.0001523
#3	.0026595	.1120723	-.000323	.0005582	-.438048	-.013180	-.000226

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2213615	.0025051	.0015417	.0001041	.0002185	-.000478	-.001628
Stddev	.1081808	.0017217	.0013473	.0001684	.0015987	.000328	.002115
%RSD	48.87064	68.72951	87.39464	161.6806	731.5791	68.53683	129.9647
#1	.3397621	.0043475	.0002852	.0002981	.0016170	-.000455	-.003578
#2	.1276785	.0009370	.0029644	-.000005	.0005630	-.000817	-.001926
#3	.1966438	.0022307	.0013754	.000019	-.001524	-.000163	.000621

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: ICB007 Acquired: 11/09/2024 16:56:49 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICB007 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0007171	.0046680	.0000876
Stddev	.0023866	.0030730	.0000481
%RSD	332.8314	65.83116	54.97922
#1	-.002038	.0021105	.0001029
#2	.002044	.0080770	.0000336
#3	.002145	.0038166	.0001262

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1139.026	28967.36	2871.501	1044.740	2199.412
Stddev	3.245	57.22	1.937	1.413	4.003
%RSD	.2848519	.1975388	.0674457	.1352019	.1820175
#1	1135.448	28906.16	2872.129	1043.325	2196.624
#2	1139.854	29019.53	2869.329	1046.150	2203.999
#3	1141.776	28976.40	2873.046	1044.746	2197.614

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: ICSA007 Acquired: 11/09/2024 17:01:24 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSA007 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.009209	-.021569	-.005904	-.016979	.0026811	245.6308
Stddev	.007133	.002375	.001953	.009990	.0016075	.5383
%RSD	77.45771	11.01122	33.07716	58.83491	59.95512	.2191486
#1	-.015365	-.018849	-.007837	-.005518	.0045279	245.9509
#2	-.001392	-.022630	-.005941	-.023840	.0019192	245.9321
#3	-.010871	-.023229	-.003932	-.021580	.0015963	245.0093

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0073138	.0004302	-.000031	253.6299	.0543293	.0014012
Stddev	.0003582	.0001508	.000251	.5414	.0019201	.0003507
%RSD	4.897976	35.04271	802.7889	.2134582	3.534240	25.02541
#1	.0074485	.0004373	-.000207	253.5424	.0551829	.0017680
#2	.0069077	.0002760	.000257	254.2098	.0556745	.0010693
#3	.0075851	.0005773	-.000143	253.1376	.0521303	.0013664

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.013508	106.4779	.0135309	253.1966	.0046187	.0029788
Stddev	.003997	.0743	.0005409	.4824	.0003032	.0008860
%RSD	29.58740	.0698189	3.997495	.1905153	6.563679	29.74413
#1	-.014363	106.4237	.0129824	252.6463	.0044368	.0037881
#2	-.009153	106.4474	.0135465	253.3975	.0049687	.0031161
#3	-.017008	106.5626	.0140639	253.5461	.0044507	.0020321

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.221809	.0032189	.0169017	-.145093	.0077179	F .0955465
Stddev	.240480	.0122245	.0003148	.085671	.0067562	.0011025
%RSD	108.4178	379.7727	1.862293	59.04563	87.53917	1.153929
#1	-.494030	.0169554	.0172376	-.172588	.0134732	.0946072
#2	-.133155	-.000835	.0168539	-.049050	.0094013	.0967604
#3	-.038241	-.006464	.0166136	-.213640	.0002792	.0952719

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: ICSA007 Acquired: 11/09/2024 17:01:24 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSA007 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000995	.0055834	.0010555	-.003258	-.000814	.0053297
Stddev	.000447	.0063481	.0008726	.002608	.000333	.0010933
%RSD	44.92260	113.6953	82.67981	80.05023	40.84143	20.51369
#1	-.000489	.0007538	.0002716	-.003227	-.001096	.0044650
#2	-.001157	.0032229	.0008991	-.005883	-.000447	.0049656
#3	-.001337	.0127737	.0019957	-.000666	-.000900	.0065587

Elem	Sr4077
Units	ppm
Avg	F .1047879
Stddev	.0003337
%RSD	.3184202
#1	.1049894
#2	.1049716
#3	.1044028

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1061.741	27509.11	2865.002	987.9056	1840.377
Stddev	1.895	109.52	11.004	2.3294	3.276
%RSD	.1784983	.3981273	.3840791	.2357894	.1780073
#1	1062.541	27392.40	2858.337	990.3616	1838.878
#2	1063.105	27525.26	2858.966	987.6275	1844.134
#3	1059.577	27609.65	2877.703	985.7278	1838.118

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: ICSAB007 Acquired: 11/09/2024 17:05:54 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSAB007 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1076413	.0860750	.0475132	.0367994	.5784320	246.3033
Stddev	.0154589	.0043504	.0058449	.0140214	.0035711	.1265
%RSD	14.36147	5.054203	12.30174	38.10225	.6173776	.0513590
#1	.1189951	.0860172	.0528267	.0420850	.5817182	246.4134
#2	.0900357	.0904540	.0412525	.0209035	.5746317	246.3315
#3	.1138932	.0817537	.0484603	.0474098	.5789461	246.1651

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5290174	.5318365	1.040451	255.7369	.6061298	.5182874
Stddev	.0013300	.0025988	.003134	.1380	.0005319	.0018107
%RSD	.2514146	.4886438	.3012433	.0539699	.0877528	.3493691
#1	.5304868	.5288394	1.038613	255.6096	.6057170	.5162425
#2	.5278958	.5334647	1.038671	255.8836	.6067301	.5189321
#3	.5286697	.5332053	1.044070	255.7175	.6059425	.5196875

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4925164	107.3633	.5442695	254.5977	1.037384	.1910537
Stddev	.0097662	.3193	.0026462	.1163	.003557	.0003549
%RSD	1.982925	.2974105	.4861851	.0456850	.3428455	.1857676
#1	.4812492	107.0168	.5454369	254.4669	1.034318	.1914147
#2	.4977421	107.4275	.5412404	254.6370	1.036551	.1910411
#3	.4985579	107.6457	.5461312	254.6893	1.041283	.1907052

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0909255	.5365262	.9788435	-.429325	F .0164827	F .0958220
Stddev	.2822404	.0135568	.0052442	.077712	.0079992	.0014003
%RSD	310.4084	2.526778	.5357544	18.10086	48.53123	1.461313
#1	.0765299	.5397820	.9827611	-.491600	.0201044	.0970571
#2	-.183842	.5481586	.9808835	-.342237	.0073131	.0961080
#3	.380088	.5216379	.9728858	-.454139	.0220305	.0943008

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: ICSAB007 Acquired: 11/09/2024 17:05:54 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSAB007 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000992	.0041539	.0016163	-.002214	-.003176	.0040476
Stddev	.001029	.0231866	.0007455	.001991	.001266	.0020933
%RSD	103.7553	558.1825	46.12426	89.88935	39.86133	51.71818
#1	-.002075	.0259712	.0014907	-.001553	-.002942	.0043631
#2	-.000028	-.020194	.0024165	-.004451	-.004543	.0018144
#3	-.000872	.006685	.0009415	-.000639	-.002044	.0059652

Elem	Sr4077
Units	ppm
Avg	F .1048308
Stddev	.0001099
%RSD	.1048513
#1	.1049574
#2	.1047750
#3	.1047599

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1057.917	27549.26	2870.240	982.5717	1846.453
Stddev	1.095	53.51	12.337	4.5102	1.974
%RSD	.1034843	.1942289	.4298130	.4590227	.1068887
#1	1057.581	27528.86	2883.271	979.6274	1848.382
#2	1059.140	27508.95	2858.740	980.3236	1846.540
#3	1057.030	27609.97	2868.710	987.7641	1844.437

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: CCV045 Acquired: 11/09/2024 17:10:17 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV045 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.146598	4.858827	24.95178	4.829058	4.962554	408.3487	10.26042
Stddev	.011822	.009438	.06588	.003866	.005816	1.5947	.03734
%RSD	.2297118	.1942513	.2640453	.0800628	.1171889	.3905270	.3639006
#1	5.155169	4.849458	24.91272	4.824712	4.957905	410.1529	10.30240
#2	5.151515	4.868334	24.91476	4.832117	4.969075	407.7660	10.23092
#3	5.133111	4.858690	25.02784	4.830344	4.960681	407.1274	10.24794

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5056660	2.500605	410.9750	15.57202	2.525035	15.26081	419.1216
Stddev	.0029274	.003920	1.5326	.00332	.004301	.05407	1.3857
%RSD	.5789099	.1567514	.3729079	.0213054	.1703212	.3542891	.3306216
#1	.5085072	2.501900	412.7443	15.56830	2.522060	15.31669	420.7165
#2	.5058313	2.496202	410.1189	15.57306	2.523079	15.25697	418.2125
#3	.5026595	2.503714	410.0617	15.57469	2.529966	15.20876	418.4358

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.19767	418.5323	2.509125	1.261832	409.4612	2.516885	14.82269
Stddev	.05250	2.1568	.007102	.003191	2.3019	.015380	.10356
%RSD	.3454297	.5153142	.2830428	.2529251	.5621849	.6110619	.6986691
#1	15.25829	420.9181	2.507670	1.258420	412.1185	2.505871	14.93487
#2	15.16767	417.9578	2.502863	1.264743	408.1859	2.534456	14.80247
#3	15.16706	416.7209	2.516841	1.262333	408.0792	2.510326	14.73073

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	155.6408	5.024628	5.198430	4.890199	5.148828	5.090834	5.038214
Stddev	.4721	.013790	.028053	.012758	.012912	.025338	.012486
%RSD	.3033409	.2744522	.5396456	.2608805	.2507663	.4977207	.2478290
#1	156.1854	5.015410	5.217178	4.880046	5.163014	5.109405	5.036292
#2	155.3479	5.017993	5.211934	4.886031	5.137764	5.101129	5.026801
#3	155.3890	5.040482	5.166179	4.904519	5.145705	5.061969	5.051550

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: CCV045 Acquired: 11/09/2024 17:10:17 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV045 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	5.029288	5.156190	5.084889
Stddev	.025416	.024437	.015571
%RSD	.5053557	.4739420	.3062275
#1	5.057940	5.183348	5.101676
#2	5.009459	5.135976	5.082072
#3	5.020466	5.149245	5.070918

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	935.8614	26418.27	2784.384	843.9921	1664.006
Stddev	1.5635	34.13	13.775	5.2186	2.334
%RSD	.1670680	.1291987	.4947315	.6183190	.1402716
#1	937.3875	26439.79	2771.201	838.0240	1665.425
#2	935.9336	26436.12	2783.269	846.2555	1665.280
#3	934.2630	26378.92	2798.684	847.6968	1661.312

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: CCB045 Acquired: 11/09/2024 17:14:32 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB045 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0026259	-.001360	-.000736	-.001498	.0006870	.0315129	.0005582
Stddev	.0019313	.005692	.000099	.005153	.0025036	.0134995	.0003713
%RSD	73.54757	418.4370	13.48965	344.0639	364.4074	42.83808	66.52260
#1	.0045370	.003472	-.000646	-.007226	-.000437	.0406281	.0002525
#2	.0026654	-.007634	-.000842	.002759	-.001057	.0160044	.0004506
#3	.0006751	.000082	-.000719	-.000026	.003556	.0379063	.0009714

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000076	.0001544	.0411890	.0011452	.0004811	.0028321	.0228624
Stddev	.000019	.0001149	.0205117	.0004255	.0000773	.0024997	.0173284
%RSD	25.43642	74.39140	49.79901	37.15053	16.06488	88.26174	75.79445
#1	-.000064	.0000309	.0242415	.0006746	.0005151	.0000910	.0058602
#2	-.000066	.0001742	.0353340	.0012586	.0005356	.0034199	.0222275
#3	-.000099	.0002581	.0639917	.0015026	.0003927	.0049856	.0404996

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006574	.0628784	.0007818	.0007585	.0385006	-.000040	.0006285
Stddev	.0021610	.0997500	.0004432	.0003328	.1360997	.003556	.0001631
%RSD	328.7273	158.6396	56.68645	43.87611	353.5003	8800.948	25.95539
#1	.0009489	.1737904	.0004086	.0005005	-.089529	.004060	.0005715
#2	-.001635	-.019484	.0012717	.0006408	.181442	-.001891	.0008125
#3	.002658	.034329	.0006652	.0011341	.023589	-.002290	.0005015

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1787595	.0048656	.0066480	.0004383	.0001263	.0005684	.0003939
Stddev	.1089088	.0018903	.0004895	.0004303	.0021724	.0006363	.0010488
%RSD	60.92478	38.84976	7.362518	98.16835	1720.270	111.9371	266.2482
#1	.1828313	.0027258	.0072109	.0005214	.0013121	-.000035	-.000711
#2	.2855753	.0063086	.0064103	.0008209	-.002381	.001233	.001375
#3	.0678719	.0055623	.0063228	-.000027	.001448	.000508	.000518

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: CCB045 Acquired: 11/09/2024 17:14:32 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB045 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0004886	.0044276	.0000861
Stddev	.0015023	.0015562	.0000827
%RSD	307.4795	35.14772	96.08319
#1	.0022064	.0034526	.0001489
#2	-.000579	.0036079	.0001171
#3	-.000161	.0062223	-.000008

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1132.244	28650.61	2886.211	1038.586	2191.029
Stddev	4.171	73.40	20.159	3.841	5.940
%RSD	.3684145	.2561731	.6984557	.3698764	.2711106
#1	1127.480	28593.06	2882.318	1034.263	2184.339
#2	1134.013	28733.27	2868.282	1039.887	2195.684
#3	1135.240	28625.52	2908.032	1041.609	2193.064

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: PB164598BL Acquired: 11/09/2024 17:19:06 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS598 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0045271	-.006277	-.001282	-.008267	-.000172	-.007327	.0003711
Stddev	.0034787	.000368	.002543	.004680	.001886	.001332	.0005690
%RSD	76.84305	5.861028	198.4256	56.61024	1095.309	18.17614	153.3172
#1	.0006864	-.006017	-.003751	-.003224	-.002349	-.007600	-.000053
#2	.0054281	-.006698	.001329	-.009106	.000898	-.008501	.001018
#3	.0074666	-.006115	-.001424	-.012470	.000935	-.005880	.000149

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000191	.0000178	-.010340	.0007144	.0003796	.0009914	-.037576
Stddev	.000052	.0001557	.018171	.0005289	.0001693	.0037154	.028337
%RSD	27.01877	872.5835	175.7372	74.03574	44.60413	374.7651	75.41344
#1	-.000250	-.000016	-.021372	.0002214	.0004982	.0050782	-.019810
#2	-.000168	.000188	.010633	.0006486	.0004549	.0000787	-.070255
#3	-.000154	-.000118	-.020280	.0012730	.0001857	-.002183	-.022662

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010874	.1109719	-.000297	.0009364	-.181553	-.003308	.0002448
Stddev	.0028493	.0412364	.000605	.0002717	.247872	.014615	.0001838
%RSD	262.0340	37.15931	203.7363	29.01185	136.5289	441.7997	75.06140
#1	-.000322	.1353589	-.000305	.0006474	-.384561	-.018426	.0004428
#2	.004367	.0633610	.000312	.0009754	-.254781	-.002245	.0000796
#3	-.000782	.1341960	-.000899	.0011865	.094683	.010746	.0002121

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.045691	.0074930	.0017273	-.000098	-.001152	.0004609	.0023254
Stddev	.064995	.0009405	.0008114	.000595	.008719	.0001799	.0024034
%RSD	142.2501	12.55129	46.97447	608.1667	757.0541	39.04266	103.3536
#1	-.088077	.0068339	.0020253	.000575	.008373	.0006562	.0016999
#2	-.078134	.0085700	.0008090	-.000553	-.003087	.0004247	.0049797
#3	.029139	.0070751	.0023475	-.000315	-.008741	.0003018	.0002966

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: PB164598BL Acquired: 11/09/2024 17:19:06 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS598 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0024450	.0049050	.0000363
Stddev	.0010222	.0036561	.0000768
%RSD	41.81031	74.53743	211.6614
#1	.0036151	.0052186	.0001246
#2	.0019944	.0083942	-.000014
#3	.0017254	.0011023	-.000002

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1137.034	28905.29	2875.230	1046.876	2204.201
Stddev	2.453	57.42	9.850	4.639	3.592
%RSD	.2156985	.1986639	.3425871	.4431071	.1629777
#1	1134.589	28881.23	2864.025	1051.604	2200.070
#2	1137.019	28863.81	2879.139	1046.691	2205.936
#3	1139.494	28970.83	2882.525	1042.332	2206.596

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: PB164598BS Acquired: 11/09/2024 17:23:41 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS598 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0233021	.0498440	.0183195	.0657213	.1125633	.4068404
Stddev	.0025916	.0059811	.0030829	.0047761	.0020143	.0083208
%RSD	11.12158	11.99956	16.82851	7.267162	1.789465	2.045212
#1	.0214550	.0465752	.0172924	.0604971	.1105496	.4140387
#2	.0221867	.0462096	.0158812	.0668030	.1125622	.3977301
#3	.0262647	.0567471	.0217848	.0698636	.1145782	.4087523

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4147085	.0107076	.0105662	10.69272	.0223705	.0998552
Stddev	.0001243	.0001883	.0001641	.02071	.0012509	.0002417
%RSD	.0299770	1.758537	1.552900	.1937028	5.591501	.2420776
#1	.4145695	.0104996	.0106516	10.66925	.0224783	.0997934
#2	.4147470	.0108664	.0103770	10.70049	.0210693	.0996504
#3	.4148090	.0107569	.0106699	10.70842	.0235640	.1001219

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0506961	.1891101	.0330441	10.46201	.0833129	.0222012
Stddev	.0028133	.0106981	.0016118	.06039	.0006658	.0004576
%RSD	5.549265	5.657096	4.877819	.5772136	.7992037	2.061012
#1	.0536140	.1778596	.0330876	10.44771	.0826900	.0216831
#2	.0504736	.1903174	.0314110	10.52826	.0832340	.0223705
#3	.0480007	.1991535	.0346337	10.41005	.0840147	.0225500

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.35377	.1107749	.1175157	9.791654	.0226567	F .0023348
Stddev	.21548	.0111681	.0007828	.014447	.0023822	.0017261
%RSD	2.081208	10.08176	.6660843	.1475401	10.51414	73.92748
#1	10.13910	.0984540	.1168665	9.802305	.0220811	.0003652
#2	10.35216	.1202327	.1183849	9.775210	.0206151	.0030553
#3	10.57006	.1136379	.1172956	9.797448	.0252740	.0035840

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: PB164598BS Acquired: 11/09/2024 17:23:41 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS598 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .0194711	.1803006	F .4554484	.0139421	.2056740	.0329395
Stddev	.0006609	.0075501	.0019880	.0039386	.0007053	.0020557
%RSD	3.394369	4.187525	.4365034	28.24983	.3429365	6.240895
#1	.0200852	.1729993	.4541522	.0143681	.2064882	.0314193
#2	.0187717	.1798253	.4544557	.0176505	.2052493	.0321208
#3	.0195565	.1880771	.4577373	.0098078	.2052844	.0352785

Elem	Sr4077
Units	ppm
Avg	.2083096
Stddev	.0003976
%RSD	.1908550
#1	.2078611
#2	.2084489
#3	.2086187

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1128.558	28839.21	2889.906	1037.359	2139.967
Stddev	1.638	50.26	5.885	4.524	4.529
%RSD	.1451164	.1742794	.2036393	.4361454	.2116247
#1	1128.688	28897.17	2883.557	1041.342	2143.654
#2	1130.127	28812.78	2895.179	1032.440	2141.334
#3	1126.859	28807.69	2890.982	1038.296	2134.912

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: PB164600BL Acquired: 11/09/2024 17:28:13 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS600 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0034350	-.002450	-.002412	.0037968	.0010007	.0063554	-.000124
Stddev	.0032778	.000837	.000868	.0045842	.0025131	.0101944	.000796
%RSD	95.42345	34.15470	35.99077	120.7379	251.1426	160.4057	643.3398
#1	.0036925	-.002078	-.002756	.0067269	.0008038	.0129438	-.000228
#2	.0065766	-.001864	-.003055	.0061496	.0036064	-.005387	-.000862
#3	.0000361	-.003409	-.001425	-.001486	-.001408	.011509	.000719

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000072	-.000034	-.003487	.0017404	.0003691	.0042549	-.035709
Stddev	.000099	.000167	.012557	.0001408	.0003757	.0025934	.010698
%RSD	137.8377	491.5791	360.0733	8.092213	101.7995	60.95207	29.96028
#1	-.000166	-.000153	.007375	.0018503	-.000064	.0017371	-.026487
#2	-.000079	.000156	-.000601	.0015816	.000601	.0069179	-.033200
#3	.000031	-.000105	-.017236	.0017893	.000570	.0041096	-.047438

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015179	.0097041	-.000454	.0006484	.0209845	.0033052	.0001486
Stddev	.0004572	.1073443	.000505	.0002750	.0705367	.0071181	.0003904
%RSD	30.12069	1106.175	111.1347	42.41633	336.1371	215.3606	262.6935
#1	.0016981	.0929094	.000128	.0007614	.0910755	-.001067	.0004049
#2	.0018575	-.111463	-.000727	.0003349	-.049990	.011519	.0003417
#3	.0009980	.047666	-.000763	.0008489	.021868	-.000536	-.000301

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0267429	.0062947	.0009669	-.000072	.0046470	-.000300	.0008513
Stddev	.1968824	.0018847	.0005247	.000165	.0134385	.000200	.0014036
%RSD	736.2055	29.94132	54.26220	228.5954	289.1868	66.70581	164.8717
#1	.1671119	.0045395	.0014689	-.000246	.0011561	-.000069	.0001036
#2	.1114295	.0060580	.0004222	.000082	.0194865	-.000418	-.000020
#3	-.198313	.0082866	.0010097	-.000052	-.006702	-.000414	.002471

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: PB164600BL Acquired: 11/09/2024 17:28:13 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS600 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0011373	.0018396	-.000006
Stddev	.0007081	.0022524	.000228
%RSD	62.26702	122.4397	3989.714
#1	.0011656	.0018977	.000252
#2	.0004154	-.000441	-.000090
#3	.0018308	.004062	-.000179

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1126.042	28823.56	2871.392	1044.591	2183.399
Stddev	.898	53.95	5.746	1.456	4.154
%RSD	.0797325	.1871847	.2000979	.1393379	.1902534
#1	1125.025	28799.97	2872.704	1045.950	2182.082
#2	1126.378	28785.41	2865.104	1043.055	2180.063
#3	1126.724	28885.29	2876.368	1044.766	2188.052

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: PB164600BS Acquired: 11/09/2024 17:32:48 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS600 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0170645	.0456908	.0174362	.0757896	.1138239	.3976863
Stddev	.0110874	.0059970	.0012959	.0062688	.0026974	.0114546
%RSD	64.97338	13.12527	7.431985	8.271298	2.369814	2.880308
#1	.0220504	.0491227	.0185457	.0692078	.1112548	.4091144
#2	.0247836	.0491834	.0160120	.0764715	.1166335	.3862054
#3	.0043595	.0387661	.0177509	.0816897	.1135835	.3977390

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4206567	.0108982	.0104444	10.81407	.0223724	.0999228
Stddev	.0012735	.0000670	.0001015	.04803	.0005489	.0002967
%RSD	.3027428	.6151011	.9716868	.4440998	2.453474	.2969372
#1	.4192783	.0109311	.0103592	10.75911	.0229664	.0998597
#2	.4209021	.0109424	.0105567	10.84796	.0218840	.0996627
#3	.4217896	.0108211	.0104174	10.83513	.0222667	.1002460

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0547903	.2017378	.0324952	10.61175	.0835252	.0224060
Stddev	.0075744	.0068541	.0000372	.03266	.0007185	.0005294
%RSD	13.82430	3.397521	.1146288	.3077886	.8602274	2.362636
#1	.0558397	.2079162	.0324914	10.64864	.0839928	.0223765
#2	.0467460	.1943650	.0325341	10.60012	.0838850	.0229495
#3	.0617853	.2029320	.0324599	10.58649	.0826979	.0218920

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.12227	.1138547	.1168499	9.780436	.0236556	F .0020952
Stddev	.17546	.0085351	.0017643	.091775	.0013345	.0020061
%RSD	1.733417	7.496516	1.509908	.9383493	5.641492	95.74445
#1	9.92165	.1043332	.1153880	9.758869	.0233967	-.000085
#2	10.24708	.1208186	.1163520	9.881073	.0251006	.003864
#3	10.19809	.1164123	.1188096	9.701365	.0224695	.002507

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: PB164600BS Acquired: 11/09/2024 17:32:48 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS600 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .0197950	.1777135	F .4562991	.0144830	.2086157	.0317966
Stddev	.0002392	.0014571	.0014796	.0009648	.0020654	.0020583
%RSD	1.208635	.8199197	.3242606	6.661451	.9900492	6.473237
#1	.0195323	.1793165	.4551504	.0155359	.2074407	.0341665
#2	.0198522	.1773547	.4579687	.0142715	.2110005	.0304557
#3	.0200004	.1764694	.4557783	.0136415	.2074058	.0307677

Elem	Sr4077
Units	ppm
Avg	.2098629
Stddev	.0006136
%RSD	.2923821
#1	.2100320
#2	.2103741
#3	.2091824

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1125.450	28801.93	2901.823	1043.490	2141.897
Stddev	1.395	60.24	11.189	1.688	4.172
%RSD	.1239333	.2091625	.3855701	.1617242	.1947895
#1	1124.362	28790.92	2912.107	1044.491	2137.418
#2	1127.023	28747.96	2889.909	1044.438	2145.674
#3	1124.967	28866.92	2903.454	1041.542	2142.598

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: PB164623BL Acquired: 11/09/2024 17:37:20 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS623 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0059780	-.002278	-.000295	-.001850	.0010163	.0083027	-.000015
Stddev	.0025454	.003035	.000834	.004948	.0036468	.0058106	.000250
%RSD	42.57952	133.2204	283.2254	267.4525	358.8200	69.98441	1713.507
#1	.0089172	-.001459	-.000710	-.005865	.0045818	.0121876	-.000246
#2	.0045062	-.005638	-.000840	.003678	.0011737	.0110978	-.000048
#3	.0045107	.000263	.000666	-.003363	-.002707	.0016228	.000251

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000124	-.000067	-.000524	.0013849	.0003543	.0012613	-.035640
Stddev	.000134	.000123	.014510	.0003325	.0004263	.0056149	.008628
%RSD	108.0863	182.6642	2767.016	24.00930	120.3002	445.1858	24.20917
#1	-.000107	-.000011	-.007236	.0016609	.0006976	.0066788	-.032143
#2	-.000266	-.000209	.016126	.0010158	.0004883	-.004532	-.045468
#3	.000001	.000018	-.010463	.0014780	-.000123	.001637	-.029310

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0028520	.0101788	.0004413	.0009646	-.314553	-.004643	.0002371
Stddev	.0006768	.0158187	.0005529	.0006094	.351644	.002688	.0002660
%RSD	23.73084	155.4086	125.2940	63.17989	111.7917	57.89254	112.1903
#1	.0034864	-.004713	-.000197	.0013721	.053192	-.002321	.0003232
#2	.0021396	.026785	.000744	.0012577	-.349342	-.007588	-.000061
#3	.0029301	.008464	.000777	.0002640	-.647511	-.004022	.000449

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002197	.0006022	-.000036	.0002045	.0020375	-.000386	-.001565
Stddev	.151239	.0034262	.000190	.0004294	.0062520	.000623	.003496
%RSD	6883.538	568.9665	532.5264	209.9368	306.8512	161.7160	223.3877
#1	.135990	.0011939	-.000255	.0005018	.0032389	-.000738	.001071
#2	-.163765	-.003081	.000075	.0003996	.0076016	-.000753	-.000236
#3	.021184	.003694	.000072	-.000288	-.004728	.000334	-.005530

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: PB164623BL Acquired: 11/09/2024 17:37:20 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS623 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0017845	-.000202	-.000024
Stddev	.0012193	.002530	.000088
%RSD	68.32666	1249.399	368.3555
#1	.0004001	.002662	.000007
#2	.0026985	-.001136	-.000124
#3	.0022549	-.002133	.000045

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1130.567	28751.74	2885.652	1042.717	2195.718
Stddev	3.304	138.10	2.615	7.509	1.464
%RSD	.2922426	.4803057	.0906356	.7201520	.0666684
#1	1127.179	28685.54	2888.621	1041.617	2195.374
#2	1133.780	28659.22	2883.689	1035.818	2197.324
#3	1130.742	28910.48	2884.646	1050.715	2194.457

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: PB164623BS Acquired: 11/09/2024 17:41:54 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS623 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0190169	.0449624	.0209464	.0665080	.1120496	.3839280
Stddev	.0104204	.0011374	.0009896	.0064546	.0004793	.0082566
%RSD	54.79521	2.529700	4.724199	9.704944	.4277431	2.150563
#1	.0104300	.0450336	.0219226	.0592062	.1124613	.3920051
#2	.0160110	.0437911	.0209727	.0714529	.1121641	.3842760
#3	.0306099	.0460626	.0199440	.0688650	.1115234	.3755029

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4121510	.0107511	.0103133	10.68810	.0222526	.0985591
Stddev	.0008400	.0001014	.0001263	.05845	.0013876	.0007154
%RSD	.2038198	.9427460	1.224116	.5468883	6.235535	.7259047
#1	.4114806	.0107791	.0104467	10.65001	.0232855	.0982375
#2	.4118790	.0106386	.0101957	10.65890	.0206754	.0980609
#3	.4130933	.0108355	.0102974	10.75540	.0227969	.0993789

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0477218	.1518463	.0330737	10.61987	.0828169	.0222063
Stddev	.0123894	.0104093	.0015682	.16821	.0003249	.0002187
%RSD	25.96175	6.855135	4.741423	1.583885	.3923313	.9847171
#1	.0532992	.1609584	.0345067	10.72047	.0826124	.0221552
#2	.0335240	.1540785	.0313985	10.42569	.0826468	.0224459
#3	.0563421	.1405020	.0333158	10.71347	.0831916	.0220176

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.822284	.1126361	.1162659	9.799402	.0199820	F .0014922
Stddev	.180736	.0044263	.0005353	.066686	.0012323	.0012370
%RSD	1.840057	3.929695	.4604321	.6805079	6.167120	82.90154
#1	9.667333	.1105162	.1156579	9.722468	.0189375	.0010592
#2	9.778690	.1096685	.1164730	9.835083	.0196674	.0005298
#3	10.02083	.1177236	.1166667	9.840657	.0213411	.0028875

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: PB164623BS Acquired: 11/09/2024 17:41:54 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS623 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .0198976	.1827731	F .4531631	.0141124	.2044914	.0292515
Stddev	.0006031	.0031441	.0031926	.0021058	.0012824	.0029490
%RSD	3.031202	1.720232	.7045234	14.92173	.6271113	10.08148
#1	.0192178	.1851329	.4532599	.0158005	.2047027	.0258562
#2	.0203687	.1792038	.4499232	.0117527	.2056550	.0307237
#3	.0201061	.1839825	.4563063	.0147841	.2031165	.0311745

Elem	Sr4077
Units	ppm
Avg	.2077747
Stddev	.0002023
%RSD	.0973388
#1	.2079792
#2	.2077701
#3	.2075748

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1135.043	28922.17	2883.914	1045.245	2154.283
Stddev	2.624	20.92	14.315	.281	3.640
%RSD	.2311430	.0723491	.4963587	.0269210	.1689769
#1	1135.569	28931.69	2880.289	1045.441	2151.240
#2	1137.363	28898.18	2899.693	1045.371	2158.316
#3	1132.196	28936.64	2871.761	1044.922	2153.293

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: PB164633BL Acquired: 11/09/2024 17:55:33 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS633 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000350	-.005136	-.000356	-.004821	.0010559	.0085059	.0007334
Stddev	.007703	.002576	.002742	.001353	.0026212	.0147475	.0006001
%RSD	2199.900	50.15235	769.6209	28.06436	248.2349	173.3797	81.82582
#1	.008533	-.005229	.002710	-.006206	.0025228	.0205687	.0000406
#2	-.005183	-.007665	-.002573	-.003503	-.001970	.0128839	.0010943
#3	-.004400	-.002515	-.001205	-.004755	.002615	-.007935	.0010651

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000089	-.000019	-.000138	-.000393	.0003020	.0062267	-.021044
Stddev	.000089	.000139	.011382	.000780	.0006716	.0020888	.007648
%RSD	99.34908	745.2000	8274.388	198.6854	222.4133	33.54528	36.34296
#1	-.000170	-.000095	.001475	.000280	-.000411	.0040935	-.021717
#2	.000006	.000142	.010352	-.001248	.000922	.0082681	-.013081
#3	-.000103	-.000103	-.012239	-.000211	.000395	.0063186	-.028332

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013874	.0551209	-.000221	.0013361	-.648085	.0089187	-.000129
Stddev	.0010900	.0176151	.000396	.0004910	.083973	.0027566	.000289
%RSD	78.56140	31.95717	179.2236	36.74733	12.95708	30.90838	223.3448
#1	.0002115	.0723739	-.000251	.0019024	-.738846	.0101451	.000139
#2	.0015869	.0558242	.000189	.0010750	-.632257	.0108494	-.000434
#3	.0023639	.0371647	-.000601	.0010308	-.573153	.0057617	-.000093

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.085863	.0056081	-.000986	.0004202	.0097807	.0001176	.0024072
Stddev	.133840	.0021729	.001869	.0002160	.0028484	.0005030	.0013977
%RSD	155.8767	38.74501	189.5468	51.40282	29.12259	427.7500	58.06589
#1	.042883	.0045001	-.002648	.0005051	.0071276	.0006169	.0034882
#2	-.076199	.0042126	-.001348	.0005809	.0094238	-.000389	.0029046
#3	-.224274	.0081116	.001038	.0001747	.0127908	.000125	.0008288

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: PB164633BL Acquired: 11/09/2024 17:55:33 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS633 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0033718	-.000886	.0000149
Stddev	.0025113	.001061	.0000724
%RSD	74.47903	119.7566	487.0954
#1	.0049436	-.001598	.0000962
#2	.0046962	.000334	-.000043
#3	.0004755	-.001394	-.000009

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1130.307	28889.78	2872.843	1050.985	2202.235
Stddev	1.678	51.21	21.528	3.127	1.989
%RSD	.1484692	.1772644	.7493743	.2975329	.0903047
#1	1129.231	28838.72	2873.796	1053.354	2200.916
#2	1129.449	28941.14	2850.854	1052.160	2201.267
#3	1132.241	28889.49	2893.879	1047.441	2204.523

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: PB164633BS Acquired: 11/09/2024 18:00:08 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS633 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0240849	.0484796	.0184470	.0605785	.1184433	.4037005
Stddev	.0060385	.0008574	.0028204	.0073931	.0005054	.0085199
%RSD	25.07172	1.768553	15.28944	12.20413	.4267218	2.110454
#1	.0299345	.0488377	.0183633	.0666999	.1189637	.3990068
#2	.0244463	.0490999	.0213083	.0523647	.1179544	.3985598
#3	.0178738	.0475012	.0156693	.0626709	.1184119	.4135351

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4315901	.0109751	.0107149	11.12878	.0235689	.1025842
Stddev	.0007636	.0000955	.0000959	.07096	.0001267	.0003215
%RSD	.1769202	.8704368	.8953769	.6375958	.5376336	.3133955
#1	.4308001	.0108650	.0107792	11.10463	.0236065	.1022946
#2	.4316460	.0110245	.0107608	11.07304	.0236726	.1025280
#3	.4323242	.0110358	.0106046	11.20866	.0234277	.1029301

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0519519	.2077579	.0351715	10.91798	.0852934	.0234011
Stddev	.0059784	.0524893	.0015164	.07169	.0003099	.0003027
%RSD	11.50766	25.26463	4.311428	.6566138	.3632995	1.293341
#1	.0543272	.1716039	.0350139	10.91252	.0855375	.0233113
#2	.0563776	.2679631	.0337400	10.84918	.0853981	.0237385
#3	.0451508	.1837066	.0367605	10.99225	.0849448	.0231535

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.990906	.1220135	.1206177	10.12003	.0216507	F -.000068
Stddev	.302855	.0064629	.0005988	.06709	.0029201	.001502
%RSD	3.031302	5.296855	.4964421	.6629082	13.48732	2198.941
#1	10.26176	.1179319	.1207697	10.16156	.0183289	-.000893
#2	9.66391	.1186437	.1199575	10.04264	.0228101	.001665
#3	10.04705	.1294649	.1211258	10.15589	.0238130	-.000977

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: PB164633BS Acquired: 11/09/2024 18:00:08 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS633 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .0205732	.1847107	F .4676009	.0131882	.2120021	.0289729
Stddev	.0004845	.0054423	.0036366	.0024929	.0022221	.0001068
%RSD	2.355145	2.946383	.7777204	18.90237	1.048162	.3684676
#1	.0210899	.1784476	.4659954	.0159143	.2143543	.0289847
#2	.0205006	.1873961	.4650434	.0110247	.2099382	.0288608
#3	.0201290	.1882883	.4717640	.0126255	.2117138	.0290734

Elem	Sr4077
Units	ppm
Avg	.2155813
Stddev	.0004894
%RSD	.2270158
#1	.2156034
#2	.2150813
#3	.2160593

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1126.087	28802.79	2901.547	1044.635	2148.666
Stddev	2.262	70.29	8.364	3.382	1.727
%RSD	.2008625	.2440309	.2882665	.3237320	.0803750
#1	1123.577	28722.42	2902.731	1041.483	2150.530
#2	1127.967	28833.19	2909.256	1048.208	2148.347
#3	1126.718	28852.77	2892.654	1044.213	2147.120

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: PB164598BSD Acquired: 11/09/2024 18:04:41 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCSD598 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0141666	.0204278	.0077296	.0342299	.0572003	.2263533	.2073741
Stddev	.0060268	.0036268	.0017402	.0066009	.0009541	.0089865	.0020354
%RSD	42.54243	17.75434	22.51349	19.28415	1.668065	3.970112	.9815371
#1	.0097633	.0167032	.0057585	.0408928	.0572237	.2365783	.2085466
#2	.0117013	.0206321	.0090533	.0341041	.0562347	.2197101	.2050238
#3	.0210352	.0239482	.0083769	.0276927	.0581426	.2227713	.2085520

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0052931	.0050339	5.408622	.0107916	.0491631	.0291149	.0929508
Stddev	.0000892	.0000367	.029392	.0014634	.0005280	.0038113	.0500113
%RSD	1.685172	.7280702	.5434292	13.56074	1.074014	13.09053	53.80400
#1	.0053697	.0050499	5.406864	.0124797	.0489018	.0291773	.1443649
#2	.0053144	.0049920	5.380149	.0100147	.0488167	.0252728	.0444716
#3	.0051951	.0050598	5.438854	.0098805	.0497709	.0328946	.0900160

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0162946	5.207630	.0418457	.0115310	5.042356	.0609555	.0589518
Stddev	.0001887	.175758	.0007273	.0005586	.402409	.0072649	.0003632
%RSD	1.157819	3.375011	1.738181	4.844476	7.980578	11.91842	.6161467
#1	.0162021	5.398048	.0425473	.0113099	5.469019	.0535345	.0586363
#2	.0165116	5.051621	.0418946	.0111168	4.988407	.0680536	.0588702
#3	.0161700	5.173220	.0410951	.0121663	4.669643	.0612782	.0593489

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.038769	.0122553	.0003852	.0096490	.0860818	.2289359	.0060928
Stddev	.056697	.0011499	.0005204	.0001726	.0013712	.0004618	.0015249
%RSD	1.125219	9.382916	135.1159	1.789102	1.592926	.2017204	25.02793
#1	5.017894	.0110288	-.000022	.0097763	.0867766	.2289679	.0075791
#2	5.102944	.0133091	.000206	.0097182	.0845023	.2284590	.0061671
#3	4.995469	.0124278	.000971	.0094525	.0869666	.2293810	.0045321

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: PB164598BSD Acquired: 11/09/2024 18:04:41 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCSD598 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.1048331	.0149428	.1047882
Stddev	.0009421	.0010102	.0003152
%RSD	.8986942	6.760346	.3008421
#1	.1039326	.0156302	.1051338
#2	.1047546	.0137829	.1047143
#3	.1058120	.0154152	.1045164

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1135.835	28962.73	2893.637	1050.274	2181.347
Stddev	.681	35.42	5.646	2.885	4.392
%RSD	.0599784	.1222856	.1951037	.2746475	.2013243
#1	1136.381	28967.73	2887.650	1048.341	2185.462
#2	1135.072	28995.39	2898.864	1048.890	2176.723
#3	1136.051	28925.08	2894.396	1053.589	2181.856

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: PB164600BSD Acquired: 11/09/2024 18:09:15 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCSD600 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0104046	.0245267	.0094116	.0334350	.0565145	.1961843	.2068524
Stddev	.0037021	.0013393	.0009373	.0032354	.0022744	.0080841	.0006131
%RSD	35.58103	5.460685	9.958807	9.676740	4.024402	4.120644	.2963747
#1	.0072283	.0233002	.0088791	.0371466	.0539053	.1909175	.2074911
#2	.0144704	.0259558	.0088619	.0312106	.0580779	.1921433	.2062687
#3	.0095152	.0243240	.0104939	.0319479	.0575603	.2054921	.2067975

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0054302	.0051921	5.352404	.0117741	.0499122	.0233995	.0922533
Stddev	.0000755	.0000680	.023889	.0002358	.0001637	.0049934	.0323378
%RSD	1.390916	1.309195	.4463228	2.002834	.3280001	21.33958	35.05329
#1	.0055085	.0052381	5.338774	.0118061	.0497616	.0251938	.1239901
#2	.0053578	.0052242	5.338450	.0115239	.0500864	.0177570	.0593463
#3	.0054244	.0051140	5.379988	.0119923	.0498884	.0272478	.0934235

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0158037	5.216176	.0412649	.0112345	4.537848	.0573239	.0588253
Stddev	.0013310	.149716	.0007783	.0002035	.426617	.0048571	.0008178
%RSD	8.422188	2.870234	1.886120	1.811649	9.401317	8.473023	1.390231
#1	.0144022	5.319349	.0403870	.0114693	4.347261	.0597684	.0590189
#2	.0170507	5.044458	.0418702	.0111069	5.026537	.0517302	.0595289
#3	.0159581	5.284720	.0415376	.0111275	4.239746	.0604730	.0579280

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.744210	.0110956	-.000497	.0097699	.0925516	.2294413	.0068144
Stddev	.110481	.0013950	.001238	.0001981	.0072321	.0009436	.0003222
%RSD	2.328755	12.57258	249.1399	2.027385	7.814144	.4112423	4.728540
#1	4.845465	.0115511	-.001926	.0095412	.0920947	.2286339	.0066966
#2	4.760787	.0095298	.000252	.0098882	.1000014	.2292115	.0071789
#3	4.626377	.0122059	.000183	.0098802	.0855588	.2304785	.0065676

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: PB164600BSD Acquired: 11/09/2024 18:09:15 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCSD600 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.1038076	.0140722	.1037615
Stddev	.0024584	.0003926	.0002248
%RSD	2.368255	2.790249	.2166620
#1	.1011584	.0136572	.1036253
#2	.1060155	.0141214	.1040210
#3	.1042489	.0144379	.1036382

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1133.845	29092.04	2876.955	1050.732	2175.652
Stddev	.932	53.66	3.284	4.409	2.298
%RSD	.0822123	.1844449	.1141336	.4195834	.1056236
#1	1133.449	29043.24	2877.550	1045.818	2174.557
#2	1134.910	29149.51	2873.414	1052.040	2178.293
#3	1133.177	29083.37	2879.900	1054.339	2174.107

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: PB164623BSD Acquired: 11/09/2024 18:13:48 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCSD623 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0059990	.0239485	.0118142	.0321129	.0580905	.1867590	.2107059
Stddev	.0090546	.0019857	.0031972	.0129733	.0023392	.0034247	.0002830
%RSD	150.9354	8.291631	27.06211	40.39904	4.026870	1.833749	.1342910
#1	.0128541	.0249804	.0115459	.0273933	.0579777	.1902830	.2109901
#2	.0094081	.0252058	.0087597	.0221601	.0604840	.1865508	.2107036
#3	-.004265	.0216593	.0151371	.0467854	.0558096	.1834431	.2104242

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0054445	.0052297	5.477463	.0116950	.0506984	.0249921	.0691951
Stddev	.0001816	.0000479	.022546	.0006769	.0001379	.0031077	.0220268
%RSD	3.335574	.9156811	.4116143	5.787986	.2720096	12.43484	31.83292
#1	.0054400	.0051994	5.451896	.0109328	.0506299	.0282111	.0474949
#2	.0056283	.0052048	5.494495	.0119264	.0508571	.0247560	.0915346
#3	.0052652	.0052849	5.485998	.0122259	.0506081	.0220091	.0685556

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0160143	5.416771	.0428128	.0113961	4.956066	.0556198	.0598489
Stddev	.0016456	.241016	.0006782	.0003874	.121088	.0029401	.0006808
%RSD	10.27557	4.449433	1.584030	3.399267	2.443229	5.286028	1.137595
#1	.0148082	5.283795	.0421574	.0109701	4.833428	.0555675	.0595513
#2	.0178889	5.271537	.0435116	.0114909	4.959228	.0585857	.0606279
#3	.0153457	5.694982	.0427695	.0117273	5.075542	.0527062	.0593676

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.885213	.0157941	-.000631	.0102651	.0851951	.2341238	.0055274
Stddev	.081285	.0026674	.000986	.0003084	.0107819	.0005311	.0017621
%RSD	1.663905	16.88846	156.3053	3.004324	12.65554	.2268274	31.87922
#1	4.899963	.0138463	-.000503	.0104736	.0727827	.2346094	.0071269
#2	4.958113	.0188343	.000285	.0099109	.0905661	.2335567	.0036386
#3	4.797562	.0147018	-.001675	.0104110	.0922367	.2342052	.0058167

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: PB164623BSD Acquired: 11/09/2024 18:13:48 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCSD623 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.1047612	.0151173	.1061313
Stddev	.0019772	.0011497	.0002538
%RSD	1.887386	7.604952	.2391173
#1	.1054035	.0162330	.1062259
#2	.1063374	.0139364	.1058438
#3	.1025426	.0151825	.1063241

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1132.736	29025.82	2893.000	1052.807	2170.687
Stddev	3.069	29.44	10.220	7.697	6.917
%RSD	.2709453	.1014276	.3532538	.7310833	.3186774
#1	1129.447	29055.62	2890.793	1061.442	2163.465
#2	1135.523	29025.11	2904.143	1046.666	2177.253
#3	1133.238	28996.75	2884.064	1050.314	2171.344

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: PB164633BSD Acquired: 11/09/2024 18:22:56 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCSD633 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0144399	.0247395	.0094008	.0347010	.0583135	.2054965	.2140800
Stddev	.0098042	.0045699	.0032130	.0009017	.0018761	.0147631	.0009203
%RSD	67.89686	18.47227	34.17812	2.598521	3.217266	7.184101	.4299059
#1	.0243863	.0196670	.0130398	.0343231	.0602297	.2145907	.2150666
#2	.0047843	.0285355	.0069554	.0357302	.0564803	.1884626	.2132447
#3	.0141490	.0260160	.0082073	.0340497	.0582304	.2134361	.2139287

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0054239	.0052057	5.544889	.0118510	.0502417	.0269229	.0660922
Stddev	.0001065	.0000200	.045130	.0006276	.0008936	.0027750	.0386182
%RSD	1.964136	.3847845	.8139049	5.295305	1.778555	10.30716	58.43079
#1	.0055164	.0052060	5.573401	.0111880	.0493232	.0268081	.0275822
#2	.0054478	.0052255	5.492857	.0124357	.0511080	.0242072	.0658767
#3	.0053074	.0051855	5.568409	.0119293	.0502940	.0297536	.1048177

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0177559	5.463503	.0425830	.0110805	4.862410	.0497808	.0627713
Stddev	.0022036	.072203	.0002022	.0002067	.209972	.0023076	.0014620
%RSD	12.41054	1.321560	.4749039	1.865193	4.318272	4.635438	2.329017
#1	.0178536	5.479156	.0428016	.0108461	4.854124	.0496730	.0623995
#2	.0155051	5.384757	.0424026	.0112367	4.656703	.0521404	.0643832
#3	.0199091	5.526596	.0425450	.0111586	5.076402	.0475290	.0615311

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.925840	.0084050	-.000849	.0097122	.0857190	.2324209	.0067300
Stddev	.029353	.0018819	.000465	.0005826	.0044199	.0012915	.0012318
%RSD	.5959046	22.39079	54.73682	5.998453	5.156291	.5556883	18.30312
#1	4.896909	.0070583	-.000991	.0097840	.0814015	.2336370	.0071464
#2	4.955598	.0076013	-.001227	.0102556	.0902347	.2310653	.0053440
#3	4.925014	.0105553	-.000330	.0090971	.0855209	.2325605	.0076997

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: PB164633BSD Acquired: 11/09/2024 18:22:56 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCSD633 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.1053619	.0139904	.1061462
Stddev	.0004740	.0032500	.0003279
%RSD	.4498440	23.22978	.3088755
#1	.1057011	.0119579	.1063290
#2	.1055643	.0122747	.1057677
#3	.1048204	.0177387	.1063419

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1132.337	29082.64	2901.287	1052.877	2181.401
Stddev	1.048	55.92	9.619	1.494	1.095
%RSD	.0925652	.1922769	.3315410	.1419321	.0501779
#1	1132.371	29035.39	2891.139	1053.030	2180.696
#2	1133.367	29068.14	2910.271	1051.312	2180.846
#3	1131.272	29144.38	2902.450	1054.289	2182.662

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: P4524-01DLX2 Acquired: 11/09/2024 18:27:29 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE4W0 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2874483	-.043310	.3258095	-.053780	.0102866	96.75040	1.419056
Stddev	.0115337	.003621	.0009825	.007511	.0053658	.12933	.000940
%RSD	4.012436	8.360809	.3015660	13.96618	52.16298	.1336780	.0662091
#1	.2896571	-.040539	.3259984	-.060894	.0041519	96.63929	1.419663
#2	.2977178	-.041984	.3247463	-.045926	.0126020	96.71952	1.419531
#3	.2749699	-.047407	.3266839	-.054521	.0141060	96.89237	1.417974

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0045953	.0077766	21.74788	.2310801	.1440275	.8150810	273.0243
Stddev	.0001110	.0003350	.01785	.0013393	.0011100	.0044997	.2443
%RSD	2.414375	4.308473	.0820894	.5795846	.7706707	.5520578	.0894918
#1	.0045057	.0078161	21.73485	.2324982	.1447039	.8129365	272.9466
#2	.0047194	.0080901	21.76823	.2298368	.1446320	.8120546	273.2980
#3	.0045609	.0074235	21.74057	.2309053	.1427465	.8202518	272.8282

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.810495	53.39024	.3064195	-.020429	1.092028	.5452583	.8686135
Stddev	.008239	.21088	.0002197	.000501	.244410	.0036381	.0015462
%RSD	.1417903	.3949769	.0717056	2.453581	22.38128	.6672177	.1780101
#1	5.812104	53.21552	.3063991	-.021007	1.144625	.5425277	.8703893
#2	5.801571	53.33072	.3066487	-.020144	1.305856	.5493883	.8678860
#3	5.817811	53.62449	.3062107	-.020134	.825601	.5438588	.8675652

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.39818	5.758099	.2553921	-.000652	1.018044	5.855076	.0098828
Stddev	.04045	.012694	.0012447	.000799	.008233	.016980	.0019310
%RSD	.2626963	.2204559	.4873556	122.6089	.8087490	.2900102	19.53921
#1	15.36362	5.772748	.2566660	.000001	1.008988	5.861994	.0120878
#2	15.38824	5.751229	.2541789	-.000413	1.025079	5.835728	.0084930
#3	15.44267	5.750321	.2553314	-.001543	1.020064	5.867505	.0090678

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: P4524-01DLX2 Acquired: 11/09/2024 18:27:29 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE4W0 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.616811	.0854934	.2520149
Stddev	.001523	.0012898	.0003663
%RSD	.0581989	1.508705	.1453458
#1	2.615507	.0868295	.2515919
#2	2.616441	.0853952	.2522242
#3	2.618485	.0842555	.2522285

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1179.628	30581.59	3110.924	1098.168	2040.646
Stddev	3.692	62.64	2.364	3.060	1.970
%RSD	.3129756	.2048311	.0759954	.2786094	.0965153
#1	1177.286	30646.36	3112.077	1095.937	2042.868
#2	1183.884	30521.32	3112.491	1096.911	2039.115
#3	1177.713	30577.08	3108.205	1101.656	2039.955

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: P4524-02DLX2 Acquired: 11/09/2024 18:31:55 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE4W1 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3345249	-.049336	.1812355	-.064116	.0128274	151.9831	2.042833
Stddev	.0026528	.006690	.0050394	.009790	.0055225	.3788	.005515
%RSD	.7929932	13.56091	2.780562	15.26942	43.05238	.2492524	.2699547
#1	.3356564	-.056865	.1836035	-.071953	.0094678	152.2570	2.045133
#2	.3314940	-.047071	.1754482	-.053142	.0098134	151.5508	2.036540
#3	.3364243	-.044072	.1846546	-.067254	.0192011	152.1414	2.046825

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0064081	.0027656	50.55447	.2741547	.1672662	.5292923	295.7360
Stddev	.0001613	.0001687	.28661	.0019624	.0009604	.0085736	.8516
%RSD	2.517543	6.098936	.5669409	.7158132	.5741602	1.619823	.2879625
#1	.0062882	.0026146	50.54452	.2741002	.1670578	.5388922	296.4866
#2	.0063445	.0029476	50.27297	.2722200	.1683137	.5265874	294.8105
#3	.0065915	.0027346	50.84594	.2761437	.1664271	.5223975	295.9111

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.193267	69.65027	.4177332	-.021719	1.080189	.6037996	.6811751
Stddev	.022530	.28032	.0008521	.000184	.134150	.0097077	.0037499
%RSD	.3637798	.4024714	.2039883	.8484631	12.41911	1.607771	.5504988
#1	6.199559	69.73133	.4184753	-.021898	1.228154	.6119686	.6810898
#2	6.168260	69.33835	.4168026	-.021530	1.045904	.6063627	.6774686
#3	6.211982	69.88114	.4179217	-.021728	.966508	.5930675	.6849668

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	14.47200	8.502885	.2809634	-.001783	1.019433	3.897105	.0077917
Stddev	.09907	.033741	.0021144	.001416	.001844	.016136	.0012705
%RSD	.6845669	.3968132	.7525564	79.42838	.1808433	.4140564	16.30605
#1	14.58533	8.531941	.2832996	-.000459	1.020464	3.909900	.0092509
#2	14.40182	8.465879	.2804095	-.003276	1.020531	3.878978	.0069313
#3	14.42886	8.510834	.2791811	-.001613	1.017305	3.902438	.0071928

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: P4524-02DLX2 Acquired: 11/09/2024 18:31:55 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE4W1 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.756786	.1225903	.3916695
Stddev	.008211	.0022365	.0013606
%RSD	.2978473	1.824360	.3473893
#1	2.761659	.1225972	.3931467
#2	2.747306	.1203504	.3904675
#3	2.761393	.1248234	.3913945

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1209.848	31078.57	3155.929	1115.804	2009.883
Stddev	1.887	53.99	13.676	3.300	2.902
%RSD	.1560111	.1737334	.4333477	.2957863	.1443808
#1	1208.909	31125.08	3156.503	1117.352	2006.809
#2	1212.021	31091.28	3169.310	1118.046	2012.575
#3	1208.615	31019.36	3141.976	1112.014	2010.265

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: P4524-03DLX2 Acquired: 11/09/2024 18:36:19 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE4W3 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2763212	-.043405	.1505201	-.070279	.0097883	134.4017	2.033624
Stddev	.0044473	.006446	.0047981	.006586	.0021660	.1935	.002906
%RSD	1.609475	14.85185	3.187698	9.370700	22.12856	.1439748	.1429147
#1	.2779873	-.040520	.1504665	-.062678	.0105626	134.1988	2.030316
#2	.2796949	-.050791	.1553448	-.074266	.0073415	134.5842	2.035768
#3	.2712814	-.038905	.1457490	-.073894	.0114608	134.4222	2.034788

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0055756	.0022061	31.80140	.2676654	.1607650	.4453832	296.4290
Stddev	.0001935	.0003589	.07415	.0005214	.0006528	.0020002	.6008
%RSD	3.469778	16.26873	.2331792	.1947979	.4060830	.4490992	.2026921
#1	.0057195	.0018446	31.74065	.2681075	.1606623	.4439439	295.7884
#2	.0053557	.0022113	31.88404	.2670904	.1601696	.4445384	296.9800
#3	.0056516	.0025624	31.77954	.2677983	.1614631	.4476672	296.5187

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.092900	61.19588	.3574792	-.022534	.8810482	.6207087	.5414059
Stddev	.025836	.23223	.0025701	.000104	.1165658	.0064390	.0030920
%RSD	.2841338	.3794816	.7189480	.4618178	13.23036	1.037367	.5711108
#1	9.063519	60.99759	.3568335	-.022582	.9826131	.6234264	.5390613
#2	9.112070	61.45136	.3552936	-.022605	.7537738	.6133563	.5402464
#3	9.103110	61.13871	.3603106	-.022414	.9067579	.6253433	.5449101

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.74113	5.094215	.2804830	-.001408	.6383961	3.632824	.0099428
Stddev	.16698	.021034	.0008035	.000726	.0140379	.009943	.0036882
%RSD	1.060797	.4129079	.2864634	51.60299	2.198928	.2736958	37.09391
#1	15.55675	5.076545	.2812886	-.001190	.6234140	3.624915	.0138663
#2	15.78447	5.088618	.2796817	-.002218	.6512457	3.629571	.0094154
#3	15.88216	5.117482	.2804786	-.000815	.6405285	3.643986	.0065467

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: P4524-03DLX2 Acquired: 11/09/2024 18:36:19 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE4W3 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.620711	.1049660	.3826413
Stddev	.007715	.0032196	.0007952
%RSD	.2943829	3.067321	.2078272
#1	2.613915	.1021480	.3817358
#2	2.629097	.1042748	.3829621
#3	2.619121	.1084751	.3832261

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1199.570	31062.15	3144.085	1115.019	2027.681
Stddev	2.195	26.89	1.831	2.381	6.921
%RSD	.1829907	.0865599	.0582309	.2135412	.3413106
#1	1200.114	31034.29	3145.508	1115.421	2027.050
#2	1201.442	31087.94	3142.020	1117.174	2034.895
#3	1197.154	31064.23	3144.728	1112.463	2021.097

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: P4524-04DLX2 Acquired: 11/09/2024 18:40:45 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE4W3 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3595665	-.046921	.3803925	-.072207	.0103530	98.62016
Stddev	.0104826	.005318	.0012821	.003581	.0052074	.44287
%RSD	2.915350	11.33465	.3370470	4.959044	50.29820	.4490711
#1	.3521786	-.040796	.3806241	-.074933	.0074207	98.13272
#2	.3549570	-.049600	.3815430	-.073536	.0163653	98.99783
#3	.3715641	-.050367	.3790104	-.068151	.0072729	98.72992

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.474893	.0052764	.0088657	18.98993	.2447373	.1656384
Stddev	.010834	.0002324	.0004804	.13932	.0011205	.0010307
%RSD	.7345804	4.404134	5.418663	.7336474	.4578522	.6222595
#1	1.463963	.0051306	.0083438	18.85747	.2457640	.1644947
#2	1.485629	.0055444	.0092894	19.13522	.2435420	.1659248
#3	1.475088	.0051541	.0089640	18.97712	.2449058	.1664955

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.090564	F 300.0987	7.350498	53.50647	.3208983	-.022386
Stddev	.010680	1.6284	.068436	.43623	.0005211	.000081
%RSD	.9793308	.5426072	.9310368	.8152932	.1623762	.3609635
#1	1.079568	298.2894	7.282247	53.00734	.3203682	-.022362
#2	1.100897	301.4466	7.419118	53.81483	.3209169	-.022320
#3	1.091228	300.5599	7.350128	53.69723	.3214098	-.022476

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.078050	.5957046	.9075772	17.80227	5.589152	.2798096
Stddev	.287950	.0076945	.0037312	.09521	.004482	.0002702
%RSD	26.71026	1.291659	.4111133	.5348339	.0801953	.0965797
#1	.787185	.6033748	.9096256	17.69541	5.585887	.2801045
#2	1.083971	.5957530	.9098354	17.83330	5.587307	.2797506
#3	1.362994	.5879860	.9032705	17.87810	5.594263	.2795738

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: P4524-04DLX2 Acquired: 11/09/2024 18:40:45 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE4W3 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000566	.7492444	5.989954	.0096500	3.109568	.0893250
Stddev	.000500	.0139916	.013764	.0024922	.017781	.0018237
%RSD	88.49724	1.867432	.2297832	25.82622	.5718073	2.041603
#1	-.001095	.7340704	5.977748	.0105821	3.089884	.0872312
#2	-.000100	.7616354	6.004872	.0115419	3.124465	.0905666
#3	-.000501	.7520275	5.987241	.0068261	3.114357	.0901771

Elem	Sr4077
Units	ppm
Avg	.2281692
Stddev	.0006683
%RSD	.2929195
#1	.2274903
#2	.2288265
#3	.2281908

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1188.071	30817.69	3115.096	1103.307	2043.741
Stddev	.431	23.56	12.715	5.774	2.190
%RSD	.0362577	.0764561	.4081809	.5233804	.1071501
#1	1187.955	30802.56	3119.984	1100.350	2045.571
#2	1188.548	30805.66	3100.663	1099.610	2044.337
#3	1187.711	30844.84	3124.643	1109.961	2041.315

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: P4524-05DLX2 Acquired: 11/09/2024 18:45:10 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE4W4 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3103744	-.047807	.3362669	-.065125	.0130459	100.9863	1.492020
Stddev	.0096500	.000863	.0050058	.009794	.0016361	.2458	.003111
%RSD	3.109150	1.804216	1.488649	15.03831	12.54071	.2433963	.2085383
#1	.3021083	-.046926	.3395711	-.071428	.0113364	100.9722	1.495303
#2	.3209786	-.047845	.3305075	-.070104	.0145970	100.7478	1.489114
#3	.3080361	-.048650	.3387222	-.053842	.0132043	101.2388	1.491643

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0050093	.0074970	19.41811	.2514909	.1595081	.7973272	311.1876
Stddev	.0002685	.0000384	.05680	.0005130	.0003950	.0083354	.4343
%RSD	5.360538	.5128128	.2924923	.2039890	.2476261	1.045416	.1395566
#1	.0047641	.0074725	19.46912	.2510662	.1590521	.8064536	311.2661
#2	.0049676	.0074772	19.35691	.2513457	.1597289	.7901163	310.7194
#3	.0052962	.0075413	19.42829	.2520609	.1597434	.7954117	311.5773

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.689759	53.59202	.3395633	-.023683	.9403974	.6094682	.8906272
Stddev	.022554	.11096	.0005988	.000422	.3149322	.0056357	.0016344
%RSD	.3371481	.2070364	.1763285	1.781567	33.48927	.9246942	.1835155
#1	6.715497	53.51286	.3397011	-.023791	.5910148	.6119174	.8908626
#2	6.680335	53.71884	.3389076	-.023218	1.202445	.6134648	.8888879
#3	6.673446	53.54437	.3400810	-.024041	1.027732	.6030222	.8921313

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.87707	5.299356	.2855669	-.000180	.6794029	3.336668	.0089888
Stddev	.03553	.024022	.0012872	.000446	.0210715	.000754	.0006664
%RSD	.2237527	.4532951	.4507508	247.3979	3.101478	.0226009	7.414099
#1	15.91807	5.278901	.2845570	.000170	.6771652	3.336781	.0083880
#2	15.85774	5.293359	.2851275	-.000028	.6595396	3.335864	.0088726
#3	15.85540	5.325808	.2870163	-.000682	.7015041	3.337359	.0097057

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: P4524-05DLX2 Acquired: 11/09/2024 18:45:10 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE4W4 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.558467	.0902953	.2384604
Stddev	.017676	.0031938	.0002982
%RSD	.6908783	3.537100	.1250638
#1	2.548404	.0938364	.2386127
#2	2.548120	.0876324	.2381168
#3	2.578876	.0894172	.2386517

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1183.123	30817.07	3114.256	1102.475	2039.518
Stddev	2.106	10.47	7.196	3.192	2.080
%RSD	.1779990	.0339646	.2310775	.2895060	.1020094
#1	1184.340	30827.74	3118.629	1103.265	2038.712
#2	1180.692	30806.82	3118.189	1105.198	2037.962
#3	1184.339	30816.64	3105.950	1098.963	2041.881

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: CCV046 Acquired: 11/09/2024 18:49:36 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV046 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.176118	4.878357	25.06473	4.863745	4.963058	409.3531	10.25228
Stddev	.008401	.020418	.03774	.013264	.013429	.5165	.02686
%RSD	.1622973	.4185392	.1505600	.2727059	.2705874	.1261673	.2620098
#1	5.167721	4.856078	25.05360	4.863555	4.958320	409.7772	10.26977
#2	5.176108	4.882817	25.03381	4.850577	4.952640	409.5042	10.26572
#3	5.184523	4.896176	25.10678	4.877103	4.978215	408.7780	10.22135

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5061674	2.512016	410.5139	15.62319	2.530257	15.30510	418.5206
Stddev	.0027462	.005225	1.2753	.03684	.008066	.03209	.9235
%RSD	.5425385	.2080192	.3106682	.2358054	.3187875	.2096950	.2206605
#1	.5089390	2.506823	411.8116	15.59076	2.527342	15.28798	419.1424
#2	.5061159	2.511951	410.4678	15.61556	2.524054	15.34213	418.9600
#3	.5034474	2.517274	409.2622	15.66324	2.539376	15.28520	417.4594

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.15696	417.8957	2.511052	1.259408	410.6776	2.541038	14.95285
Stddev	.03442	1.1671	.003267	.003508	.8014	.021961	.02607
%RSD	.2271003	.2792737	.1301235	.2785604	.1951401	.8642503	.1743455
#1	15.19169	418.7176	2.507303	1.257641	411.2189	2.563145	14.92348
#2	15.15633	418.4096	2.513295	1.257135	411.0570	2.540741	14.96184
#3	15.12286	416.5598	2.512558	1.263449	409.7570	2.519227	14.97324

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	156.3431	5.035466	5.198888	4.899215	5.172882	5.106394	5.062245
Stddev	.2104	.008071	.040054	.005849	.005091	.030178	.012243
%RSD	.1345451	.1602805	.7704379	.1193901	.0984143	.5909780	.2418494
#1	156.3917	5.034332	5.242658	4.901265	5.171774	5.139284	5.049006
#2	156.5249	5.028022	5.189945	4.892616	5.168437	5.099918	5.073159
#3	156.1127	5.044044	5.164062	4.903763	5.178436	5.079980	5.064569

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: CCV046 Acquired: 11/09/2024 18:49:36 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV046 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	5.047241	5.130750	5.105843
Stddev	.014182	.023222	.005379
%RSD	.2809852	.4526103	.1053541
#1	5.061583	5.151827	5.103849
#2	5.046915	5.134566	5.111935
#3	5.033225	5.105856	5.101746

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	937.6324	26442.94	2784.504	839.1337	1665.582
Stddev	1.5517	57.33	10.824	2.3687	1.230
%RSD	.1654964	.2167918	.3887086	.2822795	.0738480
#1	935.8446	26495.86	2773.136	841.8164	1664.999
#2	938.6302	26450.91	2785.689	838.2544	1666.996
#3	938.4225	26382.04	2794.686	837.3305	1664.752

Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: CCB046 Acquired: 11/09/2024 18:53:49 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB046 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0066244	-.005880	.0026873	-.001275	-.000232	.0421932	.0005094
Stddev	.0055794	.000488	.0007178	.006787	.002362	.0134740	.0009765
%RSD	84.22420	8.293109	26.71143	532.2985	1015.890	31.93396	191.6850
#1	.0113544	-.006236	.0023007	-.000806	.002458	.0548717	.0016058
#2	.0080475	-.005324	.0022457	.005265	-.001965	.0280444	-.000267
#3	.0004713	-.006081	.0035156	-.008284	-.001191	.0436636	.000189

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000371	-.000057	.0214302	.0001590	.0003637	.0037659	-.006505
Stddev	.0001453	.000130	.0095353	.0000642	.0004191	.0038704	.028989
%RSD	391.5663	227.6646	44.49473	40.39389	115.2332	102.7767	445.6274
#1	.0001352	.000038	.0205301	.0001873	-.000072	.0057254	-.007562
#2	.0001059	-.000206	.0313836	.0000855	.000399	-.000692	.022998
#3	-.000130	-.000004	.0123768	.0002042	.000764	.006265	-.034951

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000061	.0641826	.0003838	.0006588	-.275392	.0022718	.0005466
Stddev	.000918	.0846405	.0002961	.0001627	.129036	.0070909	.0001559
%RSD	1511.503	131.8746	77.15411	24.69269	46.85544	312.1312	28.52342
#1	.000215	.0189440	.0002756	.0005349	-.362979	-.005296	.0007238
#2	-.001085	.0117744	.0007189	.0008430	-.127211	.008762	.0004860
#3	.000688	.1618293	.0001570	.0005985	-.335985	.003349	.0004301

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000774	.0076904	.0061797	.0005242	.0023268	.0008178	.0016331
Stddev	.121875	.0029391	.0009021	.0010013	.0038949	.0014120	.0016503
%RSD	15746.08	38.21790	14.59819	190.9904	167.3965	172.6581	101.0520
#1	.077581	.0057820	.0066218	.0000482	.0032342	.0009292	.0033505
#2	-.141188	.0110750	.0051418	.0016747	-.001942	.0021708	.0014892
#3	.061286	.0062143	.0067755	-.000150	.005688	-.000647	.0000594

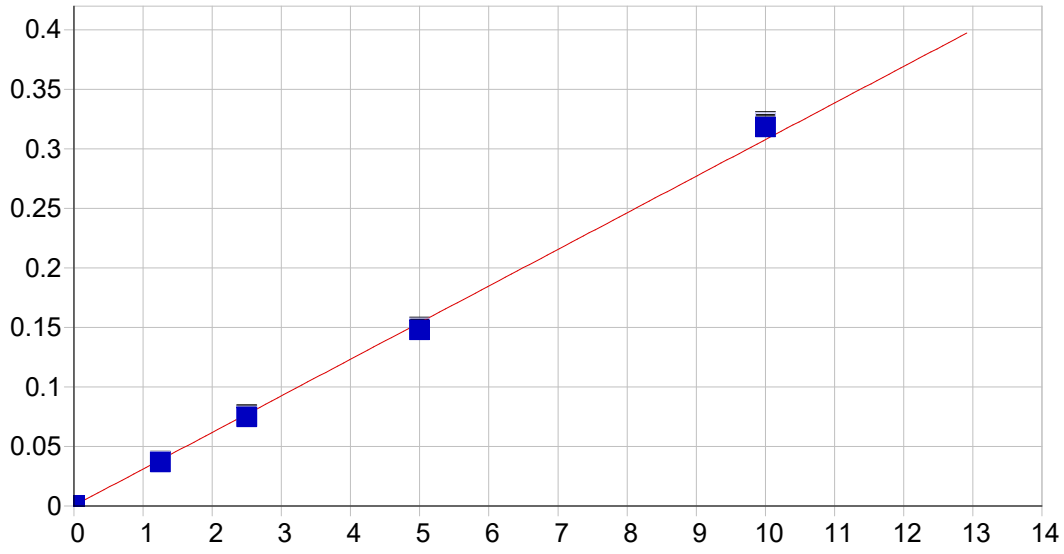
Reviewed By:Mohan
On:11/13/2024 3:17:23 AM
Inst Id :P5

Sample Name: CCB046 Acquired: 11/09/2024 18:53:49 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB046 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0004042	.0013156	.0001562
Stddev	.0012234	.0008113	.0000683
%RSD	302.6322	61.67054	43.69742
#1	-.000899	.0019932	.0001166
#2	.001527	.0015370	.0001171
#3	.000585	.0004165	.0002351

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1128.715	28719.33	2895.074	1039.356	2180.606
Stddev	.870	32.77	13.995	4.745	4.002
%RSD	.0770652	.1141164	.4834082	.4565264	.1835439
#1	1127.711	28686.71	2908.661	1044.132	2179.823
#2	1129.205	28719.02	2880.704	1039.292	2177.053
#3	1129.229	28752.26	2895.857	1034.643	2184.942

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5



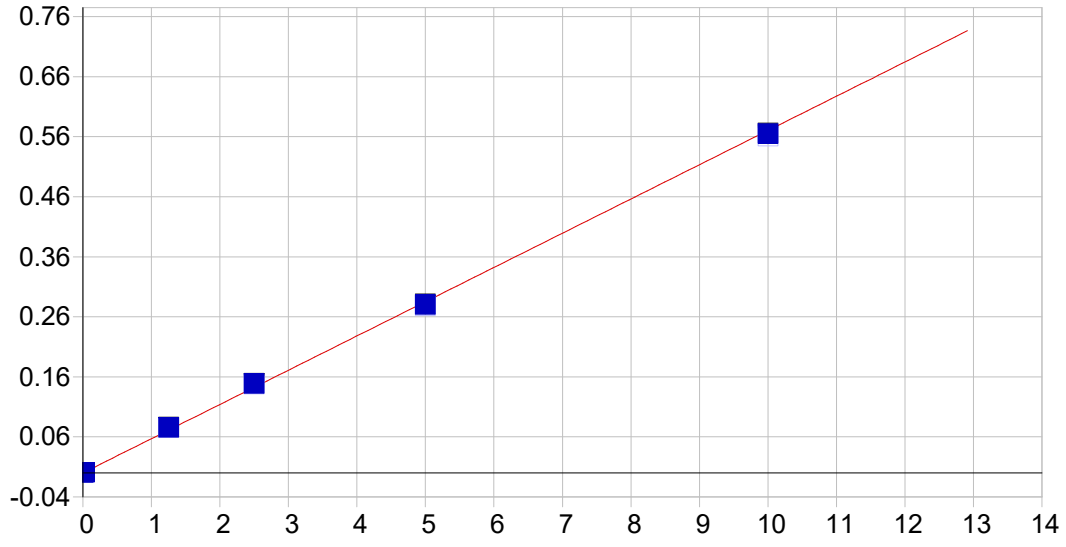
As 189.042 {479}

Date of Fit:	11/11/2024 0:35:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000297	Re-Slope:	1.000000
A1 (Gain):	0.030753	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999339	Status:	OK.
Std Error of Est:	0.000019		
Predicted MDL:	0.008698		
Predicted MQL:	0.028995		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00030	.000	1
S1	.01000	.01094	.001	9.45	.00064	.000	1
S2	1.2500	1.1879	-.062	-4.96	.03726	.001	1
S3	2.5000	2.4224	-.078	-3.10	.07565	.001	1
S4	5.0000	4.7978	-.202	-4.04	.14955	.001	1
S5	10.000	10.341	.341	3.41	.32173	.001	1

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5



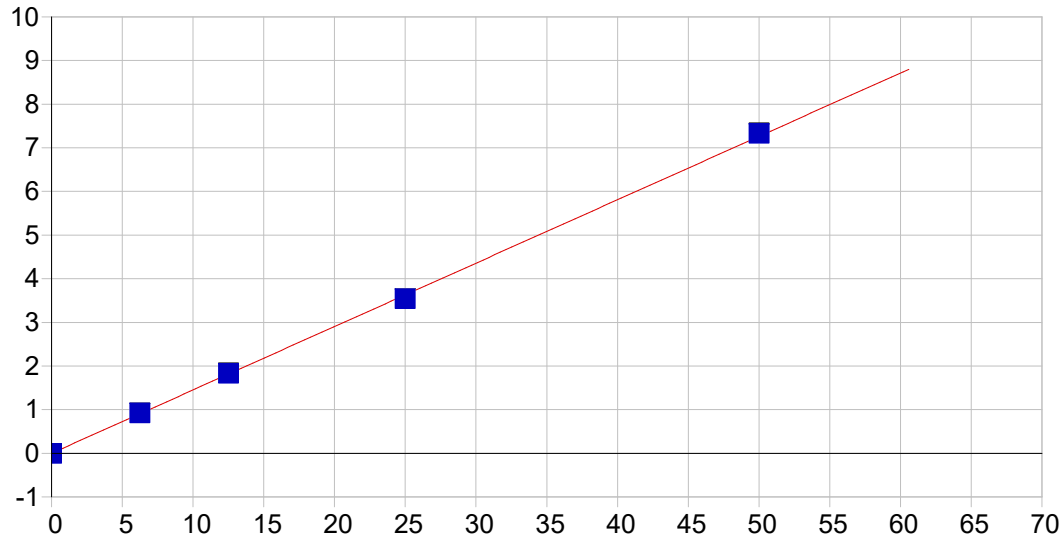
Tl 190.856 {477}

Date of Fit:	11/11/2024 0:35:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000102	Re-Slope:	1.000000
A1 (Gain):	0.057046	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999678	Status:	OK.
Std Error of Est:	0.000038		
Predicted MDL:	0.003724		
Predicted MQL:	0.012413		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00010	.000	1
S1	.02500	.02270	-.002	-9.19	.00116	.000	1
S2	1.2500	1.3283	.078	6.26	.07518	.000	1
S3	2.5000	2.6056	.106	4.22	.14755	.001	1
S4	5.0000	4.9165	-.083	-1.67	.27840	.001	1
S5	10.000	9.9019	-.098	-.981	.56083	.001	1

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5



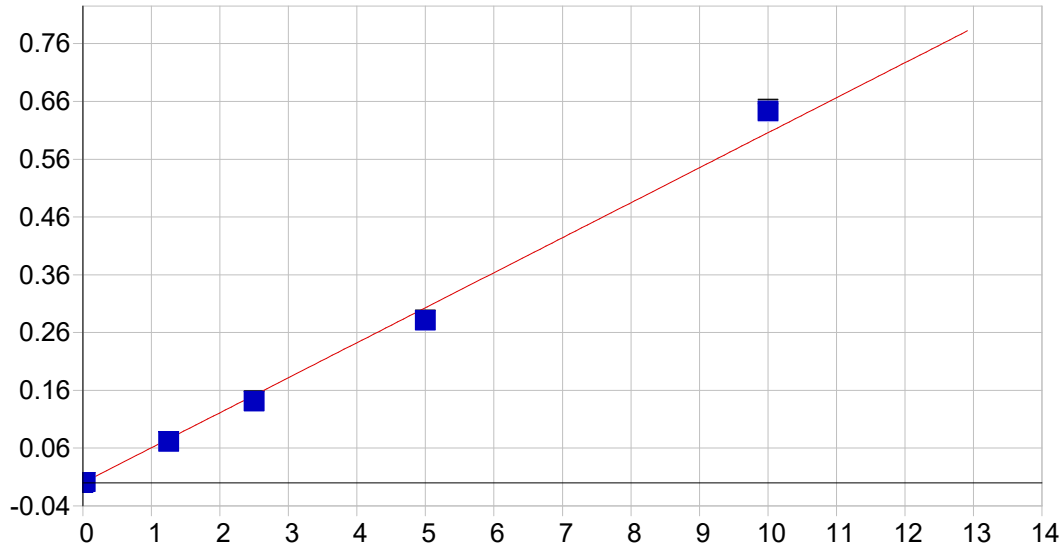
Pb 220.353 {453}

Date of Fit:	11/11/2024 0:35:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000507	Re-Slope:	1.000000
A1 (Gain):	0.145250	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999883	Status:	OK.
Std Error of Est:	0.000083		
Predicted MDL:	0.003571		
Predicted MQL:	0.011903		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00051	.000	1
S1	.01000	.00880	-.001	-12.0	.00078	.001	1
S2	6.2500	6.3295	.079	1.27	.91862	.002	1
S3	12.500	12.593	.093	.746	1.8282	.011	1
S4	25.000	24.370	-.630	-2.52	3.5383	.006	1
S5	50.000	50.459	.459	.917	7.3268	.011	1

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5



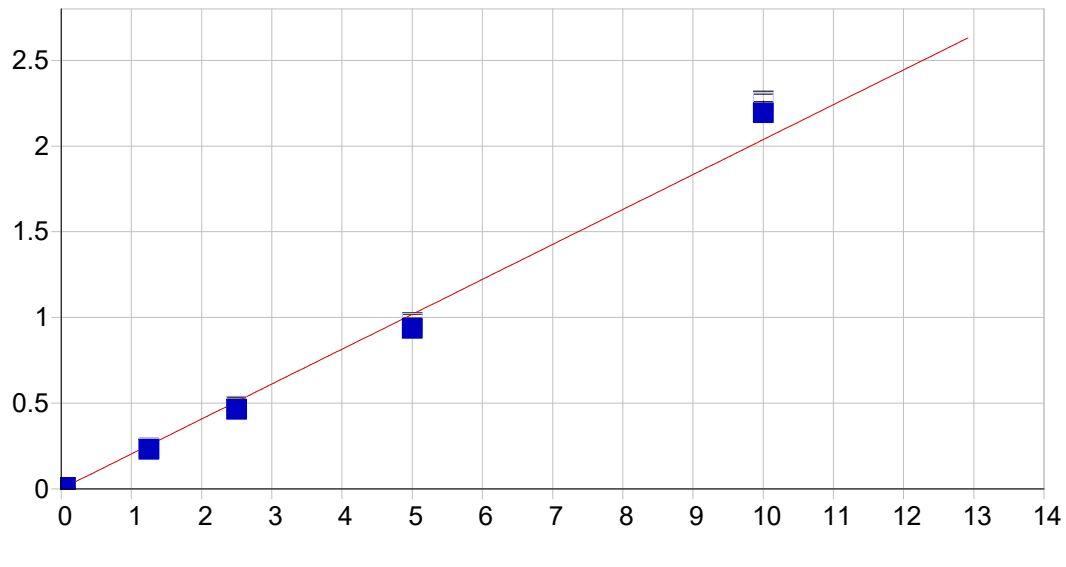
Se 196.090 {472}

Date of Fit:	11/11/2024 0:35:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000126	Re-Slope:	1.000000
A1 (Gain):	0.060566	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.997797	Status:	OK.
Std Error of Est:	0.000126		
Predicted MDL:	0.007072		
Predicted MQL:	0.023574		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00013	.000	1
S1	.03500	.02543	-.010	-27.3	.00166	.000	1
S2	1.2500	1.1720	-.078	-6.24	.07097	.000	1
S3	2.5000	2.3317	-.168	-6.73	.14106	.001	1
S4	5.0000	4.6399	-.360	-7.20	.28057	.001	1
S5	10.000	10.616	.616	6.16	.64194	.004	1

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5



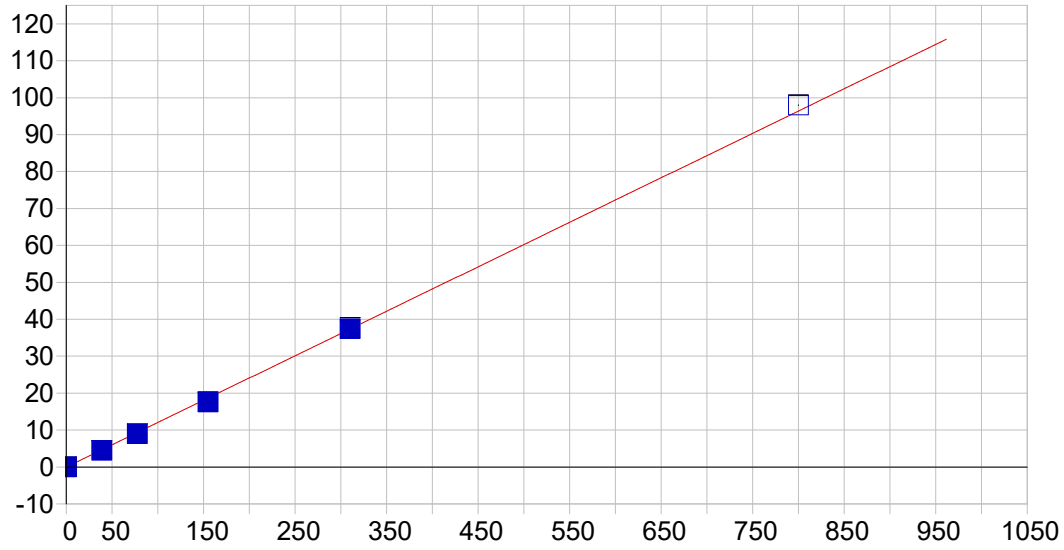
Sb 206.833 {463}

Date of Fit:	11/11/2024 0:35:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000283	Re-Slope:	1.000000
A1 (Gain):	0.203687	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.996859	Status:	OK.
Std Error of Est:	0.000685		
Predicted MDL:	0.002689		
Predicted MQL:	0.008964		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00002	.000	.000	.00029	.000	1
S1	.06000	.05419	-.006	-9.68	.01132	.000	1
S2	1.2500	1.1235	-.126	-10.1	.23665	.000	1
S3	2.5000	2.2759	-.224	-8.97	.47887	.003	1
S4	5.0000	4.5900	-.410	-8.20	.96527	.003	1
S5	10.000	10.766	.766	7.66	2.2533	.008	1

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5



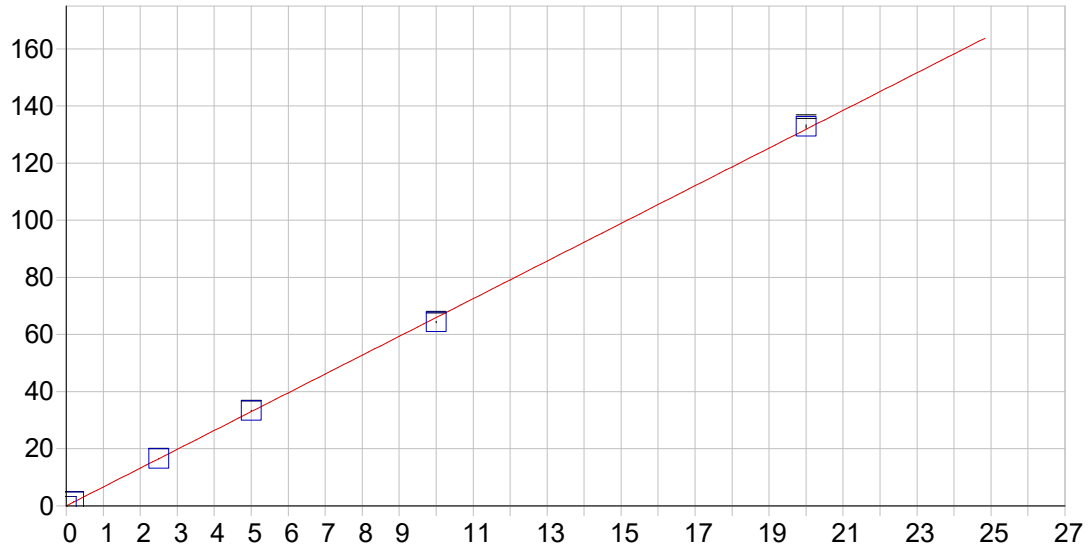
Al 396.152 { 85}

Date of Fit:	11/11/2024 0:35:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001154	Re-Slope:	1.000000
A1 (Gain):	0.120464	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999663	Status:	OK.
Std Error of Est:	0.001945		
Predicted MDL:	0.015011		
Predicted MQL:	0.050037		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00003	.000	.000	-.00115	.001	1
S1	.20000	.18966	-.010	-5.17	.02174	.001	1
S2	38.750	37.223	-1.53	-3.94	4.4885	.005	1
S3	77.500	74.533	-2.97	-3.83	8.9886	.032	1
S4	155.00	145.87	-9.13	-5.89	17.593	.069	1
S5	310.00	310.41	.407	.131	37.437	.315	1
S6	800.00	813.24	13.2	1.66	97.966	.077	1

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5



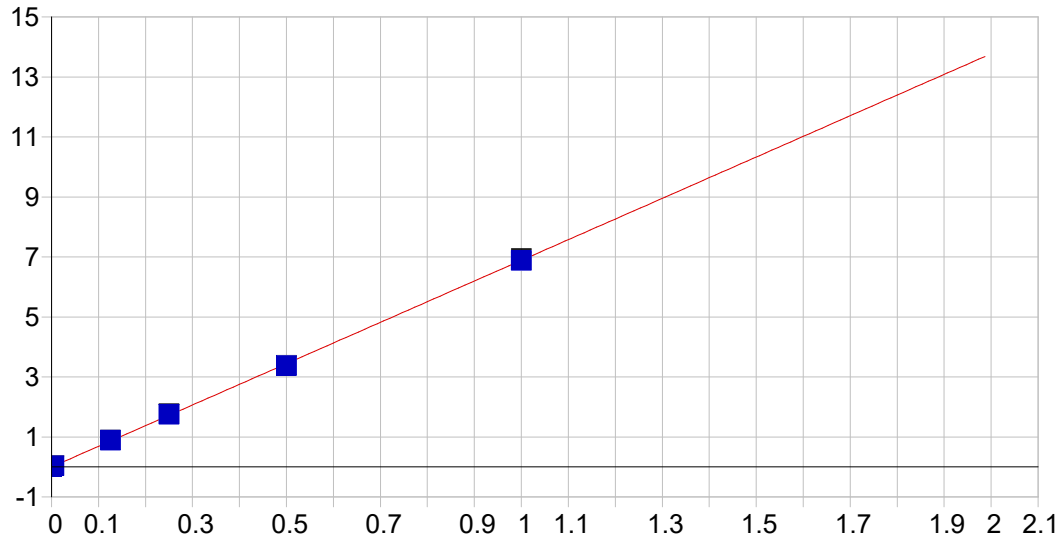
Ba 493.409 { 68}

Date of Fit:	11/11/2024 0:35:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.036318	Re-Slope:	1.000000
A1 (Gain):	6.591711	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999883	Status:	OK.
Std Error of Est:	0.010714		
Predicted MDL:	0.000888		
Predicted MQL:	0.002961		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00002	-.000	.000	.03620	.002	1
S1	.20000	.21679	.017	8.39	1.4653	.059	1
S2	2.5000	2.5178	.018	.712	16.633	.033	1
S3	5.0000	5.0572	.057	1.14	33.372	.093	1
S4	10.000	9.7637	-.236	-2.36	64.396	.299	1
S5	20.000	20.144	.144	.722	132.82	.660	1

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5



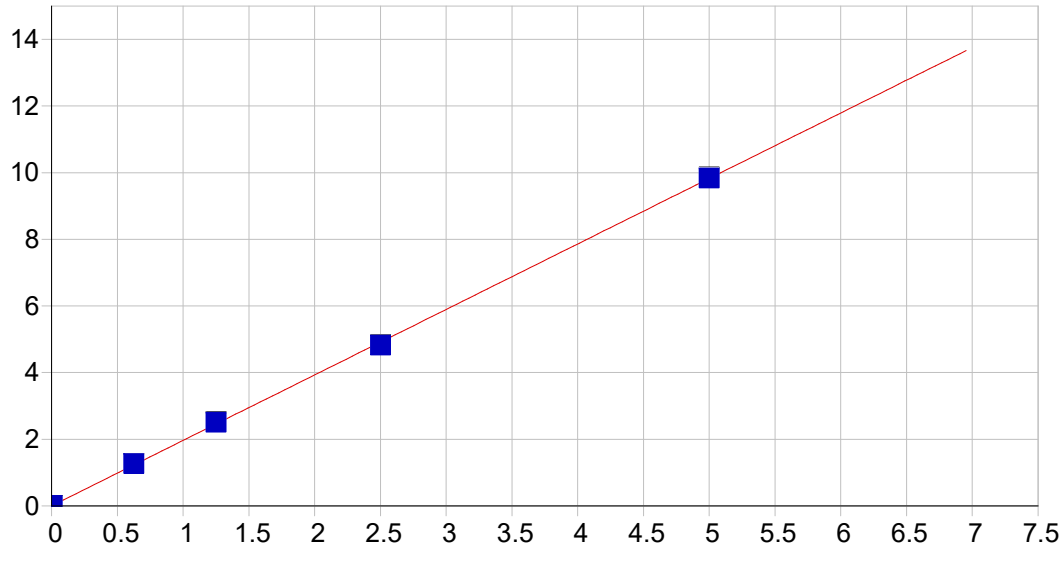
Be 234.861 {144}

Date of Fit:	11/11/2024 0:35:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.002132	Re-Slope:	1.000000
A1 (Gain):	6.887317	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999878	Status:	OK.
Std Error of Est:	0.000404		
Predicted MDL:	0.000142		
Predicted MQL:	0.000474		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00214	.000	1
S1	.00500	.00551	.001	10.2	.03578	.001	1
S2	.12500	.12896	.004	3.17	.88465	.004	1
S3	.25000	.25518	.005	2.07	1.7526	.008	1
S4	.50000	.49065	-.009	-1.87	3.3716	.010	1
S5	1.0000	.99970	-.000	-.030	6.8721	.049	1

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5



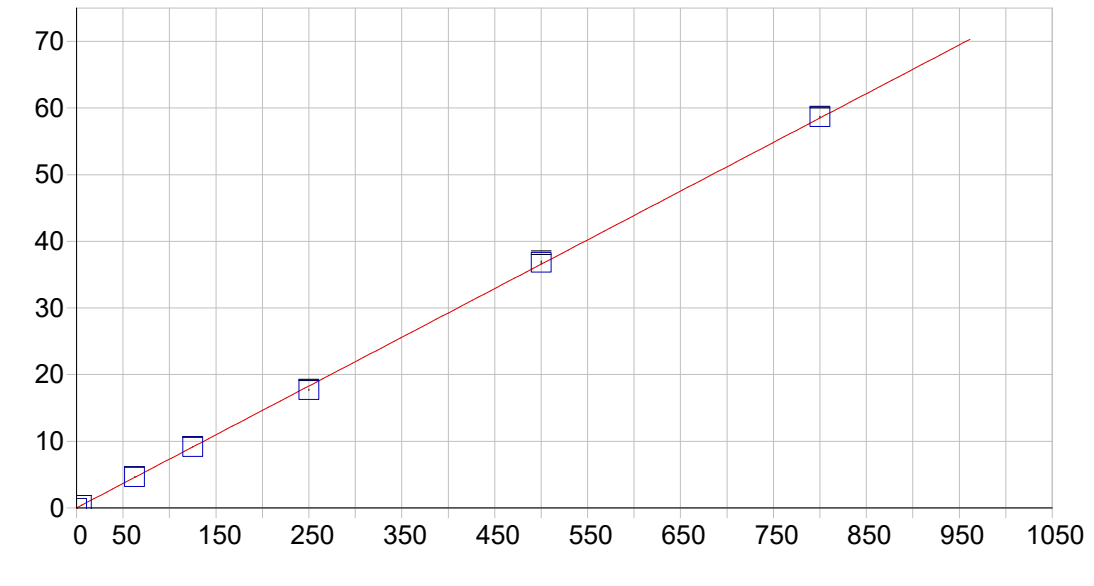
Cd 214.438 {457}

Date of Fit:	11/11/2024 0:35:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000316	Re-Slope:	1.000000
A1 (Gain):	1.965244	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999900	Status:	OK.
Std Error of Est:	0.000234		
Predicted MDL:	0.000161		
Predicted MQL:	0.000537		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00031	.000	1
S1	.00500	.00539	.000	7.73	.01091	.000	1
S2	.62500	.64255	.018	2.81	1.2660	.003	1
S3	1.2500	1.2755	.025	2.04	2.5128	.018	1
S4	2.5000	2.4539	-.046	-1.84	4.8346	.007	1
S5	5.0000	5.0027	.003	.054	9.8554	.019	1

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5



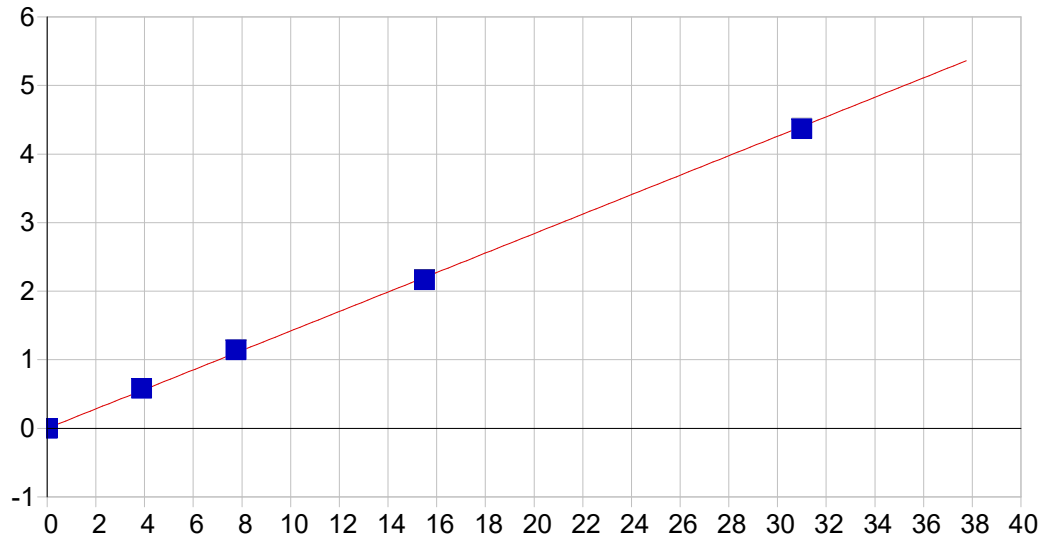
Ca 373.690 { 90}

Date of Fit:	11/11/2024 0:35:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.004558	Re-Slope:	1.000000
A1 (Gain):	0.073122	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999896	Status:	OK.
Std Error of Est:	0.003690		
Predicted MDL:	0.019511		
Predicted MQL:	0.065037		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00059	-.001	.000	.00451	.000	1
S1	5.0000	5.5728	.573	11.5	.41205	.015	1
S2	62.500	63.831	1.33	2.13	4.6720	.006	1
S3	125.00	125.45	.454	.363	9.1780	.052	1
S4	250.00	242.23	-7.77	-3.11	17.717	.075	1
S5	500.00	503.29	3.29	.659	36.806	.248	1
S6	800.00	802.11	2.11	.264	58.657	.135	1

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5



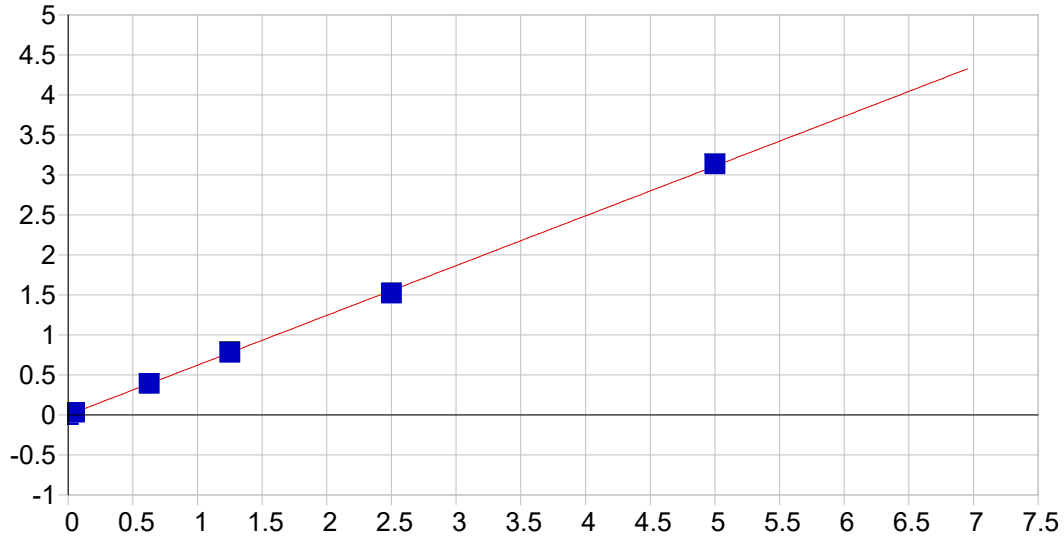
Cr 267.716 {126}

Date of Fit:	11/11/2024 0:35:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000060	Re-Slope:	1.000000
A1 (Gain):	0.141980	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999736	Status:	OK.
Std Error of Est:	0.000096		
Predicted MDL:	0.001335		
Predicted MQL:	0.004449		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00006	.000	1
S1	.01000	.00996	-.000	-.397	.00148	.000	1
S2	3.8750	4.0944	.219	5.66	.58200	.001	1
S3	7.7500	8.0513	.301	3.89	1.1444	.001	1
S4	15.500	15.235	-.265	-1.71	2.1656	.004	1
S5	31.000	30.744	-.256	-.825	4.3701	.006	1

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5



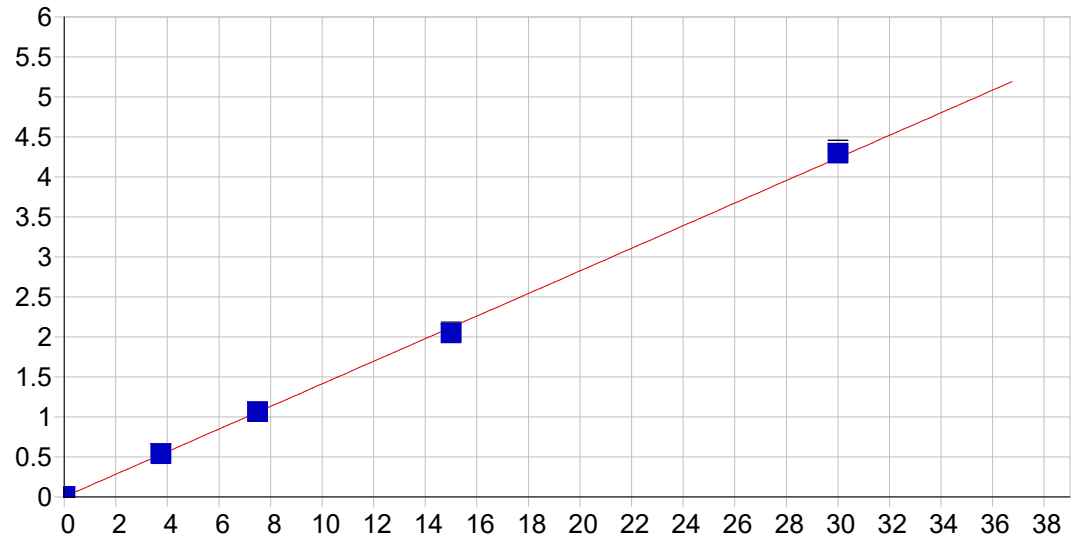
Co 228.616 {448}

Date of Fit:	11/11/2024 0:35:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000167	Re-Slope:	1.000000
A1 (Gain):	0.622074	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999915	Status:	OK.
Std Error of Est:	0.000215		
Predicted MDL:	0.000584		
Predicted MQL:	0.001946		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00017	.000	1
S1	.05000	.05110	.001	2.21	.03173	.000	1
S2	.62500	.62946	.004	.713	.39188	.001	1
S3	1.2500	1.2565	.007	.522	.78243	.005	1
S4	2.5000	2.4461	-.054	-2.16	1.5234	.000	1
S5	5.0000	5.0418	.042	.836	3.1400	.005	1

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5



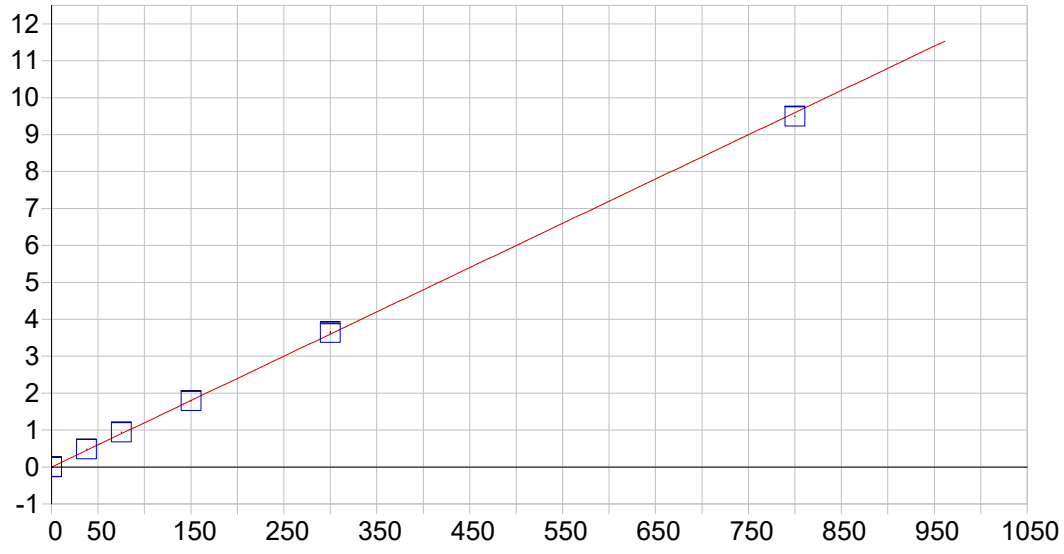
Cu 324.754 {104}

Date of Fit:	11/11/2024 0:35:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000989	Re-Slope:	1.000000
A1 (Gain):	0.141206	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999792	Status:	OK.
Std Error of Est:	0.000132		
Predicted MDL:	0.005636		
Predicted MQL:	0.018786		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00099	.000	1
S1	.02500	.02199	-.003	-12.1	.00409	.000	1
S2	3.7500	3.8037	.054	1.43	.53775	.003	1
S3	7.5000	7.5387	.039	.517	1.0648	.003	1
S4	15.000	14.502	-.498	-3.32	2.0474	.011	1
S5	30.000	30.409	.409	1.36	4.2921	.042	1

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5



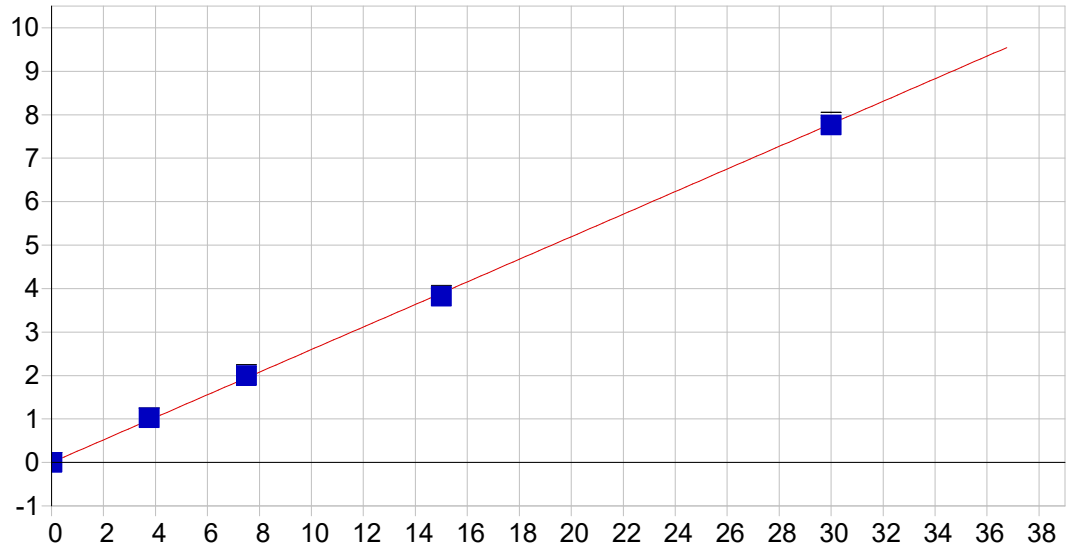
Fe 259.837 {130}

Date of Fit:	11/11/2024 0:35:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000145	Re-Slope:	1.000000
A1 (Gain):	0.011994	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999833	Status:	OK.
Std Error of Est:	0.000096		
Predicted MDL:	0.038490		
Predicted MQL:	0.128300		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00015	.000	1
S1	.10000	.07729	-.023	-22.7	.00107	.000	1
S2	37.500	39.996	2.50	6.66	.47987	.001	1
S3	75.000	78.350	3.35	4.47	.93990	.008	1
S4	150.00	149.44	-.561	-.374	1.7926	.008	1
S5	300.00	303.42	3.42	1.14	3.6394	.031	1
S6	800.00	791.32	-8.68	-1.09	9.4915	.007	1

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5



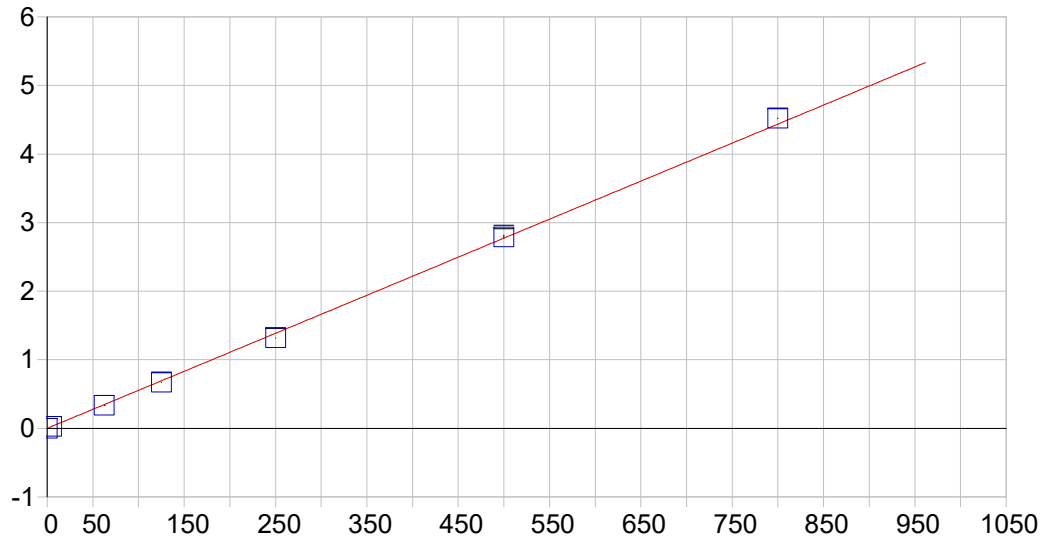
Mn 257.610 {131}

Date of Fit:	11/11/2024 0:35:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000078	Re-Slope:	1.000000
A1 (Gain):	0.259666	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999805	Status:	OK.
Std Error of Est:	0.000182		
Predicted MDL:	0.001650		
Predicted MQL:	0.005500		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00008	.000	1
S1	.01500	.01765	.003	17.7	.00452	.000	1
S2	3.7500	3.9460	.196	5.23	1.0247	.003	1
S3	7.5000	7.6981	.198	2.64	1.9991	.018	1
S4	15.000	14.709	-.291	-1.94	3.8199	.023	1
S5	30.000	29.894	-.106	-.352	7.7636	.067	1

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5



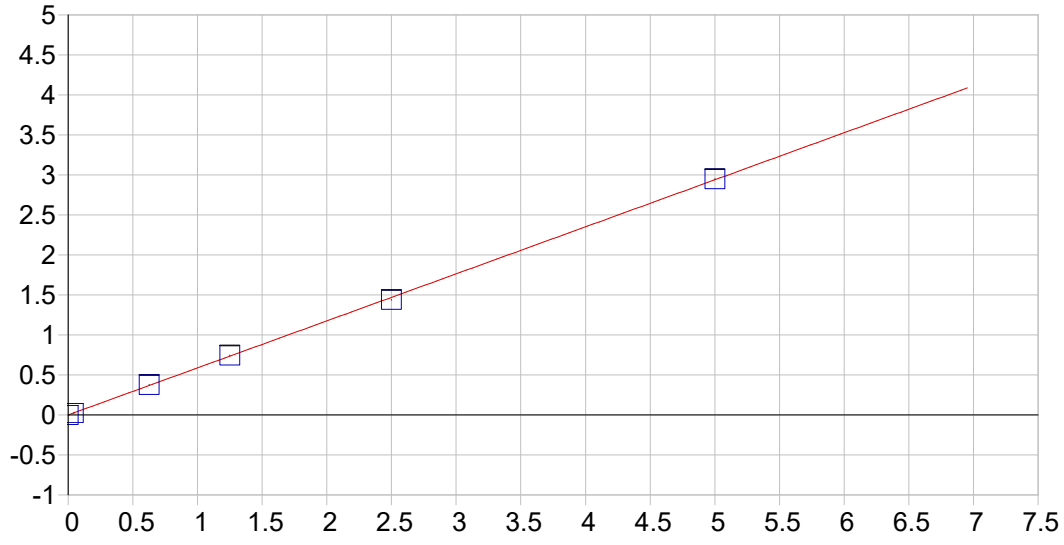
Mg 279.079 {121}

Date of Fit:	11/11/2024 0:35:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000581	Re-Slope:	1.000000
A1 (Gain):	0.005548	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999676	Status:	OK.
Std Error of Est:	0.000493		
Predicted MDL:	0.085339		
Predicted MQL:	0.284462		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00015	.000	.000	-.00058	.000	1
S1	5.0000	5.2998	.300	6.00	.02882	.001	1
S2	62.500	60.423	-2.08	-3.32	.33462	.002	1
S3	125.00	121.14	-3.86	-3.09	.67147	.005	1
S4	250.00	237.53	-12.5	-4.99	1.3172	.002	1
S5	500.00	503.07	3.07	.614	2.7903	.026	1
S6	800.00	815.03	15.0	1.88	4.5209	.005	1

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5



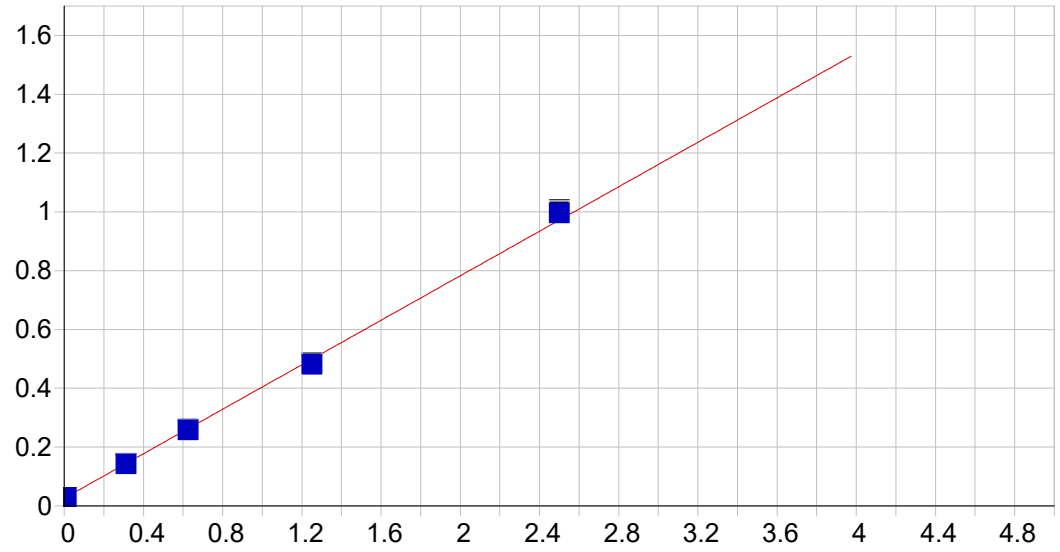
Ni 231.604 {446}

Date of Fit:	11/11/2024 0:35:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000250	Re-Slope:	1.000000
A1 (Gain):	0.587860	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999895	Status:	OK.
Std Error of Est:	0.000203		
Predicted MDL:	0.000656		
Predicted MQL:	0.002188		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00025	.000	1
S1	.04000	.04302	.003	7.56	.02504	.000	1
S2	.62500	.64024	.015	2.44	.37612	.002	1
S3	1.2500	1.2675	.017	1.40	.74486	.005	1
S4	2.5000	2.4479	-.052	-2.08	1.4388	.002	1
S5	5.0000	5.0163	.016	.327	2.9487	.004	1

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5



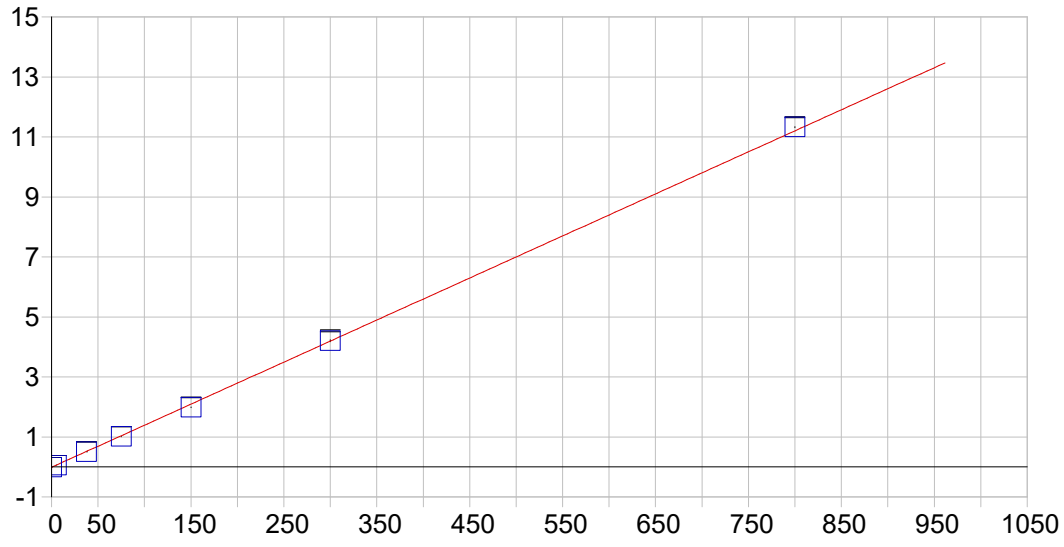
Ag 328.068 {103}

Date of Fit:	11/11/2024 0:35:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.026314	Re-Slope:	1.000000
A1 (Gain):	0.378274	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999617	Status:	OK.
Std Error of Est:	0.000089		
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	.02631	.000	1
S1	.01000	.01068	.001	6.85	.03034	.000	1
S2	.31250	.30835	-.004	-1.33	.14423	.000	1
S3	.62500	.61330	-.012	-1.87	.26086	.000	1
S4	1.2500	1.2027	-.047	-3.79	.48635	.002	1
S5	2.5000	2.5625	.062	2.50	1.0058	.002	1

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5



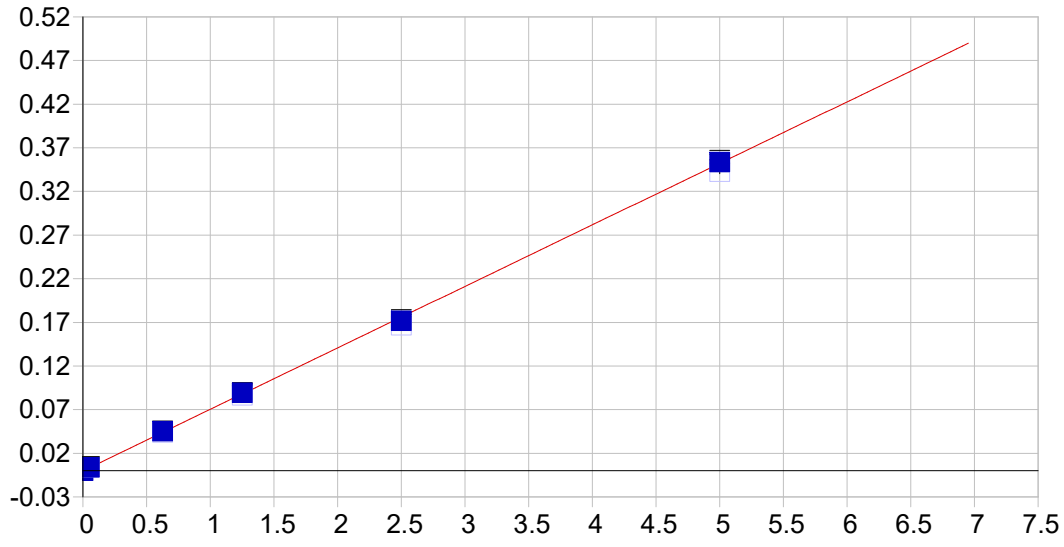
Na 818.326 { 41}

Date of Fit:	11/11/2024 0:35:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.011969	Re-Slope:	1.000000
A1 (Gain):	0.014019	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999800	Status:	OK.
Std Error of Est:	0.000866		
Predicted MDL:	0.303942		
Predicted MQL:	1.013139		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00016	.000	.000	-.01197	.002	1
S1	5.0000	5.2203	.220	4.41	.06122	.005	1
S2	37.500	36.910	-.590	-1.57	.50549	.003	1
S3	75.000	73.205	-1.80	-2.39	1.0143	.005	1
S4	150.00	142.44	-7.56	-5.04	1.9850	.009	1
S5	300.00	300.71	.708	.236	4.2037	.031	1
S6	800.00	809.01	9.01	1.13	11.330	.016	1

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5



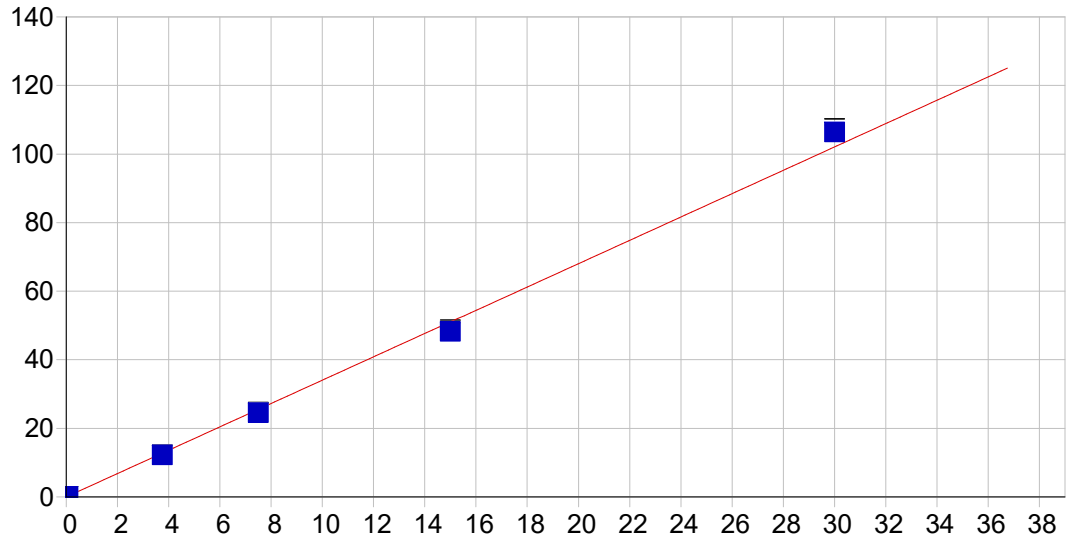
V 292.402 {115}

Date of Fit:	11/11/2024 0:35:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000196	Re-Slope:	1.000000
A1 (Gain):	0.070477	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999809	Status:	OK.
Std Error of Est:	0.000035		
Predicted MDL:	0.009164		
Predicted MQL:	0.030547		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	-.00020	.001	1
S1	.05000	.05790	.008	15.8	.00388	.000	1
S2	.62500	.64160	.017	2.66	.04367	.001	1
S3	1.2500	1.2666	.017	1.33	.08636	.001	1
S4	2.5000	2.4407	-.059	-2.37	.16640	.001	1
S5	5.0000	5.0180	.018	.360	.34263	.002	1

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5



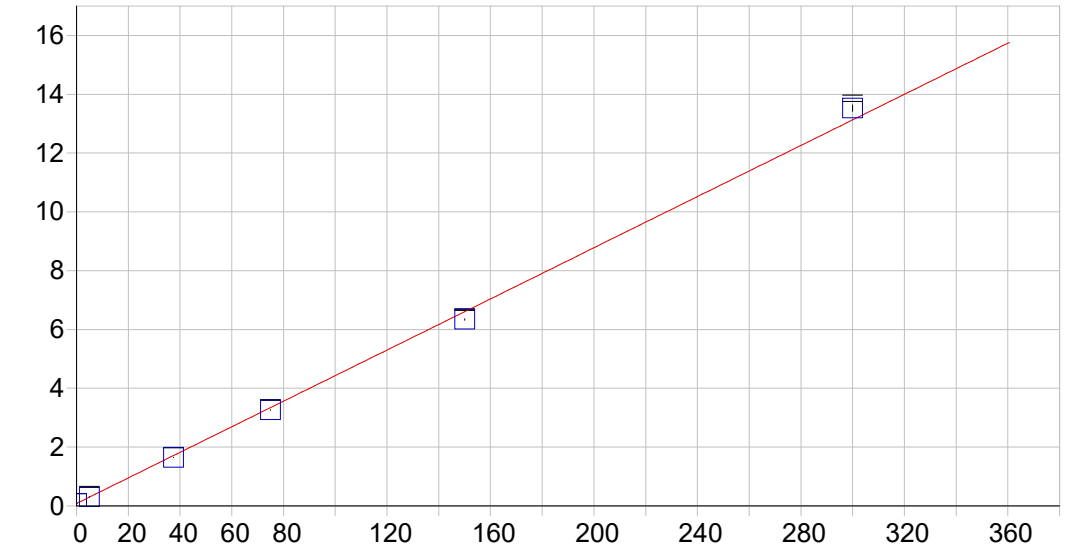
Zn 213.856 {158}

Date of Fit:	11/11/2024 0:35:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.003411	Re-Slope:	1.000000
A1 (Gain):	3.402170	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998964	Status:	OK.
Std Error of Est:	0.011041		
Predicted MDL:	0.000435		
Predicted MQL:	0.001450		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00343	.001	1
S1	.06000	.05883	-.001	-1.95	.20455	.004	1
S2	3.7500	3.5815	-.169	-4.49	12.204	.038	1
S3	7.5000	7.2173	-.283	-3.77	24.589	.115	1
S4	15.000	14.179	-.821	-5.47	48.306	.408	1
S5	30.000	31.273	1.27	4.24	106.52	.887	1

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5



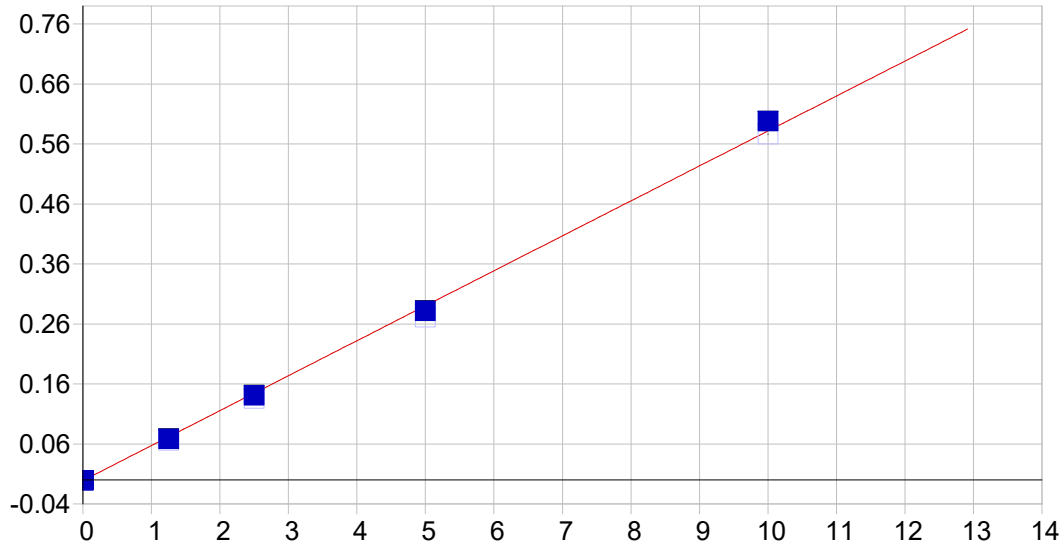
K 769.896 { 44}

Date of Fit:	11/11/2024 0:35:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.082123	Re-Slope:	1.000000
A1 (Gain):	0.043490	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999441	Status:	OK.
Std Error of Est:	0.003000		
Predicted MDL:	0.126827		
Predicted MQL:	0.422757		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00017	.000	.000	.08213	.005	1
S1	5.0000	5.2024	.202	4.05	.30837	.013	1
S2	37.500	36.013	-1.49	-3.97	1.6483	.005	1
S3	75.000	73.180	-1.82	-2.43	3.2647	.008	1
S4	150.00	143.95	-6.05	-4.04	6.3423	.028	1
S5	300.00	309.16	9.16	3.05	13.527	.113	1

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5



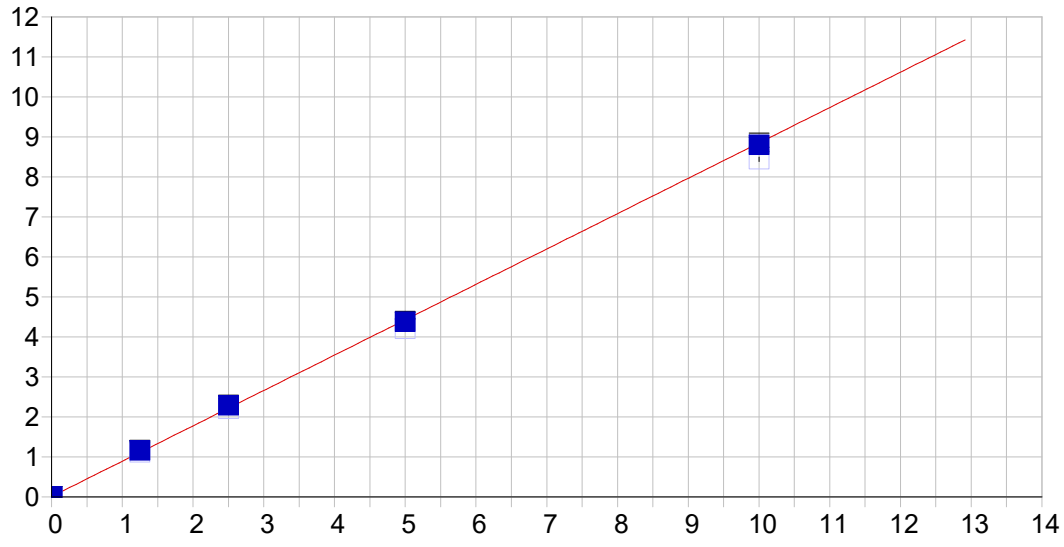
P 177.495 {490}

Date of Fit:	11/11/2024 0:35:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001061	Re-Slope:	1.000000
A1 (Gain):	0.058269	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999515	Status:	OK.
Std Error of Est:	0.000029		
Predicted MDL:	0.003528		
Predicted MQL:	0.011761		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00106	.000	1
S1	.01000	.00959	-.000	-4.09	-.00052	.000	1
S2	1.2500	1.1889	-.061	-4.89	.06554	.000	1
S3	2.5000	2.4344	-.066	-2.62	.13544	.001	1
S4	5.0000	4.8499	-.150	-3.00	.27083	.001	1
S5	10.000	10.277	.277	2.77	.57636	.000	1

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5



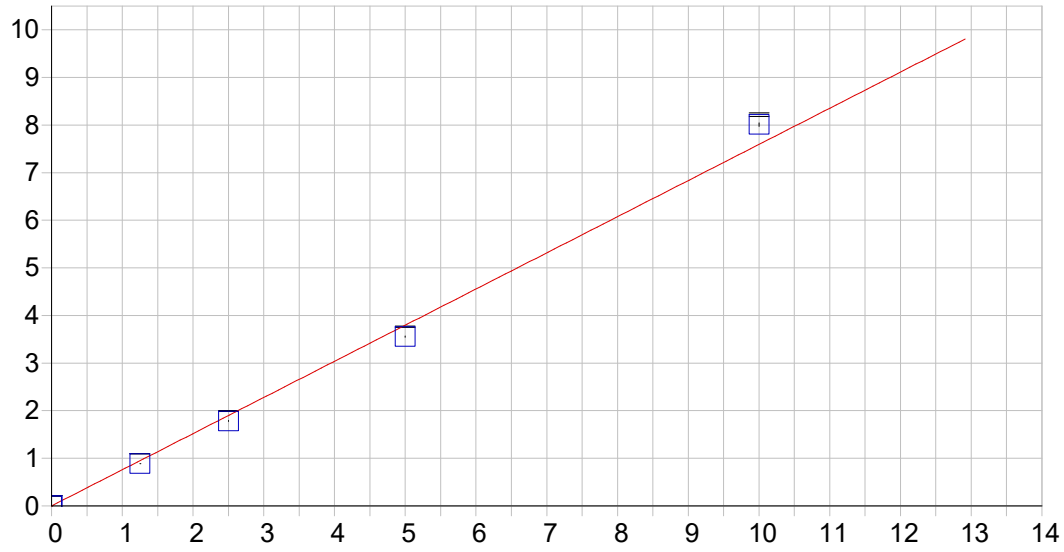
B 249.678 {135}

Date of Fit:	11/11/2024 0:35:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.008411	Re-Slope:	1.000000
A1 (Gain):	0.884118	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999432	Status:	OK.
Std Error of Est:	0.000480		
Predicted MDL:	0.001259		
Predicted MQL:	0.004195		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00842	.001	1
S1	.01000	-.00186	-.012	-119.	.00668	.001	1
S2	1.2500	1.3022	.052	4.18	1.1151	.010	1
S3	2.5000	2.5768	.077	3.07	2.1974	.013	1
S4	5.0000	4.9432	-.057	-1.14	4.2004	.014	1
S5	10.000	9.9400	-.060	-.600	8.4397	.055	1

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5



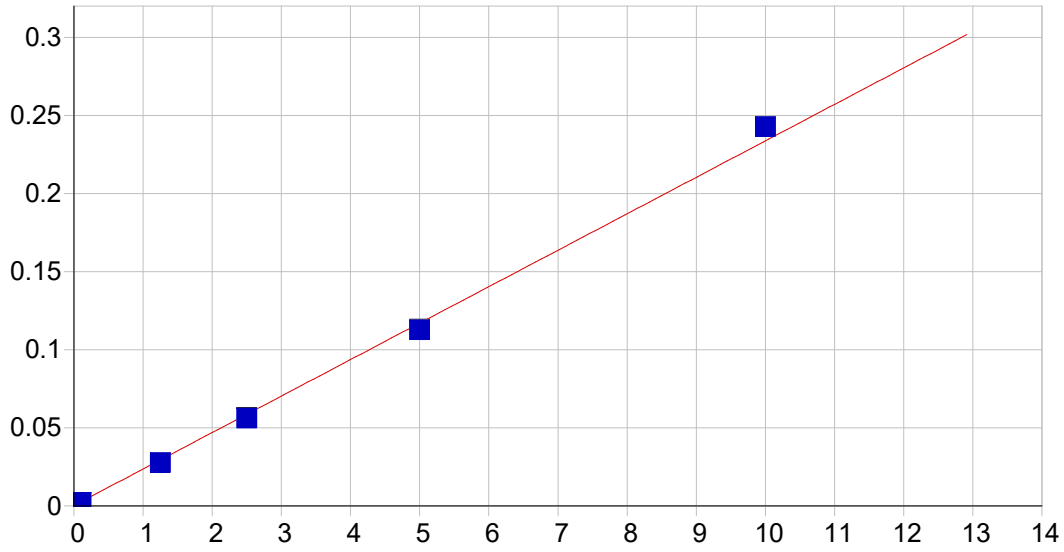
Mo 202.030 {467}

Date of Fit:	11/11/2024 0:35:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000142	Re-Slope:	1.000000
A1 (Gain):	0.759400	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998280	Status:	OK.
Std Error of Est:	0.000748		
Predicted MDL:	0.000606		
Predicted MQL:	0.002019		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00014	.000	1
S1	.01000	.00920	-.001	-8.04	.00713	.000	1
S2	1.2500	1.1674	-.083	-6.60	.88670	.002	1
S3	2.5000	2.3497	-.150	-6.01	1.7845	.008	1
S4	5.0000	4.6841	-.316	-6.32	3.5573	.012	1
S5	10.000	10.549	.549	5.49	8.0114	.038	1

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5



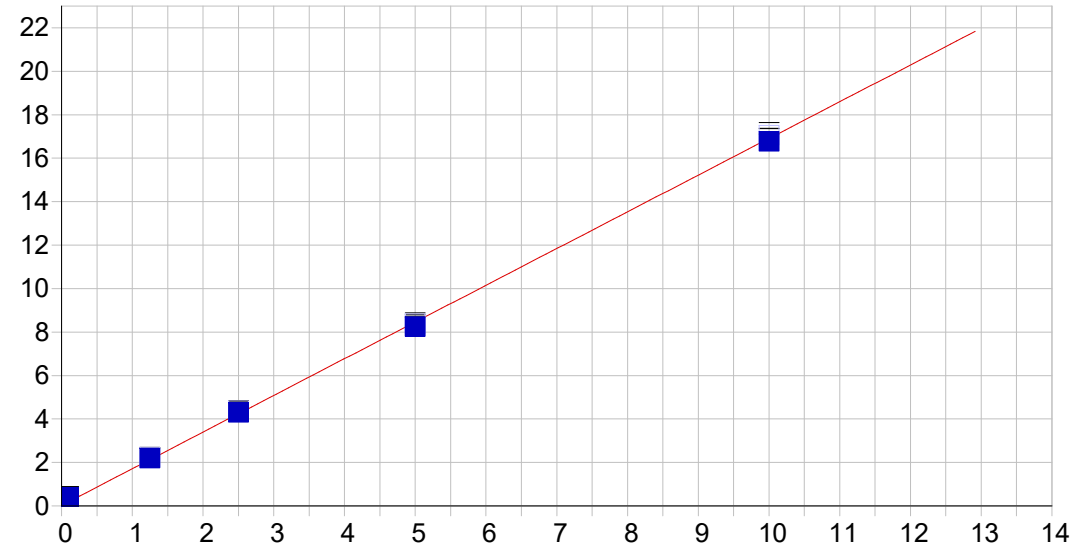
S 182.034 {485}

Date of Fit:	11/11/2024 0:35:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000307	Re-Slope:	1.000000
A1 (Gain):	0.023339	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999114	Status:	OK.
Std Error of Est:	0.000052		
Predicted MDL:	0.008040		
Predicted MQL:	0.026800		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00003	.000	.000	.00031	.000	1
S1	.10000	.08530	-.015	-14.7	.00230	.000	1
S2	1.2500	1.1693	-.081	-6.46	.02760	.000	1
S3	2.5000	2.3955	-.104	-4.18	.05622	.000	1
S4	5.0000	4.8147	-.185	-3.71	.11269	.000	1
S5	10.000	10.385	.385	3.85	.24271	.000	1

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5



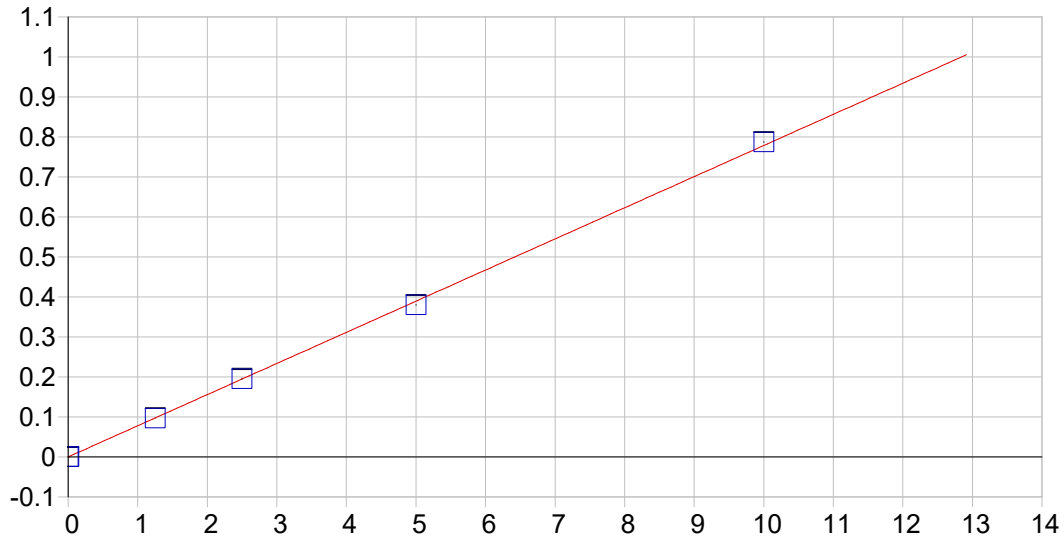
Si 251.611 {134}

Date of Fit:	11/11/2024 0:35:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.017686	Re-Slope:	1.000000
A1 (Gain):	1.689158	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.995360	Status:	OK.
Std Error of Est:	0.008817		
Predicted MDL:	0.000621		
Predicted MQL:	0.002071		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00013	-.000	.000	.01746	.002	1
S1	.10000	.23260	.133	133.	.41172	.015	1
S2	1.2500	1.2916	.042	3.32	2.2335	.007	1
S3	2.5000	2.5350	.035	1.40	4.3681	.019	1
S4	5.0000	4.8704	-.130	-2.59	8.3811	.034	1
S5	10.000	9.9216	-.078	-.784	17.050	.128	1

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5



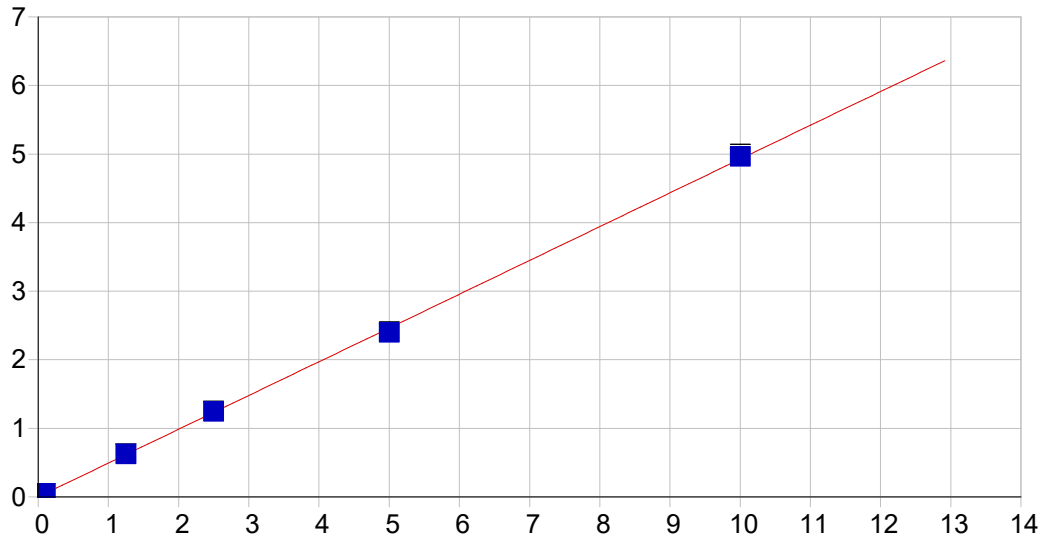
Sn 189.989 {478}

Date of Fit:	11/11/2024 0:35:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000071	Re-Slope:	1.000000
A1 (Gain):	0.077845	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999888	Status:	OK.
Std Error of Est:	0.000016		
Predicted MDL:	0.002408		
Predicted MQL:	0.008025		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00007	.000	1
S1	.00700	.00591	-.001	-15.5	.00053	.000	1
S2	1.2500	1.2477	-.002	-.187	.09720	.000	1
S3	2.5000	2.5065	.007	.260	.19519	.002	1
S4	5.0000	4.8836	-.116	-2.33	.38024	.001	1
S5	10.000	10.113	.113	1.13	.78735	.001	1

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5



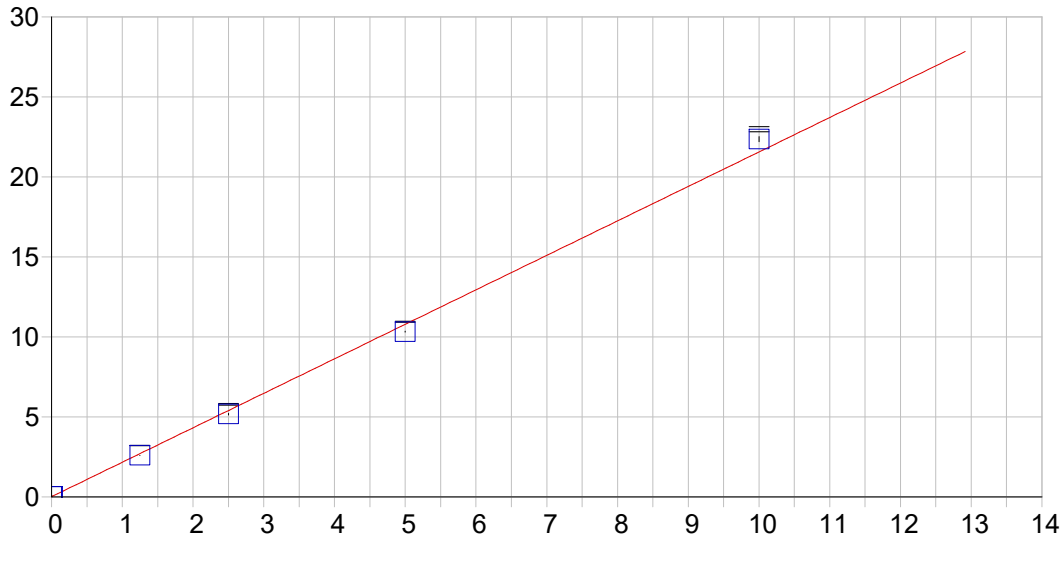
Ti 336.121 {100}

Date of Fit:	11/11/2024 0:35:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000703	Re-Slope:	1.000000
A1 (Gain):	0.492596	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999863	Status:	OK.
Std Error of Est:	0.000432		
Predicted MDL:	0.002014		
Predicted MQL:	0.006712		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00070	.001	1
S1	.10000	.10543	.005	5.43	.05262	.002	1
S2	1.2500	1.2709	.021	1.67	.62645	.001	1
S3	2.5000	2.5263	.026	1.05	1.2445	.005	1
S4	5.0000	4.8665	-.134	-2.67	2.3967	.009	1
S5	10.000	10.081	.081	.809	4.9641	.033	1

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5



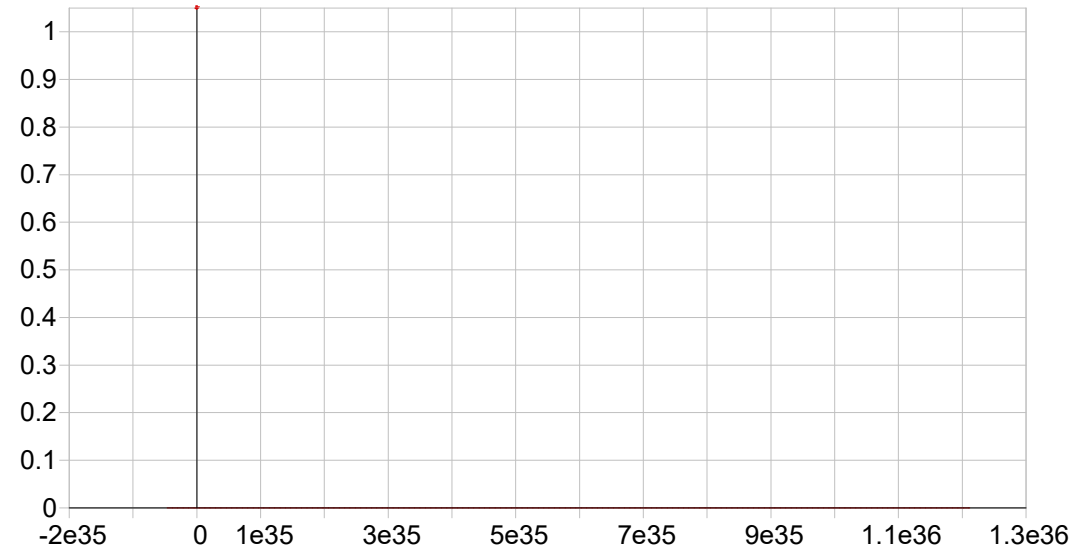
Li 670.784 { 50}

Date of Fit:	11/11/2024 0:35:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.015196	Re-Slope:	1.000000
A1 (Gain):	2.154178	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999207	Status:	OK.
Std Error of Est:	0.001763		
Predicted MDL:	0.001947		
Predicted MQL:	0.006490		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.01520	.004	1
S5	10.000	10.373	.373	3.73	22.359	.152	1
S4	5.0000	4.7847	-.215	-4.31	10.322	.028	1
S3	2.5000	2.3949	-.105	-4.20	5.1743	.047	1
S2	1.2500	1.1974	-.053	-4.21	2.5947	.012	1
S1	.01500	.01541	.000	2.75	.04840	.004	1

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

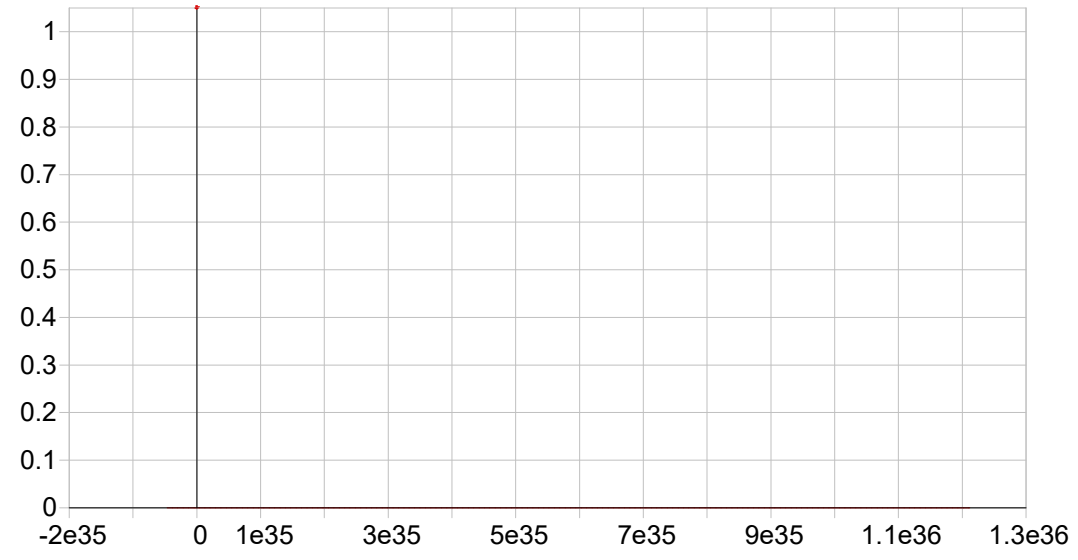


Y 224.306 {450}*

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

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

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



Y 360.073 { 94}*

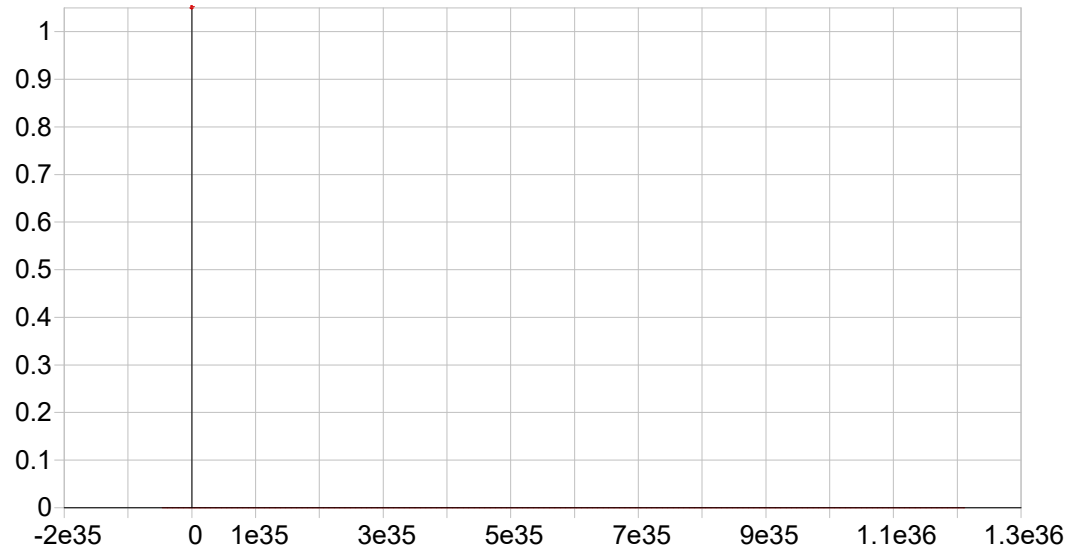
Date of Fit:	<not fit>	Type of Fit:	Linear	Weighting:	1/Conc

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

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

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

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



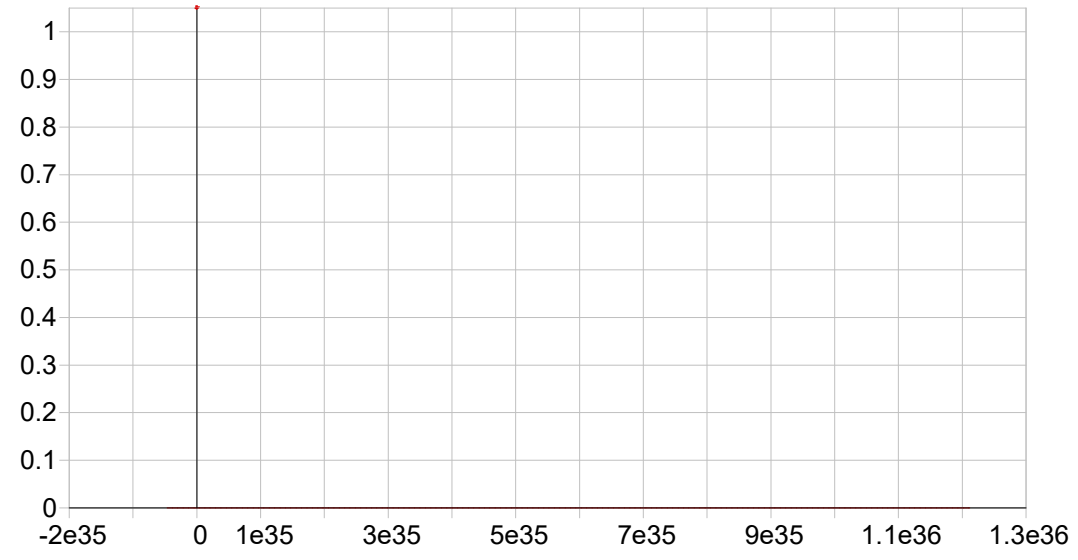
Y 371.030 { 91}*

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

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

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

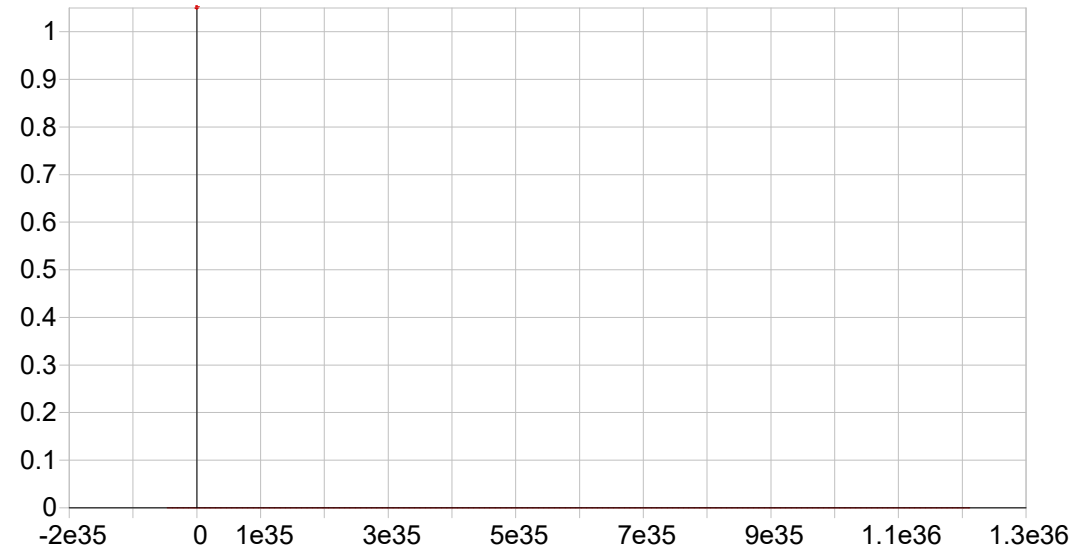
Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5



Y 224.306 {150}*

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

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



In 230.606 {446}*

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

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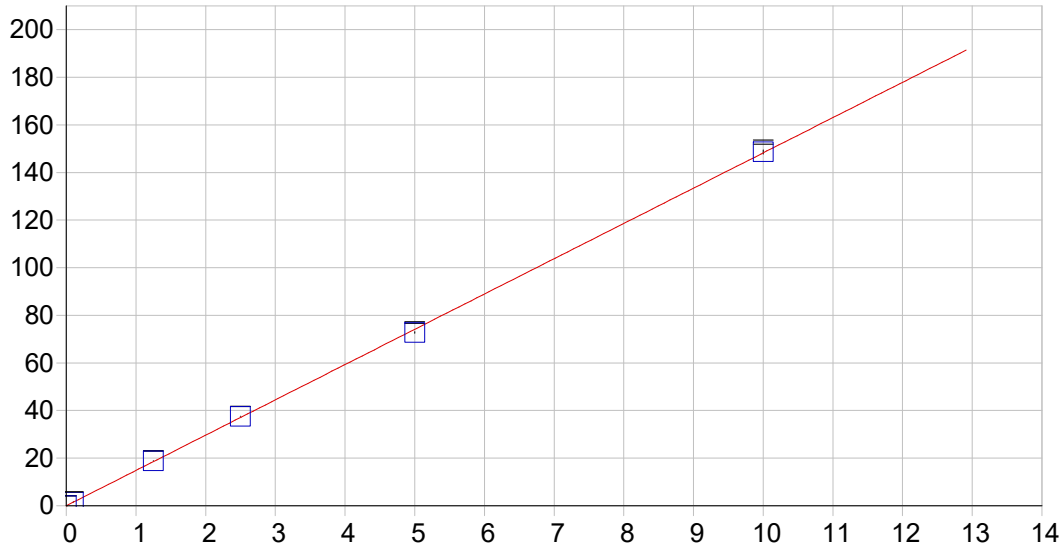
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.000000	Status:	Warning	Zero Gain	
Std Error of Est:	0.000000				
Predicted MDL:	n/a				
Predicted MQL:	n/a				

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



Sr 407.771 { 83}

Date of Fit:	11/11/2024 0:35:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.004416	Re-Slope:	1.000000
A1 (Gain):	14.824661	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999912	Status:	OK.
Std Error of Est:	0.010463		
Predicted MDL:	0.000119		
Predicted MQL:	0.000398		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00427	.001	1
S1	.10000	.10842	.008	8.42	1.6116	.069	1
S2	1.2500	1.2728	.023	1.83	18.873	.025	1
S3	2.5000	2.5344	.034	1.38	37.576	.083	1
S4	5.0000	4.9089	-.091	-1.82	72.777	.326	1
S5	10.000	10.025	.025	.254	148.63	.826	1

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: S0 Acquired: 11/11/2024 0:06:50 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) 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	.00030	-.00010	-.00051	.00013	.00029	-.00115	.03620	-.00214
Stddev	.00016	.00016	.00021	.00044	.00022	.00126	.00226	.00027
%RSD	55.029	155.84	40.977	344.88	76.581	109.75	6.2552	12.592
#1	.00019	.00006	-.00075	-.00033	.00020	-.00148	.03656	-.00243
#2	.00049	-.00025	-.00040	.00054	.00054	.00024	.03827	-.00208
#3	.00022	-.00012	-.00037	.00017	.00012	-.00222	.03378	-.00190

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	.00031	.00451	.00006	-.00017	.00099	.00015	-.00008	-.00058
Stddev	.00023	.00047	.00007	.00038	.00028	.00043	.00045	.00038
%RSD	72.634	10.481	126.07	226.05	28.589	298.69	564.30	65.564
#1	.00057	.00488	.00014	-.00008	.00131	.00064	-.00055	-.00075
#2	.00025	.00398	-.00000	.00016	.00087	-.00018	-.00003	-.00085
#3	.00012	.00468	.00004	-.00058	.00079	-.00002	.00034	-.00014

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	-.00025	.02631	-.01197	-.00020	.00343	.08213	-.00106	.00842
Stddev	.00021	.00006	.00219	.00068	.00143	.00531	.00006	.00079
%RSD	82.977	.22453	18.280	343.77	41.498	6.4684	5.7758	9.3352
#1	-.00043	.02629	-.01026	.00031	.00370	.08514	-.00110	.00873
#2	-.00031	.02627	-.01443	.00006	.00189	.08525	-.00109	.00901
#3	-.00002	.02638	-.01121	-.00096	.00471	.07600	-.00099	.00753

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	.00014	.00031	.01746	.00007	.00070	.01520	.00427
Stddev	.00010	.00005	.00173	.00015	.00053	.00415	.00132
%RSD	68.085	15.594	9.9089	205.11	75.329	27.287	30.931
#1	.00004	.00026	.01930	.00018	.00066	.01296	.00350
#2	.00017	.00035	.01587	-.00009	.00125	.01265	.00579
#3	.00022	.00032	.01721	.00012	.00020	.01998	.00351

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: S0 Acquired: 11/11/2024 0:06:50 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) 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	846.61	21477.	2272.6	767.34	1672.5
Stddev	.63	69.	103.6	4.87	2.7
%RSD	.07421	.32004	4.5579	.63430	.16050
#1	846.06	21399.	2158.2	761.83	1670.7
#2	846.47	21528.	2360.0	769.13	1675.6
#3	847.29	21504.	2299.5	771.05	1671.2

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: S1 Acquired: 11/11/2024 0:11:27 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) 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	.00064	.00116	.00078	.00166	.01132	.02174	1.4653	.03578
Stddev	.00023	.00005	.00054	.00014	.00035	.00146	.0586	.00117
%RSD	36.782	4.5052	69.055	8.6515	3.0660	6.7358	4.0010	3.2644
#1	.00090	.00118	.00062	.00159	.01108	.02010	1.4393	.03469
#2	.00045	.00110	.00033	.00183	.01172	.02293	1.5324	.03701
#3	.00055	.00120	.00137	.00157	.01116	.02218	1.4242	.03564

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	.01091	.41205	.00148	.03173	.00409	.00107	.00452	.02882
Stddev	.00008	.01506	.00009	.00026	.00005	.00025	.00032	.00105
%RSD	.68865	3.6557	6.1546	.80899	1.3141	23.348	7.0266	3.6593
#1	.01099	.40551	.00158	.03200	.00413	.00125	.00459	.02855
#2	.01085	.42928	.00141	.03170	.00412	.00079	.00479	.02998
#3	.01088	.40137	.00143	.03149	.00403	.00119	.00417	.02792

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	.02504	.03034	.06122	.00388	.20455	.30837	-.00052	.00668
Stddev	.00006	.00007	.00503	.00046	.00362	.01308	.00017	.00062
%RSD	.24746	.24677	8.2102	11.983	1.7678	4.2417	32.568	9.3244
#1	.02500	.03033	.05740	.00441	.20043	.30604	-.00034	.00733
#2	.02511	.03028	.06691	.00355	.20601	.32246	-.00053	.00608
#3	.02501	.03042	.05933	.00368	.20721	.29662	-.00068	.00664

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	.00713	.00230	.41172	.00053	.05262	.04840	1.6116
Stddev	.00030	.00021	.01472	.00014	.00200	.00412	.0693
%RSD	4.2742	9.1059	3.5745	26.316	3.8092	8.5213	4.3029
#1	.00741	.00207	.40588	.00037	.05130	.04959	1.5813
#2	.00716	.00234	.42846	.00064	.05492	.05179	1.6910
#3	.00680	.00248	.40082	.00058	.05163	.04381	1.5626

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: S1 Acquired: 11/11/2024 0:11:27 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) 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	848.39	21639.	2157.4	767.16	1660.5
Stddev	1.54	35.	77.1	.95	.5
%RSD	.18162	.16367	3.5722	.12388	.02871
#1	850.17	21609.	2187.6	766.22	1660.8
#2	847.53	21678.	2069.8	767.15	1660.8
#3	847.47	21630.	2214.7	768.12	1660.0

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: S2 Acquired: 11/11/2024 0:16:06 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) 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	.03726	.07518	.91862	.07097	.23665	4.4885	16.633	.88465
Stddev	.00050	.00039	.00190	.00031	.00040	.0051	.033	.00351
%RSD	1.3519	.52413	.20674	.43131	.17096	.11362	.20024	.39702
#1	.03698	.07491	.91960	.07074	.23618	4.4835	16.594	.88075
#2	.03696	.07500	.91644	.07131	.23690	4.4884	16.651	.88566
#3	.03784	.07563	.91983	.07084	.23686	4.4937	16.653	.88755

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	1.2660	4.6720	.58200	.39188	.53775	.47987	1.0247	.33462
Stddev	.0028	.0056	.00069	.00128	.00273	.00051	.0025	.00188
%RSD	.21884	.11941	.11807	.32644	.50816	.10640	.24615	.56066
#1	1.2634	4.6684	.58255	.39048	.53498	.47929	1.0218	.33246
#2	1.2658	4.6693	.58123	.39216	.54045	.48006	1.0261	.33558
#3	1.2689	4.6785	.58222	.39299	.53782	.48026	1.0262	.33583

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	.37612	.14423	.50549	.04367	12.204	1.6483	.06554	1.1151
Stddev	.00229	.00017	.00313	.00056	.038	.0046	.00003	.0098
%RSD	.61010	.11972	.61868	1.2930	.31115	.27965	.04212	.87914
#1	.37465	.14431	.50803	.04400	12.164	1.6537	.06555	1.1042
#2	.37495	.14403	.50200	.04399	12.240	1.6456	.06556	1.1232
#3	.37877	.14435	.50644	.04302	12.208	1.6457	.06551	1.1179

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	.88670	.02760	2.2335	.09720	.62645	2.5947	18.873
Stddev	.00227	.00007	.0069	.00031	.00139	.0118	.025
%RSD	.25650	.25495	.30946	.32149	.22188	.45526	.13179
#1	.88559	.02753	2.2269	.09693	.62738	2.5986	18.848
#2	.88518	.02767	2.2407	.09754	.62485	2.5814	18.897
#3	.88931	.02760	2.2328	.09712	.62712	2.6040	18.876

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: S2 Acquired: 11/11/2024 0:16:06 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) 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	807.55	21244.	2172.3	727.91	1510.2
Stddev	1.74	5.	11.4	2.27	1.9
%RSD	.21488	.02221	.52483	.31129	.12489
#1	805.89	21239.	2182.9	730.26	1510.3
#2	809.35	21246.	2160.2	725.74	1512.1
#3	807.41	21248.	2173.7	727.72	1508.3

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: S3 Acquired: 11/11/2024 0:20:24 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) 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	.07565	.14755	1.8282	.14106	.47887	8.9886	33.372	1.7526
Stddev	.00091	.00093	.0113	.00073	.00271	.0318	.093	.0081
%RSD	1.1972	.63038	.61923	.51982	.56674	.35418	.27984	.46285
#1	.07568	.14818	1.8348	.14078	.47947	9.0049	33.387	1.7459
#2	.07473	.14649	1.8151	.14051	.47591	8.9519	33.272	1.7502
#3	.07654	.14800	1.8346	.14189	.48124	9.0090	33.457	1.7616

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	2.5128	9.1780	1.1444	.78243	1.0648	.93990	1.9991	.67147
Stddev	.0176	.0523	.0008	.00548	.0035	.00791	.0177	.00460
%RSD	.70055	.56949	.07438	.69998	.32785	.84126	.88806	.68477
#1	2.5230	9.2053	1.1438	.78508	1.0668	.93959	2.0052	.67199
#2	2.4925	9.1178	1.1441	.77613	1.0608	.93215	1.9791	.66663
#3	2.5229	9.2110	1.1454	.78608	1.0668	.94795	2.0131	.67578

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	.74486	.26086	1.0143	.08636	24.589	3.2647	.13544	2.1974
Stddev	.00462	.00031	.0054	.00052	.115	.0081	.00077	.0133
%RSD	.62089	.11707	.52946	.60218	.46800	.24727	.56875	.60571
#1	.74653	.26089	1.0165	.08696	24.722	3.2639	.13615	2.1943
#2	.73963	.26114	1.0082	.08597	24.518	3.2571	.13462	2.1860
#3	.74841	.26054	1.0182	.08617	24.527	3.2732	.13553	2.2120

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	1.7845	.05622	4.3681	.19519	1.2445	5.1743	37.576
Stddev	.0078	.00027	.0193	.00153	.0050	.0469	.083
%RSD	.43656	.48813	.44292	.78525	.40473	.90562	.22173
#1	1.7881	.05614	4.3612	.19577	1.2457	5.2061	37.611
#2	1.7756	.05600	4.3531	.19345	1.2390	5.1205	37.481
#3	1.7899	.05653	4.3899	.19635	1.2489	5.1962	37.637

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: S3 Acquired: 11/11/2024 0:20:24 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) 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	773.04	20860.	2152.7	689.67	1441.4
Stddev	2.37	9.	9.3	3.30	8.7
%RSD	.30608	.04112	.43417	.47841	.60275
#1	770.96	20850.	2156.4	685.95	1436.8
#2	775.61	20867.	2159.7	690.81	1451.5
#3	772.54	20861.	2142.1	692.25	1436.1

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: S4 Acquired: 11/11/2024 0:24:41 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) 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	.14955	.27840	3.5383	.28057	.96527	17.593	64.396	3.3716
Stddev	.00074	.00087	.0060	.00054	.00306	.069	.299	.0101
%RSD	.49521	.31417	.17106	.19396	.31725	.39354	.46404	.30001
#1	.14870	.27877	3.5319	.28011	.96306	17.670	64.719	3.3751
#2	.15005	.27740	3.5392	.28117	.96398	17.575	64.340	3.3602
#3	.14990	.27903	3.5439	.28042	.96876	17.535	64.130	3.3795

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	4.8346	17.717	2.1656	1.5234	2.0474	1.7926	3.8199	1.3172
Stddev	.0065	.075	.0037	.0005	.0112	.0085	.0226	.0023
%RSD	.13448	.42553	.16947	.03215	.54763	.47175	.59109	.17484
#1	4.8278	17.802	2.1614	1.5228	2.0603	1.8015	3.8452	1.3195
#2	4.8353	17.692	2.1671	1.5236	2.0397	1.7914	3.8129	1.3171
#3	4.8408	17.658	2.1682	1.5237	2.0422	1.7847	3.8017	1.3149

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	1.4388	.48635	1.9850	.16640	48.306	6.3423	.27083	4.2004
Stddev	.0023	.00176	.0088	.00143	.408	.0279	.00070	.0139
%RSD	.15878	.36113	.44258	.85743	.84505	.43938	.25786	.33037
#1	1.4374	.48434	1.9918	.16785	48.207	6.3740	.27090	4.2001
#2	1.4375	.48756	1.9881	.16637	47.957	6.3317	.27148	4.1866
#3	1.4414	.48716	1.9751	.16499	48.755	6.3214	.27009	4.2144

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	3.5573	.11269	8.3811	.38024	2.3967	10.322	72.777
Stddev	.0122	.00046	.0341	.00087	.0089	.028	.326
%RSD	.34299	.40501	.40707	.22901	.37008	.26959	.44804
#1	3.5470	.11219	8.3913	.37934	2.4068	10.354	73.120
#2	3.5541	.11280	8.3431	.38028	2.3928	10.310	72.740
#3	3.5707	.11308	8.4090	.38108	2.3904	10.303	72.472

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: S4 Acquired: 11/11/2024 0:24:41 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) 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	726.45	20586.	2133.8	640.16	1369.0
Stddev	2.27	61.	4.2	3.31	1.0
%RSD	.31267	.29447	.19681	.51670	.07139
#1	728.31	20609.	2129.0	640.99	1369.2
#2	727.12	20518.	2135.8	642.97	1369.9
#3	723.92	20632.	2136.6	636.52	1368.0

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: S5 Acquired: 11/11/2024 0:28:55 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) 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	.32173	.56083	7.3268	.64194	2.2533	37.437	132.82	6.8721
Stddev	.00123	.00116	.0107	.00367	.0081	.315	.66	.0487
%RSD	.38205	.20625	.14567	.57112	.36145	.84219	.49664	.70808
#1	.32289	.55950	7.3210	.63798	2.2445	37.801	133.52	6.9278
#2	.32185	.56164	7.3202	.64263	2.2549	37.260	132.75	6.8500
#3	.32044	.56134	7.3391	.64522	2.2606	37.250	132.20	6.8383

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	9.8554	36.806	4.3701	3.1400	4.2921	3.6394	7.7636	2.7903
Stddev	.0193	.248	.0062	.0048	.0417	.0311	.0671	.0256
%RSD	.19628	.67333	.14161	.15158	.97032	.85352	.86456	.91796
#1	9.8484	37.092	4.3721	3.1387	4.3398	3.6753	7.8385	2.8194
#2	9.8406	36.680	4.3750	3.1360	4.2739	3.6220	7.7436	2.7712
#3	9.8773	36.647	4.3631	3.1453	4.2627	3.6210	7.7088	2.7802

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	2.9487	1.0058	4.2037	.34263	106.52	13.527	.57636	8.4397
Stddev	.0042	.0023	.0314	.00213	.89	.113	.00032	.0554
%RSD	.14249	.22500	.74802	.62267	.83312	.83567	.05593	.65678
#1	2.9452	1.0060	4.2397	.34504	107.51	13.655	.57646	8.5011
#2	2.9474	1.0080	4.1905	.34186	106.26	13.442	.57662	8.4246
#3	2.9533	1.0035	4.1811	.34099	105.80	13.485	.57600	8.3934

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	8.0114	.24271	17.050	.78735	4.9641	22.359	148.63
Stddev	.0380	.00034	.128	.00074	.0327	.152	.83
%RSD	.47454	.13952	.75343	.09426	.65958	.68032	.55600
#1	7.9700	.24295	17.197	.78657	5.0017	22.514	149.56
#2	8.0197	.24286	16.991	.78742	4.9478	22.354	148.33
#3	8.0446	.24232	16.962	.78805	4.9426	22.210	147.99

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: S5 Acquired: 11/11/2024 0:28:55 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) 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	616.72	19591.	2079.5	522.89	1251.3
Stddev	2.56	38.	14.6	4.64	.9
%RSD	.41507	.19507	.70307	.88823	.06978
#1	619.61	19584.	2062.7	517.78	1250.5
#2	615.80	19557.	2086.5	524.07	1252.2
#3	614.74	19633.	2089.3	526.84	1251.1

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: S6 Acquired: 11/11/2024 0:33:23 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) 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	97.966	58.657	9.4915	4.5209	11.330
Stddev	.077	.135	.0073	.0049	.016
%RSD	.07903	.22953	.07702	.10738	.14552
#1	97.945	58.806	9.4896	4.5251	11.347
#2	97.901	58.619	9.4995	4.5156	11.314
#3	98.051	58.545	9.4853	4.5221	11.328

Int. Std.	Y_3710
Units	Cts/S
Avg	2027.4
Stddev	1.8
%RSD	.08857
#1	2026.3
#2	2026.5
#3	2029.5

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: ICV008 Acquired: 11/11/2024 0:50:51 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICV008 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9186862	1.073529	.9857633	.9770428	.9232706	2.329083
Stddev	.0171854	.005261	.0022915	.0099134	.0023746	.026936
%RSD	1.870647	.4900563	.2324641	1.014636	.2571977	1.156495
#1	.8990784	1.069416	.9839512	.9856205	.9255400	2.298368
#2	.9311337	1.071714	.9849995	.9661894	.9234687	2.348683
#3	.9258464	1.079457	.9883392	.9793185	.9208032	2.340196

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5230795	.5298072	.5075722	9.940283	.5617464	.5007250
Stddev	.0024984	.0022510	.0010041	.059688	.0012429	.0011025
%RSD	.4776339	.4248777	.1978157	.6004650	.2212534	.2201740
#1	.5209582	.5275809	.5074489	9.871782	.5630491	.4996213
#2	.5258334	.5297587	.5066355	9.967949	.5605735	.5007275
#3	.5224470	.5320821	.5086322	9.981118	.5616165	.5018263

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4954605	10.61355	.5338955	5.433350	.5123209	.2414997
Stddev	.0029241	.13206	.0037442	.096072	.0004532	.0004941
%RSD	.5901777	1.244283	.7013052	1.768197	.0884667	.2046125
#1	.4988063	10.46835	.5314094	5.324850	.5125838	.2411378
#2	.4933947	10.64578	.5382018	5.507618	.5125814	.2412987
#3	.4941804	10.72651	.5320752	5.467581	.5117976	.2420627

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.773144	.5287273	1.021847	9.341674	F .0031051	F .0105358
Stddev	.106299	.0053336	.004971	.032714	.0018198	.0015327
%RSD	1.087666	1.008767	.4864279	.3501942	58.60703	14.54710
#1	9.674178	.5337441	1.027377	9.318751	.0029504	.0090698
#2	9.885507	.5231252	1.017752	9.379138	.0049974	.0104102
#3	9.759749	.5293128	1.020412	9.327134	.0013676	.0121274

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: ICV008 Acquired: 11/11/2024 0:50:51 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICV008 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F -.000350	F -.003278	F -.002106	F -.001651	F -.000704	F .0028547
Stddev	.000350	.010778	.000483	.001783	.001596	.0014144
%RSD	99.95723	328.7437	22.95061	108.0360	226.5995	49.54871
#1	-.000644	-.014747	-.001762	-.002656	-.002425	.0033958
#2	-.000443	.006640	-.002658	.000408	.000729	.0012495
#3	.000037	-.001728	-.001897	-.002705	-.000418	.0039187

Elem	Sr4077
Units	ppm
Avg	F .0009711
Stddev	.0001005
%RSD	10.35066
#1	.0010415
#2	.0010158
#3	.0008560

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	841.8798	21514.88	2160.438	757.8778	1633.768
Stddev	1.3679	27.83	11.091	4.5538	4.127
%RSD	.1624793	.1293523	.5133481	.6008558	.2526168
#1	840.3627	21511.69	2167.208	752.6234	1629.903
#2	842.2577	21544.17	2166.467	760.3314	1638.115
#3	843.0190	21488.79	2147.639	760.6786	1633.285

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: ICB008 Acquired: 11/11/2024 0:55:16 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICB008 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.004849	-.004503	-.001314	.0012107	-.001445	-.007489	-.000110
Stddev	.002901	.003351	.001075	.0047865	.001077	.006464	.000898
%RSD	59.81817	74.42086	81.80038	395.3608	74.48593	86.31364	817.8437
#1	-.007243	-.000667	-.002549	.0067342	-.001539	-.004358	.000573
#2	-.001623	-.005978	-.000807	-.001721	-.002472	-.003186	.000225
#3	-.005682	-.006863	-.000586	-.001381	-.000325	-.014922	-.001128

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000011	.0000228	.0217199	-.002117	-.000673	-.002969	.0090562
Stddev	.000038	.0000732	.0298733	.000997	.000472	.002795	.0044542
%RSD	348.7959	320.7611	137.5386	47.07696	70.10548	94.16203	49.18440
#1	-.000051	.0000450	.0120448	-.003189	-.001035	-.005839	.0094309
#2	.000025	.0000823	-.002117	-.001945	-.000140	-.002814	.0133113
#3	-.000007	-.000059	.055232	-.001218	-.000844	-.000254	.0044265

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000234	.0033558	-.000224	-.000037	.1490566	.0004876	-.000850
Stddev	.001756	.0770245	.000563	.000421	.0821234	.0016919	.000131
%RSD	750.1028	2295.255	251.0413	1128.460	55.09545	347.0205	15.45724
#1	-.002064	.0395479	-.000539	-.000513	.2376249	.0017069	-.000981
#2	.001437	.0556187	-.000559	.000114	.0754298	.0011999	-.000718
#3	-.000075	-.085099	.000426	.000287	.1341150	-.001444	-.000850

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1339201	.0025538	-.001451	-.000654	-.005011	-.001524	-.000983
Stddev	.0363658	.0010474	.001011	.000487	.003375	.000233	.000770
%RSD	27.15481	41.01279	69.64814	74.36984	67.35874	15.32265	78.37506
#1	.1421828	.0014135	-.000418	-.001082	-.002597	-.001725	-.001433
#2	.0941340	.0034730	-.002438	-.000756	-.003567	-.001579	-.001422
#3	.1654436	.0027747	-.001498	-.000125	-.008867	-.001268	-.000093

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: ICB008 Acquired: 11/11/2024 0:55:16 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICB008 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.000564	.0014892	-.000177
Stddev	.000729	.0027134	.000045
%RSD	129.2099	182.2106	25.67188
#1	.000263	-.001012	-.000134
#2	-.000844	.004374	-.000225
#3	-.001112	.001105	-.000172

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	841.2278	21384.26	2137.020	759.3374	1666.241
Stddev	1.5208	15.93	7.874	4.4867	2.413
%RSD	.1807792	.0745053	.3684348	.5908653	.1448113
#1	840.9198	21392.08	2131.214	754.5668	1664.152
#2	842.8790	21365.93	2133.864	763.4723	1668.882
#3	839.8847	21394.77	2145.982	759.9730	1665.690

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: ICSA008 Acquired: 11/11/2024 0:59:49 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSA008 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0096343	-.021392	-.003019	-.005158	-.001721	242.4023
Stddev	.0017725	.002263	.001652	.002068	.001554	.6639
%RSD	18.39811	10.57908	54.72683	40.08939	90.26321	.2738750
#1	.0082940	-.023120	-.002451	-.006103	-.001558	242.7025
#2	.0089648	-.018830	-.001726	-.002787	-.000256	242.8631
#3	.0116441	-.022225	-.004880	-.006585	-.003350	241.6413

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0063625	.0006593	.0012208	252.4036	.0507546	.0018175
Stddev	.0002230	.0001426	.0000603	.3906	.0008140	.0006970
%RSD	3.504556	21.63141	4.935957	.1547514	1.603795	38.34860
#1	.0065580	.0005648	.0011750	252.3979	.0513481	.0020132
#2	.0064098	.0005898	.0012891	252.7970	.0498267	.0023957
#3	.0061196	.0008234	.0011983	252.0159	.0510891	.0010436

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.003996	104.8985	.0100945	244.8352	.0036102	.0023620
Stddev	.003937	.2304	.0014208	.5649	.0003314	.0002409
%RSD	98.53726	.2196044	14.07460	.2307352	9.178086	10.19814
#1	.000398	105.0591	.0090453	245.4302	.0037935	.0026049
#2	-.007205	105.0018	.0095269	244.7690	.0038093	.0021232
#3	-.005180	104.6346	.0117113	244.3062	.0032277	.0023579

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6327689	-.006824	.0115345	.0344310	.0055596	F .0998570
Stddev	.1618745	.004968	.0004695	.1079977	.0032492	.0013793
%RSD	25.58192	72.80600	4.070563	313.6637	58.44352	1.381279
#1	.4619033	-.012423	.0120567	-.072689	.0070316	.0982906
#2	.7838298	-.002942	.0113995	.032696	.0018349	.1003909
#3	.6525737	-.005107	.0111473	.143286	.0078122	.1008896

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: ICSA008 Acquired: 11/11/2024 0:59:49 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSA008 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000620	-.001224	-.002076	F -.007838	-.002111	.0022148
Stddev	.001012	.010656	.000529	.002513	.000712	.0012723
%RSD	163.1646	870.3329	25.50115	32.06593	33.71751	57.44453
#1	.000156	-.005641	-.001537	-.010631	-.001356	.0009494
#2	-.000252	-.008962	-.002097	-.005759	-.002208	.0022011
#3	-.001764	.010930	-.002595	-.007124	-.002770	.0034939

Elem	Sr4077
Units	ppm
Avg	F .1061846
Stddev	.0004082
%RSD	.3844642
#1	.1063003
#2	.1065225
#3	.1057310

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	786.4940	20354.03	2122.417	711.9882	1396.408
Stddev	2.3572	95.39	4.050	3.5860	5.241
%RSD	.2997156	.4686441	.1908208	.5036600	.3752931
#1	783.8050	20256.51	2117.884	708.2751	1390.679
#2	787.4731	20358.45	2125.679	712.2576	1397.587
#3	788.2039	20447.13	2123.688	715.4319	1400.959

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: ICSAB008 Acquired: 11/11/2024 1:04:18 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSAB008 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0983434	.0849896	.0473742	.0474044	.5533929	243.0912
Stddev	.0156192	.0083724	.0013892	.0052870	.0012197	.4902
%RSD	15.88232	9.851102	2.932335	11.15301	.2203964	.2016594
#1	.1051353	.0829289	.0465341	.0414941	.5530564	243.0546
#2	.1094167	.0778399	.0489776	.0516839	.5523768	243.5987
#3	.0804781	.0941999	.0466108	.0490352	.5547455	242.6204

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5367356	.5314219	1.054782	253.0801	.6068177	.5219815
Stddev	.0003011	.0015128	.005022	.9232	.0011647	.0020835
%RSD	.0560924	.2846738	.4761170	.3647709	.1919377	.3991444
#1	.5366192	.5316672	1.054900	252.9758	.6059135	.5235731
#2	.5370774	.5327970	1.049702	254.0509	.6081320	.5196234
#3	.5365100	.5298014	1.059743	252.2135	.6064076	.5227481

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4815457	105.2435	.5400774	245.0055	1.050789	.1908461
Stddev	.0052043	.3509	.0030831	.3649	.003983	.0008126
%RSD	1.080753	.3334409	.5708641	.1489306	.3790061	.4258013
#1	.4776495	105.5347	.5434869	244.7365	1.049233	.1900557
#2	.4874561	105.3418	.5392596	245.4208	1.047819	.1908034
#3	.4795315	104.8539	.5374856	244.8591	1.055315	.1916793

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5399337	.5400728	.9596518	-.259964	.0096812	F .0992423
Stddev	.1052353	.0052349	.0010073	.044100	.0055811	.0002426
%RSD	19.49040	.9692871	.1049641	16.96405	57.64824	.2444982
#1	.4984288	.5450595	.9601968	-.302978	.0133104	.0989697
#2	.6595925	.5405379	.9602691	-.214852	.0124786	.0993223
#3	.4617798	.5346208	.9584894	-.262062	.0032547	.0994348

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: ICSAB008 Acquired: 11/11/2024 1:04:18 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSAB008 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001542	.0081469	-.002050	-.006297	-.001870	.0001575
Stddev	.000911	.0028930	.000310	.000562	.001029	.0008741
%RSD	59.04523	35.51060	15.11155	8.927593	55.02152	555.0159
#1	-.001623	.0083565	-.001907	-.006145	-.000696	-.000500
#2	-.002410	.0109294	-.002406	-.005827	-.002296	-.000177
#3	-.000594	.0051548	-.001838	-.006920	-.002617	.001149

Elem	Sr4077
Units	ppm
Avg	F .1063444
Stddev	.0001749
%RSD	.1644618
#1	.1062986
#2	.1065377
#3	.1061970

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	786.5441	20528.64	2154.915	721.6662	1405.281
Stddev	1.2824	31.29	8.969	1.2769	4.663
%RSD	.1630362	.1524005	.4162288	.1769438	.3318507
#1	787.1599	20562.66	2159.301	722.9952	1402.801
#2	785.0700	20522.15	2144.596	721.5546	1410.660
#3	787.4024	20501.11	2160.846	720.4486	1402.381

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: CCV056 Acquired: 11/11/2024 1:14:37 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV056 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.065759	4.877289	25.09799	4.873194	4.883058	407.4272	10.43365
Stddev	.029795	.009981	.01336	.016555	.025300	1.0522	.01984
%RSD	.5881727	.2046323	.0532309	.3397075	.5181251	.2582447	.1901661
#1	5.099804	4.874640	25.08262	4.879720	4.906844	406.6416	10.41409
#2	5.053035	4.868900	25.10446	4.854371	4.856476	407.0173	10.45376
#3	5.044439	4.888327	25.10687	4.885491	4.885855	408.6226	10.43310

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5133131	2.528324	403.3384	15.73919	2.540361	15.46236	409.5875
Stddev	.0030362	.000350	1.7583	.01708	.002885	.02434	1.6050
%RSD	.5914861	.0138290	.4359369	.1084886	.1135477	.1574235	.3918650
#1	.5101093	2.528275	402.0099	15.75148	2.537934	15.43427	407.9962
#2	.5136821	2.528696	402.6731	15.71969	2.539600	15.47737	409.5602
#3	.5161480	2.528002	405.3323	15.74640	2.543550	15.47542	411.2059

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.18438	405.2975	2.531263	1.275882	406.0494	2.547060	15.05259
Stddev	.06816	2.0761	.003136	.001073	1.4139	.008715	.17829
%RSD	.4488530	.5122445	.1238927	.0841222	.3482149	.3421482	1.184459
#1	15.12678	403.8085	2.528082	1.277100	405.7649	2.545106	15.07879
#2	15.16674	404.4149	2.531354	1.275074	404.7994	2.539488	14.86264
#3	15.25962	407.6691	2.534352	1.275472	407.5840	2.556586	15.21632

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	157.4634	5.130582	5.292475	4.863445	5.170996	5.088173	5.068751
Stddev	.2345	.014884	.032901	.020084	.030295	.026685	.008716
%RSD	.1489475	.2900954	.6216482	.4129556	.5858604	.5244445	.1719597
#1	157.2221	5.114367	5.264655	4.878166	5.189238	5.058140	5.059622
#2	157.4774	5.133758	5.283980	4.840566	5.136025	5.097222	5.069645
#3	157.6906	5.143622	5.328790	4.871603	5.187723	5.109156	5.076986

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: CCV056 Acquired: 11/11/2024 1:14:37 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV056 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	5.088157	5.158816	5.216992
Stddev	.011615	.023129	.009253
%RSD	.2282715	.4483327	.1773605
#1	5.078600	5.158588	5.209368
#2	5.084787	5.135802	5.214322
#3	5.101084	5.182057	5.227286

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	678.7534	19497.25	2058.506	596.8224	1266.665
Stddev	3.2334	25.55	13.664	7.7813	1.577
%RSD	.4763686	.1310515	.6637678	1.303791	.1245336
#1	677.2389	19509.88	2072.747	596.5070	1268.050
#2	682.4660	19514.02	2057.267	604.7567	1266.998
#3	676.5552	19467.84	2045.504	589.2036	1264.948

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: CCB056 Acquired: 11/11/2024 1:18:50 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB056 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008008	-.002536	.0012386	.0030745	-.000880	.0646031	.0010387
Stddev	.0046357	.004318	.0027431	.0013198	.000122	.0099437	.0003990
%RSD	578.8529	170.2484	221.4737	42.92680	13.80719	15.39202	38.41859
#1	-.004502	-.000279	-.001906	.0039409	-.001020	.0542184	.0005978
#2	.002817	.000185	.003143	.0037270	-.000824	.0655531	.0013752
#3	.004088	-.007515	.002478	.0015555	-.000797	.0740377	.0011430

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000945	-.000055	.0279070	.0010987	-.000264	.0015274	.0148649
Stddev	.0000653	.000138	.0232766	.0003077	.000342	.0041355	.0464333
%RSD	69.06621	253.4737	83.40757	28.00433	129.6000	270.7646	312.3686
#1	.0001699	-.000176	.0010751	.0009641	.000046	.0047137	.0055956
#2	.0000593	.000096	.0426768	.0014508	-.000207	.0030144	.0652337
#3	.0000544	-.000084	.0399691	.0008814	-.000631	-.003146	-.026235

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0012490	.0517849	.0006130	.0003391	.1924828	.0009925	.0022008
Stddev	.0010857	.0272853	.0001423	.0005328	.0648144	.0151229	.0002449
%RSD	86.92114	52.68965	23.21921	157.1109	33.67284	1523.691	11.12528
#1	.0000158	.0259146	.0007755	.0002806	.1385768	-.011375	.0023001
#2	.0016706	.0802935	.0005107	.0008988	.2643970	.017852	.0023805
#3	.0020607	.0491465	.0005527	-.000162	.1744746	-.003499	.0019220

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4850843	.0009747	.0049623	.0002997	-.005780	-.000680	-.000548
Stddev	.1393760	.0036247	.0001340	.0005442	.004801	.000205	.001350
%RSD	28.73233	371.8797	2.700811	181.5466	83.06430	30.15095	246.5376
#1	.4373738	.0050634	.0049644	.0004431	-.006443	-.000917	-.001788
#2	.6420503	-.000295	.0050953	-.000302	-.010216	-.000570	-.000746
#3	.3758288	-.001844	.0048273	.000758	-.000682	-.000553	.000890

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: CCB056 Acquired: 11/11/2024 1:18:50 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB056 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.000405	.0026094	.0002062
Stddev	.001284	.0010503	.0000776
%RSD	316.5772	40.24869	37.63890
#1	-.001209	.0037110	.0002957
#2	-.001083	.0016194	.0001654
#3	.001075	.0024979	.0001574

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	836.0550	21191.97	2135.768	751.0988	1650.076
Stddev	2.5006	49.19	67.998	4.4349	1.488
%RSD	.2990909	.2320972	3.183763	.5904567	.0901527
#1	834.0274	21170.10	2121.968	747.7834	1648.581
#2	838.8491	21157.51	2075.729	749.3764	1651.556
#3	835.2886	21248.30	2209.607	756.1365	1650.091

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4569-22DLX2 Acquired: 11/11/2024 1:23:23 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE536 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1750922	-.028002	.2000708	-.001705	.0063462	74.20072	.7402011
Stddev	.0048090	.005637	.0051117	.006327	.0006183	.22632	.0019387
%RSD	2.746561	20.13023	2.554961	371.1877	9.743266	.3050109	.2619124
#1	.1772932	-.034421	.1944719	.000984	.0065893	74.33159	.7423010
#2	.1784067	-.025727	.2012521	.002834	.0068060	74.33118	.7398229
#3	.1695765	-.023858	.2044885	-.008932	.0056433	73.93939	.7384794

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0038879	.0075504	12.84348	.1387114	.0975821	.5222411	186.3275
Stddev	.0002544	.0003751	.03198	.0020767	.0005492	.0047654	.8024
%RSD	6.544463	4.967451	.2489760	1.497156	.5627807	.9124963	.4306652
#1	.0038400	.0079827	12.80811	.1405463	.0969927	.5272234	186.8446
#2	.0041629	.0073576	12.87034	.1364569	.0976741	.5177271	186.7347
#3	.0036608	.0073110	12.85199	.1391309	.0980794	.5217729	185.4031

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.174429	28.98393	.1508259	-.016864	1.054276	.2956927	.6036307
Stddev	.007200	.03690	.0017118	.000734	.363581	.0092436	.0028354
%RSD	.1724667	.1273061	1.134955	4.350294	34.48631	3.126098	.4697308
#1	4.182701	28.94301	.1527437	-.017320	1.288494	.3001761	.6022317
#2	4.171012	28.99411	.1494525	-.016018	1.238907	.2850624	.6068938
#3	4.169574	29.01467	.1502816	-.017254	.635426	.3018396	.6017668

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	16.38395	3.328746	.1991922	-.000573	.8516159	5.933145	.0061595
Stddev	.08402	.023830	.0006338	.000525	.0065600	.030773	.0035284
%RSD	.5128192	.7158725	.3181703	91.57145	.7702958	.5186606	57.28312
#1	16.29080	3.341432	.1990070	-.000065	.8496870	5.967078	.0088047
#2	16.40706	3.301258	.1998979	-.001113	.8589241	5.925310	.0021533
#3	16.45400	3.343549	.1986716	-.000542	.8462367	5.907047	.0075205

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4569-22DLX2 Acquired: 11/11/2024 1:23:23 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE536 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.626458	.0577087	.1327676
Stddev	.006434	.0010648	.0004337
%RSD	.3955745	1.845122	.3266443
#1	1.632295	.0565179	.1330050
#2	1.627520	.0580390	.1330309
#3	1.619559	.0585692	.1322671

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	880.8308	22691.65	2315.398	796.8548	1585.961
Stddev	4.6049	62.84	8.155	4.1627	9.474
%RSD	.5227936	.2769231	.3521977	.5223965	.5973424
#1	878.0472	22694.40	2308.345	798.8152	1581.005
#2	886.1461	22627.48	2313.521	792.0738	1596.884
#3	878.2991	22753.07	2324.327	799.6753	1579.993

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4570-01DLX2 Acquired: 11/11/2024 1:27:50 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE531 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2279424	-.040946	.1947848	-.014702	.0013978	137.7059	1.397356
Stddev	.0032502	.004066	.0043876	.002928	.0028877	6.2064	.065216
%RSD	1.425879	9.929511	2.252548	19.91746	206.5944	4.507025	4.667129
#1	.2303675	-.038864	.1909099	-.011515	-.000624	134.2223	1.363808
#2	.2292104	-.045630	.1995489	-.017273	.000112	134.0239	1.355743
#3	.2242494	-.038342	.1938955	-.015318	.004705	144.8716	1.472517

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0062283	.0086885	140.1883	.2650360	.1495311	.5048169	256.7469
Stddev	.0001152	.0006652	6.1143	.0004296	.0007777	.0238806	11.0502
%RSD	1.849102	7.656570	4.361487	.1620751	.5200813	4.730536	4.303918
#1	.0061396	.0091754	136.5067	.2654909	.1488580	.4876861	249.7803
#2	.0061869	.0089596	136.8120	.2649798	.1503825	.4946692	250.9724
#3	.0063585	.0079306	147.2463	.2646373	.1493530	.5320955	269.4879

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.943790	53.39787	.3269411	-.019206	1.716217	.4679426	.6165476
Stddev	.317582	2.46386	.0008725	.001089	.258371	.0206582	.0030700
%RSD	4.573613	4.614151	.2668540	5.672571	15.05471	4.414677	.4979300
#1	6.756986	51.78619	.3279334	-.018818	1.882172	.4556163	.6175077
#2	6.763903	52.17334	.3262942	-.018364	1.847949	.4564194	.6190227
#3	7.310480	56.23410	.3265957	-.020436	1.418530	.4917921	.6131123

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	22.70395	6.682822	.2760768	-.001293	.8616954	7.972261	.0019636
Stddev	1.18975	.018507	.0110381	.000825	.0143937	.310806	.0019843
%RSD	5.240263	.2769353	3.998210	63.83169	1.670395	3.898598	101.0520
#1	22.13065	6.681193	.2688620	-.000398	.8618252	7.775951	-.000326
#2	21.90940	6.702089	.2705848	-.001458	.8760237	7.810229	.003184
#3	24.07180	6.665183	.2887837	-.002024	.8472372	8.330603	.003033

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4570-01DLX2 Acquired: 11/11/2024 1:27:50 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE531 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	3.508681	.1148818	.2527785
Stddev	.155968	.0039753	.0113823
%RSD	4.445189	3.460347	4.502858
#1	3.426011	.1112150	.2460634
#2	3.411452	.1143238	.2463515
#3	3.688581	.1191066	.2659206

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	895.6315	23310.25	2351.387	813.9353	1496.075
Stddev	1.8854	27.24	90.431	1.1566	3.789
%RSD	.2105116	.1168498	3.845870	.1420989	.2532842
#1	896.1610	23338.59	2409.043	813.7847	1493.000
#2	897.1956	23307.88	2397.956	812.8614	1494.916
#3	893.5380	23284.27	2247.162	815.1598	1500.308

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4570-02DLX2 Acquired: 11/11/2024 1:32:15 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE531D Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2183281	-.043085	.1882230	-.013120	.0031817	127.5248	1.291799
Stddev	.0212801	.002489	.0043193	.005950	.0010805	.4754	.005061
%RSD	9.746831	5.776392	2.294793	45.35351	33.95935	.3727665	.3917461
#1	.1974176	-.045276	.1833474	-.014440	.0031773	127.0383	1.290529
#2	.2176072	-.043601	.1897509	-.018299	.0042644	127.5478	1.287495
#3	.2399594	-.040379	.1915708	-.006620	.0021034	127.9882	1.297374

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0058752	.0083941	131.3916	.2519330	.1423504	.4685342	238.9886
Stddev	.0000797	.0000266	.2405	.0016636	.0004015	.0052720	.3110
%RSD	1.356147	.3163807	.1830363	.6603182	.2820196	1.125208	.1301134
#1	.0057935	.0083985	131.1985	.2517239	.1426327	.4639333	238.9394
#2	.0059527	.0083657	131.3153	.2503840	.1425277	.4673824	238.7051
#3	.0058794	.0084183	131.6609	.2536913	.1418908	.4742868	239.3212

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.479608	49.54821	.3096252	-.017724	1.227708	.4344202	.5893167
Stddev	.009978	.20186	.0014968	.000620	.201838	.0142694	.0013659
%RSD	.1539894	.4074094	.4834255	3.500767	16.44020	3.284693	.2317807
#1	6.473659	49.55729	.3079782	-.017554	.997965	.4503391	.5878683
#2	6.474037	49.34195	.3109026	-.017207	1.376523	.4227789	.5895002
#3	6.491127	49.74538	.3099947	-.018412	1.308634	.4301426	.5905816

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	21.21185	6.313447	.2544239	-.001875	.8155926	7.143741	-.002342
Stddev	.16785	.028412	.0032222	.000384	.0089694	.018262	.002674
%RSD	.7913091	.4500264	1.266467	20.50407	1.099742	.2556424	114.1725
#1	21.07627	6.333607	.2526546	-.001789	.8066706	7.132141	-.004847
#2	21.15968	6.280952	.2581431	-.002296	.8246086	7.134290	.000475
#3	21.39959	6.325782	.2524741	-.001541	.8154987	7.164792	-.002655

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4570-02DLX2 Acquired: 11/11/2024 1:32:15 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE531D Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	3.259204	.1050432	.2337643
Stddev	.011779	.0022403	.0009760
%RSD	.3614022	2.132717	.4175180
#1	3.249157	.1024857	.2336695
#2	3.256288	.1059854	.2328391
#3	3.272167	.1066584	.2347842

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	891.1625	23142.77	2388.839	808.3199	1497.125
Stddev	.8268	50.16	4.710	3.6273	1.339
%RSD	.0927790	.2167404	.1971541	.4487417	.0894445
#1	891.4373	23166.61	2390.436	812.1383	1496.857
#2	891.8168	23085.13	2392.543	804.9201	1498.578
#3	890.2332	23176.56	2383.539	807.9013	1495.940

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4570-01LDLX10 Acquired: 11/11/2024 1:36:42 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE531L Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0554683	-.011665	.0395009	-.004422	.0027434	28.83211	.2978258
Stddev	.0132160	.001716	.0007861	.007719	.0024053	.19676	.0011029
%RSD	23.82618	14.71031	1.990072	174.5552	87.67740	.6824461	.3703292
#1	.0706046	-.013237	.0403811	-.003915	.0038058	28.60933	.2966904
#2	.0495829	-.009834	.0392529	.003031	.0044346	28.98211	.2978939
#3	.0462174	-.011923	.0388687	-.012383	-.000010	28.90491	.2988932

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0014343	.0014948	30.05825	.0575036	.0293567	.1077082	55.76916
Stddev	.0000828	.0001747	.27084	.0007392	.0001821	.0085406	.37375
%RSD	5.769363	11.68524	.9010427	1.285525	.6203275	7.929359	.6701692
#1	.0014988	.0016538	29.76888	.0582747	.0291571	.1131453	55.35756
#2	.0014631	.0013078	30.30565	.0568010	.0293995	.1121150	56.08733
#3	.0013410	.0015229	30.10022	.0574350	.0295137	.0978644	55.86260

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.506339	11.22727	.0661370	-.004385	.5961688	.0993324	.1380224
Stddev	.012855	.07467	.0003966	.000187	.1406951	.0038345	.0003465
%RSD	.8534251	.6651149	.5996078	4.259443	23.59987	3.860257	.2510513
#1	1.491555	11.15766	.0657536	-.004575	.6593638	.1023312	.1378695
#2	1.512576	11.21802	.0665455	-.004377	.6941858	.1006542	.1384191
#3	1.514887	11.30614	.0661118	-.004202	.4349569	.0950119	.1377787

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.796910	1.323499	.0575284	-.001574	.1670958	1.677172	-.002802
Stddev	.067085	.005497	.0010342	.000355	.0035598	.016186	.001548
%RSD	1.398505	.4153749	1.797687	22.57650	2.130391	.9650657	55.25178
#1	4.744391	1.317164	.0564038	-.001981	.1632062	1.658486	-.002015
#2	4.773856	1.327014	.0584384	-.001412	.1678896	1.686825	-.004586
#3	4.872482	1.326320	.0577431	-.001328	.1701918	1.686206	-.001805

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4570-01LDLX10 Acquired: 11/11/2024 1:36:42 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE531L Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.7436634	.0204616	.0532304
Stddev	.0044729	.0014349	.0003495
%RSD	.6014681	7.012373	.6565240
#1	.7388899	.0198456	.0528393
#2	.7477582	.0221016	.0535120
#3	.7443421	.0194376	.0533399

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	863.3801	22088.17	2245.743	779.1043	1610.811
Stddev	2.0227	47.55	15.930	1.2272	2.765
%RSD	.2342717	.2152891	.7093583	.1575088	.1716409
#1	861.4451	22093.09	2262.993	779.4689	1607.667
#2	863.2149	22038.35	2231.586	777.7362	1612.861
#3	865.4803	22133.07	2242.650	780.1079	1611.905

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4570-03DLX2 Acquired: 11/11/2024 1:41:12 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE531S Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2884203	.0530253	.2125635	.1504171	.1580281	128.2964	4.969154
Stddev	.0121000	.0030506	.0045097	.0026261	.0000541	.2654	.015876
%RSD	4.195272	5.753020	2.121590	1.745856	.0342243	.2068639	.3194868
#1	.3022177	.0564209	.2090124	.1486734	.1579664	128.5366	4.979773
#2	.2796152	.0505161	.2110405	.1534374	.1580511	128.0115	4.976785
#3	.2834281	.0521390	.2176375	.1491405	.1580669	128.3411	4.950904

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0971539	.1058478	127.8006	.6348463	1.111520	.8977255	235.5890
Stddev	.0001008	.0003376	.6335	.0035175	.002202	.0010635	.7324
%RSD	.1037915	.3189239	.4956675	.5540741	.1981471	.1184654	.3108858
#1	.0972675	.1059415	128.1069	.6339340	1.112822	.8989525	236.4108
#2	.0970752	.1061286	127.0722	.6318749	1.108977	.8970671	235.0050
#3	.0971189	.1054733	128.2227	.6387301	1.112762	.8971571	235.3513

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.265057	48.69725	1.281567	.0724205	1.133262	1.352428	1.387877
Stddev	.036859	.07876	.001659	.0012318	.181568	.004876	.002253
%RSD	.5073516	.1617431	.1294505	1.700923	16.02167	.3605586	.1623088
#1	7.289915	48.63361	1.283311	.0738328	1.288630	1.357891	1.385494
#2	7.222709	48.67279	1.280008	.0718609	.933667	1.348517	1.388167
#3	7.282548	48.78534	1.281381	.0715679	1.177489	1.350876	1.389971

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	20.74798	6.140351	.2513096	-.002181	.7927918	7.065738	.0013109
Stddev	.07888	.010206	.0006483	.000717	.0036558	.022050	.0042883
%RSD	.3801902	.1662111	.2579603	32.87437	.4611262	.3120637	327.1260
#1	20.82489	6.151623	.2515981	-.002353	.7936113	7.073913	.0044739
#2	20.66726	6.131739	.2505672	-.001394	.7887959	7.040769	.0030287
#3	20.75179	6.137690	.2517636	-.002797	.7959683	7.082534	-.003570

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4570-03DLX2 Acquired: 11/11/2024 1:41:12 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE531S Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	3.180440	.1018663	.2297362
Stddev	.006002	.0012542	.0007470
%RSD	.1887312	1.231209	.3251612
#1	3.187326	.1033141	.2301998
#2	3.177677	.1011125	.2301344
#3	3.176317	.1011724	.2288745

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	886.7157	23096.01	2366.894	805.5165	1499.048
Stddev	1.0820	69.80	9.842	1.8952	1.888
%RSD	.1220216	.3022147	.4158328	.2352804	.1259534
#1	887.0179	23015.75	2361.871	806.8499	1499.058
#2	887.6145	23129.65	2378.234	806.3525	1500.931
#3	885.5148	23142.60	2360.576	803.3470	1497.155

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4570-04DLX2 Acquired: 11/11/2024 1:45:32 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE537 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1129137	-.026370	.1353667	-.001854	.0023263	70.44157	.7427494
Stddev	.0074621	.003101	.0015602	.005292	.0002835	.23431	.0034894
%RSD	6.608662	11.75887	1.152578	285.4032	12.18902	.3326260	.4697978
#1	.1053034	-.024468	.1349622	-.007387	.0020247	70.66878	.7464869
#2	.1202182	-.029948	.1340486	.003159	.0023667	70.20075	.7395771
#3	.1132196	-.024693	.1370893	-.001334	.0025874	70.45517	.7421842

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0034517	.0055386	22.47570	.1219173	.0834431	.5015921	156.0114
Stddev	.0001027	.0002131	.05369	.0016005	.0011021	.0052879	.5076
%RSD	2.975148	3.846800	.2388925	1.312753	1.320723	1.054230	.3253721
#1	.0035494	.0054321	22.52790	.1202970	.0833413	.4968699	156.2765
#2	.0034610	.0053998	22.47856	.1219576	.0823954	.5006008	155.4262
#3	.0033447	.0057839	22.42063	.1234972	.0845925	.5073055	156.3317

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.952917	28.12637	.1267452	-.013255	.8273364	.2520258	.4607057
Stddev	.021248	.13159	.0013840	.000427	.5543353	.0174667	.0032442
%RSD	.5375375	.4678567	1.091923	3.219497	67.00241	6.930509	.7041807
#1	3.971182	28.10486	.1275444	-.012922	.5286199	.2665531	.4636063
#2	3.929597	28.00686	.1251472	-.013736	1.466964	.2326459	.4572024
#3	3.957972	28.26739	.1275441	-.013107	.486425	.2568783	.4613086

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	17.63204	3.819753	.1855823	-.001282	1.019645	6.276357	.0030061
Stddev	.17025	.037155	.0022208	.001009	.020451	.034517	.0003769
%RSD	.9655903	.9727075	1.196662	78.70638	2.005701	.5499470	12.53898
#1	17.82688	3.831591	.1881357	-.000139	1.012077	6.277557	.0034365
#2	17.51196	3.778121	.1845110	-.001657	1.004057	6.310258	.0028472
#3	17.55727	3.849546	.1841003	-.002050	1.042802	6.241256	.0027347

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4570-04DLX2 Acquired: 11/11/2024 1:45:32 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE537 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.763660	.0552357	.2506001
Stddev	.006840	.0004107	.0013252
%RSD	.3878171	.7436357	.5288029
#1	1.771516	.0554897	.2514488
#2	1.760437	.0547619	.2490731
#3	1.759027	.0554556	.2512784

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	883.0662	22669.00	2300.485	803.6094	1591.766
Stddev	9.6339	74.36	9.731	3.2944	18.118
%RSD	1.090966	.3280250	.4230093	.4099488	1.138255
#1	880.7473	22588.41	2299.991	800.9564	1584.685
#2	893.6480	22734.96	2291.010	807.2969	1612.356
#3	874.8034	22683.63	2310.453	802.5750	1578.258

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4570-05DLX2 Acquired: 11/11/2024 1:49:59 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE538 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0809216	-.023426	.1110718	-.007030	.0054548	56.56920	.7816860
Stddev	.0048306	.005085	.0051344	.000364	.0011507	.06369	.0010159
%RSD	5.969462	21.70663	4.622626	5.173608	21.09505	.1125810	.1299652
#1	.0827720	-.020864	.1127374	-.006612	.0049970	56.63799	.7826547
#2	.0754393	-.020131	.1053114	-.007201	.0046035	56.51230	.7806287
#3	.0845534	-.029282	.1151668	-.007277	.0067639	56.55732	.7817746

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0028010	.0042602	55.69342	.1043852	.0692335	.3303064	134.0896
Stddev	.0000312	.0002604	.10302	.0015341	.0008703	.0051011	.2525
%RSD	1.113743	6.111531	.1849693	1.469689	1.257012	1.544354	.1883273
#1	.0027915	.0043470	55.81210	.1037732	.0695351	.3320617	134.2916
#2	.0028358	.0044660	55.62710	.1061309	.0682525	.3245594	133.8065
#3	.0027757	.0039675	55.64107	.1032515	.0699128	.3342981	134.1707

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.678034	27.70404	.1053421	-.011013	1.065596	.2084808	.4608948
Stddev	.010202	.05502	.0010624	.000560	.254197	.0062302	.0019945
%RSD	.2773739	.1985895	1.008479	5.083105	23.85493	2.988385	.4327436
#1	3.679664	27.75983	.1058748	-.010463	.781836	.2093976	.4589957
#2	3.687323	27.70247	.1041188	-.010995	1.272485	.2018430	.4629727
#3	3.667115	27.64983	.1060328	-.011582	1.142467	.2142018	.4607161

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.97120	5.111083	.2224550	-.000258	2.363481	7.017639	.0011182
Stddev	.04898	.006236	.0014056	.000595	.015489	.013967	.0025204
%RSD	.3066590	.1220096	.6318751	230.9587	.6553308	.1990320	225.4053
#1	15.92741	5.118283	.2239711	-.000712	2.367448	7.023592	-.001792
#2	15.96210	5.107537	.2221990	.000416	2.346395	7.027644	.002563
#3	16.02409	5.107428	.2211951	-.000477	2.376601	7.001682	.002584

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4570-05DLX2 Acquired: 11/11/2024 1:49:59 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE538 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.213720	.0452503	.4756719
Stddev	.005431	.0005428	.0007358
%RSD	.4474729	1.199624	.1546903
#1	1.217347	.0450635	.4765043
#2	1.207476	.0448255	.4754034
#3	1.216338	.0458618	.4751081

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	865.5371	22355.04	2289.703	786.6799	1581.322
Stddev	.6642	68.18	10.296	4.1184	1.522
%RSD	.0767329	.3050020	.4496781	.5235152	.0962710
#1	865.1875	22307.82	2281.260	783.8215	1579.908
#2	866.3031	22324.09	2286.675	784.8177	1581.126
#3	865.1208	22433.21	2301.173	791.4005	1582.933

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4570-06DLX2 Acquired: 11/11/2024 1:54:27 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE539 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0878346	-.027774	.0766994	-.002525	.0002940	71.70195	.6048677
Stddev	.0088010	.002953	.0023956	.005251	.0021746	.18234	.0003999
%RSD	10.01991	10.63191	3.123406	207.9900	739.7630	.2542999	.0661207
#1	.0776905	-.029021	.0773595	-.002641	-.001849	71.90842	.6044749
#2	.0934348	-.024402	.0740430	.002783	.002499	71.63440	.6048537
#3	.0923786	-.029899	.0786958	-.007716	.000232	71.56302	.6052744

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0029792	.0033470	70.74166	.1460480	.0735429	.2348350	133.7518
Stddev	.0001698	.0001026	.31392	.0011540	.0007990	.0020178	.2996
%RSD	5.699718	3.065803	.4437530	.7901794	1.086417	.8592606	.2239936
#1	.0029376	.0033215	71.06560	.1466272	.0727419	.2335868	134.0161
#2	.0028340	.0032596	70.72055	.1447190	.0735468	.2371630	133.8131
#3	.0031659	.0034600	70.43883	.1467977	.0743399	.2337552	133.4263

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.126321	40.60266	.1708690	-.010260	1.896978	.2502105	.3879653
Stddev	.014533	.12628	.0005862	.000276	.246516	.0076658	.0057760
%RSD	.4648487	.3110249	.3430878	2.689794	12.99518	3.063746	1.488783
#1	3.140075	40.74561	.1712649	-.009942	1.619361	.2577587	.3893234
#2	3.127769	40.55613	.1701955	-.010407	1.981321	.2424323	.3929412
#3	3.111118	40.50625	.1711466	-.010431	2.090253	.2504405	.3816313

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.11895	3.745691	.1824183	-.000128	1.846840	7.070870	.0032223
Stddev	.14371	.014188	.0014351	.000221	.003335	.027668	.0027978
%RSD	1.292467	.3787821	.7867180	172.7899	.1805963	.3913017	86.82642
#1	11.03721	3.743651	.1830352	-.000032	1.849961	7.096004	.0000050
#2	11.28488	3.732633	.1807778	.000029	1.847232	7.075384	.0050850
#3	11.03474	3.760788	.1834418	-.000381	1.843325	7.041222	.0045769

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4570-06DLX2 Acquired: 11/11/2024 1:54:27 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE539 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.808229	.0958400	.5770347
Stddev	.001993	.0030086	.0012525
%RSD	.1102122	3.139164	.2170641
#1	1.806181	.0988049	.5784336
#2	1.810162	.0959255	.5760172
#3	1.808344	.0927895	.5766532

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	867.9597	22501.78	2291.047	791.0643	1553.932
Stddev	1.5074	64.78	8.403	7.1764	2.865
%RSD	.1736761	.2879089	.3667834	.9071841	.1843772
#1	866.4364	22510.15	2282.854	792.6878	1556.350
#2	869.4507	22433.21	2290.640	783.2152	1554.678
#3	867.9919	22561.96	2299.646	797.2899	1550.768

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4570-07DLX2 Acquired: 11/11/2024 1:58:55 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE540 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4185930	-.029391	.1093843	-.006010	.0021127	64.76861	.8939923
Stddev	.0141335	.007837	.0033958	.006605	.0018040	.18395	.0015372
%RSD	3.376417	26.66501	3.104430	109.9013	85.38815	.2840185	.1719479
#1	.4043199	-.020800	.1088785	-.013404	.0038393	64.98098	.8957329
#2	.4188766	-.031224	.1062699	-.003931	.0022586	64.65865	.8934232
#3	.4325826	-.036149	.1130046	-.000695	.0002402	64.66620	.8928209

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0037240	.0044235	201.6688	.2592097	.0825521	.1946969	153.8929
Stddev	.0000167	.0002130	.8882	.0010145	.0001644	.0005041	.5368
%RSD	.4476829	4.815374	.4404316	.3913704	.1991356	.2589380	.3488353
#1	.0037432	.0043544	202.6937	.2588576	.0827271	.1950264	154.5068
#2	.0037163	.0042536	201.1898	.2584183	.0825281	.1949476	153.6599
#3	.0037126	.0046625	201.1230	.2603533	.0824009	.1941165	153.5119

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.372255	39.41118	.2289084	-.010063	2.469465	.2580773	.4050420
Stddev	.053639	.17341	.0015070	.000604	.360910	.0053233	.0018241
%RSD	.7275747	.4400144	.6583530	5.997565	14.61490	2.062686	.4503357
#1	7.434128	39.60326	.2277576	-.010732	2.618740	.2641027	.4035295
#2	7.338881	39.26613	.2283534	-.009559	2.057866	.2561176	.4070677
#3	7.343757	39.36416	.2306142	-.009897	2.731790	.2540116	.4045287

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.43167	4.747256	.1755066	.0051616	2.071463	6.953387	-.000973
Stddev	.10660	.012923	.0008940	.0004197	.004061	.043557	.001948
%RSD	1.021884	.2722130	.5094127	8.131239	.1960556	.6264150	200.0962
#1	10.49344	4.759618	.1749210	.0047340	2.067605	6.998135	.001209
#2	10.30858	4.748312	.1765357	.0051779	2.075701	6.911127	-.002534
#3	10.49299	4.733838	.1750632	.0055729	2.071084	6.950901	-.001595

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4570-07DLX2 Acquired: 11/11/2024 1:58:55 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE540 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.790591	.0766689	.5471517
Stddev	.012844	.0034645	.0018371
%RSD	.4602607	4.518851	.3357580
#1	2.802988	.0804105	.5492582
#2	2.791442	.0760241	.5463150
#3	2.777342	.0735720	.5458818

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	881.3474	22918.72	2359.557	799.1640	1492.045
Stddev	.6991	36.42	8.749	4.0225	.506
%RSD	.0793174	.1589277	.3707745	.5033368	.0339197
#1	881.9048	22949.98	2352.767	803.7532	1491.748
#2	880.5631	22927.45	2369.429	796.2493	1492.629
#3	881.5744	22878.72	2356.474	797.4895	1491.757

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4570-08DLX2 Acquired: 11/11/2024 2:03:24 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE541 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1271949	-.030785	.1422301	-.002927	.0035678	66.29647	.6933453
Stddev	.0127134	.001927	.0034681	.004753	.0026339	.34577	.0027153
%RSD	9.995234	6.259450	2.438394	162.3907	73.82486	.5215540	.3916233
#1	.1128894	-.028652	.1397158	.001718	.0055342	65.99035	.6923081
#2	.1372017	-.031301	.1461866	-.007781	.0045938	66.67151	.6964263
#3	.1314936	-.032401	.1407879	-.002718	.0005753	66.22753	.6913015

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0034295	.0056989	11.68632	.1716868	.0758966	.3766742	157.5952
Stddev	.0002712	.0002193	.03999	.0004487	.0003451	.0021364	.7398
%RSD	7.907031	3.848031	.3422145	.2613553	.4546574	.5671727	.4694600
#1	.0037417	.0059254	11.67053	.1712057	.0758559	.3772645	156.9419
#2	.0032933	.0054876	11.73180	.1720940	.0762603	.3743048	158.3986
#3	.0032533	.0056838	11.65663	.1717607	.0755737	.3784535	157.4450

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.533695	26.32466	.1424673	-.015172	.7336032	.2667438	.5029783
Stddev	.035537	.30475	.0001178	.000264	.0528534	.0095311	.0018178
%RSD	1.005651	1.157667	.0826679	1.742412	7.204629	3.573130	.3614055
#1	3.502147	26.19216	.1425166	-.014988	.7499230	.2590503	.5041182
#2	3.572193	26.67324	.1425523	-.015052	.7763720	.2774059	.5008819
#3	3.526743	26.10860	.1423328	-.015475	.6745147	.2637752	.5039347

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	13.42578	3.242880	.1656727	-.000990	.7079922	6.197476	.0055583
Stddev	.14549	.001823	.0019169	.000738	.0007324	.036096	.0026425
%RSD	1.083662	.0562275	1.157035	74.57704	.1034426	.5824241	47.54132
#1	13.27465	3.244320	.1645956	-.000617	.7077684	6.180094	.0039446
#2	13.56489	3.243491	.1678858	-.000512	.7088104	6.238974	.0086079
#3	13.43779	3.240830	.1645365	-.001840	.7073979	6.173361	.0041225

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4570-08DLX2 Acquired: 11/11/2024 2:03:24 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE541 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.735210	.0480153	.1230091
Stddev	.009387	.0022431	.0007361
%RSD	.5409765	4.671680	.5984357
#1	1.725407	.0476089	.1225013
#2	1.744116	.0460032	.1238533
#3	1.736108	.0504339	.1226725

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	878.9769	22665.46	2317.644	796.9713	1589.975
Stddev	.3981	22.14	12.279	4.2845	4.017
%RSD	.0452886	.0976951	.5297996	.5375996	.2526531
#1	878.6376	22639.91	2323.387	793.6041	1594.370
#2	878.8780	22679.21	2303.546	801.7939	1586.494
#3	879.4151	22677.24	2326.000	795.5159	1589.062

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4570-09DLX2 Acquired: 11/11/2024 2:07:50 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE542 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1038598	-.026140	.1120536	-.008348	.0059017	63.94815	.6716239
Stddev	.0124325	.003006	.0029909	.004099	.0030580	.45482	.0046818
%RSD	11.97044	11.49930	2.669130	49.10615	51.81521	.7112375	.6970897
#1	.1143228	-.023839	.1089653	-.006924	.0094319	64.30430	.6757535
#2	.0901159	-.029541	.1122591	-.012970	.0042013	63.43581	.6665376
#3	.1071407	-.025039	.1149365	-.005150	.0040718	64.10434	.6725806

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0030692	.0042564	26.40109	.1343175	.0739756	.2823265	152.0090
Stddev	.0000912	.0002161	.16595	.0004942	.0002768	.0091999	1.1702
%RSD	2.970565	5.076304	.6285910	.3679665	.3741982	3.258604	.7698086
#1	.0030537	.0041516	26.57395	.1347355	.0738112	.2883951	153.0294
#2	.0031672	.0045048	26.24303	.1344450	.0738204	.2717412	150.7317
#3	.0029868	.0041126	26.38630	.1337720	.0742952	.2868432	152.2659

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.397126	28.50048	.1188686	-.013435	1.192981	.2282399	.4285768
Stddev	.019614	.35384	.0007224	.000431	.110313	.0046759	.0040623
%RSD	.5773621	1.241505	.6077525	3.207287	9.246873	2.048688	.9478618
#1	3.417089	28.77555	.1185303	-.013112	1.234649	.2324672	.4249854
#2	3.377881	28.10131	.1183775	-.013268	1.276392	.2290351	.4277592
#3	3.396409	28.62459	.1196982	-.013924	1.067903	.2232173	.4329857

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	14.99912	4.094546	.1720891	-.000708	1.401574	5.916406	.0033885
Stddev	.18792	.014144	.0014430	.000287	.002492	.051191	.0024549
%RSD	1.252847	.3454253	.8385278	40.46444	.1778355	.8652417	72.44604
#1	15.13948	4.097956	.1719243	-.000603	1.400966	5.938702	.0009638
#2	14.78563	4.079009	.1707355	-.000489	1.399442	5.857848	.0058724
#3	15.07224	4.106673	.1736074	-.001033	1.404314	5.952668	.0033294

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4570-09DLX2 Acquired: 11/11/2024 2:07:50 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE542 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.750946	.0504788	.1950573
Stddev	.018634	.0018768	.0015713
%RSD	1.064201	3.718008	.8055454
#1	1.770238	.0488587	.1962578
#2	1.733049	.0500422	.1932790
#3	1.749551	.0525354	.1956353

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	873.8549	22607.79	2296.868	793.0760	1584.442
Stddev	1.9482	114.68	15.431	1.5054	4.308
%RSD	.2229474	.5072742	.6718160	.1898136	.2719123
#1	874.5920	22514.04	2286.198	794.6304	1582.495
#2	875.3271	22573.68	2314.561	792.9726	1589.380
#3	871.6457	22735.66	2289.845	791.6250	1581.451

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4570-10DLX2 Acquired: 11/11/2024 2:12:19 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE563 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2751469	-.050960	.2635649	-.012190	.0066895	96.61176	1.414269
Stddev	.0118721	.001000	.0039973	.006511	.0035361	.33295	.004228
%RSD	4.314811	1.962626	1.516642	53.40826	52.86018	.3446285	.2989581
#1	.2804646	-.050532	.2608788	-.012253	.0105288	96.28823	1.409678
#2	.2615456	-.052103	.2616573	-.018669	.0059734	96.59364	1.418003
#3	.2834304	-.050246	.2681587	-.005649	.0035663	96.95340	1.415125

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0053960	.0081708	37.81545	.2658365	.1829744	.3653106	300.4513
Stddev	.0002353	.0000546	.15120	.0005300	.0016774	.0030425	.9892
%RSD	4.360486	.6687255	.3998275	.1993655	.9167223	.8328448	.3292491
#1	.0056598	.0082185	37.70347	.2652291	.1833108	.3617975	299.5429
#2	.0052079	.0081828	37.75544	.2660755	.1811544	.3670782	300.3058
#3	.0053203	.0081112	37.98744	.2662049	.1844581	.3670561	301.5053

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.522008	53.51228	.3379385	-.023919	1.600280	.6458560	.6054135
Stddev	.041604	.29879	.0006904	.000238	.250755	.0039864	.0035043
%RSD	.4881929	.5583585	.2042920	.9930800	15.66942	.6172307	.5788266
#1	8.489037	53.16817	.3377000	-.023646	1.379913	.6465863	.6032553
#2	8.508235	53.70593	.3387166	-.024030	1.547809	.6494267	.6035283
#3	8.568752	53.66274	.3373991	-.024080	1.873118	.6415549	.6094569

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.83982	4.837250	.3065639	-.001550	.4741506	6.656794	.0053610
Stddev	.08240	.011238	.0027264	.000614	.0042745	.019855	.0032358
%RSD	.5202318	.2323152	.8893463	39.61144	.9015076	.2982717	60.35703
#1	15.79201	4.846715	.3034680	-.001146	.4722546	6.671043	.0088070
#2	15.93497	4.824831	.3076168	-.002257	.4790451	6.634114	.0048886
#3	15.79248	4.840205	.3086068	-.001247	.4711521	6.665224	.0023875

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4570-10DLX2 Acquired: 11/11/2024 2:12:19 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE563 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.556316	.0883256	.1814926
Stddev	.005701	.0016578	.0005535
%RSD	.2230230	1.876918	.3049448
#1	2.557008	.0864224	.1808810
#2	2.550300	.0894545	.1819590
#3	2.561639	.0891000	.1816377

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	880.7451	22828.84	2320.442	800.2456	1543.269
Stddev	2.7031	80.14	3.864	4.8497	2.662
%RSD	.3069126	.3510509	.1665119	.6060211	.1724781
#1	880.6040	22857.61	2320.748	804.8390	1543.508
#2	883.5160	22738.29	2324.144	800.7228	1545.803
#3	878.1153	22890.63	2316.435	795.1750	1540.496

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4570-11DLX2 Acquired: 11/11/2024 2:16:45 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE564 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2566811	-.041326	.1463080	-.007516	.0102025	103.4890	1.176236
Stddev	.0158480	.004843	.0051746	.007083	.0006941	.3058	.005969
%RSD	6.174209	11.71841	3.536777	94.24518	6.803063	.2955339	.5074854
#1	.2406999	-.045966	.1507912	-.007151	.0109740	103.5497	1.178967
#2	.2723926	-.036303	.1474873	-.000622	.0096288	103.1573	1.169390
#3	.2569508	-.041708	.1406456	-.014774	.0100045	103.7599	1.180352

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0053176	.0082954	18.32027	.3037883	.1360126	.3358174	289.4497
Stddev	.0001178	.0002058	.09685	.0018503	.0011101	.0049718	.7704
%RSD	2.215534	2.481303	.5286651	.6090701	.8161985	1.480506	.2661746
#1	.0051826	.0084876	18.40855	.3034928	.1349183	.3315770	288.7099
#2	.0053709	.0083204	18.21667	.3021036	.1371379	.3345861	289.3918
#3	.0053994	.0080782	18.33560	.3057686	.1359816	.3412892	290.2475

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.215634	56.96658	.3332622	-.024546	1.377309	.5789280	.5195536
Stddev	.001001	.09157	.0010815	.000111	.169111	.0007708	.0006706
%RSD	.0161094	.1607517	.3245327	.4517483	12.27836	.1331413	.1290669
#1	6.216772	56.87426	.3342977	-.024645	1.543321	.5797237	.5189910
#2	6.215238	56.96811	.3321399	-.024566	1.205261	.5781849	.5193740
#3	6.214890	57.05739	.3333489	-.024426	1.383345	.5788753	.5202956

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.68885	5.416035	.2912415	-.001784	1.636663	5.885960	.0042064
Stddev	.08247	.014255	.0016431	.001036	.003444	.037616	.0011592
%RSD	.5256915	.2632030	.5641540	58.06051	.2103990	.6390851	27.55697
#1	15.75599	5.425123	.2895837	-.002145	1.639530	5.903265	.0032391
#2	15.59679	5.399605	.2928694	-.000616	1.632844	5.842806	.0038889
#3	15.71378	5.423375	.2912715	-.002591	1.637615	5.911810	.0054912

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4570-11DLX2 Acquired: 11/11/2024 2:16:45 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE564 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.485815	.0918140	.1680715
Stddev	.008529	.0017716	.0005078
%RSD	.3431187	1.929572	.3021600
#1	2.484329	.0909092	.1680703
#2	2.478126	.0906774	.1675643
#3	2.494989	.0938553	.1685800

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	895.7931	23117.09	2362.553	813.2465	1565.894
Stddev	.7241	55.71	10.809	2.7476	1.128
%RSD	.0808340	.2409770	.4575294	.3378526	.0720132
#1	894.9821	23139.13	2365.431	816.4117	1564.774
#2	896.3748	23053.73	2371.632	811.4766	1567.030
#3	896.0224	23158.40	2350.596	811.8510	1565.880

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4570-12DLX2 Acquired: 11/11/2024 2:21:11 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE565 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1999451	-.037805	.1533007	-.001811	.0063765	85.90570	1.064036
Stddev	.0051817	.001770	.0024478	.000504	.0015400	5.94426	.076172
%RSD	2.591569	4.683082	1.596754	27.82015	24.15190	6.919522	7.158796
#1	.1939875	-.036212	.1511220	-.001958	.0050004	85.43843	1.058960
#2	.2024434	-.037491	.1559495	-.002226	.0060890	92.06981	1.142620
#3	.2034043	-.039711	.1528307	-.001251	.0080400	80.20886	.990529

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0045184	.0074142	17.26632	.2261744	.1200993	.3424013	233.0222
Stddev	.0002461	.0003603	1.14034	.0057437	.0006628	.0221446	15.7466
%RSD	5.447642	4.859116	6.604408	2.539517	.5518570	6.467433	6.757561
#1	.0045328	.0074902	17.20386	.2291134	.1204556	.3387166	232.0284
#2	.0047571	.0070220	18.43660	.2195559	.1205078	.3661571	249.2422
#3	.0042654	.0077304	16.15849	.2298539	.1193346	.3223302	217.7961

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.590655	42.50329	.2618087	-.019175	1.199367	.4338026	.5354944
Stddev	.377264	3.03050	.0004385	.001886	.274006	.0258641	.0081039
%RSD	6.748119	7.130046	.1675039	9.833284	22.84584	5.962184	1.513348
#1	5.565766	42.22703	.2618914	-.018678	1.397295	.4338286	.5434047
#2	5.979748	45.66246	.2622001	-.021259	1.314173	.4596537	.5272099
#3	5.226452	39.62037	.2613348	-.017588	.886634	.4079255	.5358687

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	17.24616	4.883333	.2419320	-.000464	.7718845	5.444413	.0061809
Stddev	1.26735	.009744	.0170152	.000636	.0054064	.313411	.0024623
%RSD	7.348596	.1995408	7.033064	137.2217	.7004196	5.756569	39.83713
#1	17.17261	4.875231	.2406952	-.001146	.7765990	5.431858	.0068819
#2	18.54868	4.894145	.2595319	-.000357	.7730711	5.763913	.0034441
#3	16.01718	4.880622	.2255690	.000113	.7659833	5.137468	.0082167

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4570-12DLX2 Acquired: 11/11/2024 2:21:11 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE565 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.470483	.0809039	.1705324
Stddev	.174523	.0055946	.0118790
%RSD	7.064330	6.915146	6.965858
#1	2.455997	.0802853	.1699079
#2	2.651797	.0867821	.1827113
#3	2.303654	.0756443	.1589779

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	888.5749	22680.35	2366.257	796.7554	1572.497
Stddev	.8965	258.77	137.135	10.8971	1.570
%RSD	.1008889	1.140953	5.795441	1.367686	.0998686
#1	889.5300	22454.01	2368.466	786.4677	1574.231
#2	888.4430	22962.46	2228.030	808.1738	1572.091
#3	887.7516	22624.58	2502.274	795.6246	1571.171

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4570-13DLX2 Acquired: 11/11/2024 2:25:37 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE566 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3233174	-.041670	.2180155	-.007918	.0048416	80.77935	1.061308
Stddev	.0055602	.005411	.0062581	.006360	.0032525	.04503	.000581
%RSD	1.719721	12.98528	2.870504	80.32235	67.17710	.0557418	.0547182
#1	.3296520	-.047517	.2237569	-.013993	.0029303	80.77674	1.061670
#2	.3210560	-.036840	.2113446	-.008456	.0029975	80.73568	1.060638
#3	.3192443	-.040653	.2189450	-.001306	.0085970	80.82562	1.061617

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0049065	.0090314	13.29283	.2151762	.1244185	.4378928	260.4177
Stddev	.0003347	.0000548	.04733	.0126185	.0013150	.0056710	.5948
%RSD	6.822107	.6065930	.3560846	5.864240	1.056875	1.295071	.2284011
#1	.0050006	.0090167	13.34604	.2228286	.1245142	.4418932	259.8697
#2	.0051840	.0089854	13.25540	.2220880	.1230584	.4314028	260.3331
#3	.0045347	.0090920	13.27705	.2006119	.1256830	.4403822	261.0502

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.966080	43.85412	.2692516	-.024484	1.322954	.4956116	.5835839
Stddev	.015198	.21909	.0010426	.002904	.233024	.0021590	.0288216
%RSD	.2547441	.4995797	.3872082	11.86176	17.61394	.4356282	4.938726
#1	5.973556	43.99408	.2684416	-.023363	1.375643	.4938660	.6007871
#2	5.948592	43.60164	.2704279	-.022308	1.525122	.4980258	.5996545
#3	5.976093	43.96663	.2688853	-.027782	1.068096	.4949428	.5503100

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	14.78575	5.348600	.2627917	-.000742	.7998222	5.727334	.0059366
Stddev	.03103	.008282	.0023667	.000537	.0032937	.044320	.0016221
%RSD	.2098819	.1548510	.9006038	72.31928	.4118040	.7738309	27.32293
#1	14.82146	5.357085	.2601854	-.001307	.7996221	5.776051	.0077929
#2	14.77050	5.340536	.2633828	-.000680	.7966331	5.716550	.0052245
#3	14.76529	5.348179	.2648068	-.000239	.8032114	5.689402	.0047924

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4570-13DLX2 Acquired: 11/11/2024 2:25:37 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE566 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.494422	.0737407	.1568426
Stddev	.002861	.0024943	.0002134
%RSD	.1147036	3.382581	.1360318
#1	2.495030	.0741492	.1566251
#2	2.491305	.0760056	.1570515
#3	2.496930	.0710674	.1568513

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	894.8781	23777.26	2360.022	837.9860	1575.561
Stddev	.9685	1135.62	7.905	36.3009	1.365
%RSD	.1082274	4.776076	.3349376	4.331919	.0866261
#1	894.0518	23207.78	2353.106	815.1567	1574.830
#2	894.6388	23039.06	2368.639	818.9560	1577.136
#3	895.9439	25084.93	2358.322	879.8451	1574.717

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4570-14DLX2 Acquired: 11/11/2024 2:30:04 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE567 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2318684	-.040026	.2131515	-.004103	.0072583	74.83674	1.178686
Stddev	.0110088	.005345	.0028079	.000365	.0048175	.15013	.000713
%RSD	4.747850	13.35386	1.317307	8.893629	66.37236	.2006044	.0604571
#1	.2211523	-.034971	.2113983	-.004502	.0041977	74.66597	1.179334
#2	.2431482	-.039488	.2163901	-.004020	.0047658	74.94795	1.178800
#3	.2313048	-.045620	.2116662	-.003786	.0128114	74.89629	1.177923

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0043307	.0083666	11.99883	.2097538	.1210560	.4198673	232.2667
Stddev	.0002428	.0001729	.01118	.0003483	.0003132	.0046040	.6304
%RSD	5.606915	2.066659	.0931729	.1660331	.2587591	1.096539	.2714067
#1	.0041887	.0081672	12.01172	.2095232	.1212897	.4222927	231.5392
#2	.0046110	.0084566	11.99186	.2101544	.1207000	.4227515	232.6097
#3	.0041923	.0084759	11.99289	.2095838	.1211782	.4145577	232.6512

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.876916	41.91739	.2673685	-.020431	1.286929	.4290351	.5489818
Stddev	.030222	.16308	.0014297	.000448	.161820	.0095293	.0024107
%RSD	.3836806	.3890533	.5347334	2.194305	12.57412	2.221103	.4391275
#1	7.843287	41.73070	.2689281	-.020797	1.424437	.4194039	.5510529
#2	7.885653	42.03209	.2661199	-.019931	1.327739	.4292422	.5463355
#3	7.901806	41.98938	.2670575	-.020564	1.108610	.4384591	.5495570

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	13.91978	4.460967	.2342864	-.001296	.4966998	6.636251	.0073231
Stddev	.05725	.016774	.0025458	.000380	.0056725	.033847	.0011421
%RSD	.4113107	.3760221	1.086611	29.32760	1.142038	.5100343	15.59581
#1	13.93287	4.474471	.2314120	-.001466	.4998408	6.599323	.0060146
#2	13.96936	4.466239	.2351903	-.000861	.5001071	6.643630	.0078350
#3	13.85712	4.442190	.2362569	-.001562	.4901516	6.665800	.0081197

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4570-14DLX2 Acquired: 11/11/2024 2:30:04 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE567 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.564683	.0678213	.1580772
Stddev	.003695	.0021916	.0003847
%RSD	.1440889	3.231469	.2433745
#1	2.560946	.0661449	.1578887
#2	2.564766	.0703012	.1578231
#3	2.568336	.0670176	.1585198

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	884.2981	22859.76	2342.149	799.4717	1570.428
Stddev	.4137	17.16	6.448	4.2760	.781
%RSD	.0467858	.0750850	.2753090	.5348582	.0497464
#1	884.6759	22879.57	2349.340	795.9000	1570.593
#2	884.3626	22849.30	2340.224	804.2099	1569.577
#3	883.8560	22850.41	2336.882	798.3051	1571.114

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4570-15DLX2 Acquired: 11/11/2024 2:34:29 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE568 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2195157	-.038053	.1486188	-.005407	.0049133	85.72616	1.245865
Stddev	.0086559	.005496	.0009255	.011527	.0008733	6.16894	.087042
%RSD	3.943178	14.44192	.6227278	213.1980	17.77420	7.196102	6.986504
#1	.2293203	-.036887	.1475503	-.009311	.0059201	87.32022	1.268421
#2	.2162945	-.033234	.1491675	-.014474	.0044589	78.91663	1.149764
#3	.2129322	-.044038	.1491387	.007565	.0043608	90.94161	1.319409

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0046781	.0072801	44.08883	.2145247	.1365399	.3604130	228.1736
Stddev	.0002983	.0007781	3.15217	.0030615	.0010116	.0309838	16.3959
%RSD	6.375713	10.68812	7.149593	1.427118	.7408782	8.596749	7.185716
#1	.0049425	.0069078	44.88820	.2147895	.1372747	.3711805	231.9054
#2	.0043548	.0081744	40.61393	.2174452	.1353861	.3254819	210.2334
#3	.0047370	.0067580	46.76435	.2113394	.1369588	.3845765	242.3819

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.173595	43.59674	.2730572	-.018118	1.016081	.4443842	.4798594
Stddev	.507248	3.34029	.0012754	.001795	.137679	.0437209	.0012892
%RSD	7.071043	7.661792	.4670896	9.908536	13.54996	9.838537	.2686511
#1	7.317703	44.57358	.2717382	-.018314	.894485	.4710014	.4783711
#2	6.609885	39.87693	.2731496	-.016232	.988188	.3939251	.4806281
#3	7.593196	46.33971	.2742840	-.019807	1.165571	.4682261	.4805791

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	16.60943	4.652534	.2354953	-.001231	.6619165	6.093895	.0039680
Stddev	1.25608	.005648	.0201494	.000792	.0116731	.377738	.0009510
%RSD	7.562464	.1213881	8.556188	64.35715	1.763533	6.198629	23.96753
#1	16.76150	4.658788	.2383516	-.001570	.6522629	6.176216	.0044244
#2	15.28423	4.647806	.2140702	-.000326	.6585968	5.681784	.0046048
#3	17.78255	4.651010	.2540642	-.001798	.6748899	6.423683	.0028748

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4570-15DLX2 Acquired: 11/11/2024 2:34:29 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE568 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.628575	.0761027	.1947616
Stddev	.184839	.0050651	.0138134
%RSD	7.031906	6.655603	7.092442
#1	2.671276	.0780285	.1985607
#2	2.426123	.0703571	.1794462
#3	2.788327	.0799223	.2062779

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	885.4896	22859.43	2369.563	802.3556	1556.734
Stddev	.6890	59.24	147.271	2.5961	1.476
%RSD	.0778128	.2591616	6.215100	.3235622	.0948170
#1	885.1939	22811.23	2331.807	805.2505	1558.024
#2	884.9977	22841.48	2532.036	801.5821	1555.124
#3	886.2771	22925.57	2244.846	800.2341	1557.054

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4570-16DLX2 Acquired: 11/11/2024 2:38:57 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE569 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2093131	-.035034	.1876593	-.003574	.0034966	80.40519	1.041345
Stddev	.0011793	.002837	.0023895	.003471	.0020118	.17293	.002387
%RSD	.5634126	8.098669	1.273323	97.12088	57.53473	.2150794	.2292284
#1	.2082041	-.037972	.1887795	-.005392	.0054173	80.26882	1.038719
#2	.2105519	-.034821	.1849155	.000428	.0014047	80.59971	1.041930
#3	.2091832	-.032310	.1892829	-.005757	.0036679	80.34704	1.043384

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0047130	.0077380	15.73676	.2087544	.1230913	.4660111	220.1734
Stddev	.0000665	.0002431	.07802	.0016830	.0017591	.0054556	.7058
%RSD	1.409878	3.141122	.4957612	.8062040	1.429129	1.170709	.3205761
#1	.0046364	.0076042	15.66878	.2079532	.1210792	.4706041	219.5865
#2	.0047477	.0075913	15.82194	.2106883	.1243384	.4599807	220.9566
#3	.0047548	.0080186	15.71956	.2076217	.1238562	.4674486	219.9771

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.647116	42.66731	.2585727	-.018875	1.205339	.4098768	.5987597
Stddev	.018680	.17503	.0025289	.000222	.057563	.0067301	.0023860
%RSD	.3307932	.4102295	.9780117	1.178717	4.775662	1.641977	.3984900
#1	5.631341	42.46826	.2556527	-.018701	1.269287	.4023957	.5974651
#2	5.667744	42.79718	.2600092	-.019126	1.157666	.4154390	.5973007
#3	5.642263	42.73649	.2600561	-.018798	1.189064	.4117958	.6015132

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	16.83346	5.105506	.2268047	-.000625	.8743840	6.410512	.0026662
Stddev	.09052	.062305	.0006152	.000336	.0129253	.034240	.0005229
%RSD	.5377345	1.220348	.2712317	53.80217	1.478218	.5341289	19.61022
#1	16.72952	5.033673	.2268939	-.000991	.8614166	6.372378	.0024020
#2	16.87593	5.144883	.2273704	-.000330	.8872668	6.438620	.0032685
#3	16.89494	5.137961	.2261498	-.000554	.8744685	6.420538	.0023282

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4570-16DLX2 Acquired: 11/11/2024 2:38:57 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE569 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.614566	.0697861	.1586061
Stddev	.006544	.0008326	.0000908
%RSD	.2502982	1.193045	.0572461
#1	2.608608	.0688295	.1586502
#2	2.613519	.0701807	.1585016
#3	2.621571	.0703480	.1586663

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	897.4462	23004.28	2332.801	806.8359	1586.375
Stddev	8.7108	2.50	12.468	.8532	17.212
%RSD	.9706215	.0108855	.5344555	.1057482	1.084962
#1	907.4185	23003.89	2345.062	806.8136	1606.246
#2	893.5970	23001.99	2320.137	805.9940	1576.706
#3	891.3231	23006.96	2333.204	807.7000	1576.171

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4570-17DLX2 Acquired: 11/11/2024 2:43:23 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE570 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3597437	-.047346	.1998337	-.004218	.0066789	110.4748	1.377031
Stddev	.0176926	.002750	.0043307	.008706	.0034336	.1274	.000230
%RSD	4.918102	5.808266	2.167128	206.4310	51.41017	.1152955	.0167335
#1	.3521495	-.049917	.1964930	-.008979	.0070757	110.5905	1.376926
#2	.3471161	-.047673	.1982816	.005831	.0030641	110.4956	1.377295
#3	.3799656	-.044447	.2047265	-.009505	.0098969	110.3384	1.376872

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0057653	.0098009	21.46908	.2868773	.1497679	.4493058	301.7840
Stddev	.0001490	.0001878	.04867	.0013609	.0006859	.0047649	.4769
%RSD	2.584739	1.916593	.2266821	.4743710	.4580040	1.060507	.1580345
#1	.0058448	.0096259	21.47091	.2865786	.1504486	.4525800	302.1881
#2	.0058576	.0099994	21.51681	.2883627	.1490769	.4438393	301.9059
#3	.0055934	.0097772	21.41953	.2856905	.1497781	.4514980	301.2579

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.818978	51.16383	.3265006	-.025728	1.093955	.5644479	.7676042
Stddev	.024945	.44157	.0004772	.000632	.317653	.0030408	.0007745
%RSD	.3658154	.8630597	.1461539	2.456279	29.03708	.5387180	.1008961
#1	6.845459	51.64568	.3259850	-.026272	1.048554	.5667532	.7671745
#2	6.815551	51.06731	.3269267	-.025035	1.431866	.5655889	.7671398
#3	6.795923	50.77849	.3265901	-.025876	.801446	.5610017	.7684982

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	20.89453	6.473576	.3124431	-.001073	1.253596	4.148136	.0073198
Stddev	.11727	.018700	.0026758	.000595	.010436	.018042	.0022010
%RSD	.5612545	.2888616	.8564157	55.50494	.8324486	.4349315	30.06852
#1	20.83245	6.457416	.3134159	-.001313	1.244653	4.166562	.0063357
#2	21.02979	6.469253	.3144964	-.001511	1.265061	4.147340	.0098411
#3	20.82134	6.494058	.3094169	-.000395	1.251073	4.130506	.0057826

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4570-17DLX2 Acquired: 11/11/2024 2:43:23 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE570 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.776038	.0896043	.2308118
Stddev	.006663	.0011699	.0000837
%RSD	.2400223	1.305668	.0362680
#1	2.783466	.0902380	.2309044
#2	2.774064	.0882542	.2307895
#3	2.770586	.0903206	.2307415

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	895.2933	23163.15	2394.384	815.3572	1555.985
Stddev	2.7911	34.84	9.181	.8966	3.051
%RSD	.3117515	.1503991	.3834250	.1099685	.1960671
#1	898.0765	23157.26	2384.800	815.1120	1558.405
#2	895.3092	23131.63	2395.252	814.6087	1556.990
#3	892.4943	23200.55	2403.100	816.3510	1552.558

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4570-18DLX2 Acquired: 11/11/2024 2:47:47 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE571 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.757585	-.044025	.2403715	-.004976	.0152432	103.8778	1.695492
Stddev	.008861	.000945	.0033360	.008679	.0028303	.0869	.002216
%RSD	.5041523	2.146079	1.387835	174.4331	18.56765	.0836777	.1307005
#1	1.767488	-.043247	.2395044	.002318	.0138021	103.7807	1.697602
#2	1.750405	-.043750	.2440554	-.014575	.0134234	103.9483	1.693184
#3	1.754861	-.045076	.2375547	-.002670	.0185040	103.9045	1.695691

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0060190	.0135567	19.41827	.2624836	.1949231	.5035859	338.0136
Stddev	.0002170	.0002916	.08327	.0028531	.0002113	.0096455	.5124
%RSD	3.605798	2.150598	.4288341	1.086980	.1084164	1.915362	.1516021
#1	.0061277	.0133193	19.37147	.2649314	.1949443	.5101844	337.6082
#2	.0061603	.0138821	19.36893	.2631694	.1951230	.4925162	337.8430
#3	.0057691	.0134688	19.51441	.2593501	.1947020	.5080571	338.5895

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.72206	51.32248	.3672318	-.029045	1.541808	.5710970	.8146033
Stddev	.03453	.09291	.0009872	.000388	.263609	.0112777	.0070343
%RSD	.2945620	.1810261	.2688137	1.336621	17.09743	1.974743	.8635208
#1	11.68746	51.28221	.3683177	-.028677	1.275848	.5607409	.8187012
#2	11.72223	51.42873	.3663887	-.029008	1.546575	.5831125	.8186277
#3	11.75651	51.25650	.3669889	-.029450	1.803002	.5694375	.8064809

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	18.81426	6.022112	.3458505	.0000239	.8521936	4.968478	.0072770
Stddev	.05666	.013099	.0010516	.0015757	.0091708	.014993	.0022447
%RSD	.3011608	.2175127	.3040720	6582.261	1.076146	.3017601	30.84742
#1	18.86622	6.036959	.3470174	.0013965	.8478570	4.978214	.0047230
#2	18.82270	6.017192	.3449760	-.001697	.8627284	4.976007	.0081704
#3	18.75385	6.012186	.3455581	.000372	.8459952	4.951212	.0089374

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4570-18DLX2 Acquired: 11/11/2024 2:47:47 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE571 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.958626	.0922318	.2772360
Stddev	.008205	.0009018	.0002715
%RSD	.2773372	.9777993	.0979390
#1	2.967199	.0925965	.2775447
#2	2.950846	.0912048	.2770342
#3	2.957833	.0928942	.2771291

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	901.7021	23377.94	2398.085	822.2351	1558.565
Stddev	1.1158	115.75	1.604	5.4533	2.311
%RSD	.1237450	.4951120	.0668910	.6632236	.1482483
#1	902.4487	23306.29	2399.023	817.8571	1558.294
#2	902.2383	23316.06	2396.233	820.5045	1560.999
#3	900.4195	23511.48	2399.000	828.3437	1556.402

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: CCV057 Acquired: 11/11/2024 2:52:13 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV057 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.961480	4.782975	24.63347	4.805525	4.819516	395.8791	10.23590
Stddev	.023087	.008980	.08824	.037944	.018202	1.9660	.04188
%RSD	.4653255	.1877443	.3582217	.7895947	.3776747	.4966239	.4091310
#1	4.939473	4.782016	24.59844	4.797120	4.825539	394.2273	10.19125
#2	4.959455	4.774513	24.56811	4.772488	4.799066	395.3563	10.24216
#3	4.985513	4.792396	24.73384	4.846967	4.833943	398.0537	10.27430

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4956426	2.488462	394.1297	15.01497	2.498788	14.99898	398.0781
Stddev	.0056193	.010056	2.7579	.53846	.010162	.03918	2.6651
%RSD	1.133742	.4041036	.6997538	3.586143	.4066879	.2612043	.6694940
#1	.4970416	2.485067	392.0501	15.45674	2.498295	14.95548	396.9636
#2	.4894559	2.480542	393.0808	14.41518	2.488882	15.00996	396.1513
#3	.5004302	2.499776	397.2582	15.17298	2.509188	15.03149	401.1196

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	14.80166	394.4252	2.488405	1.212885	400.2517	2.479748	14.14024
Stddev	.12872	2.1830	.010107	.045765	1.9914	.027107	.55373
%RSD	.8696522	.5534678	.4061463	3.773219	.4975374	1.093136	3.915963
#1	14.72289	393.9584	2.487344	1.250598	398.3411	2.451655	14.52756
#2	14.73188	392.5134	2.478870	1.161970	400.0989	2.481842	13.50601
#3	14.95020	396.8039	2.499000	1.226088	402.3151	2.505748	14.38715

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	154.0020	5.065313	5.124426	4.771255	5.046527	4.935407	4.978899
Stddev	.6872	.037268	.062994	.018877	.037856	.051090	.026295
%RSD	.4462540	.7357552	1.229293	.3956462	.7501467	1.035182	.5281353
#1	153.4349	5.069624	5.129871	4.761370	5.002994	4.939319	4.965249
#2	153.8048	5.026077	5.058886	4.759374	5.064864	4.882472	4.962236
#3	154.7663	5.100238	5.184521	4.793023	5.071723	4.984428	5.009212

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: CCV057 Acquired: 11/11/2024 2:52:13 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV057 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.970104	5.055985	5.142791
Stddev	.019799	.039600	.016979
%RSD	.3983651	.7832250	.3301542
#1	4.953705	5.025106	5.128073
#2	4.964508	5.042218	5.138933
#3	4.992099	5.100630	5.161368

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	684.3438	20173.19	2093.975	624.0218	1273.805
Stddev	2.4214	607.50	15.793	20.7993	3.703
%RSD	.3538280	3.011414	.7542237	3.333107	.2906758
#1	685.6838	19688.08	2103.465	610.5539	1275.035
#2	685.7990	20854.56	2102.716	647.9770	1276.736
#3	681.5486	19976.92	2075.743	613.5344	1269.644

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: CCB057 Acquired: 11/11/2024 2:56:26 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB057 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0016506	-.003210	-.001497	.0025973	.0002329	.0068091	.0002643
Stddev	.0019924	.003140	.002406	.0065974	.0009325	.0095073	.0009352
%RSD	120.7084	97.83069	160.6505	254.0103	400.4585	139.6258	353.9028
#1	.0031342	-.000846	-.002849	.0016177	.0009145	.0170501	-.000816
#2	-.000614	-.006773	-.002924	.0096297	.0006139	-.001736	.000810
#3	.002431	-.002010	.001280	-.003455	-.000830	.005113	.000798

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000030	.0000165	.0411324	-.001716	-.000405	.0003184	.0374409
Stddev	.000162	.0000863	.0159791	.000532	.000314	.0043632	.0201738
%RSD	531.7836	522.7349	38.84806	31.01612	77.45244	1370.180	53.88152
#1	.000062	.0001111	.0573755	-.002109	-.000077	-.004696	.0598552
#2	.000064	-.000004	.0405908	-.001930	-.000702	.003246	.0207400
#3	-.000217	-.000058	.0254310	-.001110	-.000436	.002405	.0317277

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001465	-.004071	-.000259	-.001018	.2189093	.0004603	-.000463
Stddev	.000679	.076835	.000225	.000167	.2254020	.0048548	.000193
%RSD	46.38429	1887.484	87.07393	16.37299	102.9659	1054.749	41.76921
#1	-.000682	.030929	-.000129	-.001153	.2609837	-.002400	-.000515
#2	-.001813	.049033	-.000129	-.000832	-.024565	-.002285	-.000625
#3	-.001899	-.092174	-.000519	-.001069	.420309	.006066	-.000249

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2596130	-.000466	.0034887	-.000029	-.001158	-.002142	.0003084
Stddev	.0489610	.001053	.0008135	.000337	.003068	.000528	.0015351
%RSD	18.85922	226.0383	23.31863	1165.147	264.9202	24.67125	497.7665
#1	.2105093	-.000521	.0025569	-.000403	-.003710	-.001534	.0019934
#2	.2598997	-.001490	.0038514	.000068	.002246	-.002495	-.001011
#3	.3084300	.000613	.0040578	.000249	-.002011	-.002396	-.000058

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: CCB057 Acquired: 11/11/2024 2:56:26 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB057 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.001001	-.003394	-.000054
Stddev	.001213	.003220	.000055
%RSD	121.1663	94.86500	100.4032
#1	-.001433	-.005349	-.000038
#2	-.001939	-.005155	-.000115
#3	.000369	.000322	-.000010

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	839.8072	21394.65	2147.911	756.2820	1657.296
Stddev	1.4472	41.64	9.675	2.5923	1.150
%RSD	.1723259	.1946119	.4504222	.3427630	.0694116
#1	838.4653	21395.56	2144.000	759.2334	1655.970
#2	839.6157	21352.56	2158.929	754.3741	1657.887
#3	841.3407	21435.82	2140.804	755.2385	1658.031

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4570-19DLX2 Acquired: 11/11/2024 3:00:59 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE572 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2586596	-.052391	.1725157	-.006559	.0071240	102.3992	1.113053
Stddev	.0123815	.003869	.0061314	.002413	.0025550	.4183	.005291
%RSD	4.786773	7.384812	3.554110	36.79224	35.86454	.4085416	.4753364
#1	.2558803	-.049288	.1780642	-.008988	.0050015	102.3306	1.113055
#2	.2479040	-.051158	.1659330	-.006529	.0064106	102.0193	1.107761
#3	.2721945	-.056726	.1735499	-.004162	.0099598	102.8476	1.118343

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0049411	.0081127	39.90894	.2248995	.1390387	.3694433	270.8307
Stddev	.0003315	.0003010	.03735	.0022977	.0010222	.0058553	1.1260
%RSD	6.708862	3.709634	.0935972	1.021646	.7351906	1.584896	.4157712
#1	.0050369	.0077748	39.87185	.2270060	.1381942	.3683917	270.8852
#2	.0045722	.0082111	39.90842	.2252432	.1387467	.3641851	269.6784
#3	.0052141	.0083520	39.94655	.2224494	.1401751	.3757532	271.9285

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.995121	53.07345	.3053214	-.022305	1.158493	.5858522	.5630931
Stddev	.020590	.30370	.0011390	.000564	.142252	.0068773	.0031041
%RSD	.4122034	.5722347	.3730489	2.527793	12.27909	1.173891	.5512535
#1	5.005816	52.94616	.3051856	-.021767	1.057170	.5789517	.5642915
#2	4.971384	52.85410	.3042564	-.022891	1.097189	.5858990	.5595685
#3	5.008163	53.42009	.3065223	-.022256	1.321118	.5927060	.5654193

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.44532	5.964884	.2819134	-.000785	.7629860	5.220383	.0058574
Stddev	.04354	.001212	.0015998	.000053	.0074954	.039629	.0055615
%RSD	.2819193	.0203116	.5674702	6.761181	.9823754	.7591157	94.94892
#1	15.49463	5.965044	.2836459	-.000846	.7577046	5.247724	.0109352
#2	15.42918	5.963600	.2816021	-.000755	.7596886	5.174936	-.000086
#3	15.41216	5.966008	.2804921	-.000754	.7715648	5.238491	.006723

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4570-19DLX2 Acquired: 11/11/2024 3:00:59 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE572 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.670778	.0891206	.1980271
Stddev	.012128	.0017546	.0008840
%RSD	.4541123	1.968810	.4463990
#1	2.667276	.0880342	.1981552
#2	2.660786	.0881829	.1970860
#3	2.684272	.0911449	.1988400

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	896.8945	23110.01	2368.481	809.4308	1551.541
Stddev	2.5351	62.68	10.271	6.0974	7.256
%RSD	.2826542	.2712424	.4336699	.7532973	.4676605
#1	896.9918	23088.83	2363.871	811.8639	1552.936
#2	899.3796	23180.53	2380.249	813.9361	1557.998
#3	894.3122	23060.65	2361.321	802.4925	1543.688

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4570-20DLX2 Acquired: 11/11/2024 3:05:25 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE573 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3327452	-.041271	.2108563	-.006185	.0058411	104.9758	1.428348
Stddev	.0118766	.009136	.0064464	.005643	.0037790	.0813	.004231
%RSD	3.569278	22.13719	3.057236	91.23338	64.69726	.0774652	.2961971
#1	.3264119	-.030722	.2169432	-.009254	.0028490	105.0223	1.424288
#2	.3464461	-.046551	.2041023	-.009628	.0100879	104.8819	1.432731
#3	.3253776	-.046542	.2115233	.000327	.0045864	105.0232	1.428024

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0058212	.0093503	21.14617	.2520751	.1532174	.4855125	275.7738
Stddev	.0000679	.0000826	.12043	.0023491	.0009056	.0046790	.6166
%RSD	1.166037	.8829968	.5695143	.9319009	.5910394	.9637329	.2235975
#1	.0058261	.0092765	21.03940	.2546756	.1530623	.4896311	275.8535
#2	.0057510	.0093350	21.12239	.2514430	.1523994	.4804248	275.1213
#3	.0058865	.0094395	21.27671	.2501068	.1541905	.4864817	276.3468

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.327998	53.74156	.3394374	-.022836	1.281318	.5120315	.6458833
Stddev	.007402	.29685	.0002460	.000966	.150556	.0085378	.0083895
%RSD	.1169791	.5523730	.0724783	4.231409	11.75011	1.667430	1.298914
#1	6.324613	54.02909	.3397164	-.021752	1.107471	.5194634	.6552056
#2	6.322893	53.75940	.3393438	-.023606	1.368387	.5139252	.6389408
#3	6.336488	53.43618	.3392518	-.023150	1.368096	.5027059	.6435034

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	18.29903	6.064931	.2888232	-.001218	.9259088	5.838637	.0061705
Stddev	.12846	.001226	.0017777	.000738	.0087211	.016597	.0007481
%RSD	.7020164	.0202187	.6154873	60.64101	.9418967	.2842568	12.12381
#1	18.43185	6.065957	.2899710	-.000849	.9160414	5.820123	.0053368
#2	18.17543	6.063573	.2867755	-.002068	.9325842	5.852180	.0067833
#3	18.28982	6.065262	.2897230	-.000736	.9291008	5.843607	.0063913

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4570-20DLX2 Acquired: 11/11/2024 3:05:25 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE573 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	3.111764	.0930732	.2406192
Stddev	.004273	.0008094	.0001888
%RSD	.1373220	.8696135	.0784622
#1	3.116692	.0939703	.2407277
#2	3.109521	.0928513	.2407287
#3	3.109079	.0923979	.2404012

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	897.8403	23057.84	2369.756	806.3067	1554.683
Stddev	1.1558	183.69	5.320	9.6684	2.468
%RSD	.1287320	.7966536	.2244962	1.199098	.1587591
#1	897.3194	22856.86	2375.850	795.4909	1554.336
#2	899.1649	23217.05	2367.373	814.1109	1557.306
#3	897.0366	23099.61	2366.043	809.3182	1552.407

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4570-21DLX2 Acquired: 11/11/2024 3:09:51 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE574 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2740338	-.042402	.1311123	-.001023	.0007984	120.9391	1.471639
Stddev	.0024816	.004095	.0033549	.002254	.0020268	.1799	.005374
%RSD	.9055664	9.656634	2.558829	220.2875	253.8514	.1487191	.3651808
#1	.2756321	-.037850	.1349823	-.000659	.0031372	120.9113	1.471190
#2	.2711750	-.043569	.1290259	.001026	-.000445	121.1312	1.477224
#3	.2752943	-.045786	.1293287	-.003437	-.000297	120.7747	1.466504

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0055434	.0064220	54.63942	.2379163	.1443165	.3141552	247.3312
Stddev	.0000939	.0000762	.06339	.0009745	.0003880	.0027114	.2231
%RSD	1.692994	1.186688	.1160166	.4095850	.2688362	.8630592	.0902174
#1	.0055873	.0065098	54.59683	.2389283	.1446496	.3172804	247.5457
#2	.0056073	.0063731	54.71227	.2369842	.1444095	.3124306	247.1003
#3	.0054356	.0063831	54.60915	.2378364	.1438905	.3127546	247.3477

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.889517	53.16463	.3209718	-.020393	1.226999	.4941202	.4201790
Stddev	.015627	.30445	.0021972	.000203	.202378	.0080832	.0038301
%RSD	.2653332	.5726631	.6845538	.9959590	16.49376	1.635873	.9115275
#1	5.907527	52.82560	.3188444	-.020567	1.456386	.4909149	.4239890
#2	5.881468	53.25359	.3208381	-.020170	1.150948	.4881313	.4163293
#3	5.879555	53.41469	.3232328	-.020441	1.073663	.5033144	.4202188

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	17.01727	5.493092	.2622207	-.001945	.5512430	5.638898	.0048372
Stddev	.04657	.007009	.0005512	.000584	.0029853	.008766	.0016119
%RSD	.2736532	.1275979	.2101951	30.01710	.5415587	.1554536	33.32220
#1	16.97355	5.491387	.2619785	-.002114	.5478395	5.648542	.0030382
#2	17.06624	5.487093	.2618320	-.002426	.5534187	5.631413	.0061499
#3	17.01203	5.500797	.2628515	-.001295	.5524706	5.636739	.0053237

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4570-21DLX2 Acquired: 11/11/2024 3:09:51 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE574 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.740115	.0994810	.2539073
Stddev	.010991	.0009435	.0003088
%RSD	.4011141	.9483817	.1215995
#1	2.747258	.0984204	.2535689
#2	2.745629	.1002267	.2539793
#3	2.727459	.0997961	.2541737

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	892.1004	23101.25	2364.914	814.6811	1535.815
Stddev	2.4946	25.26	3.619	1.6073	2.378
%RSD	.2796317	.1093663	.1530357	.1972868	.1548040
#1	890.1170	23106.01	2361.691	813.0365	1535.505
#2	891.2831	23073.95	2364.221	816.2483	1533.608
#3	894.9012	23123.80	2368.829	814.7584	1538.333

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4570-22DLX2 Acquired: 11/11/2024 3:14:19 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE575 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2604086	-.047138	.1380081	-.006056	.0040186	129.7617	1.716101
Stddev	.0060137	.003331	.0046296	.002469	.0025595	.1798	.005337
%RSD	2.309322	7.067327	3.354565	40.77778	63.69063	.1385562	.3109873
#1	.2612040	-.050073	.1326693	-.006868	.0050192	129.6507	1.717305
#2	.2659850	-.047824	.1404419	-.003283	.0011100	129.9691	1.720733
#3	.2540368	-.043517	.1409132	-.008017	.0059267	129.6653	1.710265

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0058682	.0073145	57.06498	.2681390	.1517946	.3342015	266.5290
Stddev	.0001240	.0001170	.17922	.0013811	.0010197	.0026482	.7718
%RSD	2.113001	1.599880	.3140689	.5150786	.6717841	.7924026	.2895779
#1	.0059049	.0072616	56.85987	.2687957	.1509792	.3353754	265.6463
#2	.0059698	.0072331	57.19136	.2665520	.1529379	.3360598	267.0765
#3	.0057300	.0074486	57.14372	.2690692	.1514666	.3311692	266.8643

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.168855	60.19507	.3706898	-.021473	1.372396	.5369264	.4981124
Stddev	.029090	.40273	.0015639	.000344	.307591	.0093025	.0032293
%RSD	.4057891	.6690431	.4218769	1.603300	22.41272	1.732551	.6483017
#1	7.135489	59.98700	.3698661	-.021395	1.075245	.5295839	.4992505
#2	7.182170	60.65928	.3697099	-.021849	1.352482	.5473876	.5006186
#3	7.188904	59.93894	.3724933	-.021174	1.689460	.5338077	.4944682

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	19.54938	7.643311	.2844469	-.002075	.7328359	5.827964	.0041625
Stddev	.01585	.031597	.0009774	.000801	.0060695	.025062	.0020078
%RSD	.0811009	.4133923	.3436121	38.57740	.8282196	.4300254	48.23542
#1	19.55164	7.607508	.2836631	-.002152	.7379796	5.803325	.0061154
#2	19.53251	7.667291	.2855420	-.001239	.7261415	5.853428	.0021040
#3	19.56398	7.655136	.2841356	-.002835	.7343865	5.827141	.0042680

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4570-22DLX2 Acquired: 11/11/2024 3:14:19 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE575 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	3.050806	.1147262	.3088377
Stddev	.001357	.0028159	.0003357
%RSD	.0444923	2.454438	.1086881
#1	3.051618	.1158342	.3085491
#2	3.049239	.1115248	.3092060
#3	3.051561	.1168195	.3087579

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	896.0047	23189.35	2403.039	813.1701	1524.365
Stddev	6.1183	55.22	12.812	1.9234	9.611
%RSD	.6828457	.2381281	.5331778	.2365325	.6304788
#1	897.2637	23248.93	2415.715	811.1427	1531.258
#2	901.3955	23179.21	2390.094	813.3986	1528.452
#3	889.3547	23139.90	2403.306	814.9691	1513.387

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4571-01DLX2 Acquired: 11/11/2024 3:18:45 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE543 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1237068	-.025435	.1473532	.0009330	.0059473	65.51908	.7720280
Stddev	.0043593	.004238	.0048339	.0046837	.0020917	.24498	.0015319
%RSD	3.523929	16.66311	3.280479	502.0102	35.17048	.3739126	.1984237
#1	.1217733	-.023367	.1453646	-.002469	.0055897	65.38758	.7717772
#2	.1206486	-.022628	.1438308	.006275	.0040576	65.36792	.7706370
#3	.1286984	-.030311	.1528642	-.001007	.0081948	65.80173	.7736698

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0034065	.0056257	14.07982	.1402262	.0850949	.4274648	165.9056
Stddev	.0001052	.0001333	.05561	.0017300	.0021278	.0013879	.7326
%RSD	3.089272	2.368570	.3949936	1.233701	2.500466	.3246903	.4415825
#1	.0032860	.0054740	14.07760	.1402072	.0842163	.4287756	165.5581
#2	.0034799	.0056795	14.02535	.1385059	.0835471	.4276078	165.4113
#3	.0034537	.0057236	14.13651	.1419657	.0875212	.4260108	166.7473

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.047122	28.18891	.1318861	-.015393	.6050959	.2714736	.5169052
Stddev	.014858	.21429	.0026921	.000555	.1618851	.0031283	.0031285
%RSD	.3671183	.7602052	2.041226	3.606463	26.75363	1.152359	.6052467
#1	4.036112	28.06500	.1294473	-.015038	.7260799	.2728829	.5199401
#2	4.041231	28.06538	.1314363	-.015109	.4211983	.2736493	.5136908
#3	4.064022	28.43636	.1347748	-.016033	.6680094	.2678884	.5170846

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.78336	3.998462	.1735114	-.000380	.6552992	4.618173	.0049344
Stddev	.24942	.067169	.0024168	.000816	.0079915	.033641	.0012085
%RSD	1.580255	1.679876	1.392900	214.8887	1.219515	.7284550	24.49145
#1	15.90562	3.959392	.1707994	-.000312	.6540181	4.610494	.0040646
#2	15.49641	3.959973	.1742970	-.001228	.6480256	4.589034	.0044244
#3	15.94807	4.076022	.1754376	.000400	.6638538	4.654989	.0063144

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4571-01DLX2 Acquired: 11/11/2024 3:18:45 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE543 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.666165	.0478196	.1267491
Stddev	.002778	.0005312	.0006359
%RSD	.1667301	1.110778	.5016896
#1	1.664415	.0480073	.1266779
#2	1.664711	.0472201	.1261518
#3	1.669368	.0482314	.1274176

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	873.1461	22708.60	2310.130	797.8798	1575.762
Stddev	13.7098	131.19	6.040	4.6449	25.502
%RSD	1.570166	.5777074	.2614474	.5821543	1.618373
#1	882.5038	22581.92	2311.900	792.5165	1591.973
#2	879.5256	22843.87	2315.088	800.5234	1588.947
#3	857.4090	22700.01	2303.404	800.5994	1546.367

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4571-02DLX2 Acquired: 11/11/2024 3:23:12 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE543D Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1249224	-.033926	.1636224	-.007175	.0070133	70.11026	.8747428
Stddev	.0026840	.001291	.0019438	.005265	.0012865	.02800	.0014525
%RSD	2.148544	3.804929	1.187978	73.37788	18.34353	.0399355	.1660431
#1	.1259713	-.035413	.1657359	-.011833	.0083917	70.07974	.8732700
#2	.1218723	-.033270	.1619113	-.001463	.0058444	70.11631	.8747845
#3	.1269236	-.033094	.1632199	-.008230	.0068039	70.13475	.8761740

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0037359	.0063630	16.08816	.1645527	.0899109	.4446005	178.5313
Stddev	.0001552	.0001206	.04205	.0011236	.0007894	.0076323	.3821
%RSD	4.155184	1.894967	.2613611	.6828414	.8779337	1.716666	.2140241
#1	.0037828	.0062239	16.06829	.1657330	.0907399	.4532396	178.1143
#2	.0035626	.0064270	16.05972	.1634960	.0891683	.4417903	178.6149
#3	.0038622	.0064380	16.13646	.1644291	.0898245	.4387718	178.8647

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.385723	28.62853	.1528444	-.016546	1.420757	.2837933	.5687101
Stddev	.014001	.12815	.0002546	.000433	.272901	.0106999	.0031576
%RSD	.3192368	.4476142	.1665704	2.616177	19.20815	3.770327	.5552220
#1	4.369575	28.48609	.1531150	-.016740	1.170722	.2808476	.5711396
#2	4.394466	28.73447	.1528084	-.016848	1.379680	.2748747	.5651408
#3	4.393129	28.66501	.1526097	-.016050	1.711867	.2956575	.5698498

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	16.71033	4.330957	.1883040	-.000259	.7155191	4.445942	.0054398
Stddev	.10589	.015700	.0005900	.000557	.0084888	.007506	.0031114
%RSD	.6336707	.3625024	.3133351	215.4285	1.186382	.1688328	57.19755
#1	16.82194	4.348888	.1886161	-.000433	.7057541	4.437406	.0084572
#2	16.61128	4.319678	.1876235	-.000708	.7196641	4.451511	.0022422
#3	16.69778	4.324305	.1886724	.000365	.7211390	4.448909	.0056198

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4571-02DLX2 Acquired: 11/11/2024 3:23:12 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE543D Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.867443	.0554429	.1474354
Stddev	.001825	.0021987	.0002112
%RSD	.0977120	3.965705	.1432583
#1	1.865342	.0579531	.1475749
#2	1.868635	.0545167	.1475388
#3	1.868352	.0538588	.1471924

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	883.5350	22720.60	2336.866	797.5229	1584.860
Stddev	2.0769	5.18	4.214	2.4422	2.801
%RSD	.2350680	.0227814	.1803442	.3062252	.1767391
#1	883.5503	22725.70	2341.710	795.0660	1583.059
#2	885.6043	22720.75	2334.845	799.9502	1588.087
#3	881.4506	22715.35	2334.042	797.5525	1583.433

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4571-01LDLX10 Acquired: 11/11/2024 3:27:37 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE543L Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0347469	-.007408	.0284025	.0015812	-.000587	13.84826	.1645313
Stddev	.0051701	.000960	.0005074	.0060164	.000715	.08961	.0006538
%RSD	14.87939	12.96104	1.786524	380.4954	121.8456	.6470865	.3973845
#1	.0371206	-.008058	.0286723	.0014012	.000228	13.74498	.1637925
#2	.0383039	-.007861	.0278171	-.004343	-.001109	13.90540	.1650352
#3	.0288161	-.006305	.0287179	.007686	-.000879	13.89439	.1647662

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007807	.0010054	3.020477	.0288248	.0165267	.0953482	35.76787
Stddev	.0001348	.0002002	.015102	.0013616	.0007306	.0065090	.28821
%RSD	17.26796	19.91594	.4999883	4.723729	4.420590	6.826547	.8057684
#1	.0007720	.0011296	3.036385	.0301568	.0157170	.0944128	35.43748
#2	.0009197	.0011122	3.006336	.0274355	.0167269	.1022744	35.89852
#3	.0006505	.0007744	3.018710	.0288820	.0171364	.0893576	35.96761

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8690415	5.964422	.0259413	-.004580	.1093166	.0559244	.1125217
Stddev	.0074502	.051096	.0005131	.000077	.2462767	.0089594	.0011950
%RSD	.8572929	.8566847	1.977967	1.685063	225.2876	16.02062	1.061984
#1	.8608313	5.958812	.0262529	-.004667	-.143850	.0643241	.1133308
#2	.8709214	6.018092	.0253491	-.004521	.123730	.0569548	.1130850
#3	.8753717	5.916363	.0262220	-.004551	.348070	.0464943	.1111492

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.377725	.8021228	.0341349	-.000911	.1250107	1.001337	-.000524
Stddev	.113976	.0086374	.0008351	.000285	.0024077	.004363	.000611
%RSD	3.374335	1.076812	2.446594	31.28136	1.925969	.4356771	116.5814
#1	3.367175	.8117276	.0334261	-.000755	.1256206	.996357	-.000414
#2	3.269391	.7949935	.0350555	-.000739	.1270547	1.004486	.000025
#3	3.496609	.7996474	.0339229	-.001240	.1223567	1.003167	-.001183

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4571-01LDLX10 Acquired: 11/11/2024 3:27:37 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE543L Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.3539143	.0048723	.0267579
Stddev	.0018717	.0007843	.0001585
%RSD	.5288494	16.09653	.5923172
#1	.3522563	.0040002	.0267088
#2	.3559439	.0050972	.0269351
#3	.3535427	.0055197	.0266297

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	860.6505	21885.73	2207.476	774.6755	1656.614
Stddev	1.2111	36.59	7.971	3.4094	3.522
%RSD	.1407173	.1672086	.3610770	.4401123	.2126113
#1	861.3604	21927.90	2216.582	774.0365	1654.787
#2	861.3390	21862.33	2201.764	771.6308	1660.674
#3	859.2521	21866.95	2204.082	778.3592	1654.381

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4571-03DLX2 Acquired: 11/11/2024 3:32:09 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE543S Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1832640	.0719780	.1788949	.1646954	.1653109	68.20261	4.668885
Stddev	.0048178	.0076989	.0024652	.0163194	.0056424	.08706	.004484
%RSD	2.628894	10.69611	1.377995	9.908845	3.413226	.1276424	.0960353
#1	.1862806	.0734403	.1817377	.1605992	.1676107	68.29358	4.671250
#2	.1777077	.0636529	.1773484	.1508144	.1694402	68.19418	4.663714
#3	.1858037	.0788409	.1775985	.1826727	.1588818	68.12008	4.671691

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0987815	.1022121	13.60628	.5555219	1.046730	.8743272	165.1165
Stddev	.0002326	.0001433	.07717	.0019821	.003089	.0086254	.3070
%RSD	.2355125	.1401579	.5671899	.3567976	.2951461	.9865166	.1859357
#1	.0990407	.1023597	13.54528	.5568370	1.049298	.8658715	165.4271
#2	.0985908	.1022029	13.58052	.5532421	1.047591	.8739972	165.1090
#3	.0987131	.1020736	13.69304	.5564866	1.043302	.8831128	164.8132

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.940115	27.63109	1.101361	.0766172	.7932921	1.237340	1.360957
Stddev	.016546	.08054	.002720	.0003710	.2833173	.007326	.005184
%RSD	.3349317	.2914907	.2469971	.4842227	35.71412	.5920742	.3809136
#1	4.948545	27.54489	1.103563	.0769640	.8353417	1.242344	1.357330
#2	4.950748	27.70443	1.102200	.0766615	.4913001	1.228932	1.358647
#3	4.921052	27.64396	1.098320	.0762260	1.053234	1.240746	1.366894

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.47141	3.893902	.1751561	-.000647	.6281810	4.597226	.0027067
Stddev	.08686	.026976	.0014686	.000513	.0182893	.010196	.0015476
%RSD	.5614390	.6927842	.8384521	79.27712	2.911477	.2217868	57.17752
#1	15.38234	3.918723	.1765452	-.000203	.6484769	4.608980	.0012191
#2	15.55588	3.897791	.1736192	-.000529	.6230888	4.591926	.0043081
#3	15.47603	3.865192	.1753038	-.001209	.6129775	4.590771	.0025930

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4571-03DLX2 Acquired: 11/11/2024 3:32:09 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE543S Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.638529	.0491894	.1255752
Stddev	.003706	.0022479	.0004995
%RSD	.2262043	4.569920	.3977667
#1	1.641734	.0499558	.1261368
#2	1.634470	.0466585	.1254080
#3	1.639384	.0509538	.1251807

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	880.0973	22570.35	2290.847	788.5540	1595.755
Stddev	1.7917	15.90	6.174	3.8632	5.376
%RSD	.2035781	.0704332	.2695276	.4899141	.3368658
#1	878.4943	22576.62	2287.139	790.7918	1591.889
#2	879.7660	22582.16	2297.975	790.7771	1593.483
#3	882.0314	22552.28	2287.428	784.0932	1601.894

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4571-04DLX2 Acquired: 11/11/2024 3:36:30 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE576 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3211120	-.049629	.2378545	-.020687	.0068600	129.6046	1.629768
Stddev	.0071538	.002174	.0039797	.012623	.0038887	.2385	.007365
%RSD	2.227810	4.379895	1.673179	61.01879	56.68600	.1840507	.4518916
#1	.3178304	-.051674	.2336852	-.006137	.0026177	129.4573	1.625121
#2	.3293179	-.047346	.2382656	-.027212	.0102555	129.8798	1.638259
#3	.3161878	-.049869	.2416128	-.028712	.0077068	129.4766	1.625923

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0065628	.0130771	25.13052	.2960374	.1591781	.3713022	283.4749
Stddev	.0001886	.0000210	.02321	.0019703	.0009220	.0018164	.3387
%RSD	2.873173	.1602825	.0923581	.6655610	.5791994	.4891909	.1194757
#1	.0063466	.0130646	25.14883	.2982320	.1584407	.3701001	283.7186
#2	.0066485	.0131013	25.10442	.2944206	.1602118	.3733917	283.6180
#3	.0066932	.0130653	25.13831	.2954596	.1588818	.3704148	283.0882

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.948106	49.05795	.3672319	-.024908	1.352504	.5423307	1.451119
Stddev	.014256	.07977	.0009938	.000369	.229229	.0147592	.006915
%RSD	.2396680	.1626030	.2706093	1.481176	16.94847	2.721435	.4765287
#1	5.964515	49.08948	.3663667	-.025267	1.155607	.5558218	1.443135
#2	5.938775	49.11714	.3683173	-.024928	1.604150	.5265671	1.455215
#3	5.941026	48.96724	.3670117	-.024530	1.297755	.5446032	1.455006

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.32492	8.715178	.3080870	-.000445	1.302223	5.328716	.0070993
Stddev	.04918	.019556	.0009025	.000744	.002263	.023260	.0020509
%RSD	.1942131	.2243910	.2929425	167.0159	.1737727	.4364963	28.88894
#1	25.27409	8.725841	.3072506	-.000152	1.303106	5.313535	.0047964
#2	25.32839	8.727086	.3090436	.000107	1.303912	5.355494	.0077722
#3	25.37228	8.692608	.3079668	-.001291	1.299652	5.317120	.0087292

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4571-04DLX2 Acquired: 11/11/2024 3:36:30 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE576 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	3.032910	.1051484	.3340088
Stddev	.002633	.0018870	.0011442
%RSD	.0868217	1.794618	.3425534
#1	3.030143	.1067915	.3337179
#2	3.033201	.1030875	.3352703
#3	3.035386	.1055661	.3330382

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	918.8596	23673.96	2440.158	834.1750	1545.944
Stddev	1.6450	11.31	8.181	1.8719	2.223
%RSD	.1790294	.0477597	.3352769	.2244043	.1437899
#1	920.0454	23665.67	2440.330	836.1914	1543.980
#2	919.5517	23669.38	2431.891	833.8412	1545.495
#3	916.9816	23686.84	2448.251	832.4925	1548.357

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4571-05DLX2 Acquired: 11/11/2024 3:40:55 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE577 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3161328	-.051256	.2681902	-.003612	.0071990	110.5180	1.510421
Stddev	.0053639	.003238	.0037222	.005255	.0007510	.0823	.003050
%RSD	1.696730	6.316659	1.387892	145.4819	10.43218	.0745007	.2019604
#1	.3214298	-.053511	.2691205	-.003485	.0071454	110.4835	1.507183
#2	.3162641	-.052711	.2640910	-.008930	.0064763	110.4586	1.513240
#3	.3107044	-.047546	.2713589	.001578	.0079755	110.6120	1.510842

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0060277	.0112457	17.90953	.2773385	.1844616	.6289989	310.0662
Stddev	.0002267	.0002715	.08714	.0005469	.0006509	.0049610	.7089
%RSD	3.761598	2.414080	.4865770	.1971822	.3528436	.7887132	.2286375
#1	.0061508	.0115000	17.97100	.2777869	.1850028	.6238182	309.9488
#2	.0061663	.0109598	17.80981	.2767292	.1837394	.6337063	309.4233
#3	.0057661	.0112774	17.94780	.2774992	.1846427	.6294723	310.8265

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.120743	54.01429	.3592038	-.026439	1.535156	.6168946	.6901270
Stddev	.000773	.11499	.0004451	.000570	.148752	.0073479	.0066922
%RSD	.0095202	.2128918	.1239155	2.157001	9.689709	1.191108	.9696987
#1	8.120715	53.99923	.3591586	-.026906	1.706119	.6251386	.6882453
#2	8.121529	53.90758	.3587831	-.026608	1.464020	.6145099	.6845772
#3	8.119984	54.13608	.3596699	-.025803	1.435328	.6110352	.6975586

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	19.47879	6.263375	.3191867	.0002753	.9127569	4.857616	.0074562
Stddev	.01112	.009526	.0011561	.0012602	.0150324	.011553	.0025338
%RSD	.0571061	.1520908	.3622101	457.7760	1.646922	.2378329	33.98242
#1	19.49056	6.261587	.3181532	.0014856	.9243910	4.860577	.0090009
#2	19.47737	6.254870	.3189717	-.001029	.8957837	4.844871	.0045320
#3	19.46845	6.273668	.3204352	.000370	.9180960	4.867401	.0088357

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4571-05DLX2 Acquired: 11/11/2024 3:40:55 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE577 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	3.107692	.1013037	.2463759
Stddev	.004643	.0037351	.0005390
%RSD	.1493960	3.687059	.2187662
#1	3.112251	.0998588	.2457727
#2	3.102970	.0985069	.2465448
#3	3.107855	.1055455	.2468102

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	905.5264	23383.28	2396.124	819.8393	1554.674
Stddev	1.2075	136.73	8.646	8.9846	2.493
%RSD	.1333533	.5847419	.3608512	1.095903	.1603631
#1	906.3582	23469.97	2393.228	823.6353	1555.274
#2	906.0797	23454.21	2405.847	826.3029	1556.813
#3	904.1413	23225.66	2389.298	809.5797	1551.936

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4571-06DLX2 Acquired: 11/11/2024 3:45:19 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE578 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2691285	-.040094	.2172270	-.016398	.0080693	91.17715	1.479005
Stddev	.0025257	.001986	.0081204	.007985	.0015278	.23768	.004771
%RSD	.9384676	4.953577	3.738221	48.69161	18.93339	.2606838	.3226073
#1	.2662367	-.039129	.2078590	-.011008	.0091784	91.44319	1.483965
#2	.2702472	-.042378	.2222596	-.012616	.0063267	91.10256	1.478602
#3	.2709017	-.038775	.2215625	-.025571	.0087029	90.98571	1.474448

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0053754	.0098569	19.27761	.2579387	.1433552	.4519086	253.0521
Stddev	.0003231	.0002406	.10594	.0032025	.0001859	.0095458	.7621
%RSD	6.011531	2.441246	.5495358	1.241590	.1297019	2.112338	.3011533
#1	.0053413	.0098156	19.32679	.2610522	.1434079	.4597375	253.9267
#2	.0057142	.0096396	19.35001	.2581098	.1431486	.4412744	252.6994
#3	.0050706	.0101155	19.15602	.2546540	.1435090	.4547138	252.5304

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.444049	41.60956	.2947731	-.023039	1.131806	.4747937	.6432432
Stddev	.047196	.34662	.0006853	.000793	.168944	.0040270	.0073377
%RSD	.6340134	.8330371	.2324883	3.440016	14.92691	.8481591	1.140727
#1	7.498396	41.94409	.2944546	-.022315	1.145465	.4708365	.6512039
#2	7.420376	41.25200	.2955597	-.022916	1.293505	.4746575	.6417754
#3	7.413374	41.63258	.2943050	-.023886	.956447	.4788871	.6367505

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.79091	5.570913	.2672372	-.000017	1.209877	5.435654	.0058373
Stddev	.10816	.014267	.0009476	.000204	.007096	.029221	.0032878
%RSD	.6849519	.2561065	.3546016	1202.762	.5865211	.5375784	56.32442
#1	15.77763	5.564050	.2681415	-.000046	1.201816	5.465826	.0063346
#2	15.90510	5.587315	.2673185	-.000205	1.212634	5.433649	.0088482
#3	15.69000	5.561375	.2662515	.000200	1.215181	5.407487	.0023292

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4571-06DLX2 Acquired: 11/11/2024 3:45:19 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE578 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.685257	.0742848	.2534480
Stddev	.002180	.0003141	.0006233
%RSD	.0811988	.4228088	.2459181
#1	2.687547	.0745071	.2541538
#2	2.685018	.0744218	.2532171
#3	2.683206	.0739255	.2529731

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	902.9306	23420.25	2403.972	817.4063	1569.962
Stddev	1.0306	231.58	10.570	7.5855	3.072
%RSD	.1141413	.9887913	.4396980	.9279919	.1957014
#1	904.1161	23198.18	2391.783	811.1654	1572.132
#2	902.4273	23402.28	2410.615	815.2044	1566.446
#3	902.2483	23660.29	2409.519	825.8492	1571.308

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4571-07DLX2 Acquired: 11/11/2024 3:49:46 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE579 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2654012	-.037674	.1978155	-.008804	.0073670	86.44178	1.343772
Stddev	.0054741	.001134	.0023233	.004001	.0007430	.09605	.004541
%RSD	2.062557	3.009096	1.174494	45.44962	10.08503	.1111158	.3379452
#1	.2591099	-.038919	.2004725	-.013342	.0072362	86.33552	1.340775
#2	.2690760	-.036701	.1961658	-.005784	.0081666	86.52243	1.348997
#3	.2680177	-.037402	.1968083	-.007285	.0066981	86.46739	1.341545

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0049850	.0084299	33.61960	.2237191	.1233932	.3707444	225.9059
Stddev	.0000636	.0001967	.04740	.0016720	.0015431	.0028311	.2307
%RSD	1.275544	2.333562	.1410029	.7473548	1.250539	.7636341	.1021268
#1	.0050459	.0085483	33.57145	.2248800	.1232129	.3719358	225.6415
#2	.0049901	.0085385	33.62112	.2244746	.1250185	.3675123	226.0103
#3	.0049190	.0082028	33.66622	.2218027	.1219481	.3727851	226.0661

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.137759	41.06372	.2760319	-.020581	.9830083	.4322365	.7070106
Stddev	.008478	.11220	.0036275	.000392	.0866901	.0044735	.0051754
%RSD	.1650202	.2732460	1.314172	1.904696	8.818858	1.034978	.7320089
#1	5.128277	40.94894	.2737030	-.021026	1.049648	.4272820	.7065428
#2	5.140393	41.17316	.2802115	-.020430	1.014377	.4359796	.7124040
#3	5.144608	41.06906	.2741812	-.020287	.885000	.4334480	.7020850

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	17.54495	8.785501	.2541519	.0006764	2.633200	5.845546	.0061138
Stddev	.03863	.101042	.0029291	.0003099	.025546	.027388	.0046177
%RSD	.2201560	1.150102	1.152483	45.81044	.9701544	.4685247	75.52858
#1	17.54753	8.711149	.2528242	.0006088	2.614000	5.845658	.0040686
#2	17.50510	8.900545	.2575097	.0004060	2.662194	5.818102	.0028720
#3	17.58223	8.744810	.2521219	.0010145	2.623407	5.872877	.0114009

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4571-07DLX2 Acquired: 11/11/2024 3:49:46 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE579 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.257875	.0733720	.4947036
Stddev	.000299	.0005863	.0012488
%RSD	.0132413	.7991038	.2524438
#1	2.257983	.0739474	.4934975
#2	2.257537	.0727754	.4959912
#3	2.258104	.0733932	.4946219

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	895.8390	23225.96	2395.268	809.6131	1557.029
Stddev	8.7333	80.69	9.244	5.6165	16.023
%RSD	.9748790	.3474153	.3859416	.6937215	1.029087
#1	902.2687	23242.87	2392.518	810.0380	1569.014
#2	885.8962	23138.15	2405.575	803.7962	1538.830
#3	899.3520	23296.85	2387.710	815.0050	1563.244

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4571-08DLX2 Acquired: 11/11/2024 3:54:11 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE580 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2738849	-.045610	.2193387	-.014510	.0082956	98.33721	1.666863
Stddev	.0185342	.002514	.0075860	.004173	.0036865	.31409	.005232
%RSD	6.767161	5.512766	3.458583	28.76132	44.43997	.3194060	.3138628
#1	.2554845	-.047858	.2186985	-.018606	.0078241	98.66004	1.672016
#2	.2925502	-.042895	.2272245	-.010263	.0048674	98.31893	1.667018
#3	.2736200	-.046078	.2120930	-.014662	.0121952	98.03265	1.661556

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0056050	.0095430	33.87882	.2467374	.1441478	.4330704	265.2623
Stddev	.0001298	.0001010	.14402	.0017167	.0003452	.0051939	1.0870
%RSD	2.315542	1.058818	.4250918	.6957741	.2394684	1.199321	.4097852
#1	.0054659	.0094520	34.04385	.2485822	.1442306	.4375754	266.4100
#2	.0057228	.0095253	33.81398	.2464434	.1437687	.4342466	265.1284
#3	.0056265	.0096518	33.77862	.2451867	.1444440	.4273893	264.2484

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.465284	46.98112	.3181627	-.023662	1.118885	.4891351	.7963466
Stddev	.024480	.20908	.0017737	.000193	.102396	.0143151	.0037325
%RSD	.3786391	.4450249	.5574918	.8164641	9.151634	2.926614	.4687034
#1	6.488123	46.97405	.3190140	-.023451	1.205353	.5007799	.7959814
#2	6.468288	47.19364	.3161238	-.023830	1.005812	.4934723	.8002482
#3	6.439440	46.77566	.3193503	-.023704	1.145490	.4731529	.7928101

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	19.31969	9.270027	.2940398	.0004807	2.636918	5.636707	.0054662
Stddev	.24188	.039214	.0013536	.0003662	.011511	.025428	.0015570
%RSD	1.252007	.4230202	.4603559	76.16769	.4365182	.4511111	28.48505
#1	19.59631	9.278948	.2952413	.0008993	2.631967	5.640395	.0071952
#2	19.21481	9.227121	.2943047	.0002198	2.628711	5.609636	.0041746
#3	19.14795	9.304012	.2925733	.0003231	2.650075	5.660089	.0050288

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4571-08DLX2 Acquired: 11/11/2024 3:54:11 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE580 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.583194	.0830263	.5277744
Stddev	.016773	.0013696	.0016175
%RSD	.6493071	1.649558	.3064800
#1	2.594010	.0844563	.5292836
#2	2.591701	.0828962	.5279727
#3	2.563873	.0817264	.5260668

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	905.6221	23437.01	2395.855	817.3358	1566.354
Stddev	1.4191	79.50	7.302	4.9504	2.088
%RSD	.1566996	.3391907	.3047949	.6056802	.1332956
#1	906.2520	23354.18	2393.814	817.6720	1566.462
#2	906.6172	23444.19	2403.961	812.2259	1568.386
#3	903.9971	23512.68	2389.790	822.1096	1564.214

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4571-09DLX2 Acquired: 11/11/2024 3:58:36 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE581 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3144883	-.042332	.1339469	-.006090	.0070620	136.7234	1.681094
Stddev	.0110293	.009462	.0076806	.004197	.0025536	.4763	.009280
%RSD	3.507055	22.35132	5.734098	68.91242	36.15960	.3483690	.5519987
#1	.3221755	-.040530	.1340004	-.003925	.0074890	137.2081	1.685017
#2	.3194382	-.033900	.1262396	-.003419	.0043218	136.7061	1.687768
#3	.3018512	-.052564	.1416006	-.010928	.0093752	136.2560	1.670497

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0060489	.0073381	67.19461	.2786586	.1511364	.3632473	272.9721
Stddev	.0000414	.0002677	.29950	.0119496	.0014630	.0056859	1.0527
%RSD	.6851730	3.647454	.4457214	4.288267	.9679665	1.565299	.3856445
#1	.0060173	.0076470	67.53754	.2658419	.1528038	.3685695	274.1764
#2	.0060335	.0071739	67.06196	.2894934	.1500678	.3639155	272.5131
#3	.0060958	.0071935	66.98435	.2806405	.1505377	.3572568	272.2268

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.642850	57.82046	.3615597	-.023091	1.517124	.5408809	.4721894
Stddev	.023950	.38611	.0004360	.002382	.272117	.0070232	.0166336
%RSD	.3605344	.6677812	.1205982	10.31430	17.93635	1.298467	3.522645
#1	6.669058	58.26329	.3613958	-.025466	1.394742	.5461769	.4539304
#2	6.622100	57.55425	.3612294	-.020702	1.327687	.5329141	.4864794
#3	6.637392	57.64382	.3620540	-.023106	1.828943	.5435517	.4761584

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	17.00563	6.087530	.2889875	-.001190	.5734847	4.481856	.0044045
Stddev	.17591	.018907	.0019948	.000753	.0123358	.030934	.0013729
%RSD	1.034407	.3105832	.6902906	63.32264	2.151022	.6902086	31.16980
#1	17.12051	6.108917	.2908825	-.000320	.5624048	4.446290	.0030142
#2	17.09326	6.080634	.2891742	-.001611	.5867770	4.496774	.0057593
#3	16.80312	6.073039	.2869059	-.001639	.5712723	4.502505	.0044401

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4571-09DLX2 Acquired: 11/11/2024 3:58:36 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE581 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.677734	.1084584	.3486137
Stddev	.011399	.0019802	.0008827
%RSD	.4257135	1.825808	.2532075
#1	2.690465	.1082560	.3495485
#2	2.674265	.1065872	.3484980
#3	2.668472	.1105321	.3477945

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	903.0667	23431.17	2389.593	820.6749	1529.411
Stddev	.1791	743.83	11.228	23.5389	3.049
%RSD	.0198294	3.174512	.4698587	2.868238	.1993275
#1	902.9925	24207.98	2377.664	846.3209	1527.738
#2	903.2710	22725.43	2399.955	800.0550	1532.929
#3	902.9367	23360.08	2391.160	815.6487	1527.565

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4571-10DLX2 Acquired: 11/11/2024 4:03:02 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE544 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1245421	-.024371	.1660926	-.004084	.0051542	59.50937	.6320481
Stddev	.0086622	.003604	.0003652	.004565	.0039407	.31669	.0023247
%RSD	6.955203	14.78594	.2198559	111.7773	76.45600	.5321748	.3678042
#1	.1277877	-.028101	.1664653	-.003469	.0054377	59.38464	.6321825
#2	.1147259	-.024103	.1660769	.000142	.0089455	59.27403	.6296592
#3	.1311128	-.020909	.1657355	-.008925	.0010794	59.86944	.6343027

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0031231	.0051683	15.59774	.1219002	.0754605	.3667288	143.3622
Stddev	.0000757	.0002337	.05439	.0017102	.0013394	.0034182	.7917
%RSD	2.422445	4.522196	.3486855	1.402928	1.774900	.9320824	.5522085
#1	.0031883	.0049006	15.63602	.1201487	.0762988	.3706520	143.3433
#2	.0030402	.0053317	15.53548	.1235658	.0761668	.3643922	142.5802
#3	.0031409	.0052726	15.62171	.1219861	.0739158	.3651422	144.1632

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.920098	23.24737	.1139588	-.014175	.9398731	.2330577	.6377440
Stddev	.019873	.09874	.0009075	.000493	.3315803	.0051332	.0020643
%RSD	.6805571	.4247244	.7963046	3.479170	35.27926	2.202523	.3236833
#1	2.919080	23.24976	.1132579	-.014667	.7167269	.2388445	.6395734
#2	2.900754	23.34490	.1149838	-.013680	.7820027	.2290535	.6381526
#3	2.940461	23.14747	.1136347	-.014179	1.320890	.2312752	.6355060

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.92238	2.558697	.1679865	-.000295	1.144758	4.806483	.0054503
Stddev	.16873	.015087	.0012784	.000462	.002679	.020954	.0016295
%RSD	1.305727	.5896339	.7610204	156.4612	.2340266	.4359494	29.89787
#1	12.77823	2.576101	.1692988	.000138	1.145555	4.821094	.0061539
#2	12.88093	2.550667	.1667449	-.000243	1.141771	4.782476	.0035872
#3	13.10797	2.549323	.1679157	-.000780	1.146948	4.815880	.0066098

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4571-10DLX2 Acquired: 11/11/2024 4:03:02 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE544 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.353427	.0440823	.1768282
Stddev	.005840	.0015719	.0009036
%RSD	.4315026	3.565714	.5110326
#1	1.350175	.0457563	.1767691
#2	1.349937	.0426378	.1759555
#3	1.360169	.0438528	.1777599

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	876.0338	22634.03	2303.887	794.9232	1606.126
Stddev	.8419	86.46	7.674	1.0957	2.868
%RSD	.0961057	.3819712	.3330706	.1378345	.1785400
#1	875.6537	22731.32	2298.912	794.3524	1602.815
#2	876.9988	22565.99	2312.724	794.2308	1607.721
#3	875.4490	22604.79	2300.025	796.1864	1607.841

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4571-11DLX2 Acquired: 11/11/2024 4:07:27 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE545 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4095271	-.039554	.1306273	.0029998	.0031740	97.81435	1.060740
Stddev	.0033532	.004785	.0037659	.0026441	.0011968	.18677	.003201
%RSD	.8188079	12.09669	2.882929	88.14315	37.70747	.1909443	.3017857
#1	.4130738	-.034353	.1280204	.0034518	.0043493	98.02955	1.064340
#2	.4064084	-.043768	.1349449	.0053887	.0019568	97.71906	1.059665
#3	.4090992	-.040540	.1289166	.0001588	.0032159	97.69446	1.058215

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0042722	.0059550	198.5103	.3212249	.1294882	.4443713	214.3373
Stddev	.0002747	.0002452	.2322	.0009675	.0007957	.0037363	.2101
%RSD	6.429210	4.116789	.1169790	.3011979	.6145277	.8407974	.0980402
#1	.0045459	.0056870	198.7388	.3212536	.1286372	.4470317	214.3167
#2	.0039966	.0061680	198.2746	.3221778	.1302138	.4400998	214.5569
#3	.0042741	.0060099	198.5175	.3202434	.1296136	.4459825	214.1382

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.725818	55.66611	.3234070	-.015341	3.344320	.3941821	.6134346
Stddev	.020837	.29236	.0017608	.000061	.219672	.0111589	.0019096
%RSD	.2387949	.5252086	.5444618	.3961194	6.568500	2.830886	.3113030
#1	8.745522	56.00032	.3213772	-.015411	3.378394	.3972494	.6149857
#2	8.704008	55.45774	.3243206	-.015300	3.544964	.4034865	.6113018
#3	8.727924	55.54026	.3245233	-.015312	3.109603	.3818104	.6140165

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	13.10805	5.373770	.2409380	.0249329	2.863246	4.724331	.0029633
Stddev	.09146	.021674	.0013750	.0013965	.010926	.030748	.0027795
%RSD	.6977153	.4033227	.5706950	5.601109	.3815813	.6508448	93.79801
#1	13.12157	5.354963	.2417717	.0260600	2.859363	4.745809	.0057746
#2	13.01058	5.368876	.2393509	.0253682	2.875583	4.689108	.0002166
#3	13.19199	5.397473	.2416912	.0233706	2.854793	4.738075	.0028987

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4571-11DLX2 Acquired: 11/11/2024 4:07:27 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE545 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	3.019088	.1092071	.6192286
Stddev	.008314	.0010777	.0009329
%RSD	.2753790	.9868901	.1506489
#1	3.026867	.1104336	.6202424
#2	3.020070	.1087758	.6190368
#3	3.010326	.1084117	.6184065

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	878.1512	22909.54	2362.803	798.0870	1481.125
Stddev	1.5389	64.34	8.818	2.1204	3.142
%RSD	.1752470	.2808481	.3731840	.2656871	.2121535
#1	878.1029	22907.73	2353.987	795.6909	1484.027
#2	879.7137	22846.12	2371.622	798.8491	1481.560
#3	876.6369	22974.76	2362.800	799.7210	1477.788

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4571-12DLX2 Acquired: 11/11/2024 4:11:53 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE546 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1525885	-.029720	.1080133	-.006209	.0046342	90.43843	.8233771
Stddev	.0086061	.003460	.0045282	.004711	.0012041	.25006	.0030774
%RSD	5.640061	11.64229	4.192264	75.87492	25.98250	.2765022	.3737540
#1	.1532355	-.028949	.1125029	-.011614	.0045363	90.65762	.8268150
#2	.1608528	-.026711	.1034475	-.004045	.0058842	90.49162	.8208795
#3	.1436772	-.033501	.1080896	-.002969	.0034821	90.16605	.8224369

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0047778	.0047769	23.70962	.1704687	.1044265	.2784288	196.3987
Stddev	.0001896	.0001834	.12803	.0019189	.0008000	.0026888	.6355
%RSD	3.968664	3.839840	.5399924	1.125674	.7661058	.9657209	.3235635
#1	.0048820	.0046439	23.80734	.1698160	.1052945	.2798529	196.3900
#2	.0048924	.0047005	23.75684	.1726288	.1037188	.2753274	197.0385
#3	.0045589	.0049861	23.56469	.1689612	.1042661	.2801060	195.7677

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.355438	34.18062	.1692988	-.018678	1.073258	.3283625	.4351942
Stddev	.037365	.12679	.0011882	.000315	.340805	.0060260	.0025177
%RSD	.6977095	.3709323	.7018142	1.688931	31.75427	1.835178	.5785156
#1	5.351459	34.31177	.1701057	-.018339	.826176	.3221030	.4322875
#2	5.394634	34.17139	.1679344	-.018732	.931542	.3341241	.4366037
#3	5.320222	34.05871	.1698562	-.018962	1.462055	.3288604	.4366914

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	18.34429	3.864429	.2449230	-.001213	1.145612	6.584674	.0038389
Stddev	.05064	.027915	.0013703	.000569	.011687	.036172	.0037995
%RSD	.2760591	.7223629	.5594776	46.93571	1.020129	.5493417	98.97233
#1	18.29040	3.847814	.2464936	-.001870	1.157110	6.588808	.0008814
#2	18.39089	3.848817	.2443037	-.000866	1.133746	6.618603	.0081241
#3	18.35159	3.896658	.2439716	-.000903	1.145982	6.546613	.0025113

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4571-12DLX2 Acquired: 11/11/2024 4:11:53 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE546 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.609401	.0659691	.1623859
Stddev	.007959	.0005902	.0001457
%RSD	.4945582	.8947294	.0897312
#1	1.611290	.0656516	.1625342
#2	1.616247	.0656056	.1623807
#3	1.600667	.0666502	.1622429

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	885.5968	22809.28	2343.353	798.2002	1573.489
Stddev	2.4219	41.97	13.317	1.8843	4.265
%RSD	.2734730	.1839924	.5682874	.2360714	.2710299
#1	887.4779	22762.59	2342.667	799.3375	1573.385
#2	886.4485	22843.85	2330.393	799.2379	1577.805
#3	882.8642	22821.41	2357.000	796.0251	1569.277

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4571-13DLX2 Acquired: 11/11/2024 4:16:20 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE547 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2070981	-.040626	.1134576	-.004783	.0024638	111.0125	1.271878
Stddev	.0152073	.006616	.0036635	.003919	.0017711	.9696	.010979
%RSD	7.343050	16.28582	3.228979	81.92698	71.88796	.8734111	.8632082
#1	.2035306	-.032990	.1176805	-.002188	.0012570	112.0573	1.283958
#2	.2237721	-.044246	.1115614	-.009291	.0044971	110.8385	1.269168
#3	.1939917	-.044643	.1111308	-.002870	.0016372	110.1417	1.262507

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0056983	.0063856	22.67400	.2354136	.1388205	.2756799	245.2156
Stddev	.0001508	.0001033	.19550	.0013811	.0000951	.0033378	2.3681
%RSD	2.646267	1.617528	.8622345	.5866878	.0684776	1.210760	.9657313
#1	.0058642	.0065041	22.87775	.2342390	.1387366	.2742826	247.9053
#2	.0056612	.0063146	22.65630	.2369352	.1389237	.2794893	244.2975
#3	.0055695	.0063381	22.48795	.2350666	.1388013	.2732678	243.4440

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.772003	43.31775	.2761942	-.022578	1.174228	.4626117	.4835226
Stddev	.071057	.43605	.0004099	.000314	.063197	.0070277	.0027435
%RSD	1.231068	1.006623	.1484216	1.390700	5.382039	1.519137	.5673950
#1	5.854053	43.77990	.2766664	-.022867	1.117120	.4702422	.4855048
#2	5.730747	43.25973	.2759296	-.022244	1.163440	.4611885	.4846716
#3	5.731211	42.91362	.2759867	-.022624	1.242126	.4564046	.4803915

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	20.95451	4.753501	.2637088	-.001479	.8596934	5.877972	.0070202
Stddev	.18200	.004768	.0030878	.000415	.0081822	.036258	.0011238
%RSD	.8685352	.1003010	1.170898	28.04135	.9517535	.6168425	16.00836
#1	21.15710	4.758552	.2663013	-.001492	.8595591	5.918341	.0057271
#2	20.90161	4.752873	.2645322	-.001887	.8679418	5.848177	.0077610
#3	20.80482	4.749079	.2602928	-.001058	.8515792	5.867396	.0075725

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4571-13DLX2 Acquired: 11/11/2024 4:16:20 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE547 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.802412	.0881291	.2564890
Stddev	.027262	.0014348	.0022524
%RSD	.9728078	1.628060	.8781656
#1	2.830882	.0897562	.2588818
#2	2.799810	.0875859	.2561753
#3	2.776545	.0870452	.2544098

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	911.2769	23334.71	2411.145	820.2221	1562.522
Stddev	3.0649	120.46	16.736	2.7762	1.716
%RSD	.3363250	.5162341	.6941019	.3384675	.1098036
#1	914.1567	23383.33	2391.889	820.0489	1564.297
#2	911.6184	23197.54	2422.180	817.5365	1560.873
#3	908.0556	23423.27	2419.367	823.0808	1562.395

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4571-14DLX2 Acquired: 11/11/2024 4:20:47 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE548 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8857665	-.066559	.1115045	-.020411	.0039792	125.5824	1.210319
Stddev	.0077822	.000689	.0028444	.006886	.0033180	.5358	.005422
%RSD	.8785800	1.035563	2.550954	33.73778	83.38240	.4266308	.4480062
#1	.8938427	-.067195	.1128865	-.027836	.0029493	125.5900	1.208987
#2	.8783161	-.066655	.1133938	-.019162	.0012984	125.0428	1.205686
#3	.8851408	-.065826	.1082331	-.014235	.0076900	126.1143	1.216283

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0053803	.0120129	256.2702	1.178163	.2945121	.5327971	399.4885
Stddev	.0001564	.0001767	1.1728	.003073	.0002962	.0012907	2.5129
%RSD	2.906445	1.471209	.4576276	.2608558	.1005840	.2422404	.6290183
#1	.0055555	.0118981	256.8253	1.179566	.2948244	.5341743	401.2176
#2	.0053305	.0122165	254.9230	1.180284	.2942351	.5316153	396.6060
#3	.0052549	.0119242	257.0624	1.174638	.2944769	.5326016	400.6420

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.19839	95.16407	.9408880	-.029356	2.034309	1.012358	.5840741
Stddev	.07833	.62707	.0038465	.000686	.362755	.005607	.0017428
%RSD	.6421608	.6589408	.4088104	2.338200	17.83184	.5538151	.2983880
#1	12.25912	95.51531	.9388699	-.029867	2.420344	1.007161	.5857796
#2	12.10997	94.44009	.9384707	-.028576	1.982089	1.018300	.5822962
#3	12.22606	95.53680	.9453235	-.029625	1.700494	1.011614	.5841465

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.625527	4.097815	.4022385	-.000403	.7451552	4.509365	-.000743
Stddev	.086031	.025398	.0057657	.000175	.0008818	.025704	.001214
%RSD	1.298478	.6197960	1.433409	43.28898	.1183419	.5700239	163.2768
#1	6.627022	4.068491	.4058791	-.000222	.7458993	4.528174	-.000535
#2	6.538758	4.112093	.3955909	-.000419	.7441812	4.480076	.000353
#3	6.710801	4.112861	.4052455	-.000570	.7453851	4.519844	-.002048

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4571-14DLX2 Acquired: 11/11/2024 4:20:47 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE548 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.065797	.1161391	.3284554
Stddev	.015759	.0016208	.0015976
%RSD	.7628750	1.395541	.4864075
#1	2.062160	.1155827	.3288092
#2	2.052175	.1148699	.3267106
#3	2.083057	.1179648	.3298465

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	874.4977	23016.96	2388.249	790.0899	1454.444
Stddev	.5166	25.41	13.669	3.8330	1.329
%RSD	.0590785	.1104180	.5723258	.4851362	.0913824
#1	875.0895	23033.68	2381.013	789.5000	1455.767
#2	874.1368	22987.71	2404.014	794.1836	1454.456
#3	874.2668	23029.48	2379.719	786.5860	1453.109

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4571-15DLX2 Acquired: 11/11/2024 4:25:11 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE549 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2804773	-.062594	.1472164	-.002988	.0099339	161.3864	.7983666
Stddev	.0150929	.003906	.0043782	.006628	.0044949	.6126	.0036327
%RSD	5.381159	6.239607	2.973995	221.8096	45.24825	.3796153	.4550142
#1	.2767626	-.059675	.1488585	-.010513	.0115090	161.0744	.8000950
#2	.2675886	-.061077	.1505363	.001987	.0048634	160.9925	.7941925
#3	.2970808	-.067031	.1422546	-.000439	.0134293	162.0922	.8008124

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0053054	.0137406	41.36480	.1469552	.2285031	.5239640	357.0467
Stddev	.0002287	.0003190	.14624	.0029279	.0007763	.0072804	1.5594
%RSD	4.310870	2.321626	.3535258	1.992342	.3397409	1.389477	.4367379
#1	.0055614	.0137364	41.31185	.1485015	.2279513	.5230058	355.8620
#2	.0052336	.0140616	41.25242	.1487857	.2281672	.5172102	356.4647
#3	.0051212	.0134237	41.53014	.1435784	.2293908	.5316760	358.8134

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.159472	59.41429	.1586524	-.025850	2.904920	.6040066	1.299084
Stddev	.052941	.12642	.0011228	.000198	.091317	.0161064	.002300
%RSD	.5779964	.2127752	.7076888	.7640326	3.143515	2.666601	.1770644
#1	9.117633	59.47793	.1587394	-.025993	2.854248	.5896250	1.296434
#2	9.141792	59.26870	.1574886	-.025625	2.850175	.6009850	1.300254
#3	9.218991	59.49625	.1597291	-.025932	3.010337	.6214099	1.300564

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.555994	3.762078	.3563815	.0001066	.2354980	4.834898	.0028463
Stddev	.112074	.019273	.0010964	.0007180	.0027888	.024714	.0034065
%RSD	1.483241	.5122924	.3076378	673.3758	1.184205	.5111657	119.6840
#1	7.683473	3.741726	.3556133	.0005956	.2369190	4.824102	.0011400
#2	7.472959	3.764457	.3558943	.0004420	.2372901	4.817419	.0067687
#3	7.511549	3.780051	.3576371	-.000718	.2322849	4.863174	.0006301

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: P4571-15DLX2 Acquired: 11/11/2024 4:25:11 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MYE549 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	5.378710	.0830065	.3189196
Stddev	.021360	.0009470	.0015848
%RSD	.3971123	1.140867	.4969356
#1	5.364616	.0840936	.3181499
#2	5.368227	.0825654	.3178666
#3	5.403285	.0823606	.3207423

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	885.0726	22848.28	2345.182	802.5472	1536.712
Stddev	1.7031	46.51	13.180	1.3924	4.330
%RSD	.1924265	.2035457	.5620186	.1734997	.2817475
#1	887.0313	22901.86	2351.419	803.9631	1541.074
#2	883.9402	22824.64	2354.086	802.4990	1536.646
#3	884.2464	22818.34	2330.040	801.1795	1532.416

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: CCV058 Acquired: 11/11/2024 4:29:37 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV058 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.923573	4.724327	24.35483	4.767133	4.785389	395.5637	10.21448
Stddev	.033786	.005538	.04860	.016405	.019921	.2633	.01320
%RSD	.6862126	.1172244	.1995362	.3441344	.4162828	.0665752	.1292262
#1	4.958921	4.724007	24.40668	4.784273	4.808383	395.3166	10.22764
#2	4.891602	4.718955	24.34749	4.751577	4.774431	395.8407	10.21456
#3	4.920198	4.730018	24.31032	4.765549	4.773353	395.5337	10.20124

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4998873	2.456956	394.3786	15.34558	2.470227	14.91889	397.1822
Stddev	.0008518	.003740	.7150	.03548	.003941	.01229	.9245
%RSD	.1703969	.1522211	.1812943	.2312066	.1595543	.0823491	.2327592
#1	.4994180	2.459975	393.6434	15.32583	2.472032	14.93049	396.3668
#2	.4993733	2.452772	394.4210	15.38654	2.465706	14.92017	396.9932
#3	.5008705	2.458122	395.0715	15.32437	2.472942	14.90602	398.1865

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	14.75706	393.7735	2.459962	1.245295	400.3171	2.486084	14.46684
Stddev	.01279	.6363	.002450	.001849	1.0366	.026032	.06523
%RSD	.0866553	.1615853	.0996084	.1485052	.2589544	1.047122	.4509089
#1	14.74582	393.1320	2.461484	1.243667	399.1836	2.457859	14.39406
#2	14.75438	393.7841	2.457136	1.247306	400.5506	2.509152	14.52004
#3	14.77097	394.4045	2.461268	1.244911	401.2170	2.491241	14.48642

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	153.8106	5.008347	5.150710	4.752935	4.982684	4.970095	4.924228
Stddev	.3209	.032545	.005398	.014344	.033269	.005916	.008341
%RSD	.2086264	.6498142	.1048029	.3018024	.6676923	.1190325	.1693917
#1	154.0728	5.019591	5.156737	4.765425	5.003990	4.965351	4.926290
#2	153.9064	4.971671	5.149074	4.737268	4.944348	4.968210	4.915049
#3	153.4528	5.033779	5.146319	4.756113	4.999714	4.976724	4.931345

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: CCV058 Acquired: 11/11/2024 4:29:37 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV058 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.963407	5.072022	5.130884
Stddev	.005042	.010610	.015952
%RSD	.1015881	.2091964	.3109047
#1	4.966284	5.059853	5.148094
#2	4.966353	5.076875	5.127965
#3	4.957585	5.079338	5.116593

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	685.2597	19693.92	2079.783	609.1687	1282.939
Stddev	1.3613	19.60	1.470	2.6771	2.185
%RSD	.1986590	.0995182	.0706792	.4394635	.1703032
#1	684.0163	19713.09	2080.624	612.2250	1280.633
#2	686.7142	19673.91	2078.086	607.2392	1284.979
#3	685.0485	19694.76	2080.639	608.0420	1283.204

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: CCB058 Acquired: 11/11/2024 4:33:50 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB058 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.004188	-.005736	-.001010	.0007425	.0003147	-.003278	.0002748
Stddev	.002745	.001579	.002181	.0046503	.0005505	.013449	.0009842
%RSD	65.56218	27.51992	215.9768	626.2981	174.9334	410.2605	358.2033
#1	-.004837	-.006568	-.001433	-.003561	-.000118	-.002073	.0011630
#2	-.006550	-.006725	-.002949	.000113	.000128	-.017289	-.000783
#3	-.001176	-.003916	.001352	.005675	.000934	.009528	.000445

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000072	-.000031	.0170871	-.001631	-.000440	-.001653	-.004898
Stddev	.000050	.000133	.0129941	.000641	.000618	.000923	.053514
%RSD	68.85387	424.8116	76.04652	39.30751	140.6581	55.84950	1092.577
#1	-.000128	-.000018	.0173869	-.002359	-.000794	-.001384	.056872
#2	-.000033	-.000170	.0039456	-.001150	-.000800	-.002681	-.034342
#3	-.000055	.000094	.0299287	-.001385	.000274	-.000894	-.037224

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000228	.0216867	.0002081	-.001430	.4058425	-.006969	-.000213
Stddev	.001210	.0544205	.0002275	.000095	.5031124	.006576	.000233
%RSD	531.2040	250.9401	109.3247	6.652905	123.9674	94.36346	109.3919
#1	-.000681	.0729970	.0003577	-.001525	.6221826	-.009320	.000027
#2	-.001146	-.035386	-.000054	-.001335	.7645984	.000460	-.000228
#3	.001144	.027449	.000320	-.001431	-.169253	-.012045	-.000438

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2937885	.0011492	.0029706	-.000027	-.003784	-.002410	.0021920
Stddev	.0782644	.0037879	.0011663	.000101	.001631	.000825	.0009606
%RSD	26.63971	329.6137	39.26233	371.5442	43.10249	34.23964	43.82435
#1	.2087618	-.003186	.0031864	-.000127	-.005429	-.002586	.0024564
#2	.3097846	.003817	.0040139	.000074	-.002167	-.001511	.0011269
#3	.3628191	.002817	.0017114	-.000028	-.003756	-.003132	.0029928

Reviewed By:Mohan
On:11/13/2024 7:19:26 AM
Inst Id :P5

Sample Name: CCB058 Acquired: 11/11/2024 4:33:50 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v714) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB058 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.000502	-.006387	.0000145
Stddev	.002155	.000859	.0000806
%RSD	429.4971	13.44780	555.9397
#1	-.001824	-.005686	-.000043
#2	-.001666	-.007345	-.000020
#3	.001985	-.006130	.000107

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	845.7182	21465.83	2151.886	761.9062	1670.047
Stddev	2.9759	48.84	5.130	3.5138	3.483
%RSD	.3518832	.2275307	.2383803	.4611804	.2085378
#1	842.2963	21439.56	2146.061	760.9802	1666.786
#2	847.1570	21522.19	2153.868	765.7903	1673.715
#3	847.7013	21435.75	2155.729	758.9482	1669.641

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Prep Standard - Chemical Standard Summary

Order ID : P4570

Test : Metals CLP Full

Prepbatch ID : PB164633,

Sequence ID/Qc Batch ID: LB133379,LB133387,

Standard ID :
MP81119,MP82127,MP83134,MP83136,MP83137,MP83138,MP83139,MP83140,MP83141,MP83142,MP83143,MP831
44,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,M587
5,M5935,M5960,M5962,M5970,M5976,M5978,M5982,M5984,M5985,M5990,M5999,M6021,M6023,M6025,M6028,M60
30,M6033,M6040,M6111,M6115,M6117,W2606,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	MP81119	06/21/2024	04/24/2025	Al-Terek Isaac	METALS_SCALE_2 (M SC-2)	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 06/21/2024

FROM 1250.00000ml of M5935 + 1250.00000ml of W2606 = Final Quantity: 2500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
170	1:1HCL	MP82127	09/03/2024	02/08/2025	Janvi Patel	None	None	Sarabjit Jaswal 09/03/2024

FROM 1250.00000ml of M6040 + 1250.00000ml of W3112 = 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
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

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

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Metals STANDARD PREPARATION LOG

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

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

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Metals STANDARD PREPARATION LOG

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

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

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Metals STANDARD PREPARATION LOG

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

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

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Metals STANDARD PREPARATION LOG

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

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

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Metals STANDARD PREPARATION LOG

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

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

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
921	ICPAES SPIKE SOL#6	MP83147	10/30/2024	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

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

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Metals STANDARD PREPARATION LOG

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 / jaswal	04/20/2021 / bin	M5130

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CHEM-QC-4 / CHEM-QC-4, Second Source, 1000 ug/ml, B, Mo, Si, Sn, Ti	S2-MEB711674	11/02/2026	07/01/2022 / bin	09/10/2021 / bin	M5218

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	PART B / ICSAB (ICP) STOCK SOLN	ICSB-0710	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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CHEMICAL RECEIPT LOG BOOK

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 #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	24D1062002	12/08/2024	06/21/2024 / Al-Terek	06/07/2024 / Al-Terek	M5935

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

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Fax : 908 789 8922

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGMO1-1 / MOLYBDENUM 125mL 1000ug/mL	T2-MO720876	07/17/2027	08/07/2024 / jaswal	02/22/2024 / Jaswal	M5976

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGTI1-1 / TITANIUM 125mL 1000ug/mL	T2-TI719972	06/17/2027	08/07/2024 / jaswal	02/22/2024 / Jaswal	M5978

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57038 / Sr, 1000 PPM, 125 ml	031524	03/15/2027	07/01/2024 / Jaswal	06/11/2024 / Jaswal	M5982

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	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

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CLPP-SPK-1 / SOIL/WATER SPIKE SOLN 1, 125mL	T2-MEB721963	07/27/2027	09/04/2024 / Jaswal	02/22/2024 / kareem	M5999

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57023 / V, 1000 PPM, 125 ml	062424	06/24/2027	09/28/2024 / jaswal	08/05/2024 / Jaswal	M6021

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57081 / Tl, 1000 PPM, 125 ml	0624724	06/27/2027	08/05/2024 / kareem	08/05/2024 / Jaswal	M6023

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57082 / Pb, 1000 PPM, 125 ml	061224	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

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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.	58113 / Al, 10000 PPM, 500 ml	011623	01/16/2026	08/07/2024 / Jaswal	01/03/2024 / Jaswal	M6033

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9530-33 / Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L)	24D1562005	02/08/2025	08/09/2024 / jaswal	08/01/2024 / Janvi	M6040

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	05/04/2025	11/02/2024 / Janvi	09/29/2024 / Eman	M6115

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	24B1362001	05/06/2025	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	10/24/2024	10/24/2019 / apatel	10/24/2019 / apatel	W2606

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	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) HNO_3
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

M6028

R 8/5/24

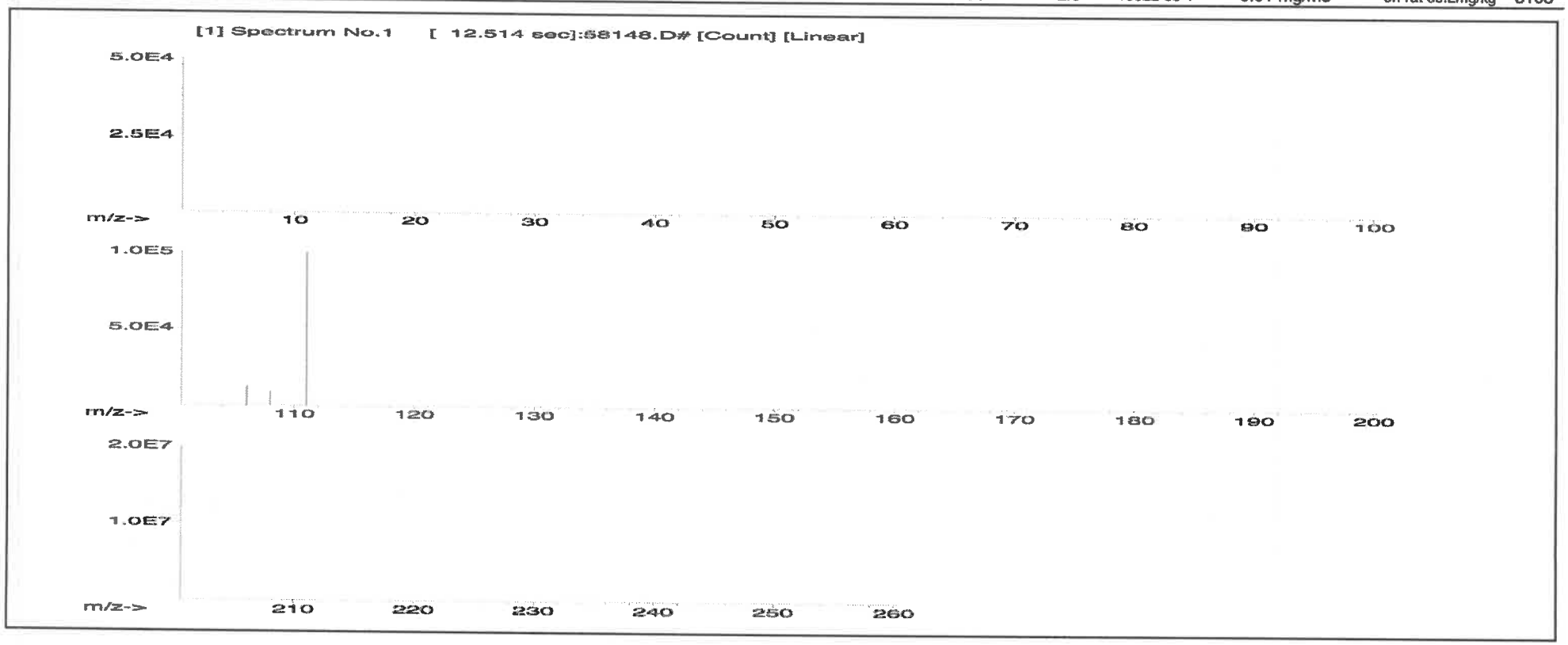
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number:	**57048**		**Lot #**		
Lot Number:	**070124**	**Solvent:**	24002546	Nitric Acid	
Description:	**Cadmium (Cd)**	2%	40.0 (mL)	Nitric Acid	
Expiration Date:	070127				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.07	0.100	Flask Uncertainty		

Aleah O'Brady		
Formulated By:	Aleah O'Brady	070124
Pedro Rentas		
Reviewed By:	Pedro L. Rentas	070124

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Cadmium nitrate tetrahydrate (Cd)	IN024	CDM092021A1	1000	99.999	0.10	36.5	5.4797	5.4804	**1000.1**	**2.0**	10022-68-1	0.01 mg/m3	orl-rat 60.2mg/kg	3108



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	T	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

M5296 OP: 09/19/2022 BH

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CHEM-CLP-4
Lot Number:	S2-MEB711673
Matrix:	3% (v/v) HNO3 3% (v/v) HF
Value / Analyte(s):	1 000 µg/mL ea: Boron, Molybdenum, Silicon, Tin, Titanium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Boron, B	**1 000 ± 6 µg/mL**	**Molybdenum, Mo**	**1 000 ± 6 µg/mL**
Silicon, Si	**1 000 ± 7 µg/mL**	**Tin, Sn**	**1 000 ± 6 µg/mL**
Titanium, Ti	**1 000 ± 7 µg/mL**		

Density: 1.030 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
B	ICP Assay	3107	110830
Mo	ICP Assay	3134	130418
Si	ICP Assay	3150	130912
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	3162a	130925

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 02, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **November 02, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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:	CLPP-CAL-1
Lot Number:	T2-MEB714417
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	5 000 µg/mL ea: Calcium, Potassium, Magnesium, Sodium, 2 000 µg/mL ea: Aluminum, Barium, 1 000 µg/mL ea: Iron, 500 µg/mL ea: Nickel, Vanadium, Zinc, Cobalt, Manganese, 250 µg/mL ea: Silver, Copper, 200 µg/mL ea: Chromium, 50 µg/mL ea: Beryllium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	**2 000 ± 7 µg/mL**	**Barium, Ba**	**2 000 ± 9 µg/mL**
Beryllium, Be	**50.00 ± 0.26 µg/mL**	**Calcium, Ca**	**5 000 ± 22 µg/mL**
Chromium, Cr	**200.0 ± 1.0 µg/mL**	**Cobalt, Co**	**500.0 ± 2.4 µg/mL**
Copper, Cu	**250.0 ± 1.0 µg/mL**	**Iron, Fe**	**1 000 ± 4 µg/mL**
Magnesium, Mg	**5 000 ± 20 µg/mL**	**Manganese, Mn**	**500.0 ± 2.0 µg/mL**
Nickel, Ni	**500.0 ± 2.2 µg/mL**	**Potassium, K**	**5 000 ± 19 µg/mL**
Silver, Ag	**250.0 ± 1.1 µg/mL**	**Sodium, Na**	**5 000 ± 18 µg/mL**
Vanadium, V	**499.7 ± 2.2 µg/mL**	**Zinc, Zn**	**500.0 ± 2.2 µg/mL**

Density: 1.118 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cr	Calculated		See Sec. 4.2
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
V	IC Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Note: This solution contains Silver (Ag), please refer to our Sample Preparation Guide for more information.

https://www.inorganicventures.com/sample-preparation-guide/samples-containing-silver

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 27, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 27, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

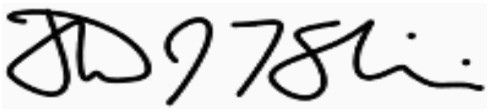
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CLPP-CAL-3
Lot Number:	T2-MEB714159
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Arsenic, Lead, Selenium, Thallium, 500 µg/mL ea: Cadmium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Arsenic, As	**1 000 ± 8 µg/mL**	**Cadmium, Cd**	**500.0 ± 2.1 µg/mL**
Lead, Pb	**1 000 ± 5 µg/mL**	**Selenium, Se**	**1 000 ± 8 µg/mL**
Thallium, Tl	**1 000 ± 7 µg/mL**		

Density: 1.043 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
As	ICP Assay	3103a	100818
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Tl	ICP Assay	3158	151215

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 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

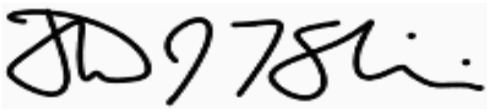
- Sealed TCT Bag Open Date: _____

- 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

CERTIFIED WEIGHT REPORT:

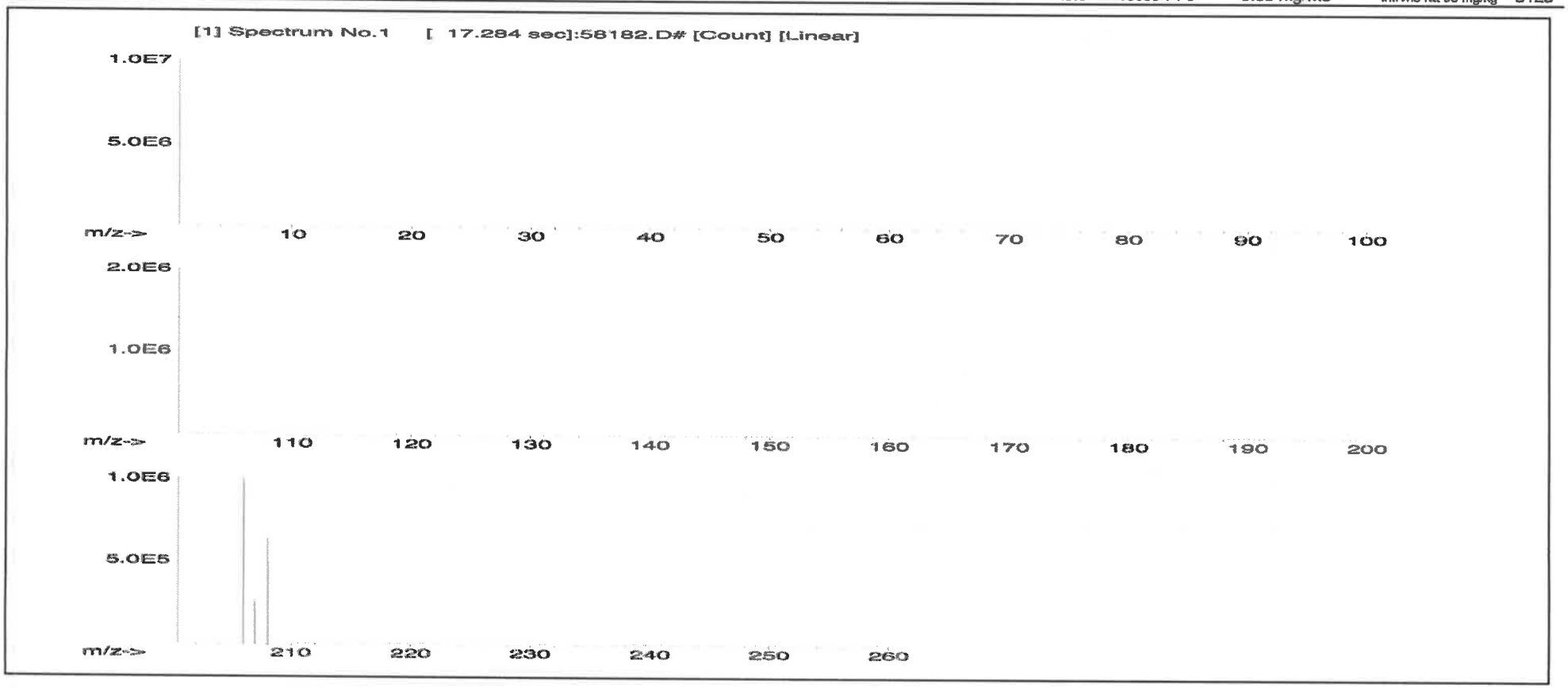
Part Number: 57182
Lot Number: 110923
Description: Lead (Pb)

Expiration Date: 110926
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.02

	Lot #		
Solvent:	24002546	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	
	0.058	Flask Uncertainty	

Formulated By:	Lawence Barry	110923
Reviewed By:	Pedro L. Rentas	110923

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lead(II) nitrate (Pb)	IN029	PBD122016A1	10000	99.999	0.10	62.5	32.0006	32.0040	**10001.1**	**20.0**	10099-74-8	0.05 mg/m3	intrvns-rat 93 mg/kg	3128



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:

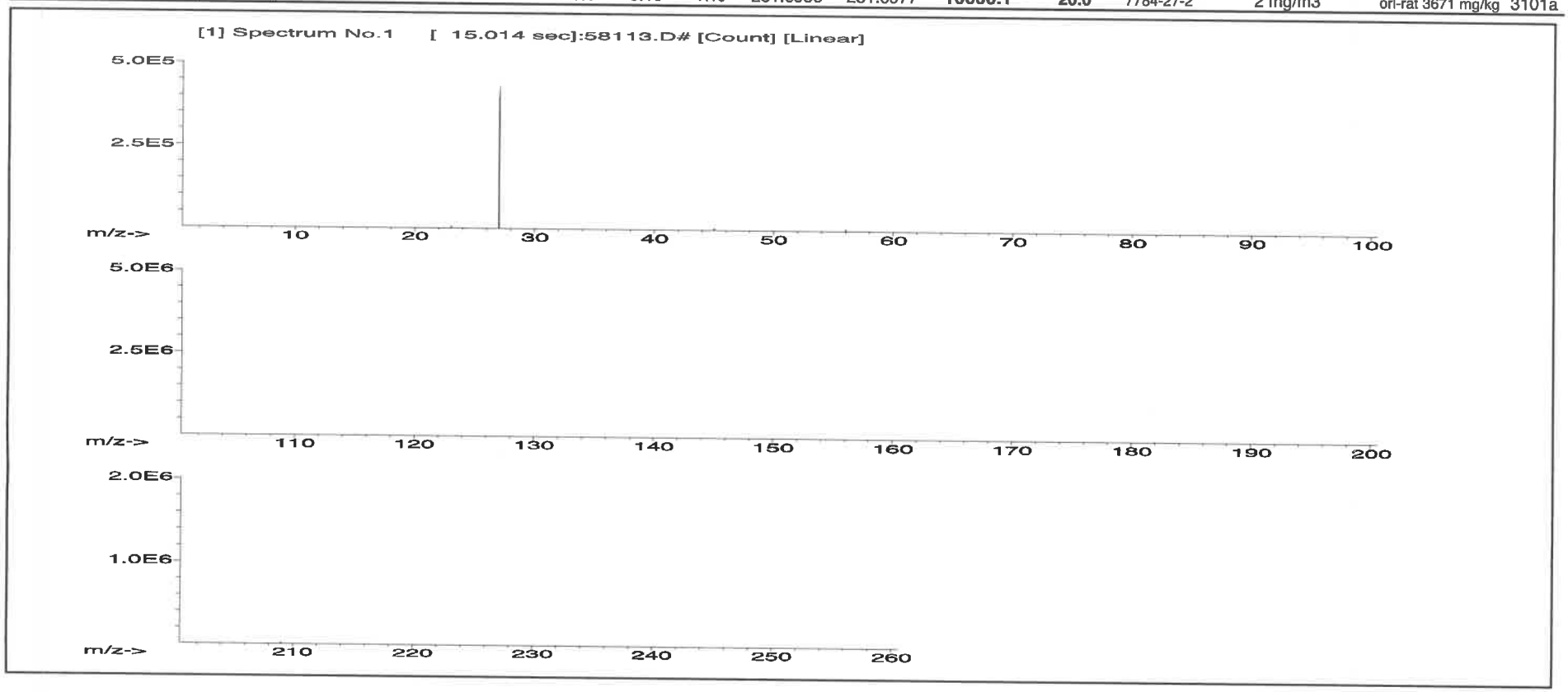
Part Number: 58113
Lot Number: 070622
Description: Aluminum (Al)

Expiration Date: 070625
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:	20370011	Nitric Acid	
2%	40.0 (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. 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.

The Quality Assurance Technical Support (QATS) contract is operated by APTIM Federal Services, LLC.

ICV1-1014 For ICP-MS analysis, use a 50-fold dilution by pipetting 2 mL of the ICV1 concentrate into a 100 mL volumetric flask and dilute to volume with 1% (v/v) nitric acid.

ICV5-0415 For the cold vapor analysis of mercury by AA, use a 100-fold dilution by pipetting 1 mL of the ICV5 concentrate into a 100 mL volumetric flask and dilute to volume with 2% (v/v) nitric acid. The ICV5 concentrate is prepared in 0.05% (w/v) $K_2Cr_2O_7$ and 5% (v/v) nitric acid.

ICV6-0400 For the analysis of cyanide, use a 100-fold dilution by pipetting 1 mL of the ICV6 concentrate into a 100 mL volumetric flask and dilute to volume with Type II water. Distill this solution along with the samples before analysis. The cyanide concentrate is prepared from $K_3Fe(CN)_6$, Type II water, and 0.1 % sodium hydroxide, and will decompose rapidly if exposed to light.

NOTE: USE TYPE II WATER AND HIGH-PURITY ACIDS FOR ALL DILUTIONS.

(D) *CERTIFIED CONCENTRATIONS OF QATS ICV1, ICV5, AND ICV6 SOLUTIONS*

ICV1-1014		
Element	**Concentration (µg/L) (after 10-fold dilution)**	**Concentration (µg/L) (after 50-fold dilution)**
Al	2500	500
Sb	1000	200
As	1000	200
Ba	520	100
Be	510	100
Cd	510	100
Ca	10000	2000
Cr	520	100
Co	520	100
Cu	510	100
Fe	10000	2000
Pb	1000	200
Mg	6000	1200
Mn	520	100
Ni	530	110
K	9900	2000
Se	1000	200
Ag	250	50
Na	10000	2000
Tl	1000	210
V	500	100
Zn	1000	200

ICV5-0415		ICV6-0400	
Element	**Concentration (µg/L) (after 100-fold dilution)**	**Analyte**	**Concentration (µg/L) (after 100-fold dilution)**
Hg	4.0	**CN^-**	99

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

R: 09/08/22 (BH)

Certified Reference Material CRM

M5387 . M5389 . M5390 . M5391 . M5392

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

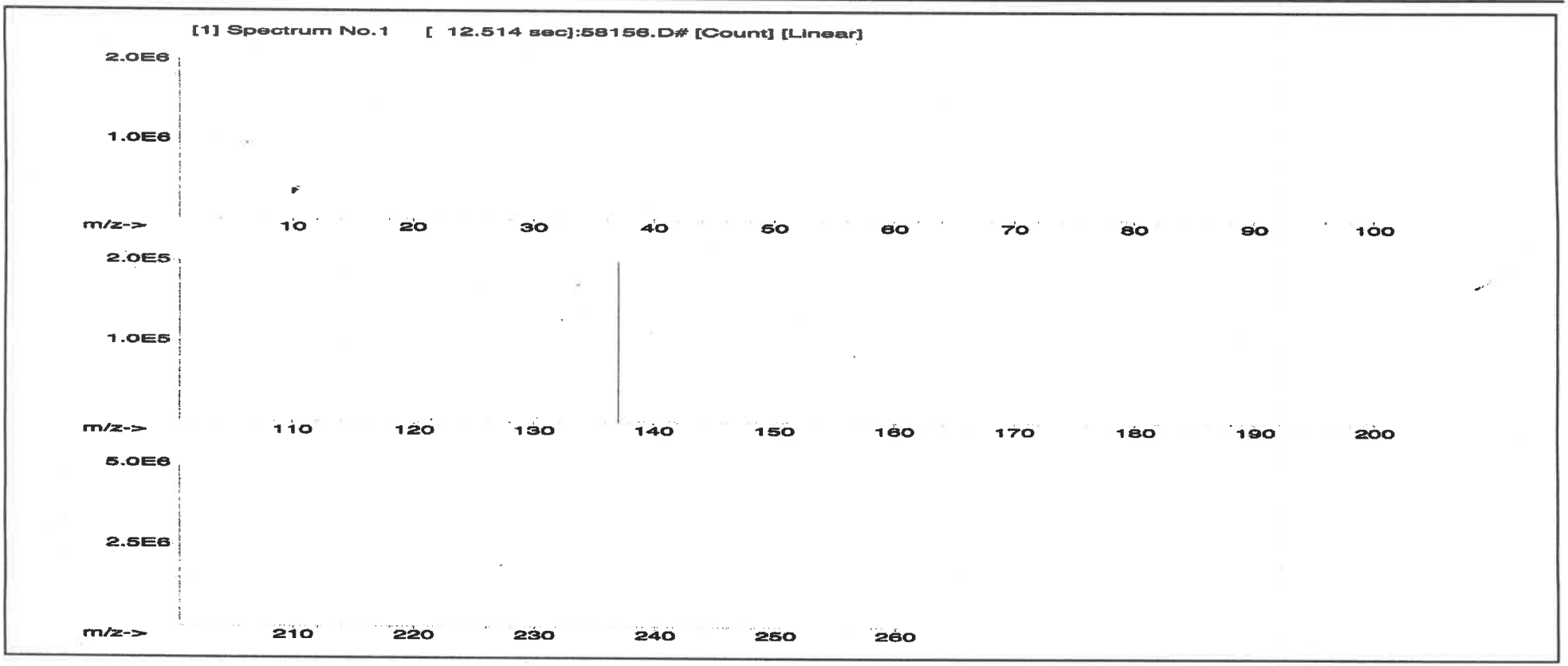
CERTIFIED WEIGHT REPORT:

Part Number:	**57056**		**Lot #**		
Lot Number:	**072122**	**Solvent:**	20510011	Nitric Acid	
Description:	**Barium (Ba)**	2%	40.0 (mL)	Nitric Acid	
Expiration Date:	072125				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Giovanni Esposito

Formulated By:	Giovanni Esposito	072122
Reviewed By:	Pedro L. Rentas	072122

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Barium nitrate (Ba)	IN023	BAD022019A1	1000	99.999	0.10	52.3	3.82417	3.82426	**1000.0**	2.0	10022-31-8	0.5 mg/m3	orl-rat 355 mg/kg	3104a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	T	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

M5429 R1 01/26/23 BH

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CERTIFIED WEIGHT REPORT:

Part Number: 57103
Lot Number: 070622
Description: Lithium (Li)

Expiration Date: 070625
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 1000.12 | 0.058 Flask Uncertainty

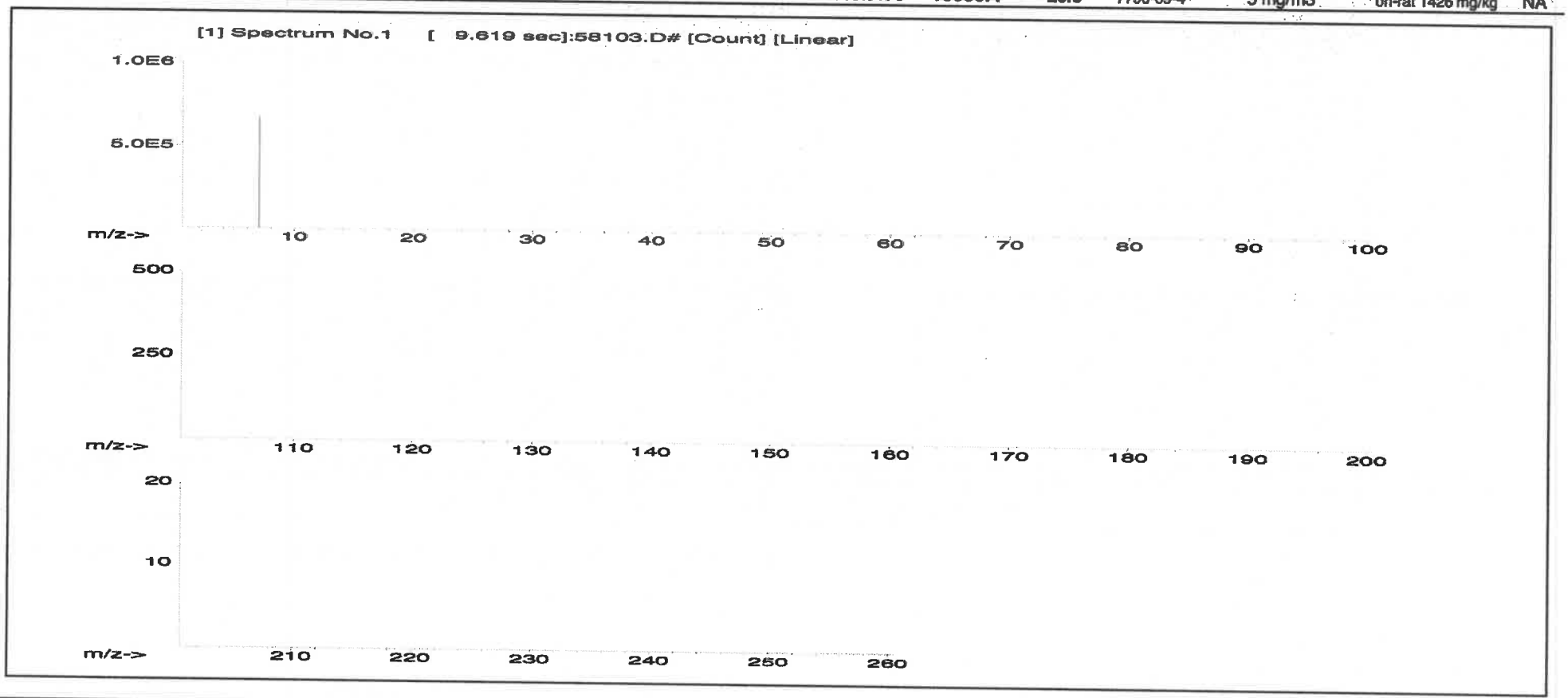
	Lot #		
Solvent:	20510011	Nitric Acid	
2%	20.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

Formulated By: Lawrence Barry 070622

Reviewed By: Pedro L. Rentas 070622

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lithium nitrate (Li)	IN019	LIZ042018A1	10000	99.999	0.10	10.0	100.0134	100.0173	**10000.4**	**20.0**	7790-69-4	5 mg/m3	orl-rat 1426 mg/kg	NA



Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	T	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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IN5497 - IN5498 R: 03/17/23 BH

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CERTIFIED WEIGHT REPORT:

Part Number: 58120
Lot Number: 031523
Description: Calcium (Ca)

Expiration Date: 031526
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 3000.41 ± 0.058 Flask Uncertainty

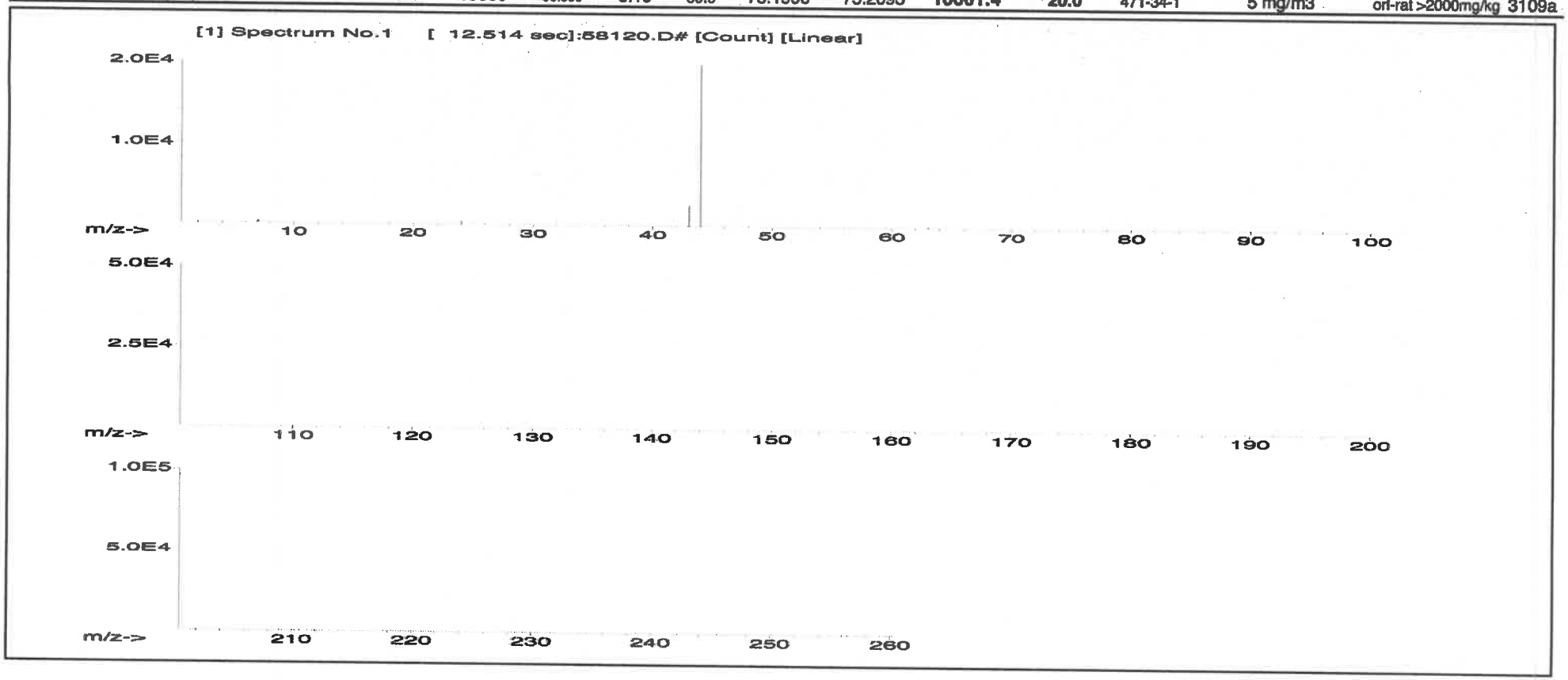
		Lot #	
Solvent:	21110221		Nitric Acid
	2%	60.0 (mL)	Nitric Acid

5E-05 Balance Uncertainty

Giovanni Esposito

Formulated By:	Giovanni Esposito	031523
Reviewed By:	Pedro L. Rentas	031523

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Calcium carbonate (Ca)	IN014	CAD072022A1	10000	99.999	0.10	39.9	75.1990	75.2093	**10001.4**	**20.0**	471-34-1	5 mg/m3	orl-rat >2000mg/kg	3109a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	T	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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Certified Reference Material CRM

M 5513 R: 03/17/23

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
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CERTIFIED WEIGHT REPORT:

Part Number: 57182
Lot Number: 061522
Description: Lead (Pb)

Expiration Date: 061525
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.02

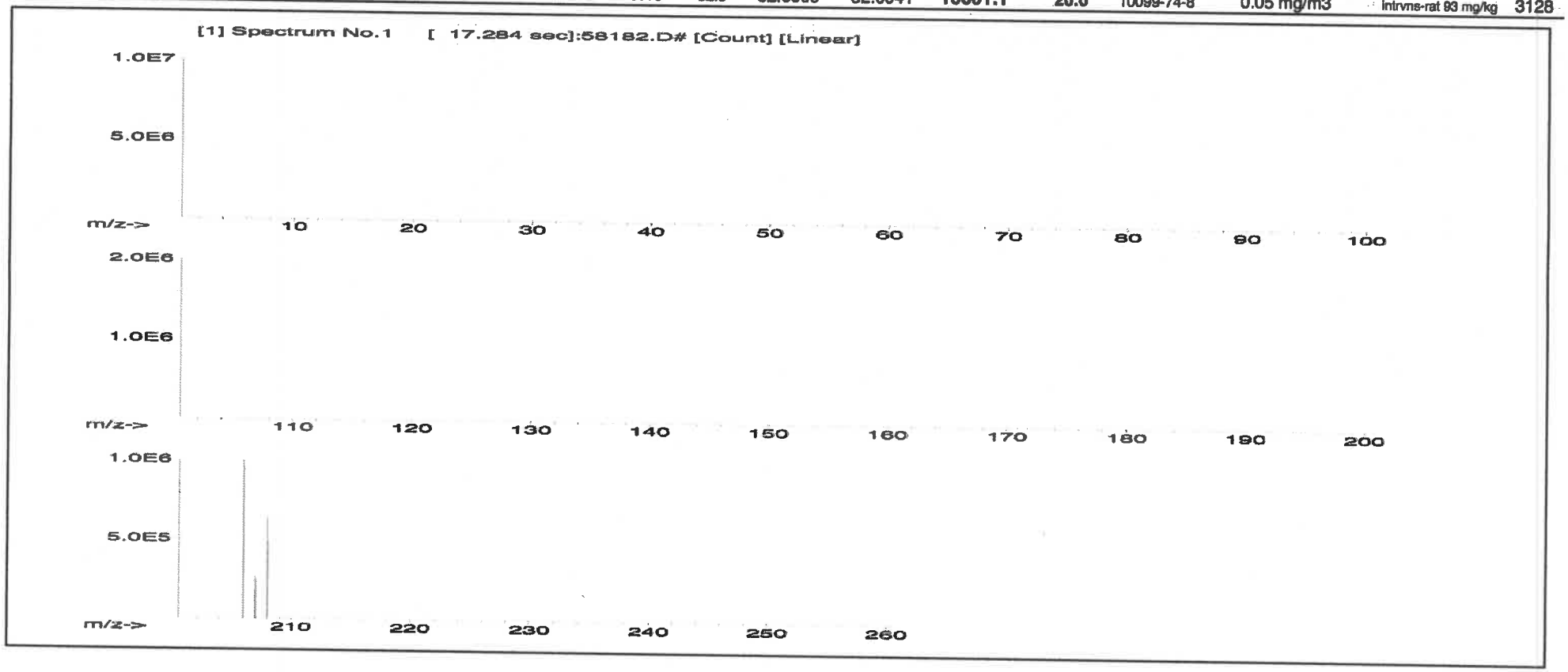
	Lot #		
Solvent:	20510011	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Giovanni Esposito

Formulated By:	Giovanni Esposito	061522
Reviewed By:	Pedro L. Rentas	061522

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lead(II) nitrate (Pb)	IN029	PBD122016A1	10000	99.999	0.10	62.5	32.0006	32.0041	**10001.1**	**20.0**	10099-74-8	0.05 mg/m3	Intrvns-rat 93 mg/kg	3128



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	T	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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Certified Reference Material CRM

M5514 - M5515 R: 03/17/22

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 58126
Lot Number: 092122
Description: Iron (Fe)

Expiration Date: 092125
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 5000.1 ± 0.12 Flask Uncertainty

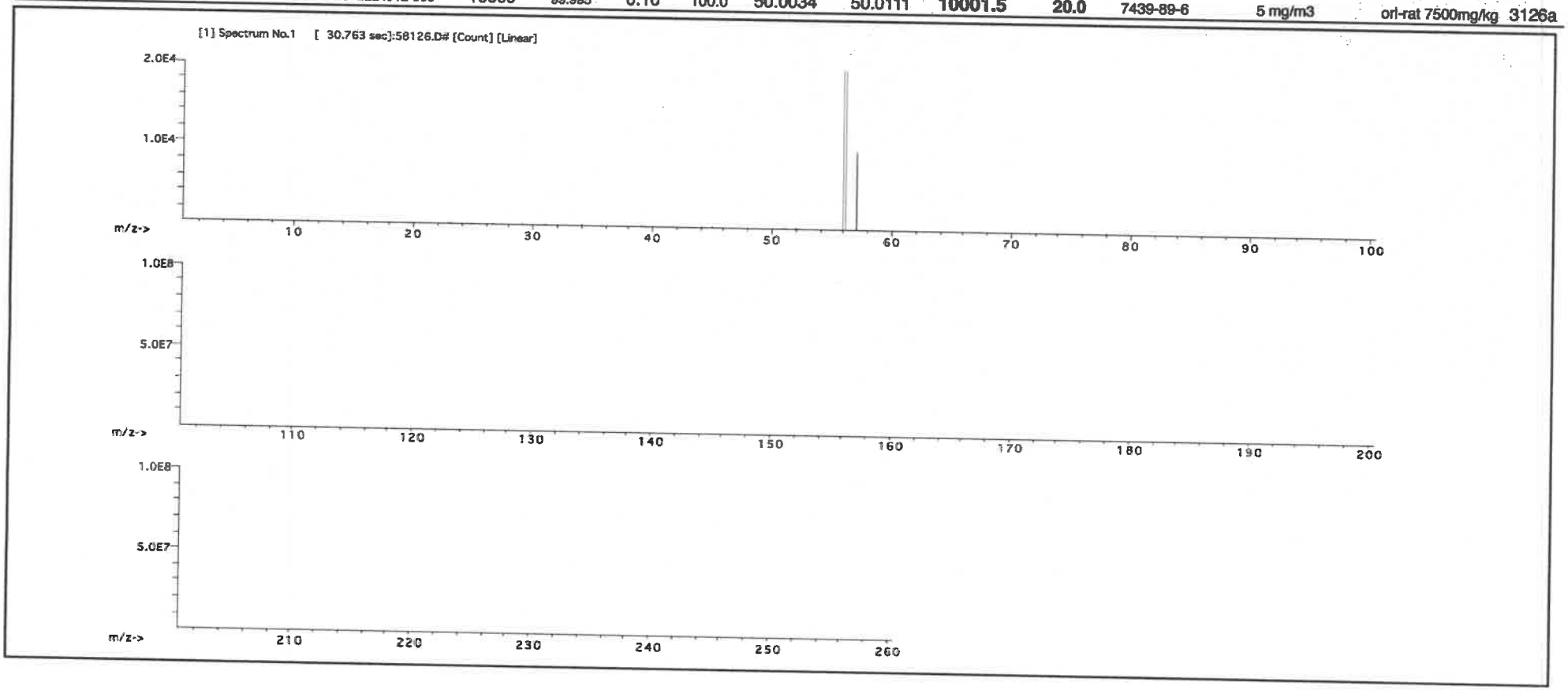
	Lot #		
Solvent:	20510011	Nitric Acid	
7.0%	350.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

Giovanni Esposito

Formulated By:	Giovanni Esposito	092122
Reviewed By:	Pedro L. Rentas	092122

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Iron (Fe)	IN346	2224912-500	10000	99.995	0.10	100.0	50.0034	50.0111	**10001.5**	**20.0**	7439-89-6	5 mg/m3	orl-rat 7500mg/kg	3126a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.10	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.10	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.05	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.10	Ge	<0.10	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.05
B	<0.02	Cu	<0.10	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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Certified Reference Material CRM

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

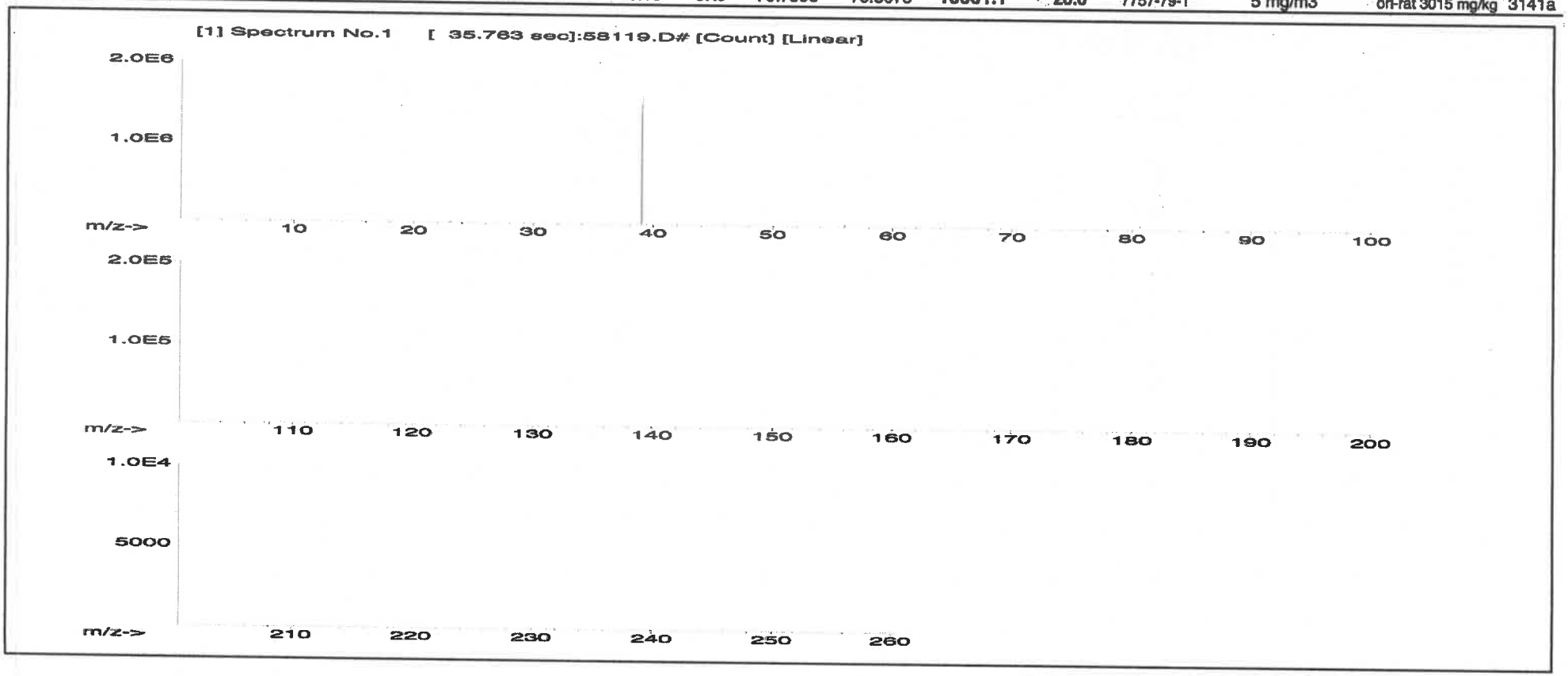
	Lot #		
Solvent:	20510011	Nitric Acid	
2%	60.0 (mL)	Nitric Acid	

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



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	T	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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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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Certified Reference Material CRM

M5658 R! 8/25/23

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AR-1539 Certificate Number
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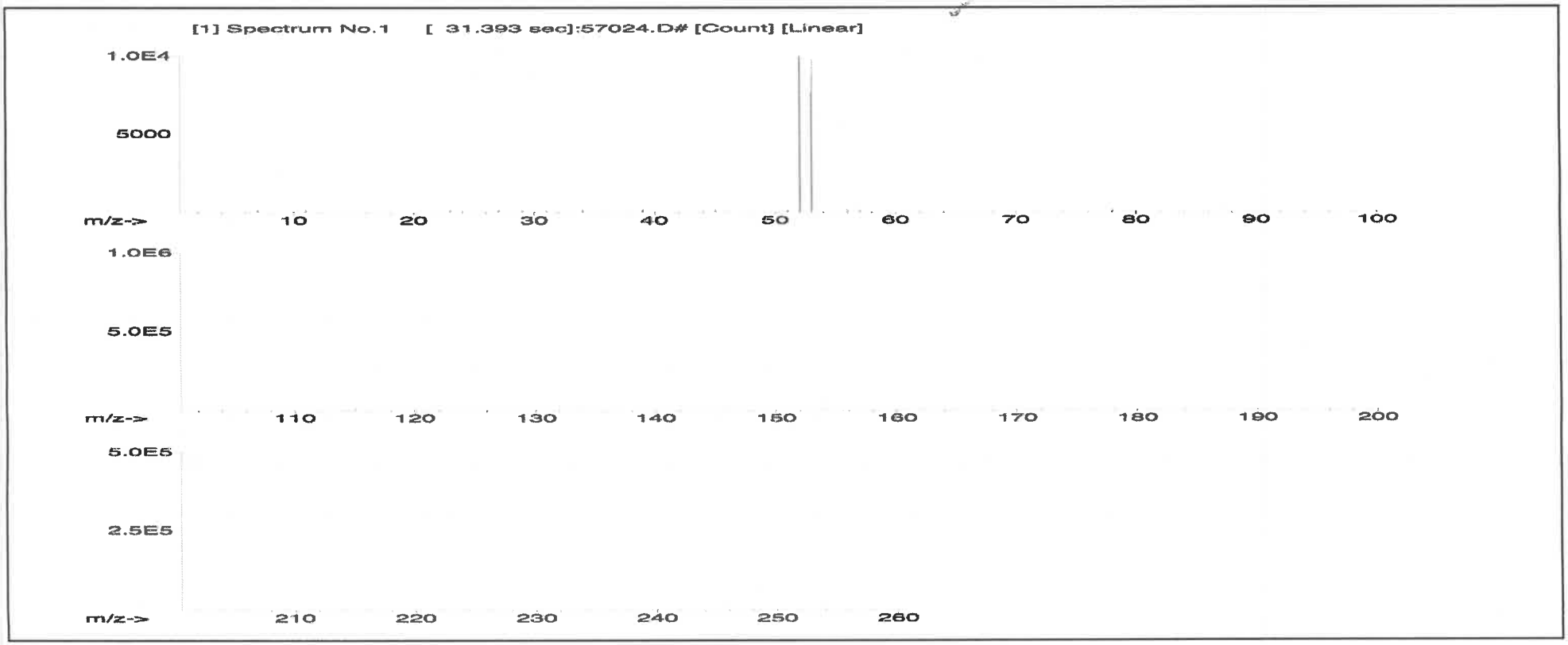
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**58024**	21110221	Nitric Acid	
Lot Number:	**060523**			
Description:	**Chromium (Cr)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	060526			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	060523
Reviewed By:	Pedro L. Rentas	060523

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Chromium(III) nitrate nonahydrate (Cr)	58124	071122	0.1000	200.0	0.084	1000	10000.1	**1000.0**	**2.2**	7789-02-8	0.5 mg(Cr)/m3	orl-rat 3250 mg/kg	3112a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	T	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* 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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M5648 R: 10/27/23

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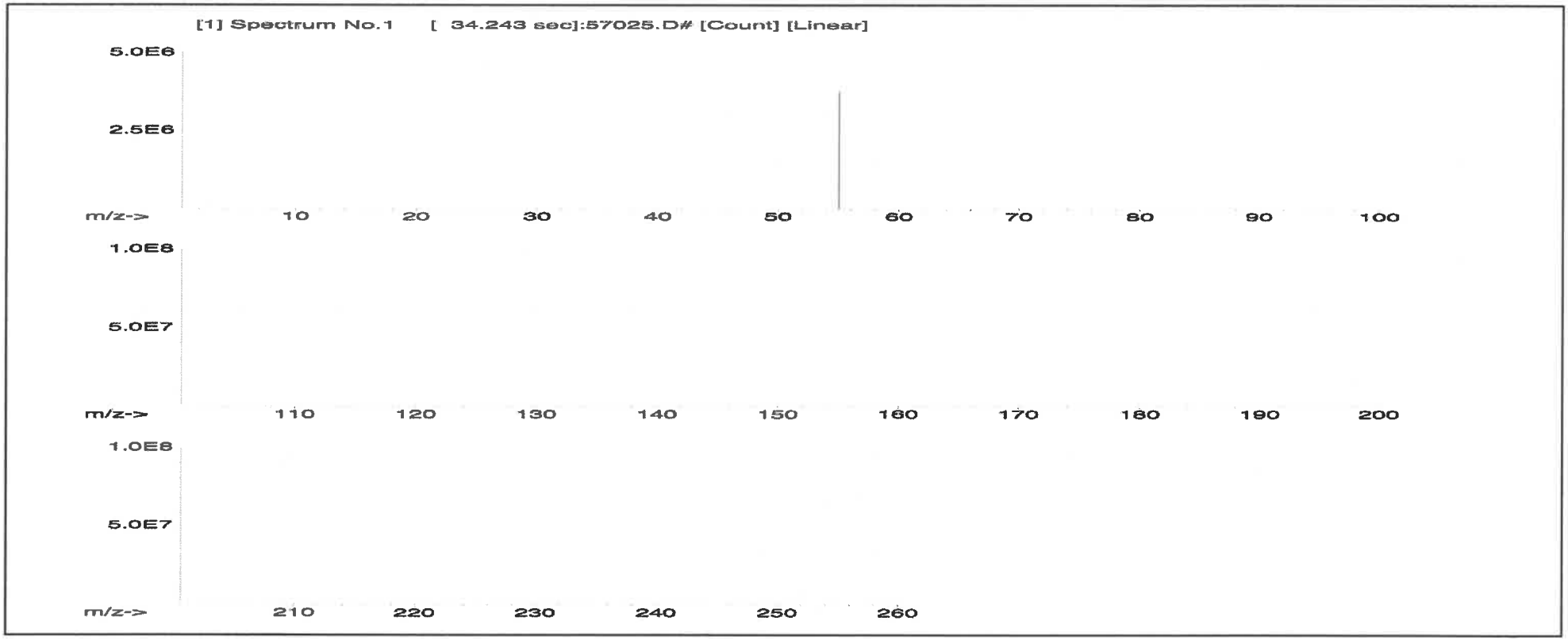
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**58025**	24002546	Nitric Acid	
Lot Number:	**102623**			
Description:	**Manganese (Mn)**			
		2.0%	60.0 (mL)	Nitric Acid
Expiration Date:	102626			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	3000.41	0.058	Flask Uncertainty	

Formulated By:	Benson Chan	102623
Reviewed By:	Pedro L. Rentas	102623

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Manganese(II) nitrate tetrahydrate (Mn)	58125	071123	0.1000	300.0	0.084	1000	10000.1	**1000.0**	**2.1**	20694-39-7	5 mg/m3	orl-rat >300mg/kg	3132



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	T	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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R: 8/25/23 M5751

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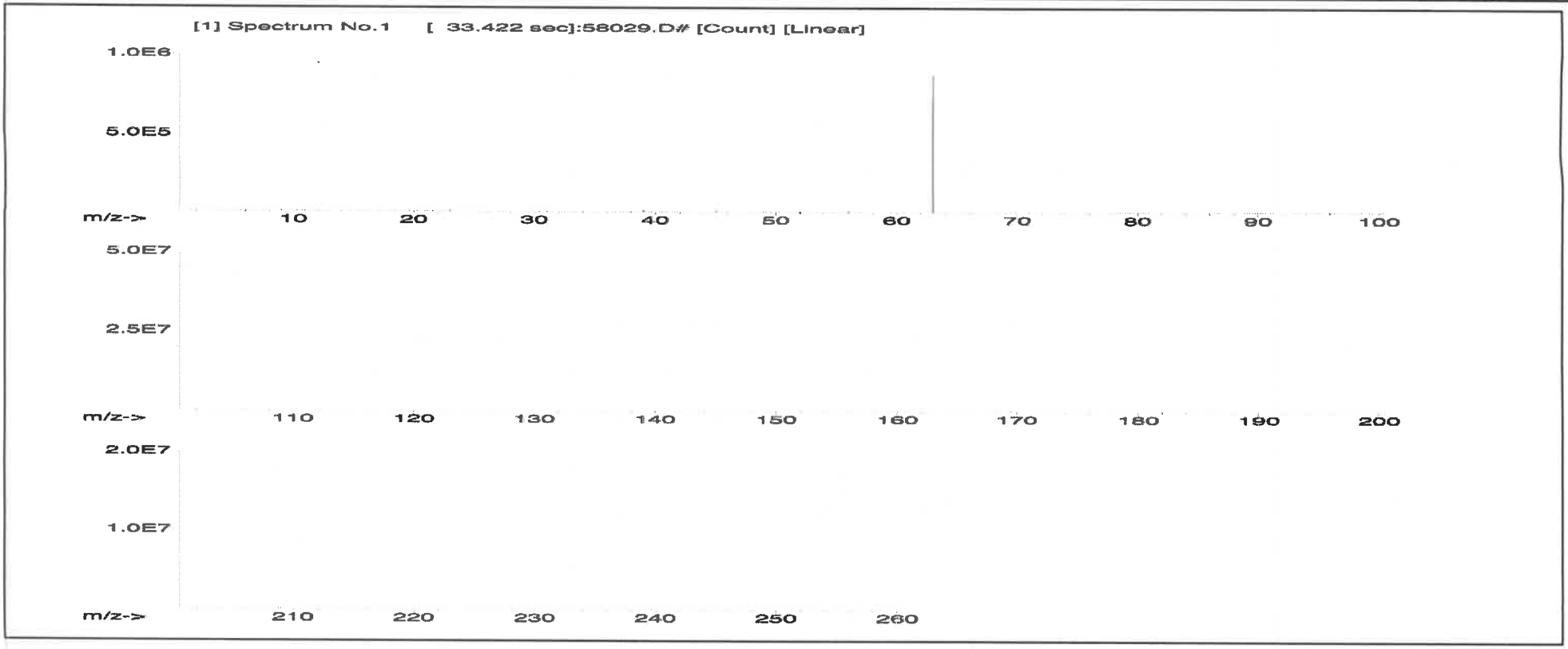
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**58029**	21110221	Nitric Acid	
Lot Number:	**071723**			
Description:	**Copper (Cu)**	2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	071726			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Benson Chan	071723
Reviewed By:	Pedro L. Rentas	071723

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Copper(II) nitrate trihydrate (Cu)	58129	022723	0.1000	200.0	0.084	1000	10000.5	**1000.0**	**2.2**	10031-43-3	1 mg/m3	orl-rat 794 mg/kg	3114



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	T	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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M5768 M5769 (BP) R:1/3/24

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CERTIFIED WEIGHT REPORT:

Part Number: 58112
Lot Number: 091823
Description: Magnesium (Mg)

Expiration Date: 091826
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB

Weight shown below was diluted to (mL): 2000.02 0.058 Flask Uncertainty

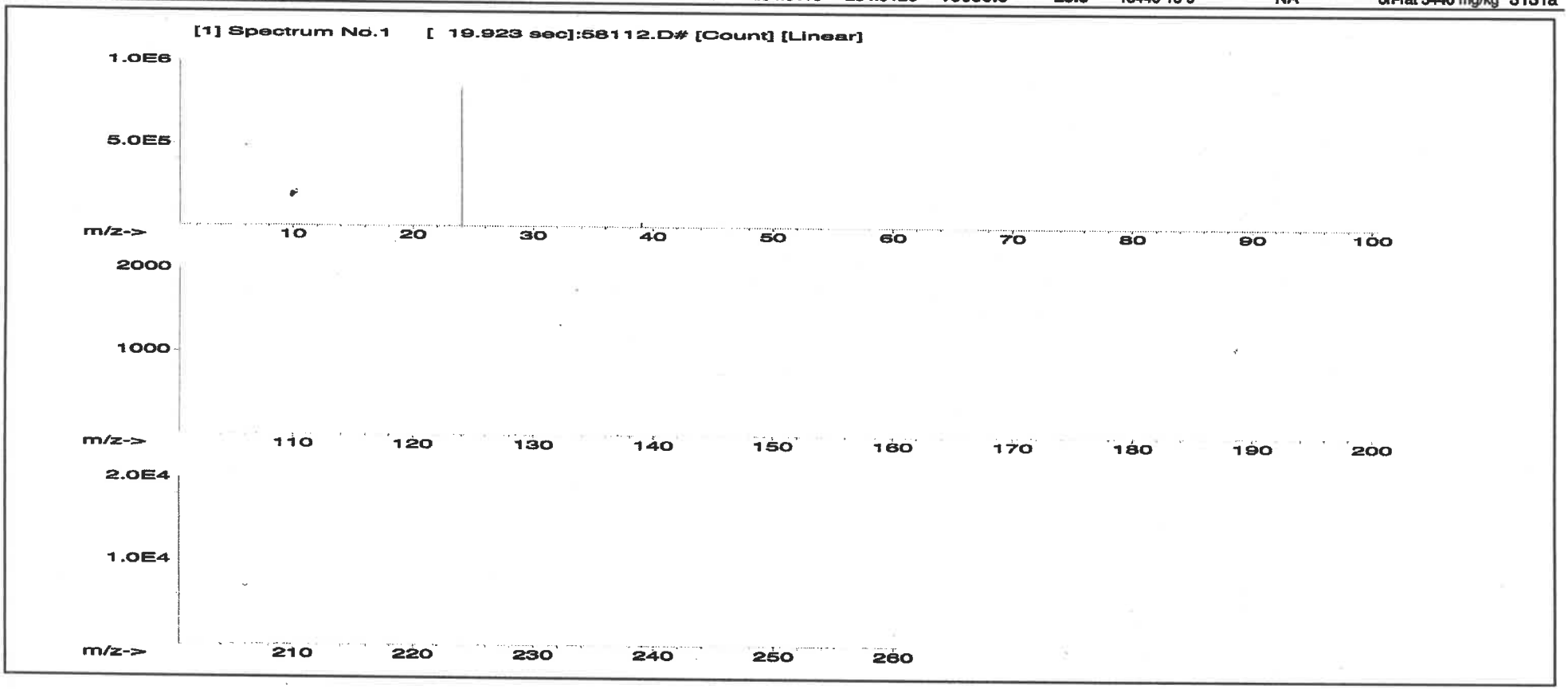
	Lot #		
Solvent:	24002546	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

M5768, M5769 (BP) R: 1/3/24

Formulated By:	Lawrence Barry	091823
Reviewed By:	Pedro L. Rentas	091823

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Magnesium nitrate hexahydrate (Mg)	IN030	MGD052023A1	10000	99.999	0.10	8.51	234.9118	234.9126	**10000.0**	**20.0**	13446-18-9	NA	orl-rat 5440 mg/kg	3131a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	T	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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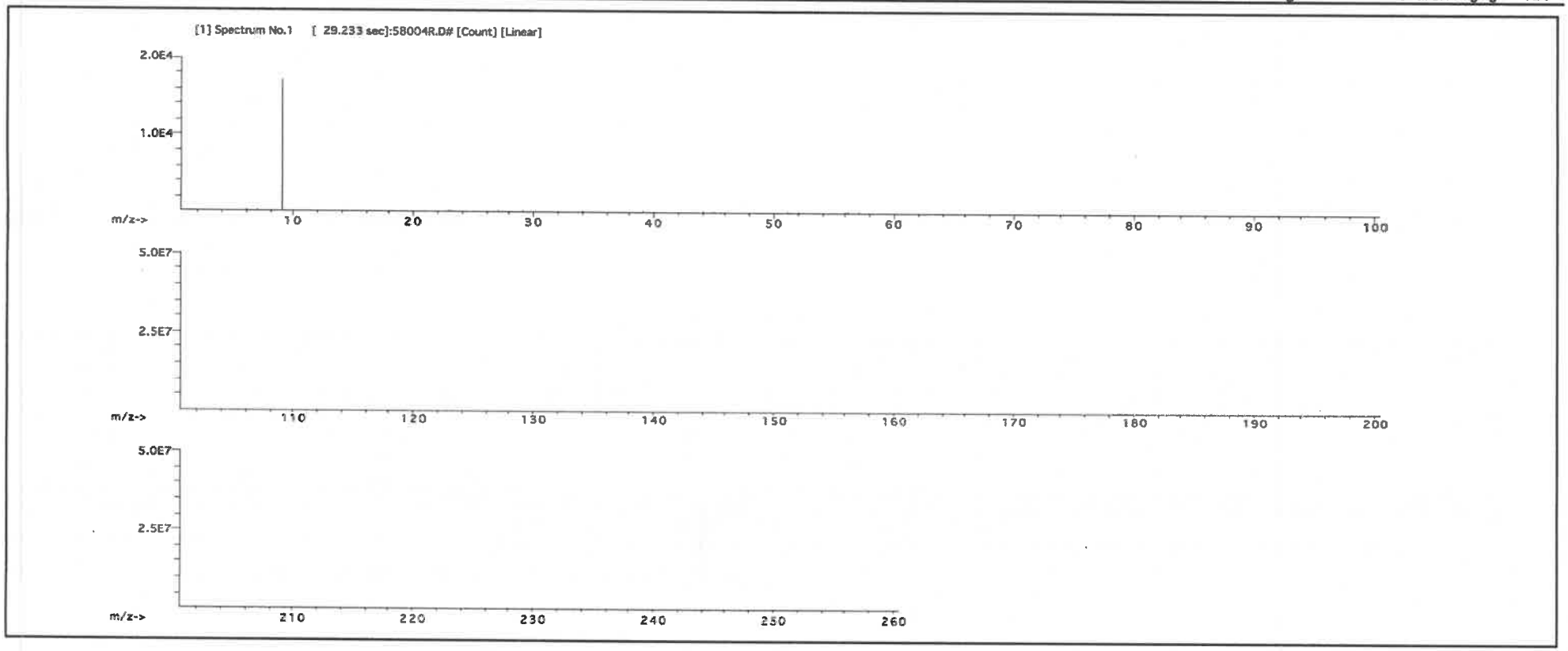
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57004**	24002546	Nitric Acid	
Lot Number:	**102523**			
Description:	**Beryllium (Be)**	2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	102526			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Benson Chan	102523
Reviewed By:	Pedro L. Rentas	102523

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Beryllium nitrate (Be)	58104	091423	0.1000	200.0	0.084	1000	10001.5	**1000.0**	**2.2**	13597-99-4	0.2ug/m3	intrvns-rat 3.16mg/kg	NA



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																		
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	T	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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R? 02/09/24 IV15799

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CERTIFIED WEIGHT REPORT:

Part Number: 57050
Lot Number: 071123
Description: Tin (Sn)

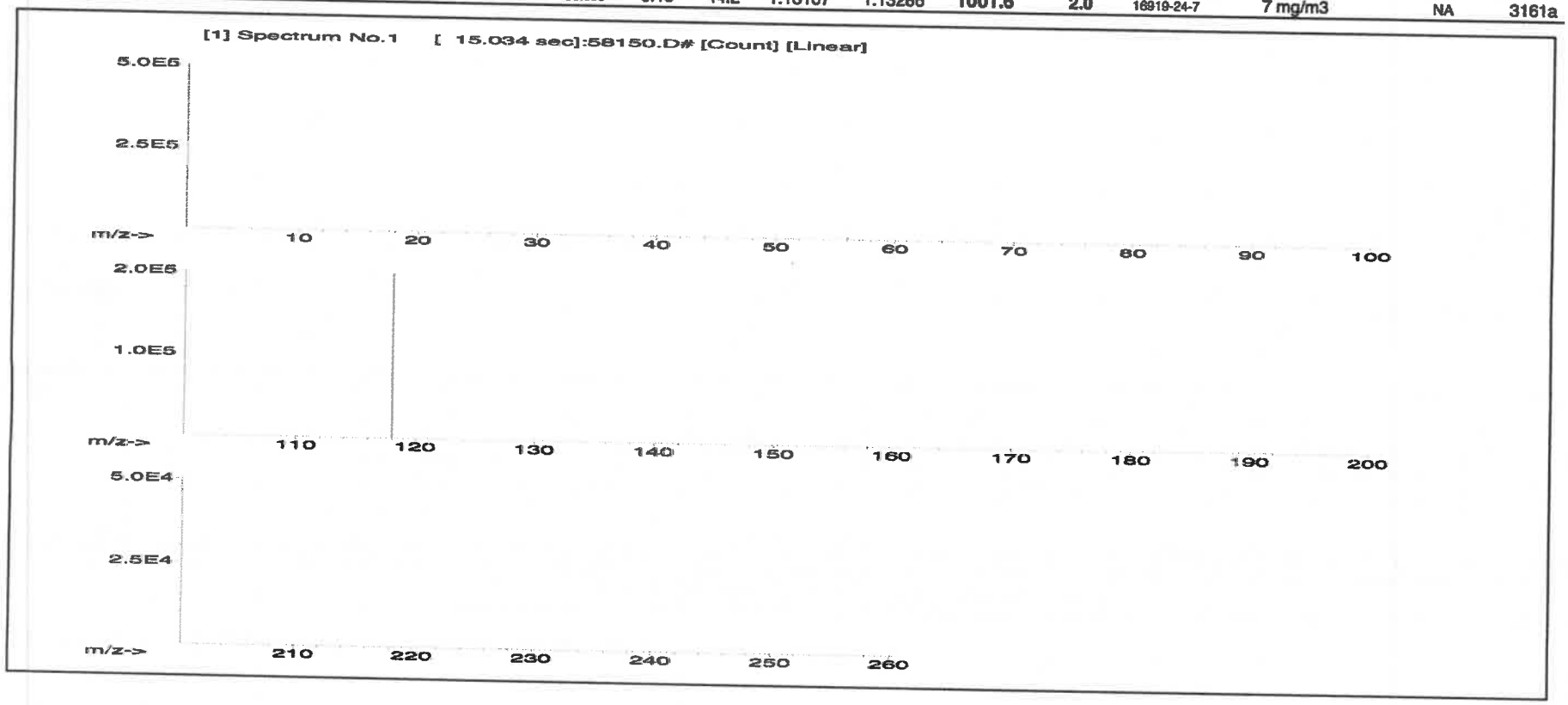
Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 499.93

	Lot #	
Solvents:	21110221	Nitric Acid
	22D0562008	Hydrochloric acid
2%	10.0	Nitric Acid
6%	30.0	Hydrochloric acid
	(mL)	

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By:	Benson Chan	071123
Reviewed By:	Pedro L. Rentas	071123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium hexafluorostannate(IV) (Sn)	IN010	SND042023A1	1000	99.999	0.10	44.2	1.13107	1.13286	**1001.6**	**2.0**	16919-24-7	7 mg/m3	NA	3161a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<500	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	T	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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R: 02/09/24 IM5800 BH

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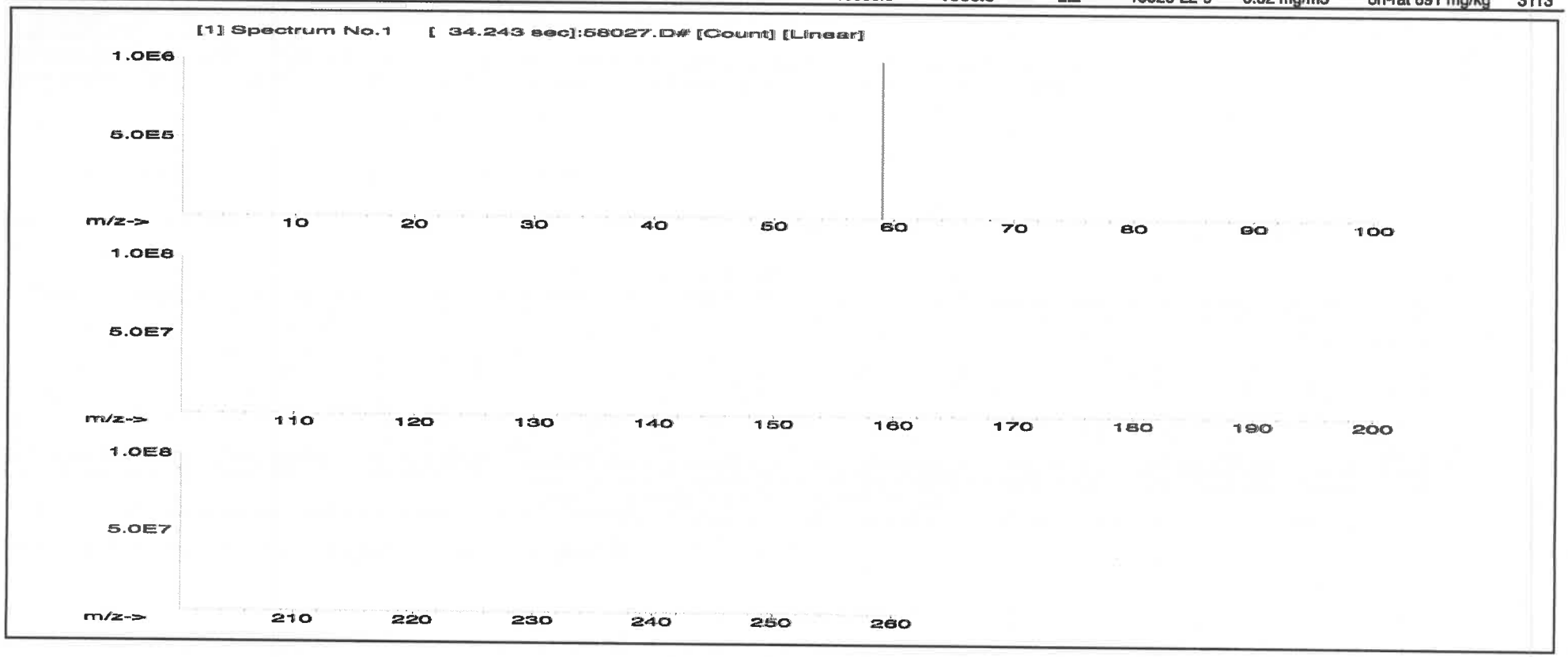
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:		
Part Number:	**57027**	24002546	Nitric Acid		
Lot Number:	**091923**				
Description:	**Cobalt (Co)**				
		2.0%	40.0 (mL)	Nitric Acid	
Expiration Date:	091926				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Formulated By:	Lawrence Barry	091923
Reviewed By:	Pedro L. Rentas	091923

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Cobalt(II) nitrate hexahydrate (Co)	58127	050923	0.1000	200.0	0.084	1000	10000.0	**1000.0**	**2.2**	10026-22-9	0.02 mg/m3	orl-rat 691 mg/kg	3113



Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	T	Gé	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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R: 02/09/24 IM5801 BH

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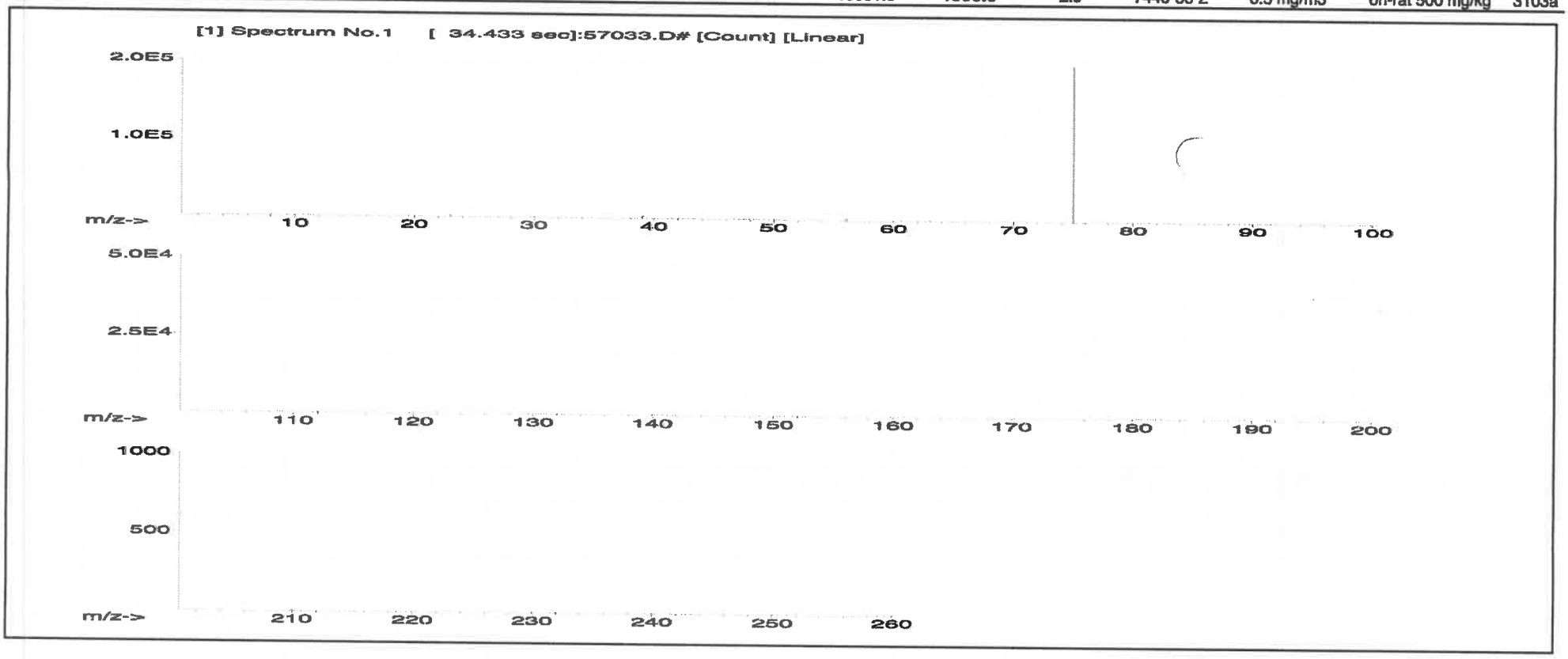
CERTIFIED **WEIGHT** REPORT:

		Lot #	Solvent:		
Part Number:	**57033**	24002546	Nitric Acid		
Lot Number:	**111323**				
Description:	**Arsenic (As)**	2.0%	80.0 (mL)	Nitric Acid	
Expiration Date:	111326				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	4000.0	0.06	Flask Uncertainty		

Formulated By:	Lawrence Barry	111323
Reviewed By:	Pedro L. Rentas	111323

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Arsenic (As)	58133	020522	0.1000	400.0	0.084	1000	10001.0	**1000.0**	**2.0**	7440-38-2	0.5 mg/m3	orl-rat 500 mg/kg	3103a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	T	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge*	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* 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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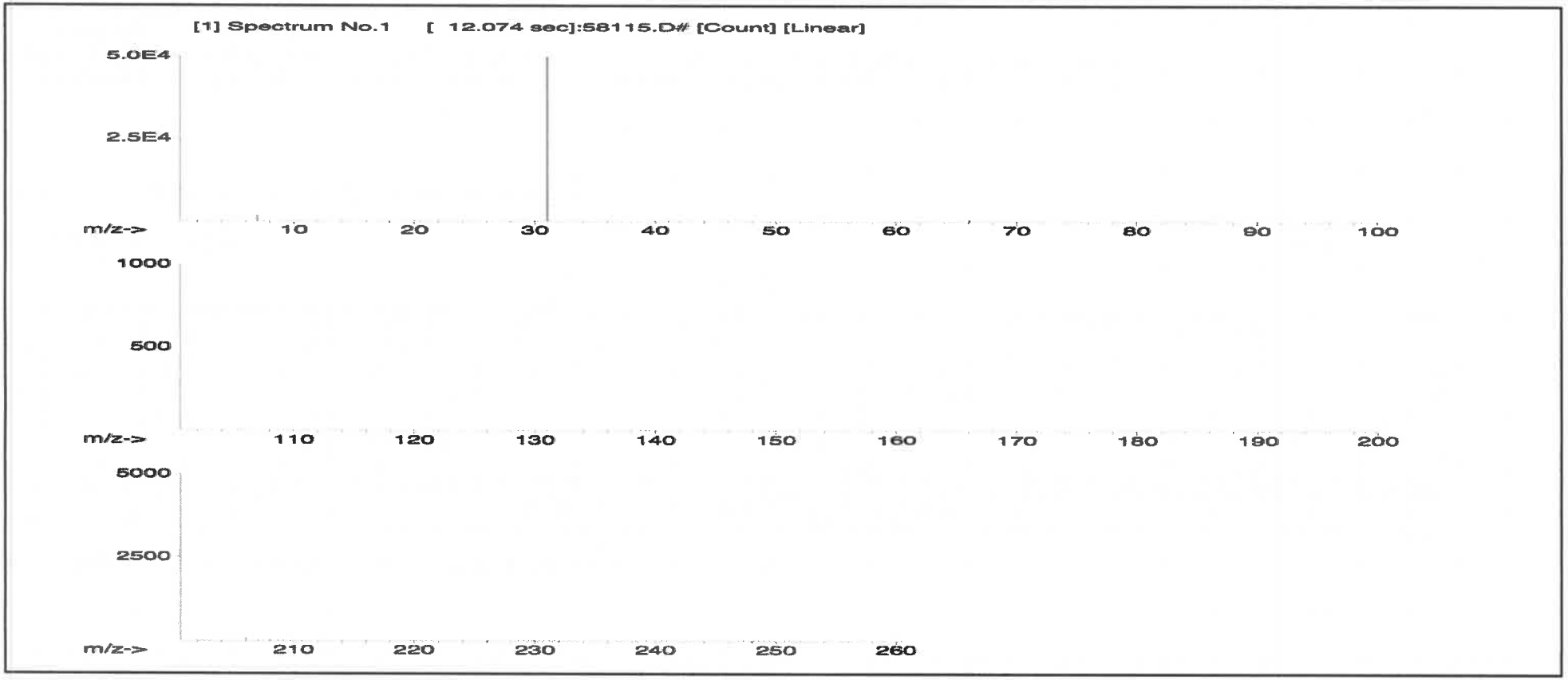
CERTIFIED WEIGHT REPORT:

			Lot #	
Part Number:	**57115**	**Solvent:**	21110221	Nitric Acid
Lot Number:	**041723**			
Description:	**Phosphorous (P)**	2%	40.0 (mL)	Nitric Acid
Expiration Date:	041726			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**10000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	041723
Reviewed By:	Pedro L. Rentas	041723

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium dihydrogen phosphate (P)	IN008	PV082019A1	10000	99.999	0.10	27.5	72.7287	72.7289	**10000.0**	**20.0**	7722-76-1	5 mg/m3	orl-rat >2000mg/kg	3186



Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	T	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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R: 02/09/24 M5816

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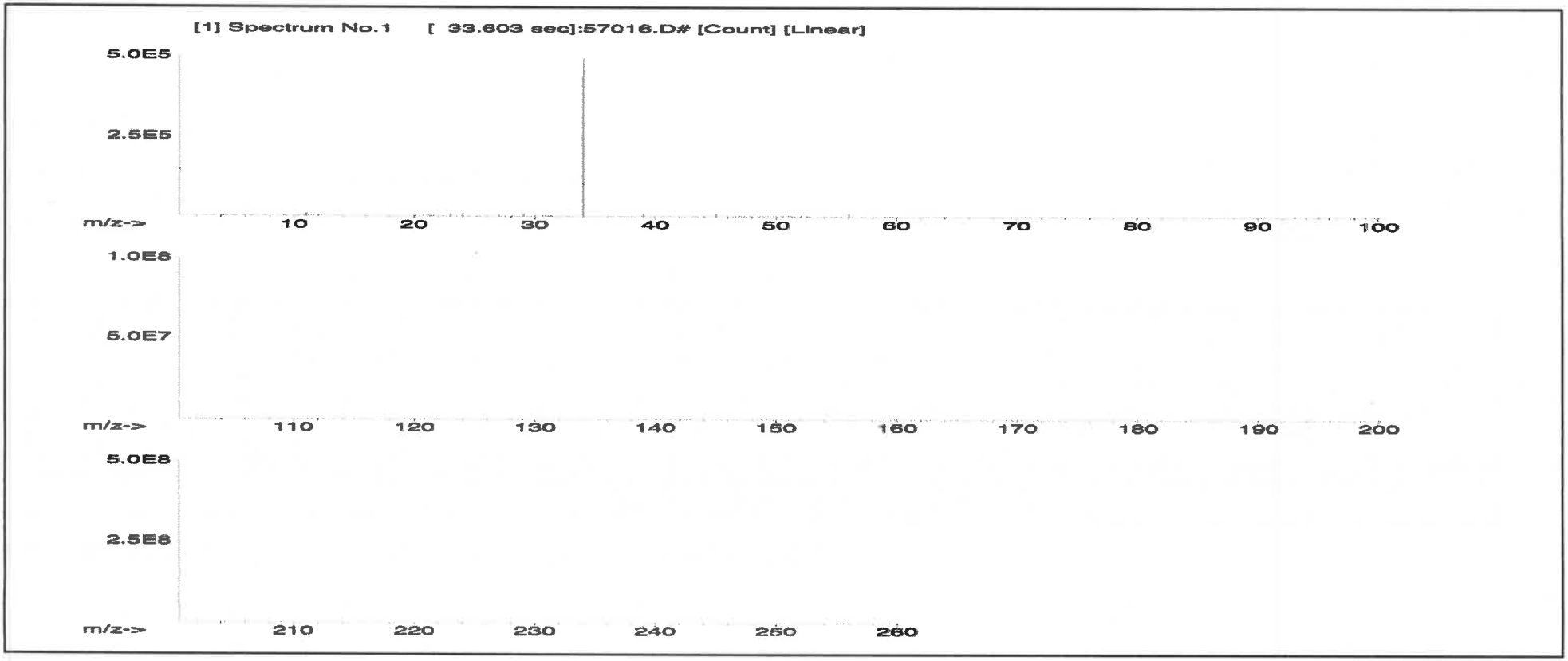
CERTIFIED WEIGHT REPORT:

Part Number:	**57016**	**Solvent:**	**Lot #** 122923	ASTM Type 1 Water
Lot Number:	**122923**			
Description:	**Sulfur (S)**			
Expiration Date:	122926			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	4000.0	0.06	Flask Uncertainty	

Formulated By:	Benson Chan	122923
Reviewed By:	Pedro L. Rentas	122923

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium sulfate (S)	IN117	SLBR7225V	1000	99.9	0.10	24.3	16.4979	16.4980	**1000.0**	**2.0**	7783-20-2	NA	orl-rat 4250mg/kg	3181



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	T	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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R: 02/09/24 M5817

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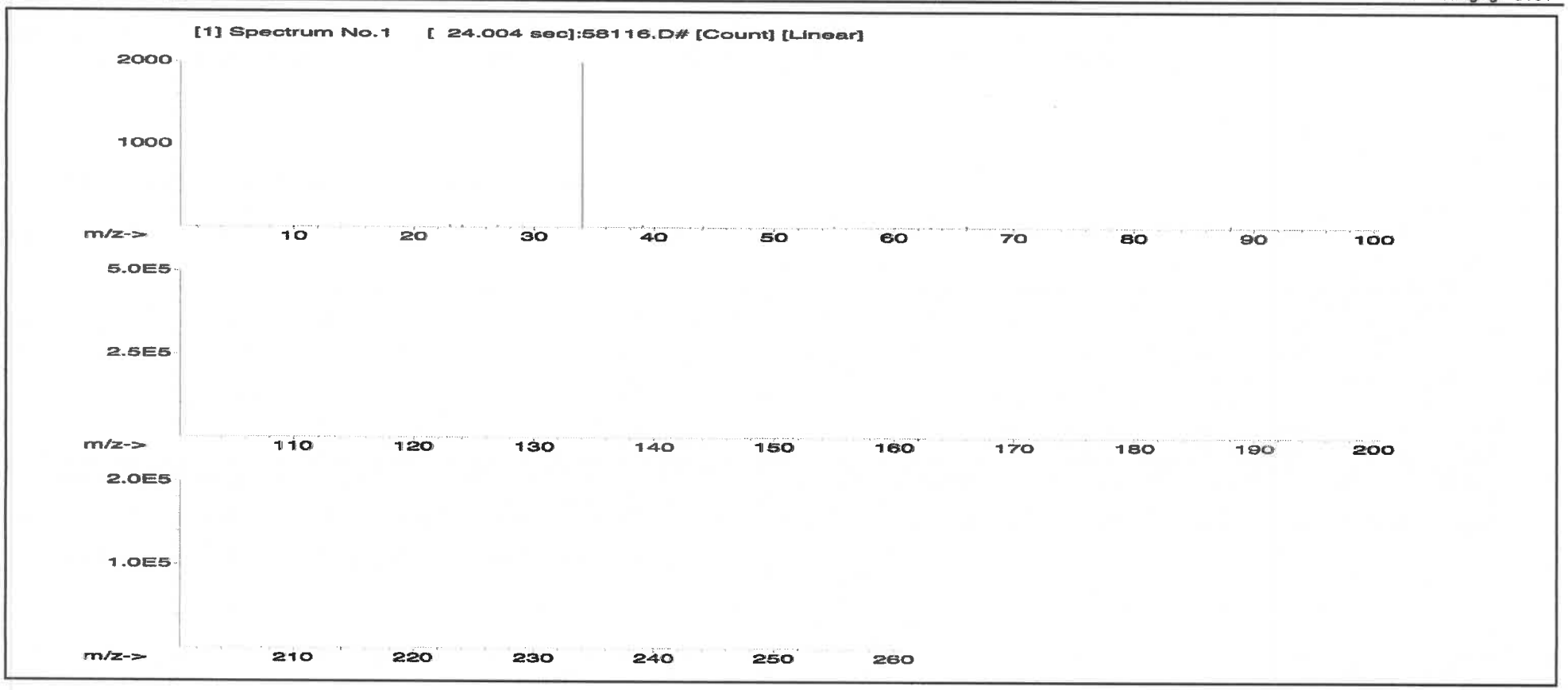
CERTIFIED WEIGHT REPORT:

Part Number:	**57116**			
Lot Number:	**071123**	**Solvent:**	071123	ASTM Type 1 Water
Description:	**Sulfur (S)**			
Expiration Date:	071126			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**10000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	1999.48	0.058	Flask Uncertainty	

Lot #

Formulated By:	Lawrence Barry	071123
Reviewed By:	Pedro L. Rentas	071123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium sulfate (S)	IN117	SLBR7225V	10000	99.9	0.10	24.3	82.4675	82.4682	**10000.1**	**20.0**	7783-20-2	NA	orl-rat 4250mg/kg	3181



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	T	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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R: 02/09/24 M.5818

Lot #

ANAB ISO 17034 Accredited
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CERTIFIED WEIGHT REPORT:

Part Number: 57014
Lot Number: 122023
Description: Silicon (Si)

Expiration Date: 122026
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 1999.48 ± 0.058 Flask Uncertainty

Solvent: 24002546 Nitric Acid

2% 40.0 (mL) Nitric Acid

5E-05 Balance Uncertainty

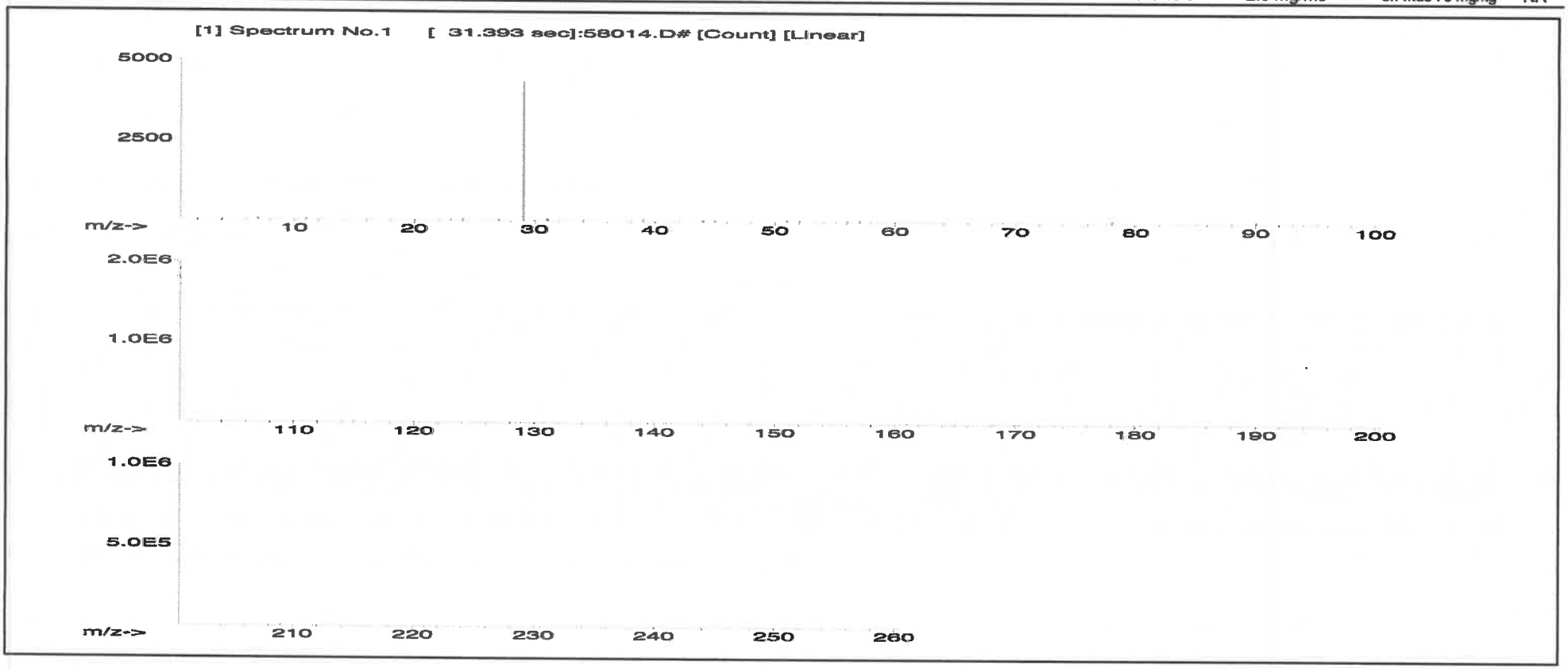
Aleah O'Brady

Formulated By: Aleah O'Brady 122023

Pedro Rentas

Reviewed By: Pedro L. Rentas 122023

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium hexafluorosilicate (Si)	IN009	SID082022A1	1000	99.999	0.10	14.4	13.8854	13.8855	**1000.0**	**2.0**	16919-19-0	2.5 mg/m3	orl-mus 70 mg/kg	NA



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	T	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

R: 02/09/24 M5819

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CERTIFIED WEIGHT REPORT:

Part Number: 58030
Lot Number: 111623
Description: Zinc (Zn)

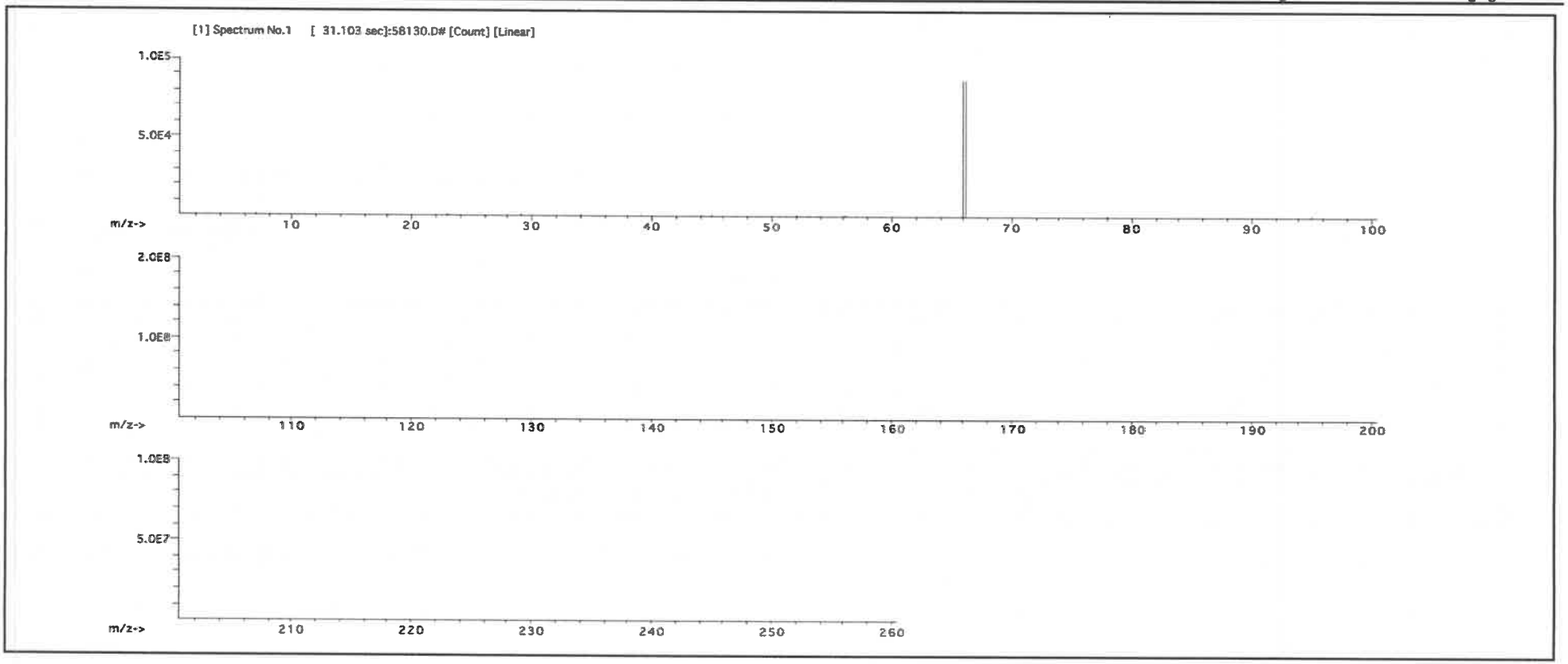
Expiration Date: 111626
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

Weight shown below was diluted to (mL): 3000.4 0.06 Flask Uncertainty

		Lot #		
Solvent:	24002546	Nitric Acid		
2%	60.0 (mL)	Nitric Acid		
			5E-05	Balance Uncertainty

Formulated By:	Benson Chan	111623
Reviewed By:	Pedro L. Rentas	111623

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Zinc nitrate hexahydrate (Zn)	IN016	ZNE032021A1	1000	99.999	0.10	24.3	12.3475	12.3502	**1000.2**	**2.0**	10196-18-6	1 mg/m3	orl-rat 1190mg/kg	3168



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	T
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

R: 02/09/24 M5820

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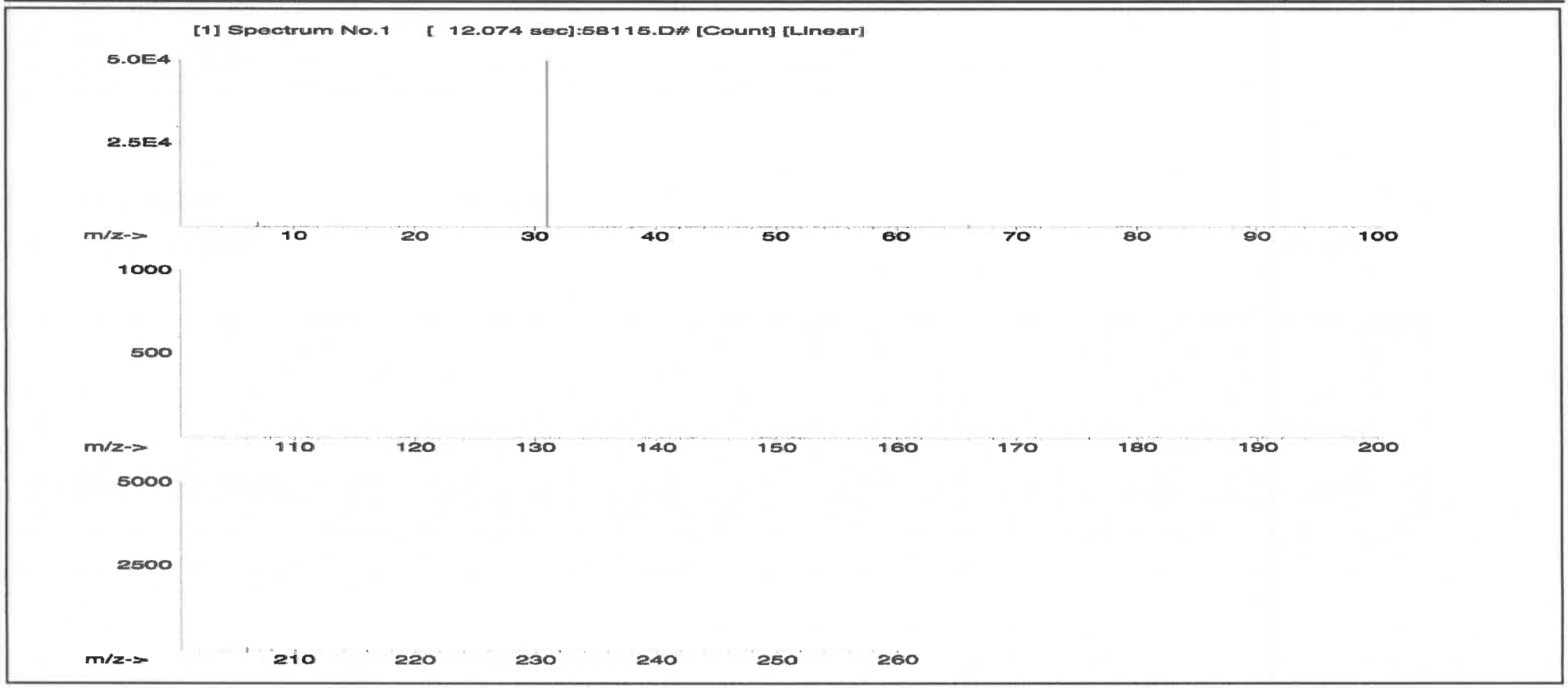
CERTIFIED WEIGHT REPORT:

Part Number:	**57015**		**Lot #**		
Lot Number:	**091123**	**Solvent:**	24002546	Nitric Acid	
Description:	**Phosphorous (P)**	2%	40.0 (mL)	Nitric Acid	
Expiration Date:	091126				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Formulated By:	Lawrence Barry	091123
Reviewed By:	Pedro L. Rentas	091123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium dihydrogen phosphate (P)	IN008	PV082019A1	1000	99.999	0.10	27.5	7.2729	7.2730	**1000.0**	**2.0**	7722-76-1	5 mg/m3	orl-rat >2000mg/k	3186



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	T	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* 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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Certified Reference Material CRM

M5962 R! 06/14/24.

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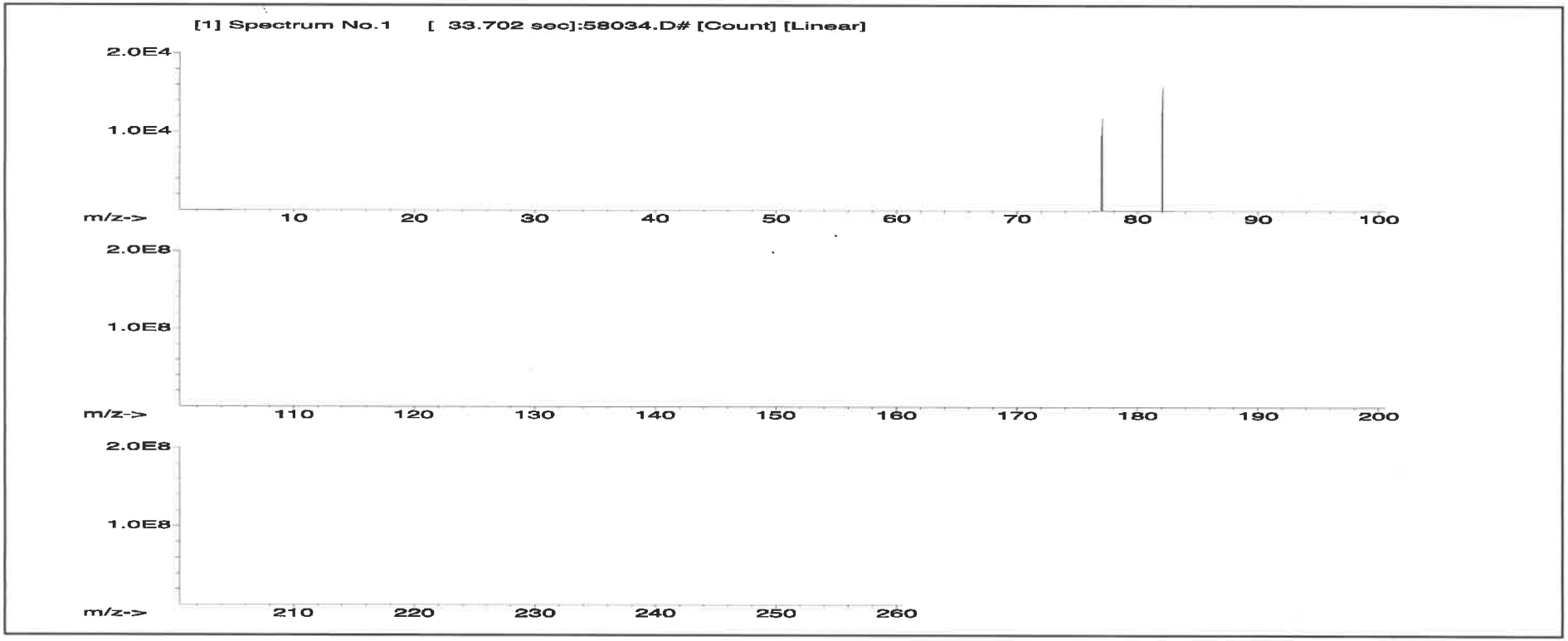
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57034**	24002546	Nitric Acid	
Lot Number:	**060624**			
Description:	**Selenium (Se)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	060627			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.07	0.100	Flask Uncertainty	

Formulated By:	Benson Chan	060624
Reviewed By:	Pedro L. Rentas	060624

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Selenium (Se)	58134	071223	0.1000	200.0	0.084	1000	10002.5	**1000.0**	**2.2**	7782-49-2	0.2 mg/m3	orl-rat 6700 mg/kg	3149



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																		
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	T	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
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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M5970, M5971 R: 7/01/24

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CERTIFIED WEIGHT REPORT:

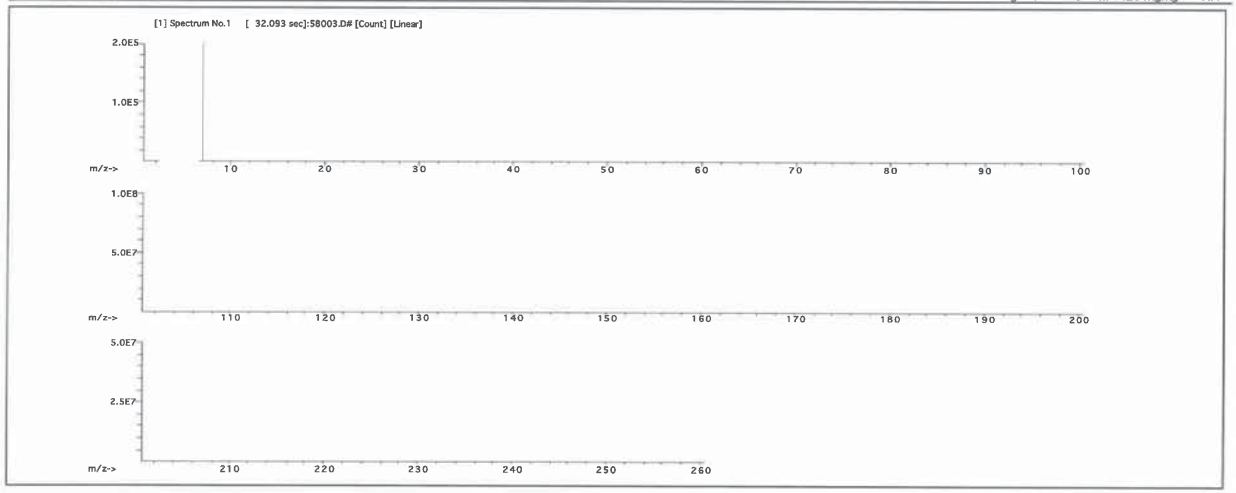
		Lot #	Solvent:
Part Number:	**57003**	24002546	Nitric Acid
Lot Number:	**062124**		
Description:	**Lithium (Li)**		
		2.0%	5.0 (mL) Nitric Acid
Expiration Date:	062127		
Recommended Storage:	Ambient (20 °C)		
Nominal Concentration (µg/mL):	**1000**		
NIST Test Number:	6UTB	5E-05 Balance Uncertainty	
Volume shown below was diluted to (mL):	250.11	0.016 Flask Uncertainty	

Giovanni Esposito

Formulated By: Giovanni Esposito 062124

Reviewed By: Pedro L. Rentas 062124

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lithium nitrate (Li)	58103	070622	0.1000	25.0	0.004	1000	10000.4	**1000.0**	**2.0**	7790-69-4	5 mg/m3	orl-rat 1426 mg/kg	NA



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	T	Ni	<0.02	Pr	<0.02	Sc	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

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Certified by:

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Certificate of Analysis

M5976, M5977
R: 02/22/24

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info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGMO1
Lot Number:	T2-MO720876
Matrix:	H2O tr. NH4OH
Value / Analyte(s):	1 000 µg/mL ea: Molybdenum
Starting Material:	Ammonium Molybdate
Starting Material Lot#:	2361
Starting Material Purity:	99.9893%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 998 ± 7 µg/mL

Density: 1.000 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **998 ± 4 µg/mL**
ICP Assay NIST SRM 3134 Lot Number: 130418

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance.

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000590	M	Eu	<	0.000300	M	Na		0.000879	M	Se	<	0.008000	M	Zn		0.000598
M	Al		0.000563	M	Fe	<	0.006500	M	Nb	<	0.029000	i	Si	<		M	Zr	<	0.001800
M	As	<	0.002100	M	Ga	<	0.000300	i	Nd	<		M	Sm	<	0.000300				
M	Au	<	0.000300	M	Gd	<	0.000300	M	Ni	<	0.008000	M	Sn	<	0.008900				
M	B	<	0.003300	M	Ge	<	0.000300	M	Os	<	0.000590	M	Sr		0.000175				
M	Ba		0.001689	M	Hf	<	0.001800	i	P	<		M	Ta	<	0.004200				
M	Be	<	0.000890	M	Hg	<	0.003300	M	Pb	<	0.000300	M	Tb	<	0.000300				
M	Bi	<	0.000890	M	Ho	<	0.000300	M	Pd	<	0.001800	M	Te	<	0.021000				
O	Ca		0.006334	M	In	<	0.032000	M	Pr	<	0.013000	M	Th	<	0.000300				
O	Cd	<	0.026000	M	Ir	<	0.000300	M	Pt	<	0.000300	O	Tl	<	0.032000				
M	Ce	<	0.008300	M	K		0.130213	M	Rb		0.004575	M	Tl		0.001266				
M	Co		0.000598	M	La	<	0.000300	M	Re	<	0.000300	M	Tm	<	0.000300				
M	Cr		0.000527	O	Li		0.000059	M	Rh	<	0.000300	M	U	<	0.005300				
M	Cs		0.000527	M	Lu	<	0.000300	M	Ru	<	0.079000	M	V	<	0.000890				
M	Cu		0.002252	M	Mg		0.000563	i	S	<		M	W		0.087982				
M	Dy	<	0.000300	M	Mn	<	0.005900	M	Sb		0.001513	M	Y	<	0.000300				
M	Er	<	0.000300	s	Mo	<		M	Sc	<	0.001200	M	Yb	<	0.000300				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 95.94 +6 6,7,8,9 [MoO4]-2(chemical form as received)

Chemical Compatibility -Mo is received in a NH4OH matrix giving the operator the option of using HCl or HF to stabilize acidic solutions. The [MoO4]-2 is soluble in concentrated HCl [MoOCl5]-2, dilute HF / HNO3 [MoOF5]-2 and basic media [MoO4]-2. Stable at ppm levels with some metals provided it is fluorinated. Do not mix with Alkaline or Rare Earths when HF is present. Stable with most inorganic anions provided it is in the [MoO4]-2 chemical form.

Stability - 2-100 ppb levels stable (alone or mixed with all other metals that are at comparable levels) as the [MoOF5]-2 for months in 1% HNO3 / LDPE container. 1-10,000 ppm single element solutions as the [MoO4]-2 chemically stable for years in 1% NH4OH in a LDPE container.

Mo Containing Samples (Preparation and Solution) -Metal (Soluble in HF / HNO3 or hot dilute HCl); Oxide (soluble in HF or NH4OH) ; Organic Matrices (Dry ash at 450EC in Pt0 and dissolve oxide with HF or HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 95 amu	3 ppt	n/a	40Ar39K16O,79Br1 6O,190Os2+,190Pt 2+
ICP-OES 202.030 nm	0.008 / 0.0002 µg/mL	1	Os, Hf
ICP-OES 203.844 nm	0.012 / 0.002 µg/mL	1	
ICP-OES 204.598 nm	0.012 / 0.001 µg/mL	1	Ir, Ta

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 17, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- July 17, 2027

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation

Certificate Approved By:

Michael Booth
Director, Technical

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

M5978, M5979

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGTI1
Lot Number:	T2-TI719972
Matrix:	2% (v/v) HNO_3 tr. HF
Value / Analyte(s):	1 000 µg/mL ea: Titanium
Starting Material:	Ti Metal
Starting Material Lot#:	2094
Starting Material Purity:	99.9975%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1002 ± 5 µg/mL

Density: 1.012 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **1002 ± 4 µg/mL**
ICP Assay NIST SRM 3162a Lot Number: 130925

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(\bar{x}_i)$

$\bar{x}_i$ = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance

$w_i = (1/u_{char\ i}^2) / (\Sigma(1/u_{char\ i}^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = (\Sigma(w_i)^2\,(u_{char\ i})^2)^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (\bar{x}_a)\ (u_{char\ a})$

$\bar{x}_a$ = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000536	M	Eu	<	0.000268	O	Na	<	0.032670	M	Se		0.001204	O	Zn	<	0.003267
O	Al		0.000872	O	Fe		0.003225	O	Nb	<	0.043560	O	Si		0.004735	O	Zr	<	0.043560
M	As	<	0.008586	M	Ga	<	0.000268	M	Nd	<	0.000268	M	Sm	<	0.000268				
M	Au	<	0.004577	M	Gd	<	0.000268	O	Ni	<	0.010890	M	Sn		0.000096				
O	B	<	0.008929	M	Ge	<	0.002146	M	Os	<	0.000269	O	Sr		0.000096				
M	Ba	<	0.002683	M	Hf		0.002161	O	P	<	0.054450	M	Ta		0.010560				
M	Be	<	0.005366	M	Hg	<	0.003231	M	Pb	<	0.001073	M	Tb	<	0.000268				
M	Bi	<	0.001609	M	Ho	<	0.000268	M	Pd	<	0.000268	M	Te	<	0.001341				
O	Ca		0.000676	M	In	<	0.002683	M	Pr	<	0.000268	M	Th	<	0.053663				
M	Cd	<	0.000268	M	Ir	<	0.000269	M	Pt	<	0.000536	s	Ti	<					
M	Ce	<	0.000268	M	K		0.001172	M	Rb	<	0.000268	M	Tl	<	0.000268				
M	Co	<	0.004293	M	La	<	0.000268	M	Re	<	0.000268	M	Tm	<	0.000268				
M	Cr		0.000752	O	Li	<	0.027225	M	Rh	<	0.000268	M	U	<	0.000268				
M	Cs	<	0.000268	M	Lu	<	0.000268	M	Ru	<	0.000269	M	V	<	0.019855				
O	Cu	<	0.010890	O	Mg	<	0.005445	i	S	<		M	W		0.000473				
M	Dy	<	0.000268	O	Mn	<	0.003267	M	Sb	<	0.006976	M	Y	<	0.002146				
M	Er	<	0.000268	M	Mo		0.000774	O	Sc	<	0.004900	M	Yb	<	0.000536				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 47.87 +4 6 Ti(F)6-2

Chemical Compatibility - Soluble in concentrated HCl, HF, H3PO4 H2SO4 and HNO3. Avoid neutral to basic media. Unstable at ppm levels with metals that would pull F- away (i.e. Do not mix with Alkaline or Rare Earths or high levels of transition elements unless they are fluorinated). Stable with most inorganic anions with a tendency to hydrolyze forming the hydrated oxide in all dilute acids except HF.

Stability - 2-100 ppb levels stable (Alone or mixed with all other metals) as the Ti(F)6-2 for months in 1% HNO3 / LDPE container. 1-10,000 ppm single element solutions as the Ti(F)6-2 chemically stable for years in 2-5% HNO3 / trace HF in an LDPE container.

Ti Containing Samples (Preparation and Solution) - Metal (Soluble in H2O / HF caution -powder reacts violently); Oxide - low temperature history anatase or rutile (Dissolved by heating in 1:1:1 H2O / HF / H2SO4); Oxide - high temperature history (~800EC) brookite (fuse in Pt0 with K2S2O7); Ores (fuse in Pt0 with KF + K2S2O7 - no KF if silica not present); Organic Matrices (Dry ash at 450EC in Pt0 and dissolve by heating with 1:1:1 H2O / HF / H2SO4 or fuse ash with pyrosulfate if oxide is as plastic pigment and likely in brookite crystalline form).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 48 amu	14 ppt	N/A	32S16O, 32S14N, 14N16O18O, 14N17N2, 36Ar12C, 48Ca, [96X=2 (where X = Zr, Mo, Ru)]
ICP-OES 323.452 nm	0.0054 / 0.00092 µg/mL	1	Ce, Ar, Ni
ICP-OES 334.941 nm	0.0038 / 0.000028 µg/mL	1	Nb, Ta, Cr, U
ICP-OES 336.121 nm	0.0053 / 0.000034 µg/mL	1	W, Mo, Co

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 17, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- June 17, 2027

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

45982 R: 6/11/24

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

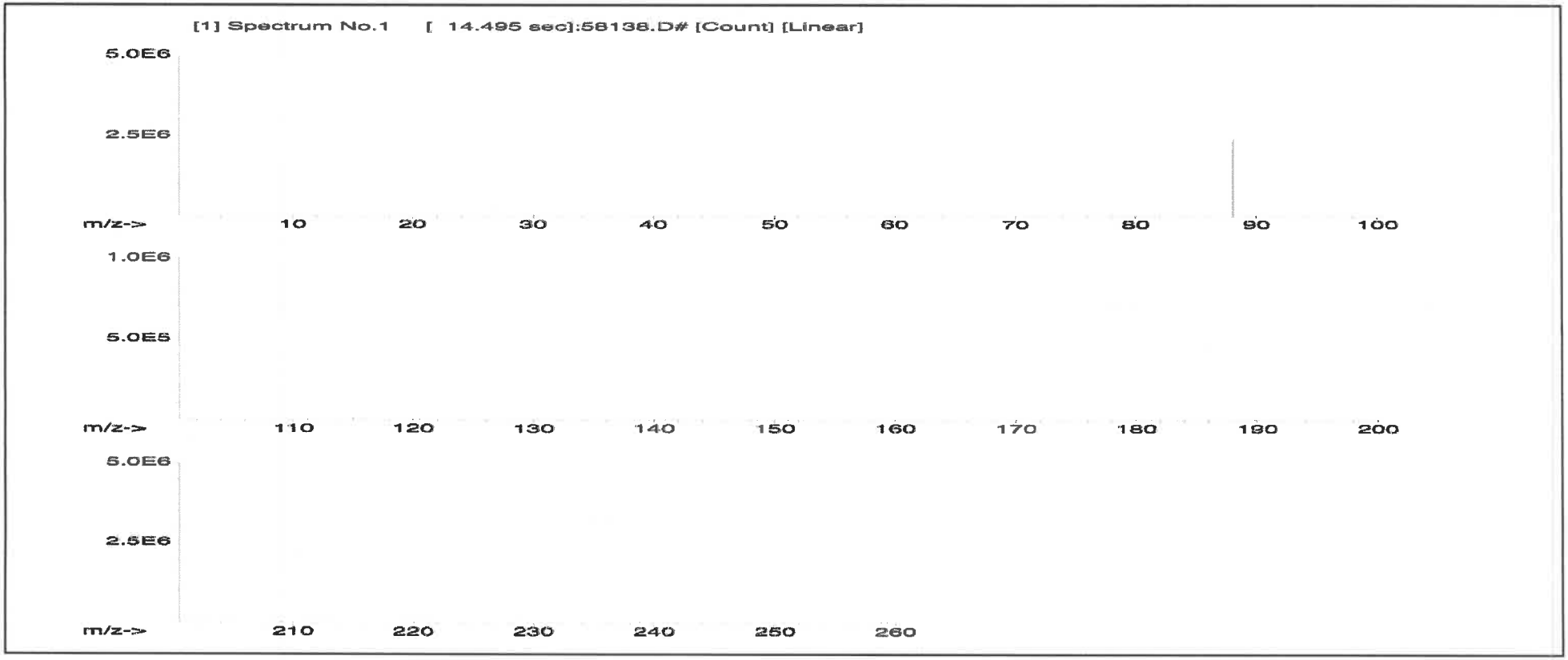
Part Number: 57038
Lot Number: 031524
Description: Strontium (Sr)

Expiration Date: 031527
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.07

	Lot #		
Solvent:	24002546	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	
5E-05	Balance Uncertainty		
0.100	Flask Uncertainty		

Formulated By:	Benson Chan	031524
Reviewed By:	Pedro L. Rentas	031524

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Strontium nitrate (Sr)	IN017	SRZ022018A1	1000	99.997	0.10	41.2	4.85470	4.85502	**1000.1**	**2.0**	10042-76-9	NA	orl-rat >2000mg/kg	3153a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	T	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGY10
Lot Number:	V2-Y740548
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Yttrium
Starting Material:	Yttrium Oxide
Starting Material Lot#:	2661 and 06230520YL
Starting Material Purity:	99.9984%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10000 ± 30 µg/mL

Density: 1.032 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	**10011 ± 25 µg/mL** EDTA NIST SRM 928 Lot Number: 928
Assay Method #2	**9997 ± 50 µg/mL** ICP Assay NIST SRM 3167a Lot Number: 190730
Assay Method #3	**9984 ± 31 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.004600	M	Eu		0.009037	M	Na		0.086360	M	Se	<	0.005200	M	Zn		0.030125
M	Al		0.014862	O	Fe		0.002410	M	Nb	<	0.000570	O	Si		0.024100	O	Zr	<	0.002600
M	As	<	0.003500	M	Ga	<	0.000570	M	Nd		0.000923	M	Sm		0.000461				
M	Au	<	0.001700	M	Gd	<	0.003500	M	Ni	<	0.005700	M	Sn	<	0.002300				
O	B		0.002209	M	Ge	<	0.005200	M	Os	<	0.001200	M	Sr	<	0.004600				
O	Ba	<	0.002500	M	Hf	<	0.000570	n	P	<		M	Ta	<	0.000570				
O	Be	<	0.001400	M	Hg	<	0.000570	M	Pb		0.005020	M	Tb		0.001044				
M	Bi	<	0.003500	M	Ho		0.009037	M	Pd	<	0.005100	M	Te	<	0.002300				
O	Ca		0.009841	M	In	<	0.002300	M	Pr	<	0.002300	M	Th	<	0.000570				
M	Cd	<	0.000570	M	Ir	<	0.000570	M	Pt	<	0.000570	M	Ti	<	0.003500				
M	Ce	<	0.002300	O	K		0.018677	M	Rb	<	0.000570	M	Tl	<	0.000570				
M	Co	<	0.000570	M	La		0.000461	M	Re	<	0.000570	M	Tm	<	0.003500				
M	Cr	<	0.004000	O	Li	<	0.009300	M	Rh	<	0.008000	M	U	<	0.000570				
M	Cs	<	0.000570	M	Lu		0.000582	M	Ru	<	0.000570	M	V		0.001265				
M	Cu		0.002610	O	Mg		0.001486	n	S	<		M	W	<	0.002300				
M	Dy		0.003815	M	Mn		0.000582	M	Sb		0.005422	s	Y	<					
M	Er		0.003615	M	Mo	<	0.005700	M	Sc	<	0.001200	M	Yb		0.001827				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 88.91 +3 6 Y(OH)(H2O)x+2

Chemical Compatibility -Soluble in HCl, H2SO4 and HNO3. Avoid HF, H3PO4 and neutral to basic media. Stable with most metals and inorganic anions forming an insoluble carbonate, oxide, oxalate, and fluoride. Avoid mixing with elements / solutions containing moderate amounts of fluoride.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.

Y Containing Samples (Preparation and Solution) - Metal (Soluble in acids); Oxide (Dissolve by heating in H2O/ HNO3); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Dry ash and dissolve in 1:1 H2O / HCl or HNO3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 89 amu	0.8 ppt	N/A	73Ge16O, 178Hf+2
ICP-OES 360.073 nm	0.005 / 0.000036 µg/mL	1	Ce, Th
ICP-OES 371.030 nm	0.004 / 0.00007 µg/mL	1	Ce
ICP-OES 377.433 nm	0.005 / 0.0009 µg/mL	1	Ta, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 20, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- February 20, 2029

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Custom Processing Supervisor

Certificate Approved By:

Muzzammil Khan
Stock Laboratory Supervisor

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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MS985
R: 6/14/24

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 863.01
ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGIN10
Lot Number:	U2-IN729349
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Indium
Starting Material:	Indium Metal
Starting Material Lot#:	2511
Starting Material Purity:	99.9995%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10022 ± 30 µg/mL

Density: 1.044 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	**10021 ± 56 µg/mL** ICP Assay NIST SRM 3124a Lot Number: 110516
Assay Method #2	**10035 ± 25 µg/mL** EDTA NIST SRM 928 Lot Number: 928
Assay Method #3	**10001 ± 33 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000760	M	Eu	<	0.000760	O	Na		0.012771	M	Se	<	0.023000	M	Zn	<	0.006100
M	Al		0.003385	O	Fe		0.004462	M	Nb	<	0.000760	O	Si		0.024619	M	Zr	<	0.000760
M	As	<	0.004600	M	Ga	<	0.000760	M	Nd	<	0.000760	M	Sm	<	0.000760				
M	Au	<	0.002300	M	Gd	<	0.000760	O	Ni	<	0.005100	M	Sn	<	0.000760				
O	B		0.003692	M	Ge	<	0.001600	M	Os	<	0.000760	O	Sr	<	0.000610				
M	Ba	<	0.001600	M	Hf	<	0.000760	n	P	<		M	Ta	<	0.000760				
O	Be	<	0.000130	M	Hg	<	0.003100	M	Pb		0.001400	M	Tb	<	0.000760				
M	Bi	<	0.000760	M	Ho	<	0.000760	M	Pd	<	0.001600	M	Te	<	0.000760				
O	Ca		0.004616	s	In	<		M	Pr	<	0.000760	M	Th	<	0.000760				
M	Cd	<	0.000760	M	Ir	<	0.000760	M	Pt	<	0.000760	O	Ti	<	0.001100				
M	Ce	<	0.000760	O	K		0.007078	M	Rb	<	0.000760	M	Tl	<	0.000760				
M	Co	<	0.000760	M	La	<	0.000760	M	Re	<	0.000760	M	Tm	<	0.000760				
O	Cr	<	0.001300	O	Li	<	0.000130	M	Rh	<	0.000760	M	U	<	0.000760				
M	Cs	<	0.000760	M	Lu	<	0.000760	M	Ru	<	0.000760	M	V	<	0.001600				
M	Cu	<	0.003800	O	Mg		0.000707	n	S	<		M	W	<	0.001600				
M	Dy	<	0.000760	O	Mn		0.000149	M	Sb	<	0.000760	M	Y	<	0.000760				
M	Er	<	0.000760	M	Mo	<	0.002300	M	Sc	<	0.000760	M	Yb	<	0.000760				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 114.82 +3 6 In(H2O)6+3

Chemical Compatibility -Soluble in HCl, HNO3, and H2SO4. Avoid neutral and basic media. Stable with most metals and inorganic anions. The oxalate, sulfide, carbonate, hydroxide and phosphate are insoluble in water.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.

In Containing Samples (Preparation and Solution) -Metal (Best dissolved in HCl / HNO3); Oxide (Soluble in mineral acids); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Sulfuric/peroxide digestion or dry ash and dissolution in dilute HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 115 amu	1 ppt	n/a	115Sn, 99Ru16O
ICP-OES 158.583 nm	0.05 / 0.002 µg/mL	1	
ICP-OES 230.606 nm	0.1 / 0.03 µg/mL	1	Ni, Os
ICP-OES 325.609 nm	0.2 / 0.05 µg/mL	1	Mn, Mo, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 21, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- February 21, 2028

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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1.0 ACCREDITATION / REGISTRATION

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

CERTIFIED WEIGHT REPORT:

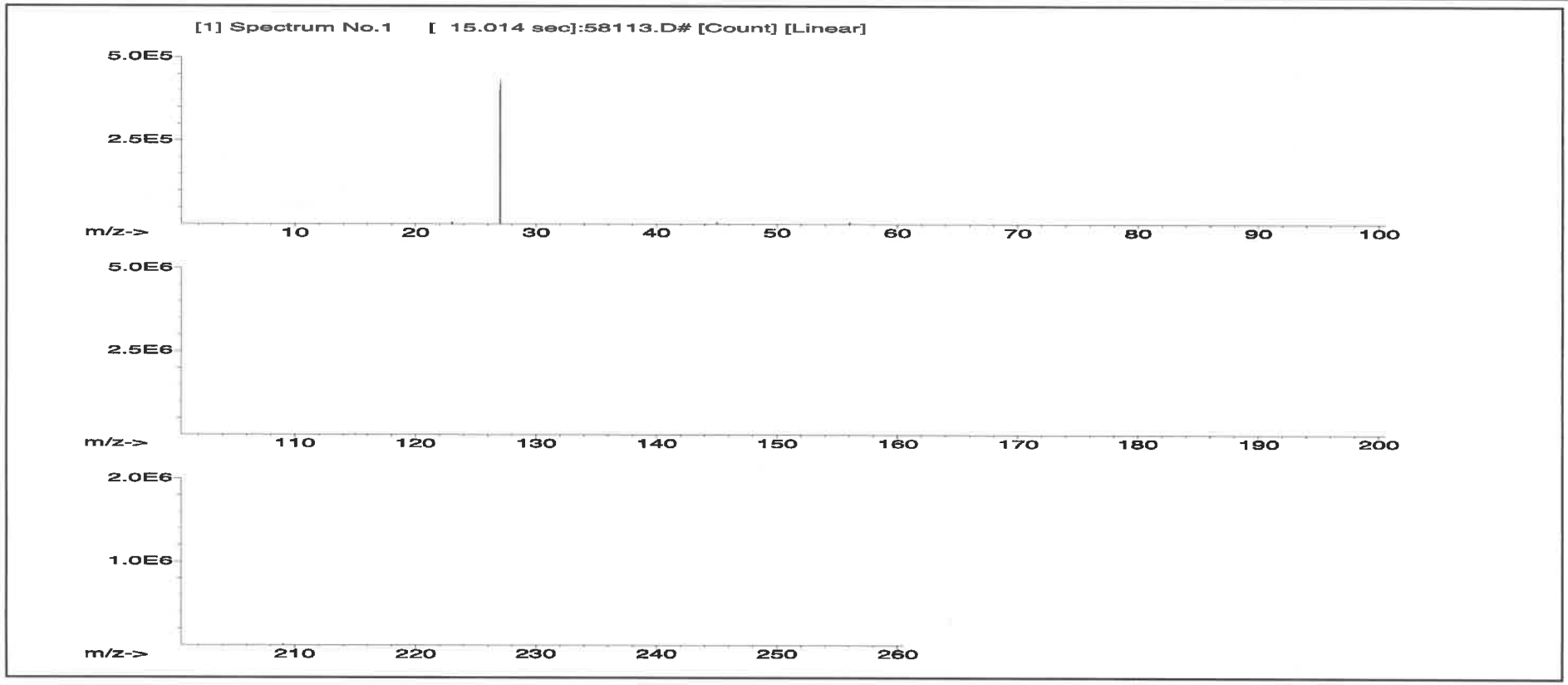
Part Number:	**58113**		**Solvent:**	20510011	Nitric Acid
Lot Number:	**011623**				
Description:	**Aluminum (Al)**				
			2%	40.0 (mL)	Nitric Acid
Expiration Date:	011626				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**10000**				
NIST Test Number:	6UTB	5E-05 Balance Uncertainty			
Weight shown below was diluted to (mL):	2000.02	0.058 Flask Uncertainty			

Lot #

Giovanni Esposito

Formulated By:	Giovanni Esposito	011623
Reviewed By:	Pedro L. Rentas	011623

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Aluminum nitrate nonahydrate (Al)	IN022	ALM112021A1	10000	99.999	0.10	7.30	273.9779	274.0078	**10001.1**	**20.0**	7784-27-2	2 mg/m3	orl-rat 3671 mg/kg	3101a



Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

Received — 08/01/2024
paper
M6039
M6040

Material No.: 9530-33
Batch No.: 24D1562005
Manufactured Date: 2024-03-18
Retest Date: 2029-03-17
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
ACS - Assay (as HCl) (by acid-base titrn)	36.5 - 38.0 %	37.6 %
ACS - Color (APHA)	≤ 10	5
ACS - Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS - Specific Gravity at 60°/60°F	1.185 - 1.192	1.192
ACS - Bromide (Br)	≤ 0.005 %	< 0.005 %
ACS - Extractable Organic Substances	≤ 5 ppm	< 1 ppm
ACS - Free Chlorine (as Cl_2)	≤ 0.5 ppm	< 0.5 ppm
Phosphate (PO_4)	≤ 0.05 ppm	0.03 ppm
Sulfate (SO_4)	≤ 0.5 ppm	< 0.3 ppm
Sulfite (SO_3)	≤ 0.8 ppm	0.3 ppm
Ammonium (NH_4)	≤ 3 ppm	< 1 ppm
Trace Impurities - Arsenic (As)	≤ 0.010 ppm	< 0.003 ppm
Trace Impurities - Aluminum (Al)	≤ 10.0 ppb	< 5.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 3.0 ppb
Trace Impurities - Barium (Ba)	≤ 1.0 ppb	< 1.0 ppb
Trace Impurities - Beryllium (Be)	≤ 1.0 ppb	< 1.0 ppb
Trace Impurities - Bismuth (Bi)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities - Boron (B)	≤ 20.0 ppb	2.2 ppb
Trace Impurities - Cadmium (Cd)	≤ 1.0 ppb	< 1.0 ppb
Trace Impurities - Calcium (Ca)	≤ 50.0 ppb	31.0 ppb
Trace Impurities - Chromium (Cr)	≤ 1.0 ppb	0.5 ppb
Trace Impurities - Cobalt (Co)	≤ 1.0 ppb	0.2 ppb
Trace Impurities - Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities - Gallium (Ga)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Germanium (Ge)	≤ 3.0 ppb	< 2.0 ppb
Trace Impurities - Gold (Au)	≤ 4.0 ppb	< 0.2 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities - Iron (Fe)	≤ 15 ppb	3 ppb

>>> Continued on page 2 >>>

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

Material No.: 9530-33
Batch No.: 24D1562005

Test	Specification	Result
Trace Impurities – Lead (Pb)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Lithium (Li)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities – Magnesium (Mg)	≤ 10.0 ppb	2.2 ppb
Trace Impurities – Manganese (Mn)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Mercury (Hg)	≤ 0.5 ppb	< 0.1 ppb
Trace Impurities – Molybdenum (Mo)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Nickel (Ni)	≤ 4.0 ppb	0.2 ppb
Trace Impurities – Niobium (Nb)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Potassium (K)	≤ 9.0 ppb	< 1.0 ppb
Trace Impurities – Selenium (Se), For Information Only		< 1.0 ppb
Trace Impurities – Silicon (Si)	≤ 100.0 ppb	< 10.0 ppb
Trace Impurities – Silver (Ag)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities – Sodium (Na)	≤ 100.0 ppb	2.0 ppb
Trace Impurities – Strontium (Sr)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Tantalum (Ta)	≤ 1.0 ppb	< 0.9 ppb
Trace Impurities – Thallium (Tl)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities – Tin (Sn)	≤ 5.0 ppb	< 0.4 ppb
Trace Impurities – Titanium (Ti)	≤ 1.0 ppb	0.2 ppb
Trace Impurities – Vanadium (V)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Zinc (Zn)	≤ 5.0 ppb	< 0.2 ppb
Trace Impurities – Zirconium (Zr)	≤ 1.0 ppb	< 0.1 ppb

>>> Continued on page 3 >>>

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

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Material No.: 9530-33
Batch No.: 24D1562005

Test	Specification	Result

For Laboratory,Research,or Manufacturing Use
Product Information (not specifications):
Appearance (clear, fuming liquid)
Meets ACS Specifications
Storage Condition: Store below 25 °C.

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Jamie Croak
Director Quality Operations, Bioscience Production

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

M6109
M6110
M6111

Received date 9/29/24 Met dig.

avantor™ | J.T.Baker®

Material No.: 9530-33
Batch No.: 22F0762009
Manufactured Date: 2022-05-10
Retest Date: 2027-05-09
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
ACS – Assay (as HCl) (by acid-base titrn)	36.5 – 38.0 %	37.6 %
ACS – Color (APHA)	≤ 10	5
ACS – Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS – Specific Gravity at 60°/60°F	1.185 – 1.192	1.190
ACS – Bromide (Br)	≤ 0.005 %	< 0.005 %
ACS – Extractable Organic Substances	≤ 5 ppm	< 1 ppm
ACS – Free Chlorine (as Cl_2)	≤ 0.5 ppm	< 0.5 ppm
Phosphate (PO_4)	≤ 0.05 ppm	< 0.03 ppm
Sulfate (SO_4)	≤ 0.5 ppm	< 0.3 ppm
Sulfite (SO_3)	≤ 0.8 ppm	0.3 ppm
Ammonium (NH_4)	≤ 3 ppm	< 1 ppm
Trace Impurities – Arsenic (As)	≤ 0.010 ppm	< 0.003 ppm
Trace Impurities – Aluminum (Al)	≤ 10.0 ppb	0.8 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 3.0 ppb
Trace Impurities – Barium (Ba)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Beryllium (Be)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Bismuth (Bi)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Boron (B)	≤ 20.0 ppb	< 5.0 ppb
Trace Impurities – Cadmium (Cd)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities – Calcium (Ca)	≤ 50.0 ppb	14.9 ppb
Trace Impurities – Chromium (Cr)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities – Cobalt (Co)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities – Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities – Gallium (Ga)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Germanium (Ge)	≤ 3.0 ppb	< 2.0 ppb
Trace Impurities – Gold (Au)	≤ 4.0 ppb	0.2 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities – Iron (Fe)	≤ 15 ppb	6 ppb

>>> Continued on page 2 >>>

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

Material No.: 9530-33
Batch No.: 22F0762009

Test	Specification	Result
Trace Impurities - Lead (Pb)	≤ 1.0 ppb	< 0.5 ppb
Trace Impurities - Lithium (Li)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Magnesium (Mg)	≤ 10.0 ppb	0.8 ppb
Trace Impurities - Manganese (Mn)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities - Mercury (Hg)	≤ 0.5 ppb	0.1 ppb
Trace Impurities - Molybdenum (Mo)	≤ 10.0 ppb	< 3.0 ppb
Trace Impurities - Nickel (Ni)	≤ 4.0 ppb	< 0.3 ppb
Trace Impurities - Niobium (Nb)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Potassium (K)	≤ 9.0 ppb	< 2.0 ppb
Trace Impurities - Selenium (Se), For Information Only		< 1.0 ppb
Trace Impurities - Silicon (Si)	≤ 100.0 ppb	1.0 ppb
Trace Impurities - Silver (Ag)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities - Sodium (Na)	≤ 100.0 ppb	0.7 ppb
Trace Impurities - Strontium (Sr)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Tantalum (Ta)	≤ 1.0 ppb	< 0.9 ppb
Trace Impurities - Thallium (Tl)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities - Tin (Sn)	≤ 5.0 ppb	< 0.8 ppb
Trace Impurities - Titanium (Ti)	≤ 1.0 ppb	0.2 ppb
Trace Impurities - Vanadium (V)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Zinc (Zn)	≤ 5.0 ppb	0.8 ppb
Trace Impurities - Zirconium (Zr)	≤ 1.0 ppb	< 0.1 ppb

>>> Continued on page 3 >>>

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

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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

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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

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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

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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.
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www.absolutestandards.com

Certified Reference Material CRM

R: 01/03/24 M5806, M5807

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 58111
Lot Number: 122223
Description: Sodium (Na)

Expiration Date: 122226
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB

Weight shown below was diluted to (mL): 3000.4 0.06 Flask Uncertainty

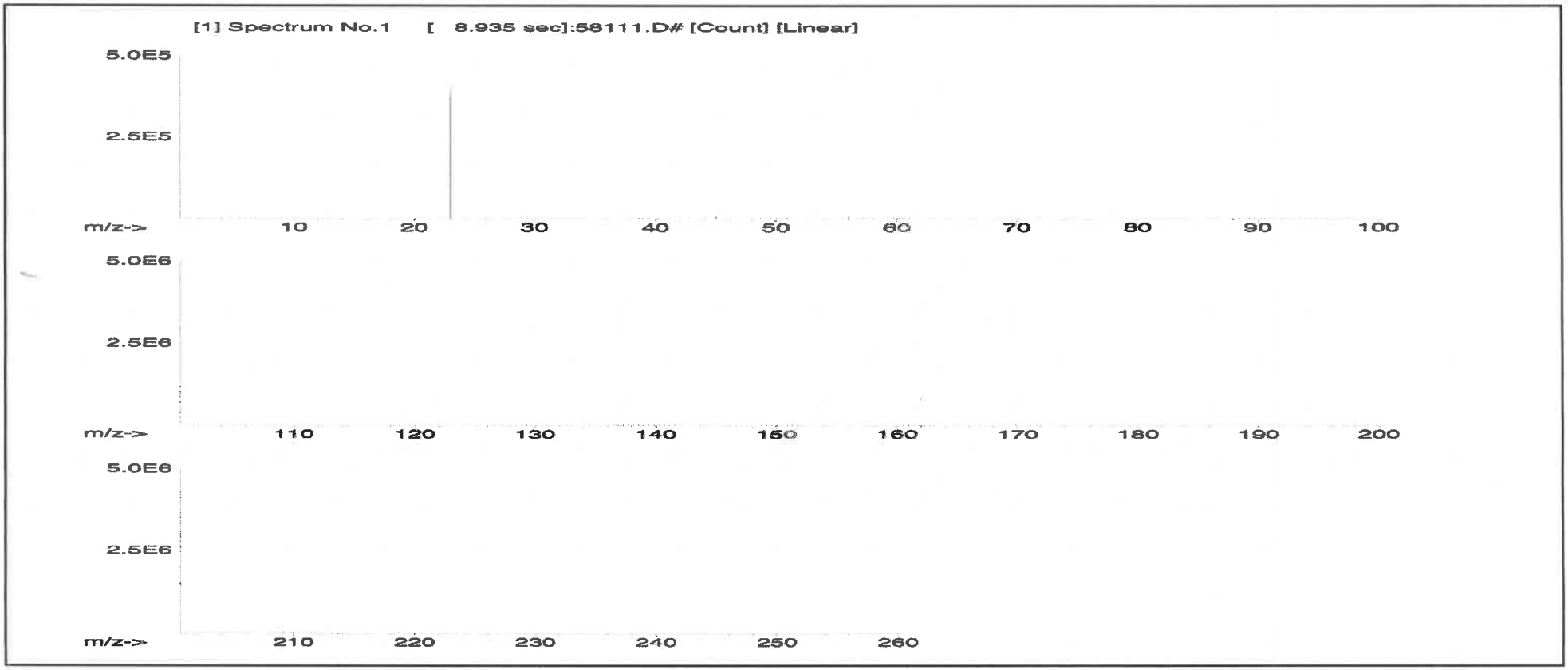
	Lot #		
Solvent:	24002546	Nitric Acid	
2%	60.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

Aleah O'Brady

Formulated By:	Aleah O'Brady	122223
Reviewed By:	Pedro L. Rentas	122223

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Sodium nitrate (Na)	IN036	NAV012015I1	10000	99.999	0.10	26.9	111.5406	111.5479	**10000.7**	**20.0**	7631-99-4	5 mg/m3	orl-rat 3430 mg/kg	3152a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	T	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

R: 01/03/24 M5802, M5803

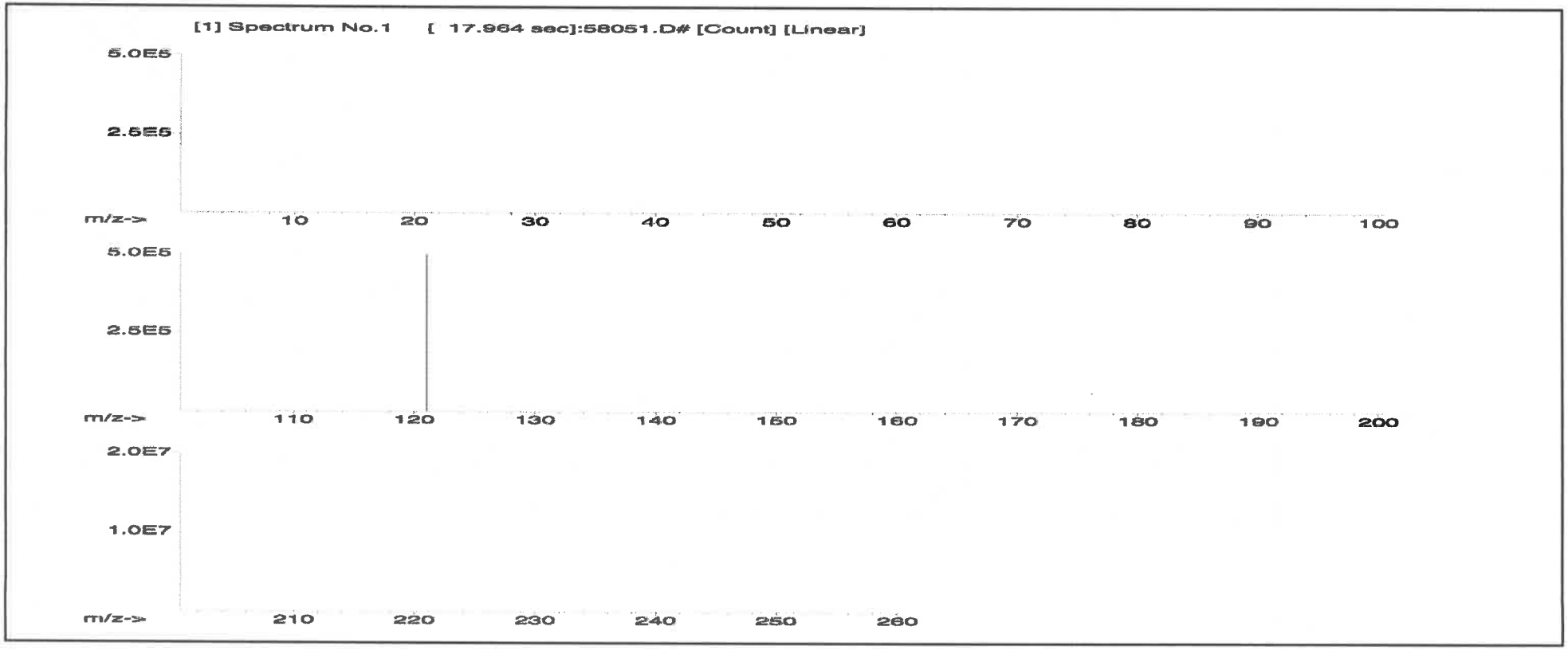
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57051**	24002546	Nitric Acid	
Lot Number:	**120523**			
Description:	**Antimony (Sb)**			
		2.0%	60.0 (mL)	Nitric Acid
Expiration Date:	120526			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	3000.41	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	120523
Reviewed By:	Pedro L. Rentas	120523

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Antimony (Sb)	58151	100923	0.1000	300.0	0.084	1000	10001.4	**1000.0**	2.1	7440-36-0	0.5 mg/m3	orl-rat 7000 mg/kg	3102a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	T	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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* 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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M6030

R: 8/5/24

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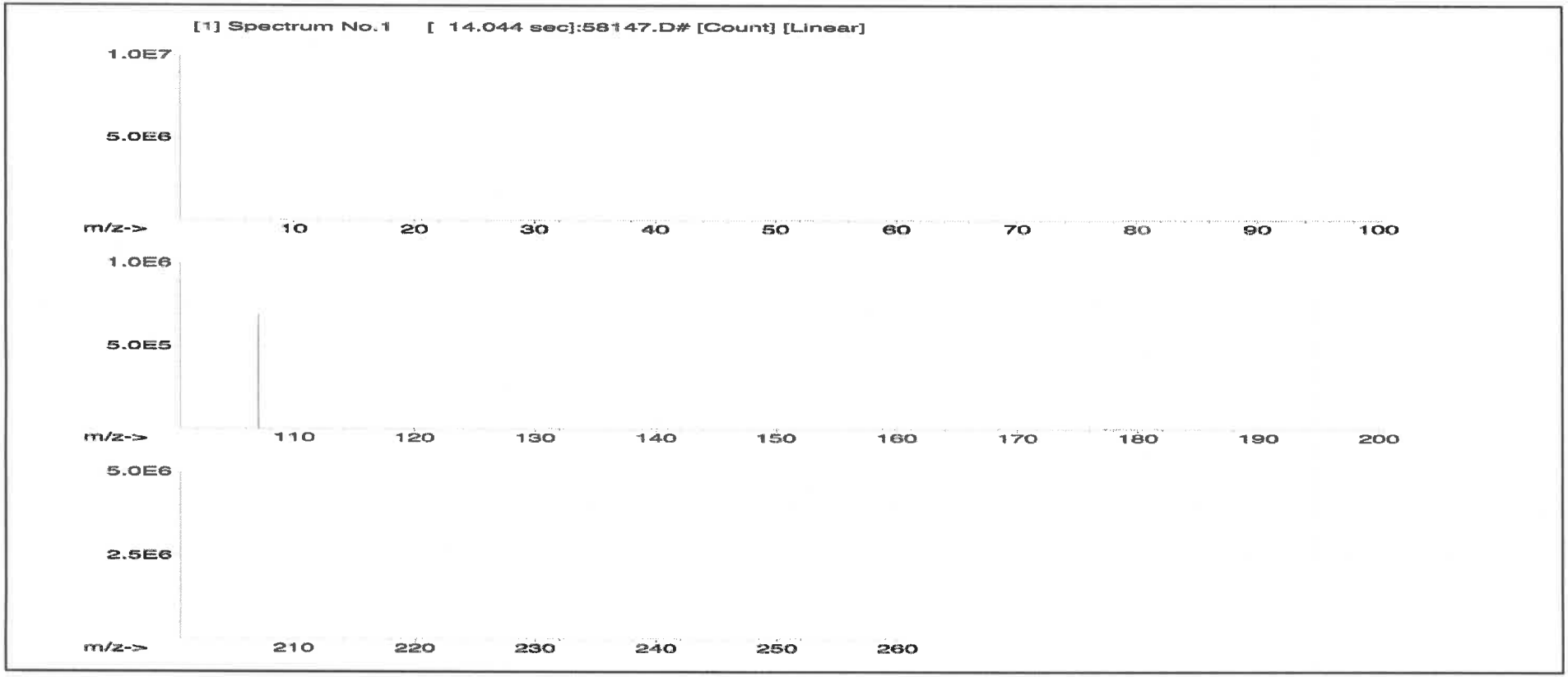
CERTIFIED WEIGHT REPORT:

Part Number:	**57047**			**Lot #**	
Lot Number:	**122823**	**Solvent:**	24002546	Nitric Acid	
Description:	**Silver (Ag)**				
		2%	80.0 (mL)	Nitric Acid	
Expiration Date:	122826				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	4000.30	0.058	Flask Uncertainty		

Formulated By:	Benson Chan	122823
Reviewed By:	Pedro L. Rentas	122823

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Silver nitrate (Ag)	IN035	J0612AGA1	1000.0	99.9999	0.10	63.7	6.27992	6.27998	**1000.0**	**2.0**	7761-88-8	10 ug/m3	NA	3151



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	T	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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R: 03/16/23 M5473, M5474, M5475, M5476

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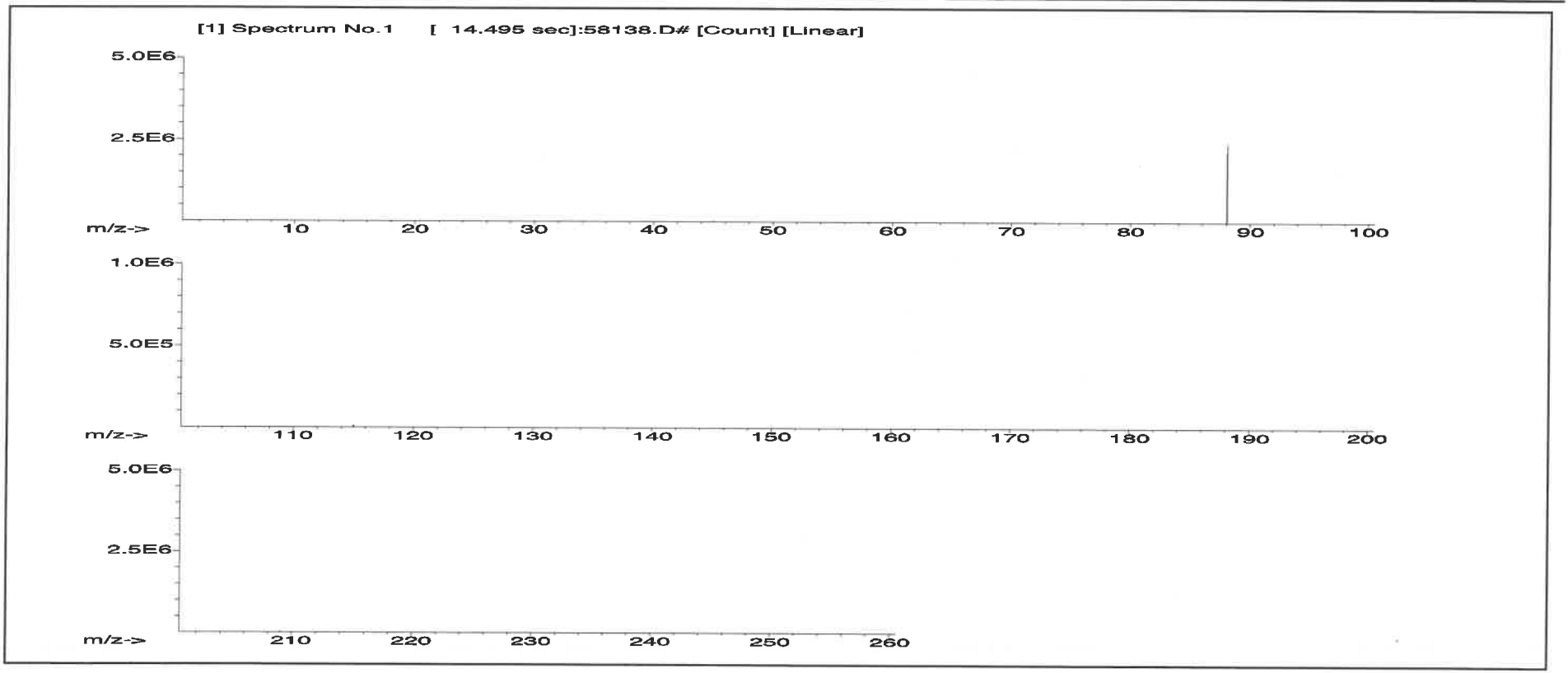
CERTIFIED WEIGHT REPORT:

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



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

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CERTIFIED WEIGHT REPORT:

Part Number:	**57081**		**Lot #**		
Lot Number:	**062724**	**Solvent:**	24002546	Nitric Acid	
Description:	**Thallium (Tl)**	2%	40.0 (mL)	Nitric Acid	
Expiration Date:	062727				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.1	0.10	Flask Uncertainty		

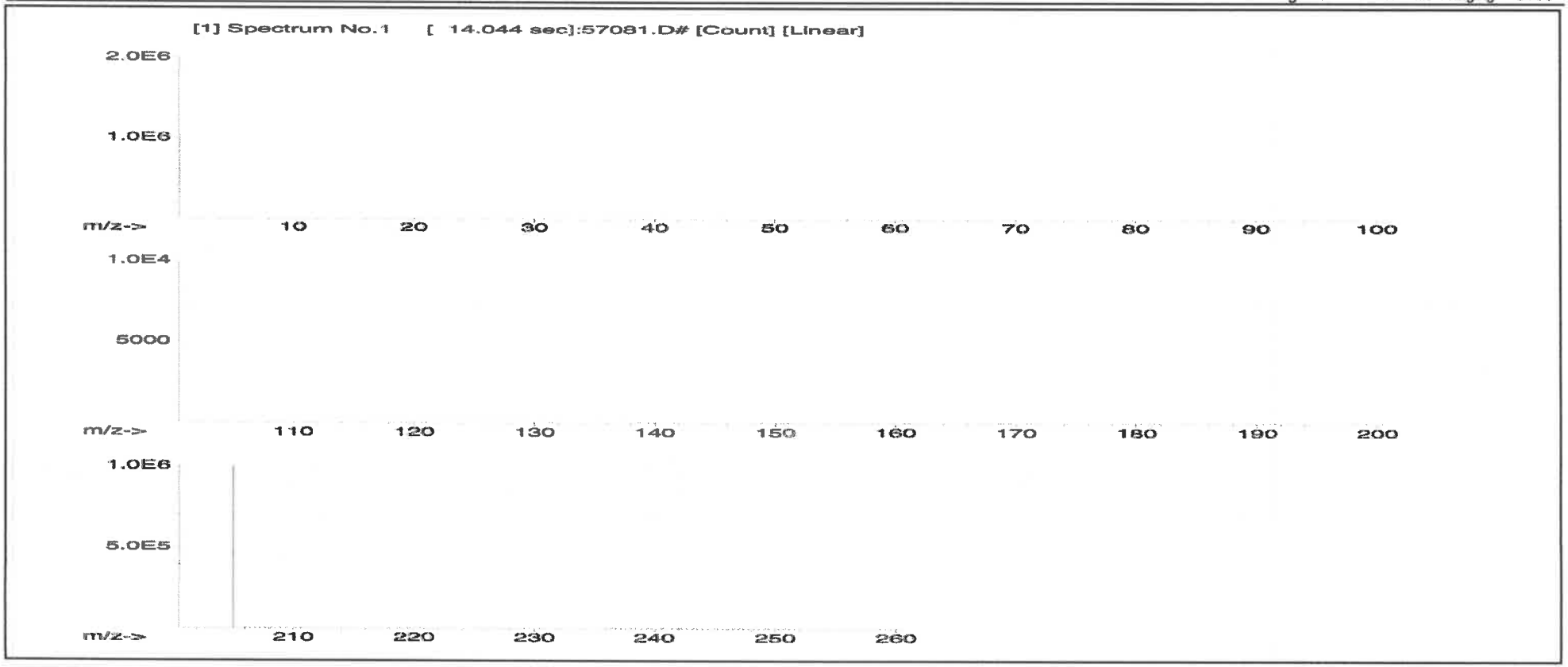
Aleah O'Brady

Formulated By:	Aleah O'Brady	062724

Pedro Rentas

Reviewed By:	Pedro L. Rentas	062724

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Thallium nitrate (Tl)	IN037	BCCF4399	1000	99.999	0.10	77.0	2.5975	2.5977	**1000.1**	**2.0**	10102-45-1	0.1 mg/m3	orl-mus 15mg/kg	3158



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	T	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

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Rc. 8/5/24

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57023**			
Lot Number:	**062424**			
Description:	**Vanadium (V)**	24002546	Nitric Acid	
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	062427			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.3	0.06	Flask Uncertainty	

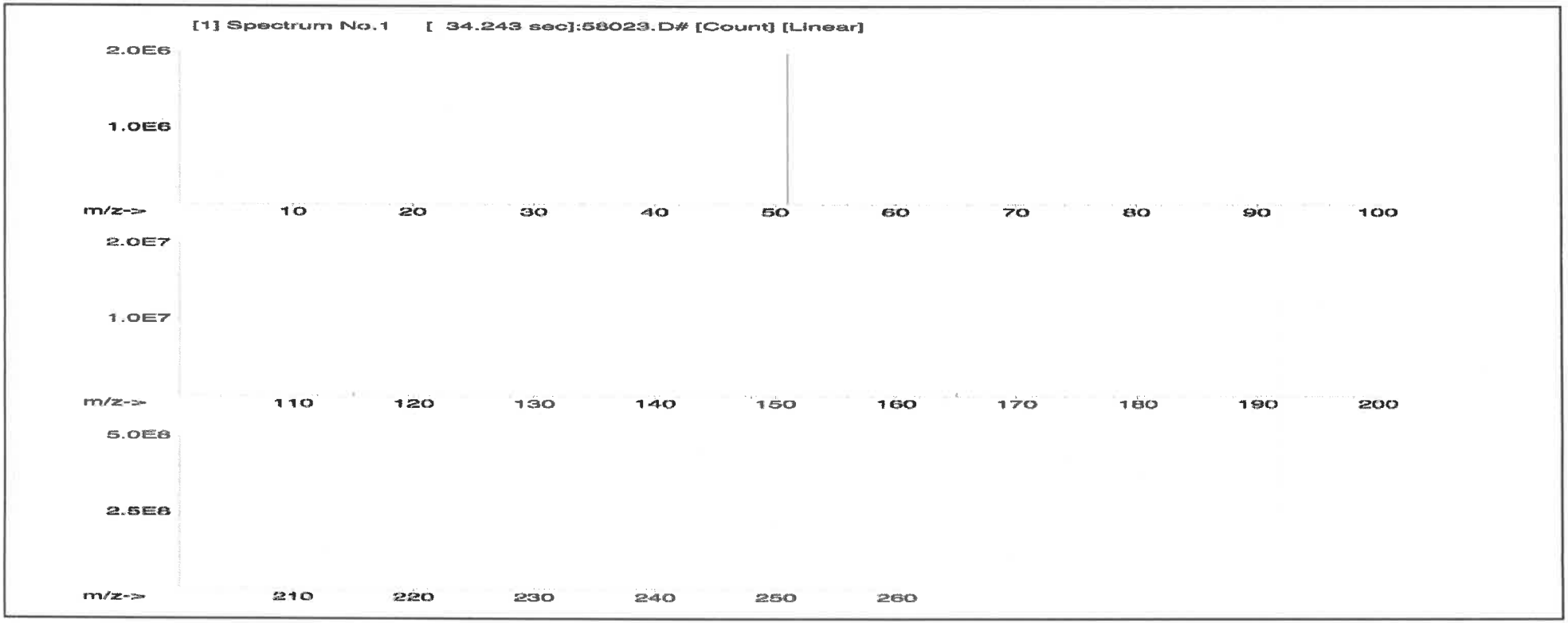
Aleah O'Brady

Formulated By:	Aleah O'Brady	062424

Pedro Rentas

Reviewed By:	Pedro L. Rentas	062424

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium metavanadate (V)	58123	021224	0.1000	200.0	0.084	1000	10000.3	**1000.0**	**2.2**	7803-55-6	0.05 mg/m3	orl-rat 58.1mg/kg	3165



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	T
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
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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Soil/Sludge Metals Preparation Sheet

PB164633

SOP ID : M3050B-Digestion-20, MSFAM01.1-Trace Metals-2

SDG No : MYE531

Matrix : SOIL

Pippete ID: ICP A

Balance ID : M SC-2

Filter paper ID : N/A

pH Strip ID : N/A

Hood ID : #3

Block ID: 1. HOT BLOCK #2 2. N/A

Start Digest Date: 11/04/2024 **Time :** 10:00 **Temp :** 95 °C

End Digest Date: 11/04/2024 **Time :** 13:00 **Temp :** 95 °C

Digestion tube ID: M6054

Block thermometer ID: MET-DIG. #2

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
LCSSD	0.50	MP83141
Spike Sol 6	2.00	MP83147
N/A	N/A	N/A
N/A	N/A	N/A

Chemical Used	ML/SAMPLE USED	Lot Number
1:1 HNO3	10.00	MP81119
1:1 HCL	5.00	MP82127
Conc. HNO3	5.00	M6115
30% H2O2	3.00	M5634
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Extraction Conformance/Non-Conformance Comments:

HOT BLOCK #2 CELL #34 : 95 C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
11/4/24 13:15	JSP Met dig	Melissa Cash
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

Soil/Sludge Metals Preparation Sheet

PB164633

Lab Sample ID	Client Sample ID	pH	Initial Weight (g)	Final Vol (ml)	Color Before	Color After	Texture	Artifact	Comment	Prep Pos
P4570-01	MYE531	N/A	1.24	100	Brown	Yellow	Medium	N/A	N/A	1
P4570-02	MYE531D	N/A	1.25	100	Brown	Yellow	Medium	N/A	N/A	3
P4570-03	MYE531S	N/A	1.24	100	Brown	Yellow	Medium	N/A	MP83147	29
P4570-04	MYE537	N/A	1.16	100	Brown	Yellow	Medium	N/A	N/A	5
P4570-05	MYE538	N/A	1.25	100	Brown	Yellow	Medium	N/A	N/A	6
P4570-06	MYE539	N/A	1.37	100	Brown	Yellow	Medium	N/A	N/A	7
P4570-07	MYE540	N/A	1.34	100	Brown	Yellow	Medium	N/A	N/A	8
P4570-08	MYE541	N/A	1.15	100	Brown	Yellow	Medium	N/A	N/A	9
P4570-09	MYE542	N/A	1.21	100	Brown	Yellow	Medium	N/A	N/A	10
P4570-10	MYE563	N/A	1.13	100	Brown	Yellow	Medium	N/A	N/A	11
P4570-11	MYE564	N/A	1.27	100	Brown	Yellow	Medium	N/A	N/A	12
P4570-12	MYE565	N/A	1.17	100	Brown	Yellow	Medium	N/A	N/A	13
P4570-13	MYE566	N/A	1.22	100	Brown	Yellow	Medium	N/A	N/A	14
P4570-14	MYE567	N/A	1.10	100	Brown	Yellow	Medium	N/A	N/A	15
P4570-15	MYE568	N/A	1.15	100	Brown	Yellow	Medium	N/A	N/A	16
P4570-16	MYE569	N/A	1.22	100	Brown	Yellow	Medium	N/A	N/A	17
P4570-17	MYE570	N/A	1.31	100	Brown	Yellow	Medium	N/A	N/A	18
P4570-18	MYE571	N/A	1.27	100	Brown	Yellow	Medium	N/A	N/A	19
P4570-19	MYE572	N/A	1.24	100	Brown	Yellow	Medium	N/A	N/A	20
P4570-20	MYE573	N/A	1.32	100	Brown	Yellow	Medium	N/A	N/A	21
P4570-21	MYE574	N/A	1.11	100	Brown	Yellow	Medium	N/A	N/A	22
P4570-22	MYE575	N/A	1.15	100	Brown	Yellow	Medium	N/A	N/A	23
PB164633BL	PBS633	N/A	1.00	100	Colorless	Colorless	Fine	N/A	N/A	24
PB164633BS	LCS633	N/A	1.00	100	Colorless	Colorless	Fine	N/A	MP83141	27
PB164633BSD	LCSD633	N/A	1.00	100	Colorless	Colorless	Fine	N/A	MP83141	28

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Fax : 908 789 8922

Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB133379

Review By	Sarabjit Jaswal	Review On	11/13/2024 3:15:58 AM
Supervise By	Mohan Bera	Supervise On	11/13/2024 3:17:23 AM

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	11/09/24 16:11		Kareem	OK
2	S1	S01	CAL2	11/09/24 16:15		Kareem	OK
3	S2	S02	CAL3	11/09/24 16:20		Kareem	OK
4	S3	S03	CAL4	11/09/24 16:24		Kareem	OK
5	S4	S04	CAL5	11/09/24 16:29		Kareem	OK
6	S5	S05	CAL6	11/09/24 16:33		Kareem	OK
7	S6	S06	CAL7	11/09/24 16:37		Kareem	OK
8	ICV007	ICV007	ICV	11/09/24 16:52	Inst. paused for calibration review	Kareem	OK
9	ICB007	ICB007	ICB	11/09/24 16:56		Kareem	OK
10	ICSA007	ICSA007	ICSA	11/09/24 17:01		Kareem	OK
11	ICSAB007	ICSAB007	ICSAB	11/09/24 17:05		Kareem	OK
12	CCV045	CCV045	CCV	11/09/24 17:10		Kareem	OK
13	CCB045	CCB045	CCB	11/09/24 17:14		Kareem	OK
14	PB164598BL	PBS598	MB	11/09/24 17:19		Kareem	OK
15	PB164598BS	LCS598	LCS	11/09/24 17:23		Kareem	OK
16	PB164600BL	PBS600	MB	11/09/24 17:28		Kareem	OK
17	PB164600BS	LCS600	LCS	11/09/24 17:32		Kareem	OK
18	PB164623BL	PBS623	MB	11/09/24 17:37		Kareem	OK

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CCV Standard	MP83146
ICSA Standard	MP83144,MP83145
CRI Standard	
LCS Standard	MP83141
Chk Standard	MP83148,MP83149

19	PB164623BS	LCS623	LCS	11/09/24 17:41		Kareem	OK
20	PB164633BL	PBS633	MB	11/09/24 17:55		Kareem	OK
21	PB164633BS	LCS633	LCS	11/09/24 18:00		Kareem	OK
22	PB164598BSD	LCSD598	LCSD	11/09/24 18:04		Kareem	OK
23	PB164600BSD	LCSD600	LCSD	11/09/24 18:09		Kareem	OK
24	PB164623BSD	LCSD623	LCSD	11/09/24 18:13		Kareem	OK
25	PB164633BSD	LCSD633	LCSD	11/09/24 18:22		Kareem	OK
26	P4524-01DL	MYE4W0	SAM	11/09/24 18:27		Kareem	OK
27	P4524-02DL	MYE4W1	SAM	11/09/24 18:31		Kareem	OK
28	P4524-03DL	MYE4W2	SAM	11/09/24 18:36		Kareem	OK
29	P4524-04DL	MYE4W3	SAM	11/09/24 18:40		Kareem	OK
30	P4524-05DL	MYE4W4	SAM	11/09/24 18:45		Kareem	OK
31	CCV046	CCV046	CCV	11/09/24 18:49		Kareem	OK
32	CCB046	CCB046	CCB	11/09/24 18:53		Kareem	OK
33	PB164631BL	PBS631	MB	11/09/24 18:58		Kareem	OK
34	PB164631BS	LCS631	LCS	11/09/24 19:02		Kareem	OK
35	PB164631BSD	LCSD631	LCSD	11/09/24 19:07		Kareem	OK
36	P4524-06DL	MYE4W5	SAM	11/09/24 19:21		Kareem	OK
37	P4524-07DL	MYE4W5D	DUP	11/09/24 19:25		Kareem	OK
38	P4524-06LDL	MYE4W5L	SD	11/09/24 19:29		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

39	P4524-08DL	MYE4W5S	MS	11/09/24 19:34		Kareem	OK
40	P4524-09DL	MYE4W6	SAM	11/09/24 19:38		Kareem	OK
41	P4524-10DL	MYE4W7	SAM	11/09/24 19:43		Kareem	OK
42	P4524-11DL	MYE4Y0	SAM	11/09/24 19:47		Kareem	OK
43	P4524-12DL	MYE4Y1	SAM	11/09/24 19:52		Kareem	OK
44	P4524-13DL	MYE4Y2	SAM	11/09/24 19:56		Kareem	OK
45	P4524-14DL	MYE4Y3	SAM	11/09/24 20:00		Kareem	OK
46	P4524-15DL	MYE4Y4	SAM	11/09/24 20:05		Kareem	OK
47	P4524-16DL	MYE4Y5	SAM	11/09/24 20:09		Kareem	OK
48	P4524-17DL	MYE4Y6	SAM	11/09/24 20:14		Kareem	OK
49	P4538-01DL	MYE4Y7	SAM	11/09/24 20:18		Kareem	OK
50	P4538-02DL	MYE4Y8	SAM	11/09/24 20:23		Kareem	OK
51	CCV047	CCV047	CCV	11/09/24 20:27		Kareem	OK
52	CCB047	CCB047	CCB	11/09/24 20:31		Kareem	OK
53	P4538-03DL	MYE4Y9	SAM	11/09/24 20:36		Kareem	OK
54	P4538-04DL	MYE4Z0	SAM	11/09/24 20:40		Kareem	OK
55	P4538-05DL	MYE4Z1	SAM	11/09/24 20:45		Kareem	OK
56	P4538-06DL	MYE4Z2	SAM	11/09/24 20:49		Kareem	OK
57	P4538-07DL	MYE4Z3	SAM	11/09/24 20:53		Kareem	OK
58	P4538-08DL	MYE4Z4	SAM	11/09/24 20:58		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

59	P4538-09DL	MYE4Z5	SAM	11/09/24 21:02		Kareem	OK
60	P4538-10DL	MYE4Z6	SAM	11/09/24 21:07		Kareem	OK
61	P4538-11DL	MYE4Z6D	DUP	11/09/24 21:11		Kareem	OK
62	P4538-10LDL	MYE4Z6L	SD	11/09/24 21:16		Kareem	OK
63	P4538-12DL	MYE4Z6S	MS	11/09/24 21:20		Kareem	OK
64	P4538-13DL	MYE4Z7	SAM	11/09/24 21:24		Kareem	OK
65	P4538-14DL	MYE4Z8	SAM	11/09/24 21:29		Kareem	OK
66	P4538-15DL	MYE4Z9	SAM	11/09/24 21:33		Kareem	OK
67	P4538-16DL	MYE500	SAM	11/09/24 21:38		Kareem	OK
68	P4538-17DL	MYE501	SAM	11/09/24 21:42		Kareem	OK
69	P4538-18DL	MYE502	SAM	11/09/24 21:47		Kareem	OK
70	P4538-19DL	MYE503	SAM	11/09/24 21:51		Kareem	OK
71	P4538-20DL	MYE504	SAM	11/09/24 21:55		Kareem	OK
72	P4538-21DL	MYE505	SAM	11/09/24 22:00		Kareem	OK
73	CCV048	CCV048	CCV	11/09/24 22:04		Kareem	OK
74	CCB048	CCB048	CCB	11/09/24 22:09		Kareem	OK
75	P4541-01DL	MYE5B3	SAM	11/09/24 22:14		Kareem	OK
76	P4541-02DL	MYE5B4	SAM	11/09/24 22:18		Kareem	OK
77	P4541-03DL	MYE5B5	SAM	11/09/24 22:23		Kareem	OK
78	P4541-04DL	MYE5B6	SAM	11/09/24 22:27		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	P4541-05DL	MYE5B7	SAM	11/09/24 22:32		Kareem	OK
80	P4541-06DL	MYE5B7D	DUP	11/09/24 22:36		Kareem	OK
81	P4541-05LDL	MYE5B7L	SD	11/09/24 22:41		Kareem	OK
82	P4541-07DL	MYE5B7S	MS	11/09/24 22:45	MS fail for Sb(Below RL),Cu(1035 ppb),Zn(931 ppb)	Kareem	OK
83	P4541-08DL	MYE5B8	SAM	11/09/24 22:49		Kareem	OK
84	P4541-09DL	MYE5B9	SAM	11/09/24 22:54		Kareem	OK
85	P4541-10DL	MYE5C0	SAM	11/09/24 22:58		Kareem	OK
86	P4541-11DL	MYE5C1	SAM	11/09/24 23:03		Kareem	OK
87	P4541-12DL	MYE5C2	SAM	11/09/24 23:07		Kareem	OK
88	P4541-13DL	MYE5C3	SAM	11/09/24 23:12		Kareem	OK
89	P4541-14DL	MYE5C4	SAM	11/09/24 23:16		Kareem	OK
90	P4541-15DL	MYE5C5	SAM	11/09/24 23:20		Kareem	OK
91	P4541-16DL	MYE5C6	SAM	11/09/24 23:25		Kareem	OK
92	P4541-17DL	MYE5C7	SAM	11/09/24 23:29		Kareem	OK
93	P4541-18DL	MYE5C8	SAM	11/09/24 23:34		Kareem	OK
94	P4541-19DL	MYE5C9	SAM	11/09/24 23:38		Kareem	OK
95	CCV049	CCV049	CCV	11/09/24 23:43		Kareem	OK
96	CCB049	CCB049	CCB	11/09/24 23:47		Kareem	OK
97	P4541-20DL	MYE5D0	SAM	11/09/24 23:51	Not Use	Kareem	Not Ok

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ICV Standard	MP83143
CCV Standard	MP83146
ICSA Standard	MP83144,MP83145
CRI Standard	
LCS Standard	MP83141
Chk Standard	MP83148,MP83149

98	P4541-21DL	MYE5D1	SAM	11/09/24 23:56		Kareem	OK
99	P4541-22DL	MYE5D2	SAM	11/10/24		Kareem	OK
100	P4542-01DL	MYE5D3	SAM	11/10/24 00:05		Kareem	OK
101	P4542-02DL	MYE5D4	SAM	11/10/24 00:09		Kareem	OK
102	P4542-03DL	MYE5D5	SAM	11/10/24 00:14		Kareem	OK
103	P4542-04DL	MYE5D6	SAM	11/10/24 00:18		Kareem	OK
104	P4542-05DL	MYE5D6D	DUP	11/10/24 00:22		Kareem	OK
105	P4542-04LDL	MYE5D6L	SD	11/10/24 00:27		Kareem	OK
106	P4542-06DL	MYE5D6S	MS	11/10/24 00:31	MS fail for As(140 ppb),Cu(1023 ppb)	Kareem	OK
107	P4542-07DL	MYE5D7	SAM	11/10/24 00:36		Kareem	OK
108	P4542-08DL	MYE5D8	SAM	11/10/24 00:40		Kareem	OK
109	P4542-09DL	MYE5D9	SAM	11/10/24 00:44		Kareem	OK
110	P4542-10DL	MYE5E0	SAM	11/10/24 00:49		Kareem	OK
111	P4542-11DL	MYE5E1	SAM	11/10/24 00:53		Kareem	OK
112	P4542-12DL	MYE5E2	SAM	11/10/24 00:58		Kareem	OK
113	P4542-13DL	MYE5E3	SAM	11/10/24 01:02		Kareem	OK
114	P4542-14DL	MYE5E4	SAM	11/10/24 01:07	Not Use	Kareem	Not Ok
115	P4542-15DL	MYE5E5	SAM	11/10/24 01:11		Kareem	OK
116	P4542-16DL	MYE5E6	SAM	11/10/24 01:15		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

117	CCV050	CCV050	CCV	11/10/24 01:20		Kareem	OK
118	CCB050	CCB050	CCB	11/10/24 01:24		Kareem	OK
119	P4542-17DL	MYE5E7	SAM	11/10/24 01:29		Kareem	OK
120	P4542-18DL	MYE5E8	SAM	11/10/24 01:33		Kareem	OK
121	P4542-19DL	MYE5E9	SAM	11/10/24 01:38		Kareem	OK
122	P4542-20DL	MYE5F0	SAM	11/10/24 01:42		Kareem	OK
123	P4542-21DL	MYE5F1	SAM	11/10/24 01:46		Kareem	OK
124	P4542-22DL	MYE5F2	SAM	11/10/24 01:51		Kareem	OK
125	P4543-01DL	MYE5F3	SAM	11/10/24 01:55		Kareem	OK
126	P4543-02DL	MYE5F4	SAM	11/10/24 02:00		Kareem	OK
127	P4543-03DL	MYE5F5	SAM	11/10/24 02:04		Kareem	OK
128	P4543-04DL	MYE5F5D	DUP	11/10/24 02:09		Kareem	OK
129	P4543-03LDL	MYE5F5L	SD	11/10/24 02:13		Kareem	OK
130	P4543-05DL	MYE5F5S	MS	11/10/24 02:17	MS fail for for As(182 ppb)	Kareem	OK
131	P4543-06DL	MYE5F6	SAM	11/10/24 02:22		Kareem	OK
132	P4543-07DL	MYE5F7	SAM	11/10/24 02:26		Kareem	OK
133	P4543-08DL	MYE5F8	SAM	11/10/24 02:31		Kareem	OK
134	P4543-09DL	MYE5F9	SAM	11/10/24 02:35		Kareem	OK
135	P4543-10DL	MYE5G0	SAM	11/10/24 02:40		Kareem	OK
136	P4543-11DL	MYE5G2	SAM	11/10/24 02:44		Kareem	OK

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Instrument ID: P5

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CCV Standard	MP83146
ICSA Standard	MP83144,MP83145
CRI Standard	
LCS Standard	MP83141
Chk Standard	MP83148,MP83149

137	P4543-12DL	MYE5G3	SAM	11/10/24 02:48		Kareem	OK
138	P4543-13DL	MYE506	SAM	11/10/24 02:53		Kareem	OK
139	CCV051	CCV051	CCV	11/10/24 02:57		Kareem	OK
140	CCB051	CCB051	CCB	11/10/24 03:02		Kareem	OK
141	P4543-14DL	MYE507	SAM	11/10/24 03:06		Kareem	OK
142	P4543-15DL	MYE508	SAM	11/10/24 03:10		Kareem	OK
143	P4543-16DL	MYE509	SAM	11/10/24 03:15		Kareem	OK
144	P4543-17DL	MYE510	SAM	11/10/24 03:19		Kareem	OK
145	P4543-18DL	MYE511	SAM	11/10/24 03:24		Kareem	OK
146	P4543-19DL	MYE512	SAM	11/10/24 03:28		Kareem	OK
147	P4543-20DL	MYE513	SAM	11/10/24 03:33		Kareem	OK
148	P4543-21DL	MYE514	SAM	11/10/24 03:37		Kareem	OK
149	P4543-22DL	MYE515	SAM	11/10/24 03:42		Kareem	OK
150	PB164626BL	PBS626	MB	11/10/24 03:46		Kareem	OK
151	PB164626BS	LCS626	LCS	11/10/24 03:51		Kareem	OK
152	PB164626BSD	LCSD626	LCSD	11/10/24 03:55		Kareem	OK
153	PB164628BL	PBS628	MB	11/10/24 04:13		Kareem	OK
154	PB164628BS	LCS628	LCS	11/10/24 04:18		Kareem	OK
155	PB164628BSD	LCSD628	LCSD	11/10/24 04:22		Kareem	OK
156	P4569-01DL	MYE516	SAM	11/10/24 04:27		Kareem	OK

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CCV Standard	MP83146
ICSA Standard	MP83144,MP83145
CRI Standard	
LCS Standard	MP83141
Chk Standard	MP83148,MP83149

157	P4569-02DL	MYE517	SAM	11/10/24 04:31		Kareem	OK
158	CCV052	CCV052	CCV	11/10/24 04:36		Kareem	OK
159	CCB052	CCB052	CCB	11/10/24 04:40		Kareem	OK
160	P4569-03DL	MYE518	SAM	11/10/24 04:44		Kareem	OK
161	P4569-04DL	MYE519	SAM	11/10/24 04:49		Kareem	OK
162	P4569-05DL	MYE519D	DUP	11/10/24 04:53		Kareem	OK
163	P4569-04LDL	MYE519L	SD	11/10/24 04:58		Kareem	OK
164	P4569-06DL	MYE519S	MS	11/10/24 05:02	MS fail for Cu(1099 ppb),Zn(978 ppb)	Kareem	OK
165	P4569-07DL	MYE520	SAM	11/10/24 05:07		Kareem	OK
166	P4569-08DL	MYE521	SAM	11/10/24 05:11		Kareem	OK
167	P4569-09DL	MYE522	SAM	11/10/24 05:15		Kareem	OK
168	P4569-10DL	MYE523	SAM	11/10/24 05:20		Kareem	OK
169	P4569-11DL	MYE524	SAM	11/10/24 05:24		Kareem	OK
170	P4569-12DL	MYE525	SAM	11/10/24 05:29		Kareem	OK
171	P4569-13DL	MYE526	SAM	11/10/24 05:33		Kareem	OK
172	P4569-14DL	MYE527	SAM	11/10/24 05:38		Kareem	OK
173	P4569-15DL	MYE528	SAM	11/10/24 05:42		Kareem	OK
174	P4569-16DL	MYE529	SAM	11/10/24 05:47		Kareem	OK
175	P4569-17DL	MYE530	SAM	11/10/24 05:51		Kareem	OK

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Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB133379

Review By	Sarabjit Jaswal	Review On	11/13/2024 3:15:58 AM
Supervise By	Mohan Bera	Supervise On	11/13/2024 3:17:23 AM

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

176	P4569-18DL	MYE532	SAM	11/10/24 05:55		Kareem	OK
177	P4569-19DL	MYE533	SAM	11/10/24 06:00		Kareem	OK
178	P4569-20DL	MYE534	SAM	11/10/24 06:04		Kareem	OK
179	P4569-21DL	MYE535	SAM	11/10/24 06:09		Kareem	OK
180	CCV053	CCV053	CCV	11/10/24 06:13		Kareem	OK
181	CCB053	CCB053	CCB	11/10/24 06:17		Kareem	OK

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

Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB133387

Review By	Sarabjit Jaswal	Review On	11/13/2024 7:17:22 AM
Supervise By	Mohan Bera	Supervise On	11/13/2024 7:19:26 AM

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	
Chk Standard	MP83148,MP83149

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	11/11/24 00:06		Kareem	OK
2	S1	S01	CAL2	11/11/24 00:11		Kareem	OK
3	S2	S02	CAL3	11/11/24 00:16		Kareem	OK
4	S3	S03	CAL4	11/11/24 00:20		Kareem	OK
5	S4	S04	CAL5	11/11/24 00:24		Kareem	OK
6	S5	S05	CAL6	11/11/24 00:28		Kareem	OK
7	S6	S06	CAL7	11/11/24 00:33		Kareem	OK
8	ICV008	ICV008	ICV	11/11/24 00:50	Inst. paused for calibration review	Kareem	OK
9	ICB008	ICB008	ICB	11/11/24 00:55		Kareem	OK
10	ICSA008	ICSA008	ICSA	11/11/24 00:59		Kareem	OK
11	ICSAB008	ICSAB008	ICSAB	11/11/24 01:04		Kareem	OK
12	CCV056	CCV056	CCV	11/11/24 01:14	Inst. paused for review	Kareem	OK
13	CCB056	CCB056	CCB	11/11/24 01:18		Kareem	OK
14	P4569-22DL	MYE536	SAM	11/11/24 01:23		Kareem	OK
15	P4570-01DL	MYE531	SAM	11/11/24 01:27		Kareem	OK
16	P4570-02DL	MYE531D	DUP	11/11/24 01:32		Kareem	OK
17	P4570-01LDL	MYE531L	SD	11/11/24 01:36		Kareem	OK
18	P4570-03DL	MYE531S	MS	11/11/24 01:41		Kareem	OK

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CCV Standard	MP83146
ICSA Standard	MP83144,MP83145
CRI Standard	
LCS Standard	
Chk Standard	MP83148,MP83149

19	P4570-04DL	MYE537	SAM	11/11/24 01:45		Kareem	OK
20	P4570-05DL	MYE538	SAM	11/11/24 01:49		Kareem	OK
21	P4570-06DL	MYE539	SAM	11/11/24 01:54		Kareem	OK
22	P4570-07DL	MYE540	SAM	11/11/24 01:58		Kareem	OK
23	P4570-08DL	MYE541	SAM	11/11/24 02:03		Kareem	OK
24	P4570-09DL	MYE542	SAM	11/11/24 02:07		Kareem	OK
25	P4570-10DL	MYE563	SAM	11/11/24 02:12		Kareem	OK
26	P4570-11DL	MYE564	SAM	11/11/24 02:16		Kareem	OK
27	P4570-12DL	MYE565	SAM	11/11/24 02:21		Kareem	OK
28	P4570-13DL	MYE566	SAM	11/11/24 02:25		Kareem	OK
29	P4570-14DL	MYE567	SAM	11/11/24 02:30		Kareem	OK
30	P4570-15DL	MYE568	SAM	11/11/24 02:34		Kareem	OK
31	P4570-16DL	MYE569	SAM	11/11/24 02:38		Kareem	OK
32	P4570-17DL	MYE570	SAM	11/11/24 02:43		Kareem	OK
33	P4570-18DL	MYE571	SAM	11/11/24 02:47		Kareem	OK
34	CCV057	CCV057	CCV	11/11/24 02:52		Kareem	OK
35	CCB057	CCB057	CCB	11/11/24 02:56		Kareem	OK
36	P4570-19DL	MYE572	SAM	11/11/24 03:00		Kareem	OK
37	P4570-20DL	MYE573	SAM	11/11/24 03:05		Kareem	OK
38	P4570-21DL	MYE574	SAM	11/11/24 03:09		Kareem	OK

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CCV Standard	MP83146
ICSA Standard	MP83144,MP83145
CRI Standard	
LCS Standard	
Chk Standard	MP83148,MP83149

39	P4570-22DL	MYE575	SAM	11/11/24 03:14		Kareem	OK
40	P4571-01DL	MYE543	SAM	11/11/24 03:18		Kareem	OK
41	P4571-02DL	MYE543D	DUP	11/11/24 03:23		Kareem	OK
42	P4571-01LDL	MYE543L	SD	11/11/24 03:27		Kareem	OK
43	P4571-03DL	MYE543S	MS	11/11/24 03:32	MS fail for As (109.26 ppb), Pb (147.35 ppb)	Kareem	OK
44	P4571-04DL	MYE576	SAM	11/11/24 03:36		Kareem	OK
45	P4571-05DL	MYE577	SAM	11/11/24 03:40		Kareem	OK
46	P4571-06DL	MYE578	SAM	11/11/24 03:45		Kareem	OK
47	P4571-07DL	MYE579	SAM	11/11/24 03:49		Kareem	OK
48	P4571-08DL	MYE580	SAM	11/11/24 03:54		Kareem	OK
49	P4571-09DL	MYE581	SAM	11/11/24 03:58		Kareem	OK
50	P4571-10DL	MYE544	SAM	11/11/24 04:03		Kareem	OK
51	P4571-11DL	MYE545	SAM	11/11/24 04:07		Kareem	OK
52	P4571-12DL	MYE546	SAM	11/11/24 04:11		Kareem	OK
53	P4571-13DL	MYE547	SAM	11/11/24 04:16		Kareem	OK
54	P4571-14DL	MYE548	SAM	11/11/24 04:20		Kareem	OK
55	P4571-15DL	MYE549	SAM	11/11/24 04:25		Kareem	OK
56	CCV058	CCV058	CCV	11/11/24 04:29		Kareem	OK
57	CCB058	CCB058	CCB	11/11/24 04:33		Kareem	OK

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CCV Standard	MP83146
ICSA Standard	MP83144,MP83145
CRI Standard	
LCS Standard	
Chk Standard	MP83148,MP83149

58	P4571-16DL	MYE550	SAM	11/11/24 04:38		Kareem	OK
59	P4571-17DL	MYE551	SAM	11/11/24 04:42		Kareem	OK
60	P4571-18DL	MYE552	SAM	11/11/24 04:47		Kareem	OK
61	P4571-19DL	MYE553	SAM	11/11/24 04:51		Kareem	OK
62	P4571-20DL	MYE554	SAM	11/11/24 04:56		Kareem	OK
63	P4571-21DL	MYE555	SAM	11/11/24 05:00		Kareem	OK
64	P4571-22DL	MYE556	SAM	11/11/24 05:05		Kareem	OK
65	PB164636BL	PBS636	MB	11/11/24 05:09	Not used	Kareem	Not Ok
66	PB164636BS	LCS636	LCS	11/11/24 05:14	Wrong sample	Kareem	Not Ok
67	PB164636BSD	LCSD636	LCSD	11/11/24 05:18	Not used	Kareem	Not Ok
68	P4572-01DL	MYE557	SAM	11/11/24 05:23		Kareem	OK
69	P4572-02DL	MYE558	SAM	11/11/24 05:27		Kareem	OK
70	P4572-03DL	MYE559	SAM	11/11/24 05:32		Kareem	OK
71	P4572-04DL	MYE560	SAM	11/11/24 05:36		Kareem	OK
72	P4572-05DL	MYE561	SAM	11/11/24 05:40		Kareem	OK
73	P4572-06DL	MYE562	SAM	11/11/24 05:45		Kareem	OK
74	P4572-07DL	MYE582	SAM	11/11/24 05:49		Kareem	OK
75	P4572-08DL	MYE583	SAM	11/11/24 05:54		Kareem	OK
76	P4572-09DL	MYE584	SAM	11/11/24 05:58		Kareem	OK
77	P4572-10DL	MYE585	SAM	11/11/24 06:03		Kareem	OK

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CCV Standard	MP83146
ICSA Standard	MP83144,MP83145
CRI Standard	
LCS Standard	
Chk Standard	MP83148,MP83149

78	CCV059	CCV059	CCV	11/11/24 06:07		Kareem	OK
79	CCB059	CCB059	CCB	11/11/24 06:11		Kareem	OK