

## DATA REPORTING QUALIFIERS- INORGANIC

For reporting results, the following “ Results Qualifiers” are used:

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

## LAB CHRONICLE

|                 |                       |                   |                       |
|-----------------|-----------------------|-------------------|-----------------------|
| <b>OrderID:</b> | Q2902                 | <b>OrderDate:</b> | 8/19/2025 12:17:00 PM |
| <b>Client:</b>  | Tris Pharma, Inc.     | <b>Project:</b>   | Quarterly             |
| <b>Contact:</b> | Nichole Nikki Ferrari | <b>Location:</b>  | J23,VOA Lab           |

| LabID           | ClientID               | Matrix       | Test          | Method | Sample Date     | Prep Date | Anal Date | Received        |
|-----------------|------------------------|--------------|---------------|--------|-----------------|-----------|-----------|-----------------|
| <b>Q2902-01</b> | <b>OUTFALL-DSN-001</b> | <b>Water</b> | Metals Group3 | 200.7  | <b>08/19/25</b> | 08/20/25  | 08/21/25  | <b>08/19/25</b> |
| <b>Q2902-04</b> | <b>OUTFALL-DSN-002</b> | <b>Water</b> | Metals Group3 | 200.7  | <b>08/19/25</b> | 08/20/25  | 08/22/25  | <b>08/19/25</b> |



284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,  
Fax : 908 789 8922

**Hit Summary Sheet**  
**SW-846**

**SDG No.:** Q2902

**Order ID:** Q2902

**Client:** Tris Pharma, Inc.

**Project ID:** Quarterly

| Sample ID                          | Client ID       | Matrix | Parameter | Concentration | C | MDL  | RDL  | Units |
|------------------------------------|-----------------|--------|-----------|---------------|---|------|------|-------|
| <b>Client ID : OUTFALL-DSN-001</b> |                 |        |           |               |   |      |      |       |
| Q2902-01                           | OUTFALL-DSN-001 | Water  | Copper    | 39.7          |   | 1.89 | 10.0 | ug/L  |
| Q2902-01                           | OUTFALL-DSN-001 | Water  | Zinc      | 25.1          |   | 2.00 | 20.0 | ug/L  |
| <b>Client ID : OUTFALL-DSN-002</b> |                 |        |           |               |   |      |      |       |
| Q2902-04                           | OUTFALL-DSN-002 | Water  | Copper    | 42.1          |   | 1.89 | 10.0 | ug/L  |
| Q2902-04                           | OUTFALL-DSN-002 | Water  | Zinc      | 122           |   | 2.00 | 20.0 | ug/L  |



# SAMPLE DATA



## Report of Analysis

|                   |                   |                 |          |
|-------------------|-------------------|-----------------|----------|
| Client:           | Tris Pharma, Inc. | Date Collected: | 08/19/25 |
| Project:          | Quarterly         | Date Received:  | 08/19/25 |
| Client Sample ID: | OUTFALL-DSN-001   | SDG No.:        | Q2902    |
| Lab Sample ID:    | Q2902-01          | Matrix:         | Water    |
| Level (low/med):  | low               | % Solid:        | 0        |

| Cas       | Parameter | Conc. | Qua. | DF | MDL  | LOQ / CRQL | Units | Prep Date      | Date Ana.      | Ana Met.  | Prep Met. |
|-----------|-----------|-------|------|----|------|------------|-------|----------------|----------------|-----------|-----------|
| 7440-50-8 | Copper    | 39.7  |      | 1  | 1.89 | 10.0       | ug/L  | 08/20/25 13:30 | 08/21/25 17:47 | EPA 200.7 |           |
| 7440-66-6 | Zinc      | 25.1  | N*   | 1  | 2.00 | 20.0       | ug/L  | 08/20/25 13:30 | 08/21/25 17:47 | EPA 200.7 |           |

|               |               |                 |       |            |
|---------------|---------------|-----------------|-------|------------|
| Color Before: | Colorless     | Clarity Before: | Clear | Texture:   |
| Color After:  | Colorless     | Clarity After:  | Clear | Artifacts: |
| Comments:     | Metals Group3 |                 |       |            |

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

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

## Report of Analysis

|                   |                   |                 |          |
|-------------------|-------------------|-----------------|----------|
| Client:           | Tris Pharma, Inc. | Date Collected: | 08/19/25 |
| Project:          | Quarterly         | Date Received:  | 08/19/25 |
| Client Sample ID: | OUTFALL-DSN-002   | SDG No.:        | Q2902    |
| Lab Sample ID:    | Q2902-04          | Matrix:         | Water    |
| Level (low/med):  | low               | % Solid:        | 0        |

| Cas       | Parameter | Conc. | Qua. | DF | MDL  | LOQ / CRQL | Units | Prep Date      | Date Ana.      | Ana Met.  | Prep Met. |
|-----------|-----------|-------|------|----|------|------------|-------|----------------|----------------|-----------|-----------|
| 7440-50-8 | Copper    | 42.1  |      | 1  | 1.89 | 10.0       | ug/L  | 08/20/25 13:30 | 08/22/25 13:07 | EPA 200.7 |           |
| 7440-66-6 | Zinc      | 122   | N*   | 1  | 2.00 | 20.0       | ug/L  | 08/20/25 13:30 | 08/22/25 13:07 | EPA 200.7 |           |

|               |               |                 |       |            |
|---------------|---------------|-----------------|-------|------------|
| Color Before: | Colorless     | Clarity Before: | Clear | Texture:   |
| Color After:  | Colorless     | Clarity After:  | Clear | Artifacts: |
| Comments:     | Metals Group3 |                 |       |            |

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

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



# METAL CALIBRATION DATA

**Metals**

**- 2a -**

**INITIAL AND CONTINUING CALIBRATION VERIFICATION**

**Client:** Tris Pharma, Inc.

**SDG No.:** Q2902

**Contract:** TRIS02

**Lab Code:** ACE

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** Inorganic Ventures

---

| Sample ID | Analyte | Result<br>ug/L | True Value | %<br>Recovery | Acceptance<br>Window (%R) | M | Analysis<br>Date | Analysis<br>Time | Run<br>Number |
|-----------|---------|----------------|------------|---------------|---------------------------|---|------------------|------------------|---------------|
| ICV01     | Copper  | 1000           | 1000       | 100           | 95 - 105                  | P | 08/21/2025       | 14:24            | LB136917      |
|           | Zinc    | 1980           | 2000       | 99            | 95 - 105                  | P | 08/21/2025       | 14:24            | LB136917      |

---

**Metals**

**- 2a -**

**INITIAL AND CONTINUING CALIBRATION VERIFICATION**

**Client:** Tris Pharma, Inc.

**SDG No.:** Q2902

**Contract:** TRIS02

**Lab Code:** ACE

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** Inorganic Ventures

---

| Sample ID | Analyte | Result<br>ug/L | True Value | %<br>Recovery | Acceptance<br>Window (%R) | M | Analysis<br>Date | Analysis<br>Time | Run<br>Number |
|-----------|---------|----------------|------------|---------------|---------------------------|---|------------------|------------------|---------------|
| LLICV01   | Copper  | 21.4           | 20.0       | 107           | 80 - 120                  | P | 08/21/2025       | 14:33            | LB136917      |
|           | Zinc    | 41.4           | 40.0       | 104           | 80 - 120                  | P | 08/21/2025       | 14:33            | LB136917      |

---

**Metals**

- 2a -

**INITIAL AND CONTINUING CALIBRATION VERIFICATION**

**Client:** Tris Pharma, Inc.

**SDG No.:** Q2902

**Contract:** TRIS02

**Lab Code:** ACE

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** Inorganic Ventures

| Sample ID | Analyte | Result<br>ug/L | True Value | %<br>Recovery | Acceptance<br>Window (%R) | M | Analysis<br>Date | Analysis<br>Time | Run<br>Number |
|-----------|---------|----------------|------------|---------------|---------------------------|---|------------------|------------------|---------------|
| CCV01     | Copper  | 1250           | 1250       | 100           | 90 - 110                  | P | 08/21/2025       | 15:03            | LB136917      |
|           | Zinc    | 2500           | 2500       | 100           | 90 - 110                  | P | 08/21/2025       | 15:03            | LB136917      |
| CCV02     | Copper  | 1260           | 1250       | 101           | 90 - 110                  | P | 08/21/2025       | 16:23            | LB136917      |
|           | Zinc    | 2530           | 2500       | 101           | 90 - 110                  | P | 08/21/2025       | 16:23            | LB136917      |
| CCV03     | Copper  | 1270           | 1250       | 101           | 90 - 110                  | P | 08/21/2025       | 17:14            | LB136917      |
|           | Zinc    | 2520           | 2500       | 101           | 90 - 110                  | P | 08/21/2025       | 17:14            | LB136917      |
| CCV04     | Copper  | 1280           | 1250       | 102           | 90 - 110                  | P | 08/21/2025       | 18:04            | LB136917      |
|           | Zinc    | 2550           | 2500       | 102           | 90 - 110                  | P | 08/21/2025       | 18:04            | LB136917      |
| CCV05     | Copper  | 1270           | 1250       | 101           | 90 - 110                  | P | 08/21/2025       | 18:52            | LB136917      |
|           | Zinc    | 2520           | 2500       | 101           | 90 - 110                  | P | 08/21/2025       | 18:52            | LB136917      |

**Metals**

**- 2a -**

**INITIAL AND CONTINUING CALIBRATION VERIFICATION**

**Client:** Tris Pharma, Inc.

**SDG No.:** Q2902

**Contract:** TRIS02

**Lab Code:** ACE

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** Inorganic Ventures

---

| Sample ID | Analyte | Result<br>ug/L | True Value | %<br>Recovery | Acceptance<br>Window (%R) | M | Analysis<br>Date | Analysis<br>Time | Run<br>Number |
|-----------|---------|----------------|------------|---------------|---------------------------|---|------------------|------------------|---------------|
| ICV01     | Copper  | 997            | 1000       | 100           | 95 - 105                  | P | 08/22/2025       | 11:37            | LB136940      |
|           | Zinc    | 1960           | 2000       | 98            | 95 - 105                  | P | 08/22/2025       | 11:37            | LB136940      |

---

**Metals**

**- 2a -**

**INITIAL AND CONTINUING CALIBRATION VERIFICATION**

**Client:** Tris Pharma, Inc.

**SDG No.:** Q2902

**Contract:** TRIS02

**Lab Code:** ACE

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** Inorganic Ventures

---

| Sample ID | Analyte | Result<br>ug/L | True Value | %<br>Recovery | Acceptance<br>Window (%R) | M | Analysis<br>Date | Analysis<br>Time | Run<br>Number |
|-----------|---------|----------------|------------|---------------|---------------------------|---|------------------|------------------|---------------|
| LLICV01   | Copper  | 21.2           | 20.0       | 106           | 80 - 120                  | P | 08/22/2025       | 11:45            | LB136940      |
|           | Zinc    | 41.9           | 40.0       | 105           | 80 - 120                  | P | 08/22/2025       | 11:45            | LB136940      |

---



**Metals**

- 2a -

**INITIAL AND CONTINUING CALIBRATION VERIFICATION**

**Client:** Tris Pharma, Inc.

**SDG No.:** Q2902

**Contract:** TRIS02

**Lab Code:** ACE

**Initial Calibration Source:** EPA

**Continuing Calibration Source:** Inorganic Ventures

| Sample ID | Analyte | Result<br>ug/L | True Value | %<br>Recovery | Acceptance<br>Window (%R) | M | Analysis<br>Date | Analysis<br>Time | Run<br>Number |
|-----------|---------|----------------|------------|---------------|---------------------------|---|------------------|------------------|---------------|
| CCV01     | Copper  | 1270           | 1250       | 101           | 90 - 110                  | P | 08/22/2025       | 12:18            | LB136940      |
|           | Zinc    | 2560           | 2500       | 102           | 90 - 110                  | P | 08/22/2025       | 12:18            | LB136940      |
| CCV02     | Copper  | 1270           | 1250       | 102           | 90 - 110                  | P | 08/22/2025       | 13:36            | LB136940      |
|           | Zinc    | 2570           | 2500       | 103           | 90 - 110                  | P | 08/22/2025       | 13:36            | LB136940      |
| CCV03     | Copper  | 1290           | 1250       | 103           | 90 - 110                  | P | 08/22/2025       | 14:25            | LB136940      |
|           | Zinc    | 2610           | 2500       | 104           | 90 - 110                  | P | 08/22/2025       | 14:25            | LB136940      |
| CCV04     | Copper  | 1240           | 1250       | 100           | 90 - 110                  | P | 08/22/2025       | 15:44            | LB136940      |
|           | Zinc    | 2540           | 2500       | 102           | 90 - 110                  | P | 08/22/2025       | 15:44            | LB136940      |
| CCV05     | Copper  | 1210           | 1250       | 97            | 90 - 110                  | P | 08/22/2025       | 16:30            | LB136940      |
|           | Zinc    | 2470           | 2500       | 99            | 90 - 110                  | P | 08/22/2025       | 16:30            | LB136940      |



284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,  
Fax : 908 789 8922

**Metals**

**- 2b -**

**CRDL STANDARD FOR AA & ICP**

**Client:** Tris Pharma, Inc.

**SDG No.:** Q2902

**Contract:** TRIS02

**Lab Code:** ACE

**Initial Calibration Source:** \_\_\_\_\_

**Continuing Calibration Source:** \_\_\_\_\_

| Sample ID | Analyte | Result<br>ug/L | True Value<br>ug/L | %<br>Recovery | Acceptance<br>Window (%R) | M | Analysis<br>Date | Analysis<br>Time | Run<br>Number |
|-----------|---------|----------------|--------------------|---------------|---------------------------|---|------------------|------------------|---------------|
| CRI01     | Copper  | 21.3           | 20.0               | 106           | 65 - 135                  | P | 08/21/2025       | 14:41            | LB136917      |
|           | Zinc    | 41.0           | 40.0               | 102           | 65 - 135                  | P | 08/21/2025       | 14:41            | LB136917      |
| CRI01     | Copper  | 21.0           | 20.0               | 105           | 65 - 135                  | P | 08/22/2025       | 11:56            | LB136940      |
|           | Zinc    | 41.4           | 40.0               | 104           | 65 - 135                  | P | 08/22/2025       | 11:56            | LB136940      |



284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,  
Fax : 908 789 8922

### Metals

- 3a -

#### INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tris Pharma, Inc.

SDG No.: Q2902

Contract: TRIS02

Lab Code: ACE

| Sample ID | Analyte | Result<br>ug/L | Acceptance<br>Limit | Conc<br>Qual | CRQL | M | Analysis<br>Date | Analysis<br>Time | Run<br>Number |
|-----------|---------|----------------|---------------------|--------------|------|---|------------------|------------------|---------------|
| ICB01     | Copper  | 4.60           | +/-10               | U            | 20.0 | P | 08/21/2025       | 14:37            | LB136917      |
|           | Zinc    | 16.7           | +/-20               | U            | 40.0 | P | 08/21/2025       | 14:37            | LB136917      |

## Metals

- 3a -

### INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tris Pharma, Inc.

SDG No.: Q2902

Contract: TRIS02

Lab Code: ACE

| Sample ID | Analyte | Result<br>ug/L | Acceptance<br>Limit | Conc<br>Qual | CRQL | M | Analysis<br>Date | Analysis<br>Time | Run<br>Number |
|-----------|---------|----------------|---------------------|--------------|------|---|------------------|------------------|---------------|
| CCB01     | Copper  | 4.60           | +/-10               | U            | 20.0 | P | 08/21/2025       | 15:07            | LB136917      |
|           | Zinc    | 16.7           | +/-20               | U            | 40.0 | P | 08/21/2025       | 15:07            | LB136917      |
| CCB02     | Copper  | 4.60           | +/-10               | U            | 20.0 | P | 08/21/2025       | 16:27            | LB136917      |
|           | Zinc    | 16.7           | +/-20               | U            | 40.0 | P | 08/21/2025       | 16:27            | LB136917      |
| CCB03     | Copper  | 4.60           | +/-10               | U            | 20.0 | P | 08/21/2025       | 17:18            | LB136917      |
|           | Zinc    | 16.7           | +/-20               | U            | 40.0 | P | 08/21/2025       | 17:18            | LB136917      |
| CCB04     | Copper  | 4.60           | +/-10               | U            | 20.0 | P | 08/21/2025       | 18:08            | LB136917      |
|           | Zinc    | 16.7           | +/-20               | U            | 40.0 | P | 08/21/2025       | 18:08            | LB136917      |
| CCB05     | Copper  | 4.60           | +/-10               | U            | 20.0 | P | 08/21/2025       | 18:57            | LB136917      |
|           | Zinc    | 16.7           | +/-20               | U            | 40.0 | P | 08/21/2025       | 18:57            | LB136917      |

**Metals**

**- 3a -**

**INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY**

**Client:** Tris Pharma, Inc.

**SDG No.:** Q2902

**Contract:** TRIS02

**Lab Code:** ACE

| Sample ID | Analyte | Result<br>ug/L | Acceptance<br>Limit | Conc<br>Qual | CRQL | M | Analysis<br>Date | Analysis<br>Time | Run<br>Number |
|-----------|---------|----------------|---------------------|--------------|------|---|------------------|------------------|---------------|
| ICB01     | Copper  | 4.60           | +/-10               | U            | 20.0 | P | 08/22/2025       | 11:50            | LB136940      |
|           | Zinc    | 16.7           | +/-20               | U            | 40.0 | P | 08/22/2025       | 11:50            | LB136940      |

**Metals**

- 3a -

**INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY**

**Client:** Tris Pharma, Inc.

**SDG No.:** Q2902

**Contract:** TRIS02

**Lab Code:** ACE

| Sample ID | Analyte | Result<br>ug/L | Acceptance<br>Limit | Conc<br>Qual | CRQL | M | Analysis<br>Date | Analysis<br>Time | Run<br>Number |
|-----------|---------|----------------|---------------------|--------------|------|---|------------------|------------------|---------------|
| CCB01     | Copper  | 4.60           | +/-10               | U            | 20.0 | P | 08/22/2025       | 12:22            | LB136940      |
|           | Zinc    | 16.7           | +/-20               | U            | 40.0 | P | 08/22/2025       | 12:22            | LB136940      |
| CCB02     | Copper  | 4.60           | +/-10               | U            | 20.0 | P | 08/22/2025       | 13:40            | LB136940      |
|           | Zinc    | 16.7           | +/-20               | U            | 40.0 | P | 08/22/2025       | 13:40            | LB136940      |
| CCB03     | Copper  | 4.60           | +/-10               | U            | 20.0 | P | 08/22/2025       | 14:30            | LB136940      |
|           | Zinc    | 16.7           | +/-20               | U            | 40.0 | P | 08/22/2025       | 14:30            | LB136940      |
| CCB04     | Copper  | 4.60           | +/-10               | U            | 20.0 | P | 08/22/2025       | 15:48            | LB136940      |
|           | Zinc    | 16.7           | +/-20               | U            | 40.0 | P | 08/22/2025       | 15:48            | LB136940      |
| CCB05     | Copper  | 4.60           | +/-10               | U            | 20.0 | P | 08/22/2025       | 16:34            | LB136940      |
|           | Zinc    | 16.7           | +/-20               | U            | 40.0 | P | 08/22/2025       | 16:34            | LB136940      |

**Metals**  
**- 3b -**  
**PREPARATION BLANK SUMMARY**

**Client:** Tris Pharma, Inc.

**SDG No.:** Q2902

**Instrument:** P4

| Sample ID         | Analyte | Result<br>(ug/L) | Acceptance<br>Limit | Conc<br>Qual         | CRQL<br>ug/L    | M | Analysis<br>Date  | Analysis<br>Time  | Run      |
|-------------------|---------|------------------|---------------------|----------------------|-----------------|---|-------------------|-------------------|----------|
| <b>PB169324BL</b> |         | <b>WATER</b>     |                     | <b>Batch Number:</b> | <b>PB169324</b> |   | <b>Prep Date:</b> | <b>08/20/2025</b> |          |
|                   | Copper  | 1.89             | <5                  | U                    | 10.0            | P | 08/22/2025        | 12:45             | LB136940 |
|                   | Zinc    | 2.00             | <10                 | U                    | 20.0            | P | 08/22/2025        | 12:45             | LB136940 |

**Metals**  
**- 4 -**  
**INTERFERENCE CHECK SAMPLE**

**Client:** Tris Pharma, Inc.

**SDG No.:** Q2902

**Contract:** TRIS02

**Lab Code:** ACE

**ICS Source:** EPA

**Instrument ID:** P4

| Sample ID      | Analyte | Result<br>ug/L | True Value<br>ug/L | %<br>Recovery | Low<br>Limit<br>(ug/L) | High<br>Limit<br>(ug/L) | Analysis<br>Date | Analysis<br>Time | Run<br>Number |
|----------------|---------|----------------|--------------------|---------------|------------------------|-------------------------|------------------|------------------|---------------|
| <b>ICSA01</b>  | Copper  | 10.1           | 2.0                | 502           | -18                    | 22                      | 08/21/2025       | 14:45            | LB136917      |
|                | Zinc    | 1.65           |                    |               | -40                    | 40                      | 08/21/2025       | 14:45            | LB136917      |
| <b>ICSAB01</b> | Copper  | 478            | 511                | 94            | 434                    | 588                     | 08/21/2025       | 14:50            | LB136917      |
|                | Zinc    | 1010           | 952                | 106           | 809                    | 1095                    | 08/21/2025       | 14:50            | LB136917      |
| <b>ICSA</b>    | Copper  | 14.3           | 2.0                | 715           | -18                    | 22                      | 08/21/2025       | 14:54            | LB136917      |
|                | Zinc    | -16.0          |                    |               | -40                    | 40                      | 08/21/2025       | 14:54            | LB136917      |
| <b>ICSAB</b>   | Copper  | 498            | 511                | 98            | 434                    | 588                     | 08/21/2025       | 14:59            | LB136917      |
|                | Zinc    | 975            | 952                | 102           | 809                    | 1095                    | 08/21/2025       | 14:59            | LB136917      |
| <b>ICSA01</b>  | Copper  | 8.67           | 2.0                | 434           | -18                    | 22                      | 08/22/2025       | 12:00            | LB136940      |
|                | Zinc    | 2.57           |                    |               | -40                    | 40                      | 08/22/2025       | 12:00            | LB136940      |
| <b>ICSAB01</b> | Copper  | 491            | 511                | 96            | 434                    | 588                     | 08/22/2025       | 12:04            | LB136940      |
|                | Zinc    | 1040           | 952                | 109           | 809                    | 1095                    | 08/22/2025       | 12:04            | LB136940      |
| <b>ICSA</b>    | Copper  | 3.62           | 2.0                | 181           | -18                    | 22                      | 08/22/2025       | 12:09            | LB136940      |
|                | Zinc    | -9.86          |                    |               | -40                    | 40                      | 08/22/2025       | 12:09            | LB136940      |
| <b>ICSAB</b>   | Copper  | 507            | 511                | 99            | 434                    | 588                     | 08/22/2025       | 12:13            | LB136940      |
|                | Zinc    | 1020           | 952                | 107           | 809                    | 1095                    | 08/22/2025       | 12:13            | LB136940      |





# METAL

## QC

### DATA

**metals**  
**- 5a -**  
**MATRIX SPIKE SUMMARY**

|                                             |                                     |                                                   |
|---------------------------------------------|-------------------------------------|---------------------------------------------------|
| <b>client:</b> <u>Tris Pharma, Inc.</u>     | <b>level:</b> <u>low</u>            | <b>sdg no.:</b> <u>Q2902</u>                      |
| <b>contract:</b> <u>TRIS02</u>              |                                     | <b>lab code:</b> <u>ACE</u>                       |
| <b>matrix:</b> <u>Water</u>                 | <b>sample id:</b> <u>Q2902-04</u>   | <b>client id:</b> <u>OUTFALL-DSN-002MS</u>        |
| <b>Percent Solids for Sample:</b> <u>NA</u> | <b>Spiked ID:</b> <u>Q2902-04MS</u> | <b>Percent Solids for Spike Sample:</b> <u>NA</u> |

| Analyte | Units | Acceptance<br>Limit %R | Spiked<br>Result | C | Sample<br>Result | C | Spike<br>Added | %<br>Recovery | Qual | M |
|---------|-------|------------------------|------------------|---|------------------|---|----------------|---------------|------|---|
| Copper  | ug/L  | 75 - 125               | 192              |   | 42.1             |   | 150            | 100           |      | P |
| Zinc    | ug/L  | 75 - 125               | 120              |   | 122              |   | 100            | -2            | N    | P |

**metals**  
**- 5a -**  
**MATRIX SPIKE DUPLICATE SUMMARY**

|                                             |                                      |                                                   |
|---------------------------------------------|--------------------------------------|---------------------------------------------------|
| <b>client:</b> <u>Tris Pharma, Inc.</u>     | <b>level:</b> <u>low</u>             | <b>sdg no.:</b> <u>Q2902</u>                      |
| <b>contract:</b> <u>TRIS02</u>              |                                      | <b>lab code:</b> <u>ACE</u>                       |
| <b>matrix:</b> <u>Water</u>                 | <b>sample id:</b> <u>Q2902-04</u>    | <b>client id:</b> <u>OUTFALL-DSN-002MSD</u>       |
| <b>Percent Solids for Sample:</b> <u>NA</u> | <b>Spiked ID:</b> <u>Q2902-04MSD</u> | <b>Percent Solids for Spike Sample:</b> <u>NA</u> |

| Analyte | Units | Acceptance<br>Limit %R | MSD<br>Result | C | Sample<br>Result | C | Spike<br>Added | %<br>Recovery | Qual | M |
|---------|-------|------------------------|---------------|---|------------------|---|----------------|---------------|------|---|
| Copper  | ug/L  | 75 - 125               | 199           |   | 42.1             |   | 150            | 105           |      | P |
| Zinc    | ug/L  | 75 - 125               | 125           |   | 122              |   | 100            | 2             | N    | P |

**Metals**  
**- 5b -**  
**POST DIGEST SPIKE SUMMARY**

**Client:** Tris Pharma, Inc.

**SDG No.:** Q2902

**Contract:** TRIS02

**Lab Code:** ACE

**Matrix:** Water

**Level:** LOW

**Client ID:** OUTFALL-DSN-002A

**Sample ID:** Q2902-04

**Spiked ID:** Q2902-04A

| Analyte | Units | Acceptance<br>Limit %R | Spiked<br>Result | C | Sample<br>Result | C | Spike<br>Added | %<br>Recovery | Qual | M |
|---------|-------|------------------------|------------------|---|------------------|---|----------------|---------------|------|---|
| Zinc    | ug/L  | 85 - 115               | 200              |   | 122              |   | 100            | 78            | N    | P |

**Metals**

- 6 -

**DUPLICATE SAMPLE SUMMARY**

|                                   |                          |                     |                 |                                         |                           |
|-----------------------------------|--------------------------|---------------------|-----------------|-----------------------------------------|---------------------------|
| <b>Client:</b>                    | <u>Tris Pharma, Inc.</u> | <b>Level:</b>       | <u>LOW</u>      | <b>SDG No.:</b>                         | <u>Q2902</u>              |
| <b>Contract:</b>                  | <u>TRIS02</u>            |                     |                 | <b>Lab Code:</b>                        | <u>ACE</u>                |
| <b>Matrix:</b>                    | <u>Water</u>             | <b>Sample ID:</b>   | <u>Q2902-04</u> | <b>Client ID:</b>                       | <u>OUTFALL-DSN-002DUP</u> |
| <b>Percent Solids for Sample:</b> | NA                       | <b>Duplicate ID</b> | Q2902-04DUP     | <b>Percent Solids for Spike Sample:</b> | NA                        |

| Analyte | Units | Acceptance<br>Limit | Sample<br>Result | C | Duplicate<br>Result | C | RPD | Qual | M |
|---------|-------|---------------------|------------------|---|---------------------|---|-----|------|---|
| Copper  | ug/L  | 20                  | 42.1             |   | 44.7                |   | 6   |      | P |
| Zinc    | ug/L  | 20                  | 122              |   | 16.9                | J | 151 | *    | P |

**Metals**

- 6 -

**DUPLICATE SAMPLE SUMMARY**

|                                   |                          |                     |                   |                                         |                           |
|-----------------------------------|--------------------------|---------------------|-------------------|-----------------------------------------|---------------------------|
| <b>Client:</b>                    | <u>Tris Pharma, Inc.</u> | <b>Level:</b>       | <u>LOW</u>        | <b>SDG No.:</b>                         | <u>Q2902</u>              |
| <b>Contract:</b>                  | <u>TRIS02</u>            |                     |                   | <b>Lab Code:</b>                        | <u>ACE</u>                |
| <b>Matrix:</b>                    | <u>Water</u>             | <b>Sample ID:</b>   | <u>Q2902-04MS</u> | <b>Client ID:</b>                       | <u>OUTFALL-DSN-002MSD</u> |
| <b>Percent Solids for Sample:</b> | NA                       | <b>Duplicate ID</b> | Q2902-04MSD       | <b>Percent Solids for Spike Sample:</b> | NA                        |

| Analyte | Units | Acceptance<br>Limit | Sample<br>Result | C | Duplicate<br>Result | C | RPD | Qual | M |
|---------|-------|---------------------|------------------|---|---------------------|---|-----|------|---|
| Copper  | ug/L  | 20                  | 192              |   | 199                 |   | 4   |      | P |
| Zinc    | ug/L  | 20                  | 120              |   | 125                 |   | 4   |      | P |

**Metals**

- 7 -

**LABORATORY CONTROL SAMPLE SUMMARY**

**Client:** Tris Pharma, Inc.

**SDG No.:** Q2902

**Contract:** TRIS02

**Lab Code:** ACE

| Analyte    | Units | True Value | Result | C | %<br>Recovery | Acceptance<br>Limits | M |
|------------|-------|------------|--------|---|---------------|----------------------|---|
| PB169324BS |       |            |        |   |               |                      |   |
| Copper     | ug/L  | 150        | 159    |   | 106           | 85 - 115             | P |
| Zinc       | ug/L  | 100        | 107    |   | 107           | 85 - 115             | P |

**Metals**

**-9 -**

**ICP SERIAL DILUTIONS**

**SAMPLE NO.**

OUTFALL-DSN-002L

**Lab Name:** Alliance

**Contract:** TRIS02

**Lab Code:** ACE      **Lb No.:** lb136940      **Lab Sample ID :** Q2902-04L      **SDG No.:** Q2902

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

**Concentration Units:** ug/L

| Analyte | Initial Sample<br>Result (I) |  | Serial Dilution<br>Result (S) |   | % Differ-<br>ence | Q | M |
|---------|------------------------------|--|-------------------------------|---|-------------------|---|---|
|         | C                            |  | C                             |   |                   |   |   |
| Copper  | 42.1                         |  | 37.3                          | J | 11                |   | P |
| Zinc    | 122                          |  | 204                           |   | 67                |   | P |





# METAL PREPARATION & INSTRUMENT DATA

**Metals**

- 11 -

**ICP INTERELEMENT CORRECTION FACTORS**

**Client:** Tris Pharma, Inc.

**SDG No.:** Q2902

**Contract:** TRIS02

**Lab Code:** ACE

**Instrument ID:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Interelement Correction Factors (apparent ppb analyte/ppm interferent )**

| Analyte | Wave-<br>Length<br>(nm) | ICP Interement Correction Factors For: |           |           |           |           |
|---------|-------------------------|----------------------------------------|-----------|-----------|-----------|-----------|
|         |                         | Al                                     | Ca        | Fe        | Mg        | Ag        |
| Copper  | 224.700                 | 0.0000000                              | 0.0000000 | 0.0007850 | 0.0000000 | 0.0000000 |
| Zinc    | 213.800                 | 0.0000000                              | 0.0000000 | 0.0001050 | 0.0000000 | 0.0000000 |

**Metals**

- 11 -

**ICP INTERELEMENT CORRECTION FACTORS**

**Client:** Tris Pharma, Inc.

**SDG No.:** Q2902

**Contract:** TRIS02

**Lab Code:** ACE

**Instrument ID:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Interement Correction Factors (apparent ppb analyte/ppm interferent )**

| Analyte | Wave-<br>Length<br>(nm) | ICP Interement Correction Factors For: |           |           |           |           |
|---------|-------------------------|----------------------------------------|-----------|-----------|-----------|-----------|
|         |                         | As                                     | Ba        | Be        | Cd        | Co        |
| Copper  | 224.700                 | 0.0000000                              | 0.0000000 | 0.0000000 | 0.0000000 | 0.0009530 |
| Zinc    | 213.800                 | 0.0000000                              | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |



284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900, Fax : 908 789 8922

## Metals

- 11 -

### ICP INTERELEMENT CORRECTION FACTORS

**Client:** Tris Pharma, Inc.

**SDG No.:** Q2902

**Contract:** TRIS02

**Lab Code:** ACE

**Instrument ID:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Interelement Correction Factors (apparent ppb analyte/ppm interferent )**

| Analyte | Wave-<br>Length<br>(nm) | ICP Interement Correction Factors For: |           |           |           |           |
|---------|-------------------------|----------------------------------------|-----------|-----------|-----------|-----------|
|         |                         | Cr                                     | Cu        | K         | Mn        | Mo        |
| Copper  | 224.700                 | 0.0000000                              | 0.0000000 | 0.0000000 | 0.0006510 | 0.0020500 |
| Zinc    | 213.800                 | 0.0000000                              | 0.0009010 | 0.0000000 | 0.0000000 | 0.0000000 |



284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789  
8900, Fax : 908 789 8922

**Metals**

**- 11 -**

**ICP INTERELEMENT CORRECTION FACTORS**

**Client:** Tris Pharma, Inc.

**SDG No.:** Q2902

**Contract:** TRIS02

**Lab Code:** ACE

**Instrument ID:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Interelement Correction Factors (apparent ppb analyte/ppm interferent )**

| Analyte | Wave-<br>Length<br>(nm) | ICP Interement Correction Factors For: |            |           |           |           |
|---------|-------------------------|----------------------------------------|------------|-----------|-----------|-----------|
|         |                         | Na                                     | Ni         | Pb        | Sb        | Se        |
| Copper  | 224.700                 | 0.0000000                              | -0.0047000 | 0.0036100 | 0.0000000 | 0.0000000 |
| Zinc    | 213.800                 | 0.0000000                              | 0.0067600  | 0.0000000 | 0.0000000 | 0.0000000 |



284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900, Fax : 908 789 8922

## Metals

- 11 -

### ICP INTERELEMENT CORRECTION FACTORS

**Client:** Tris Pharma, Inc.

**SDG No.:** Q2902

**Contract:** TRIS02

**Lab Code:** ACE

**Instrument ID:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Interelement Correction Factors (apparent ppb analyte/ppm interferent )**

| Analyte | Wave-<br>Length<br>(nm) | ICP Interement Correction Factors For: |           |           |           |           |
|---------|-------------------------|----------------------------------------|-----------|-----------|-----------|-----------|
|         |                         | Sn                                     | Ti        | Tl        | V         | Zn        |
| Copper  | 224.700                 | 0.0000000                              | 0.0003840 | 0.0000000 | 0.0000000 | 0.0000000 |
| Zinc    | 213.800                 | 0.0000000                              | 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 |



# METAL PREPARATION & ANALYICAL SUMMARY

**Metals**

- 13 -

**SAMPLE PREPARATION SUMMARY**

**Client:** Tris Pharma, Inc.

**SDG No.:** Q2902

**Contract:** TRIS02

**Lab Code:** ACE

**Method:** \_\_\_\_\_

| Sample ID                     | Client ID          | Sample Type | Matrix | Prep Date  | Initial Sample Size(mL) | Final Sample Volume (mL) | Percent Solids |
|-------------------------------|--------------------|-------------|--------|------------|-------------------------|--------------------------|----------------|
| <b>Batch Number: PB169324</b> |                    |             |        |            |                         |                          |                |
| PB169324BL                    | PB169324BL         | MB          | WATER  | 08/20/2025 | 50.0                    | 25.0                     |                |
| PB169324BS                    | PB169324BS         | LCS         | WATER  | 08/20/2025 | 50.0                    | 25.0                     |                |
| Q2902-01                      | OUTFALL-DSN-001    | SAM         | WATER  | 08/20/2025 | 50.0                    | 25.0                     |                |
| Q2902-04                      | OUTFALL-DSN-002    | SAM         | WATER  | 08/20/2025 | 50.0                    | 25.0                     |                |
| Q2902-04DUP                   | OUTFALL-DSN-002DUP | DUP         | WATER  | 08/20/2025 | 50.0                    | 25.0                     |                |
| Q2902-04MS                    | OUTFALL-DSN-002MS  | MS          | WATER  | 08/20/2025 | 50.0                    | 25.0                     |                |
| Q2902-04MSD                   | OUTFALL-DSN-002MSD | MSD         | WATER  | 08/20/2025 | 50.0                    | 25.0                     |                |



**metals**  
**- 14 -**  
**ANALYSIS RUN LOG**

**Client:** Tris Pharma, Inc.

**Contract:** TRIS02

**Lab code:** ACE

**Sdg no.:** Q2902

**Instrument id number:** \_\_\_\_\_

**Method:** \_\_\_\_\_

**Run number:** LB136917

**Start date:** 08/21/2025

**End date:** 08/21/2025

| Lab sample id. | Client Sample Id | d/f | Time | Parameter list |
|----------------|------------------|-----|------|----------------|
| S0             | S0               | 1   | 1358 | Cu,Zn          |
| S1             | S1               | 1   | 1403 | Cu,Zn          |
| S2             | S2               | 1   | 1407 | Cu,Zn          |
| S3             | S3               | 1   | 1411 | Cu,Zn          |
| S4             | S4               | 1   | 1415 | Cu,Zn          |
| S5             | S5               | 1   | 1419 | Cu,Zn          |
| ICV01          | ICV01            | 1   | 1424 | Cu,Zn          |
| LLICV01        | LLICV01          | 1   | 1433 | Cu,Zn          |
| ICB01          | ICB01            | 1   | 1437 | Cu,Zn          |
| CRI01          | CRI01            | 1   | 1441 | Cu,Zn          |
| ICSA01         | ICSA01           | 1   | 1445 | Cu,Zn          |
| ICSAB01        | ICSAB01          | 1   | 1450 | Cu,Zn          |
| ICSA           | ICSA             | 20  | 1454 | Cu,Zn          |
| ICSAB          | ICSAB            | 20  | 1459 | Cu,Zn          |
| CCV01          | CCV01            | 1   | 1503 | Cu,Zn          |
| CCB01          | CCB01            | 1   | 1507 | Cu,Zn          |
| CCV02          | CCV02            | 1   | 1623 | Cu,Zn          |
| CCB02          | CCB02            | 1   | 1627 | Cu,Zn          |
| CCV03          | CCV03            | 1   | 1714 | Cu,Zn          |
| CCB03          | CCB03            | 1   | 1718 | Cu,Zn          |
| Q2902-01       | OUTFALL-DSN-001  | 1   | 1747 | Cu,Zn          |
| CCV04          | CCV04            | 1   | 1804 | Cu,Zn          |
| CCB04          | CCB04            | 1   | 1808 | Cu,Zn          |
| CCV05          | CCV05            | 1   | 1852 | Cu,Zn          |
| CCB05          | CCB05            | 1   | 1857 | Cu,Zn          |

**metals**  
**- 14 -**  
**ANALYSIS RUN LOG**

**Client:** Tris Pharma, Inc.

**Contract:** TRIS02

**Lab code:** ACE

**Sdg no.:** Q2902

**Instrument id number:** \_\_\_\_\_

**Method:** \_\_\_\_\_

**Run number:** LB136940

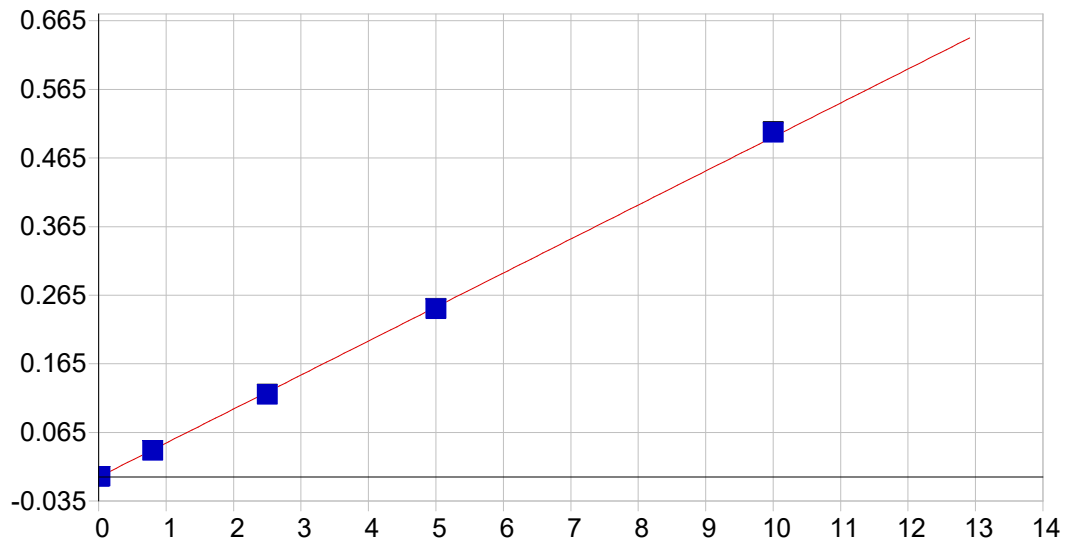
**Start date:** 08/22/2025

**End date:** 08/22/2025

| Lab sample id. | Client Sample Id   | d/f | Time | Parameter list |
|----------------|--------------------|-----|------|----------------|
| S0             | S0                 | 1   | 1112 | Cu,Zn          |
| S1             | S1                 | 1   | 1116 | Cu,Zn          |
| S2             | S2                 | 1   | 1120 | Cu,Zn          |
| S3             | S3                 | 1   | 1124 | Cu,Zn          |
| S4             | S4                 | 1   | 1128 | Cu,Zn          |
| S5             | S5                 | 1   | 1133 | Cu,Zn          |
| ICV01          | ICV01              | 1   | 1137 | Cu,Zn          |
| LLICV01        | LLICV01            | 1   | 1145 | Cu,Zn          |
| ICB01          | ICB01              | 1   | 1150 | Cu,Zn          |
| CRI01          | CRI01              | 1   | 1156 | Cu,Zn          |
| ICSA01         | ICSA01             | 1   | 1200 | Cu,Zn          |
| ICSAB01        | ICSAB01            | 1   | 1204 | Cu,Zn          |
| ICSA           | ICSA               | 20  | 1209 | Cu,Zn          |
| ICSAB          | ICSAB              | 20  | 1213 | Cu,Zn          |
| CCV01          | CCV01              | 1   | 1218 | Cu,Zn          |
| CCB01          | CCB01              | 1   | 1222 | Cu,Zn          |
| PB169324BL     | PB169324BL         | 1   | 1245 | Cu,Zn          |
| Q2902-04       | OUTFALL-DSN-002    | 1   | 1307 | Cu,Zn          |
| Q2902-04DUP    | OUTFALL-DSN-002DUP | 1   | 1314 | Cu,Zn          |
| Q2902-04L      | OUTFALL-DSN-002L   | 5   | 1327 | Cu,Zn          |
| Q2902-04MS     | OUTFALL-DSN-002MS  | 1   | 1332 | Cu,Zn          |
| CCV02          | CCV02              | 1   | 1336 | Cu,Zn          |
| CCB02          | CCB02              | 1   | 1340 | Cu,Zn          |
| Q2902-04MSD    | OUTFALL-DSN-002MSD | 1   | 1344 | Cu,Zn          |
| Q2902-04A      | OUTFALL-DSN-002A   | 1   | 1348 | Zn             |
| PB169324BS     | PB169324BS         | 1   | 1400 | Cu,Zn          |
| CCV03          | CCV03              | 1   | 1425 | Cu,Zn          |
| CCB03          | CCB03              | 1   | 1430 | Cu,Zn          |
| CCV04          | CCV04              | 1   | 1544 | Cu,Zn          |
| CCB04          | CCB04              | 1   | 1548 | Cu,Zn          |
| CCV05          | CCV05              | 1   | 1630 | Cu,Zn          |
| CCB05          | CCB05              | 1   | 1634 | Cu,Zn          |



# METAL RAW DATA

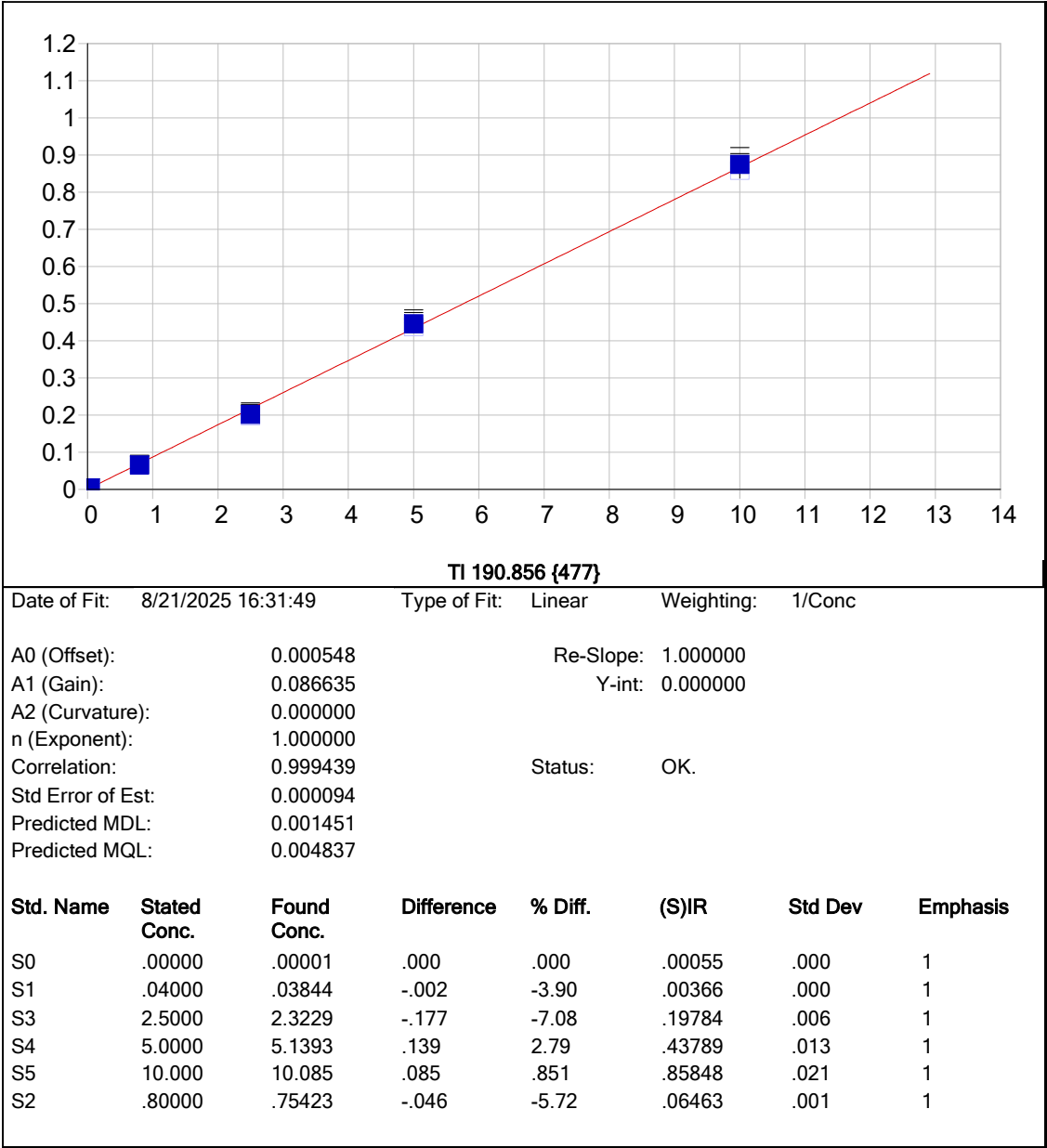


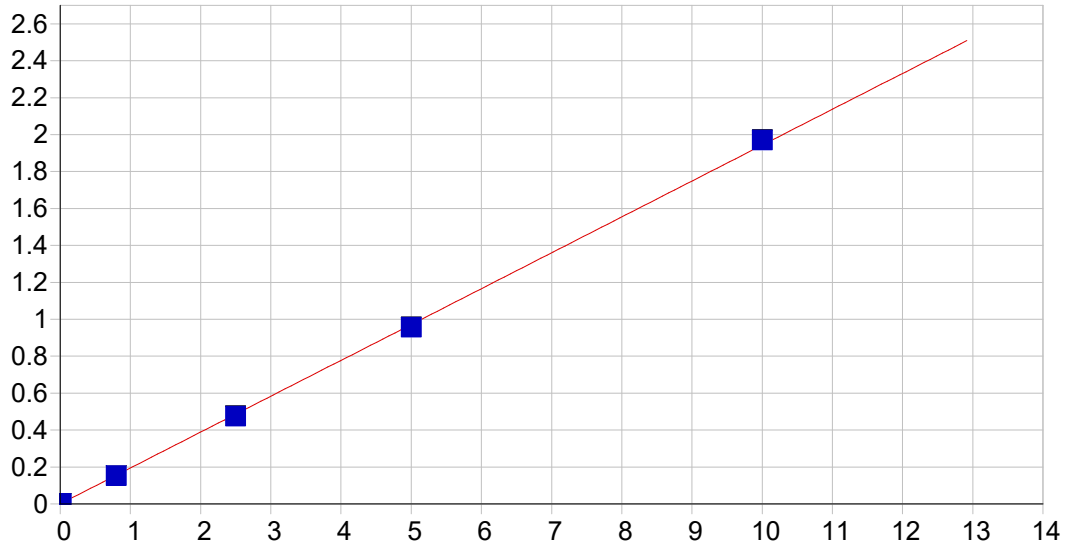
As 189.042 {479}

Date of Fit: 8/21/2025 16:31:49 Type of Fit: Linear Weighting: 1/Conc

A0 (Offset): -0.000108 Re-Slope: 1.000000  
A1 (Gain): 0.049569 Y-int: 0.000000  
A2 (Curvature): 0.000000  
n (Exponent): 1.000000  
Correlation: 0.999864 Status: OK.  
Std Error of Est: 0.000019  
Predicted MDL: 0.002111  
Predicted MQL: 0.007037

| Std. Name | Stated Conc. | Found Conc. | Difference | % Diff. | (S)IR   | Std Dev | Emphasis |
|-----------|--------------|-------------|------------|---------|---------|---------|----------|
| S0        | .00000       | .00000      | .000       | .000    | -.00011 | .000    | 1        |
| S1        | .02000       | .01932      | -.001      | -3.42   | .00084  | .000    | 1        |
| S3        | 2.5000       | 2.4311      | -.069      | -2.76   | .12027  | .000    | 1        |
| S4        | 5.0000       | 4.9490      | -.051      | -1.02   | .24494  | .001    | 1        |
| S5        | 10.000       | 10.141      | .141       | 1.41    | .50206  | .001    | 1        |
| S2        | .80000       | .77909      | -.021      | -2.61   | .03847  | .000    | 1        |



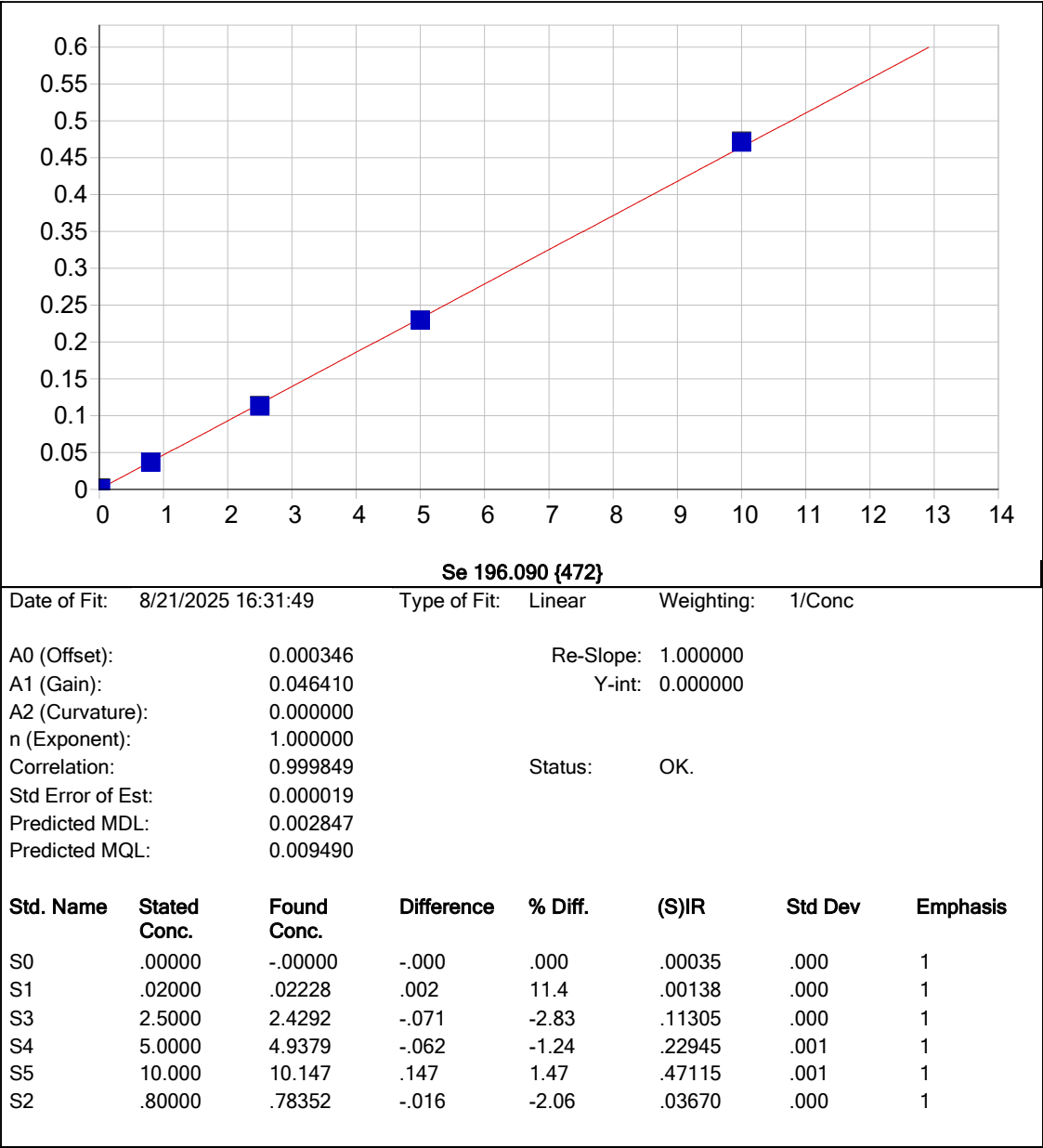


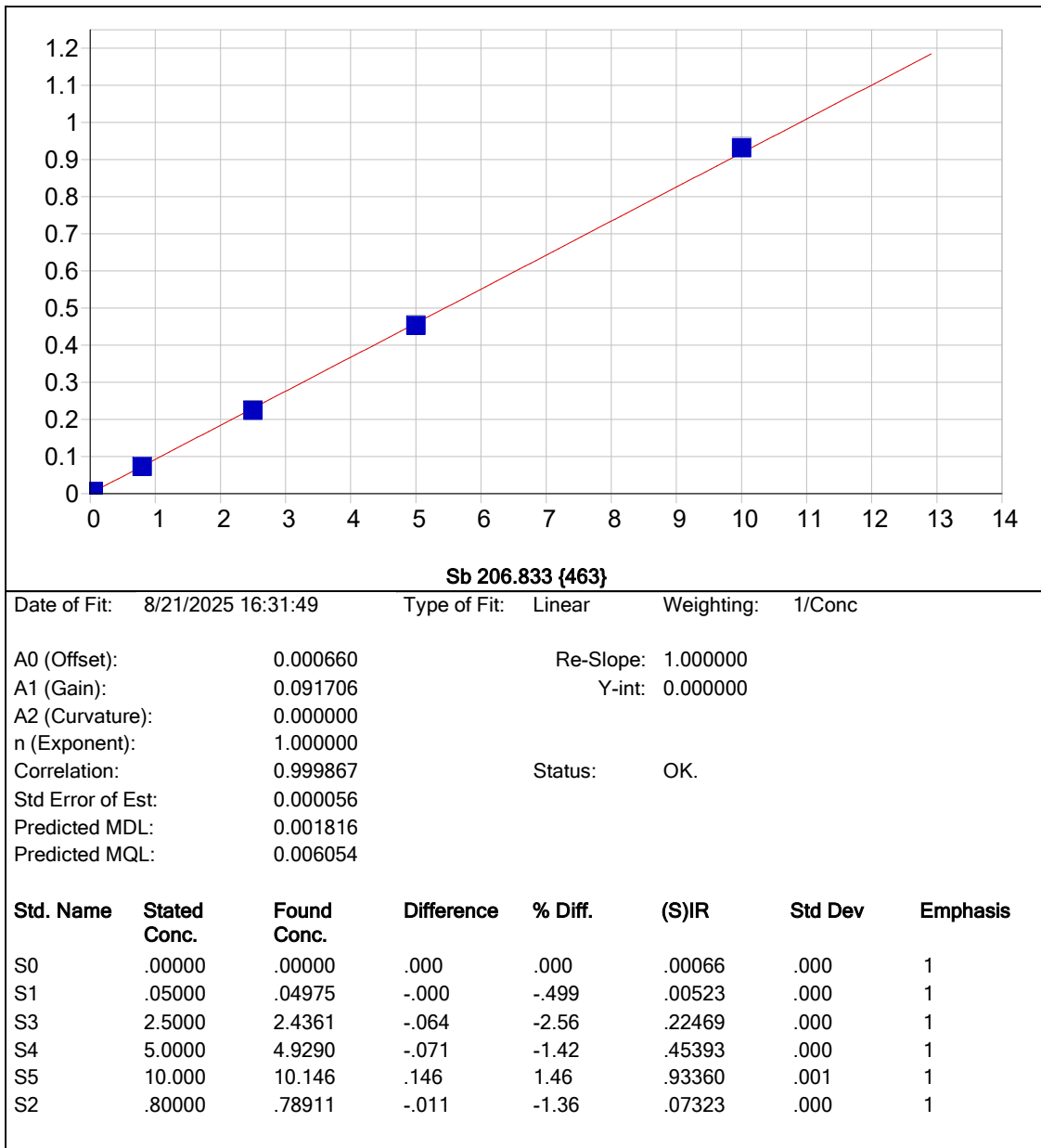
**Pb 220.353 {453}**

Date of Fit: 8/21/2025 16:31:49 Type of Fit: Linear Weighting: 1/Conc

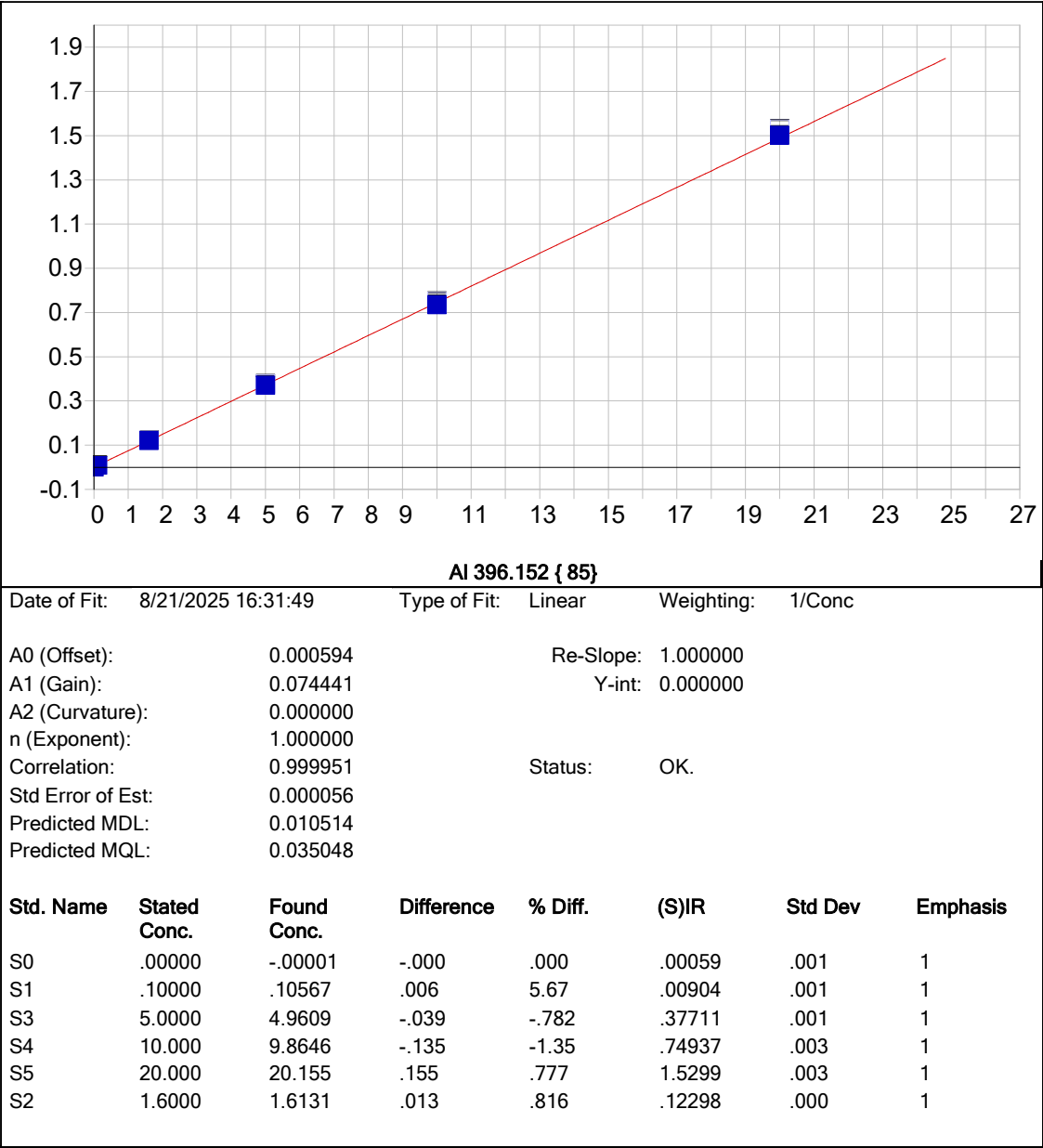
A0 (Offset): 0.000190 Re-Slope: 1.000000  
A1 (Gain): 0.194247 Y-int: 0.000000  
A2 (Curvature): 0.000000  
n (Exponent): 1.000000  
Correlation: 0.999874 Status: OK.  
Std Error of Est: 0.000056  
Predicted MDL: 0.001248  
Predicted MQL: 0.004161

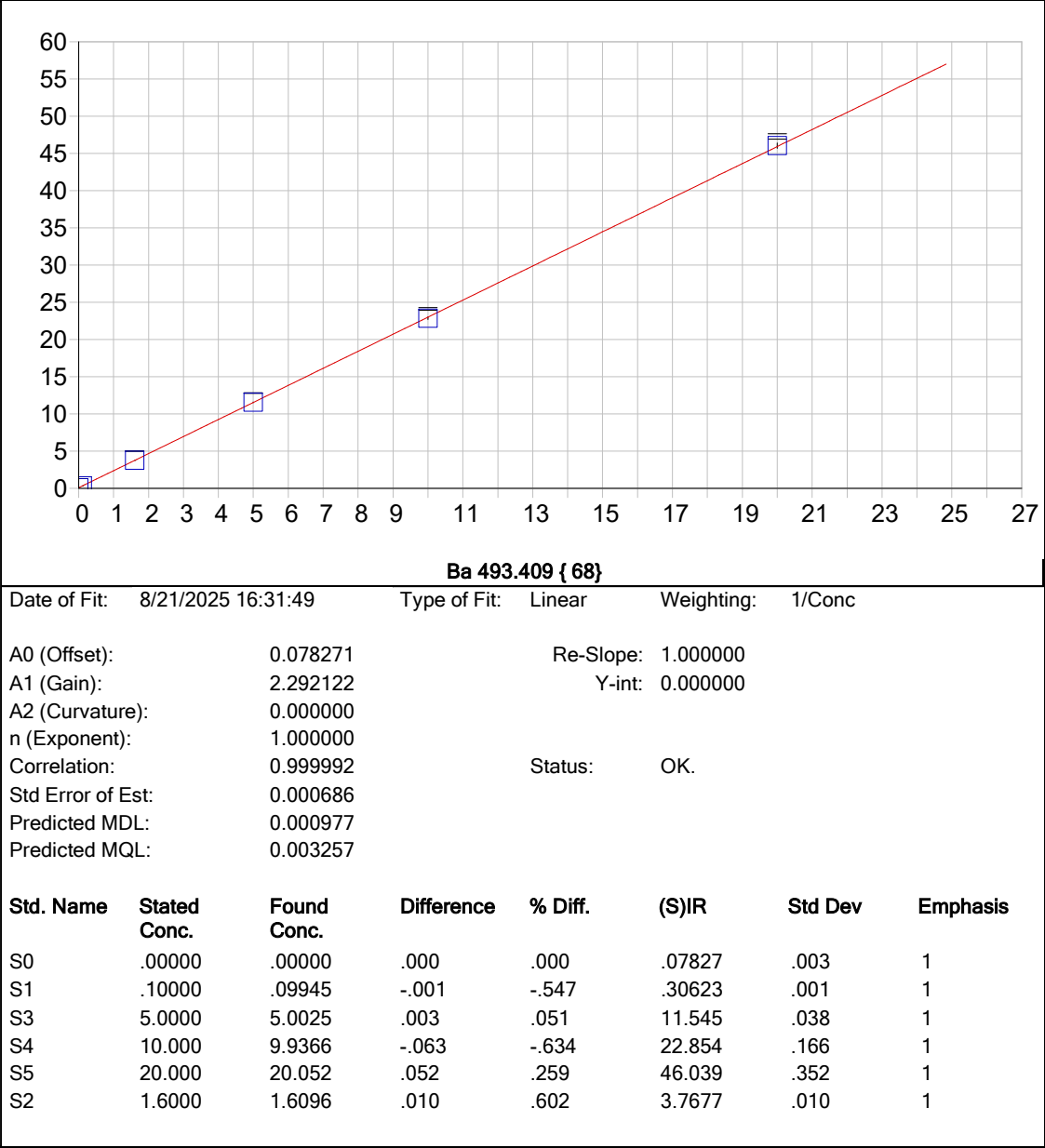
| Std. Name | Stated Conc. | Found Conc. | Difference | % Diff. | (S)IR  | Std Dev | Emphasis |
|-----------|--------------|-------------|------------|---------|--------|---------|----------|
| S0        | .00000       | .00000      | .000       | .000    | .00019 | .000    | 1        |
| S1        | .01200       | .01192      | -.000      | -.656   | .00246 | .000    | 1        |
| S3        | 2.5000       | 2.4474      | -.053      | -2.11   | .47508 | .001    | 1        |
| S4        | 5.0000       | 4.9248      | -.075      | -1.50   | .95583 | .001    | 1        |
| S5        | 10.000       | 10.143      | .143       | 1.43    | 1.9685 | .002    | 1        |
| S2        | .80000       | .78457      | -.015      | -1.93   | .15243 | .000    | 1        |

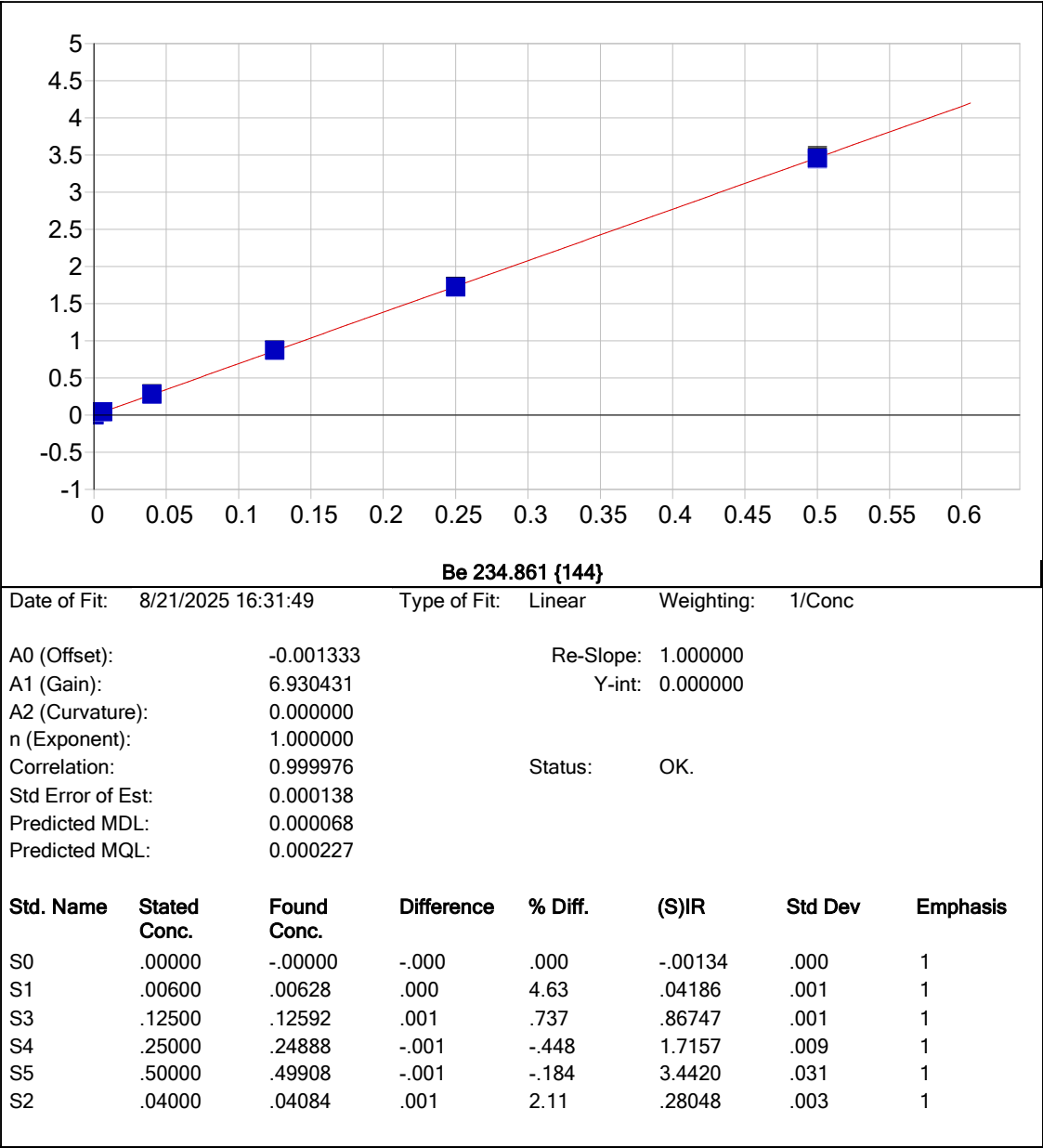


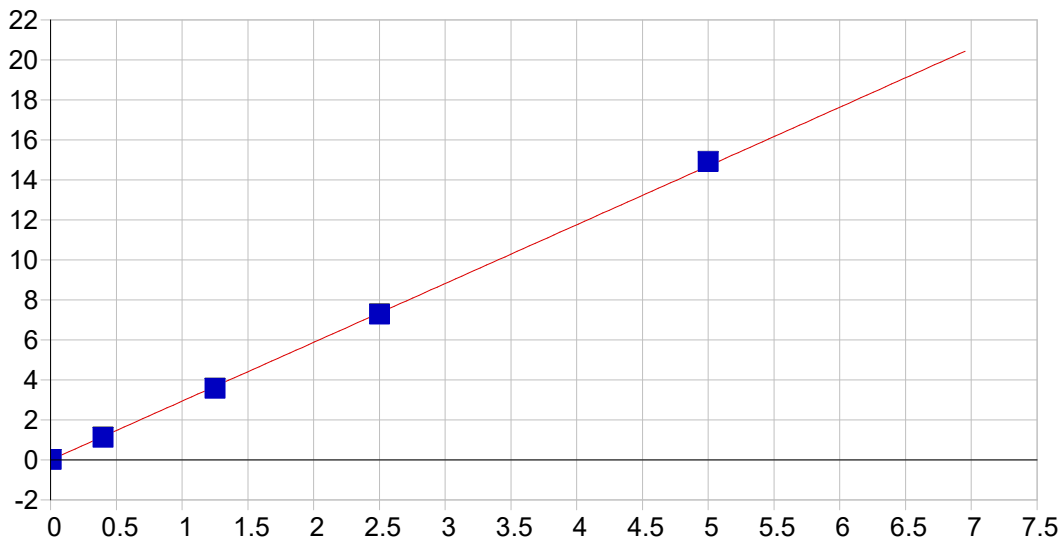










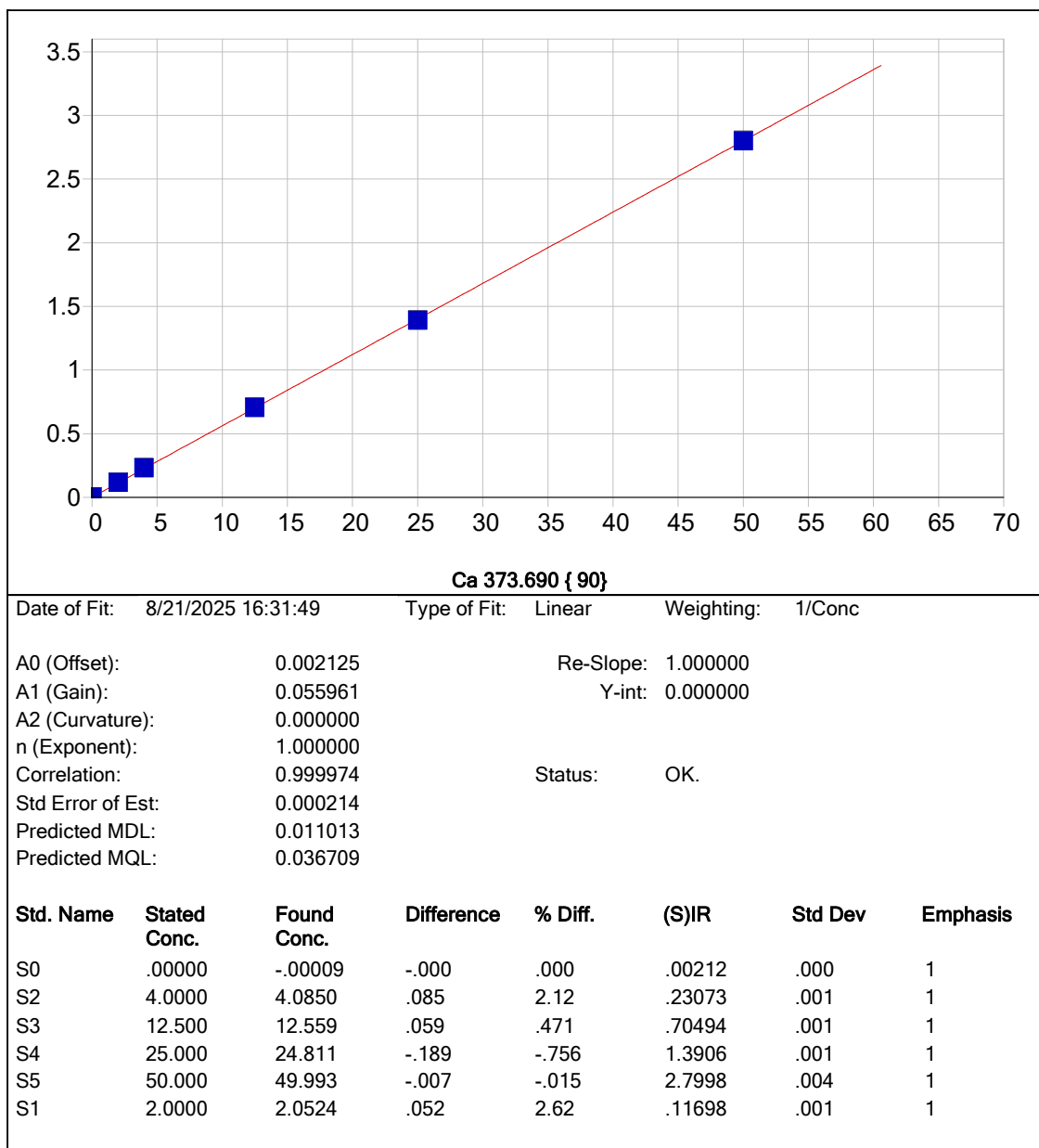


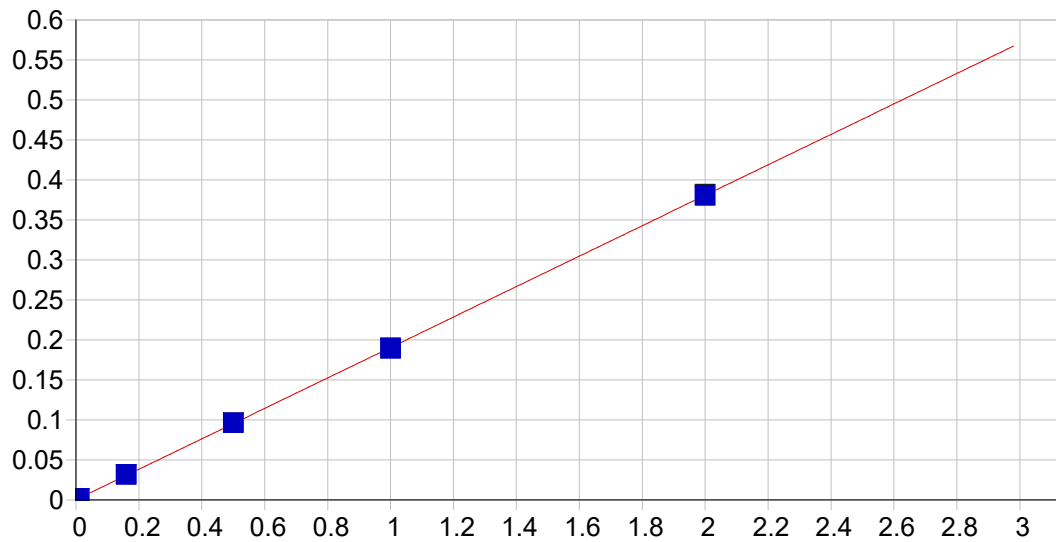
**Cd 226.502 {449}**

Date of Fit: 8/21/2025 16:31:49      Type of Fit: Linear      Weighting: 1/Conc

|                   |           |           |          |
|-------------------|-----------|-----------|----------|
| A0 (Offset):      | -0.000412 | Re-Slope: | 1.000000 |
| A1 (Gain):        | 2.939402  | Y-int:    | 0.000000 |
| A2 (Curvature):   | 0.000000  |           |          |
| n (Exponent):     | 1.000000  |           |          |
| Correlation:      | 0.999846  | Status:   | OK.      |
| Std Error of Est: | 0.000469  |           |          |
| Predicted MDL:    | 0.000071  |           |          |
| Predicted MQL:    | 0.000235  |           |          |

| Std. Name | Stated Conc. | Found Conc. | Difference | % Diff. | (S)IR   | Std Dev | Emphasis |
|-----------|--------------|-------------|------------|---------|---------|---------|----------|
| S0        | .00000       | .00000      | .000       | .000    | -.00041 | .000    | 1        |
| S1        | .00600       | .00574      | -.000      | -4.26   | .01653  | .000    | 1        |
| S3        | 1.2500       | 1.2167      | -.033      | -2.66   | 3.5784  | .006    | 1        |
| S4        | 2.5000       | 2.4774      | -.023      | -.903   | 7.2866  | .002    | 1        |
| S5        | 5.0000       | 5.0726      | .073       | 1.45    | 14.920  | .016    | 1        |
| S2        | .40000       | .38354      | -.016      | -4.12   | 1.1277  | .002    | 1        |



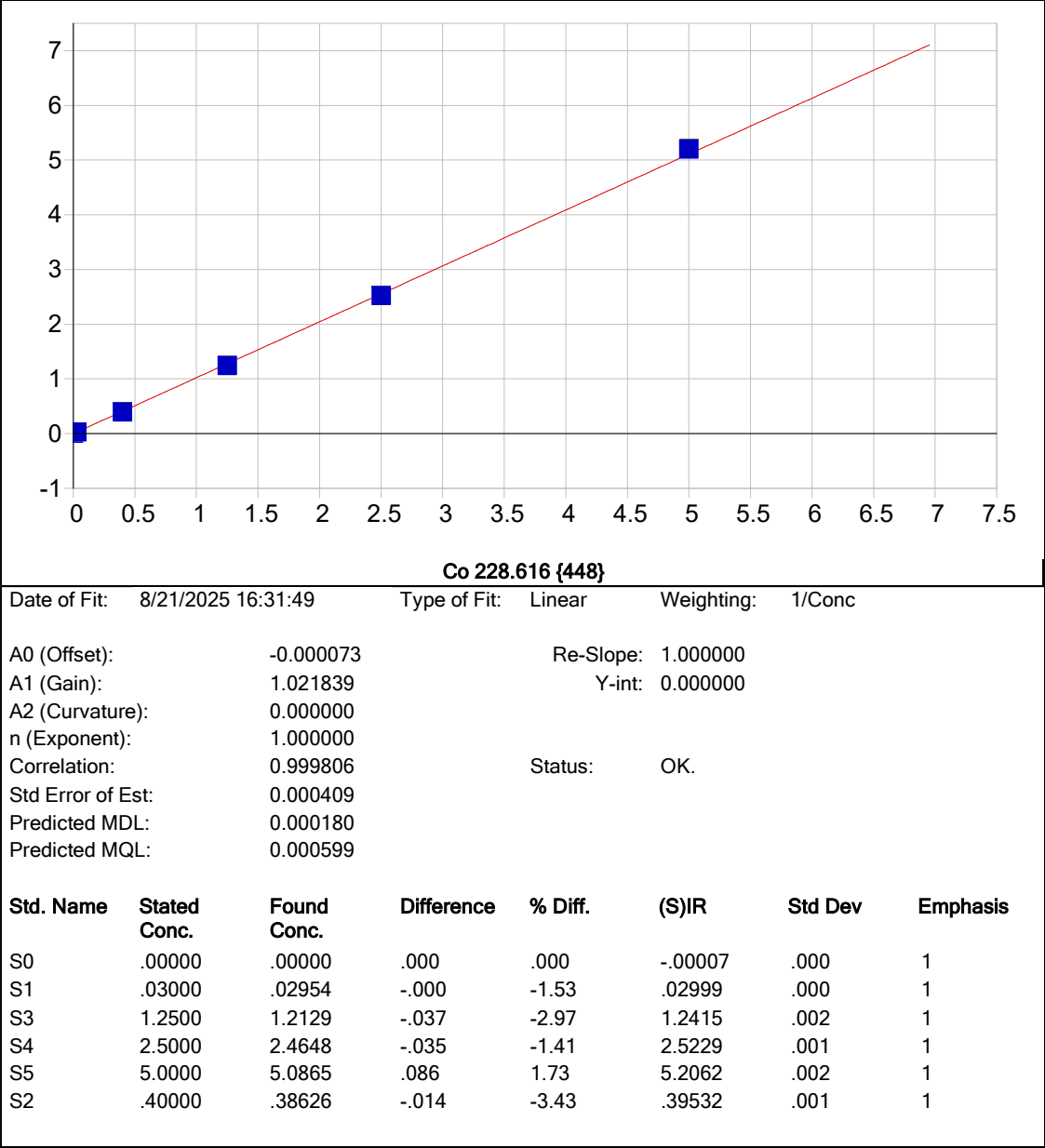


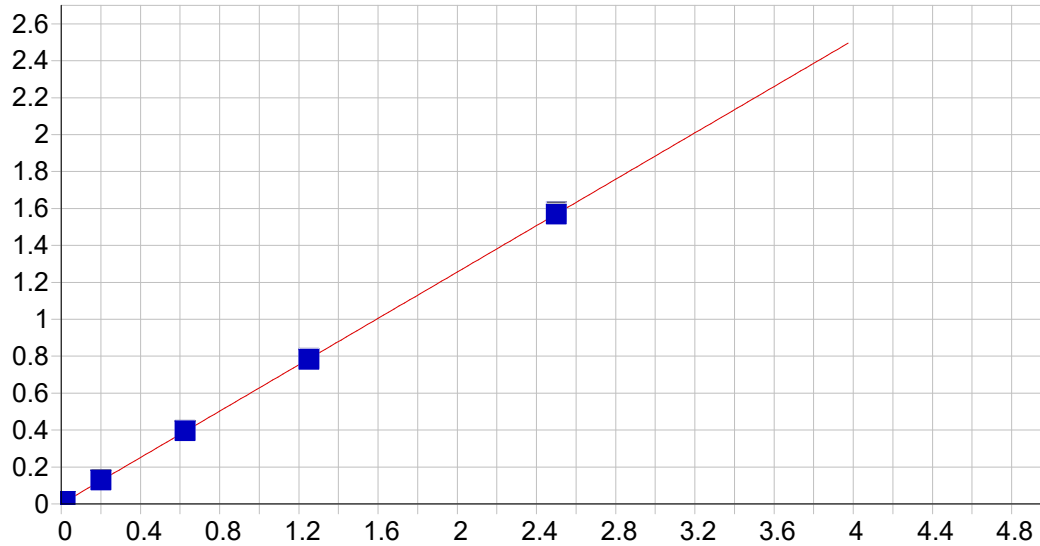
Cr 267.716 {126}

Date of Fit: 8/21/2025 16:31:49 Type of Fit: Linear Weighting: 1/Conc

A0 (Offset): 0.000230 Re-Slope: 1.000000  
A1 (Gain): 0.190301 Y-int: 0.000000  
A2 (Curvature): 0.000000  
n (Exponent): 1.000000  
Correlation: 0.999974 Status: OK.  
Std Error of Est: 0.000010  
Predicted MDL: 0.000335  
Predicted MQL: 0.001118

| Std. Name | Stated Conc. | Found Conc. | Difference | % Diff. | (S)IR  | Std Dev | Emphasis |
|-----------|--------------|-------------|------------|---------|--------|---------|----------|
| S0        | .00000       | -.00000     | -.000      | .000    | .00023 | .000    | 1        |
| S1        | .01000       | .01000      | -.000      | -.017   | .00213 | .000    | 1        |
| S3        | .50000       | .50455      | .005       | .910    | .09628 | .000    | 1        |
| S4        | 1.0000       | .99329      | -.007      | -.671   | .18933 | .001    | 1        |
| S5        | 2.0000       | 1.9981      | -.002      | -.093   | .38063 | .001    | 1        |
| S2        | .16000       | .16402      | .004       | 2.51    | .03145 | .000    | 1        |





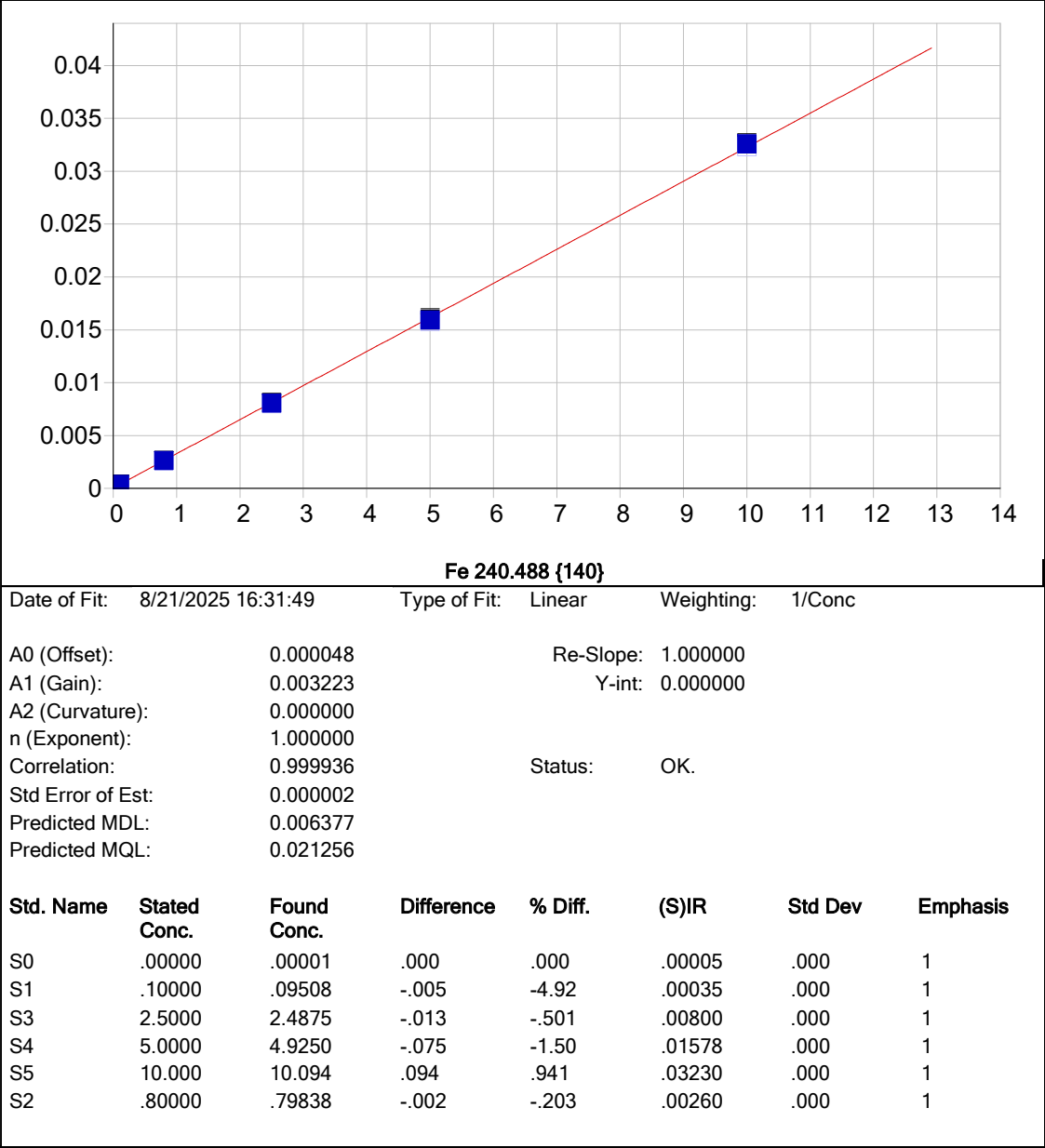
**Cu 224.700 {450}**

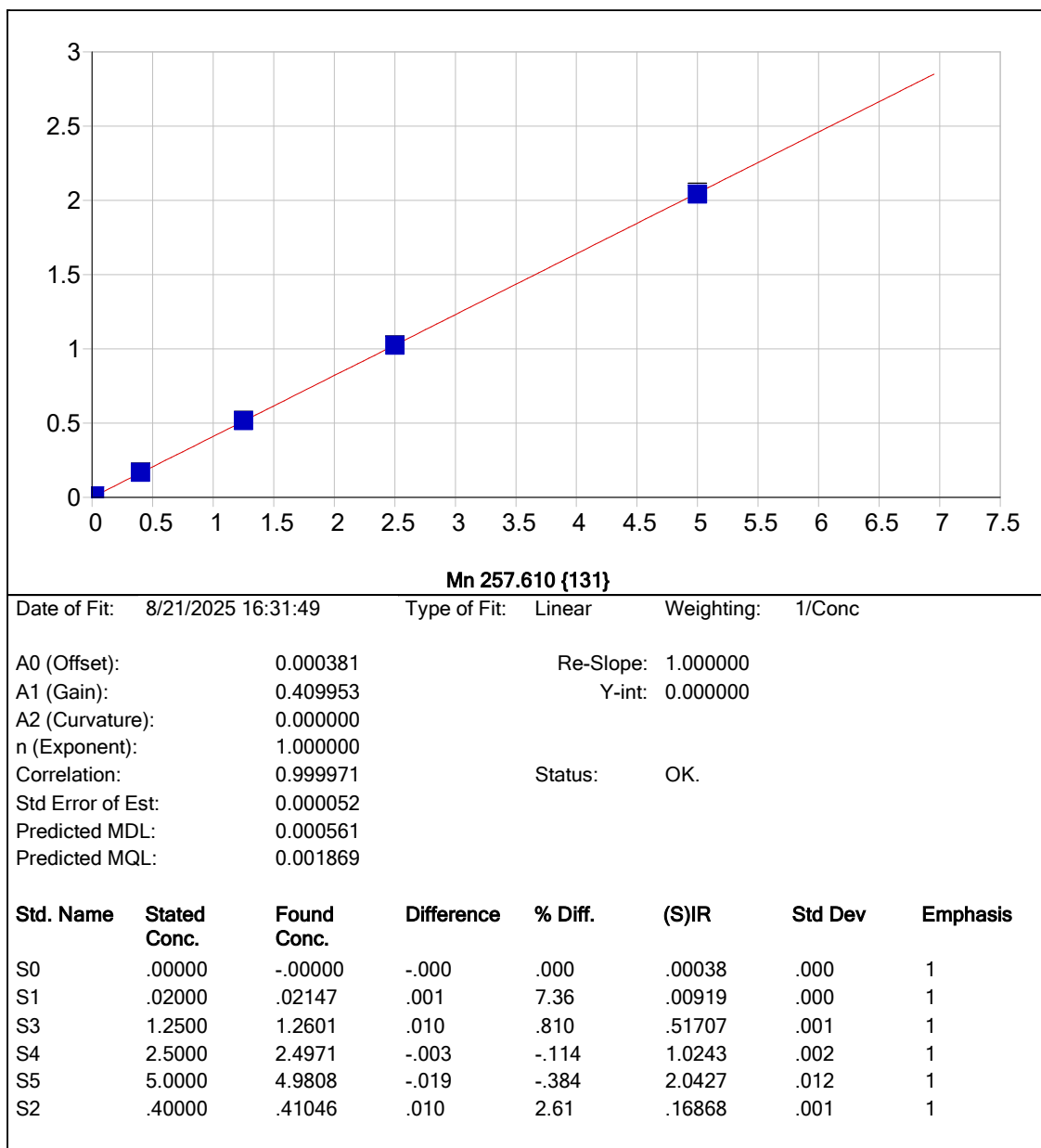
Date of Fit: 8/21/2025 16:31:49 Type of Fit: Linear Weighting: 1/Conc

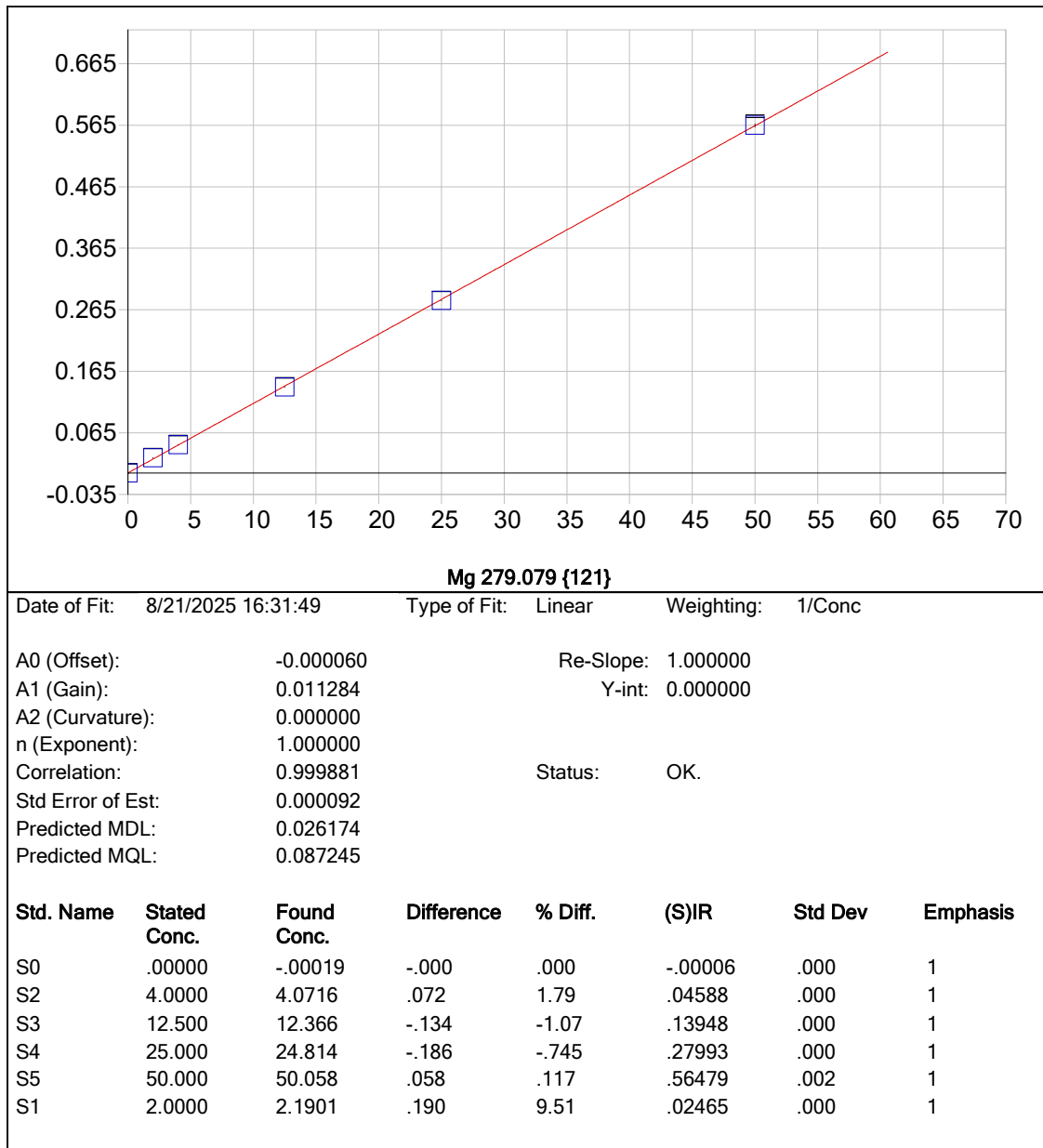
A0 (Offset): 0.000393 Re-Slope: 1.000000  
A1 (Gain): 0.627823 Y-int: 0.000000  
A2 (Curvature): 0.000000  
n (Exponent): 1.000000  
Correlation: 0.999975 Status: OK.  
Std Error of Est: 0.000053  
Predicted MDL: 0.000402  
Predicted MQL: 0.001339

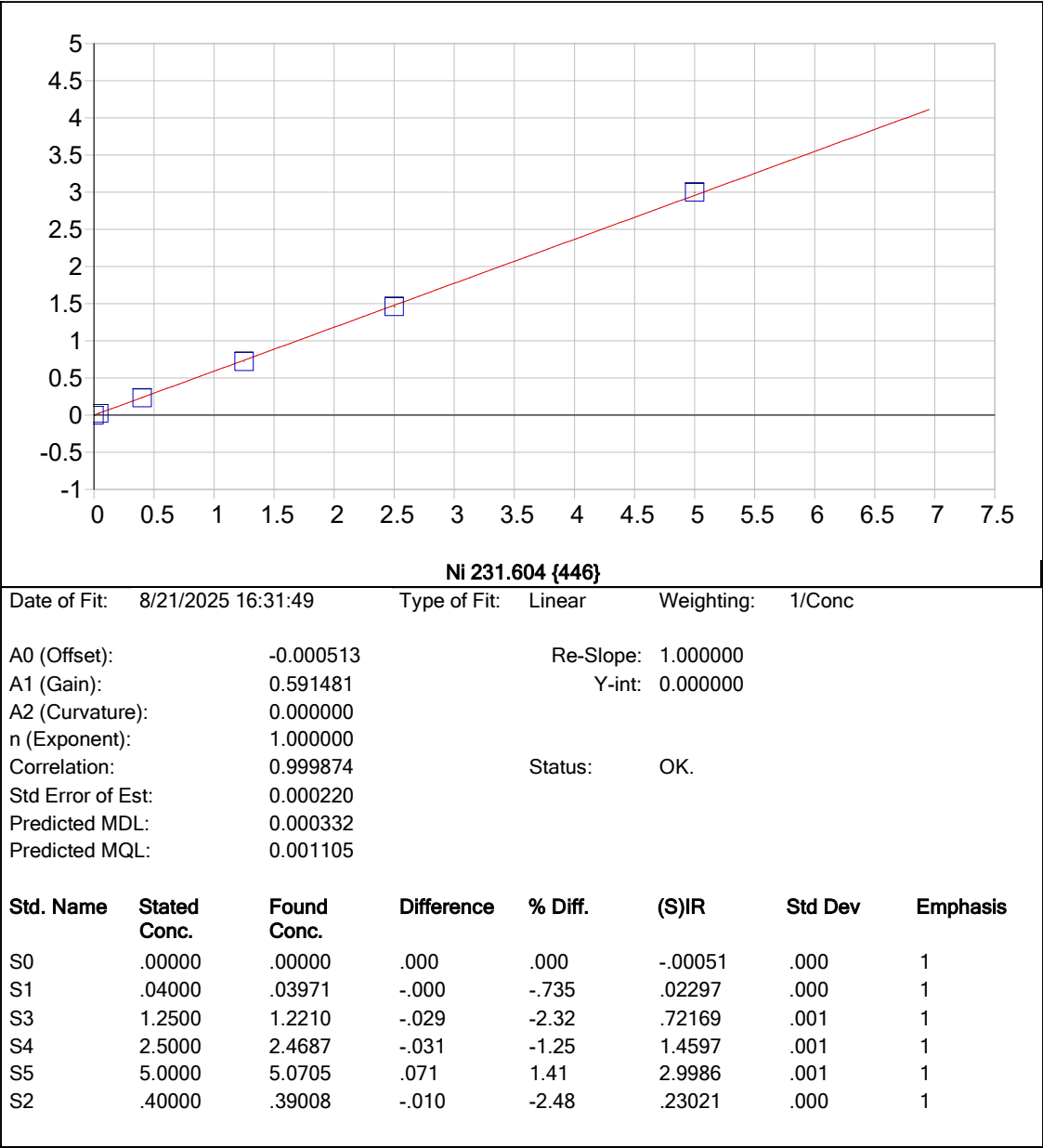
| Std. Name | Stated Conc. | Found Conc. | Difference | % Diff. | (S)IR  | Std Dev | Emphasis |
|-----------|--------------|-------------|------------|---------|--------|---------|----------|
| S0        | .00000       | -.00000     | -.000      | .000    | .00039 | .000    | 1        |
| S1        | .02000       | .02141      | .001       | 7.03    | .01397 | .000    | 1        |
| S3        | .62500       | .62772      | .003       | .435    | .39776 | .001    | 1        |
| S4        | 1.2500       | 1.2438      | -.006      | -.497   | .78781 | .000    | 1        |
| S5        | 2.5000       | 2.4978      | -.002      | -.088   | 1.5816 | .001    | 1        |
| S2        | .20000       | .20429      | .004       | 2.14    | .12970 | .000    | 1        |

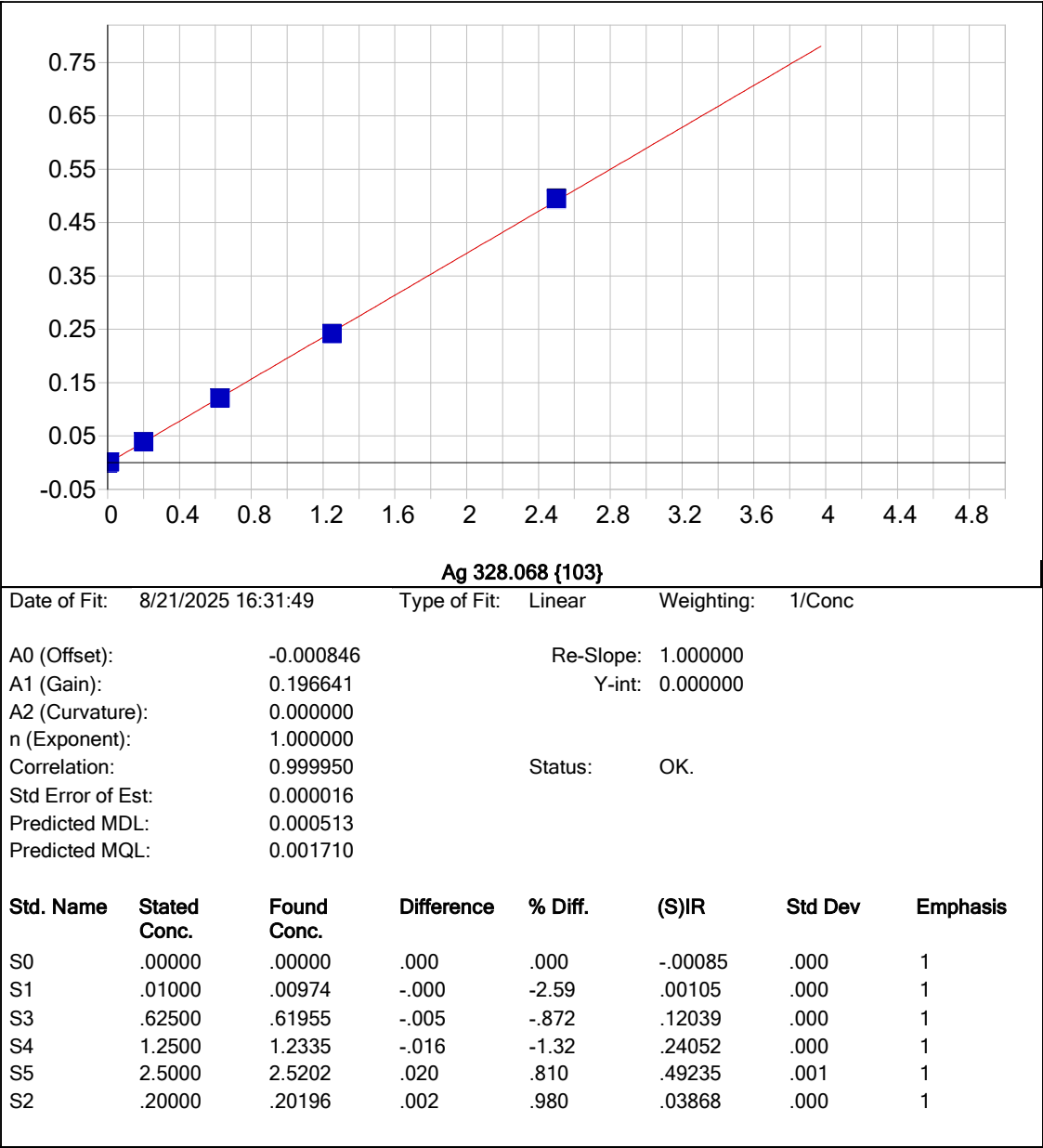


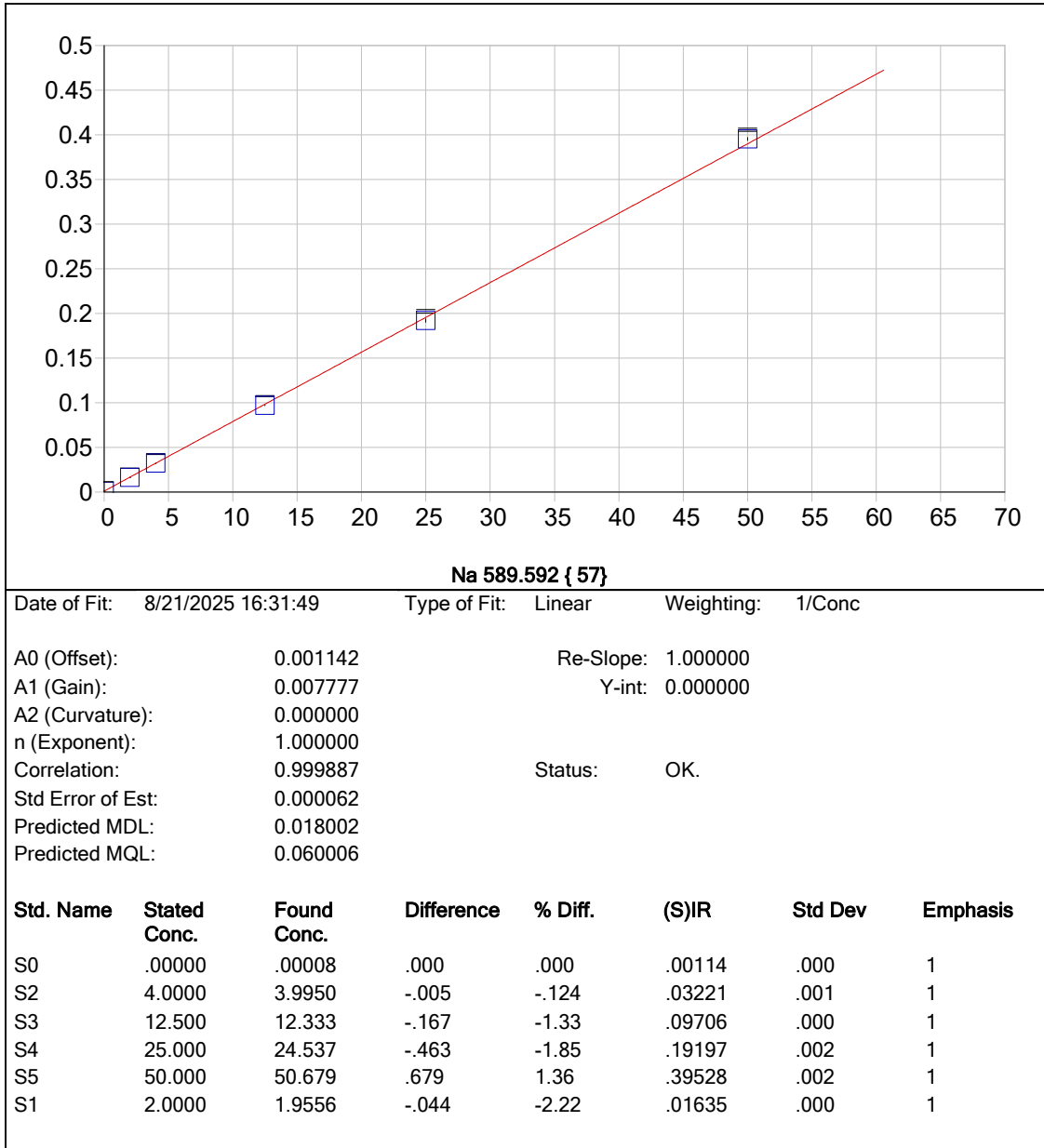


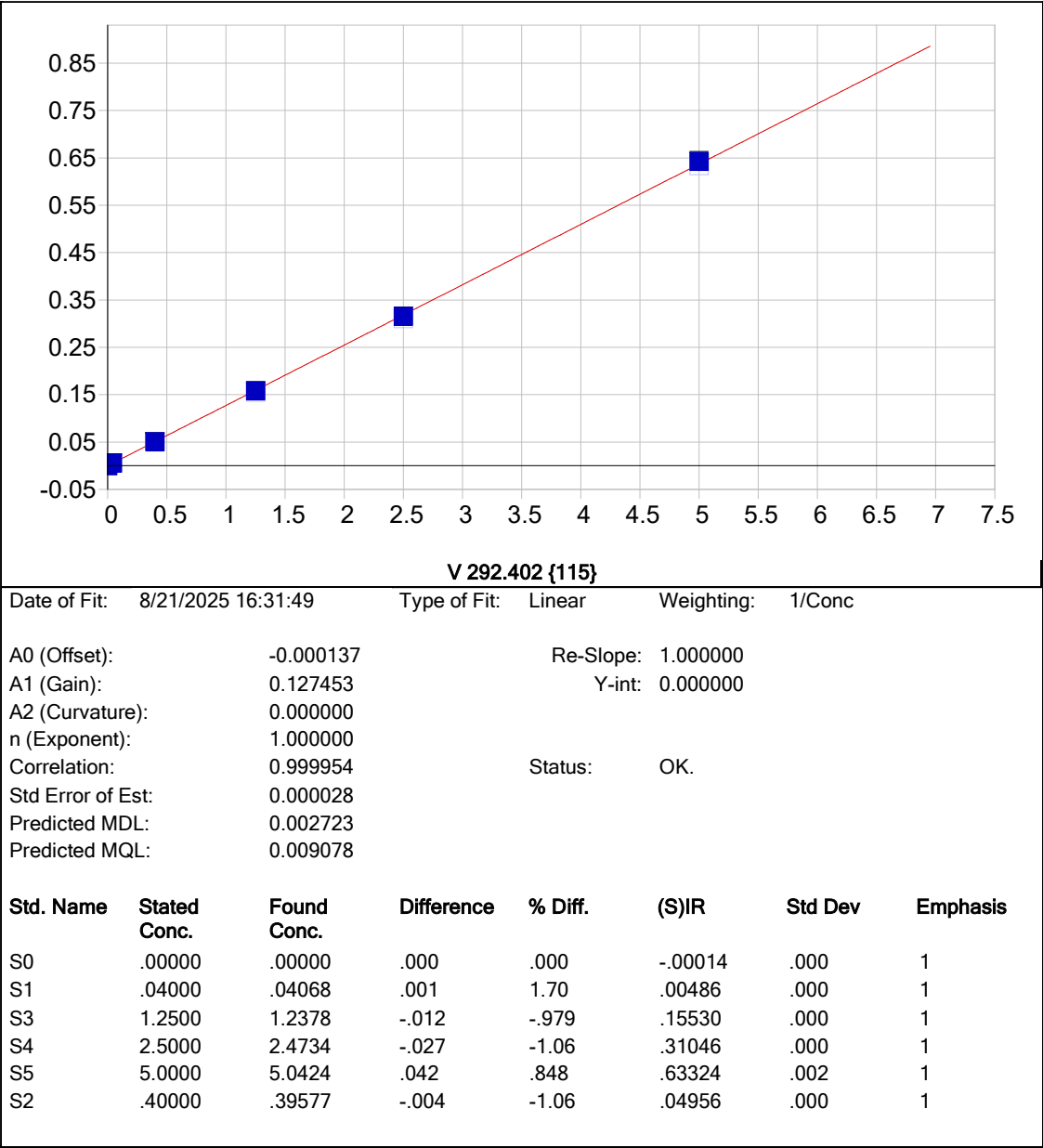


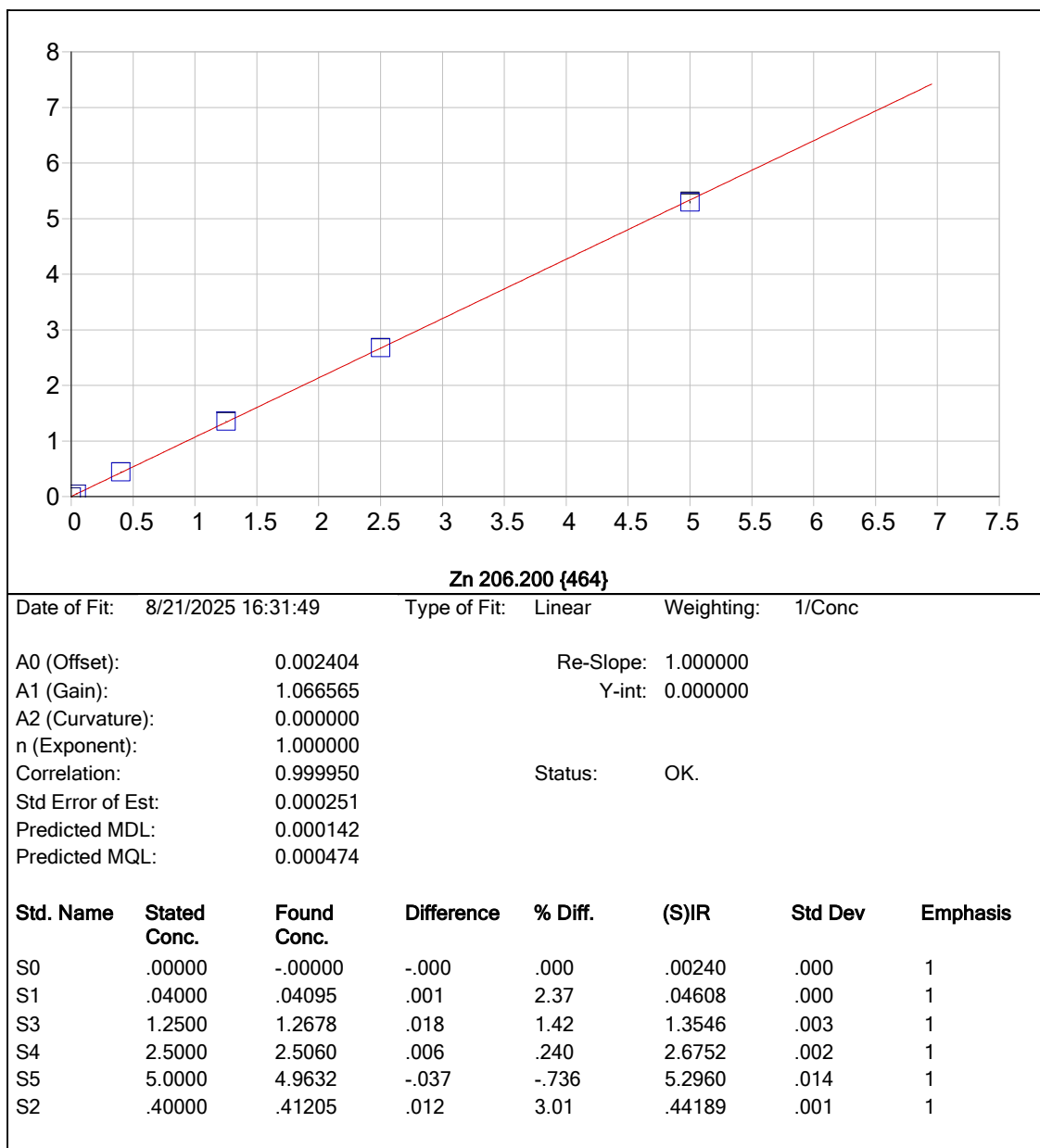




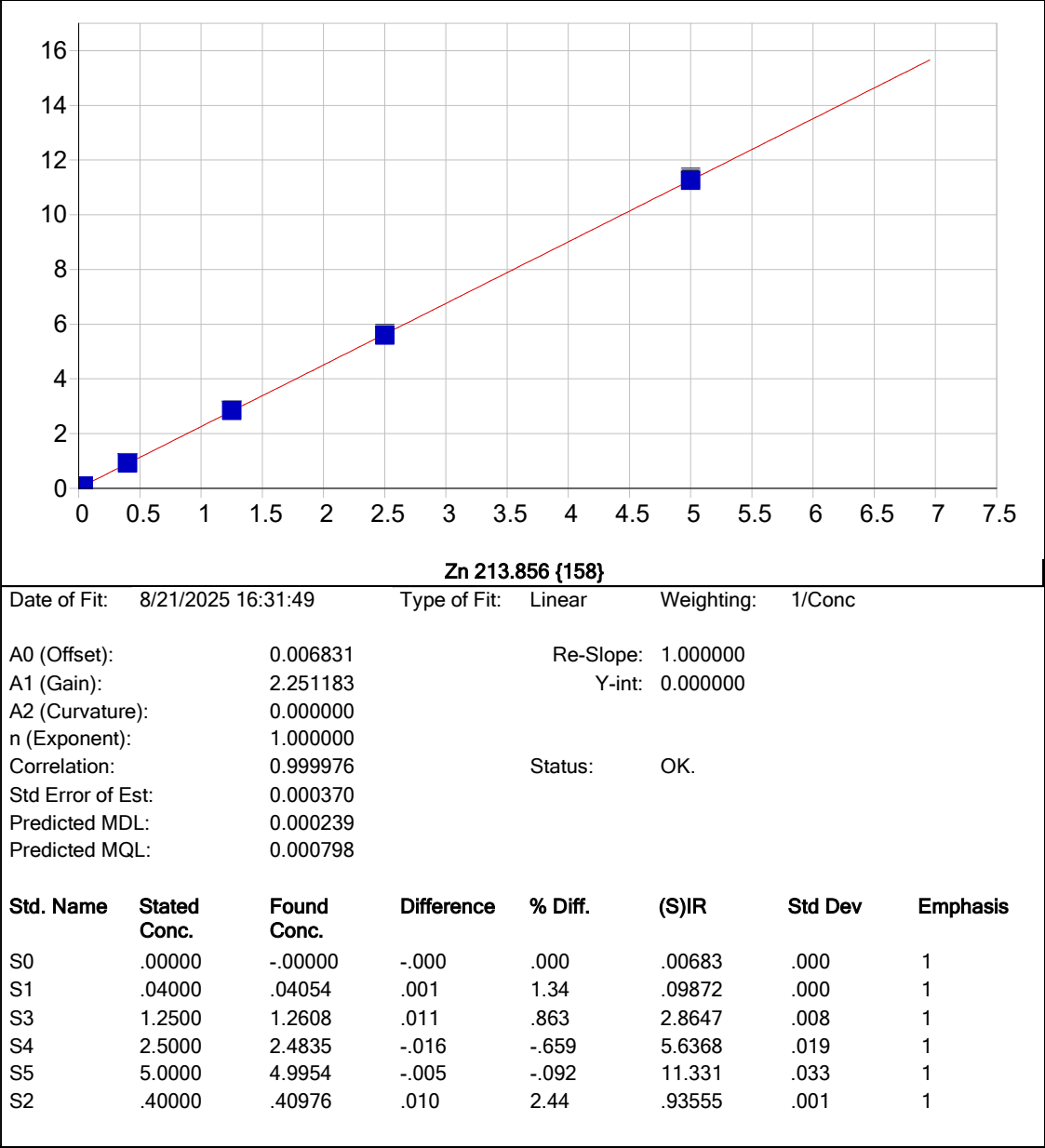


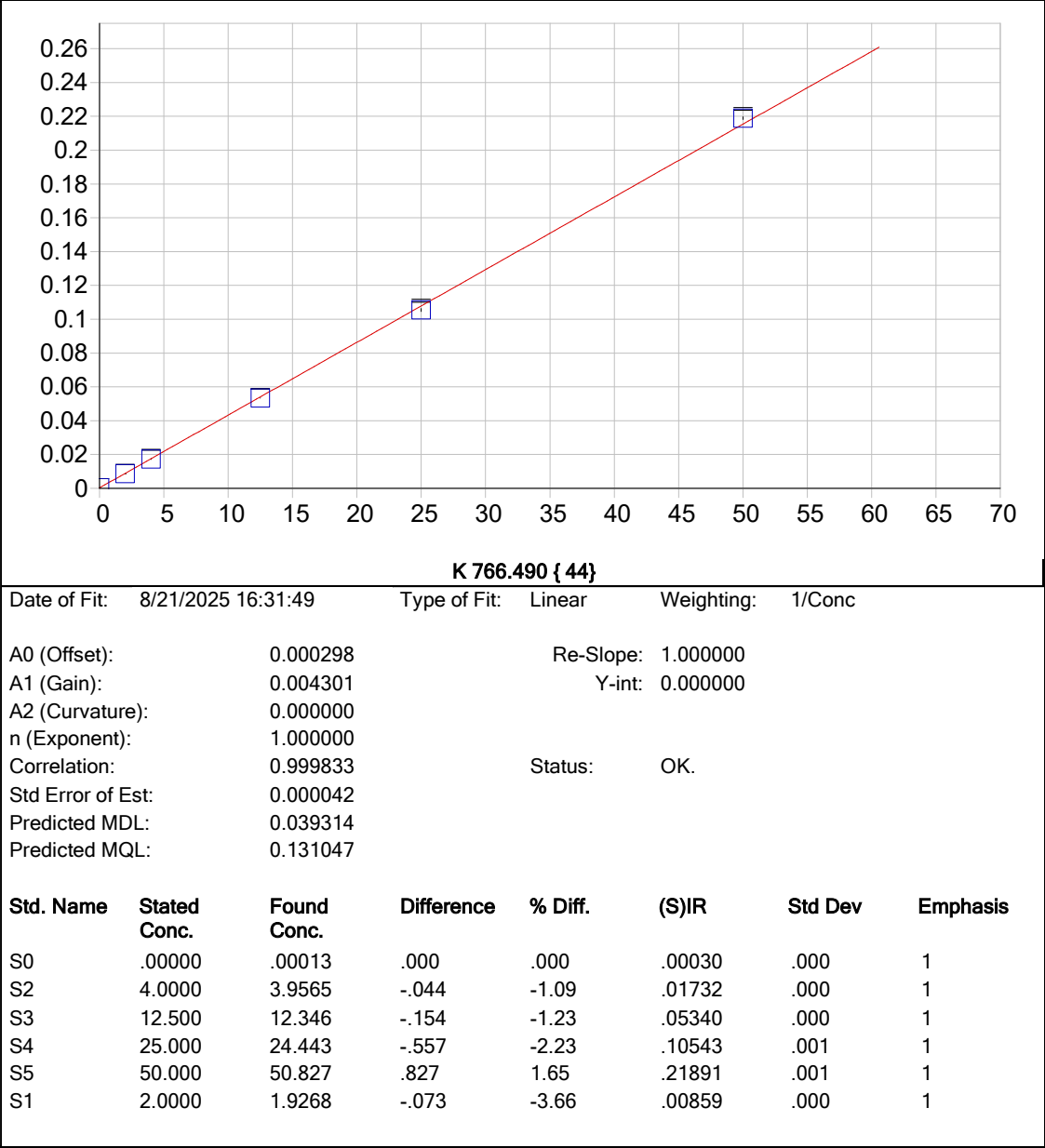


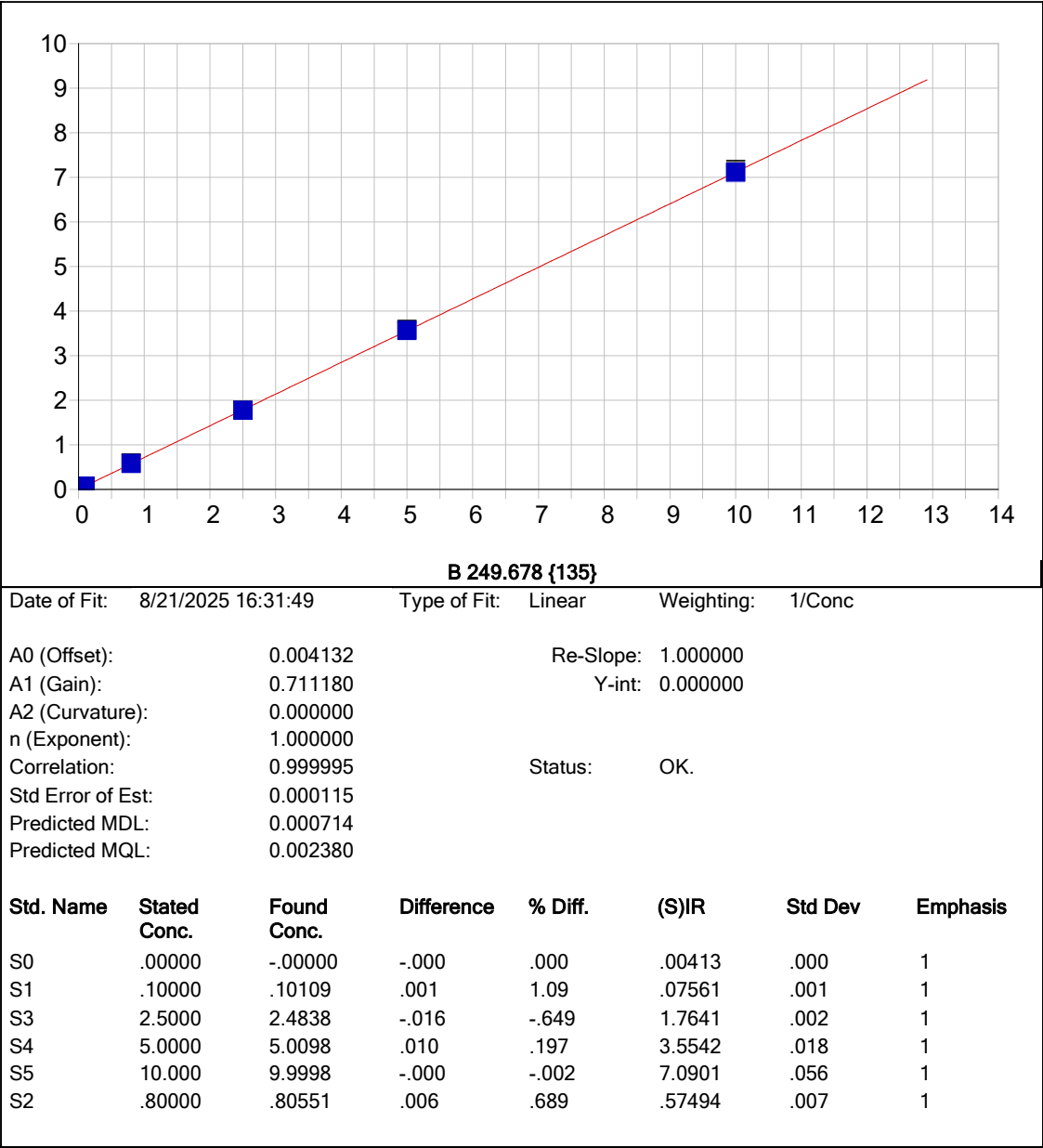


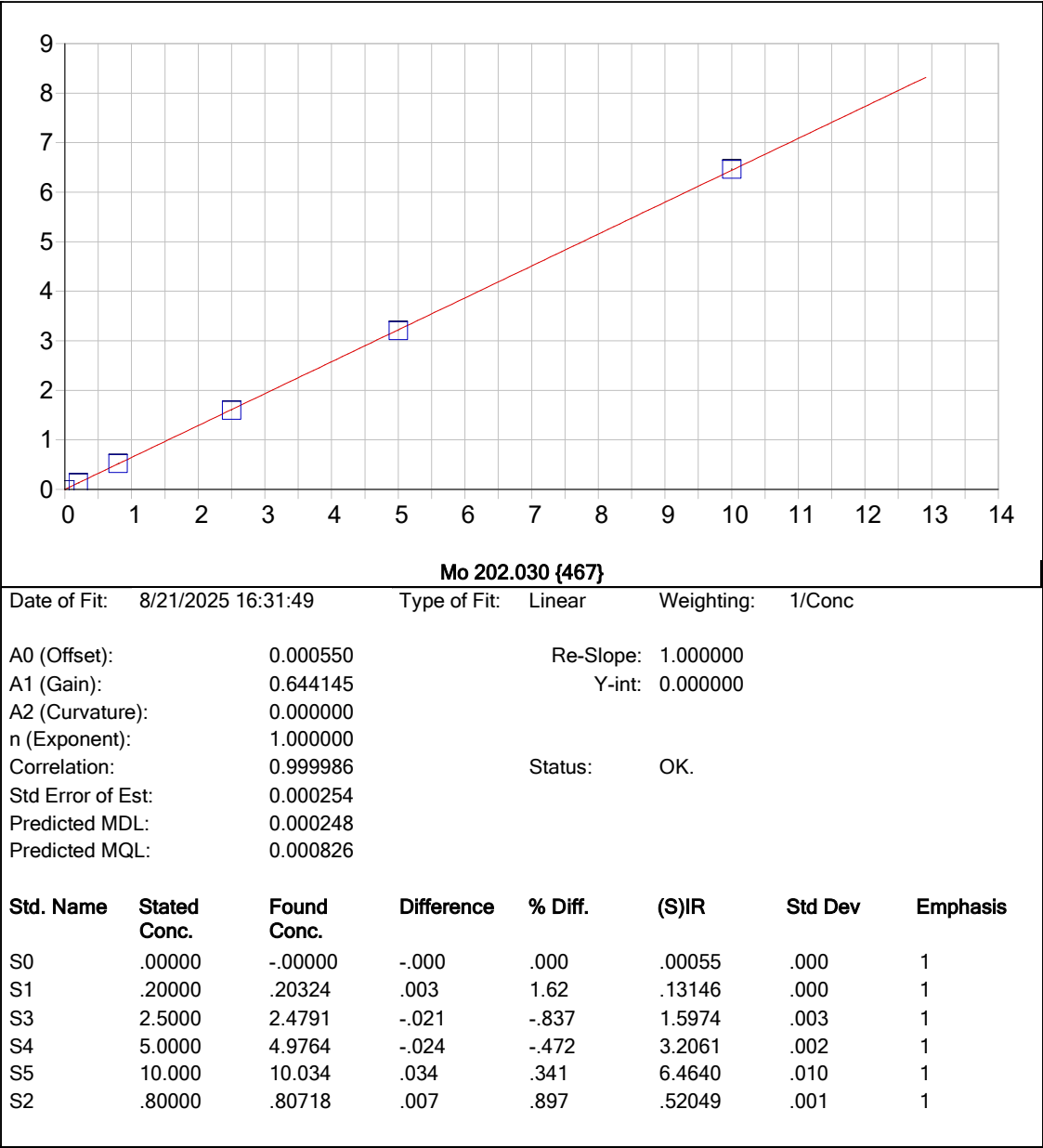


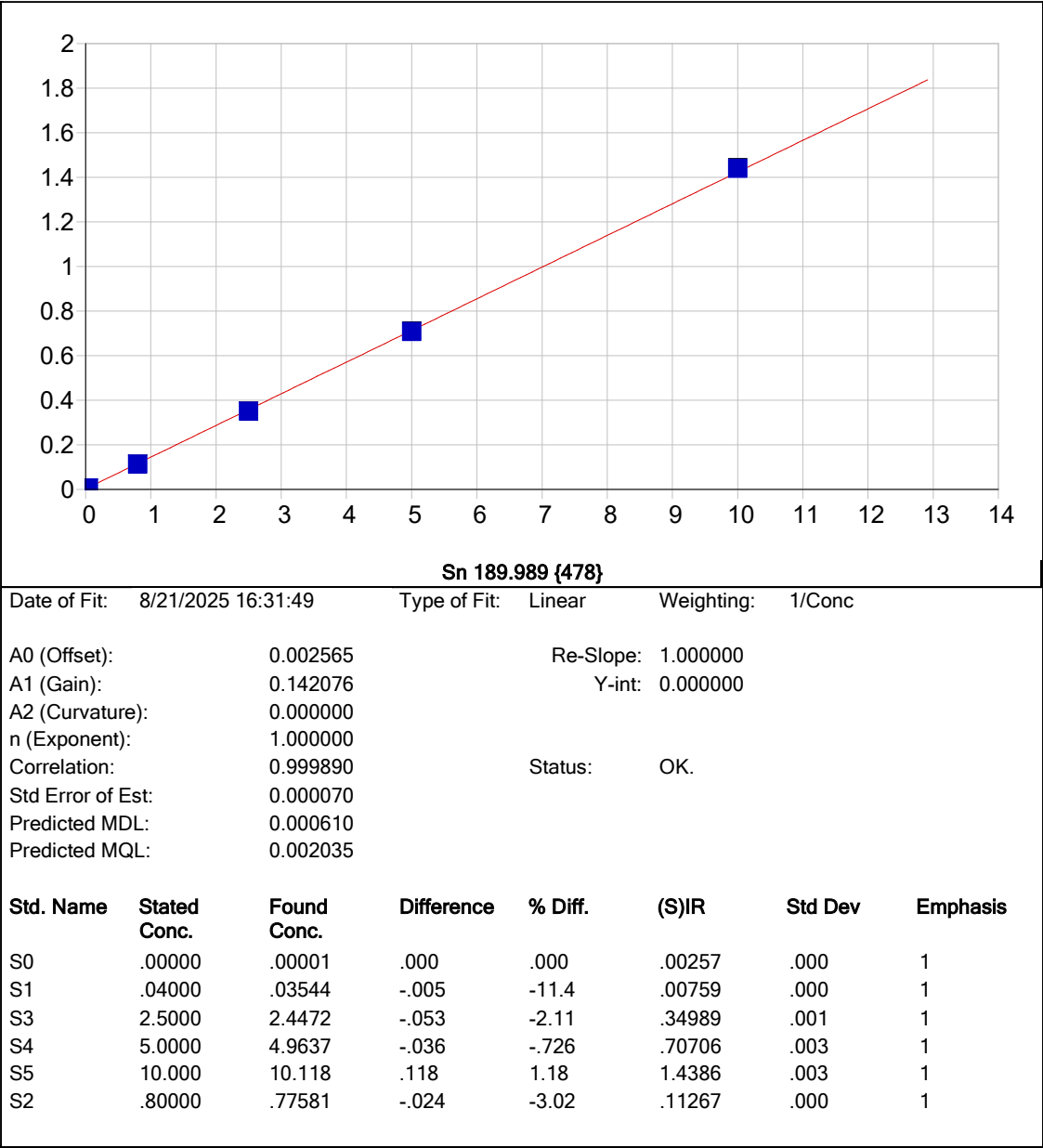


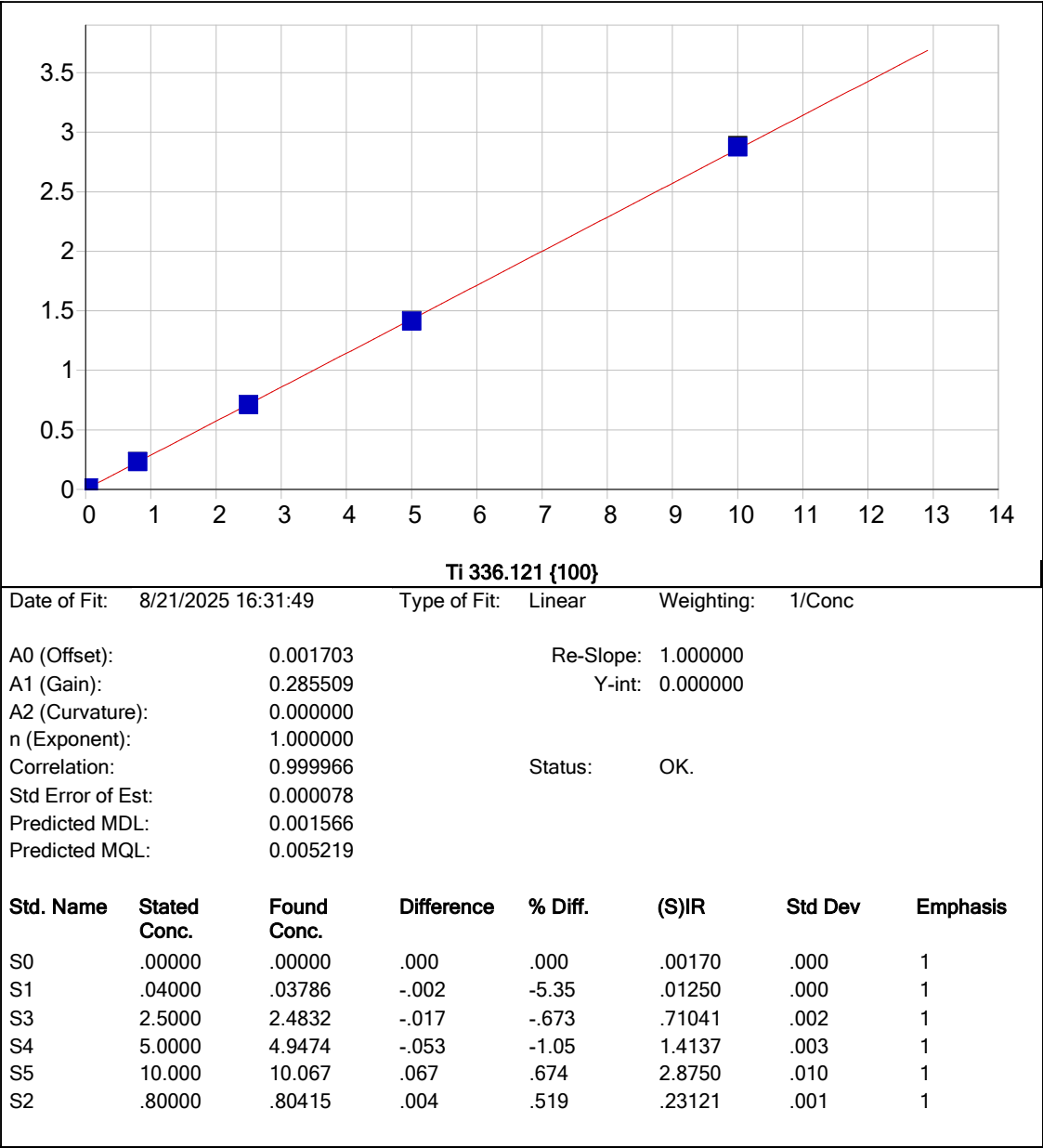


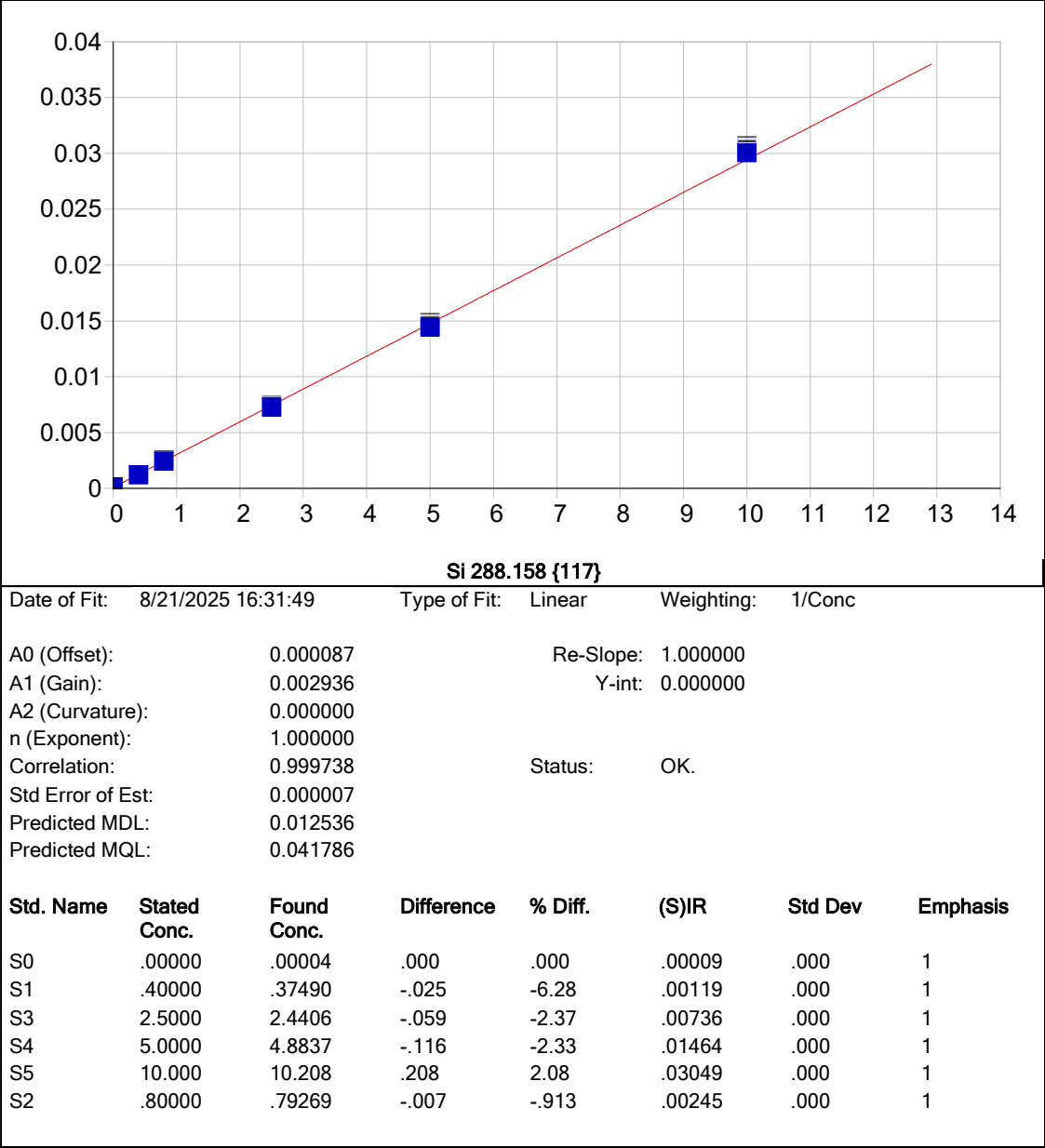


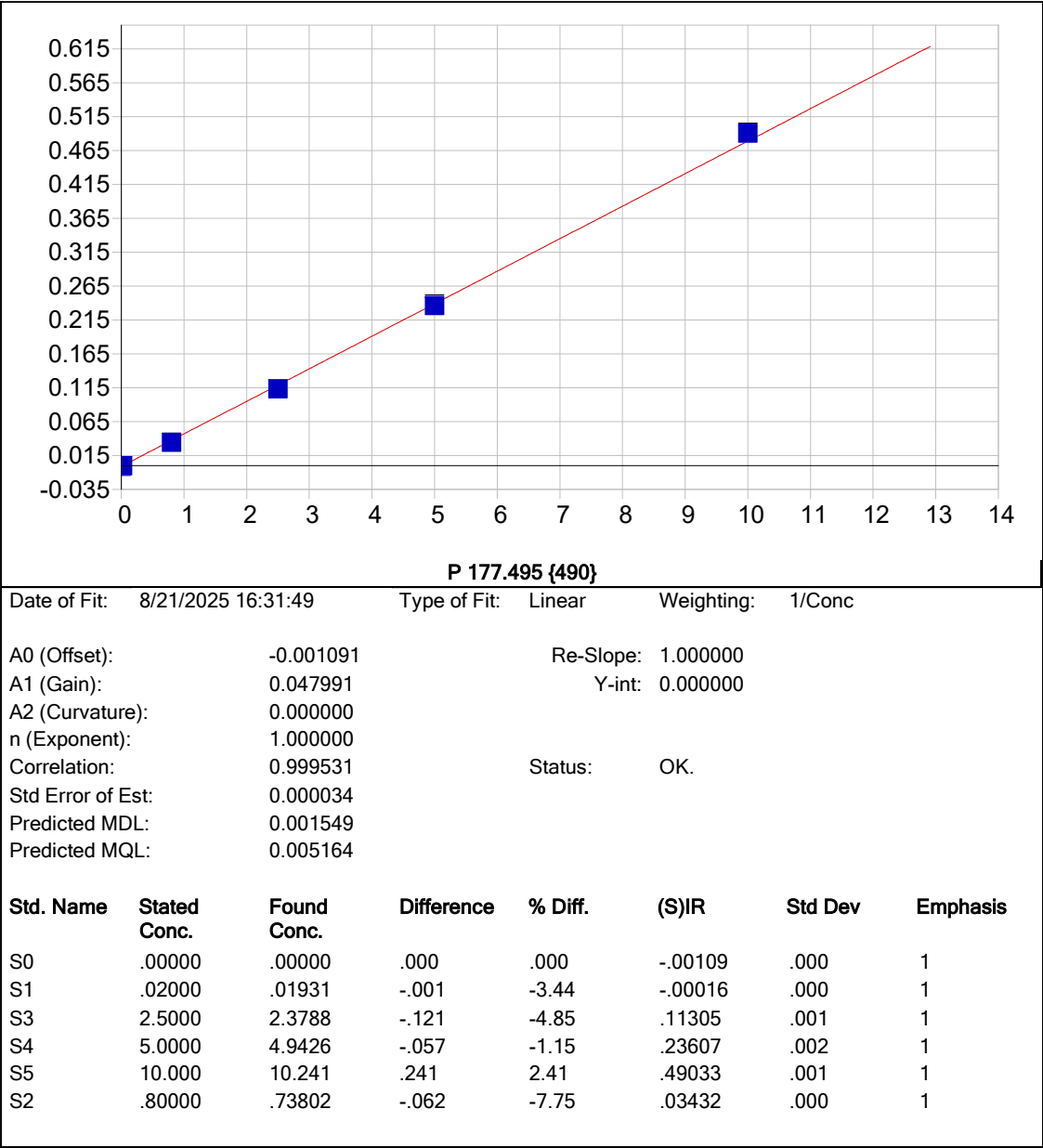




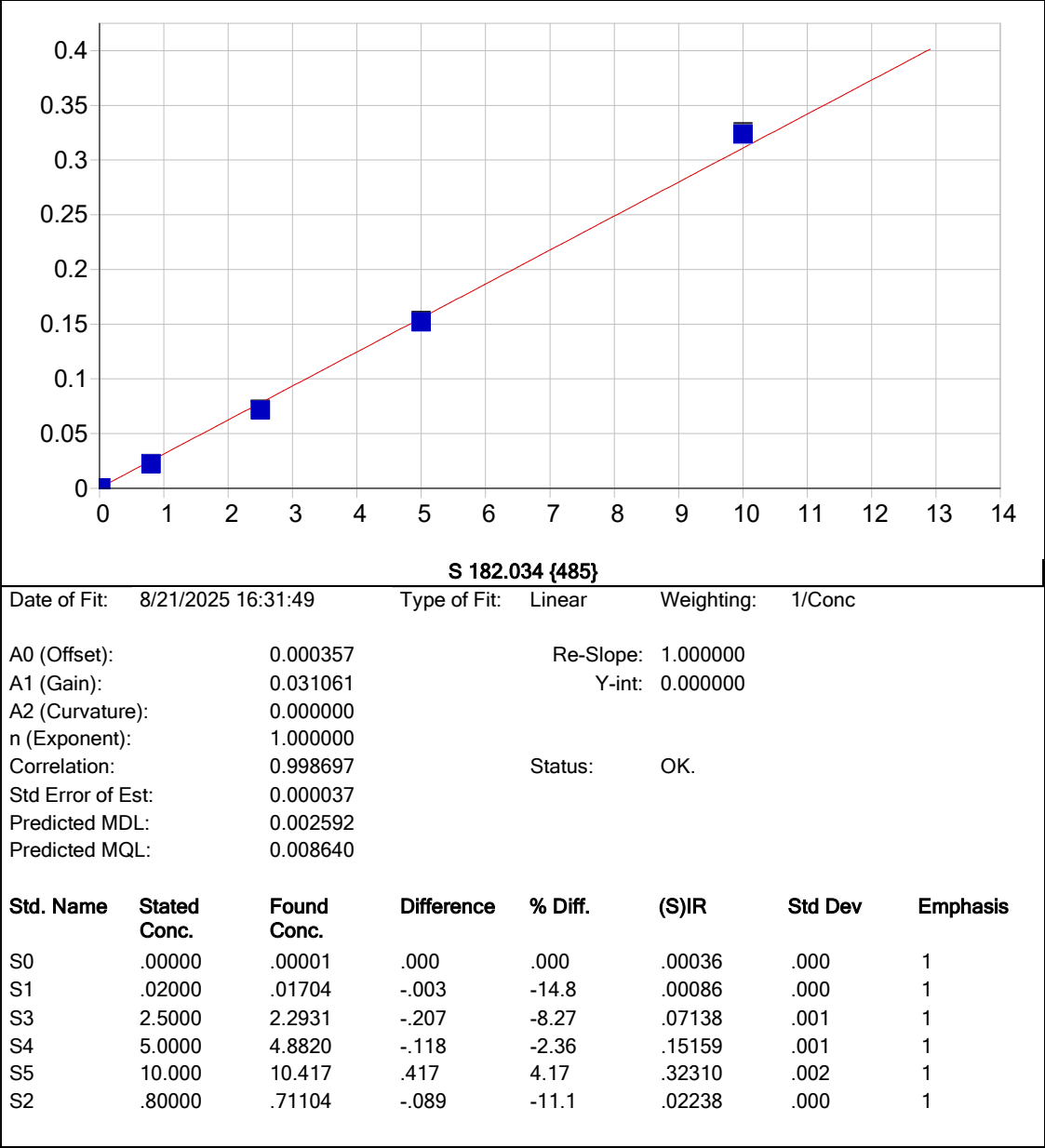


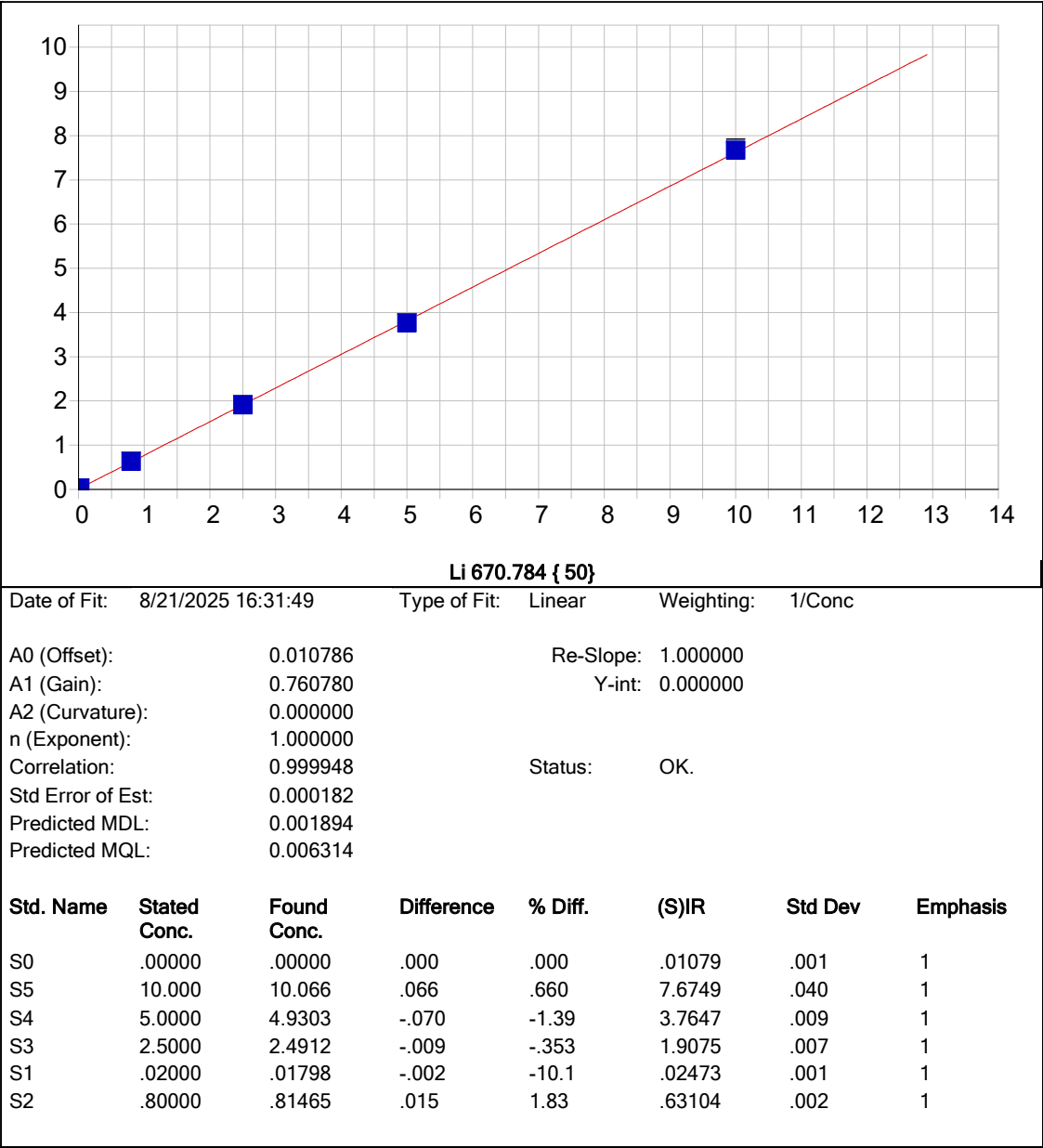


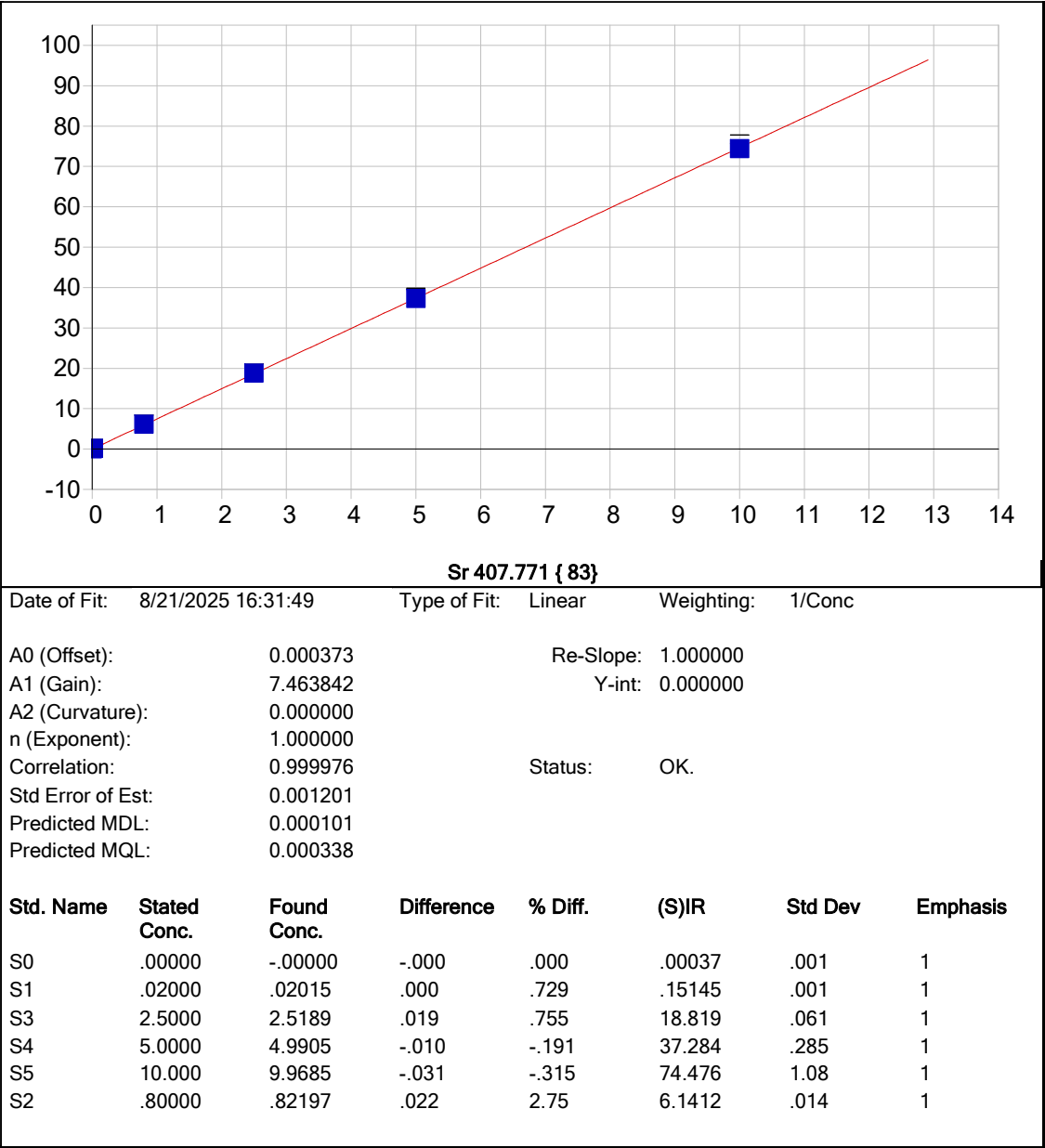


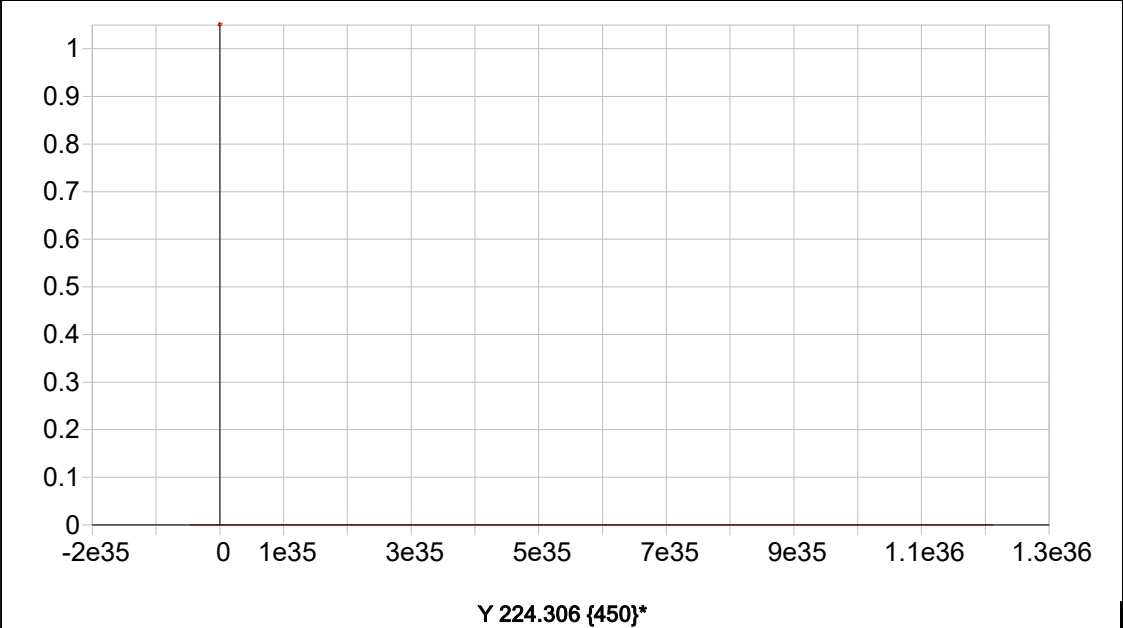








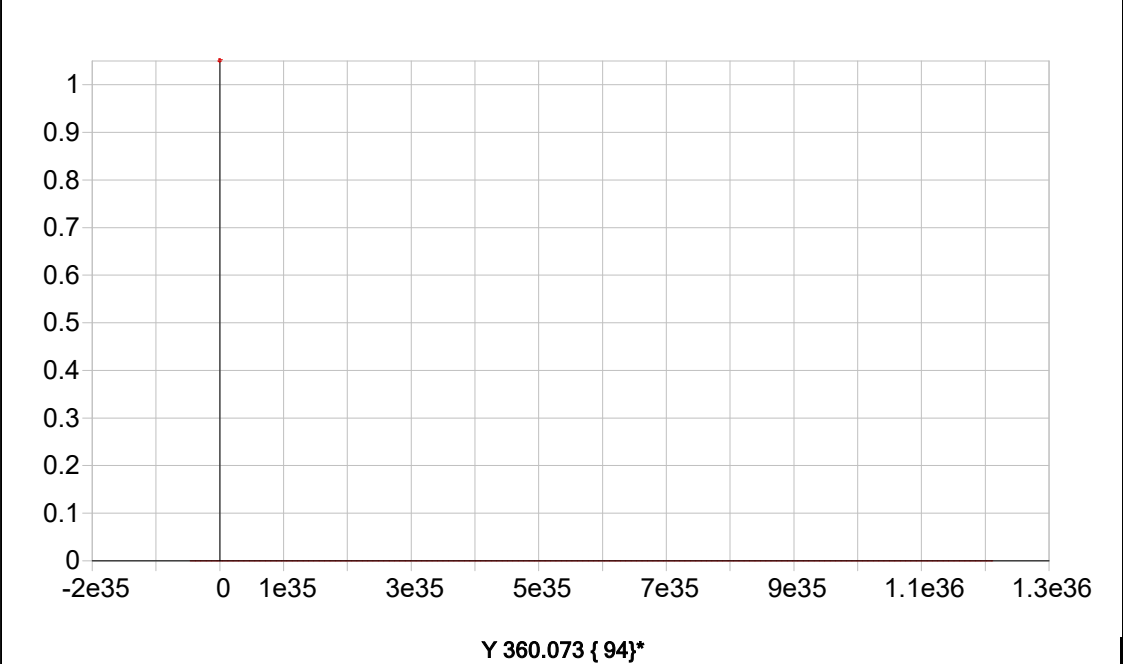




Date of Fit: 8/21/2025 16:31:49      Type of Fit: Linear      Weighting: 1/Conc

|                   |          |           |                        |
|-------------------|----------|-----------|------------------------|
| 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 |
|-----------|--------------|-------------|------------|---------|-------|---------|----------|
|-----------|--------------|-------------|------------|---------|-------|---------|----------|

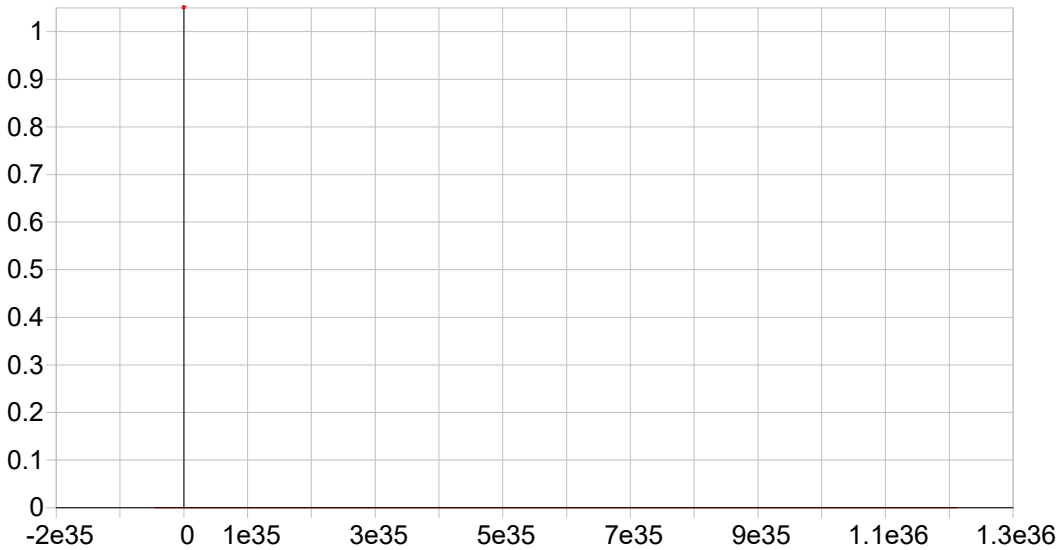


Date of Fit: <not fit>      Type of Fit: Linear      Weighting: 1/Conc

|              |          |           |          |
|--------------|----------|-----------|----------|
| 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      |  |         |         |           |  |  |

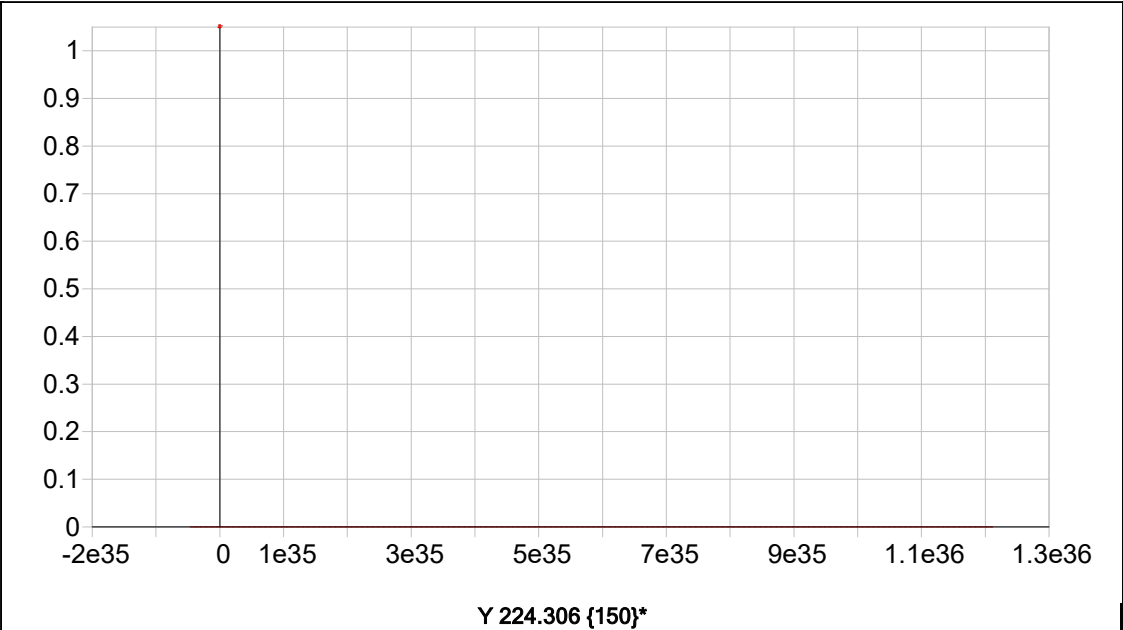
| Std. Name | Stated Conc. | Found Conc. | Difference | % Diff. | (S)IR | Std Dev | Emphasis |
|-----------|--------------|-------------|------------|---------|-------|---------|----------|
|-----------|--------------|-------------|------------|---------|-------|---------|----------|



Y 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 |
|-----------|--------------|-------------|------------|---------|-------|---------|----------|
|-----------|--------------|-------------|------------|---------|-------|---------|----------|



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

| Std. Name                                                                                                                                                                                                                                             | Stated Conc. | Found Conc. | Difference | % Diff. | (S)IR | Std Dev | Emphasis |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------|------------|---------|-------|---------|----------|
|                                                                                                                                                                   |              |             |            |         |       |         |          |
| ln 230.606 {446}*<br>The plot shows a single data point at the origin (0, 1). The x-axis ranges from -2e35 to 1.3e36 with major ticks every 1e35. The y-axis ranges from 0 to 1 with major ticks every 0.1. A red dot marks the data point at (0, 1). |              |             |            |         |       |         |          |

|              |           |  |              |          |            |        |
|--------------|-----------|--|--------------|----------|------------|--------|
| 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    |            | Status: | Warning | Zero Gain |          |
| n (Exponent):     |              | 1.000000    |            |         |         |           |          |
| Correlation:      |              | 0.000000    |            |         |         |           |          |
| 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 |

Sample Name: S0      Acquired: 8/21/2025 13:58:53      Type: Cal  
Method: 6010-200.7 NEW(v123)      Mode: IR      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |                |               |               |               |               |               |               |                |
|--------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|
| Elem   | As1890         | Tl1908        | Pb2203        | Se1960        | Sb2068        | Al3961        | Ba4934        | Be2348         |
| Units  | Cts/S          | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S          |
| Avg    | <b>-.00011</b> | <b>.00055</b> | <b>.00019</b> | <b>.00035</b> | <b>.00066</b> | <b>.00059</b> | <b>.07827</b> | <b>-.00134</b> |
| Stddev | .00002         | .00006        | .00012        | .00003        | .00015        | .00100        | .00287        | .00019         |
| %RSD   | 14.527         | 10.500        | 64.404        | 8.7864        | 22.117        | 167.81        | 3.6731        | 13.924         |

|    |                |               |               |               |               |                |               |                |
|----|----------------|---------------|---------------|---------------|---------------|----------------|---------------|----------------|
| #1 | <b>-.00009</b> | <b>.00051</b> | <b>.00032</b> | <b>.00038</b> | <b>.00059</b> | <b>-.00032</b> | <b>.07516</b> | <b>-.00114</b> |
| #2 | <b>-.00012</b> | <b>.00061</b> | <b>.00008</b> | <b>.00033</b> | <b>.00056</b> | <b>.00166</b>  | <b>.08083</b> | <b>-.00135</b> |
| #3 | <b>-.00012</b> | <b>.00053</b> | <b>.00017</b> | <b>.00033</b> | <b>.00083</b> | <b>.00044</b>  | <b>.07883</b> | <b>-.00151</b> |

|        |                |               |               |                |               |               |               |                |
|--------|----------------|---------------|---------------|----------------|---------------|---------------|---------------|----------------|
| Elem   | Cd2265         | Ca3736        | Cr2677        | Co2286         | Cu2247        | Fe2404        | Mn2576        | Mg2790         |
| Units  | Cts/S          | Cts/S         | Cts/S         | Cts/S          | Cts/S         | Cts/S         | Cts/S         | Cts/S          |
| Avg    | <b>-.00041</b> | <b>.00212</b> | <b>.00023</b> | <b>-.00007</b> | <b>.00039</b> | <b>.00005</b> | <b>.00038</b> | <b>-.00006</b> |
| Stddev | .00016         | .00027        | .00005        | .00009         | .00010        | .00001        | .00016        | .00010         |
| %RSD   | 39.241         | 12.655        | 20.075        | 125.58         | 25.998        | 17.852        | 41.020        | 156.13         |

|    |                |               |               |                |               |               |               |                |
|----|----------------|---------------|---------------|----------------|---------------|---------------|---------------|----------------|
| #1 | <b>-.00049</b> | <b>.00204</b> | <b>.00028</b> | <b>-.00016</b> | <b>.00030</b> | <b>.00005</b> | <b>.00037</b> | <b>-.00009</b> |
| #2 | <b>-.00051</b> | <b>.00242</b> | <b>.00019</b> | <b>-.00007</b> | <b>.00050</b> | <b>.00004</b> | <b>.00023</b> | <b>-.00014</b> |
| #3 | <b>-.00022</b> | <b>.00191</b> | <b>.00022</b> | <b>.00002</b>  | <b>.00038</b> | <b>.00006</b> | <b>.00054</b> | <b>.00005</b>  |

|        |                |                |               |                |               |               |               |               |
|--------|----------------|----------------|---------------|----------------|---------------|---------------|---------------|---------------|
| Elem   | Ni2316         | Ag3280         | Na5895        | V_2924         | Zn2138        | K_7664        | B_2496        | Mo2020        |
| Units  | Cts/S          | Cts/S          | Cts/S         | Cts/S          | Cts/S         | Cts/S         | Cts/S         | Cts/S         |
| Avg    | <b>-.00051</b> | <b>-.00085</b> | <b>.00114</b> | <b>-.00014</b> | <b>.00683</b> | <b>.00030</b> | <b>.00413</b> | <b>.00055</b> |
| Stddev | .00011         | .00012         | .00017        | .00031         | .00040        | .00011        | .00022        | .00011        |
| %RSD   | 21.318         | 14.288         | 14.562        | 223.40         | 5.9227        | 37.058        | 5.4346        | 19.704        |

|    |                |                |               |                |               |               |               |               |
|----|----------------|----------------|---------------|----------------|---------------|---------------|---------------|---------------|
| #1 | <b>-.00057</b> | <b>-.00079</b> | <b>.00095</b> | <b>-.00037</b> | <b>.00685</b> | <b>.00042</b> | <b>.00412</b> | <b>.00049</b> |
| #2 | <b>-.00058</b> | <b>-.00076</b> | <b>.00122</b> | <b>.00021</b>  | <b>.00722</b> | <b>.00021</b> | <b>.00436</b> | <b>.00067</b> |
| #3 | <b>-.00039</b> | <b>-.00098</b> | <b>.00126</b> | <b>-.00025</b> | <b>.00641</b> | <b>.00027</b> | <b>.00391</b> | <b>.00048</b> |

|        |               |               |               |                |               |               |               |  |
|--------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|--|
| Elem   | Sn1899        | Ti3361        | Si2881        | P_1774         | S_1820        | Li6707        | Sr4077        |  |
| Units  | Cts/S         | Cts/S         | Cts/S         | Cts/S          | Cts/S         | Cts/S         | Cts/S         |  |
| Avg    | <b>.00257</b> | <b>.00170</b> | <b>.00009</b> | <b>-.00109</b> | <b>.00036</b> | <b>.01079</b> | <b>.00037</b> |  |
| Stddev | .00004        | .00009        | .00003        | .00002         | .00008        | .00102        | .00087        |  |
| %RSD   | 1.6478        | 5.1776        | 32.256        | 1.8355         | 22.506        | 9.4309        | 236.17        |  |

|    |               |               |               |                |               |               |                |  |
|----|---------------|---------------|---------------|----------------|---------------|---------------|----------------|--|
| #1 | <b>.00252</b> | <b>.00176</b> | <b>.00012</b> | <b>-.00110</b> | <b>.00027</b> | <b>.01183</b> | <b>-.00063</b> |  |
| #2 | <b>.00260</b> | <b>.00175</b> | <b>.00006</b> | <b>-.00110</b> | <b>.00037</b> | <b>.00979</b> | <b>.00075</b>  |  |
| #3 | <b>.00258</b> | <b>.00160</b> | <b>.00008</b> | <b>-.00107</b> | <b>.00043</b> | <b>.01074</b> | <b>.00097</b>  |  |



Sample Name: S0      Acquired: 8/21/2025 13:58:53      Type: Cal  
Method: 6010-200.7 NEW(v123)      Mode: IR      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|           |        |         |        |        |        |
|-----------|--------|---------|--------|--------|--------|
| Int. Std. | Y_2243 | Y_3600  | Y_3710 | Y_2243 | In2306 |
| Units     | Cts/S  | Cts/S   | Cts/S  | Cts/S  | Cts/S  |
| Avg       | 6337.0 | 106380. | 10465. | 4926.5 | 7972.4 |
| Stddev    | 10.4   | 404.    | 24.    | 15.3   | 13.1   |
| %RSD      | .16409 | .38000  | .23168 | .31059 | .16460 |
| #1        | 6331.0 | 105930. | 10482. | 4936.7 | 7959.6 |
| #2        | 6331.1 | 106710. | 10437. | 4933.9 | 7971.6 |
| #3        | 6349.0 | 106500. | 10476. | 4908.9 | 7985.9 |

Sample Name: S1      Acquired: 8/21/2025 14:03:14      Type: Cal  
Method: 6010-200.7 NEW(v123)      Mode: IR      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |        |        |        |        |        |        |        |        |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Elem   | As1890 | Tl1908 | Pb2203 | Se1960 | Sb2068 | Al3961 | Ba4934 | Be2348 |
| Units  | Cts/S  | Cts/S  | Cts/S  | Cts/S  | Cts/S  | Cts/S  | Cts/S  | Cts/S  |
| Avg    | .00084 | .00366 | .00246 | .00138 | .00523 | .00904 | .30623 | .04186 |
| Stddev | .00004 | .00007 | .00008 | .00003 | .00018 | .00054 | .00125 | .00065 |
| %RSD   | 4.6650 | 1.9168 | 3.0533 | 2.2737 | 3.3917 | 5.9769 | .40851 | 1.5472 |

|    |        |        |        |        |        |        |        |        |
|----|--------|--------|--------|--------|--------|--------|--------|--------|
| #1 | .00080 | .00374 | .00242 | .00137 | .00543 | .00911 | .30575 | .04140 |
| #2 | .00088 | .00361 | .00255 | .00135 | .00510 | .00846 | .30765 | .04260 |
| #3 | .00085 | .00363 | .00242 | .00142 | .00517 | .00954 | .30529 | .04158 |

|        |        |        |        |        |        |        |        |        |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Elem   | Cd2265 | Ca3736 | Cr2677 | Co2286 | Cu2247 | Fe2404 | Mn2576 | Mg2790 |
| Units  | Cts/S  | Cts/S  | Cts/S  | Cts/S  | Cts/S  | Cts/S  | Cts/S  | Cts/S  |
| Avg    | .01653 | .11698 | .00213 | .02999 | .01397 | .00035 | .00919 | .02465 |
| Stddev | .00007 | .00085 | .00005 | .00021 | .00015 | .00002 | .00013 | .00011 |
| %RSD   | .42886 | .72409 | 2.4743 | .68837 | 1.0855 | 4.7321 | 1.3846 | .46443 |

|    |        |        |        |        |        |        |        |        |
|----|--------|--------|--------|--------|--------|--------|--------|--------|
| #1 | .01655 | .11681 | .00213 | .02984 | .01383 | .00035 | .00905 | .02460 |
| #2 | .01659 | .11790 | .00208 | .02990 | .01413 | .00037 | .00921 | .02458 |
| #3 | .01645 | .11623 | .00219 | .03022 | .01396 | .00033 | .00930 | .02478 |

|        |        |        |        |        |        |        |        |        |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Elem   | Ni2316 | Ag3280 | Na5895 | V_2924 | Zn2138 | K_7664 | B_2496 | Mo2020 |
| Units  | Cts/S  | Cts/S  | Cts/S  | Cts/S  | Cts/S  | Cts/S  | Cts/S  | Cts/S  |
| Avg    | .02297 | .00105 | .01635 | .00486 | .09872 | .00859 | .07561 | .13146 |
| Stddev | .00006 | .00011 | .00012 | .00010 | .00026 | .00001 | .00081 | .00028 |
| %RSD   | .24136 | 10.029 | .75391 | 1.9899 | .26662 | .14061 | 1.0695 | .21417 |

|    |        |        |        |        |        |        |        |        |
|----|--------|--------|--------|--------|--------|--------|--------|--------|
| #1 | .02297 | .00101 | .01622 | .00478 | .09844 | .00857 | .07501 | .13178 |
| #2 | .02303 | .00097 | .01638 | .00483 | .09874 | .00858 | .07653 | .13123 |
| #3 | .02292 | .00117 | .01646 | .00496 | .09896 | .00860 | .07529 | .13139 |

|        |        |        |        |         |        |        |        |  |
|--------|--------|--------|--------|---------|--------|--------|--------|--|
| Elem   | Sn1899 | Ti3361 | Si2881 | P_1774  | S_1820 | Li6707 | Sr4077 |  |
| Units  | Cts/S  | Cts/S  | Cts/S  | Cts/S   | Cts/S  | Cts/S  | Cts/S  |  |
| Avg    | .00759 | .01250 | .00119 | -.00016 | .00086 | .02473 | .15145 |  |
| Stddev | .00009 | .00041 | .00001 | .00005  | .00004 | .00105 | .00078 |  |
| %RSD   | 1.1435 | 3.2894 | 1.2536 | 30.969  | 4.4265 | 4.2480 | .51516 |  |

|    |        |        |        |         |        |        |        |  |
|----|--------|--------|--------|---------|--------|--------|--------|--|
| #1 | .00763 | .01207 | .00118 | -.00012 | .00085 | .02556 | .15097 |  |
| #2 | .00765 | .01289 | .00121 | -.00016 | .00090 | .02509 | .15235 |  |
| #3 | .00749 | .01254 | .00118 | -.00022 | .00083 | .02355 | .15104 |  |

Sample Name: S1      Acquired: 8/21/2025 14:03:14      Type: Cal  
Method: 6010-200.7 NEW(v123)      Mode: IR      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

| Int. Std. | Y_2243 | Y_3600  | Y_3710 | Y_2243 | ln2306 |
|-----------|--------|---------|--------|--------|--------|
| Units     | Cts/S  | Cts/S   | Cts/S  | Cts/S  | Cts/S  |
| Avg       | 6361.0 | 108960. | 10787. | 4971.0 | 7871.0 |
| Stddev    | 3.7    | 300.    | 69.    | 19.2   | 15.8   |
| %RSD      | .05775 | .27541  | .64173 | .38553 | .20049 |
| #1        | 6363.3 | 108920. | 10866. | 4953.1 | 7885.7 |
| #2        | 6356.8 | 109280. | 10757. | 4991.2 | 7854.3 |
| #3        | 6362.9 | 108680. | 10737. | 4968.6 | 7872.9 |

Sample Name: S2      Acquired: 8/21/2025 14:07:31      Type: Cal  
Method: 6010-200.7 NEW(v123)      Mode: IR      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |               |               |               |               |               |               |               |               |               |
|--------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Elem   | As1890        | Tl1908        | Pb2203        | Se1960        | Sb2068        | Al3961        | Ba4934        | Be2348        | Cd2265        |
| Units  | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         |
| Avg    | <b>.03847</b> | <b>.06463</b> | <b>.15243</b> | <b>.03670</b> | <b>.07323</b> | <b>.12298</b> | <b>3.7677</b> | <b>.28048</b> | <b>1.1277</b> |
| Stddev | .00015        | .00101        | .00030        | .00013        | .00023        | .00037        | .0097         | .00283        | .0020         |
| %RSD   | .39181        | 1.5597        | .19875        | .34937        | .30731        | .30320        | .25833        | 1.0088        | .17566        |

|    |               |               |               |               |               |               |               |               |               |
|----|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| #1 | <b>.03844</b> | <b>.06494</b> | <b>.15212</b> | <b>.03668</b> | <b>.07345</b> | <b>.12300</b> | <b>3.7674</b> | <b>.28339</b> | <b>1.1262</b> |
| #2 | <b>.03833</b> | <b>.06350</b> | <b>.15272</b> | <b>.03658</b> | <b>.07323</b> | <b>.12335</b> | <b>3.7582</b> | <b>.27774</b> | <b>1.1270</b> |
| #3 | <b>.03863</b> | <b>.06544</b> | <b>.15245</b> | <b>.03684</b> | <b>.07300</b> | <b>.12260</b> | <b>3.7776</b> | <b>.28032</b> | <b>1.1300</b> |

|        |               |               |               |               |               |               |               |               |               |
|--------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Elem   | Ca3736        | Cr2677        | Co2286        | Cu2247        | Fe2404        | Mn2576        | Mg2790        | Ni2316        | Ag3280        |
| Units  | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         |
| Avg    | <b>.23073</b> | <b>.03145</b> | <b>.39532</b> | <b>.12970</b> | <b>.00260</b> | <b>.16868</b> | <b>.04588</b> | <b>.23021</b> | <b>.03868</b> |
| Stddev | .00087        | .00008        | .00101        | .00021        | .00000        | .00062        | .00047        | .00031        | .00006        |
| %RSD   | .37658        | .26163        | .25506        | .16053        | .19042        | .36621        | 1.0338        | .13340        | .16526        |

|    |               |               |               |               |               |               |               |               |               |
|----|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| #1 | <b>.23118</b> | <b>.03139</b> | <b>.39417</b> | <b>.12955</b> | <b>.00259</b> | <b>.16907</b> | <b>.04632</b> | <b>.22987</b> | <b>.03875</b> |
| #2 | <b>.22973</b> | <b>.03143</b> | <b>.39606</b> | <b>.12961</b> | <b>.00260</b> | <b>.16797</b> | <b>.04538</b> | <b>.23047</b> | <b>.03865</b> |
| #3 | <b>.23127</b> | <b>.03155</b> | <b>.39573</b> | <b>.12993</b> | <b>.00260</b> | <b>.16901</b> | <b>.04594</b> | <b>.23029</b> | <b>.03863</b> |

|        |               |               |               |               |               |               |               |               |               |
|--------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Elem   | Na5895        | V_2924        | Zn2138        | K_7664        | B_2496        | Mo2020        | Sn1899        | Ti3361        | Si2881        |
| Units  | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         |
| Avg    | <b>.03221</b> | <b>.04956</b> | <b>.93555</b> | <b>.01732</b> | <b>.57494</b> | <b>.52049</b> | <b>.11267</b> | <b>.23121</b> | <b>.00245</b> |
| Stddev | .00052        | .00012        | .00102        | .00024        | .00666        | .00058        | .00037        | .00095        | .00005        |
| %RSD   | 1.6046        | .23599        | .10899        | 1.3721        | 1.1585        | .11125        | .32706        | .41157        | 2.0105        |

|    |               |               |               |               |               |               |               |               |               |
|----|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| #1 | <b>.03181</b> | <b>.04962</b> | <b>.93473</b> | <b>.01704</b> | <b>.58192</b> | <b>.51999</b> | <b>.11225</b> | <b>.23093</b> | <b>.00241</b> |
| #2 | <b>.03202</b> | <b>.04964</b> | <b>.93523</b> | <b>.01744</b> | <b>.56865</b> | <b>.52035</b> | <b>.11294</b> | <b>.23044</b> | <b>.00244</b> |
| #3 | <b>.03280</b> | <b>.04943</b> | <b>.93669</b> | <b>.01747</b> | <b>.57425</b> | <b>.52112</b> | <b>.11283</b> | <b>.23228</b> | <b>.00250</b> |

|        |               |               |               |               |
|--------|---------------|---------------|---------------|---------------|
| Elem   | P_1774        | S_1820        | Li6707        | Sr4077        |
| Units  | Cts/S         | Cts/S         | Cts/S         | Cts/S         |
| Avg    | <b>.03432</b> | <b>.02238</b> | <b>.63104</b> | <b>6.1412</b> |
| Stddev | .00005        | .00012        | .00240        | .0145         |
| %RSD   | .13799        | .53296        | .37987        | .23571        |

|    |               |               |               |               |
|----|---------------|---------------|---------------|---------------|
| #1 | <b>.03427</b> | <b>.02233</b> | <b>.63260</b> | <b>6.1415</b> |
| #2 | <b>.03436</b> | <b>.02229</b> | <b>.62828</b> | <b>6.1266</b> |
| #3 | <b>.03434</b> | <b>.02251</b> | <b>.63224</b> | <b>6.1555</b> |

Sample Name: S2      Acquired: 8/21/2025 14:07:31      Type: Cal  
Method: 6010-200.7 NEW(v123)      Mode: IR      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

| Int. Std. | Y_2243 | Y_3600  | Y_3710 | Y_2243 | In2306 |
|-----------|--------|---------|--------|--------|--------|
| Units     | Cts/S  | Cts/S   | Cts/S  | Cts/S  | Cts/S  |
| Avg       | 6320.2 | 105630. | 10687. | 4945.0 | 7685.3 |
| Stddev    | 10.1   | 286.    | 100.   | 18.1   | 24.1   |
| %RSD      | .16044 | .27102  | .93387 | .36611 | .31328 |
| #1        | 6331.5 | 105940. | 10576. | 4961.3 | 7713.1 |
| #2        | 6317.2 | 105580. | 10770. | 4948.3 | 7670.4 |
| #3        | 6311.9 | 105380. | 10714. | 4925.5 | 7672.5 |

Sample Name: S3      Acquired: 8/21/2025 14:11:35      Type: Cal  
Method: 6010-200.7 NEW(v123)      Mode: IR      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |               |               |               |               |               |               |               |               |               |
|--------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Elem   | As1890        | Tl1908        | Pb2203        | Se1960        | Sb2068        | Al3961        | Ba4934        | Be2348        | Cd2265        |
| Units  | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         |
| Avg    | <b>.12027</b> | <b>.19784</b> | <b>.47508</b> | <b>.11305</b> | <b>.22469</b> | <b>.37711</b> | <b>11.545</b> | <b>.86747</b> | <b>3.5784</b> |
| Stddev | .00021        | .00599        | .00090        | .00044        | .00037        | .00144        | .038          | .00100        | .0057         |
| %RSD   | .17826        | 3.0255        | .18948        | .38671        | .16290        | .38165        | .33319        | .11493        | .15979        |
| #1     | .12016        | .19460        | .47450        | .11255        | .22437        | .37605        | 11.537        | .86840        | 3.5766        |
| #2     | .12013        | .20475        | .47463        | .11334        | .22461        | .37653        | 11.511        | .86760        | 3.5738        |
| #3     | .12051        | .19417        | .47612        | .11326        | .22509        | .37875        | 11.586        | .86642        | 3.5848        |
| Elem   | Ca3736        | Cr2677        | Co2286        | Cu2247        | Fe2404        | Mn2576        | Mg2790        | Ni2316        | Ag3280        |
| Units  | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         |
| Avg    | <b>.70494</b> | <b>.09628</b> | <b>1.2415</b> | <b>.39776</b> | <b>.00800</b> | <b>.51707</b> | <b>.13948</b> | <b>.72169</b> | <b>.12039</b> |
| Stddev | .00135        | .00046        | .0022         | .00073        | .00004        | .00115        | .00046        | .00092        | .00017        |
| %RSD   | .19102        | .47768        | .18101        | .18342        | .53253        | .22241        | .33324        | .12683        | .14252        |
| #1     | .70508        | .09680        | 1.2408        | .39787        | .00803        | .51687        | .13957        | .72101        | .12058        |
| #2     | .70352        | .09590        | 1.2396        | .39698        | .00795        | .51604        | .13989        | .72134        | .12030        |
| #3     | .70620        | .09615        | 1.2440        | .39843        | .00801        | .51831        | .13897        | .72273        | .12028        |
| Elem   | Na5895        | V_2924        | Zn2138        | K_7664        | B_2496        | Mo2020        | Sn1899        | Ti3361        | Si2881        |
| Units  | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         |
| Avg    | <b>.09706</b> | <b>.15530</b> | <b>2.8647</b> | <b>.05340</b> | <b>1.7641</b> | <b>1.5974</b> | <b>.34989</b> | <b>.71041</b> | <b>.00736</b> |
| Stddev | .00046        | .00017        | .0081         | .00011        | .0024         | .0034         | .00095        | .00151        | .00004        |
| %RSD   | .47275        | .10706        | .28317        | .20101        | .13420        | .21420        | .27081        | .21277        | .53314        |
| #1     | .09729        | .15536        | 2.8701        | .05332        | 1.7652        | 1.5935        | .34882        | .71160        | .00740        |
| #2     | .09653        | .15542        | 2.8554        | .05336        | 1.7658        | 1.5994        | .35027        | .70871        | .00736        |
| #3     | .09736        | .15511        | 2.8685        | .05352        | 1.7614        | 1.5994        | .35059        | .71092        | .00732        |
| Elem   | P_1774        | S_1820        | Li6707        | Sr4077        |               |               |               |               |               |
| Units  | Cts/S         | Cts/S         | Cts/S         | Cts/S         |               |               |               |               |               |
| Avg    | <b>.11305</b> | <b>.07138</b> | <b>1.9075</b> | <b>18.819</b> |               |               |               |               |               |
| Stddev | .00072        | .00061        | .0067         | .061          |               |               |               |               |               |
| %RSD   | .63742        | .85603        | .35410        | .32310        |               |               |               |               |               |
| #1     | .11269        | .07114        | 1.9055        | 18.883        |               |               |               |               |               |
| #2     | .11388        | .07208        | 1.9020        | 18.762        |               |               |               |               |               |
| #3     | .11258        | .07093        | 1.9151        | 18.812        |               |               |               |               |               |

Sample Name: S3      Acquired: 8/21/2025 14:11:35      Type: Cal  
Method: 6010-200.7 NEW(v123)      Mode: IR      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|           |        |         |        |        |        |
|-----------|--------|---------|--------|--------|--------|
| Int. Std. | Y_2243 | Y_3600  | Y_3710 | Y_2243 | In2306 |
| Units     | Cts/S  | Cts/S   | Cts/S  | Cts/S  | Cts/S  |
| Avg       | 6224.1 | 104950. | 10717. | 4882.6 | 7359.8 |
| Stddev    | 8.7    | 372.    | 20.    | 20.7   | 10.9   |
| %RSD      | .14031 | .35485  | .18387 | .42475 | .14874 |
| #1        | 6225.9 | 104520. | 10695. | 4881.5 | 7361.1 |
| #2        | 6231.8 | 105160. | 10722. | 4903.8 | 7370.0 |
| #3        | 6214.6 | 105170. | 10734. | 4862.4 | 7348.2 |

Sample Name: S4      Acquired: 8/21/2025 14:15:38      Type: Cal  
Method: 6010-200.7 NEW(v123)      Mode: IR      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |               |               |               |               |               |               |               |               |               |
|--------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Elem   | As1890        | Tl1908        | Pb2203        | Se1960        | Sb2068        | Al3961        | Ba4934        | Be2348        | Cd2265        |
| Units  | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         |
| Avg    | <b>.24494</b> | <b>.43789</b> | <b>.95583</b> | <b>.22945</b> | <b>.45393</b> | <b>.74937</b> | <b>22.854</b> | <b>1.7157</b> | <b>7.2866</b> |
| Stddev | .00060        | .01299        | .00104        | .00055        | .00046        | .00304        | .166          | .0089         | .0024         |
| %RSD   | .24625        | 2.9671        | .10857        | .24168        | .10025        | .40583        | .72838        | .51848        | .03356        |
| #1     | .24546        | .45081        | .95639        | .23003        | .45441        | .75042        | 22.784        | 1.7257        | 7.2844        |
| #2     | .24509        | .43804        | .95646        | .22940        | .45351        | .75174        | 23.044        | 1.7085        | 7.2892        |
| #3     | .24428        | .42483        | .95463        | .22892        | .45386        | .74594        | 22.735        | 1.7131        | 7.2861        |
| Elem   | Ca3736        | Cr2677        | Co2286        | Cu2247        | Fe2404        | Mn2576        | Mg2790        | Ni2316        | Ag3280        |
| Units  | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         |
| Avg    | <b>1.3906</b> | <b>.18933</b> | <b>2.5229</b> | <b>.78781</b> | <b>.01578</b> | <b>1.0243</b> | <b>.27993</b> | <b>1.4597</b> | <b>.24052</b> |
| Stddev | .0009         | .00053        | .0007         | .00049        | .00019        | .0019         | .00038        | .0013         | .00023        |
| %RSD   | .06385        | .28157        | .02618        | .06158        | 1.1856        | .18402        | .13673        | .08600        | .09445        |
| #1     | 1.3904        | .18907        | 2.5230        | .78810        | .01557        | 1.0232        | .28033        | 1.4598        | .24032        |
| #2     | 1.3916        | .18898        | 2.5236        | .78725        | .01584        | 1.0232        | .27957        | 1.4608        | .24048        |
| #3     | 1.3898        | .18994        | 2.5223        | .78808        | .01594        | 1.0265        | .27991        | 1.4583        | .24077        |
| Elem   | Na5895        | V_2924        | Zn2138        | K_7664        | B_2496        | Mo2020        | Sn1899        | Ti3361        | Si2881        |
| Units  | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         |
| Avg    | <b>.19197</b> | <b>.31046</b> | <b>5.6368</b> | <b>.10543</b> | <b>3.5542</b> | <b>3.2061</b> | <b>.70706</b> | <b>1.4137</b> | <b>.01464</b> |
| Stddev | .00190        | .00033        | .0190         | .00090        | .0182         | .0017         | .00259        | .0032         | .00018        |
| %RSD   | .99033        | .10614        | .33688        | .84948        | .51207        | .05407        | .36606        | .22488        | 1.2004        |
| #1     | .19005        | .31071        | 5.6574        | .10440        | 3.5744        | 3.2080        | .70947        | 1.4107        | .01446        |
| #2     | .19199        | .31058        | 5.6199        | .10591        | 3.5491        | 3.2046        | .70739        | 1.4170        | .01466        |
| #3     | .19386        | .31009        | 5.6332        | .10599        | 3.5391        | 3.2056        | .70432        | 1.4134        | .01481        |
| Elem   | P_1774        | S_1820        | Li6707        | Sr4077        |               |               |               |               |               |
| Units  | Cts/S         | Cts/S         | Cts/S         | Cts/S         |               |               |               |               |               |
| Avg    | <b>.23607</b> | <b>.15159</b> | <b>3.7647</b> | <b>37.284</b> |               |               |               |               |               |
| Stddev | .00198        | .00123        | .0086         | .285          |               |               |               |               |               |
| %RSD   | .83934        | .80951        | .22889        | .76514        |               |               |               |               |               |
| #1     | .23782        | .15286        | 3.7557        | 37.054        |               |               |               |               |               |
| #2     | .23648        | .15151        | 3.7654        | 37.195        |               |               |               |               |               |
| #3     | .23392        | .15041        | 3.7729        | 37.603        |               |               |               |               |               |



Sample Name: S4      Acquired: 8/21/2025 14:15:38      Type: Cal  
Method: 6010-200.7 NEW(v123)      Mode: IR      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

| Int. Std. | Y_2243 | Y_3600  | Y_3710 | Y_2243 | In2306 |
|-----------|--------|---------|--------|--------|--------|
| Units     | Cts/S  | Cts/S   | Cts/S  | Cts/S  | Cts/S  |
| Avg       | 6159.2 | 105180. | 10637. | 4860.4 | 7121.0 |
| Stddev    | 5.7    | 263.    | 54.    | 17.2   | 12.4   |
| %RSD      | .09310 | .25047  | .50589 | .35478 | .17423 |
| #1        | 6152.9 | 105440. | 10577. | 4844.1 | 7109.1 |
| #2        | 6164.0 | 105170. | 10653. | 4878.4 | 7119.9 |
| #3        | 6160.7 | 104920. | 10681. | 4858.7 | 7133.9 |

Sample Name: S5      Acquired: 8/21/2025 14:19:50      Type: Cal  
Method: 6010-200.7 NEW(v123)      Mode: IR      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |               |               |               |               |               |               |               |               |               |
|--------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Elem   | As1890        | Tl1908        | Pb2203        | Se1960        | Sb2068        | Al3961        | Ba4934        | Be2348        | Cd2265        |
| Units  | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         |
| Avg    | <b>.50206</b> | <b>.85848</b> | <b>1.9685</b> | <b>.47115</b> | <b>.93360</b> | <b>1.5299</b> | <b>46.039</b> | <b>3.4420</b> | <b>14.920</b> |
| Stddev | .00081        | .02094        | .0018         | .00121        | .00077        | .0026         | .352          | .0313         | .016          |
| %RSD   | .16075        | 2.4387        | .09341        | .25621        | .08275        | .16746        | .76562        | .91024        | .10496        |

|    |               |               |               |               |               |               |               |               |               |
|----|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| #1 | <b>.50292</b> | <b>.88087</b> | <b>1.9703</b> | <b>.47250</b> | <b>.93446</b> | <b>1.5326</b> | <b>46.098</b> | <b>3.4679</b> | <b>14.937</b> |
| #2 | <b>.50131</b> | <b>.83939</b> | <b>1.9685</b> | <b>.47018</b> | <b>.93339</b> | <b>1.5295</b> | <b>45.661</b> | <b>3.4072</b> | <b>14.916</b> |
| #3 | <b>.50196</b> | <b>.85517</b> | <b>1.9666</b> | <b>.47076</b> | <b>.93296</b> | <b>1.5275</b> | <b>46.359</b> | <b>3.4509</b> | <b>14.906</b> |

|        |               |               |               |               |               |               |               |               |               |
|--------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Elem   | Ca3736        | Cr2677        | Co2286        | Cu2247        | Fe2404        | Mn2576        | Mg2790        | Ni2316        | Ag3280        |
| Units  | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         |
| Avg    | <b>2.7998</b> | <b>.38063</b> | <b>5.2062</b> | <b>1.5816</b> | <b>.03230</b> | <b>2.0427</b> | <b>.56479</b> | <b>2.9986</b> | <b>.49235</b> |
| Stddev | .0042         | .00145        | .0016         | .0005         | .00010        | .0122         | .00221        | .0013         | .00094        |
| %RSD   | .15154        | .38084        | .03152        | .03425        | .31298        | .59539        | .39113        | .04389        | .19187        |

|    |               |               |               |               |               |               |               |               |               |
|----|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| #1 | <b>2.8038</b> | <b>.38221</b> | <b>5.2072</b> | <b>1.5819</b> | <b>.03219</b> | <b>2.0466</b> | <b>.56712</b> | <b>3.0001</b> | <b>.49343</b> |
| #2 | <b>2.7954</b> | <b>.37937</b> | <b>5.2070</b> | <b>1.5820</b> | <b>.03233</b> | <b>2.0291</b> | <b>.56453</b> | <b>2.9975</b> | <b>.49168</b> |
| #3 | <b>2.8002</b> | <b>.38031</b> | <b>5.2043</b> | <b>1.5810</b> | <b>.03239</b> | <b>2.0524</b> | <b>.56272</b> | <b>2.9983</b> | <b>.49195</b> |

|        |               |               |               |               |               |               |               |               |               |
|--------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Elem   | Na5895        | V_2924        | Zn2138        | K_7664        | B_2496        | Mo2020        | Sn1899        | Ti3361        | Si2881        |
| Units  | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         | Cts/S         |
| Avg    | <b>.39528</b> | <b>.63324</b> | <b>11.331</b> | <b>.21891</b> | <b>7.0901</b> | <b>6.4640</b> | <b>1.4386</b> | <b>2.8750</b> | <b>.03049</b> |
| Stddev | .00170        | .00151        | .033          | .00079        | .0565         | .0099         | .0032         | .0100         | .00017        |
| %RSD   | .43116        | .23825        | .29220        | .36303        | .79688        | .15270        | .22020        | .34937        | .57036        |

|    |               |               |               |               |               |               |               |               |               |
|----|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| #1 | <b>.39366</b> | <b>.63189</b> | <b>11.367</b> | <b>.21801</b> | <b>7.1355</b> | <b>6.4750</b> | <b>1.4422</b> | <b>2.8761</b> | <b>.03035</b> |
| #2 | <b>.39513</b> | <b>.63297</b> | <b>11.301</b> | <b>.21951</b> | <b>7.0268</b> | <b>6.4560</b> | <b>1.4375</b> | <b>2.8645</b> | <b>.03069</b> |
| #3 | <b>.39706</b> | <b>.63487</b> | <b>11.324</b> | <b>.21922</b> | <b>7.1081</b> | <b>6.4609</b> | <b>1.4362</b> | <b>2.8845</b> | <b>.03045</b> |

|        |               |               |               |               |
|--------|---------------|---------------|---------------|---------------|
| Elem   | P_1774        | S_1820        | Li6707        | Sr4077        |
| Units  | Cts/S         | Cts/S         | Cts/S         | Cts/S         |
| Avg    | <b>.49033</b> | <b>.32310</b> | <b>7.6749</b> | <b>74.476</b> |
| Stddev | .00135        | .00173        | .0401         | 1.077         |
| %RSD   | .27569        | .53645        | .52315        | 1.4459        |

|    |               |               |               |               |
|----|---------------|---------------|---------------|---------------|
| #1 | <b>.49189</b> | <b>.32456</b> | <b>7.6815</b> | <b>74.694</b> |
| #2 | <b>.48950</b> | <b>.32119</b> | <b>7.6318</b> | <b>73.306</b> |
| #3 | <b>.48959</b> | <b>.32356</b> | <b>7.7113</b> | <b>75.426</b> |

Sample Name: S5      Acquired: 8/21/2025 14:19:50      Type: Cal  
Method: 6010-200.7 NEW(v123)      Mode: IR      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|           |        |         |        |        |        |
|-----------|--------|---------|--------|--------|--------|
| Int. Std. | Y_2243 | Y_3600  | Y_3710 | Y_2243 | In2306 |
| Units     | Cts/S  | Cts/S   | Cts/S  | Cts/S  | Cts/S  |
| Avg       | 6003.3 | 103480. | 10679. | 4671.1 | 6766.3 |
| Stddev    | 1.6    | 634.    | 108.   | 25.1   | 5.2    |
| %RSD      | .02693 | .61280  | 1.0155 | .53682 | .07717 |
| #1        | 6001.6 | 102770. | 10561. | 4645.0 | 6761.0 |
| #2        | 6003.5 | 103670. | 10775. | 4673.3 | 6766.5 |
| #3        | 6004.8 | 103990. | 10703. | 4695.1 | 6771.5 |

Sample Name: ICV01      Acquired: 8/21/2025 14:24:01      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1: ICV01      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                   |                 |                 |                 |
|--------|-----------------|-----------------|-------------------|-----------------|-----------------|-----------------|
| Elem   | As1890          | Tl1908          | Pb2203            | Se1960          | Sb2068          | Al3961          |
| Units  | ppm             | ppm             | ppm               | ppm             | ppm             | ppm             |
| Avg    | <b>3.870986</b> | <b>3.830387</b> | <b>F 3.762221</b> | <b>3.901310</b> | <b>4.048968</b> | <b>7.872013</b> |
| Stddev | .007917         | .065510         | .000595           | .012650         | .003169         | .018031         |
| %RSD   | .2045191        | 1.710265        | .0158258          | .3242491        | .0782786        | .2290534        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | 3.878828 | 3.838916 | 3.761668 | 3.905084 | 4.051221 | 7.867385 |
| #2 | 3.871135 | 3.891215 | 3.762143 | 3.911643 | 4.045344 | 7.891907 |
| #3 | 3.862996 | 3.761031 | 3.762852 | 3.887202 | 4.050339 | 7.856747 |

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Ba4934          | Be2348          | Cd2265          | Ca3736          | Cr2677          | Co2286          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>8.018720</b> | <b>.1940973</b> | <b>1.911793</b> | <b>19.68444</b> | <b>.7890724</b> | <b>1.945510</b> |
| Stddev | .043691         | .0014610        | .000831         | .04770          | .0008603        | .000699         |
| %RSD   | .5448652        | .7526971        | .0434579        | .2422985        | .1090219        | .0359156        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | 7.993682 | .1936226 | 1.912652 | 19.63855 | .7881376 | 1.944725 |
| #2 | 7.993308 | .1929327 | 1.911733 | 19.68100 | .7898307 | 1.945742 |
| #3 | 8.069170 | .1957366 | 1.910993 | 19.73376 | .7892490 | 1.946064 |

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Cu2247          | Fe2404          | Mn2576          | Mg2790          | Ni2316          | Ag3280          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>1.000662</b> | <b>4.104563</b> | <b>2.000336</b> | <b>19.60801</b> | <b>1.940947</b> | <b>.9822066</b> |
| Stddev | .001236         | .033149         | .001223         | .08078          | .000567         | .0010916        |
| %RSD   | .1235658        | .8076216        | .0611355        | .4119837        | .0292356        | .1111406        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | 1.001373 | 4.097992 | 1.999077 | 19.52743 | 1.941118 | .9812527 |
| #2 | .999234  | 4.140505 | 2.001519 | 19.60759 | 1.940313 | .9819700 |
| #3 | 1.001379 | 4.075190 | 2.000413 | 19.68900 | 1.941409 | .9833971 |

|        |                 |                 |                 |                 |                   |                   |
|--------|-----------------|-----------------|-----------------|-----------------|-------------------|-------------------|
| Elem   | Na5895          | V_2924          | Zn2138          | K_7664          | B_2496            | Mo2020            |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm               | ppm               |
| Avg    | <b>20.98596</b> | <b>2.010369</b> | <b>1.981226</b> | <b>20.34438</b> | <b>F .0127906</b> | <b>F .0005589</b> |
| Stddev | .15407          | .001299         | .005307         | .16352          | .0003457          | .0003087          |
| %RSD   | .7341738        | .0645937        | .2678882        | .8037388        | 2.702956          | 55.23104          |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | 21.00469 | 2.011254 | 1.975590 | 20.30202 | .0131395 | .0008985 |
| #2 | 21.12982 | 2.008879 | 1.981961 | 20.52491 | .0127842 | .0004828 |
| #3 | 20.82338 | 2.010976 | 1.986129 | 20.20621 | .0124482 | .0002954 |

Sample Name: ICV01      Acquired: 8/21/2025 14:24:01      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1: ICV01      Custom ID2:      Custom ID3:  
Comment:

|        |                   |                   |                   |                   |                   |                   |
|--------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Elem   | Sn1899            | Ti3361            | Si2881            | P_1774            | S_1820            | Li6707            |
| Units  | ppm               | ppm               | ppm               | ppm               | ppm               | ppm               |
| Avg    | F <b>-.002165</b> | F <b>-.005340</b> | F <b>-.030242</b> | F <b>.0055970</b> | F <b>.0074167</b> | F <b>-.001773</b> |
| Stddev | .000059           | .001255           | .011645           | .0022713          | .0034525          | .001405           |
| %RSD   | 2.713501          | 23.50176          | 38.50637          | 40.58048          | 46.54976          | 79.25110          |
| #1     | -.002219          | -.004230          | -.023032          | .0059365          | .0076492          | -.003314          |
| #2     | -.002173          | -.005089          | -.024018          | .0031751          | .0038539          | -.000562          |
| #3     | -.002103          | -.006702          | -.043677          | .0076795          | .0107471          | -.001443          |

|        |                   |
|--------|-------------------|
| Elem   | Sr4077            |
| Units  | ppm               |
| Avg    | F <b>-.003364</b> |
| Stddev | .000056           |
| %RSD   | 1.652941          |
| #1     | -.003300          |
| #2     | -.003399          |
| #3     | -.003392          |

|           |                 |                 |                 |                 |                 |
|-----------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Int. Std. | Y_2243          | Y_3600          | Y_3710          | Y_2243          | In2306          |
| Units     | Cts/S           | Cts/S           | Cts/S           | Cts/S           | Cts/S           |
| Avg       | <b>6330.646</b> | <b>107821.5</b> | <b>11402.35</b> | <b>4996.290</b> | <b>7443.746</b> |
| Stddev    | 7.164           | 90.8            | 83.26           | 13.093          | 6.364           |
| %RSD      | .1131634        | .0841744        | .7302242        | .2620480        | .0854904        |
| #1        | 6322.452        | 107912.9        | 11404.54        | 5011.143        | 7437.075        |
| #2        | 6335.723        | 107731.4        | 11484.50        | 4991.306        | 7449.750        |
| #3        | 6333.764        | 107820.1        | 11318.01        | 4986.422        | 7444.413        |

Sample Name: LLICV01      Acquired: 8/21/2025 14:33:10      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1: LLICV01      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | As1890          | Tl1908          | Pb2203          | Se1960          | Sb2068          | Al3961          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.0203787</b> | <b>.0399239</b> | <b>.0126240</b> | <b>.0204589</b> | <b>.0489030</b> | <b>.1070484</b> |
| Stddev | .0018832        | .0002195        | .0011116        | .0030674        | .0004624        | .0057035        |
| %RSD   | 9.241284        | .5497760        | 8.805286        | 14.99281        | .9455626        | 5.327968        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | .0183459 | .0397322 | .0113499 | .0204286 | .0484122 | .1005437 |
| #2 | .0207260 | .0398762 | .0133955 | .0174068 | .0493305 | .1111933 |
| #3 | .0220641 | .0401634 | .0131267 | .0235413 | .0489661 | .1094081 |

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Ba4934          | Be2348          | Cd2265          | Ca3736          | Cr2677          | Co2286          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.1004057</b> | <b>.0061066</b> | <b>.0057380</b> | <b>2.065369</b> | <b>.0097665</b> | <b>.0295244</b> |
| Stddev | .0002237        | .0000371        | .0000121        | .001717         | .0002204        | .0000309        |
| %RSD   | .2227816        | .6079679        | .2101611        | .0831307        | 2.256426        | .1046407        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | .1002812 | .0060717 | .0057335 | 2.067189 | .0095129 | .0294936 |
| #2 | .1006639 | .0061456 | .0057288 | 2.063778 | .0099115 | .0295243 |
| #3 | .1002719 | .0061026 | .0057516 | 2.065141 | .0098750 | .0295554 |

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Cu2247          | Fe2404          | Mn2576          | Mg2790          | Ni2316          | Ag3280          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.0213519</b> | <b>.1015281</b> | <b>.0222550</b> | <b>2.179286</b> | <b>.0395650</b> | <b>.0098425</b> |
| Stddev | .0002779        | .0076168        | .0002525        | .032680         | .0003127        | .0001142        |
| %RSD   | 1.301357        | 7.502169        | 1.134723        | 1.499596        | .7902730        | 1.160160        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | .0211423 | .0997122 | .0222058 | 2.174333 | .0398834 | .0097205 |
| #2 | .0216671 | .0949834 | .0225285 | 2.149364 | .0395532 | .0099468 |
| #3 | .0212464 | .1098888 | .0220307 | 2.214160 | .0392584 | .0098604 |

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Na5895          | V_2924          | Zn2138          | K_7664          | B_2496          | Mo2020          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>2.107180</b> | <b>.0401342</b> | <b>.0414427</b> | <b>1.950226</b> | <b>.1040833</b> | <b>.2048150</b> |
| Stddev | .022219         | .0028646        | .0002408        | .042045         | .0015136        | .0000721        |
| %RSD   | 1.054460        | 7.137440        | .5809933        | 2.155892        | 1.454245        | .0351821        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | 2.090220 | .0408210 | .0411649 | 1.902098 | .1040576 | .2048879 |
| #2 | 2.132332 | .0369887 | .0415914 | 1.979814 | .1056096 | .2047438 |
| #3 | 2.098987 | .0425930 | .0415719 | 1.968766 | .1025827 | .2048135 |

Sample Name: LLICV01      Acquired: 8/21/2025 14:33:10      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1: LLICV01      Custom ID2:      Custom ID3:  
Comment:

|        |          |          |          |          |            |          |
|--------|----------|----------|----------|----------|------------|----------|
| Elem   | Sn1899   | Ti3361   | Si2881   | P_1774   | S_1820     | Li6707   |
| Units  | ppm      | ppm      | ppm      | ppm      | ppm        | ppm      |
| Avg    | .0357138 | .0372540 | .3814172 | .0190333 | F .0153891 | .0202656 |
| Stddev | .0005409 | .0004090 | .0048972 | .0002422 | .0003992   | .0006642 |
| %RSD   | 1.514467 | 1.097805 | 1.283959 | 1.272489 | 2.594335   | 3.277585 |
| #1     | .0350929 | .0374393 | .3861258 | .0190478 | .0153724   | .0196512 |
| #2     | .0359656 | .0375376 | .3763509 | .0192680 | .0149985   | .0209704 |
| #3     | .0360828 | .0367852 | .3817748 | .0187842 | .0157965   | .0201751 |

|        |          |
|--------|----------|
| Elem   | Sr4077   |
| Units  | ppm      |
| Avg    | .0207603 |
| Stddev | .0001027 |
| %RSD   | .4948283 |
| #1     | .0207884 |
| #2     | .0208461 |
| #3     | .0206464 |

|           |          |          |          |          |          |
|-----------|----------|----------|----------|----------|----------|
| Int. Std. | Y_2243   | Y_3600   | Y_3710   | Y_2243   | In2306   |
| Units     | Cts/S    | Cts/S    | Cts/S    | Cts/S    | Cts/S    |
| Avg       | 6465.990 | 110767.4 | 11318.68 | 5062.254 | 8009.633 |
| Stddev    | 7.446    | 372.4    | 22.59    | 15.759   | 14.772   |
| %RSD      | .1151565 | .3362121 | .1995905 | .3112990 | .1844245 |
| #1        | 6462.233 | 111136.0 | 11343.36 | 5080.439 | 8001.196 |
| #2        | 6461.171 | 110774.8 | 11299.02 | 5053.729 | 8001.013 |
| #3        | 6474.566 | 110391.3 | 11313.65 | 5052.594 | 8026.689 |

Sample Name: ICB01      Acquired: 8/21/2025 14:37:26      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1: ICB01      Custom ID2:      Custom ID3:  
Comment:

|        |          |          |          |          |          |          |          |
|--------|----------|----------|----------|----------|----------|----------|----------|
| Elem   | As1890   | Tl1908   | Pb2203   | Se1960   | Sb2068   | Al3961   | Ba4934   |
| Units  | ppm      | ppm      | ppm      | ppm      | ppm      | ppm      | ppm      |
| Avg    | .0006272 | -.000913 | -.001106 | .0009257 | -.002059 | .0039809 | -.003882 |
| Stddev | .0010194 | .001451  | .000877  | .0009852 | .001036  | .0124444 | .000188  |
| %RSD   | 162.5344 | 158.9225 | 79.27870 | 106.4300 | 50.34213 | 312.6007 | 4.834377 |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | .0008656 | -.001585 | -.001215 | .0001864 | -.002749 | .0044003 | -.004018 |
| #2 | .0015062 | -.001905 | -.001923 | .0020442 | -.000867 | .0162104 | -.003668 |
| #3 | -.000490 | .000752  | -.000180 | .0005465 | -.002559 | -.008668 | -.003959 |

|        |          |          |          |          |          |          |          |
|--------|----------|----------|----------|----------|----------|----------|----------|
| Elem   | Be2348   | Cd2265   | Ca3736   | Cr2677   | Co2286   | Cu2247   | Fe2404   |
| Units  | ppm      | ppm      | ppm      | ppm      | ppm      | ppm      | ppm      |
| Avg    | .0000345 | -.000045 | -.007568 | -.000293 | .0000813 | .0000755 | -.004256 |
| Stddev | .0000155 | .000043  | .009707  | .000337  | .0000476 | .0000757 | .001084  |
| %RSD   | 44.93989 | 96.41152 | 128.2702 | 114.8105 | 58.57841 | 100.3159 | 25.45899 |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | .0000170 | .000005  | -.016402 | -.000157 | .0000478 | -.000008 | -.005507 |
| #2 | .0000400 | -.000074 | -.009125 | -.000676 | .0000603 | .000141  | -.003637 |
| #3 | .0000464 | -.000064 | .002824  | -.000046 | .0001358 | .000093  | -.003624 |

|        |          |          |          |          |          |          |          |
|--------|----------|----------|----------|----------|----------|----------|----------|
| Elem   | Mn2576   | Mg2790   | Ni2316   | Ag3280   | Na5895   | V_2924   | Zn2138   |
| Units  | ppm      | ppm      | ppm      | ppm      | ppm      | ppm      | ppm      |
| Avg    | -.000225 | -.007012 | -.000285 | .0000594 | .0130161 | -.000415 | -.000937 |
| Stddev | .000233  | .008819  | .000279  | .0000713 | .0059059 | .002419  | .000409  |
| %RSD   | 103.5991 | 125.7711 | 98.03874 | 119.9808 | 45.37404 | 583.4384 | 43.70015 |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | -.000488 | .003166  | -.000336 | .0000838 | .0198189 | .000936  | -.000547 |
| #2 | -.000141 | -.011811 | .000017  | .0001153 | .0092003 | -.003208 | -.001364 |
| #3 | -.000045 | -.012391 | -.000534 | -.000021 | .0100292 | .001027  | -.000900 |

|        |          |          |          |          |          |          |          |
|--------|----------|----------|----------|----------|----------|----------|----------|
| Elem   | K_7664   | B_2496   | Mo2020   | Sn1899   | Ti3361   | Si2881   | P_1774   |
| Units  | ppm      | ppm      | ppm      | ppm      | ppm      | ppm      | ppm      |
| Avg    | .0155177 | .0027537 | -.000088 | -.002304 | -.000824 | .0208537 | .0015192 |
| Stddev | .0389445 | .0007767 | .000169  | .000586  | .000931  | .0061719 | .0000704 |
| %RSD   | 250.9679 | 28.20588 | 190.9004 | 25.45969 | 113.0033 | 29.59605 | 4.635648 |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | -.014793 | .0033162 | -.000258 | -.002369 | -.001327 | .0279763 | .0015019 |
| #2 | .001904  | .0030773 | -.000085 | -.002855 | .000251  | .0175012 | .0014590 |
| #3 | .059442  | .0018675 | .000079  | -.001687 | -.001396 | .0170836 | .0015967 |



Sample Name: ICB01      Acquired: 8/21/2025 14:37:26      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1: ICB01      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|
| Elem   | S_1820          | Li6707          | Sr4077          |
| Units  | ppm             | ppm             | ppm             |
| Avg    | <b>-.004386</b> | <b>-.003746</b> | <b>-.000034</b> |
| Stddev | .000550         | .000887         | .000061         |
| %RSD   | 12.53287        | 23.67093        | 179.3766        |

|    |                 |                 |                 |
|----|-----------------|-----------------|-----------------|
| #1 | <b>-.004383</b> | <b>-.003364</b> | <b>-.000105</b> |
| #2 | <b>-.003839</b> | <b>-.003114</b> | <b>.000000</b>  |
| #3 | <b>-.004938</b> | <b>-.004760</b> | <b>.000002</b>  |

|           |                 |                 |                 |                 |                 |
|-----------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Int. Std. | Y_2243          | Y_3600          | Y_3710          | Y_2243          | In2306          |
| Units     | Cts/S           | Cts/S           | Cts/S           | Cts/S           | Cts/S           |
| Avg       | <b>6477.009</b> | <b>111210.4</b> | <b>11347.99</b> | <b>5089.134</b> | <b>8180.463</b> |
| Stddev    | 11.743          | 466.1           | 12.13           | 36.227          | 12.035          |
| %RSD      | .1813009        | .4191299        | .1069076        | .7118584        | .1471177        |

|    |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|
| #1 | 6484.642 | 110676.4 | 11340.10 | 5047.340 | 8189.367 |
| #2 | 6482.899 | 111419.6 | 11361.96 | 5111.570 | 8185.251 |
| #3 | 6463.487 | 111535.3 | 11341.90 | 5108.491 | 8166.771 |

Sample Name: CRI01      Acquired: 8/21/2025 14:41:45      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1: CRI01      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | As1890          | Tl1908          | Pb2203          | Se1960          | Sb2068          | Al3961          | Ba4934          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.0209316</b> | <b>.0414851</b> | <b>.0123388</b> | <b>.0197530</b> | <b>.0489839</b> | <b>.1093775</b> | <b>.0985869</b> |
| Stddev | .0009393        | .0009713        | .0002889        | .0014945        | .0009823        | .0041502        | .0009761        |
| %RSD   | 4.487374        | 2.341391        | 2.341152        | 7.565885        | 2.005266        | 3.794391        | .9900791        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>.0206251</b> | <b>.0408029</b> | <b>.0126290</b> | <b>.0183454</b> | <b>.0490685</b> | <b>.1079514</b> | <b>.0980667</b> |
| #2 | <b>.0201838</b> | <b>.0410553</b> | <b>.0120513</b> | <b>.0195923</b> | <b>.0499211</b> | <b>.1061284</b> | <b>.0979811</b> |
| #3 | <b>.0219858</b> | <b>.0425972</b> | <b>.0123361</b> | <b>.0213214</b> | <b>.0479621</b> | <b>.1140528</b> | <b>.0997129</b> |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Be2348          | Cd2265          | Ca3736          | Cr2677          | Co2286          | Cu2247          | Fe2404          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.0060663</b> | <b>.0056638</b> | <b>2.050917</b> | <b>.0099202</b> | <b>.0292494</b> | <b>.0212646</b> | <b>.1009021</b> |
| Stddev | .0000467        | .0000414        | .013985         | .0001778        | .0001599        | .0003201        | .0026401        |
| %RSD   | .7694070        | .7312649        | .6819049        | 1.791992        | .5468160        | 1.505464        | 2.616471        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>.0060440</b> | <b>.0056168</b> | <b>2.043622</b> | <b>.0100528</b> | <b>.0291261</b> | <b>.0209273</b> | <b>.0988239</b> |
| #2 | <b>.0060349</b> | <b>.0056946</b> | <b>2.042088</b> | <b>.0097182</b> | <b>.0294301</b> | <b>.0213022</b> | <b>.1038728</b> |
| #3 | <b>.0061199</b> | <b>.0056802</b> | <b>2.067042</b> | <b>.0099895</b> | <b>.0291920</b> | <b>.0215642</b> | <b>.1000097</b> |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Mn2576          | Mg2790          | Ni2316          | Ag3280          | Na5895          | V_2924          | Zn2138          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.0213634</b> | <b>2.172131</b> | <b>.0391671</b> | <b>.0098758</b> | <b>2.030642</b> | <b>.0406429</b> | <b>.0409679</b> |
| Stddev | .0005176        | .014591         | .0003507        | .0004584        | .032660         | .0017099        | .0001570        |
| %RSD   | 2.422762        | .6717256        | .8954471        | 4.641226        | 1.608356        | 4.207031        | .3832088        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>.0208047</b> | <b>2.172148</b> | <b>.0394218</b> | <b>.0100634</b> | <b>1.995641</b> | <b>.0386693</b> | <b>.0410392</b> |
| #2 | <b>.0214590</b> | <b>2.157532</b> | <b>.0387671</b> | <b>.0093534</b> | <b>2.035981</b> | <b>.0415800</b> | <b>.0407880</b> |
| #3 | <b>.0218265</b> | <b>2.186713</b> | <b>.0393125</b> | <b>.0102106</b> | <b>2.060303</b> | <b>.0416793</b> | <b>.0410767</b> |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | K_7664          | B_2496          | Mo2020          | Sn1899          | Ti3361          | Si2881          | P_1774          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>1.896882</b> | <b>.0996222</b> | <b>.2038802</b> | <b>.0355235</b> | <b>.0379852</b> | <b>.4032610</b> | <b>.0189692</b> |
| Stddev | .046032         | .0000567        | .0004713        | .0005744        | .0010090        | .0076346        | .0017330        |
| %RSD   | 2.426725        | .0568725        | .2311579        | 1.617015        | 2.656407        | 1.893216        | 9.135792        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>1.858603</b> | <b>.0996755</b> | <b>.2033942</b> | <b>.0351882</b> | <b>.0389046</b> | <b>.4009827</b> | <b>.0209615</b> |
| #2 | <b>1.884085</b> | <b>.0995627</b> | <b>.2043352</b> | <b>.0351955</b> | <b>.0381453</b> | <b>.3970250</b> | <b>.0178110</b> |
| #3 | <b>1.947959</b> | <b>.0996285</b> | <b>.2039112</b> | <b>.0361868</b> | <b>.0369056</b> | <b>.4117754</b> | <b>.0181351</b> |

Sample Name: CRI01      Acquired: 8/21/2025 14:41:45      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1: CRI01      Custom ID2:      Custom ID3:  
Comment:

|        |          |          |          |
|--------|----------|----------|----------|
| Elem   | S_1820   | Li6707   | Sr4077   |
| Units  | ppm      | ppm      | ppm      |
| Avg    | .0149584 | .0192023 | .0204808 |
| Stddev | .0019930 | .0001643 | .0001362 |
| %RSD   | 13.32355 | .8556770 | .6650928 |

|    |          |          |          |
|----|----------|----------|----------|
| #1 | .0159542 | .0192203 | .0203239 |
| #2 | .0162572 | .0193568 | .0205504 |
| #3 | .0126638 | .0190297 | .0205683 |

|           |          |          |          |          |          |
|-----------|----------|----------|----------|----------|----------|
| Int. Std. | Y_2243   | Y_3600   | Y_3710   | Y_2243   | In2306   |
| Units     | Cts/S    | Cts/S    | Cts/S    | Cts/S    | Cts/S    |
| Avg       | 6442.062 | 110754.0 | 11327.14 | 5081.354 | 8001.858 |
| Stddev    | 17.806   | 526.5    | 42.22    | 19.474   | 17.175   |
| %RSD      | .2764070 | .4754101 | .3727126 | .3832475 | .2146327 |

|    |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|
| #1 | 6458.891 | 111269.7 | 11296.67 | 5078.896 | 8016.160 |
| #2 | 6443.879 | 110774.9 | 11375.33 | 5101.941 | 8006.604 |
| #3 | 6423.417 | 110217.3 | 11309.42 | 5063.226 | 7982.809 |

Sample Name: ICSA01      Acquired: 8/21/2025 14:45:59      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1: ICSA01      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | As1890          | Tl1908          | Pb2203          | Se1960          | Sb2068          | Al3961          | Ba4934          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.0121636</b> | <b>-.003564</b> | <b>-.007000</b> | <b>.0014919</b> | <b>-.002546</b> | <b>243.2782</b> | <b>.0002457</b> |
| Stddev | .0020777        | .001295         | .001811         | .0013071        | .001733         | .5531           | .0000868        |
| %RSD   | 17.08119        | 36.34112        | 25.86294        | 87.61035        | 68.08893        | .2273396        | 35.33131        |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | .0136328 | -.002087 | -.009082 | .0020280 | -.004295 | 242.9543 | .0001976 |
| #2 | .0097865 | -.004104 | -.006127 | .0000020 | -.000829 | 242.9636 | .0001936 |
| #3 | .0130715 | -.004503 | -.005792 | .0024457 | -.002513 | 243.9168 | .0003459 |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Be2348          | Cd2265          | Ca3736          | Cr2677          | Co2286          | Cu2247          | Fe2404          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.0014704</b> | <b>.0017285</b> | <b>231.8001</b> | <b>.0583660</b> | <b>.0021048</b> | <b>.0100532</b> | <b>100.6300</b> |
| Stddev | .0000788        | .0000585        | .2216           | .0001384        | .0000811        | .0004805        | .3903           |
| %RSD   | 5.359383        | 3.383875        | .0955798        | .2370351        | 3.855254        | 4.779872        | .3878326        |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | .0014001 | .0017688 | 231.6712 | .0582063 | .0020156 | .0101882 | 100.2150 |
| #2 | .0014554 | .0017553 | 231.6731 | .0584507 | .0021246 | .0104518 | 100.9896 |
| #3 | .0015556 | .0016614 | 232.0559 | .0584409 | .0021742 | .0095196 | 100.6855 |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Mn2576          | Mg2790          | Ni2316          | Ag3280          | Na5895          | V_2924          | Zn2138          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.0071207</b> | <b>244.2005</b> | <b>.0058492</b> | <b>.0034308</b> | <b>.1091908</b> | <b>.0045023</b> | <b>.0016491</b> |
| Stddev | .0006877        | .2395           | .0003613        | .0008562        | .0180118        | .0017359        | .0001512        |
| %RSD   | 9.657117        | .0980554        | 6.177519        | 24.95740        | 16.49573        | 38.55672        | 9.168952        |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | .0063323 | 243.9713 | .0054527 | .0026066 | .0887231 | .0063328 | .0017930 |
| #2 | .0074326 | 244.1810 | .0061599 | .0043158 | .1226232 | .0028796 | .0014915 |
| #3 | .0075970 | 244.4490 | .0059350 | .0033699 | .1162261 | .0042945 | .0016627 |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | K_7664          | B_2496          | Mo2020          | Sn1899          | Ti3361          | Si2881          | P_1774          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.2854592</b> | <b>.0810018</b> | <b>.0010575</b> | <b>-.004638</b> | <b>-.006506</b> | <b>.0313169</b> | <b>.0076250</b> |
| Stddev | .0352241        | .0016606        | .0001171        | .000377         | .000422         | .0088065        | .0016282        |
| %RSD   | 12.33944        | 2.050069        | 11.07213        | 8.134839        | 6.487263        | 28.12065        | 21.35351        |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | .2447968 | .0790873 | .0010945 | -.004695 | -.006965 | .0241530 | .0075074 |
| #2 | .3066025 | .0820517 | .0009264 | -.004235 | -.006417 | .0411489 | .0093088 |
| #3 | .3049785 | .0818663 | .0011516 | -.004983 | -.006135 | .0286487 | .0060588 |

Sample Name: ICSA01      Acquired: 8/21/2025 14:45:59      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1: ICSA01      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                   |                 |
|--------|-----------------|-------------------|-----------------|
| Elem   | S_1820          | Li6707            | Sr4077          |
| Units  | ppm             | ppm               | ppm             |
| Avg    | <b>-.012825</b> | <b>F -.027847</b> | <b>.0012962</b> |
| Stddev | .001922         | .001614           | .0004790        |
| %RSD   | 14.98835        | 5.795817          | 36.95082        |

|    |                 |                 |                 |
|----|-----------------|-----------------|-----------------|
| #1 | <b>-.014217</b> | <b>-.027630</b> | <b>.0015367</b> |
| #2 | <b>-.013626</b> | <b>-.026352</b> | <b>.0007447</b> |
| #3 | <b>-.010632</b> | <b>-.029558</b> | <b>.0016073</b> |

|           |                 |                 |                 |                 |                 |
|-----------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Int. Std. | Y_2243          | Y_3600          | Y_3710          | Y_2243          | In2306          |
| Units     | Cts/S           | Cts/S           | Cts/S           | Cts/S           | Cts/S           |
| Avg       | <b>5792.960</b> | <b>98894.90</b> | <b>11105.95</b> | <b>4556.247</b> | <b>6442.275</b> |
| Stddev    | 5.362           | 463.87          | 54.12           | 16.294          | 12.102          |
| %RSD      | .0925664        | .4690532        | .4872779        | .3576178        | .1878534        |

|    |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>5794.555</b> | <b>99375.54</b> | <b>11098.46</b> | <b>4559.456</b> | <b>6447.822</b> |
| #2 | <b>5797.343</b> | <b>98859.29</b> | <b>11163.42</b> | <b>4570.697</b> | <b>6450.609</b> |
| #3 | <b>5786.981</b> | <b>98449.86</b> | <b>11055.96</b> | <b>4538.587</b> | <b>6428.394</b> |

Sample Name: ICSAB01      Acquired: 8/21/2025 14:50:40      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1: ICSAB01      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | As1890          | Tl1908          | Pb2203          | Se1960          | Sb2068          | Al3961          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.1069847</b> | <b>.0959571</b> | <b>.0370810</b> | <b>.0484886</b> | <b>.5853805</b> | <b>248.0891</b> |
| Stddev | .0023285        | .0032109        | .0022762        | .0029414        | .0017243        | .3515           |
| %RSD   | 2.176453        | 3.346162        | 6.138464        | 6.066089        | .2945609        | .1416762        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | .1050531 | .0946956 | .0348301 | .0458193 | .5871413 | 247.7381 |
| #2 | .1095702 | .0935685 | .0370314 | .0480045 | .5836952 | 248.0879 |
| #3 | .1063308 | .0996071 | .0393817 | .0516420 | .5853051 | 248.4411 |

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Ba4934          | Be2348          | Cd2265          | Ca3736          | Cr2677          | Co2286          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.4782072</b> | <b>.4704464</b> | <b>.9601949</b> | <b>235.6065</b> | <b>.5403366</b> | <b>.4839252</b> |
| Stddev | .0009320        | .0025438        | .0014741        | .1109           | .0013828        | .0006375        |
| %RSD   | .1948972        | .5407102        | .1535183        | .0470497        | .2559131        | .1317355        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | .4771446 | .4694372 | .9610497 | 235.6803 | .5396636 | .4839350 |
| #2 | .4788864 | .4685622 | .9584927 | 235.6602 | .5394193 | .4832829 |
| #3 | .4785906 | .4733399 | .9610421 | 235.4790 | .5419271 | .4845578 |

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Cu2247          | Fe2404          | Mn2576          | Mg2790          | Ni2316          | Ag3280          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.4777383</b> | <b>101.7690</b> | <b>.4787478</b> | <b>248.9017</b> | <b>.9602841</b> | <b>.2095879</b> |
| Stddev | .0009669        | .3344           | .0015262        | .0490           | .0009230        | .0003590        |
| %RSD   | .2023958        | .3285811        | .3187949        | .0196943        | .0961175        | .1712830        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | .4787427 | 101.4689 | .4786424 | 248.9008 | .9596369 | .2092664 |
| #2 | .4768138 | 102.1295 | .4803239 | 248.9511 | .9613411 | .2095222 |
| #3 | .4776582 | 101.7087 | .4772769 | 248.8531 | .9598744 | .2099753 |

|        |                 |                 |                 |                 |                   |                   |
|--------|-----------------|-----------------|-----------------|-----------------|-------------------|-------------------|
| Elem   | Na5895          | V_2924          | Zn2138          | K_7664          | B_2496            | Mo2020            |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm               | ppm               |
| Avg    | <b>.0702488</b> | <b>.4699542</b> | <b>1.008229</b> | <b>-.028406</b> | <b>F .0797996</b> | <b>F .0010608</b> |
| Stddev | .0084682        | .0022029        | .003195         | .034253         | .0024998          | .0001479          |
| %RSD   | 12.05456        | .4687571        | .3169034        | 120.5866        | 3.132605          | 13.93878          |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | .0625775 | .4693020 | 1.006327 | -.059132 | .0802712 | .0011987 |
| #2 | .0793355 | .4681510 | 1.006443 | -.034611 | .0820301 | .0010790 |
| #3 | .0688334 | .4724096 | 1.011918 | .008526  | .0770976 | .0009047 |

Sample Name: ICSAB01      Acquired: 8/21/2025 14:50:40      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1: ICSAB01      Custom ID2:      Custom ID3:  
Comment:

|        |                   |                   |                   |                   |                   |                   |
|--------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Elem   | Sn1899            | Ti3361            | Si2881            | P_1774            | S_1820            | Li6707            |
| Units  | ppm               | ppm               | ppm               | ppm               | ppm               | ppm               |
| Avg    | F <b>-.007203</b> | F <b>-.008479</b> | F <b>.0148632</b> | F <b>.0125321</b> | F <b>-.007585</b> | F <b>-.031373</b> |
| Stddev | .000730           | .000379           | .0049091          | .0011316          | .002234           | .001875           |
| %RSD   | 10.13426          | 4.471448          | 33.02873          | 9.029384          | 29.45681          | 5.975515          |
| #1     | -.007030          | -.008042          | .0205258          | .0127985          | -.005185          | -.032960          |
| #2     | -.008004          | -.008723          | .0122563          | .0135067          | -.009605          | -.029304          |
| #3     | -.006575          | -.008672          | .0118074          | .0112911          | -.007964          | -.031854          |

|        |                   |
|--------|-------------------|
| Elem   | Sr4077            |
| Units  | ppm               |
| Avg    | F <b>.0021431</b> |
| Stddev | .0002673          |
| %RSD   | 12.47435          |
| #1     | .0023520          |
| #2     | .0018418          |
| #3     | .0022353          |

|           |                 |                 |                 |                 |                 |
|-----------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Int. Std. | Y_2243          | Y_3600          | Y_3710          | Y_2243          | In2306          |
| Units     | Cts/S           | Cts/S           | Cts/S           | Cts/S           | Cts/S           |
| Avg       | <b>5782.457</b> | <b>98834.65</b> | <b>11049.69</b> | <b>4568.452</b> | <b>6444.106</b> |
| Stddev    | 9.746           | 136.94          | 29.82           | 6.232           | 11.887          |
| %RSD      | .1685515        | .1385527        | .2698414        | .1364140        | .1844700        |
| #1        | 5771.332        | 98985.82        | 11057.33        | 4561.362        | 6430.655        |
| #2        | 5789.491        | 98718.90        | 11074.95        | 4570.927        | 6453.202        |
| #3        | 5786.549        | 98799.21        | 11016.80        | 4573.066        | 6448.461        |

Sample Name: ICSADLX20      Acquired: 8/21/2025 14:54:45      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1: ICSA01DLX20      Custom ID2:      Custom ID3:  
Comment:

|        |          |          |          |          |          |          |          |
|--------|----------|----------|----------|----------|----------|----------|----------|
| Elem   | As1890   | Tl1908   | Pb2203   | Se1960   | Sb2068   | Al3961   | Ba4934   |
| Units  | ppm      | ppm      | ppm      | ppm      | ppm      | ppm      | ppm      |
| Avg    | .0008080 | -.002106 | -.000462 | .0000014 | -.001914 | 11.90024 | -.002854 |
| Stddev | .0002881 | .001183  | .001149  | .0038086 | .000191  | .02505   | .000439  |
| %RSD   | 35.65819 | 56.16784 | 248.9795 | 265982.4 | 9.997035 | .2105183 | 15.39115 |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | .0009906 | -.003424 | -.001710 | .0032813 | -.001775 | 11.88291 | -.003361 |
| #2 | .0009575 | -.001761 | -.000226 | .0008987 | -.002132 | 11.92897 | -.002585 |
| #3 | .0004758 | -.001135 | .000552  | -.004176 | -.001835 | 11.88886 | -.002617 |

|        |          |          |          |          |          |          |          |
|--------|----------|----------|----------|----------|----------|----------|----------|
| Elem   | Be2348   | Cd2265   | Ca3736   | Cr2677   | Co2286   | Cu2247   | Fe2404   |
| Units  | ppm      | ppm      | ppm      | ppm      | ppm      | ppm      | ppm      |
| Avg    | .0001341 | .0000531 | 11.82556 | .0026764 | .0001686 | .0007153 | 4.780051 |
| Stddev | .0000516 | .0000192 | .04251   | .0003274 | .0000060 | .0003956 | .020669  |
| %RSD   | 38.43525 | 36.21719 | .3594802 | 12.23442 | 3.586013 | 55.31042 | .4324102 |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | .0000826 | .0000309 | 11.78167 | .0030144 | .0001702 | .0002754 | 4.801273 |
| #2 | .0001341 | .0000650 | 11.82845 | .0026540 | .0001736 | .0010419 | 4.759983 |
| #3 | .0001857 | .0000633 | 11.86654 | .0023607 | .0001619 | .0008285 | 4.778897 |

|        |          |          |          |          |          |          |          |
|--------|----------|----------|----------|----------|----------|----------|----------|
| Elem   | Mn2576   | Mg2790   | Ni2316   | Ag3280   | Na5895   | V_2924   | Zn2138   |
| Units  | ppm      | ppm      | ppm      | ppm      | ppm      | ppm      | ppm      |
| Avg    | -.000173 | 12.23093 | .0003271 | .0000134 | -.044186 | .0000284 | -.000801 |
| Stddev | .000099  | .04715   | .0000381 | .0003132 | .008158  | .0007085 | .000344  |
| %RSD   | 57.10383 | .3855171 | 11.63619 | 2331.102 | 18.46353 | 2491.586 | 42.94721 |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | -.000075 | 12.17762 | .0003685 | -.000143 | -.052475 | -.000599 | -.001064 |
| #2 | -.000170 | 12.24803 | .0003190 | -.000191 | -.043919 | .000797  | -.000928 |
| #3 | -.000273 | 12.26715 | .0002937 | .000374  | -.036165 | -.000113 | -.000412 |

|        |          |          |          |          |          |          |          |
|--------|----------|----------|----------|----------|----------|----------|----------|
| Elem   | K_7664   | B_2496   | Mo2020   | Sn1899   | Ti3361   | Si2881   | P_1774   |
| Units  | ppm      | ppm      | ppm      | ppm      | ppm      | ppm      | ppm      |
| Avg    | -.289096 | .0017139 | .0000227 | -.003704 | -.002368 | .0111392 | .0025915 |
| Stddev | .022985  | .0003574 | .0000786 | .000211  | .001658  | .0120304 | .0015776 |
| %RSD   | 7.950479 | 20.85487 | 345.4958 | 5.701232 | 69.99591 | 108.0004 | 60.87576 |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | -.297265 | .0019290 | -.000011 | -.003521 | -.001399 | .0040725 | .0041749 |
| #2 | -.306881 | .0013013 | -.000033 | -.003656 | -.004283 | .0043152 | .0025800 |
| #3 | -.263143 | .0019113 | .000113  | -.003935 | -.001424 | .0250300 | .0010197 |



Sample Name: ICSADLX20      Acquired: 8/21/2025 14:54:45      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1: ICSA01DLX20      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|
| Elem   | S_1820          | Li6707          | Sr4077          |
| Units  | ppm             | ppm             | ppm             |
| Avg    | <b>-.007361</b> | <b>-.006089</b> | <b>.0002103</b> |
| Stddev | .003336         | .001068         | .0000584        |
| %RSD   | 45.31588        | 17.53182        | 27.75579        |

|    |                 |                 |                 |
|----|-----------------|-----------------|-----------------|
| #1 | <b>-.010738</b> | <b>-.006704</b> | <b>.0001889</b> |
| #2 | <b>-.004068</b> | <b>-.004857</b> | <b>.0001657</b> |
| #3 | <b>-.007277</b> | <b>-.006708</b> | <b>.0002764</b> |

|           |                 |                 |                 |                 |                 |
|-----------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Int. Std. | Y_2243          | Y_3600          | Y_3710          | Y_2243          | In2306          |
| Units     | Cts/S           | Cts/S           | Cts/S           | Cts/S           | Cts/S           |
| Avg       | <b>6393.589</b> | <b>110385.9</b> | <b>11390.79</b> | <b>5046.820</b> | <b>7830.636</b> |
| Stddev    | 14.314          | 239.4           | 93.59           | 23.072          | 14.751          |
| %RSD      | .2238765        | .2168709        | .8216658        | .4571624        | .1883730        |

|    |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>6377.271</b> | <b>110304.8</b> | <b>11494.37</b> | <b>5032.629</b> | <b>7819.697</b> |
| #2 | <b>6399.474</b> | <b>110197.5</b> | <b>11365.71</b> | <b>5073.442</b> | <b>7824.799</b> |
| #3 | <b>6404.022</b> | <b>110655.3</b> | <b>11312.30</b> | <b>5034.389</b> | <b>7847.412</b> |

Sample Name: ICSABDLX20      Acquired: 8/21/2025 14:59:00      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1: ICSAB01DLX20      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | As1890          | Tl1908          | Pb2203          | Se1960          | Sb2068          | Al3961          | Ba4934          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.0057668</b> | <b>.0044146</b> | <b>.0016422</b> | <b>-.000073</b> | <b>.0269570</b> | <b>12.26892</b> | <b>.0207979</b> |
| Stddev | .0011918        | .0004450        | .0005581        | .001965         | .0010458        | .02286          | .0012208        |
| %RSD   | 20.66610        | 10.08058        | 33.98692        | 2691.481        | 3.879661        | .1863044        | 5.869839        |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | .0044727 | .0048288 | .0013538 | .002171  | .0261157 | 12.25035 | .0221965 |
| #2 | .0060085 | .0044710 | .0012872 | -.000908 | .0266275 | 12.29444 | .0202509 |
| #3 | .0068192 | .0039441 | .0022855 | -.001482 | .0281279 | 12.26196 | .0199463 |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Be2348          | Cd2265          | Ca3736          | Cr2677          | Co2286          | Cu2247          | Fe2404          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.0237051</b> | <b>.0454470</b> | <b>12.20435</b> | <b>.0269314</b> | <b>.0229313</b> | <b>.0248965</b> | <b>5.025805</b> |
| Stddev | .0001476        | .0000887        | .02802          | .0002755        | .0001475        | .0000153        | .012813         |
| %RSD   | .6226183        | .1950649        | .2295698        | 1.023015        | .6433182        | .0612661        | .2549427        |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | .0237231 | .0455097 | 12.19183 | .0272496 | .0228174 | .0249090 | 5.011370 |
| #2 | .0235493 | .0453456 | 12.18478 | .0267743 | .0228785 | .0249010 | 5.030214 |
| #3 | .0238429 | .0454858 | 12.23645 | .0267705 | .0230979 | .0248795 | 5.035831 |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Mn2576          | Mg2790          | Ni2316          | Ag3280          | Na5895          | V_2924          | Zn2138          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.0243123</b> | <b>12.59339</b> | <b>.0458345</b> | <b>.0092333</b> | <b>-.038861</b> | <b>.0247902</b> | <b>.0487474</b> |
| Stddev | .0001753        | .03148          | .0004419        | .0003076        | .004594         | .0015744        | .0002702        |
| %RSD   | .7209316        | .2499914        | .9642290        | 3.331455        | 11.82153        | 6.351047        | .5543898        |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | .0245128 | 12.56430 | .0457091 | .0093727 | -.033557 | .0235890 | .0487747 |
| #2 | .0241885 | 12.58907 | .0454688 | .0088807 | -.041441 | .0242090 | .0490029 |
| #3 | .0242355 | 12.62681 | .0463256 | .0094465 | -.041585 | .0265727 | .0484645 |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | K_7664          | B_2496          | Mo2020          | Sn1899          | Ti3361          | Si2881          | P_1774          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>-.294539</b> | <b>.0020850</b> | <b>-.000065</b> | <b>-.003271</b> | <b>-.001622</b> | <b>.0109409</b> | <b>.0019465</b> |
| Stddev | .032899         | .0002682        | .000099         | .000555         | .000705         | .0116254        | .0011555        |
| %RSD   | 11.16954        | 12.86129        | 151.7864        | 16.96307        | 43.44264        | 106.2564        | 59.36033        |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | -.332357 | .0020186 | -.000023 | -.003194 | -.000875 | .0011076 | .0026225 |
| #2 | -.272514 | .0023801 | -.000178 | -.003861 | -.002275 | .0079436 | .0006124 |
| #3 | -.278748 | .0018562 | .000006  | -.002759 | -.001716 | .0237714 | .0026048 |

Sample Name: ICSABDLX20      Acquired: 8/21/2025 14:59:00      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1: ICSAB01DLX20 Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|
| Elem   | S_1820          | Li6707          | Sr4077          |
| Units  | ppm             | ppm             | ppm             |
| Avg    | <b>-.004579</b> | <b>-.005458</b> | <b>.0001706</b> |
| Stddev | .003358         | .001903         | .0000769        |
| %RSD   | 73.33141        | 34.85942        | 45.10763        |
| #1     | <b>-.004449</b> | <b>-.004496</b> | <b>.0002589</b> |
| #2     | <b>-.007999</b> | <b>-.007650</b> | <b>.0001186</b> |
| #3     | <b>-.001288</b> | <b>-.004229</b> | <b>.0001342</b> |

|           |                 |                 |                 |                 |                 |
|-----------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Int. Std. | Y_2243          | Y_3600          | Y_3710          | Y_2243          | In2306          |
| Units     | Cts/S           | Cts/S           | Cts/S           | Cts/S           | Cts/S           |
| Avg       | <b>6362.948</b> | <b>108424.1</b> | <b>11401.73</b> | <b>4997.140</b> | <b>7772.969</b> |
| Stddev    | 6.579           | 84.4            | 41.15           | 11.144          | 14.275          |
| %RSD      | .1033943        | .0778468        | .3609531        | .2230097        | .1836517        |
| #1        | 6366.473        | 108328.5        | 11390.46        | 4984.495        | 7778.375        |
| #2        | 6367.013        | 108455.8        | 11447.34        | 5001.397        | 7783.752        |
| #3        | 6355.358        | 108488.2        | 11367.38        | 5005.528        | 7756.781        |

Sample Name: CCV01      Acquired: 8/21/2025 15:03:10      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1: CCV01      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | As1890          | Tl1908          | Pb2203          | Se1960          | Sb2068          | Al3961          | Ba4934          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>4.954150</b> | <b>5.156620</b> | <b>4.910359</b> | <b>4.957720</b> | <b>4.933255</b> | <b>9.888634</b> | <b>9.927297</b> |
| Stddev | .007923         | .079607         | .003236         | .014261         | .016058         | .035223         | .045929         |
| %RSD   | .1599276        | 1.543778        | .0659099        | .2876448        | .3255128        | .3562007        | .4626532        |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | 4.948418 | 5.157895 | 4.907673 | 4.942338 | 4.917020 | 9.929290 | 9.970183 |
| #2 | 4.950841 | 5.076384 | 4.909452 | 4.960323 | 4.933616 | 9.867324 | 9.932873 |
| #3 | 4.963191 | 5.235582 | 4.913952 | 4.970500 | 4.949131 | 9.869286 | 9.878834 |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Be2348          | Cd2265          | Ca3736          | Cr2677          | Co2286          | Cu2247          | Fe2404          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.2443253</b> | <b>2.480355</b> | <b>24.77802</b> | <b>.9935540</b> | <b>2.469779</b> | <b>1.246687</b> | <b>5.002362</b> |
| Stddev | .0008543        | .002277         | .06448          | .0032243        | .000363         | .000866         | .018690         |
| %RSD   | .3496698        | .0918101        | .2602253        | .3245202        | .0146889        | .0694459        | .3736318        |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | .2447634 | 2.482864 | 24.84436 | .9935016 | 2.470084 | 1.246305 | 5.004065 |
| #2 | .2433407 | 2.478418 | 24.77412 | .9968041 | 2.469378 | 1.246077 | 5.020143 |
| #3 | .2448717 | 2.479784 | 24.71558 | .9903562 | 2.469874 | 1.247678 | 4.982879 |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Mn2576          | Mg2790          | Ni2316          | Ag3280          | Na5895          | V_2924          | Zn2138          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>2.479075</b> | <b>24.55778</b> | <b>2.468784</b> | <b>1.235601</b> | <b>25.17504</b> | <b>2.471137</b> | <b>2.501588</b> |
| Stddev | .006251         | .09765          | .001206         | .001120         | .11801          | .006639         | .004954         |
| %RSD   | .2521699        | .3976427        | .0488574        | .0906480        | .4687734        | .2686731        | .1980242        |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | 2.485904 | 24.65288 | 2.467848 | 1.236280 | 25.27535 | 2.470394 | 2.495902 |
| #2 | 2.473635 | 24.56268 | 2.468360 | 1.234308 | 25.20476 | 2.478117 | 2.504974 |
| #3 | 2.477687 | 24.45777 | 2.470145 | 1.236215 | 25.04501 | 2.464901 | 2.503887 |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | K_7664          | B_2496          | Mo2020          | Sn1899          | Ti3361          | Si2881          | P_1774          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>24.77175</b> | <b>4.899705</b> | <b>4.993669</b> | <b>4.965273</b> | <b>4.956897</b> | <b>4.970732</b> | <b>4.965409</b> |
| Stddev | .11499          | .026795         | .005692         | .000989         | .017701         | .032091         | .011152         |
| %RSD   | .4641798        | .5468700        | .1139926        | .0199140        | .3571013        | .6455931        | .2245860        |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | 24.87116 | 4.907818 | 4.995526 | 4.965834 | 4.977314 | 4.958254 | 4.978025 |
| #2 | 24.79826 | 4.869791 | 4.987279 | 4.965853 | 4.945860 | 5.007188 | 4.956868 |
| #3 | 24.64582 | 4.921506 | 4.998200 | 4.964131 | 4.947517 | 4.946755 | 4.961335 |

Sample Name: CCV01      Acquired: 8/21/2025 15:03:10      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1: CCV01      Custom ID2:      Custom ID3:  
Comment:

|        |          |          |          |
|--------|----------|----------|----------|
| Elem   | S_1820   | Li6707   | Sr4077   |
| Units  | ppm      | ppm      | ppm      |
| Avg    | 4.914484 | 4.944589 | 5.037948 |
| Stddev | .008599  | .018460  | .019072  |
| %RSD   | .1749724 | .3733397 | .3785748 |
| #1     | 4.911679 | 4.965789 | 5.015945 |
| #2     | 4.907639 | 4.935910 | 5.048139 |
| #3     | 4.924136 | 4.932067 | 5.049760 |

|           |          |          |          |          |          |
|-----------|----------|----------|----------|----------|----------|
| Int. Std. | Y_2243   | Y_3600   | Y_3710   | Y_2243   | In2306   |
| Units     | Cts/S    | Cts/S    | Cts/S    | Cts/S    | Cts/S    |
| Avg       | 6206.022 | 106168.1 | 10997.63 | 4901.743 | 7172.486 |
| Stddev    | 10.220   | 287.1    | 29.09    | 25.951   | 8.596    |
| %RSD      | .1646864 | .2704663 | .2645551 | .5294271 | .1198493 |
| #1        | 6201.280 | 106251.6 | 10975.51 | 4893.359 | 7166.623 |
| #2        | 6217.752 | 105848.5 | 11030.59 | 4881.021 | 7182.354 |
| #3        | 6199.033 | 106404.3 | 10986.78 | 4930.850 | 7168.480 |

Sample Name: CCB01      Acquired: 8/21/2025 15:07:20      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1: CCB01      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | As1890          | Tl1908          | Pb2203          | Se1960          | Sb2068          | Al3961          | Ba4934          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>-.000866</b> | <b>-.000117</b> | <b>-.000631</b> | <b>-.000272</b> | <b>-.001296</b> | <b>-.000354</b> | <b>-.003096</b> |
| Stddev | .001202         | .000627         | .000963         | .001454         | .001301         | .006158         | .000389         |
| %RSD   | 138.8495        | 536.5750        | 152.6408        | 534.4166        | 100.4149        | 1741.687        | 12.56575        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>-.002040</b> | <b>.000182</b>  | <b>-.001305</b> | <b>-.001024</b> | <b>-.002501</b> | <b>.002112</b>  | <b>-.002975</b> |
| #2 | <b>-.000919</b> | <b>-.000838</b> | <b>.000472</b>  | <b>-.001196</b> | <b>.000084</b>  | <b>-.007362</b> | <b>-.003531</b> |
| #3 | <b>.000362</b>  | <b>.000305</b>  | <b>-.001059</b> | <b>.001404</b>  | <b>-.001470</b> | <b>.004190</b>  | <b>-.002782</b> |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Be2348          | Cd2265          | Ca3736          | Cr2677          | Co2286          | Cu2247          | Fe2404          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.0000264</b> | <b>.0000181</b> | <b>-.014006</b> | <b>-.000033</b> | <b>-.000040</b> | <b>.0001218</b> | <b>-.006277</b> |
| Stddev | .0000600        | .0000642        | .010846         | .000276         | .000257         | .0003949        | .004754         |
| %RSD   | 226.8945        | 354.8445        | 77.44121        | 830.3892        | 643.4983        | 324.3365        | 75.73420        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>-.000026</b> | <b>.0000470</b> | <b>-.002574</b> | <b>-.000348</b> | <b>-.000226</b> | <b>-.000269</b> | <b>-.002791</b> |
| #2 | <b>.000013</b>  | <b>.0000628</b> | <b>-.015292</b> | <b>.000169</b>  | <b>.000253</b>  | <b>.000114</b>  | <b>-.011692</b> |
| #3 | <b>.000092</b>  | <b>-.000056</b> | <b>-.024152</b> | <b>.000079</b>  | <b>-.000147</b> | <b>.000521</b>  | <b>-.004347</b> |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Mn2576          | Mg2790          | Ni2316          | Ag3280          | Na5895          | V_2924          | Zn2138          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.0003157</b> | <b>.0186499</b> | <b>-.000360</b> | <b>.0000967</b> | <b>-.038031</b> | <b>.0007724</b> | <b>-.000995</b> |
| Stddev | .0004308        | .0203464        | .000260         | .0001391        | .006720         | .0014528        | .000272         |
| %RSD   | 136.4483        | 109.0967        | 72.33139        | 143.8777        | 17.67070        | 188.0909        | 27.35482        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>.0000927</b> | <b>.0284067</b> | <b>-.000303</b> | <b>.0001203</b> | <b>-.034223</b> | <b>.0001956</b> | <b>-.001309</b> |
| #2 | <b>.0008122</b> | <b>.0322805</b> | <b>-.000133</b> | <b>.0002225</b> | <b>-.034079</b> | <b>.0024250</b> | <b>-.000851</b> |
| #3 | <b>.0000421</b> | <b>-.004737</b> | <b>-.000644</b> | <b>-.000053</b> | <b>-.045791</b> | <b>-.000303</b> | <b>-.000826</b> |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | K_7664          | B_2496          | Mo2020          | Sn1899          | Ti3361          | Si2881          | P_1774          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>-.243363</b> | <b>.0037325</b> | <b>.0003177</b> | <b>-.002257</b> | <b>-.002013</b> | <b>.0175217</b> | <b>.0020359</b> |
| Stddev | .034181         | .0005288        | .0002180        | .000241         | .000670         | .0024462        | .0002240        |
| %RSD   | 14.04532        | 14.16746        | 68.61501        | 10.67121        | 33.26707        | 13.96086        | 11.00333        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>-.262298</b> | <b>.0036369</b> | <b>.0005149</b> | <b>-.002506</b> | <b>-.002778</b> | <b>.0202926</b> | <b>.0021320</b> |
| #2 | <b>-.203904</b> | <b>.0043026</b> | <b>.0000836</b> | <b>-.002238</b> | <b>-.001729</b> | <b>.0166111</b> | <b>.0021959</b> |
| #3 | <b>-.263886</b> | <b>.0032581</b> | <b>.0003546</b> | <b>-.002026</b> | <b>-.001533</b> | <b>.0156614</b> | <b>.0017799</b> |

Sample Name: CCB01      Acquired: 8/21/2025 15:07:20      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1: CCB01      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|
| Elem   | S_1820          | Li6707          | Sr4077          |
| Units  | ppm             | ppm             | ppm             |
| Avg    | <b>-.005003</b> | <b>-.004325</b> | <b>.0000173</b> |
| Stddev | .001226         | .001132         | .0001006        |
| %RSD   | 24.50745        | 26.16522        | 582.0036        |

|    |                 |                 |                 |
|----|-----------------|-----------------|-----------------|
| #1 | <b>-.006227</b> | <b>-.003088</b> | <b>.0000772</b> |
| #2 | <b>-.003775</b> | <b>-.004576</b> | <b>.0000734</b> |
| #3 | <b>-.005006</b> | <b>-.005309</b> | <b>-.000099</b> |

|           |                 |                 |                 |                 |                 |
|-----------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Int. Std. | Y_2243          | Y_3600          | Y_3710          | Y_2243          | In2306          |
| Units     | Cts/S           | Cts/S           | Cts/S           | Cts/S           | Cts/S           |
| Avg       | <b>6492.895</b> | <b>109679.6</b> | <b>11182.11</b> | <b>5051.523</b> | <b>8177.430</b> |
| Stddev    | 11.905          | 298.7           | 26.56           | 16.125          | 13.527          |
| %RSD      | .1833514        | .2723437        | .2375543        | .3192156        | .1654192        |

|    |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|
| #1 | 6482.106 | 109992.3 | 11198.40 | 5069.712 | 8163.782 |
| #2 | 6490.914 | 109649.2 | 11151.46 | 5038.979 | 8177.675 |
| #3 | 6505.667 | 109397.2 | 11196.48 | 5045.878 | 8190.833 |

Sample Name: LR-2      Acquired: 8/21/2025 15:16:19      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | As1890          | Tl1908          | Pb2203          | Se1960          | Sb2068          | Al3961          | Ba4934          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.2564138</b> | <b>-.370946</b> | <b>-.120612</b> | <b>.0313263</b> | <b>-.176292</b> | <b>1908.458</b> | <b>.0215329</b> |
| Stddev | .0040153        | .005158         | .004078         | .0059525        | .009974         | 23.812          | .0006406        |
| %RSD   | 1.565938        | 1.390608        | 3.381406        | 19.00161        | 5.657392        | 1.247729        | 2.974936        |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | .2610318 | -.374282 | -.125187 | .0339863 | -.187331 | 1881.541 | .0215568 |
| #2 | .2544623 | -.373552 | -.119294 | .0354849 | -.167930 | 1926.780 | .0221612 |
| #3 | .2537472 | -.365005 | -.117356 | .0245076 | -.173614 | 1917.051 | .0208806 |

|        |                 |                 |                |                 |                 |                 |                 |
|--------|-----------------|-----------------|----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Be2348          | Cd2265          | Ca3736         | Cr2677          | Co2286          | Cu2247          | Fe2404          |
| Units  | ppm             | ppm             | ppm            | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.0426223</b> | <b>.1020271</b> | <b>^ *****</b> | <b>-.045869</b> | <b>.0914718</b> | <b>.2681714</b> | <b>2862.452</b> |
| Stddev | .0002110        | .0016786        | -----          | .000196         | .0014200        | .0076580        | 16.161          |
| %RSD   | .4950342        | 1.645252        | -----          | .4282623        | 1.552435        | 2.855646        | .5645753        |

|    |          |          |                |          |          |          |          |
|----|----------|----------|----------------|----------|----------|----------|----------|
| #1 | .0427676 | .1017332 | <b>^ -----</b> | -.046061 | .0908020 | .2691755 | 2867.441 |
| #2 | .0423803 | .1005149 | 9.817340       | -.045668 | .0905106 | .2600608 | 2875.529 |
| #3 | .0427191 | .1038333 | <b>^ -----</b> | -.045877 | .0931029 | .2752778 | 2844.385 |

|        |                 |                 |                 |                |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|----------------|-----------------|-----------------|-----------------|
| Elem   | Mn2576          | Mg2790          | Ni2316          | Ag3280         | Na5895          | V_2924          | Zn2138          |
| Units  | ppm             | ppm             | ppm             | ppm            | ppm             | ppm             | ppm             |
| Avg    | <b>-.218701</b> | <b>1.126895</b> | <b>.0570511</b> | <b>^ *****</b> | <b>2.989360</b> | <b>.0529666</b> | <b>.0844768</b> |
| Stddev | .000608         | .001948         | .0009036        | -----          | .035621         | .0028470        | .0020101        |
| %RSD   | .2780600        | .1728258        | 1.583894        | -----          | 1.191593        | 5.375093        | 2.379427        |

|    |          |          |          |                |          |          |          |
|----|----------|----------|----------|----------------|----------|----------|----------|
| #1 | -.218687 | 1.125518 | .0580524 | <b>^ -----</b> | 2.997471 | .0559809 | .0823125 |
| #2 | -.218100 | 1.126044 | .0562962 | <b>^ -----</b> | 3.020226 | .0503232 | .0848327 |
| #3 | -.219316 | 1.129123 | .0568046 | <b>^ -----</b> | 2.950383 | .0525957 | .0862851 |

|        |                 |                |                 |                 |                 |                 |                 |
|--------|-----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | K_7664          | B_2496         | Mo2020          | Sn1899          | Ti3361          | Si2881          | P_1774          |
| Units  | ppm             | ppm            | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>1888.420</b> | <b>^ *****</b> | <b>-.015178</b> | <b>.0167845</b> | <b>.0021534</b> | <b>.5392264</b> | <b>.1139528</b> |
| Stddev | 13.145          | -----          | .000087         | .0029401        | .0016770        | .0126653        | .0022871        |
| %RSD   | .6960798        | -----          | .5737955        | 17.51682        | 77.87744        | 2.348790        | 2.007085        |

|    |          |                |          |          |          |          |          |
|----|----------|----------------|----------|----------|----------|----------|----------|
| #1 | 1883.496 | <b>^ -----</b> | -.015256 | .0174068 | .0020101 | .5305775 | .1162310 |
| #2 | 1903.316 | <b>^ -----</b> | -.015084 | .0135830 | .0005527 | .5333378 | .1139705 |
| #3 | 1878.448 | <b>^ -----</b> | -.015194 | .0193636 | .0038975 | .5537640 | .1116568 |



Sample Name: LR-2      Acquired: 8/21/2025 15:16:19      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |                |                   |                 |
|--------|----------------|-------------------|-----------------|
| Elem   | S_1820         | Li6707            | Sr4077          |
| Units  | ppm            | ppm               | ppm             |
| Avg    | <b>-463414</b> | <b>k .2900498</b> | <b>-2.74375</b> |
| Stddev | .010995        | .0014490          | .01547          |
| %RSD   | 2.372506       | .4995751          | .5637405        |

|    |                |                   |                 |
|----|----------------|-------------------|-----------------|
| #1 | <b>-473809</b> | <b>k .2911009</b> | <b>-2.74850</b> |
| #2 | <b>-451905</b> | <b>.2883969</b>   | <b>-2.75628</b> |
| #3 | <b>-464528</b> | <b>k .2906517</b> | <b>-2.72646</b> |

|           |                 |                 |                 |                 |                 |
|-----------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Int. Std. | Y_2243          | Y_3600          | Y_3710          | Y_2243          | In2306          |
| Units     | Cts/S           | Cts/S           | Cts/S           | Cts/S           | Cts/S           |
| Avg       | <b>5033.465</b> | <b>84651.59</b> | <b>10807.00</b> | <b>3923.048</b> | <b>4358.535</b> |
| Stddev    | 4.616           | 184.31          | 19.71           | 12.871          | 5.117           |
| %RSD      | .0917047        | .2177257        | .1824052        | .3280740        | .1174005        |

|    |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|
| #1 | 5038.406 | 84471.50 | 10806.39 | 3932.170 | 4359.029 |
| #2 | 5032.727 | 84643.44 | 10827.01 | 3928.647 | 4363.387 |
| #3 | 5029.263 | 84839.84 | 10787.59 | 3908.326 | 4353.189 |

Sample Name: LR-3      Acquired: 8/21/2025 15:20:46      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | As1890          | Tl1908          | Pb2203          | Se1960          | Sb2068          | Al3961          | Ba4934          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.0932202</b> | <b>.0106134</b> | <b>226.8502</b> | <b>.0007616</b> | <b>.1233691</b> | <b>.1358505</b> | <b>-.001933</b> |
| Stddev | .0024685        | .0021925        | .6896           | .0013559        | .0009043        | .0148933        | .000786         |
| %RSD   | 2.648009        | 20.65793        | .3039718        | 178.0416        | .7329769        | 10.96303        | 40.67876        |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | .0960493 | .0123458 | 227.4067 | .0021064 | .1224317 | .1300378 | -.001902 |
| #2 | .0921064 | .0081484 | 226.0787 | -.000605 | .1234394 | .1247401 | -.001163 |
| #3 | .0915049 | .0113459 | 227.0651 | .000783  | .1242362 | .1527737 | -.002734 |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Be2348          | Cd2265          | Ca3736          | Cr2677          | Co2286          | Cu2247          | Fe2404          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>-.005048</b> | <b>-.001465</b> | <b>.2241001</b> | <b>23.51165</b> | <b>.0059842</b> | <b>53.19335</b> | <b>.1452815</b> |
| Stddev | .000097         | .000031         | .0111970        | .15270          | .0001993        | .02723          | .0162257        |
| %RSD   | 1.918001        | 2.146281        | 4.996430        | .6494596        | 3.330843        | .0511898        | 11.16846        |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | -.005089 | -.001442 | .2147563 | 23.66354 | .0058649 | 53.18880 | .1620608 |
| #2 | -.005118 | -.001501 | .2210329 | 23.35815 | .0058734 | 53.22256 | .1296728 |
| #3 | -.004937 | -.001452 | .2365110 | 23.51325 | .0062143 | 53.16868 | .1441108 |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Mn2576          | Mg2790          | Ni2316          | Ag3280          | Na5895          | V_2924          | Zn2138          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>50.18505</b> | <b>-.196678</b> | <b>23.62850</b> | <b>.0039821</b> | <b>.2505870</b> | <b>-.039250</b> | <b>29.26948</b> |
| Stddev | .59644          | .023303         | .03628          | .0004752        | .0148615        | .001744         | .55014          |
| %RSD   | 1.188489        | 11.84818        | .1535241        | 11.93470        | 5.930660        | 4.444580        | 1.879558        |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | 50.38706 | -.206324 | 23.66971 | .0035313 | .2373267 | -.037235 | 29.70471 |
| #2 | 50.65426 | -.213609 | 23.61436 | .0044785 | .2477839 | -.040257 | 28.65114 |
| #3 | 49.51384 | -.170101 | 23.60142 | .0039364 | .2666504 | -.040257 | 29.45260 |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | K_7664          | B_2496          | Mo2020          | Sn1899          | Ti3361          | Si2881          | P_1774          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.5502131</b> | <b>.0014149</b> | <b>-.014478</b> | <b>-.012496</b> | <b>-.043342</b> | <b>-.136877</b> | <b>.1674445</b> |
| Stddev | .0050659        | .0006266        | .000221         | .000157         | .000502         | .013514         | .0038251        |
| %RSD   | .9207201        | 44.28249        | 1.526683        | 1.256274        | 1.159017        | 9.872754        | 2.284429        |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | .5517987 | .0013245 | -.014733 | -.012325 | -.042825 | -.132191 | .1717678 |
| #2 | .5445441 | .0020818 | -.014347 | -.012531 | -.043828 | -.152110 | .1660663 |
| #3 | .5542966 | .0008385 | -.014354 | -.012633 | -.043373 | -.126330 | .1644994 |

Sample Name: LR-3      Acquired: 8/21/2025 15:20:46      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |          |          |          |
|--------|----------|----------|----------|
| Elem   | S_1820   | Li6707   | Sr4077   |
| Units  | ppm      | ppm      | ppm      |
| Avg    | .0458016 | -.000157 | .0004218 |
| Stddev | .0018609 | .000080  | .0000623 |
| %RSD   | 4.062953 | 50.68599 | 14.76582 |

|    |          |          |          |
|----|----------|----------|----------|
| #1 | .0475504 | -.000069 | .0003985 |
| #2 | .0438459 | -.000224 | .0003746 |
| #3 | .0460086 | -.000179 | .0004924 |

|           |          |          |          |          |          |
|-----------|----------|----------|----------|----------|----------|
| Int. Std. | Y_2243   | Y_3600   | Y_3710   | Y_2243   | In2306   |
| Units     | Cts/S    | Cts/S    | Cts/S    | Cts/S    | Cts/S    |
| Avg       | 5994.317 | 110661.0 | 11197.63 | 4849.807 | 7758.814 |
| Stddev    | 26.385   | 479.2    | 53.53    | 30.176   | 42.484   |
| %RSD      | .4401739 | .4330637 | .4780118 | .6222044 | .5475575 |

|    |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|
| #1 | 5965.160 | 110160.6 | 11181.93 | 4824.922 | 7710.437 |
| #2 | 6016.549 | 111115.8 | 11153.70 | 4883.371 | 7790.048 |
| #3 | 6001.243 | 110706.7 | 11257.24 | 4841.127 | 7775.957 |

Sample Name: PB169331BL      Acquired: 8/21/2025 15:25:41      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | As1890          | Tl1908          | Pb2203          | Se1960          | Sb2068          | Al3961          | Ba4934          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.0010518</b> | <b>-.003203</b> | <b>.0027373</b> | <b>.0007077</b> | <b>-.002158</b> | <b>.0225393</b> | <b>-.003531</b> |
| Stddev | .0006287        | .000578         | .0006712        | .0019068        | .001333         | .0064612        | .000735         |
| %RSD   | 59.77640        | 18.04375        | 24.51984        | 269.4387        | 61.76902        | 28.66620        | 20.81852        |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | .0016581 | -.002670 | .0019755 | -.000910 | -.002760 | .0152223 | -.002749 |
| #2 | .0010943 | -.003818 | .0029950 | .002810  | -.000630 | .0274599 | -.004207 |
| #3 | .0004029 | -.003123 | .0032416 | .000223  | -.003082 | .0249356 | -.003638 |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Be2348          | Cd2265          | Ca3736          | Cr2677          | Co2286          | Cu2247          | Fe2404          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.0000204</b> | <b>.0000271</b> | <b>-.000586</b> | <b>.0006955</b> | <b>.0000471</b> | <b>.0009085</b> | <b>.0096305</b> |
| Stddev | .0000461        | .0000577        | .009941         | .0001689        | .0000922        | .0002129        | .0007740        |
| %RSD   | 226.4528        | 212.6781        | 1696.270        | 24.28339        | 195.6580        | 23.43747        | 8.037264        |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | .0000414 | .0000268 | .001780  | .0008745 | .0001072 | .0008144 | .0087396 |
| #2 | -.000032 | .0000850 | .007958  | .0006729 | .0000933 | .0011523 | .0100143 |
| #3 | .000052  | -.000030 | -.011496 | .0005390 | -.000059 | .0007589 | .0101377 |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Mn2576          | Mg2790          | Ni2316          | Ag3280          | Na5895          | V_2924          | Zn2138          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.0006279</b> | <b>.0066753</b> | <b>.0002079</b> | <b>.0001713</b> | <b>.2707880</b> | <b>.0012750</b> | <b>.0006492</b> |
| Stddev | .0004048        | .0112939        | .0000502        | .0003270        | .0183205        | .0019530        | .0003179        |
| %RSD   | 64.46988        | 169.1883        | 24.13320        | 190.9051        | 6.765629        | 153.1844        | 48.97527        |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | .0008697 | .0067004 | .0001596 | -.000138 | .2500028 | .0033860 | .0009772 |
| #2 | .0008536 | .0179566 | .0002043 | .000513  | .2777713 | -.000468 | .0003424 |
| #3 | .0001606 | -.004631 | .0002598 | .000139  | .2845899 | .000907  | .0006280 |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | K_7664          | B_2496          | Mo2020          | Sn1899          | Ti3361          | Si2881          | P_1774          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.5082536</b> | <b>-.001609</b> | <b>-.000014</b> | <b>-.002910</b> | <b>-.001441</b> | <b>.0224158</b> | <b>.0020540</b> |
| Stddev | .0990496        | .000292         | .000102         | .000214         | .000597         | .0097613        | .0008308        |
| %RSD   | 19.48822        | 18.14932        | 743.1066        | 7.367561        | 41.45923        | 43.54673        | 40.44559        |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | .3971617 | -.001945 | -.000130 | -.003148 | -.001664 | .0158797 | .0018947 |
| #2 | .5402461 | -.001419 | .000031  | -.002732 | -.001894 | .0177313 | .0029528 |
| #3 | .5873529 | -.001463 | .000058  | -.002850 | -.000764 | .0336364 | .0013144 |

Sample Name: PB169331BL      Acquired: 8/21/2025 15:25:41      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

| Elem   | S_1820          | Li6707          | Sr4077          |
|--------|-----------------|-----------------|-----------------|
| Units  | ppm             | ppm             | ppm             |
| Avg    | <b>-.005007</b> | <b>.0018562</b> | <b>-.000069</b> |
| Stddev | .002234         | .0018385        | .000061         |
| %RSD   | 44.62790        | 99.04534        | 88.27526        |

|    |                 |                 |                 |
|----|-----------------|-----------------|-----------------|
| #1 | <b>-.007052</b> | <b>.0000342</b> | <b>-.000004</b> |
| #2 | <b>-.002622</b> | <b>.0037106</b> | <b>-.000079</b> |
| #3 | <b>-.005347</b> | <b>.0018237</b> | <b>-.000124</b> |

| Int. Std. | Y_2243          | Y_3600          | Y_3710          | Y_2243          | In2306          |
|-----------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Units     | Cts/S           | Cts/S           | Cts/S           | Cts/S           | Cts/S           |
| Avg       | <b>6490.396</b> | <b>111589.9</b> | <b>11281.75</b> | <b>5115.674</b> | <b>8218.451</b> |
| Stddev    | 9.974           | 279.6           | 86.49           | 33.255          | 7.387           |
| %RSD      | .1536718        | .2505713        | .7666197        | .6500637        | .0898818        |

|    |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|
| #1 | 6480.771 | 111556.2 | 11183.34 | 5103.621 | 8210.447 |
| #2 | 6500.685 | 111884.8 | 11345.67 | 5153.275 | 8225.005 |
| #3 | 6489.733 | 111328.6 | 11316.23 | 5090.126 | 8219.902 |

Sample Name: PB169331BS      Acquired: 8/21/2025 15:34:38      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | As1890          | Tl1908          | Pb2203          | Se1960          | Sb2068          | Al3961          | Ba4934          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.7801446</b> | <b>2.031859</b> | <b>.9579641</b> | <b>1.979946</b> | <b>.7872637</b> | <b>2.002890</b> | <b>.1968564</b> |
| Stddev | .0035021        | .031465         | .0023753        | .009196         | .0033629        | .011850         | .0010460        |
| %RSD   | .4489088        | 1.548592        | .2479485        | .4644588        | .4271602        | .5916571        | .5313657        |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | .7796042 | 2.066293 | .9556404 | 1.988992 | .7911106 | 2.002425 | .1957735 |
| #2 | .7769441 | 2.004604 | .9603877 | 1.970607 | .7848821 | 1.991279 | .1978612 |
| #3 | .7838855 | 2.024679 | .9578641 | 1.980238 | .7857984 | 2.014966 | .1969344 |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Be2348          | Cd2265          | Ca3736          | Cr2677          | Co2286          | Cu2247          | Fe2404          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.2035906</b> | <b>.1917364</b> | <b>1.106519</b> | <b>.4004216</b> | <b>.1959631</b> | <b>.3114399</b> | <b>2.974619</b> |
| Stddev | .0010797        | .0001034        | .005408         | .0007546        | .0004420        | .0002816        | .001058         |
| %RSD   | .5303425        | .0539487        | .4887109        | .1884525        | .2255594        | .0904146        | .0355598        |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | .2024941 | .1917436 | 1.104343 | .4012914 | .1961920 | .3113941 | 2.974471 |
| #2 | .2046527 | .1918360 | 1.102538 | .4000316 | .1954535 | .3111840 | 2.975742 |
| #3 | .2036250 | .1916295 | 1.112676 | .3999417 | .1962437 | .3117415 | 2.973642 |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Mn2576          | Mg2790          | Ni2316          | Ag3280          | Na5895          | V_2924          | Zn2138          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.2062734</b> | <b>2.090394</b> | <b>.4913738</b> | <b>.0749157</b> | <b>3.599012</b> | <b>.3007236</b> | <b>.2075829</b> |
| Stddev | .0006427        | .032114         | .0007365        | .0003932        | .052425         | .0012802        | .0000055        |
| %RSD   | .3116021        | 1.536244        | .1498836        | .5248783        | 1.456650        | .4257129        | .0026431        |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | .2066029 | 2.069920 | .4915136 | .0752200 | 3.656321 | .2992893 | .2075892 |
| #2 | .2066846 | 2.073856 | .4905775 | .0750554 | 3.587245 | .3011308 | .2075807 |
| #3 | .2055327 | 2.127406 | .4920304 | .0744717 | 3.553471 | .3017507 | .2075789 |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | K_7664          | B_2496          | Mo2020          | Sn1899          | Ti3361          | Si2881          | P_1774          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>9.823536</b> | <b>.2980822</b> | <b>.3986683</b> | <b>.6632714</b> | <b>.1908088</b> | <b>.8733754</b> | <b>5.591860</b> |
| Stddev | .070894         | .0006831        | .0007767        | .0021193        | .0005569        | .0030864        | .007092         |
| %RSD   | .7216717        | .2291807        | .1948107        | .3195199        | .2918795        | .3533876        | .1268199        |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | 9.894403 | .2973422 | .3990058 | .6647166 | .1914068 | .8727454 | 5.600002 |
| #2 | 9.752616 | .2986887 | .3977800 | .6608385 | .1907146 | .8767282 | 5.587033 |
| #3 | 9.823588 | .2982159 | .3992191 | .6642590 | .1903049 | .8706526 | 5.588545 |

Sample Name: PB169331BS      Acquired: 8/21/2025 15:34:38      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |                   |                 |                 |
|--------|-------------------|-----------------|-----------------|
| Elem   | S_1820            | Li6707          | Sr4077          |
| Units  | ppm               | ppm             | ppm             |
| Avg    | <b>F -.005701</b> | <b>.2171740</b> | <b>.2003427</b> |
| Stddev | .002693           | .0013432        | .0002536        |
| %RSD   | 47.24102          | .6184743        | .1265603        |

|    |                 |                 |                 |
|----|-----------------|-----------------|-----------------|
| #1 | <b>-.002858</b> | <b>.2160815</b> | <b>.2000705</b> |
| #2 | <b>-.006031</b> | <b>.2186736</b> | <b>.2005722</b> |
| #3 | <b>-.008213</b> | <b>.2167669</b> | <b>.2003852</b> |

|           |                 |                 |                 |                 |                 |
|-----------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Int. Std. | Y_2243          | Y_3600          | Y_3710          | Y_2243          | In2306          |
| Units     | Cts/S           | Cts/S           | Cts/S           | Cts/S           | Cts/S           |
| Avg       | <b>6323.152</b> | <b>109301.2</b> | <b>10897.57</b> | <b>4946.063</b> | <b>7743.797</b> |
| Stddev    | 3.694           | 134.1           | 54.98           | 10.534          | 2.432           |
| %RSD      | .0584231        | .1227029        | .5044968        | .2129795        | .0314050        |

|    |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|
| #1 | 6326.746 | 109156.9 | 10954.94 | 4951.201 | 7746.534 |
| #2 | 6323.346 | 109324.9 | 10845.34 | 4933.946 | 7741.884 |
| #3 | 6319.365 | 109422.0 | 10892.43 | 4953.042 | 7742.973 |

Sample Name: PB169325TB      Acquired: 8/21/2025 15:43:17      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | As1890          | Tl1908          | Pb2203          | Se1960          | Sb2068          | Al3961          | Ba4934          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>-.002840</b> | <b>-.005120</b> | <b>-.000869</b> | <b>.0071386</b> | <b>.0017998</b> | <b>.0055625</b> | <b>-.007699</b> |
| Stddev | .002557         | .001249         | .000649         | .0022153        | .0002605        | .0085086        | .001070         |
| %RSD   | 90.02277        | 24.39694        | 74.69253        | 31.03296        | 14.47077        | 152.9646        | 13.89169        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>-.002014</b> | <b>-.003678</b> | <b>-.001570</b> | <b>.0087327</b> | <b>.0015028</b> | <b>.0130593</b> | <b>-.006475</b> |
| #2 | <b>-.005708</b> | <b>-.005807</b> | <b>-.000289</b> | <b>.0046090</b> | <b>.0019075</b> | <b>.0073135</b> | <b>-.008166</b> |
| #3 | <b>-.000799</b> | <b>-.005875</b> | <b>-.000748</b> | <b>.0080741</b> | <b>.0019891</b> | <b>-.003685</b> | <b>-.008455</b> |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Be2348          | Cd2265          | Ca3736          | Cr2677          | Co2286          | Cu2247          | Fe2404          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>-.000117</b> | <b>-.000046</b> | <b>.0474958</b> | <b>.0002551</b> | <b>-.000325</b> | <b>.0004162</b> | <b>.0131709</b> |
| Stddev | .000059         | .000020         | .0113933        | .0002283        | .000063         | .0001562        | .0021307        |
| %RSD   | 50.55696        | 44.08194        | 23.98793        | 89.50667        | 19.24039        | 37.54118        | 16.17770        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>-.000142</b> | <b>-.000058</b> | <b>.0600981</b> | <b>.0000241</b> | <b>-.000301</b> | <b>.0005243</b> | <b>.0108651</b> |
| #2 | <b>-.000160</b> | <b>-.000022</b> | <b>.0379247</b> | <b>.0002606</b> | <b>-.000396</b> | <b>.0004872</b> | <b>.0135803</b> |
| #3 | <b>-.000050</b> | <b>-.000057</b> | <b>.0444646</b> | <b>.0004807</b> | <b>-.000278</b> | <b>.0002370</b> | <b>.0150672</b> |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Mn2576          | Mg2790          | Ni2316          | Ag3280          | Na5895          | V_2924          | Zn2138          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.0041285</b> | <b>.0055892</b> | <b>.0011935</b> | <b>-.000393</b> | <b>467.4308</b> | <b>-.000046</b> | <b>.0015988</b> |
| Stddev | .0003689        | .0201838        | .0001815        | .000266         | 10.0169         | .001322         | .0001066        |
| %RSD   | 8.935612        | 361.1222        | 15.20317        | 67.53084        | 2.142961        | 2869.550        | 6.669833        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>.0037282</b> | <b>.0165940</b> | <b>.0013374</b> | <b>-.000149</b> | <b>457.1595</b> | <b>.000107</b>  | <b>.0015026</b> |
| #2 | <b>.0044548</b> | <b>.0178788</b> | <b>.0012535</b> | <b>-.000354</b> | <b>477.1721</b> | <b>-.001438</b> | <b>.0015803</b> |
| #3 | <b>.0042024</b> | <b>-.017705</b> | <b>.0009897</b> | <b>-.000676</b> | <b>467.9607</b> | <b>.001192</b>  | <b>.0017135</b> |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | K_7664          | B_2496          | Mo2020          | Sn1899          | Ti3361          | Si2881          | P_1774          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.5040188</b> | <b>.0015057</b> | <b>.0004930</b> | <b>-.015527</b> | <b>-.001811</b> | <b>.0397313</b> | <b>.0089470</b> |
| Stddev | .0313972        | .0006420        | .0001473        | .000655         | .000566         | .0055713        | .0008703        |
| %RSD   | 6.229363        | 42.63800        | 29.87797        | 4.221242        | 31.27641        | 14.02238        | 9.727198        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>.4761818</b> | <b>.0021636</b> | <b>.0005385</b> | <b>-.016284</b> | <b>-.002314</b> | <b>.0408801</b> | <b>.0082682</b> |
| #2 | <b>.4978226</b> | <b>.0014724</b> | <b>.0006122</b> | <b>-.015145</b> | <b>-.001197</b> | <b>.0446386</b> | <b>.0099282</b> |
| #3 | <b>.5380521</b> | <b>.0008810</b> | <b>.0003283</b> | <b>-.015153</b> | <b>-.001922</b> | <b>.0336752</b> | <b>.0086448</b> |



Sample Name: PB169325TB      Acquired: 8/21/2025 15:43:17      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |          |          |          |
|--------|----------|----------|----------|
| Elem   | S_1820   | Li6707   | Sr4077   |
| Units  | ppm      | ppm      | ppm      |
| Avg    | .0794273 | -.010263 | .0002038 |
| Stddev | .0043343 | .001063  | .0000320 |
| %RSD   | 5.456910 | 10.35296 | 15.69030 |

|    |          |          |          |
|----|----------|----------|----------|
| #1 | .0816554 | -.010949 | .0002407 |
| #2 | .0744322 | -.010801 | .0001858 |
| #3 | .0821942 | -.009039 | .0001848 |

|           |          |          |          |          |          |
|-----------|----------|----------|----------|----------|----------|
| Int. Std. | Y_2243   | Y_3600   | Y_3710   | Y_2243   | In2306   |
| Units     | Cts/S    | Cts/S    | Cts/S    | Cts/S    | Cts/S    |
| Avg       | 6002.994 | 102657.0 | 11713.45 | 4668.950 | 6931.549 |
| Stddev    | 9.824    | 328.8    | 115.51   | 19.540   | 4.013    |
| %RSD      | .1636520 | .3203055 | .9861356 | .4185056 | .0578993 |

|    |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|
| #1 | 6003.923 | 102550.7 | 11586.30 | 4677.120 | 6932.822 |
| #2 | 6012.320 | 102394.6 | 11811.92 | 4646.651 | 6934.771 |
| #3 | 5992.738 | 103025.9 | 11742.12 | 4683.078 | 6927.054 |

Sample Name: Q2840-05      Acquired: 8/21/2025 15:52:23      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | As1890          | Tl1908          | Pb2203          | Se1960          | Sb2068          | Al3961          | Ba4934          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>-.003264</b> | <b>-.004505</b> | <b>.0423720</b> | <b>.0055890</b> | <b>.0039184</b> | <b>.5515930</b> | <b>.2993377</b> |
| Stddev | .000347         | .000397         | .0005316        | .0032724        | .0014824        | .0026101        | .0011506        |
| %RSD   | 10.63762        | 8.818596        | 1.254641        | 58.55123        | 37.83151        | .4731980        | .3843888        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>-.003130</b> | <b>-.004187</b> | <b>.0428303</b> | <b>.0040804</b> | <b>.0030108</b> | <b>.5490405</b> | <b>.2980203</b> |
| #2 | <b>-.003658</b> | <b>-.004950</b> | <b>.0417892</b> | <b>.0093436</b> | <b>.0031153</b> | <b>.5514814</b> | <b>.3001454</b> |
| #3 | <b>-.003004</b> | <b>-.004378</b> | <b>.0424967</b> | <b>.0033430</b> | <b>.0056290</b> | <b>.5542572</b> | <b>.2998475</b> |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Be2348          | Cd2265          | Ca3736          | Cr2677          | Co2286          | Cu2247          | Fe2404          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>-.000169</b> | <b>.0005579</b> | <b>8.077655</b> | <b>.0014237</b> | <b>.0036060</b> | <b>.0088761</b> | <b>.7488117</b> |
| Stddev | .000046         | .0000342        | .023683         | .0002790        | .0001404        | .0003783        | .0084622        |
| %RSD   | 27.33502        | 6.125982        | .2931888        | 19.59931        | 3.894297        | 4.262320        | 1.130088        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>-.000173</b> | <b>.0005626</b> | <b>8.100423</b> | <b>.0016405</b> | <b>.0034591</b> | <b>.0091153</b> | <b>.7431710</b> |
| #2 | <b>-.000213</b> | <b>.0005216</b> | <b>8.053153</b> | <b>.0015216</b> | <b>.0036199</b> | <b>.0084399</b> | <b>.7447221</b> |
| #3 | <b>-.000121</b> | <b>.0005895</b> | <b>8.079389</b> | <b>.0011089</b> | <b>.0037390</b> | <b>.0090732</b> | <b>.7585419</b> |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Mn2576          | Mg2790          | Ni2316          | Ag3280          | Na5895          | V_2924          | Zn2138          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>1.530427</b> | <b>1.229658</b> | <b>.0017473</b> | <b>-.000149</b> | <b>242.2557</b> | <b>.0028604</b> | <b>.5808115</b> |
| Stddev | .000918         | .017863         | .0000641        | .000291         | 2.0022          | .0009005        | .0003968        |
| %RSD   | .0600105        | 1.452675        | 3.670188        | 194.9904        | .8264627        | 31.48152        | .0683252        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>1.531236</b> | <b>1.249126</b> | <b>.0018056</b> | <b>.000010</b>  | <b>240.3318</b> | <b>.0019790</b> | <b>.5809995</b> |
| #2 | <b>1.529429</b> | <b>1.214022</b> | <b>.0017577</b> | <b>-.000485</b> | <b>242.1074</b> | <b>.0037788</b> | <b>.5810793</b> |
| #3 | <b>1.530615</b> | <b>1.225826</b> | <b>.0016786</b> | <b>.000027</b>  | <b>244.3278</b> | <b>.0028235</b> | <b>.5803556</b> |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | K_7664          | B_2496          | Mo2020          | Sn1899          | Ti3361          | Si2881          | P_1774          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>7.618461</b> | <b>.1792548</b> | <b>.0001255</b> | <b>-.012149</b> | <b>.0187086</b> | <b>1.050140</b> | <b>.2205490</b> |
| Stddev | .042316         | .0018094        | .0001476        | .000886         | .0003331        | .013721         | .0026107        |
| %RSD   | .5554466        | 1.009383        | 117.5848        | 7.295436        | 1.780502        | 1.306548        | 1.183738        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>7.578306</b> | <b>.1781688</b> | <b>-.000028</b> | <b>-.012670</b> | <b>.0188744</b> | <b>1.060624</b> | <b>.2177563</b> |
| #2 | <b>7.614426</b> | <b>.1813435</b> | <b>.000266</b>  | <b>-.012650</b> | <b>.0183252</b> | <b>1.034611</b> | <b>.2229285</b> |
| #3 | <b>7.662650</b> | <b>.1782522</b> | <b>.000139</b>  | <b>-.011125</b> | <b>.0189263</b> | <b>1.055183</b> | <b>.2209623</b> |

Sample Name: Q2840-05      Acquired: 8/21/2025 15:52:23      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |          |          |          |
|--------|----------|----------|----------|
| Elem   | S_1820   | Li6707   | Sr4077   |
| Units  | ppm      | ppm      | ppm      |
| Avg    | 2.203068 | -.009369 | .0499305 |
| Stddev | .013230  | .001011  | .0000286 |
| %RSD   | .6005053 | 10.78993 | .0573197 |
| #1     | 2.187820 | -.010411 | .0499610 |
| #2     | 2.209893 | -.009303 | .0499262 |
| #3     | 2.211491 | -.008393 | .0499043 |

|           |          |          |          |          |          |
|-----------|----------|----------|----------|----------|----------|
| Int. Std. | Y_2243   | Y_3600   | Y_3710   | Y_2243   | In2306   |
| Units     | Cts/S    | Cts/S    | Cts/S    | Cts/S    | Cts/S    |
| Avg       | 6215.250 | 109463.4 | 12189.21 | 4873.806 | 7301.119 |
| Stddev    | 10.560   | 415.3    | 107.64   | 15.467   | 14.131   |
| %RSD      | .1699102 | .3793886 | .8830967 | .3173531 | .1935423 |
| #1        | 6203.242 | 109322.8 | 12117.11 | 4864.136 | 7285.765 |
| #2        | 6223.091 | 109136.5 | 12137.57 | 4865.638 | 7304.015 |
| #3        | 6219.417 | 109930.7 | 12312.94 | 4891.645 | 7313.578 |

Sample Name: Q2857-12      Acquired: 8/21/2025 16:01:23      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | As1890          | Tl1908          | Pb2203          | Se1960          | Sb2068          | Al3961          | Ba4934          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>-.002030</b> | <b>-.003123</b> | <b>-.000785</b> | <b>.0024292</b> | <b>.0001458</b> | <b>-.010053</b> | <b>-.004796</b> |
| Stddev | .002183         | .001226         | .000038         | .0008818        | .0005240        | .007365         | .000467         |
| %RSD   | 107.5480        | 39.25601        | 4.893547        | 36.29788        | 359.3565        | 73.26004        | 9.733807        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>-.003929</b> | <b>-.004459</b> | <b>-.000743</b> | <b>.0031595</b> | <b>-.000121</b> | <b>-.016076</b> | <b>-.004360</b> |
| #2 | <b>-.002515</b> | <b>-.002050</b> | <b>-.000818</b> | <b>.0026785</b> | <b>-.000191</b> | <b>-.012243</b> | <b>-.005288</b> |
| #3 | <b>.000355</b>  | <b>-.002861</b> | <b>-.000794</b> | <b>.0014497</b> | <b>.000750</b>  | <b>-.001842</b> | <b>-.004740</b> |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Be2348          | Cd2265          | Ca3736          | Cr2677          | Co2286          | Cu2247          | Fe2404          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>-.000132</b> | <b>-.000049</b> | <b>.0359074</b> | <b>.0001867</b> | <b>-.000231</b> | <b>.0002889</b> | <b>-.003013</b> |
| Stddev | .000036         | .000043         | .0105903        | .0001951        | .000109         | .0000444        | .006282         |
| %RSD   | 27.43565        | 87.62222        | 29.49335        | 104.4758        | 47.22868        | 15.38461        | 208.4920        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>-.000092</b> | <b>-.000099</b> | <b>.0237056</b> | <b>.0002073</b> | <b>-.000154</b> | <b>.0002455</b> | <b>-.008589</b> |
| #2 | <b>-.000162</b> | <b>-.000025</b> | <b>.0427098</b> | <b>.0003707</b> | <b>-.000182</b> | <b>.0003343</b> | <b>.003793</b>  |
| #3 | <b>-.000142</b> | <b>-.000023</b> | <b>.0413067</b> | <b>-.000018</b> | <b>-.000355</b> | <b>.0002868</b> | <b>-.004242</b> |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Mn2576          | Mg2790          | Ni2316          | Ag3280          | Na5895          | V_2924          | Zn2138          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.0034324</b> | <b>.0387522</b> | <b>-.000217</b> | <b>-.000307</b> | <b>.2969744</b> | <b>-.001314</b> | <b>.0012498</b> |
| Stddev | .0001402        | .0160168        | .000142         | .000433         | .0230973        | .000726         | .0000732        |
| %RSD   | 4.084217        | 41.33132        | 65.43909        | 140.9043        | 7.777552        | 55.21770        | 5.860366        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>.0032728</b> | <b>.0208278</b> | <b>-.000237</b> | <b>-.000284</b> | <b>.3190955</b> | <b>-.001977</b> | <b>.0012518</b> |
| #2 | <b>.0035354</b> | <b>.0437679</b> | <b>-.000347</b> | <b>.000114</b>  | <b>.2988165</b> | <b>-.001427</b> | <b>.0013220</b> |
| #3 | <b>.0034890</b> | <b>.0516610</b> | <b>-.000066</b> | <b>-.000751</b> | <b>.2730111</b> | <b>-.000539</b> | <b>.0011756</b> |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | K_7664          | B_2496          | Mo2020          | Sn1899          | Ti3361          | Si2881          | P_1774          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>-.124245</b> | <b>-.001269</b> | <b>.0002659</b> | <b>-.015658</b> | <b>-.001470</b> | <b>.0253784</b> | <b>.0080983</b> |
| Stddev | .022630         | .000488         | .0002288        | .000452         | .000593         | .0090675        | .0008837        |
| %RSD   | 18.21440        | 38.50722        | 86.04642        | 2.885125        | 40.35875        | 35.72905        | 10.91284        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>-.098123</b> | <b>-.001114</b> | <b>.0004564</b> | <b>-.015186</b> | <b>-.001898</b> | <b>.0226460</b> | <b>.0076578</b> |
| #2 | <b>-.137918</b> | <b>-.001815</b> | <b>.0000121</b> | <b>-.015702</b> | <b>-.000793</b> | <b>.0179914</b> | <b>.0075214</b> |
| #3 | <b>-.136693</b> | <b>-.000876</b> | <b>.0003292</b> | <b>-.016086</b> | <b>-.001718</b> | <b>.0354979</b> | <b>.0091157</b> |

Sample Name: Q2857-12      Acquired: 8/21/2025 16:01:23      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |          |          |          |
|--------|----------|----------|----------|
| Elem   | S_1820   | Li6707   | Sr4077   |
| Units  | ppm      | ppm      | ppm      |
| Avg    | .0231018 | -.008236 | .0000289 |
| Stddev | .0022435 | .000703  | .0000610 |
| %RSD   | 9.711479 | 8.542040 | 211.5411 |

|    |          |          |          |
|----|----------|----------|----------|
| #1 | .0243308 | -.008785 | .0000349 |
| #2 | .0205123 | -.007443 | .0000867 |
| #3 | .0244623 | -.008479 | -.000035 |

|           |          |          |          |          |          |
|-----------|----------|----------|----------|----------|----------|
| Int. Std. | Y_2243   | Y_3600   | Y_3710   | Y_2243   | In2306   |
| Units     | Cts/S    | Cts/S    | Cts/S    | Cts/S    | Cts/S    |
| Avg       | 6531.714 | 113215.0 | 11598.71 | 5073.148 | 8364.939 |
| Stddev    | 6.317    | 195.3    | 39.23    | 10.605   | 7.697    |
| %RSD      | .0967095 | .1725354 | .3381973 | .2090407 | .0920190 |

|    |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|
| #1 | 6538.916 | 113211.1 | 11563.22 | 5072.882 | 8359.980 |
| #2 | 6529.111 | 113021.7 | 11592.08 | 5062.678 | 8361.031 |
| #3 | 6527.114 | 113412.3 | 11640.83 | 5083.883 | 8373.807 |

Sample Name: Q2883-04      Acquired: 8/21/2025 16:10:21      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | As1890          | Tl1908          | Pb2203          | Se1960          | Sb2068          | Al3961          | Ba4934          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>-.002754</b> | <b>-.002414</b> | <b>.0053342</b> | <b>.0059815</b> | <b>.0012887</b> | <b>.1042161</b> | <b>.2836083</b> |
| Stddev | .002193         | .001141         | .0004533        | .0020328        | .0015624        | .0024153        | .0004367        |
| %RSD   | 79.62292        | 47.25120        | 8.497791        | 33.98457        | 121.2396        | 2.317549        | .1539925        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>-.000547</b> | <b>-.003012</b> | <b>.0048232</b> | <b>.0080005</b> | <b>-.000515</b> | <b>.1035192</b> | <b>.2833042</b> |
| #2 | <b>-.004933</b> | <b>-.003131</b> | <b>.0056877</b> | <b>.0039352</b> | <b>.002152</b>  | <b>.1069032</b> | <b>.2841088</b> |
| #3 | <b>-.002783</b> | <b>-.001099</b> | <b>.0054918</b> | <b>.0060087</b> | <b>.002229</b>  | <b>.1022260</b> | <b>.2834119</b> |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Be2348          | Cd2265          | Ca3736          | Cr2677          | Co2286          | Cu2247          | Fe2404          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>-.000084</b> | <b>.0008055</b> | <b>31.86456</b> | <b>.0004858</b> | <b>.0000693</b> | <b>.0046262</b> | <b>.0450678</b> |
| Stddev | .000060         | .0000460        | .06619          | .0003139        | .0002126        | .0003362        | .0070187        |
| %RSD   | 71.92300        | 5.711144        | .2077104        | 64.61132        | 306.8257        | 7.268165        | 15.57364        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>-.000108</b> | <b>.0008570</b> | <b>31.91288</b> | <b>.0008481</b> | <b>.0003127</b> | <b>.0047549</b> | <b>.0392106</b> |
| #2 | <b>-.000128</b> | <b>.0007684</b> | <b>31.78912</b> | <b>.0003137</b> | <b>-.000080</b> | <b>.0048791</b> | <b>.0431454</b> |
| #3 | <b>-.000015</b> | <b>.0007912</b> | <b>31.89168</b> | <b>.0002956</b> | <b>-.000025</b> | <b>.0042447</b> | <b>.0528473</b> |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Mn2576          | Mg2790          | Ni2316          | Ag3280          | Na5895          | V_2924          | Zn2138          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.2418859</b> | <b>3.165317</b> | <b>.0012063</b> | <b>-.000448</b> | <b>327.9460</b> | <b>-.000070</b> | <b>.2610703</b> |
| Stddev | .0004123        | .046814         | .0002906        | .000119         | 2.2847          | .000651         | .0006266        |
| %RSD   | .1704322        | 1.478956        | 24.08821        | 26.67524        | .6966611        | 929.7928        | .2400120        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>.2423353</b> | <b>3.219373</b> | <b>.0013257</b> | <b>-.000436</b> | <b>330.0716</b> | <b>.000671</b>  | <b>.2603479</b> |
| #2 | <b>.2417969</b> | <b>3.138403</b> | <b>.0014182</b> | <b>-.000572</b> | <b>328.2365</b> | <b>-.000329</b> | <b>.2614665</b> |
| #3 | <b>.2415254</b> | <b>3.138176</b> | <b>.0008751</b> | <b>-.000334</b> | <b>325.5300</b> | <b>-.000551</b> | <b>.2613965</b> |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | K_7664          | B_2496          | Mo2020          | Sn1899          | Ti3361          | Si2881          | P_1774          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>3.477589</b> | <b>.0585210</b> | <b>.0005904</b> | <b>-.017489</b> | <b>-.000891</b> | <b>1.860600</b> | <b>.0979045</b> |
| Stddev | .041342         | .0013184        | .0001289        | .000402         | .000285         | .013623         | .0008297        |
| %RSD   | 1.188805        | 2.252942        | 21.82775        | 2.297294        | 31.95825        | .7321728        | .8474894        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>3.433091</b> | <b>.0599795</b> | <b>.0007331</b> | <b>-.017935</b> | <b>-.001178</b> | <b>1.845366</b> | <b>.0973250</b> |
| #2 | <b>3.514807</b> | <b>.0574136</b> | <b>.0004827</b> | <b>-.017155</b> | <b>-.000609</b> | <b>1.864825</b> | <b>.0988549</b> |
| #3 | <b>3.484871</b> | <b>.0581700</b> | <b>.0005552</b> | <b>-.017377</b> | <b>-.000886</b> | <b>1.871610</b> | <b>.0975334</b> |

Sample Name: Q2883-04      Acquired: 8/21/2025 16:10:21      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |          |          |          |
|--------|----------|----------|----------|
| Elem   | S_1820   | Li6707   | Sr4077   |
| Units  | ppm      | ppm      | ppm      |
| Avg    | 1.217573 | -.014787 | .1189640 |
| Stddev | .010598  | .000721  | .0001469 |
| %RSD   | .8703824 | 4.875525 | .1234858 |
| #1     | 1.206601 | -.015557 | .1191283 |
| #2     | 1.227752 | -.014679 | .1189180 |
| #3     | 1.218367 | -.014127 | .1188455 |

|           |          |          |          |          |          |
|-----------|----------|----------|----------|----------|----------|
| Int. Std. | Y_2243   | Y_3600   | Y_3710   | Y_2243   | In2306   |
| Units     | Cts/S    | Cts/S    | Cts/S    | Cts/S    | Cts/S    |
| Avg       | 6028.218 | 104463.3 | 11864.90 | 4741.163 | 6967.481 |
| Stddev    | 22.134   | 206.7    | 114.72   | 9.047    | 33.767   |
| %RSD      | .3671662 | .1978617 | .9669106 | .1908171 | .4846429 |
| #1        | 6052.540 | 104364.0 | 11739.50 | 4731.854 | 7004.423 |
| #2        | 6022.857 | 104325.0 | 11964.58 | 4749.923 | 6959.810 |
| #3        | 6009.257 | 104700.9 | 11890.62 | 4741.713 | 6938.209 |

Sample Name: LR-1      Acquired: 8/21/2025 16:14:46      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | As1890          | Tl1908          | Pb2203          | Se1960          | Sb2068          | Al3961          | Ba4934          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.0013481</b> | <b>.0087901</b> | <b>.0114360</b> | <b>-.015856</b> | <b>.0161625</b> | <b>.0978678</b> | <b>-.016834</b> |
| Stddev | .0015689        | .0022534        | .0009715        | .002854         | .0009279        | .0080177        | .000325         |
| %RSD   | 116.3739        | 25.63527        | 8.495432        | 17.99855        | 5.741404        | 8.192354        | 1.929430        |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | -.000174 | .0063105 | .0123975 | -.015671 | .0166217 | .0973119 | -.016915 |
| #2 | .002960  | .0093469 | .0114556 | -.018798 | .0167712 | .0901426 | -.016476 |
| #3 | .001258  | .0107128 | .0104548 | -.013099 | .0150944 | .1061490 | -.017111 |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Be2348          | Cd2265          | Ca3736          | Cr2677          | Co2286          | Cu2247          | Fe2404          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.0001279</b> | <b>.0003836</b> | <b>2243.323</b> | <b>.0114886</b> | <b>-.000017</b> | <b>.0028118</b> | <b>.4230824</b> |
| Stddev | .0000869        | .0000120        | 17.076          | .0005857        | .000381         | .0004905        | .0065938        |
| %RSD   | 67.89466        | 3.125626        | .7612110        | 5.098377        | 2275.393        | 17.44555        | 1.558509        |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | .0002277 | .0003840 | 2235.638 | .0108447 | -.000125 | .0022518 | .4154763 |
| #2 | .0000689 | .0003954 | 2231.439 | .0116312 | -.000332 | .0031655 | .4271817 |
| #3 | .0000873 | .0003714 | 2262.891 | .0119898 | .000407  | .0030181 | .4265893 |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Mn2576          | Mg2790          | Ni2316          | Ag3280          | Na5895          | V_2924          | Zn2138          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.0136620</b> | <b>2123.099</b> | <b>.0080683</b> | <b>-.002914</b> | <b>2154.450</b> | <b>.0041376</b> | <b>.0443593</b> |
| Stddev | .0009144        | 8.197           | .0005630        | .000754         | 19.878          | .0021851        | .0006421        |
| %RSD   | 6.693099        | .3860935        | 6.977337        | 25.86512        | .9226259        | 52.81108        | 1.447418        |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | .0142534 | 2116.057 | .0074203 | -.003067 | 2173.686 | .0058096 | .0444572 |
| #2 | .0126088 | 2121.142 | .0083483 | -.002096 | 2155.676 | .0049381 | .0449468 |
| #3 | .0141238 | 2132.097 | .0084364 | -.003580 | 2133.987 | .0016651 | .0436740 |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | K_7664          | B_2496          | Mo2020          | Sn1899          | Ti3361          | Si2881          | P_1774          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>11.56424</b> | <b>.0060708</b> | <b>.0025783</b> | <b>-.016278</b> | <b>-.106711</b> | <b>-.018267</b> | <b>.0129347</b> |
| Stddev | .77135          | .0011011        | .0004591        | .001107         | .001335         | .005523         | .0017670        |
| %RSD   | 6.670135        | 18.13784        | 17.80521        | 6.802544        | 1.251165        | 30.23672        | 13.66062        |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | 10.74262 | .0067209 | .0024315 | -.017128 | -.105689 | -.015285 | .0120112 |
| #2 | 11.67723 | .0066920 | .0022107 | -.016681 | -.106221 | -.014875 | .0149720 |
| #3 | 12.27286 | .0047994 | .0030929 | -.015026 | -.108221 | -.024640 | .0118208 |



Sample Name: LR-1      Acquired: 8/21/2025 16:14:46      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |          |          |          |
|--------|----------|----------|----------|
| Elem   | S_1820   | Li6707   | Sr4077   |
| Units  | ppm      | ppm      | ppm      |
| Avg    | .1896111 | -.356508 | .0609770 |
| Stddev | .0039188 | .002885  | .0005581 |
| %RSD   | 2.066772 | .8091769 | .9152262 |
| #1     | .1886886 | -.355979 | .0615420 |
| #2     | .1939089 | -.353924 | .0604261 |
| #3     | .1862358 | -.359620 | .0609628 |

|           |          |          |          |          |          |
|-----------|----------|----------|----------|----------|----------|
| Int. Std. | Y_2243   | Y_3600   | Y_3710   | Y_2243   | In2306   |
| Units     | Cts/S    | Cts/S    | Cts/S    | Cts/S    | Cts/S    |
| Avg       | 3946.639 | 73045.38 | 10082.02 | 3137.029 | 4199.261 |
| Stddev    | 2.729    | 109.36   | 34.49    | 14.275   | 5.422    |
| %RSD      | .0691468 | .1497166 | .3421033 | .4550372 | .1291173 |
| #1        | 3949.092 | 72951.48 | 10049.20 | 3124.368 | 4205.521 |
| #2        | 3947.125 | 73019.21 | 10117.97 | 3152.500 | 4196.018 |
| #3        | 3943.699 | 73165.45 | 10078.91 | 3134.219 | 4196.246 |

Sample Name: Q2909-02      Acquired: 8/21/2025 16:19:26      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | As1890          | Tl1908          | Pb2203          | Se1960          | Sb2068          | Al3961          | Ba4934          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>-.003731</b> | <b>-.003603</b> | <b>.0006681</b> | <b>.0065532</b> | <b>.0036448</b> | <b>.0704642</b> | <b>.0949499</b> |
| Stddev | .001487         | .001378         | .0010132        | .0022835        | .0009955        | .0006529        | .0003223        |
| %RSD   | 39.85963        | 38.25322        | 151.6628        | 34.84601        | 27.31299        | .9266205        | .3394026        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>-.004027</b> | <b>-.002014</b> | <b>.0010988</b> | <b>.0082331</b> | <b>.0044849</b> | <b>.0700676</b> | <b>.0946026</b> |
| #2 | <b>-.005048</b> | <b>-.004473</b> | <b>.0013947</b> | <b>.0039532</b> | <b>.0039042</b> | <b>.0701073</b> | <b>.0952394</b> |
| #3 | <b>-.002118</b> | <b>-.004324</b> | <b>-.000489</b> | <b>.0074733</b> | <b>.0025452</b> | <b>.0712178</b> | <b>.0950076</b> |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Be2348          | Cd2265          | Ca3736          | Cr2677          | Co2286          | Cu2247          | Fe2404          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>-.000126</b> | <b>.0005940</b> | <b>5.420864</b> | <b>.0018336</b> | <b>.0000225</b> | <b>.0175707</b> | <b>.2529307</b> |
| Stddev | .000024         | .0000424        | .025395         | .0002256        | .0000621        | .0001781        | .0081256        |
| %RSD   | 19.29859        | 7.143634        | .4684640        | 12.30475        | 275.3339        | 1.013656        | 3.212561        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>-.000154</b> | <b>.0006427</b> | <b>5.407712</b> | <b>.0017923</b> | <b>-.000048</b> | <b>.0177268</b> | <b>.2466373</b> |
| #2 | <b>-.000113</b> | <b>.0005655</b> | <b>5.450137</b> | <b>.0020770</b> | <b>.000047</b>  | <b>.0176085</b> | <b>.2500510</b> |
| #3 | <b>-.000111</b> | <b>.0005737</b> | <b>5.404743</b> | <b>.0016315</b> | <b>.000068</b>  | <b>.0173767</b> | <b>.2621040</b> |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Mn2576          | Mg2790          | Ni2316          | Ag3280          | Na5895          | V_2924          | Zn2138          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.0321958</b> | <b>.3970342</b> | <b>.0040547</b> | <b>-.000381</b> | <b>330.6480</b> | <b>-.002565</b> | <b>1.142148</b> |
| Stddev | .0005597        | .0031034        | .0002915        | .000349         | 1.3267          | .002533         | .003337         |
| %RSD   | 1.738529        | .7816536        | 7.189394        | 91.58521        | .4012285        | 98.76195        | .2921277        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>.0316903</b> | <b>.3937069</b> | <b>.0038077</b> | <b>-.000318</b> | <b>331.6416</b> | <b>-.005366</b> | <b>1.140948</b> |
| #2 | <b>.0320998</b> | <b>.3998503</b> | <b>.0043762</b> | <b>-.000068</b> | <b>329.1415</b> | <b>-.000434</b> | <b>1.139578</b> |
| #3 | <b>.0327973</b> | <b>.3975455</b> | <b>.0039802</b> | <b>-.000757</b> | <b>331.1609</b> | <b>-.001895</b> | <b>1.145919</b> |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | K_7664          | B_2496          | Mo2020          | Sn1899          | Ti3361          | Si2881          | P_1774          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>17.04696</b> | <b>.0993240</b> | <b>.2545976</b> | <b>-.014934</b> | <b>-.001037</b> | <b>.1931747</b> | <b>.2754576</b> |
| Stddev | .09490          | .0006156        | .0006888        | .000361         | .001057         | .0046625        | .0017302        |
| %RSD   | .5566979        | .6197807        | .2705313        | 2.414198        | 101.8755        | 2.413629        | .6281333        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>17.09224</b> | <b>.0999943</b> | <b>.2538159</b> | <b>-.014757</b> | <b>-.002209</b> | <b>.1967777</b> | <b>.2750502</b> |
| #2 | <b>16.93790</b> | <b>.0987839</b> | <b>.2548615</b> | <b>-.014696</b> | <b>-.000157</b> | <b>.1879086</b> | <b>.2739675</b> |
| #3 | <b>17.11073</b> | <b>.0991937</b> | <b>.2551154</b> | <b>-.015349</b> | <b>-.000745</b> | <b>.1948376</b> | <b>.2773552</b> |

Sample Name: Q2909-02      Acquired: 8/21/2025 16:19:26      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |          |          |          |
|--------|----------|----------|----------|
| Elem   | S_1820   | Li6707   | Sr4077   |
| Units  | ppm      | ppm      | ppm      |
| Avg    | 1.716659 | -.001754 | .0193220 |
| Stddev | .007958  | .001047  | .0001178 |
| %RSD   | .4635530 | 59.67613 | .6097515 |
| #1     | 1.710661 | -.002069 | .0194411 |
| #2     | 1.713630 | -.002607 | .0192055 |
| #3     | 1.725686 | -.000586 | .0193195 |

|           |          |          |          |          |          |
|-----------|----------|----------|----------|----------|----------|
| Int. Std. | Y_2243   | Y_3600   | Y_3710   | Y_2243   | In2306   |
| Units     | Cts/S    | Cts/S    | Cts/S    | Cts/S    | Cts/S    |
| Avg       | 6092.139 | 107690.3 | 12535.04 | 4791.987 | 7125.079 |
| Stddev    | 12.500   | 71.2     | 15.50    | 16.017   | 16.196   |
| %RSD      | .2051852 | .0661180 | .1236794 | .3342488 | .2273089 |
| #1        | 6094.255 | 107641.3 | 12522.56 | 4801.427 | 7136.262 |
| #2        | 6103.446 | 107657.7 | 12530.17 | 4801.040 | 7132.469 |
| #3        | 6078.716 | 107772.0 | 12552.40 | 4773.493 | 7106.506 |

Sample Name: CCV02      Acquired: 8/21/2025 16:23:49      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1: CCV02      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | As1890          | Tl1908          | Pb2203          | Se1960          | Sb2068          | Al3961          | Ba4934          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>5.079761</b> | <b>5.026590</b> | <b>4.893696</b> | <b>5.136489</b> | <b>5.136227</b> | <b>9.950036</b> | <b>10.08344</b> |
| Stddev | .003153         | .036135         | .007279         | .011085         | .005666         | .006730         | .12517          |
| %RSD   | .0620715        | .7188676        | .1487407        | .2158151        | .1103196        | .0676384        | 1.241310        |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | 5.077596 | 4.988463 | 4.893794 | 5.130938 | 5.130185 | 9.945418 | 9.94366  |
| #2 | 5.078308 | 5.060332 | 4.886368 | 5.129276 | 5.137072 | 9.957757 | 10.12151 |
| #3 | 5.083379 | 5.030976 | 4.900925 | 5.149253 | 5.141423 | 9.946931 | 10.18516 |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Be2348          | Cd2265          | Ca3736          | Cr2677          | Co2286          | Cu2247          | Fe2404          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.2320459</b> | <b>2.461003</b> | <b>24.89238</b> | <b>.9837177</b> | <b>2.477404</b> | <b>1.262492</b> | <b>5.301812</b> |
| Stddev | .0020637        | .003258         | .07483          | .0016660        | .001738         | .002545         | .041771         |
| %RSD   | .8893601        | .1323938        | .3006236        | .1693563        | .0701436        | .2015937        | .7878538        |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | .2298497 | 2.458383 | 24.84006 | .9824557 | 2.475563 | 1.259968 | 5.311615 |
| #2 | .2323432 | 2.459975 | 24.85899 | .9856061 | 2.477636 | 1.262450 | 5.337810 |
| #3 | .2339449 | 2.464651 | 24.97810 | .9830912 | 2.479015 | 1.265058 | 5.256012 |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Mn2576          | Mg2790          | Ni2316          | Ag3280          | Na5895          | V_2924          | Zn2138          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>2.510279</b> | <b>24.41812</b> | <b>2.468011</b> | <b>1.245827</b> | <b>27.05761</b> | <b>2.524255</b> | <b>2.525829</b> |
| Stddev | .006878         | .08891          | .001419         | .001880         | .16720          | .010295         | .001596         |
| %RSD   | .2740061        | .3641225        | .0575157        | .1508824        | .6179398        | .4078496        | .0631931        |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | 2.502753 | 24.31852 | 2.466626 | 1.247983 | 27.16994 | 2.516825 | 2.525333 |
| #2 | 2.511843 | 24.48949 | 2.467944 | 1.244531 | 27.13743 | 2.519934 | 2.524539 |
| #3 | 2.516241 | 24.44634 | 2.469462 | 1.244967 | 26.86546 | 2.536007 | 2.527614 |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | K_7664          | B_2496          | Mo2020          | Sn1899          | Ti3361          | Si2881          | P_1774          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>25.36158</b> | <b>4.683165</b> | <b>5.084663</b> | <b>4.925779</b> | <b>5.083327</b> | <b>5.252971</b> | <b>4.939496</b> |
| Stddev | .12465          | .032479         | .003986         | .005558         | .007153         | .006489         | .004305         |
| %RSD   | .4915096        | .6935341        | .0784004        | .1128408        | .1407073        | .1235250        | .0871531        |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | 25.47847 | 4.651580 | 5.080084 | 4.921180 | 5.076201 | 5.258247 | 4.942477 |
| #2 | 25.37588 | 4.681445 | 5.086544 | 4.931955 | 5.083273 | 5.254940 | 4.941451 |
| #3 | 25.23039 | 4.716470 | 5.087360 | 4.924201 | 5.090506 | 5.245726 | 4.934561 |

Sample Name: CCV02      Acquired: 8/21/2025 16:23:49      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1: CCV02      Custom ID2:      Custom ID3:  
Comment:

|        |          |          |          |
|--------|----------|----------|----------|
| Elem   | S_1820   | Li6707   | Sr4077   |
| Units  | ppm      | ppm      | ppm      |
| Avg    | 4.952504 | 4.724238 | 5.184071 |
| Stddev | .005924  | .008186  | .063232  |
| %RSD   | .1196244 | .1732741 | 1.219735 |
| #1     | 4.946709 | 4.716204 | 5.151098 |
| #2     | 4.952252 | 4.723943 | 5.144140 |
| #3     | 4.958550 | 4.732568 | 5.256974 |

|           |          |          |          |          |          |
|-----------|----------|----------|----------|----------|----------|
| Int. Std. | Y_2243   | Y_3600   | Y_3710   | Y_2243   | In2306   |
| Units     | Cts/S    | Cts/S    | Cts/S    | Cts/S    | Cts/S    |
| Avg       | 6133.069 | 108131.9 | 11775.58 | 4818.447 | 7177.243 |
| Stddev    | 7.707    | 115.5    | 98.24    | 4.928    | 5.587    |
| %RSD      | .1256585 | .1068087 | .8342365 | .1022694 | .0778367 |
| #1        | 6139.815 | 108188.5 | 11879.56 | 4817.558 | 7183.090 |
| #2        | 6134.721 | 107999.1 | 11762.85 | 4823.759 | 7176.678 |
| #3        | 6124.670 | 108208.2 | 11684.33 | 4814.025 | 7171.960 |

Sample Name: CCB02      Acquired: 8/21/2025 16:27:59      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1: CCB02      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | As1890          | Tl1908          | Pb2203          | Se1960          | Sb2068          | Al3961          | Ba4934          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>-.000002</b> | <b>-.000297</b> | <b>-.000117</b> | <b>.0002119</b> | <b>-.000799</b> | <b>-.002136</b> | <b>-.007141</b> |
| Stddev | .000463         | .001055         | .000840         | .0018134        | .001897         | .006757         | .001127         |
| %RSD   | 18869.54        | 355.2762        | 719.9292        | 855.7505        | 237.3329        | 316.2810        | 15.78787        |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | .000458  | .000365  | .000501  | .0014562 | -.001465 | .004646  | -.006192 |
| #2 | -.000468 | .000258  | -.001073 | -.001869 | .001341  | -.002189 | -.006844 |
| #3 | .000002  | -.001513 | .000222  | .001048  | -.002274 | -.008867 | -.008388 |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Be2348          | Cd2265          | Ca3736          | Cr2677          | Co2286          | Cu2247          | Fe2404          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.0000377</b> | <b>.0000861</b> | <b>-.005177</b> | <b>-.000384</b> | <b>.0000181</b> | <b>.0000631</b> | <b>.0017974</b> |
| Stddev | .0000597        | .0000542        | .006300         | .000307         | .0000822        | .0002366        | .0023070        |
| %RSD   | 158.5956        | 62.90776        | 121.6997        | 79.99822        | 453.9590        | 374.9266        | 128.3462        |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | -.000030 | .0001487 | -.007069 | -.000030 | -.000019 | .0003298 | .0040885 |
| #2 | .000084  | .0000543 | -.010314 | -.000580 | .000112  | -.000121 | -.000525 |
| #3 | .000059  | .0000554 | .001853  | -.000541 | -.000039 | -.000019 | .001829  |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Mn2576          | Mg2790          | Ni2316          | Ag3280          | Na5895          | V_2924          | Zn2138          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.0008145</b> | <b>-.010233</b> | <b>-.000256</b> | <b>-.000067</b> | <b>.5721117</b> | <b>.0000173</b> | <b>.0003681</b> |
| Stddev | .0003674        | .009401         | .000286         | .000143         | .0155042        | .0027450        | .0001325        |
| %RSD   | 45.10754        | 91.87054        | 111.7163        | 212.3572        | 2.709999        | 15836.06        | 35.98549        |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | .0009799 | -.018365 | -.000456 | -.000184 | .5603607 | .0029983 | .0003091 |
| #2 | .0010701 | .000060  | .000071  | .000092  | .5662904 | -.002406 | .0005199 |
| #3 | .0003935 | -.012393 | -.000382 | -.000109 | .5896841 | -.000540 | .0002755 |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | K_7664          | B_2496          | Mo2020          | Sn1899          | Ti3361          | Si2881          | P_1774          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.0831933</b> | <b>.0007328</b> | <b>.0003865</b> | <b>-.002177</b> | <b>-.001235</b> | <b>.0141868</b> | <b>.0032169</b> |
| Stddev | .0314810        | .0001624        | .0001803        | .000232         | .001794         | .0045407        | .0004082        |
| %RSD   | 37.84074        | 22.15593        | 46.65684        | 10.67676        | 145.2237        | 32.00637        | 12.69014        |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | .0999797 | .0006595 | .0003308 | -.002179 | .000177  | .0194270 | .0034550 |
| #2 | .1027236 | .0009189 | .0005881 | -.001944 | -.000630 | .0114167 | .0034503 |
| #3 | .0468768 | .0006201 | .0002405 | -.002409 | -.003254 | .0117166 | .0027455 |

Sample Name: CCB02      Acquired: 8/21/2025 16:27:59      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1: CCB02      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|
| Elem   | S_1820          | Li6707          | Sr4077          |
| Units  | ppm             | ppm             | ppm             |
| Avg    | <b>-.000361</b> | <b>-.003520</b> | <b>.0001708</b> |
| Stddev | .001149         | .000934         | .0000649        |
| %RSD   | 317.8207        | 26.54754        | 37.98084        |

|    |          |          |          |
|----|----------|----------|----------|
| #1 | .000667  | -.002709 | .0002003 |
| #2 | -.001601 | -.003308 | .0002156 |
| #3 | -.000151 | -.004542 | .0000964 |

|           |                 |                 |                 |                 |                 |
|-----------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Int. Std. | Y_2243          | Y_3600          | Y_3710          | Y_2243          | In2306          |
| Units     | Cts/S           | Cts/S           | Cts/S           | Cts/S           | Cts/S           |
| Avg       | <b>6466.108</b> | <b>109696.6</b> | <b>11753.15</b> | <b>5000.987</b> | <b>8243.459</b> |
| Stddev    | 19.125          | 340.8           | 35.54           | 12.881          | 22.335          |
| %RSD      | .2957726        | .3106357        | .3023918        | .2575734        | .2709426        |

|    |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|
| #1 | 6483.063 | 110024.4 | 11784.46 | 5011.397 | 8253.272 |
| #2 | 6469.885 | 109721.1 | 11760.46 | 4986.581 | 8259.207 |
| #3 | 6445.377 | 109344.2 | 11714.52 | 5004.982 | 8217.897 |

Sample Name: Q2909-02DUP      Acquired: 8/21/2025 16:32:19      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | As1890          | Tl1908          | Pb2203          | Se1960          | Sb2068          | Al3961          | Ba4934          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>-.003366</b> | <b>-.003247</b> | <b>.0031112</b> | <b>.0061461</b> | <b>.0059720</b> | <b>.0842965</b> | <b>.1247521</b> |
| Stddev | .001145         | .000445         | .0002998        | .0040657        | .0009509        | .0037390        | .0013928        |
| %RSD   | 34.02251        | 13.71625        | 9.636263        | 66.15116        | 15.92307        | 4.435568        | 1.116497        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>-.002947</b> | <b>-.003093</b> | <b>.0031234</b> | <b>.0087751</b> | <b>.0052595</b> | <b>.0875268</b> | <b>.1255885</b> |
| #2 | <b>-.002490</b> | <b>-.003748</b> | <b>.0034046</b> | <b>.0082001</b> | <b>.0070517</b> | <b>.0851620</b> | <b>.1255236</b> |
| #3 | <b>-.004662</b> | <b>-.002899</b> | <b>.0028054</b> | <b>.0014632</b> | <b>.0056046</b> | <b>.0802006</b> | <b>.1231442</b> |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Be2348          | Cd2265          | Ca3736          | Cr2677          | Co2286          | Cu2247          | Fe2404          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>-.000154</b> | <b>.0007126</b> | <b>6.905155</b> | <b>.0023997</b> | <b>.0000350</b> | <b>.0224417</b> | <b>.3331362</b> |
| Stddev | .000017         | .0000424        | .037252         | .0000411        | .0000401        | .0002997        | .0072665        |
| %RSD   | 11.16005        | 5.954133        | .5394849        | 1.711598        | 114.4714        | 1.335420        | 2.181228        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>-.000170</b> | <b>.0007050</b> | <b>6.947381</b> | <b>.0023826</b> | <b>.0000655</b> | <b>.0221345</b> | <b>.3247503</b> |
| #2 | <b>-.000136</b> | <b>.0006744</b> | <b>6.891149</b> | <b>.0023699</b> | <b>-.000010</b> | <b>.0224571</b> | <b>.3375726</b> |
| #3 | <b>-.000155</b> | <b>.0007582</b> | <b>6.876937</b> | <b>.0024465</b> | <b>.000050</b>  | <b>.0227333</b> | <b>.3370855</b> |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Mn2576          | Mg2790          | Ni2316          | Ag3280          | Na5895          | V_2924          | Zn2138          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.0415333</b> | <b>.4610589</b> | <b>.0050971</b> | <b>-.000332</b> | <b>430.0655</b> | <b>-.003685</b> | <b>1.444375</b> |
| Stddev | .0003373        | .0038865        | .0000356        | .000238         | 5.8498          | .001354         | .000752         |
| %RSD   | .8121993        | .8429423        | .6976514        | 71.75338        | 1.360203        | 36.73740        | .0520895        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>.0417874</b> | <b>.4645955</b> | <b>.0050573</b> | <b>-.000420</b> | <b>435.6895</b> | <b>-.003415</b> | <b>1.443785</b> |
| #2 | <b>.0416619</b> | <b>.4568982</b> | <b>.0051258</b> | <b>-.000514</b> | <b>424.0135</b> | <b>-.002486</b> | <b>1.444118</b> |
| #3 | <b>.0411506</b> | <b>.4616830</b> | <b>.0051083</b> | <b>-.000062</b> | <b>430.4935</b> | <b>-.005153</b> | <b>1.445222</b> |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | K_7664          | B_2496          | Mo2020          | Sn1899          | Ti3361          | Si2881          | P_1774          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>21.34725</b> | <b>.1305375</b> | <b>.3188981</b> | <b>-.014261</b> | <b>-.000609</b> | <b>.2551211</b> | <b>.3499287</b> |
| Stddev | .12999          | .0007447        | .0009163        | .000874         | .001093         | .0075687        | .0009781        |
| %RSD   | .6089317        | .5704734        | .2873431        | 6.127430        | 179.2843        | 2.966719        | .2795203        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>21.49408</b> | <b>.1296998</b> | <b>.3179554</b> | <b>-.013414</b> | <b>-.001871</b> | <b>.2634564</b> | <b>.3492153</b> |
| #2 | <b>21.30081</b> | <b>.1311246</b> | <b>.3189533</b> | <b>-.014210</b> | <b>-.000009</b> | <b>.2532288</b> | <b>.3495270</b> |
| #3 | <b>21.24686</b> | <b>.1307881</b> | <b>.3197856</b> | <b>-.015159</b> | <b>.000052</b>  | <b>.2486780</b> | <b>.3510437</b> |



Sample Name: Q2909-02DUP      Acquired: 8/21/2025 16:32:19      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |          |          |          |
|--------|----------|----------|----------|
| Elem   | S_1820   | Li6707   | Sr4077   |
| Units  | ppm      | ppm      | ppm      |
| Avg    | 2.192400 | .0003271 | .0243415 |
| Stddev | .020271  | .0003154 | .0002865 |
| %RSD   | .9246084 | 96.44811 | 1.177161 |

|    |          |          |          |
|----|----------|----------|----------|
| #1 | 2.175146 | .0001382 | .0246710 |
| #2 | 2.187330 | .0001518 | .0242027 |
| #3 | 2.214725 | .0006912 | .0241508 |

|           |          |          |          |          |          |
|-----------|----------|----------|----------|----------|----------|
| Int. Std. | Y_2243   | Y_3600   | Y_3710   | Y_2243   | In2306   |
| Units     | Cts/S    | Cts/S    | Cts/S    | Cts/S    | Cts/S    |
| Avg       | 5938.387 | 102141.0 | 11891.66 | 4626.262 | 6877.668 |
| Stddev    | 8.462    | 399.1    | 2.06     | 18.489   | 14.827   |
| %RSD      | .1424956 | .3906976 | .0173126 | .3996631 | .2155770 |

|    |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|
| #1 | 5933.557 | 102152.1 | 11891.57 | 4619.763 | 6873.548 |
| #2 | 5948.158 | 102534.4 | 11893.76 | 4647.123 | 6894.119 |
| #3 | 5933.447 | 101736.5 | 11889.64 | 4611.900 | 6865.337 |

Sample Name: Q2909-02LX5      Acquired: 8/21/2025 16:36:41      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | As1890          | Tl1908          | Pb2203          | Se1960          | Sb2068          | Al3961          | Ba4934          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>-.000455</b> | <b>-.001765</b> | <b>.0010434</b> | <b>.0029677</b> | <b>.0010478</b> | <b>.0196666</b> | <b>.0153099</b> |
| Stddev | .001954         | .000594         | .0008283        | .0011790        | .0005167        | .0025189        | .0018210        |
| %RSD   | 429.5057        | 33.66310        | 79.38980        | 39.72668        | 49.31700        | 12.80784        | 11.89425        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>-.002352</b> | <b>-.002173</b> | <b>.0017541</b> | <b>.0018876</b> | <b>.0015945</b> | <b>.0168498</b> | <b>.0170023</b> |
| #2 | <b>-.000564</b> | <b>-.002038</b> | <b>.0001337</b> | <b>.0042254</b> | <b>.0009815</b> | <b>.0217027</b> | <b>.0133830</b> |
| #3 | <b>.001551</b>  | <b>-.001083</b> | <b>.0012423</b> | <b>.0027901</b> | <b>.0005674</b> | <b>.0204472</b> | <b>.0155443</b> |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Be2348          | Cd2265          | Ca3736          | Cr2677          | Co2286          | Cu2247          | Fe2404          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>-.000024</b> | <b>.0000992</b> | <b>1.232008</b> | <b>.0000791</b> | <b>-.000007</b> | <b>.0037992</b> | <b>.0449589</b> |
| Stddev | .000055         | .0000237        | .004597         | .0000925        | .000035         | .0004006        | .0020454        |
| %RSD   | 225.0475        | 23.93029        | .3731477        | 116.9119        | 533.1444        | 10.54429        | 4.549428        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>-.000087</b> | <b>.0001100</b> | <b>1.227315</b> | <b>.0000043</b> | <b>.000022</b>  | <b>.0034745</b> | <b>.0428889</b> |
| #2 | <b>.000016</b>  | <b>.0000720</b> | <b>1.236503</b> | <b>.0001825</b> | <b>.000004</b>  | <b>.0042468</b> | <b>.0450090</b> |
| #3 | <b>-.000003</b> | <b>.0001156</b> | <b>1.232205</b> | <b>.0000506</b> | <b>-.000046</b> | <b>.0036762</b> | <b>.0469787</b> |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Mn2576          | Mg2790          | Ni2316          | Ag3280          | Na5895          | V_2924          | Zn2138          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.0066937</b> | <b>.0904976</b> | <b>.0005431</b> | <b>-.000053</b> | <b>71.87343</b> | <b>-.000397</b> | <b>.2557306</b> |
| Stddev | .0002093        | .0012417        | .0003216        | .000256         | .18444          | .000320         | .0012354        |
| %RSD   | 3.126367        | 1.372070        | 59.22216        | 479.8654        | .2566198        | 80.67564        | .4830663        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>.0068458</b> | <b>.0910177</b> | <b>.0001835</b> | <b>.000141</b>  | <b>71.66048</b> | <b>-.000417</b> | <b>.2553718</b> |
| #2 | <b>.0067803</b> | <b>.0913947</b> | <b>.0006424</b> | <b>-.000344</b> | <b>71.97720</b> | <b>-.000067</b> | <b>.2547143</b> |
| #3 | <b>.0064550</b> | <b>.0890804</b> | <b>.0008034</b> | <b>.000042</b>  | <b>71.98261</b> | <b>-.000706</b> | <b>.2571056</b> |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | K_7664          | B_2496          | Mo2020          | Sn1899          | Ti3361          | Si2881          | P_1774          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>3.494994</b> | <b>.0246370</b> | <b>.0536430</b> | <b>-.005337</b> | <b>-.000566</b> | <b>.0596186</b> | <b>.0602565</b> |
| Stddev | .010940         | .0007956        | .0006298        | .000171         | .000914         | .0108168        | .0021890        |
| %RSD   | .3130156        | 3.229369        | 1.174113        | 3.197414        | 161.4064        | 18.14344        | 3.632756        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>3.482432</b> | <b>.0240482</b> | <b>.0543617</b> | <b>-.005153</b> | <b>-.001455</b> | <b>.0711708</b> | <b>.0626859</b> |
| #2 | <b>3.502427</b> | <b>.0243207</b> | <b>.0533798</b> | <b>-.005489</b> | <b>-.000616</b> | <b>.0579550</b> | <b>.0596462</b> |
| #3 | <b>3.500124</b> | <b>.0255421</b> | <b>.0531875</b> | <b>-.005369</b> | <b>.000372</b>  | <b>.0497298</b> | <b>.0584375</b> |

Sample Name: Q2909-02LX5      Acquired: 8/21/2025 16:36:41      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |          |          |          |
|--------|----------|----------|----------|
| Elem   | S_1820   | Li6707   | Sr4077   |
| Units  | ppm      | ppm      | ppm      |
| Avg    | .3630525 | -.002551 | .0043266 |
| Stddev | .0088544 | .000961  | .0000302 |
| %RSD   | 2.438874 | 37.68099 | .6973144 |
| #1     | .3730473 | -.002542 | .0043394 |
| #2     | .3599204 | -.001594 | .0042921 |
| #3     | .3561899 | -.003516 | .0043482 |

|           |          |          |          |          |          |
|-----------|----------|----------|----------|----------|----------|
| Int. Std. | Y_2243   | Y_3600   | Y_3710   | Y_2243   | In2306   |
| Units     | Cts/S    | Cts/S    | Cts/S    | Cts/S    | Cts/S    |
| Avg       | 6245.797 | 110312.5 | 11873.46 | 4920.742 | 7522.683 |
| Stddev    | 6.597    | 424.7    | 81.12    | 17.636   | 4.942    |
| %RSD      | .1056233 | .3849930 | .6832114 | .3584094 | .0656906 |
| #1        | 6238.180 | 110728.5 | 11825.56 | 4915.667 | 7517.028 |
| #2        | 6249.676 | 110329.3 | 11827.71 | 4940.360 | 7524.845 |
| #3        | 6249.536 | 109879.6 | 11967.12 | 4906.200 | 7526.175 |

Sample Name: Q2909-02MS      Acquired: 8/21/2025 16:40:58      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | As1890          | Tl1908          | Pb2203          | Se1960          | Sb2068          | Al3961          | Ba4934          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.8355867</b> | <b>1.870154</b> | <b>.9367829</b> | <b>2.106629</b> | <b>.8433747</b> | <b>2.048068</b> | <b>.2848801</b> |
| Stddev | .0053257        | .016548         | .0008066        | .007937         | .0024913        | .004231         | .0027636        |
| %RSD   | .6373549        | .8848236        | .0861037        | .3767741        | .2954029        | .2065784        | .9700865        |
| #1     | .8298572        | 1.852116        | .9362982        | 2.107933        | .8406083        | 2.050273        | .2847921        |
| #2     | .8403858        | 1.884631        | .9363366        | 2.113834        | .8440747        | 2.050741        | .2876866        |
| #3     | .8365171        | 1.873716        | .9377141        | 2.098121        | .8454413        | 2.043190        | .2821616        |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Be2348          | Cd2265          | Ca3736          | Cr2677          | Co2286          | Cu2247          | Fe2404          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.1803641</b> | <b>.1988100</b> | <b>5.689697</b> | <b>.4108372</b> | <b>.2030231</b> | <b>.3187299</b> | <b>3.572610</b> |
| Stddev | .0002349        | .0002158        | .002759         | .0011955        | .0000363        | .0004508        | .021819         |
| %RSD   | .1302431        | .1085648        | .0484842        | .2909875        | .0178923        | .1414381        | .6107206        |
| #1     | .1806281        | .1989874        | 5.686517        | .4096398        | .2029830        | .3188962        | 3.552446        |
| #2     | .1801781        | .1985697        | 5.691137        | .4120308        | .2030537        | .3190739        | 3.595773        |
| #3     | .1802860        | .1988730        | 5.691438        | .4108409        | .2030327        | .3182196        | 3.569611        |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Mn2576          | Mg2790          | Ni2316          | Ag3280          | Na5895          | V_2924          | Zn2138          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.2362013</b> | <b>2.244420</b> | <b>.5076860</b> | <b>.0752994</b> | <b>283.0134</b> | <b>.3076180</b> | <b>1.178534</b> |
| Stddev | .0012094        | .014468         | .0000795        | .0003654        | 1.8098          | .0015388        | .000767         |
| %RSD   | .5120316        | .6446115        | .0156528        | .4852348        | .6394664        | .5002311        | .0650538        |
| #1     | .2370213        | 2.260720        | .5076295        | .0754750        | 280.9838        | .3068490        | 1.179409        |
| #2     | .2367703        | 2.233100        | .5077769        | .0755438        | 283.5968        | .3066153        | 1.178213        |
| #3     | .2348123        | 2.239440        | .5076518        | .0748793        | 284.4594        | .3093898        | 1.177980        |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | K_7664          | B_2496          | Mo2020          | Sn1899          | Ti3361          | Si2881          | P_1774          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>24.12567</b> | <b>.3398999</b> | <b>.6530290</b> | <b>.6885886</b> | <b>.2046806</b> | <b>1.155192</b> | <b>6.105442</b> |
| Stddev | .14213          | .0008279        | .0003131        | .0010848        | .0022761        | .013641         | .022293         |
| %RSD   | .5891261        | .2435713        | .0479463        | .1575344        | 1.112047        | 1.180858        | .3651399        |
| #1     | 24.05554        | .3407507        | .6530597        | .6886514        | .2032613        | 1.147269        | 6.101237        |
| #2     | 24.28924        | .3398520        | .6533255        | .6896406        | .2073060        | 1.170943        | 6.129538        |
| #3     | 24.03224        | .3390970        | .6527016        | .6874738        | .2034747        | 1.147364        | 6.085550        |

Sample Name: Q2909-02MS      Acquired: 8/21/2025 16:40:58      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |          |          |          |
|--------|----------|----------|----------|
| Elem   | S_1820   | Li6707   | Sr4077   |
| Units  | ppm      | ppm      | ppm      |
| Avg    | 1.445825 | .1919232 | .2161183 |
| Stddev | .006281  | .0009644 | .0011715 |
| %RSD   | .4344424 | .5024743 | .5420544 |
| #1     | 1.444506 | .1930175 | .2168637 |
| #2     | 1.452662 | .1915548 | .2167233 |
| #3     | 1.440308 | .1911975 | .2147680 |

|           |          |          |          |          |          |
|-----------|----------|----------|----------|----------|----------|
| Int. Std. | Y_2243   | Y_3600   | Y_3710   | Y_2243   | In2306   |
| Units     | Cts/S    | Cts/S    | Cts/S    | Cts/S    | Cts/S    |
| Avg       | 5943.755 | 104953.7 | 11842.78 | 4685.106 | 6940.827 |
| Stddev    | 2.219    | 150.9    | 26.02    | 11.965   | 4.783    |
| %RSD      | .0373312 | .1437547 | .2196805 | .2553776 | .0689148 |
| #1        | 5945.803 | 105092.6 | 11830.86 | 4698.886 | 6946.264 |
| #2        | 5941.397 | 104975.3 | 11872.62 | 4677.356 | 6938.950 |
| #3        | 5944.063 | 104793.2 | 11824.85 | 4679.075 | 6937.267 |

Sample Name: Q2909-02MSD      Acquired: 8/21/2025 16:45:07      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | As1890          | Tl1908          | Pb2203          | Se1960          | Sb2068          | Al3961          | Ba4934          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.8253526</b> | <b>1.855114</b> | <b>.9255628</b> | <b>2.091291</b> | <b>.8250345</b> | <b>2.024166</b> | <b>.2771521</b> |
| Stddev | .0010986        | .039008         | .0024222        | .006338         | .0017741        | .002531         | .0004594        |
| %RSD   | .1331024        | 2.102713        | .2617010        | .3030664        | .2150389        | .1250241        | .1657489        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>.8251746</b> | <b>1.837578</b> | <b>.9233175</b> | <b>2.085092</b> | <b>.8255707</b> | <b>2.024824</b> | <b>.2772589</b> |
| #2 | <b>.8243539</b> | <b>1.827953</b> | <b>.9252411</b> | <b>2.091022</b> | <b>.8264787</b> | <b>2.026303</b> | <b>.2775488</b> |
| #3 | <b>.8265293</b> | <b>1.899813</b> | <b>.9281298</b> | <b>2.097760</b> | <b>.8230541</b> | <b>2.021371</b> | <b>.2766488</b> |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Be2348          | Cd2265          | Ca3736          | Cr2677          | Co2286          | Cu2247          | Fe2404          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.1786867</b> | <b>.1965902</b> | <b>5.469413</b> | <b>.4071779</b> | <b>.2009616</b> | <b>.3150085</b> | <b>3.512380</b> |
| Stddev | .0012279        | .0004569        | .016264         | .0012859        | .0003342        | .0007705        | .018872         |
| %RSD   | .6871689        | .2324075        | .2973718        | .3158174        | .1662903        | .2445949        | .5372976        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>.1796998</b> | <b>.1965532</b> | <b>5.483229</b> | <b>.4057540</b> | <b>.2006422</b> | <b>.3144650</b> | <b>3.492551</b> |
| #2 | <b>.1790392</b> | <b>.1961529</b> | <b>5.451488</b> | <b>.4082546</b> | <b>.2009336</b> | <b>.3146702</b> | <b>3.514469</b> |
| #3 | <b>.1773212</b> | <b>.1970645</b> | <b>5.473521</b> | <b>.4075249</b> | <b>.2013088</b> | <b>.3158903</b> | <b>3.530121</b> |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Mn2576          | Mg2790          | Ni2316          | Ag3280          | Na5895          | V_2924          | Zn2138          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.2310471</b> | <b>2.213110</b> | <b>.5017812</b> | <b>.0749682</b> | <b>270.0203</b> | <b>.3060331</b> | <b>1.130614</b> |
| Stddev | .0005294        | .017785         | .0011936        | .0004431        | 3.5249          | .0038137        | .003429         |
| %RSD   | .2291243        | .8036391        | .2378687        | .5910568        | 1.305427        | 1.246182        | .3033087        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>.2313535</b> | <b>2.226123</b> | <b>.5014713</b> | <b>.0751555</b> | <b>269.7505</b> | <b>.3016295</b> | <b>1.133725</b> |
| #2 | <b>.2313519</b> | <b>2.192844</b> | <b>.5007731</b> | <b>.0752869</b> | <b>266.6381</b> | <b>.3082599</b> | <b>1.131180</b> |
| #3 | <b>.2304358</b> | <b>2.220363</b> | <b>.5030991</b> | <b>.0744622</b> | <b>273.6724</b> | <b>.3082099</b> | <b>1.126937</b> |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | K_7664          | B_2496          | Mo2020          | Sn1899          | Ti3361          | Si2881          | P_1774          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>23.35344</b> | <b>.3332542</b> | <b>.6353406</b> | <b>.6706648</b> | <b>.2004573</b> | <b>1.119584</b> | <b>6.028114</b> |
| Stddev | .18349          | .0014475        | .0008711        | .0036641        | .0002584        | .023049         | .030716         |
| %RSD   | .7856982        | .4343442        | .1371021        | .5463396        | .1289241        | 2.058753        | .5095454        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>23.18137</b> | <b>.3348143</b> | <b>.6344638</b> | <b>.6705297</b> | <b>.2001760</b> | <b>1.094167</b> | <b>6.006267</b> |
| #2 | <b>23.33240</b> | <b>.3329934</b> | <b>.6353522</b> | <b>.6670701</b> | <b>.2005118</b> | <b>1.125454</b> | <b>6.014840</b> |
| #3 | <b>23.54654</b> | <b>.3319548</b> | <b>.6362059</b> | <b>.6743945</b> | <b>.2006842</b> | <b>1.139131</b> | <b>6.063235</b> |

Sample Name: Q2909-02MSD      Acquired: 8/21/2025 16:45:07      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |          |          |          |
|--------|----------|----------|----------|
| Elem   | S_1820   | Li6707   | Sr4077   |
| Units  | ppm      | ppm      | ppm      |
| Avg    | 1.374692 | .1896990 | .2137111 |
| Stddev | .010756  | .0006960 | .0003080 |
| %RSD   | .7823974 | .3668954 | .1441313 |
| #1     | 1.367047 | .1902086 | .2135325 |
| #2     | 1.370038 | .1889060 | .2140668 |
| #3     | 1.386991 | .1899825 | .2135341 |

|           |          |          |          |          |          |
|-----------|----------|----------|----------|----------|----------|
| Int. Std. | Y_2243   | Y_3600   | Y_3710   | Y_2243   | In2306   |
| Units     | Cts/S    | Cts/S    | Cts/S    | Cts/S    | Cts/S    |
| Avg       | 6164.538 | 109164.8 | 12267.36 | 4864.684 | 7208.465 |
| Stddev    | 4.255    | 428.5    | 60.43    | 28.321   | 7.160    |
| %RSD      | .0690205 | .3925376 | .4925747 | .5821773 | .0993274 |
| #1        | 6168.917 | 109580.5 | 12202.70 | 4853.590 | 7210.517 |
| #2        | 6164.278 | 109189.5 | 12276.99 | 4843.590 | 7214.375 |
| #3        | 6160.419 | 108724.5 | 12322.39 | 4896.873 | 7200.503 |

Sample Name: Q2909-02A      Acquired: 8/21/2025 16:49:14      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | As1890          | Tl1908          | Pb2203          | Se1960          | Sb2068          | Al3961          | Ba4934          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>-.004094</b> | <b>-.004675</b> | <b>.0001565</b> | <b>.0066040</b> | <b>.0053172</b> | <b>.0732043</b> | <b>.1082302</b> |
| Stddev | .001819         | .000324         | .0007545        | .0003770        | .0009687        | .0063490        | .0002997        |
| %RSD   | 44.42517        | 6.936408        | 482.0904        | 5.708817        | 18.21742        | 8.673026        | .2769350        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>-.002295</b> | <b>-.004683</b> | <b>.0002986</b> | <b>.0068094</b> | <b>.0063435</b> | <b>.0658799</b> | <b>.1085554</b> |
| #2 | <b>-.005932</b> | <b>-.004996</b> | <b>.0008299</b> | <b>.0061689</b> | <b>.0044189</b> | <b>.0771403</b> | <b>.1079650</b> |
| #3 | <b>-.004054</b> | <b>-.004347</b> | <b>-.000659</b> | <b>.0068338</b> | <b>.0051893</b> | <b>.0765926</b> | <b>.1081704</b> |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Be2348          | Cd2265          | Ca3736          | Cr2677          | Co2286          | Cu2247          | Fe2404          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>-.000164</b> | <b>.0006073</b> | <b>6.088291</b> | <b>.0021720</b> | <b>.0000703</b> | <b>.0196504</b> | <b>.2754542</b> |
| Stddev | .000012         | .0000494        | .016132         | .0002138        | .0001246        | .0000585        | .0057234        |
| %RSD   | 7.493258        | 8.138810        | .2649652        | 9.843895        | 177.2226        | .2975440        | 2.077808        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>-.000171</b> | <b>.0005598</b> | <b>6.081281</b> | <b>.0019632</b> | <b>.0001427</b> | <b>.0196028</b> | <b>.2807042</b> |
| #2 | <b>-.000150</b> | <b>.0006036</b> | <b>6.076850</b> | <b>.0021622</b> | <b>-.000074</b> | <b>.0196326</b> | <b>.2693528</b> |
| #3 | <b>-.000171</b> | <b>.0006585</b> | <b>6.106742</b> | <b>.0023905</b> | <b>.000142</b>  | <b>.0197156</b> | <b>.2763054</b> |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Mn2576          | Mg2790          | Ni2316          | Ag3280          | Na5895          | V_2924          | Zn2138          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.0334818</b> | <b>.4111927</b> | <b>.0043229</b> | <b>-.000528</b> | <b>355.8702</b> | <b>-.001606</b> | <b>1.273438</b> |
| Stddev | .0004044        | .0122602        | .0004780        | .000431         | 4.9245          | .001747         | .002691         |
| %RSD   | 1.207714        | 2.981612        | 11.05712        | 81.75620        | 1.383788        | 108.7716        | .2113563        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>.0334784</b> | <b>.4047898</b> | <b>.0039056</b> | <b>-.000456</b> | <b>356.4328</b> | <b>-.003609</b> | <b>1.275105</b> |
| #2 | <b>.0330792</b> | <b>.4253287</b> | <b>.0048444</b> | <b>-.000136</b> | <b>360.4892</b> | <b>-.000816</b> | <b>1.274877</b> |
| #3 | <b>.0338879</b> | <b>.4034596</b> | <b>.0042187</b> | <b>-.000990</b> | <b>350.6885</b> | <b>-.000394</b> | <b>1.270333</b> |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | K_7664          | B_2496          | Mo2020          | Sn1899          | Ti3361          | Si2881          | P_1774          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>17.95046</b> | <b>.1165927</b> | <b>.2826085</b> | <b>-.015216</b> | <b>-.001200</b> | <b>.2239181</b> | <b>.3104487</b> |
| Stddev | .11449          | .0012248        | .0003994        | .000280         | .000771         | .0256538        | .0014345        |
| %RSD   | .6377885        | 1.050532        | .1413174        | 1.839138        | 64.29880        | 11.45677        | .4620764        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>18.06562</b> | <b>.1153174</b> | <b>.2821515</b> | <b>-.014935</b> | <b>-.000827</b> | <b>.2283741</b> | <b>.3107062</b> |
| #2 | <b>17.83666</b> | <b>.1177600</b> | <b>.2827833</b> | <b>-.015494</b> | <b>-.002087</b> | <b>.2470520</b> | <b>.3089029</b> |
| #3 | <b>17.94910</b> | <b>.1167006</b> | <b>.2828907</b> | <b>-.015221</b> | <b>-.000686</b> | <b>.1963282</b> | <b>.3117371</b> |



Sample Name: Q2909-02A      Acquired: 8/21/2025 16:49:14      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |          |          |          |
|--------|----------|----------|----------|
| Elem   | S_1820   | Li6707   | Sr4077   |
| Units  | ppm      | ppm      | ppm      |
| Avg    | 1.930057 | -.002563 | .0212229 |
| Stddev | .011523  | .000834  | .0000907 |
| %RSD   | .5970030 | 32.53226 | .4271944 |
| #1     | 1.933320 | -.002256 | .0211881 |
| #2     | 1.917254 | -.003507 | .0211549 |
| #3     | 1.939596 | -.001927 | .0213259 |

|           |          |          |          |          |          |
|-----------|----------|----------|----------|----------|----------|
| Int. Std. | Y_2243   | Y_3600   | Y_3710   | Y_2243   | In2306   |
| Units     | Cts/S    | Cts/S    | Cts/S    | Cts/S    | Cts/S    |
| Avg       | 6084.942 | 106311.0 | 11905.58 | 4781.059 | 7041.284 |
| Stddev    | 3.897    | 445.1    | 67.95    | 23.589   | 10.984   |
| %RSD      | .0640476 | .4186655 | .5707151 | .4933795 | .1559931 |
| #1        | 6080.547 | 105798.9 | 11981.93 | 4772.703 | 7031.730 |
| #2        | 6087.977 | 106528.9 | 11851.78 | 4762.785 | 7053.285 |
| #3        | 6086.302 | 106605.1 | 11883.01 | 4807.688 | 7038.838 |

Sample Name: PB169324BL      Acquired: 8/21/2025 16:53:36      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |          |          |          |          |          |          |          |
|--------|----------|----------|----------|----------|----------|----------|----------|
| Elem   | As1890   | Tl1908   | Pb2203   | Se1960   | Sb2068   | Al3961   | Ba4934   |
| Units  | ppm      | ppm      | ppm      | ppm      | ppm      | ppm      | ppm      |
| Avg    | .0001719 | -.002585 | -.000704 | .0029027 | -.001394 | .0039237 | -.007137 |
| Stddev | .0019252 | .000454  | .000662  | .0018414 | .000457  | .0052301 | .000806  |
| %RSD   | 1120.129 | 17.56311 | 93.99881 | 63.44017 | 32.81369 | 133.2944 | 11.29770 |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | -.001113 | -.002439 | -.000611 | .0009726 | -.000883 | -.001620 | -.008055 |
| #2 | .002385  | -.002222 | -.001408 | .0046404 | -.001766 | .004620  | -.006541 |
| #3 | -.000757 | -.003094 | -.000094 | .0030951 | -.001532 | .008771  | -.006816 |

|        |          |          |          |          |          |          |          |
|--------|----------|----------|----------|----------|----------|----------|----------|
| Elem   | Be2348   | Cd2265   | Ca3736   | Cr2677   | Co2286   | Cu2247   | Fe2404   |
| Units  | ppm      | ppm      | ppm      | ppm      | ppm      | ppm      | ppm      |
| Avg    | -.000031 | -.000016 | -.010845 | -.000332 | .0000453 | .0000582 | -.007093 |
| Stddev | .000086  | .000031  | .010324  | .000086  | .0001042 | .0001121 | .004576  |
| %RSD   | 279.8450 | 202.3818 | 95.19891 | 26.03294 | 229.8746 | 192.5240 | 64.51694 |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | -.000130 | .000013  | .000542  | -.000256 | .0001102 | .0001727 | -.011926 |
| #2 | .000012  | -.000049 | -.013481 | -.000314 | .0001005 | -.000051 | -.002825 |
| #3 | .000025  | -.000011 | -.019596 | -.000425 | -.000075 | .000053  | -.006530 |

|        |          |          |          |          |          |          |          |
|--------|----------|----------|----------|----------|----------|----------|----------|
| Elem   | Mn2576   | Mg2790   | Ni2316   | Ag3280   | Na5895   | V_2924   | Zn2138   |
| Units  | ppm      | ppm      | ppm      | ppm      | ppm      | ppm      | ppm      |
| Avg    | -.000145 | .0130491 | -.000024 | -.000346 | .5947387 | -.001692 | -.001067 |
| Stddev | .000167  | .0067279 | .000197  | .000389  | .0144514 | .001658  | .000134  |
| %RSD   | 115.3610 | 51.55818 | 825.0264 | 112.4848 | 2.429880 | 97.97877 | 12.52455 |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | .000047  | .0188922 | .000083  | .000096  | .5942049 | -.000675 | -.000946 |
| #2 | -.000259 | .0145612 | .000097  | -.000496 | .6094496 | -.003604 | -.001045 |
| #3 | -.000223 | .0056938 | -.000252 | -.000638 | .5805616 | -.000796 | -.001211 |

|        |          |          |          |          |          |          |          |
|--------|----------|----------|----------|----------|----------|----------|----------|
| Elem   | K_7664   | B_2496   | Mo2020   | Sn1899   | Ti3361   | Si2881   | P_1774   |
| Units  | ppm      | ppm      | ppm      | ppm      | ppm      | ppm      | ppm      |
| Avg    | .0246619 | -.002968 | -.000183 | -.002737 | -.002812 | .0270758 | .0024798 |
| Stddev | .0284670 | .000707  | .000089  | .000217  | .000772  | .0119348 | .0006034 |
| %RSD   | 115.4290 | 23.82780 | 48.88776 | 7.915936 | 27.44085 | 44.07903 | 24.33077 |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | .0342312 | -.002802 | -.000286 | -.002933 | -.003324 | .0293459 | .0031713 |
| #2 | -.007357 | -.002359 | -.000127 | -.002504 | -.001925 | .0141691 | .0020606 |
| #3 | .047111  | -.003744 | -.000135 | -.002776 | -.003189 | .0377126 | .0022075 |

Sample Name: PB169324BL      Acquired: 8/21/2025 16:53:36      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|
| Elem   | S_1820          | Li6707          | Sr4077          |
| Units  | ppm             | ppm             | ppm             |
| Avg    | <b>-.003932</b> | <b>-.000609</b> | <b>-.000042</b> |
| Stddev | .001044         | .001190         | .000080         |
| %RSD   | 26.55809        | 195.4594        | 190.5757        |

|    |                 |                 |                 |
|----|-----------------|-----------------|-----------------|
| #1 | <b>-.002845</b> | <b>.000480</b>  | <b>-.000010</b> |
| #2 | <b>-.004024</b> | <b>-.000427</b> | <b>-.000132</b> |
| #3 | <b>-.004928</b> | <b>-.001880</b> | <b>.000017</b>  |

|           |                 |                 |                 |                 |                 |
|-----------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Int. Std. | Y_2243          | Y_3600          | Y_3710          | Y_2243          | In2306          |
| Units     | Cts/S           | Cts/S           | Cts/S           | Cts/S           | Cts/S           |
| Avg       | <b>6463.939</b> | <b>113108.1</b> | <b>11695.32</b> | <b>5076.311</b> | <b>8216.727</b> |
| Stddev    | 5.931           | 348.7           | 61.94           | 9.838           | 16.813          |
| %RSD      | .0917541        | .3082863        | .5295878        | .1937989        | .2046137        |

|    |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|
| #1 | 6470.726 | 113268.6 | 11743.68 | 5075.431 | 8235.741 |
| #2 | 6461.335 | 113347.7 | 11716.79 | 5066.942 | 8203.828 |
| #3 | 6459.755 | 112708.1 | 11625.51 | 5086.559 | 8210.612 |

Sample Name: PB169324BS      Acquired: 8/21/2025 16:57:54      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | As1890          | Tl1908          | Pb2203          | Se1960          | Sb2068          | Al3961          | Ba4934          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.7602023</b> | <b>1.923521</b> | <b>.9212292</b> | <b>1.931591</b> | <b>.7724051</b> | <b>1.925659</b> | <b>.1845105</b> |
| Stddev | .0043412        | .023364         | .0005126        | .004784         | .0031551        | .009193         | .0004798        |
| %RSD   | .5710581        | 1.214637        | .0556449        | .2476943        | .4084812        | .4773823        | .2600389        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>.7642712</b> | <b>1.915775</b> | <b>.9215545</b> | <b>1.931968</b> | <b>.7690596</b> | <b>1.929799</b> | <b>.1839788</b> |
| #2 | <b>.7556323</b> | <b>1.905014</b> | <b>.9206383</b> | <b>1.926629</b> | <b>.7728288</b> | <b>1.932054</b> | <b>.1846416</b> |
| #3 | <b>.7607034</b> | <b>1.949774</b> | <b>.9214949</b> | <b>1.936176</b> | <b>.7753270</b> | <b>1.915124</b> | <b>.1849111</b> |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Be2348          | Cd2265          | Ca3736          | Cr2677          | Co2286          | Cu2247          | Fe2404          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.1892513</b> | <b>.1838855</b> | <b>.9833396</b> | <b>.3883546</b> | <b>.1892709</b> | <b>.3012842</b> | <b>2.980037</b> |
| Stddev | .0004425        | .0002608        | .0025367        | .0020366        | .0002469        | .0003921        | .013220         |
| %RSD   | .2338269        | .1418486        | .2579667        | .5244163        | .1304424        | .1301418        | .4436108        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>.1894321</b> | <b>.1838307</b> | <b>.9806816</b> | <b>.3869942</b> | <b>.1891878</b> | <b>.3012454</b> | <b>2.966769</b> |
| #2 | <b>.1887470</b> | <b>.1836564</b> | <b>.9857345</b> | <b>.3873735</b> | <b>.1890763</b> | <b>.3009130</b> | <b>2.980133</b> |
| #3 | <b>.1895748</b> | <b>.1841694</b> | <b>.9836027</b> | <b>.3906960</b> | <b>.1895486</b> | <b>.3016943</b> | <b>2.993208</b> |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Mn2576          | Mg2790          | Ni2316          | Ag3280          | Na5895          | V_2924          | Zn2138          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.1979444</b> | <b>1.931505</b> | <b>.4734709</b> | <b>.0723536</b> | <b>3.153951</b> | <b>.2907346</b> | <b>.2019977</b> |
| Stddev | .0014371        | .003281         | .0000640        | .0002266        | .049433         | .0011940        | .0003554        |
| %RSD   | .7260201        | .1698912        | .0135086        | .3132271        | 1.567337        | .4106915        | .1759539        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>.1971873</b> | <b>1.935235</b> | <b>.4733979</b> | <b>.0721605</b> | <b>3.098436</b> | <b>.2921104</b> | <b>.2019796</b> |
| #2 | <b>.1996018</b> | <b>1.930219</b> | <b>.4734981</b> | <b>.0726031</b> | <b>3.193206</b> | <b>.2899686</b> | <b>.2023618</b> |
| #3 | <b>.1970441</b> | <b>1.929062</b> | <b>.4735168</b> | <b>.0722973</b> | <b>3.170211</b> | <b>.2901248</b> | <b>.2016516</b> |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | K_7664          | B_2496          | Mo2020          | Sn1899          | Ti3361          | Si2881          | P_1774          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>9.223706</b> | <b>.2771327</b> | <b>.3881331</b> | <b>.6364762</b> | <b>.1855889</b> | <b>.8989351</b> | <b>5.312730</b> |
| Stddev | .053179         | .0004969        | .0006317        | .0012647        | .0009319        | .0088362        | .030839         |
| %RSD   | .5765453        | .1793067        | .1627493        | .1987074        | .5021211        | .9829593        | .5804771        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>9.169507</b> | <b>.2776785</b> | <b>.3880031</b> | <b>.6379155</b> | <b>.1858606</b> | <b>.8888799</b> | <b>5.339990</b> |
| #2 | <b>9.275802</b> | <b>.2767065</b> | <b>.3875766</b> | <b>.6359704</b> | <b>.1845514</b> | <b>.9024637</b> | <b>5.279258</b> |
| #3 | <b>9.225808</b> | <b>.2770130</b> | <b>.3888197</b> | <b>.6355426</b> | <b>.1863548</b> | <b>.9054617</b> | <b>5.318943</b> |

Sample Name: PB169324BS      Acquired: 8/21/2025 16:57:54      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

| Elem   | S_1820            | Li6707          | Sr4077          |
|--------|-------------------|-----------------|-----------------|
| Units  | ppm               | ppm             | ppm             |
| Avg    | <b>F -.003919</b> | <b>.1842751</b> | <b>.1919132</b> |
| Stddev | .003671           | .0018582        | .0007800        |
| %RSD   | 93.66792          | 1.008396        | .4064399        |

|    |          |          |          |
|----|----------|----------|----------|
| #1 | -.001838 | .1823741 | .1911691 |
| #2 | -.001761 | .1843638 | .1927247 |
| #3 | -.008158 | .1860874 | .1918458 |

| Int. Std. | Y_2243          | Y_3600          | Y_3710          | Y_2243          | In2306          |
|-----------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Units     | Cts/S           | Cts/S           | Cts/S           | Cts/S           | Cts/S           |
| Avg       | <b>6403.143</b> | <b>111291.7</b> | <b>11589.91</b> | <b>5008.992</b> | <b>7898.093</b> |
| Stddev    | 6.732           | 174.0           | 24.44           | 12.035          | 11.248          |
| %RSD      | .1051325        | .1563196        | .2108427        | .2402595        | .1424151        |

|    |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|
| #1 | 6396.577 | 111481.5 | 11575.12 | 5013.425 | 7885.123 |
| #2 | 6410.029 | 111253.9 | 11618.11 | 4995.370 | 7905.176 |
| #3 | 6402.824 | 111139.7 | 11576.49 | 5018.182 | 7903.978 |

Sample Name: Q2814-23      Acquired: 8/21/2025 17:01:55      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |          |          |          |          |          |          |          |
|--------|----------|----------|----------|----------|----------|----------|----------|
| Elem   | As1890   | Tl1908   | Pb2203   | Se1960   | Sb2068   | Al3961   | Ba4934   |
| Units  | ppm      | ppm      | ppm      | ppm      | ppm      | ppm      | ppm      |
| Avg    | .0018148 | -.002493 | .0086016 | .0032160 | .0026931 | .5470637 | .0136461 |
| Stddev | .0018329 | .000613  | .0016429 | .0011456 | .0011480 | .0120911 | .0013149 |
| %RSD   | 100.9987 | 24.60445 | 19.09969 | 35.62132 | 42.62783 | 2.210189 | 9.635970 |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | .0017384 | -.001921 | .0085567 | .0019821 | .0014066 | .5566328 | .0124601 |
| #2 | .0036848 | -.003141 | .0102664 | .0042458 | .0036132 | .5334746 | .0150602 |
| #3 | .0000213 | -.002419 | .0069816 | .0034201 | .0030594 | .5510837 | .0134181 |

|        |          |          |          |          |          |          |          |
|--------|----------|----------|----------|----------|----------|----------|----------|
| Elem   | Be2348   | Cd2265   | Ca3736   | Cr2677   | Co2286   | Cu2247   | Fe2404   |
| Units  | ppm      | ppm      | ppm      | ppm      | ppm      | ppm      | ppm      |
| Avg    | -.000054 | .0001446 | 36.73827 | .0016859 | -.000197 | .1043405 | .1073909 |
| Stddev | .000055  | .0000606 | .06618   | .0001953 | .000154  | .0002097 | .0052872 |
| %RSD   | 103.1846 | 41.89504 | .1801388 | 11.58583 | 77.97507 | .2010026 | 4.923273 |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | -.000004 | .0001051 | 36.68963 | .0018701 | -.000283 | .1041613 | .1108586 |
| #2 | -.000113 | .0002143 | 36.81364 | .0014811 | -.000020 | .1042890 | .1013056 |
| #3 | -.000044 | .0001143 | 36.71155 | .0017066 | -.000289 | .1045712 | .1100085 |

|        |          |          |          |          |          |          |          |
|--------|----------|----------|----------|----------|----------|----------|----------|
| Elem   | Mn2576   | Mg2790   | Ni2316   | Ag3280   | Na5895   | V_2924   | Zn2138   |
| Units  | ppm      | ppm      | ppm      | ppm      | ppm      | ppm      | ppm      |
| Avg    | .0173594 | 13.57399 | .0023107 | -.000324 | 85.90423 | .0044018 | .0238785 |
| Stddev | .0003562 | .05494   | .0000578 | .000357  | .63032   | .0009603 | .0002341 |
| %RSD   | 2.051948 | .4047109 | 2.499837 | 110.3777 | .7337489 | 21.81494 | .9803678 |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | .0177688 | 13.63015 | .0023070 | -.000636 | 86.13657 | .0032989 | .0237272 |
| #2 | .0171884 | 13.57146 | .0023702 | .000066  | 85.19071 | .0050519 | .0241482 |
| #3 | .0171209 | 13.52037 | .0022548 | -.000400 | 86.38540 | .0048547 | .0237602 |

|        |          |          |          |          |          |          |          |
|--------|----------|----------|----------|----------|----------|----------|----------|
| Elem   | K_7664   | B_2496   | Mo2020   | Sn1899   | Ti3361   | Si2881   | P_1774   |
| Units  | ppm      | ppm      | ppm      | ppm      | ppm      | ppm      | ppm      |
| Avg    | 8.735120 | .1567648 | .0016459 | -.017213 | -.000144 | 9.591604 | 1.002879 |
| Stddev | .112786  | .0018912 | .0001480 | .000239  | .000315  | .089613  | .003402  |
| %RSD   | 1.291177 | 1.206393 | 8.993090 | 1.389504 | 218.2716 | .9342822 | .3392303 |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | 8.788860 | .1557384 | .0017169 | -.016938 | -.000420 | 9.606274 | 1.004910 |
| #2 | 8.605514 | .1589473 | .0017450 | -.017369 | -.000212 | 9.495561 | 1.004776 |
| #3 | 8.810985 | .1556087 | .0014757 | -.017333 | .000199  | 9.672976 | .998951  |

Sample Name: Q2814-23      Acquired: 8/21/2025 17:01:55      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |          |          |          |
|--------|----------|----------|----------|
| Elem   | S_1820   | Li6707   | Sr4077   |
| Units  | ppm      | ppm      | ppm      |
| Avg    | 5.489351 | -.014871 | .1663265 |
| Stddev | .006346  | .000968  | .0002970 |
| %RSD   | .1156038 | 6.510678 | .1785910 |
| #1     | 5.484526 | -.015446 | .1659934 |
| #2     | 5.496539 | -.015413 | .1664226 |
| #3     | 5.486987 | -.013753 | .1665637 |

|           |          |          |          |          |          |
|-----------|----------|----------|----------|----------|----------|
| Int. Std. | Y_2243   | Y_3600   | Y_3710   | Y_2243   | In2306   |
| Units     | Cts/S    | Cts/S    | Cts/S    | Cts/S    | Cts/S    |
| Avg       | 6288.007 | 110142.5 | 11717.98 | 4926.345 | 7475.594 |
| Stddev    | 11.942   | 236.1    | 102.22   | 5.261    | 7.351    |
| %RSD      | .1899250 | .2143632 | .8723109 | .1067831 | .0983358 |
| #1        | 6294.264 | 110341.0 | 11790.68 | 4927.113 | 7484.002 |
| #2        | 6295.520 | 110205.2 | 11601.11 | 4931.180 | 7472.397 |
| #3        | 6274.236 | 109881.4 | 11762.15 | 4920.743 | 7470.383 |

Sample Name: Q2916-01      Acquired: 8/21/2025 17:06:06      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | As1890          | Tl1908          | Pb2203          | Se1960          | Sb2068          | Al3961          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.1053325</b> | <b>-.036315</b> | <b>.1871706</b> | <b>.0060589</b> | <b>-.024054</b> | <b>187.5423</b> |
| Stddev | .0018915        | .002486         | .0021453        | .0045376        | .000442         | .0405           |
| %RSD   | 1.795727        | 6.844404        | 1.146179        | 74.89263        | 1.837433        | .0215910        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | .1068252 | -.033834 | .1848072 | .0110481 | -.023715 | 187.5576 |
| #2 | .1032054 | -.036307 | .1877095 | .0021784 | -.023894 | 187.5729 |
| #3 | .1059670 | -.038805 | .1889951 | .0049500 | -.024554 | 187.4964 |

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Ba4934          | Be2348          | Cd2265          | Ca3736          | Cr2677          | Co2286          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.7486311</b> | <b>.0104689</b> | <b>.0129402</b> | <b>54.37602</b> | <b>.3508488</b> | <b>.2350437</b> |
| Stddev | .0032817        | .0001624        | .0000968        | .03869          | .0007043        | .0005450        |
| %RSD   | .4383614        | 1.550856        | .7483759        | .0711607        | .2007292        | .2318881        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | .7524196 | .0105889 | .0130323 | 54.36881 | .3502159 | .2346729 |
| #2 | .7468101 | .0105336 | .0129491 | 54.41782 | .3507230 | .2347888 |
| #3 | .7466637 | .0102841 | .0128392 | 54.34144 | .3516075 | .2356695 |

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Cu2247          | Fe2404          | Mn2576          | Mg2790          | Ni2316          | Ag3280          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.4277466</b> | <b>384.2937</b> | <b>6.552734</b> | <b>47.78490</b> | <b>.3106234</b> | <b>.0173746</b> |
| Stddev | .0005032        | 1.5533          | .020844         | .12200          | .0002341        | .0002972        |
| %RSD   | .1176418        | .4041888        | .3181023        | .2553068        | .0753589        | 1.710799        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | .4283181 | 382.5210 | 6.570037 | 47.65690 | .3105102 | .0170342 |
| #2 | .4273700 | 384.9444 | 6.558572 | 47.89984 | .3108926 | .0175824 |
| #3 | .4275517 | 385.4159 | 6.529593 | 47.79796 | .3104675 | .0175073 |

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Na5895          | V_2924          | Zn2138          | K_7664          | B_2496          | Mo2020          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>22.02314</b> | <b>.9070415</b> | <b>.6207274</b> | <b>12.78541</b> | <b>.4014646</b> | <b>.0155289</b> |
| Stddev | .09320          | .0030136        | .0006742        | .07099          | .0101096        | .0002304        |
| %RSD   | .4231813        | .3322416        | .1086107        | .5552384        | 2.518187        | 1.483470        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | 21.96814 | .9062225 | .6214963 | 12.77295 | .3919023 | .0153545 |
| #2 | 21.97053 | .9103799 | .6204487 | 12.72147 | .4004469 | .0154421 |
| #3 | 22.13074 | .9045220 | .6202373 | 12.86180 | .4120446 | .0157900 |



Sample Name: Q2916-01      Acquired: 8/21/2025 17:06:06      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                   |                 |                 |                 |                 |
|--------|-----------------|-------------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Sn1899          | Ti3361            | Si2881          | P_1774          | S_1820          | Li6707          |
| Units  | ppm             | ppm               | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.0028105</b> | <b>F 10.24499</b> | <b>6.184741</b> | <b>8.950097</b> | <b>3.730737</b> | <b>.1294203</b> |
| Stddev | .0006382        | .02289            | .037558         | .045317         | .032046         | .0010936        |
| %RSD   | 22.70867        | .2234462          | .6072703        | .5063342        | .8589809        | .8449800        |
| #1     | .0022044        | 10.27063          | 6.226445        | 8.909908        | 3.703163        | .1305582        |
| #2     | .0027505        | 10.23775          | 6.174195        | 8.999214        | 3.765895        | .1283772        |
| #3     | .0034766        | 10.22660          | 6.153583        | 8.941169        | 3.723151        | .1293256        |

|        |                 |
|--------|-----------------|
| Elem   | Sr4077          |
| Units  | ppm             |
| Avg    | <b>-.180316</b> |
| Stddev | .002194         |
| %RSD   | 1.216801        |
| #1     | <b>-.177803</b> |
| #2     | <b>-.181291</b> |
| #3     | <b>-.181853</b> |

|           |                 |                 |                 |                 |                 |
|-----------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Int. Std. | Y_2243          | Y_3600          | Y_3710          | Y_2243          | In2306          |
| Units     | Cts/S           | Cts/S           | Cts/S           | Cts/S           | Cts/S           |
| Avg       | <b>7264.016</b> | <b>126710.6</b> | <b>14507.87</b> | <b>5708.380</b> | <b>6663.636</b> |
| Stddev    | 7.540           | 402.3           | 63.43           | 10.137          | 8.631           |
| %RSD      | .1037934        | .3175054        | .4371912        | .1775795        | .1295220        |
| #1        | 7269.364        | 127174.1        | 14470.66        | 5702.475        | 6671.153        |
| #2        | 7255.393        | 126507.1        | 14471.85        | 5720.085        | 6654.211        |
| #3        | 7267.292        | 126450.8        | 14581.11        | 5702.580        | 6665.544        |

Sample Name: Q2904-02      Acquired: 8/21/2025 17:10:05      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | As1890          | Tl1908          | Pb2203          | Se1960          | Sb2068          | Al3961          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>-.003025</b> | <b>-.004206</b> | <b>-.000729</b> | <b>.0034103</b> | <b>.0027107</b> | <b>.1395525</b> |
| Stddev | .001076         | .000248         | .000167         | .0031372        | .0015011        | .0130891        |
| %RSD   | 35.55243        | 5.886806        | 22.92349        | 91.99182        | 55.37584        | 9.379331        |

|    |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>-.003797</b> | <b>-.004472</b> | <b>-.000920</b> | <b>.0003105</b> | <b>.0022060</b> | <b>.1318296</b> |
| #2 | <b>-.001797</b> | <b>-.003983</b> | <b>-.000660</b> | <b>.0065835</b> | <b>.0015270</b> | <b>.1546653</b> |
| #3 | <b>-.003482</b> | <b>-.004162</b> | <b>-.000608</b> | <b>.0033368</b> | <b>.0043990</b> | <b>.1321626</b> |

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Ba4934          | Be2348          | Cd2265          | Ca3736          | Cr2677          | Co2286          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.1500778</b> | <b>-.000050</b> | <b>.0000163</b> | <b>54.48073</b> | <b>.0011902</b> | <b>.0001244</b> |
| Stddev | .0018151        | .000029         | .0000077        | .19072          | .0000073        | .0001756        |
| %RSD   | 1.209429        | 58.40830        | 46.91630        | .3500605        | .6089513        | 141.1579        |

|    |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>.1516734</b> | <b>-.000053</b> | <b>.0000233</b> | <b>54.65497</b> | <b>.0011899</b> | <b>.0002645</b> |
| #2 | <b>.1481031</b> | <b>-.000019</b> | <b>.0000175</b> | <b>54.27698</b> | <b>.0011831</b> | <b>-.000073</b> |
| #3 | <b>.1504570</b> | <b>-.000077</b> | <b>.0000082</b> | <b>54.51024</b> | <b>.0011976</b> | <b>.000181</b>  |

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Cu2247          | Fe2404          | Mn2576          | Mg2790          | Ni2316          | Ag3280          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.0845021</b> | <b>.2006147</b> | <b>.0248915</b> | <b>7.994386</b> | <b>.0016834</b> | <b>-.000932</b> |
| Stddev | .0004405        | .0016904        | .0002639        | .056616         | .0003834        | .000379         |
| %RSD   | .5213129        | .8426246        | 1.060165        | .7081919        | 22.77665        | 40.62676        |

|    |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>.0848180</b> | <b>.2025440</b> | <b>.0247760</b> | <b>8.035932</b> | <b>.0014234</b> | <b>-.000602</b> |
| #2 | <b>.0846894</b> | <b>.1993933</b> | <b>.0251935</b> | <b>7.929900</b> | <b>.0021238</b> | <b>-.000849</b> |
| #3 | <b>.0839989</b> | <b>.1999067</b> | <b>.0247051</b> | <b>8.017326</b> | <b>.0015032</b> | <b>-.001345</b> |

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Na5895          | V_2924          | Zn2138          | K_7664          | B_2496          | Mo2020          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>37.68455</b> | <b>.0019904</b> | <b>.0331009</b> | <b>5.094741</b> | <b>.0194514</b> | <b>.0009891</b> |
| Stddev | .22667          | .0003724        | .0000542        | .017728         | .0001418        | .0000894        |
| %RSD   | .6014939        | 18.70825        | .1635950        | .3479570        | .7289042        | 9.033675        |

|    |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>37.47880</b> | <b>.0024204</b> | <b>.0330469</b> | <b>5.074434</b> | <b>.0192920</b> | <b>.0010870</b> |
| #2 | <b>37.64732</b> | <b>.0017772</b> | <b>.0331552</b> | <b>5.107123</b> | <b>.0195632</b> | <b>.0009685</b> |
| #3 | <b>37.92753</b> | <b>.0017736</b> | <b>.0331004</b> | <b>5.102668</b> | <b>.0194991</b> | <b>.0009119</b> |

Sample Name: Q2904-02      Acquired: 8/21/2025 17:10:05      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                   |                 |                 |                 |
|--------|-----------------|-----------------|-------------------|-----------------|-----------------|-----------------|
| Elem   | Sn1899          | Ti3361          | Si2881            | P_1774          | S_1820          | Li6707          |
| Units  | ppm             | ppm             | ppm               | ppm             | ppm             | ppm             |
| Avg    | <b>-.014773</b> | <b>-.002027</b> | <b>F 11.54593</b> | <b>.5576959</b> | <b>9.902689</b> | <b>-.014978</b> |
| Stddev | .000288         | .001176         | .09377            | .0027682        | .046579         | .000400         |
| %RSD   | 1.950166        | 58.01747        | .8121167          | .4963567        | .4703699        | 2.668732        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | -.015097 | -.002625 | 11.43771 | .5596484 | 9.952779 | -.014674 |
| #2 | -.014548 | -.000672 | 11.59702 | .5589114 | 9.894611 | -.015431 |
| #3 | -.014672 | -.002783 | 11.60305 | .5545280 | 9.860677 | -.014830 |

|        |                 |
|--------|-----------------|
| Elem   | Sr4077          |
| Units  | ppm             |
| Avg    | <b>.1891832</b> |
| Stddev | .0009589        |
| %RSD   | .5068783        |

|    |                 |
|----|-----------------|
| #1 | <b>.1899310</b> |
| #2 | <b>.1881021</b> |
| #3 | <b>.1895166</b> |

|           |                 |                 |                 |                 |                 |
|-----------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Int. Std. | Y_2243          | Y_3600          | Y_3710          | Y_2243          | In2306          |
| Units     | Cts/S           | Cts/S           | Cts/S           | Cts/S           | Cts/S           |
| Avg       | <b>6343.826</b> | <b>110876.6</b> | <b>11795.76</b> | <b>4957.479</b> | <b>7683.763</b> |
| Stddev    | 22.596          | 321.1           | 82.87           | 3.667           | 32.131          |
| %RSD      | .3561844        | .2895615        | .7025607        | .0739746        | .4181691        |

|    |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|
| #1 | 6317.746 | 111100.3 | 11704.89 | 4960.276 | 7647.384 |
| #2 | 6357.529 | 111020.7 | 11867.17 | 4958.833 | 7695.645 |
| #3 | 6356.203 | 110508.7 | 11815.23 | 4953.327 | 7708.262 |

Sample Name: CCV03      Acquired: 8/21/2025 17:14:19      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1: CCV03      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | As1890          | Tl1908          | Pb2203          | Se1960          | Sb2068          | Al3961          | Ba4934          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>5.042180</b> | <b>4.967977</b> | <b>4.947853</b> | <b>5.068446</b> | <b>5.069656</b> | <b>9.865227</b> | <b>9.824822</b> |
| Stddev | .001160         | .041288         | .008137         | .006056         | .009864         | .023537         | .049960         |
| %RSD   | .0230097        | .8310924        | .1644556        | .1194779        | .1945640        | .2385825        | .5085129        |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | 5.043239 | 4.971786 | 4.940910 | 5.062236 | 5.071123 | 9.889865 | 9.775388 |
| #2 | 5.042361 | 5.007229 | 4.945842 | 5.074334 | 5.059141 | 9.842973 | 9.823784 |
| #3 | 5.040940 | 4.924916 | 4.956807 | 5.068768 | 5.078705 | 9.862843 | 9.875293 |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Be2348          | Cd2265          | Ca3736          | Cr2677          | Co2286          | Cu2247          | Fe2404          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.2430043</b> | <b>2.492281</b> | <b>24.67973</b> | <b>.9966273</b> | <b>2.500682</b> | <b>1.265700</b> | <b>5.058684</b> |
| Stddev | .0016742        | .004235         | .03177          | .0014155        | .005317         | .002998         | .018301         |
| %RSD   | .6889705        | .1699395        | .1287354        | .1420290        | .2126052        | .2368258        | .3617821        |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | .2423123 | 2.488597 | 24.64568 | .9954905 | 2.495906 | 1.263237 | 5.045238 |
| #2 | .2417869 | 2.491337 | 24.68494 | .9982128 | 2.499730 | 1.264827 | 5.079526 |
| #3 | .2449136 | 2.496908 | 24.70858 | .9961787 | 2.506410 | 1.269038 | 5.051288 |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Mn2576          | Mg2790          | Ni2316          | Ag3280          | Na5895          | V_2924          | Zn2138          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>2.468735</b> | <b>24.52115</b> | <b>2.493668</b> | <b>1.246409</b> | <b>24.16851</b> | <b>2.490424</b> | <b>2.517436</b> |
| Stddev | .016797         | .03770          | .003770         | .001113         | .12201          | .004897         | .006387         |
| %RSD   | .6804036        | .1537629        | .1511968        | .0892875        | .5048207        | .1966397        | .2537200        |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | 2.456162 | 24.48685 | 2.490000 | 1.246233 | 24.04565 | 2.493604 | 2.510417 |
| #2 | 2.462231 | 24.51508 | 2.493471 | 1.247600 | 24.28965 | 2.484785 | 2.522907 |
| #3 | 2.487812 | 24.56152 | 2.497533 | 1.245395 | 24.17021 | 2.492883 | 2.518984 |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | K_7664          | B_2496          | Mo2020          | Sn1899          | Ti3361          | Si2881          | P_1774          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>24.08486</b> | <b>4.866630</b> | <b>5.059106</b> | <b>4.974787</b> | <b>4.970495</b> | <b>5.034075</b> | <b>4.982000</b> |
| Stddev | .10060          | .036070         | .002967         | .005211         | .016363         | .048081         | .021556         |
| %RSD   | .4177076        | .7411791        | .0586506        | .1047483        | .3292067        | .9551050        | .4326756        |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | 23.99949 | 4.853286 | 5.059315 | 4.972465 | 4.957815 | 5.058004 | 4.992658 |
| #2 | 24.19578 | 4.839133 | 5.056040 | 4.980755 | 4.964705 | 5.065496 | 4.996151 |
| #3 | 24.05931 | 4.907471 | 5.061964 | 4.971140 | 4.988966 | 4.978725 | 4.957192 |

Sample Name: CCV03      Acquired: 8/21/2025 17:14:19      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1: CCV03      Custom ID2:      Custom ID3:  
Comment:

|        |          |          |          |
|--------|----------|----------|----------|
| Elem   | S_1820   | Li6707   | Sr4077   |
| Units  | ppm      | ppm      | ppm      |
| Avg    | 4.960947 | 4.548469 | 5.017385 |
| Stddev | .025046  | .023809  | .021281  |
| %RSD   | .5048672 | .5234558 | .4241542 |
| #1     | 4.973106 | 4.527913 | 4.993308 |
| #2     | 4.977593 | 4.542936 | 5.033679 |
| #3     | 4.932143 | 4.574558 | 5.025170 |

|           |          |          |          |          |          |
|-----------|----------|----------|----------|----------|----------|
| Int. Std. | Y_2243   | Y_3600   | Y_3710   | Y_2243   | In2306   |
| Units     | Cts/S    | Cts/S    | Cts/S    | Cts/S    | Cts/S    |
| Avg       | 6129.839 | 106670.2 | 11187.40 | 4843.467 | 7125.612 |
| Stddev    | 12.417   | 268.3    | 67.41    | 17.704   | 12.471   |
| %RSD      | .2025712 | .2515061 | .6025460 | .3655256 | .1750107 |
| #1        | 6136.240 | 106526.0 | 11199.38 | 4860.530 | 7136.494 |
| #2        | 6137.750 | 106504.9 | 11248.01 | 4825.185 | 7128.336 |
| #3        | 6115.527 | 106979.8 | 11114.80 | 4844.686 | 7112.004 |

Sample Name: CCB03      Acquired: 8/21/2025 17:18:30      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1: CCB03      Custom ID2:      Custom ID3:  
Comment:

|        |          |          |          |          |          |          |          |
|--------|----------|----------|----------|----------|----------|----------|----------|
| Elem   | As1890   | Tl1908   | Pb2203   | Se1960   | Sb2068   | Al3961   | Ba4934   |
| Units  | ppm      | ppm      | ppm      | ppm      | ppm      | ppm      | ppm      |
| Avg    | .0008108 | -.001285 | .0003187 | .0009511 | -.001149 | .0082314 | -.004682 |
| Stddev | .0009234 | .000984  | .0002238 | .0012904 | .000923  | .0063007 | .001077  |
| %RSD   | 113.8850 | 76.59575 | 70.21868 | 135.6691 | 80.36589 | 76.54468 | 23.00106 |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | .0002235 | -.001052 | .0005771 | .0024352 | -.000637 | .0148800 | -.005703 |
| #2 | .0003338 | -.000438 | .0001889 | .0003239 | -.002215 | .0023485 | -.004786 |
| #3 | .0018752 | -.002365 | .0001901 | .0000943 | -.000595 | .0074659 | -.003557 |

|        |          |          |          |          |          |          |          |
|--------|----------|----------|----------|----------|----------|----------|----------|
| Elem   | Be2348   | Cd2265   | Ca3736   | Cr2677   | Co2286   | Cu2247   | Fe2404   |
| Units  | ppm      | ppm      | ppm      | ppm      | ppm      | ppm      | ppm      |
| Avg    | -.000017 | -.000009 | -.007426 | -.000153 | .0000965 | -.000171 | -.010187 |
| Stddev | .000051  | .000056  | .004695  | .000176  | .0000912 | .000242  | .002508  |
| %RSD   | 305.8002 | 593.0767 | 63.22809 | 114.8749 | 94.58763 | 141.6912 | 24.62212 |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | .000026  | .000052  | -.008345 | -.000354 | .0001846 | -.000440 | -.011380 |
| #2 | -.000073 | -.000059 | -.011594 | -.000081 | .0000025 | .000030  | -.007305 |
| #3 | -.000003 | -.000021 | -.002339 | -.000025 | .0001023 | -.000103 | -.011875 |

|        |          |          |          |          |          |          |          |
|--------|----------|----------|----------|----------|----------|----------|----------|
| Elem   | Mn2576   | Mg2790   | Ni2316   | Ag3280   | Na5895   | V_2924   | Zn2138   |
| Units  | ppm      | ppm      | ppm      | ppm      | ppm      | ppm      | ppm      |
| Avg    | .0003018 | -.000201 | -.000239 | -.000575 | .2791795 | -.001528 | .0000644 |
| Stddev | .0006348 | .022747  | .000342  | .000373  | .0572677 | .001528  | .0002645 |
| %RSD   | 210.3691 | 11310.09 | 142.9451 | 64.89673 | 20.51286 | 99.99653 | 410.7002 |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | .0002076 | -.017660 | .000143  | -.000508 | .2194637 | -.000500 | .0003647 |
| #2 | -.000281 | .025522  | -.000517 | -.000976 | .2844384 | -.000800 | -.000038 |
| #3 | .000978  | -.008465 | -.000345 | -.000239 | .3336363 | -.003283 | -.000134 |

|        |          |          |          |          |          |          |          |
|--------|----------|----------|----------|----------|----------|----------|----------|
| Elem   | K_7664   | B_2496   | Mo2020   | Sn1899   | Ti3361   | Si2881   | P_1774   |
| Units  | ppm      | ppm      | ppm      | ppm      | ppm      | ppm      | ppm      |
| Avg    | .4491385 | .0017263 | .0003166 | -.002539 | -.000892 | .0177421 | .0038045 |
| Stddev | .0961783 | .0004518 | .0001233 | .000389  | .001280  | .0074000 | .0006269 |
| %RSD   | 21.41395 | 26.16954 | 38.96681 | 15.32579 | 143.4889 | 41.70902 | 16.47684 |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | .3510279 | .0014584 | .0003812 | -.002299 | .000569  | .0132655 | .0041013 |
| #2 | .4531270 | .0022479 | .0003941 | -.002989 | -.001817 | .0136771 | .0042278 |
| #3 | .5432604 | .0014726 | .0001743 | -.002331 | -.001428 | .0262836 | .0030843 |

Sample Name: CCB03      Acquired: 8/21/2025 17:18:30      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1: CCB03      Custom ID2:      Custom ID3:  
Comment:

|        |          |          |          |
|--------|----------|----------|----------|
| Elem   | S_1820   | Li6707   | Sr4077   |
| Units  | ppm      | ppm      | ppm      |
| Avg    | .0014476 | -.003557 | .0001299 |
| Stddev | .0023888 | .000746  | .0000397 |
| %RSD   | 165.0215 | 20.96264 | 30.59180 |

|    |          |          |          |
|----|----------|----------|----------|
| #1 | .0004451 | -.003209 | .0001529 |
| #2 | .0041743 | -.003049 | .0001527 |
| #3 | -.000277 | -.004413 | .0000840 |

|           |          |          |          |          |          |
|-----------|----------|----------|----------|----------|----------|
| Int. Std. | Y_2243   | Y_3600   | Y_3710   | Y_2243   | In2306   |
| Units     | Cts/S    | Cts/S    | Cts/S    | Cts/S    | Cts/S    |
| Avg       | 6509.225 | 112981.8 | 11330.85 | 5074.776 | 8229.689 |
| Stddev    | 5.535    | 260.3    | 74.97    | 3.634    | 3.763    |
| %RSD      | .0850285 | .2303485 | .6616371 | .0715996 | .0457208 |

|    |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|
| #1 | 6515.543 | 113244.3 | 11352.13 | 5072.137 | 8233.119 |
| #2 | 6505.230 | 112723.9 | 11247.54 | 5073.271 | 8230.284 |
| #3 | 6506.903 | 112977.1 | 11392.88 | 5078.920 | 8225.664 |

Sample Name: Q2904-04      Acquired: 8/21/2025 17:22:49      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |          |          |          |          |          |          |
|--------|----------|----------|----------|----------|----------|----------|
| Elem   | As1890   | Tl1908   | Pb2203   | Se1960   | Sb2068   | Al3961   |
| Units  | ppm      | ppm      | ppm      | ppm      | ppm      | ppm      |
| Avg    | .0013152 | -.002883 | .0396570 | .0019652 | .0013256 | 3.483482 |
| Stddev | .0018677 | .001668  | .0004782 | .0010776 | .0022300 | .014345  |
| %RSD   | 142.0156 | 57.85831 | 1.205743 | 54.83382 | 168.2231 | .4117902 |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | .0016514 | -.004707 | .0401870 | .0019459 | -.000817 | 3.471266 |
| #2 | -.000698 | -.002503 | .0392581 | .0030524 | .001160  | 3.479902 |
| #3 | .002992  | -.001437 | .0395258 | .0008974 | .003634  | 3.499278 |

|        |          |          |          |          |          |          |
|--------|----------|----------|----------|----------|----------|----------|
| Elem   | Ba4934   | Be2348   | Cd2265   | Ca3736   | Cr2677   | Co2286   |
| Units  | ppm      | ppm      | ppm      | ppm      | ppm      | ppm      |
| Avg    | .0859183 | .0002283 | .0004868 | 49.73515 | .0108508 | .0029446 |
| Stddev | .0007650 | .0000264 | .0000414 | .16828   | .0000874 | .0000677 |
| %RSD   | .8903372 | 11.54871 | 8.514420 | .3383478 | .8053484 | 2.297881 |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | .0857580 | .0002582 | .0005132 | 49.59546 | .0107587 | .0030226 |
| #2 | .0852461 | .0002179 | .0005082 | 49.68803 | .0109325 | .0029016 |
| #3 | .0867507 | .0002087 | .0004391 | 49.92197 | .0108613 | .0029097 |

|        |          |          |          |          |          |          |
|--------|----------|----------|----------|----------|----------|----------|
| Elem   | Cu2247   | Fe2404   | Mn2576   | Mg2790   | Ni2316   | Ag3280   |
| Units  | ppm      | ppm      | ppm      | ppm      | ppm      | ppm      |
| Avg    | .0797220 | 11.59787 | .2634681 | 7.198216 | .0082942 | .0001313 |
| Stddev | .0001216 | .04194   | .0019358 | .039897  | .0001555 | .0004696 |
| %RSD   | .1525052 | .3616297 | .7347307 | .5542596 | 1.874470 | 357.5621 |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | .0796972 | 11.58001 | .2616048 | 7.160179 | .0081227 | .0005562 |
| #2 | .0798541 | 11.56782 | .2633305 | 7.194725 | .0084260 | .0002106 |
| #3 | .0796148 | 11.64579 | .2654690 | 7.239743 | .0083338 | -.000373 |

|        |          |          |          |          |          |          |
|--------|----------|----------|----------|----------|----------|----------|
| Elem   | Na5895   | V_2924   | Zn2138   | K_7664   | B_2496   | Mo2020   |
| Units  | ppm      | ppm      | ppm      | ppm      | ppm      | ppm      |
| Avg    | 28.51875 | .0103211 | .4144712 | 7.672632 | .0408827 | .0048299 |
| Stddev | .15674   | .0013249 | .0008490 | .045645  | .0003664 | .0002974 |
| %RSD   | .5495863 | 12.83662 | .2048289 | .5949043 | .8962749 | 6.157949 |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | 28.48299 | .0103065 | .4154502 | 7.633642 | .0404727 | .0051373 |
| #2 | 28.38298 | .0116533 | .4139386 | 7.661415 | .0411782 | .0048088 |
| #3 | 28.69028 | .0090036 | .4140247 | 7.722840 | .0409973 | .0045436 |



Sample Name: Q2904-04      Acquired: 8/21/2025 17:22:49      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                   |                 |                 |                 |
|--------|-----------------|-----------------|-------------------|-----------------|-----------------|-----------------|
| Elem   | Sn1899          | Ti3361          | Si2881            | P_1774          | S_1820          | Li6707          |
| Units  | ppm             | ppm             | ppm               | ppm             | ppm             | ppm             |
| Avg    | <b>-.015325</b> | <b>.1554543</b> | <b>F 10.53322</b> | <b>2.319127</b> | <b>2.814614</b> | <b>-.009328</b> |
| Stddev | .000180         | .0025308        | .04559            | .005224         | .003433         | .001243         |
| %RSD   | 1.174981        | 1.628006        | .4327894          | .2252704        | .1219850        | 13.32950        |
| #1     | -.015178        | .1534611        | 10.58016          | 2.322748        | 2.813665        | -.009264        |
| #2     | -.015526        | .1583017        | 10.48912          | 2.321495        | 2.818422        | -.010602        |
| #3     | -.015271        | .1546002        | 10.53037          | 2.313138        | 2.811755        | -.008118        |

|        |                 |
|--------|-----------------|
| Elem   | Sr4077          |
| Units  | ppm             |
| Avg    | <b>.1311923</b> |
| Stddev | .0007623        |
| %RSD   | .5810268        |
| #1     | <b>.1305902</b> |
| #2     | <b>.1309373</b> |
| #3     | <b>.1320494</b> |

|           |                 |                 |                 |                 |                 |
|-----------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Int. Std. | Y_2243          | Y_3600          | Y_3710          | Y_2243          | In2306          |
| Units     | Cts/S           | Cts/S           | Cts/S           | Cts/S           | Cts/S           |
| Avg       | <b>6405.413</b> | <b>111946.1</b> | <b>12075.60</b> | <b>5049.707</b> | <b>7678.404</b> |
| Stddev    | 6.130           | 152.1           | 58.71           | 16.460          | 14.887          |
| %RSD      | .0957005        | .1358421        | .4861694        | .3259512        | .1938765        |
| #1        | 6411.529        | 111821.2        | 12139.15        | 5034.232        | 7692.561        |
| #2        | 6405.440        | 112115.5        | 12064.28        | 5067.000        | 7679.770        |
| #3        | 6399.269        | 111901.7        | 12023.38        | 5047.890        | 7662.882        |

Sample Name: Q2904-04DUP      Acquired: 8/21/2025 17:26:58      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | As1890          | Tl1908          | Pb2203          | Se1960          | Sb2068          | Al3961          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>-.000598</b> | <b>-.002418</b> | <b>.0008357</b> | <b>.0009398</b> | <b>.0019724</b> | <b>.1577432</b> |
| Stddev | .000590         | .001668         | .0013567        | .0008091        | .0014334        | .0015735        |
| %RSD   | 98.63697        | 69.00321        | 162.3335        | 86.10083        | 72.67282        | .9975150        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | -.001229 | -.003566 | -.000601 | .0009261 | .0021231 | .1593355 |
| #2 | -.000506 | -.000504 | .002095  | .0017556 | .0033245 | .1561892 |
| #3 | -.000060 | -.003184 | .001013  | .0001375 | .0004696 | .1577048 |

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Ba4934          | Be2348          | Cd2265          | Ca3736          | Cr2677          | Co2286          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.1610629</b> | <b>-.000018</b> | <b>.0001199</b> | <b>58.08882</b> | <b>.0011393</b> | <b>.0002193</b> |
| Stddev | .0007089        | .000034         | .0000783        | .12349          | .0000576        | .0001128        |
| %RSD   | .4401576        | 183.0098        | 65.30486        | .2125946        | 5.055440        | 51.40201        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | .1615404 | -.000047 | .0000528 | 57.94640 | .0011956 | .0000923 |
| #2 | .1614000 | .000019  | .0001010 | 58.16627 | .0011417 | .0002582 |
| #3 | .1602483 | -.000027 | .0002059 | 58.15379 | .0010805 | .0003075 |

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Cu2247          | Fe2404          | Mn2576          | Mg2790          | Ni2316          | Ag3280          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.0874440</b> | <b>.2088821</b> | <b>.0338058</b> | <b>8.479328</b> | <b>.0017000</b> | <b>-.000451</b> |
| Stddev | .0006681        | .0059322        | .0002879        | .019163         | .0001390        | .000350         |
| %RSD   | .7640094        | 2.839964        | .8514969        | .2260023        | 8.178140        | 77.70910        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | .0868218 | .2025784 | .0336606 | 8.470214 | .0016835 | -.000716 |
| #2 | .0873600 | .2097124 | .0336196 | 8.466423 | .0015700 | -.000583 |
| #3 | .0881500 | .2143553 | .0341374 | 8.501348 | .0018466 | -.000054 |

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Na5895          | V_2924          | Zn2138          | K_7664          | B_2496          | Mo2020          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>39.06280</b> | <b>.0003715</b> | <b>.0326150</b> | <b>5.463679</b> | <b>.0231525</b> | <b>.0014608</b> |
| Stddev | .29584          | .0013976        | .0002654        | .029574         | .0006894        | .0000589        |
| %RSD   | .7573378        | 376.1732        | .8138150        | .5412919        | 2.977505        | 4.032289        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | 39.37496 | -.001228 | .0326173 | 5.459980 | .0228079 | .0014076 |
| #2 | 38.78657 | .000989  | .0328792 | 5.436129 | .0227034 | .0015241 |
| #3 | 39.02689 | .001354  | .0323484 | 5.494930 | .0239462 | .0014505 |

Sample Name: Q2904-04DUP      Acquired: 8/21/2025 17:26:58      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                   |                 |                   |                 |
|--------|-----------------|-----------------|-------------------|-----------------|-------------------|-----------------|
| Elem   | Sn1899          | Ti3361          | Si2881            | P_1774          | S_1820            | Li6707          |
| Units  | ppm             | ppm             | ppm               | ppm             | ppm               | ppm             |
| Avg    | <b>-.015701</b> | <b>-.001697</b> | <b>F 12.26069</b> | <b>.6056408</b> | <b>F 10.80882</b> | <b>-.013129</b> |
| Stddev | .000640         | .001227         | .06845            | .0029117        | .04273            | .000573         |
| %RSD   | 4.074117        | 72.28346        | .5582841          | .4807588        | .3953289          | 4.366730        |
| #1     | -.016285        | -.000283        | 12.26133          | .6027071        | 10.76012          | -.012552        |
| #2     | -.015801        | -.002478        | 12.19192          | .6056854        | 10.82634          | -.013139        |
| #3     | -.015018        | -.002329        | 12.32881          | .6085300        | 10.84001          | -.013698        |

|        |                 |
|--------|-----------------|
| Elem   | Sr4077          |
| Units  | ppm             |
| Avg    | <b>.2021949</b> |
| Stddev | .0003060        |
| %RSD   | .1513204        |
| #1     | .2021534        |
| #2     | .2025195        |
| #3     | .2019118        |

|           |                 |                 |                 |                 |                 |
|-----------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Int. Std. | Y_2243          | Y_3600          | Y_3710          | Y_2243          | In2306          |
| Units     | Cts/S           | Cts/S           | Cts/S           | Cts/S           | Cts/S           |
| Avg       | <b>6379.007</b> | <b>109638.5</b> | <b>11590.96</b> | <b>4982.625</b> | <b>7691.772</b> |
| Stddev    | 11.226          | 288.8           | 67.25           | 7.466           | 12.356          |
| %RSD      | .1759868        | .2634295        | .5802277        | .1498415        | .1606432        |
| #1        | 6388.894        | 109313.7        | 11629.39        | 4977.745        | 7706.035        |
| #2        | 6381.323        | 109735.6        | 11513.30        | 4991.220        | 7684.973        |
| #3        | 6366.803        | 109866.4        | 11630.19        | 4978.912        | 7684.309        |

Sample Name: Q2904-04LX5      Acquired: 8/21/2025 17:31:12      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | As1890          | Tl1908          | Pb2203          | Se1960          | Sb2068          | Al3961          | Ba4934          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>-.001511</b> | <b>-.001299</b> | <b>.0080440</b> | <b>.0021391</b> | <b>-.000222</b> | <b>.8956799</b> | <b>.0153838</b> |
| Stddev | .000794         | .000259         | .0004040        | .0006205        | .002186         | .0098204        | .0006887        |
| %RSD   | 52.53703        | 19.92863        | 5.022384        | 29.00701        | 982.9506        | 1.096418        | 4.476938        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>-.001257</b> | <b>-.001412</b> | <b>.0078138</b> | <b>.0025141</b> | <b>-.002382</b> | <b>.9066439</b> | <b>.0158886</b> |
| #2 | <b>-.002401</b> | <b>-.001003</b> | <b>.0078077</b> | <b>.0014229</b> | <b>.001990</b>  | <b>.8876913</b> | <b>.0145992</b> |
| #3 | <b>-.000875</b> | <b>-.001482</b> | <b>.0085104</b> | <b>.0024802</b> | <b>-.000275</b> | <b>.8927045</b> | <b>.0156638</b> |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Be2348          | Cd2265          | Ca3736          | Cr2677          | Co2286          | Cu2247          | Fe2404          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.0000896</b> | <b>.0000770</b> | <b>11.39014</b> | <b>.0022966</b> | <b>.0007696</b> | <b>.0178769</b> | <b>2.603438</b> |
| Stddev | .0000674        | .0000357        | .02930          | .0001487        | .0000854        | .0002121        | .017940         |
| %RSD   | 75.13096        | 46.33684        | .2571998        | 6.475129        | 11.09997        | 1.186147        | .6890895        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>.0000857</b> | <b>.0001179</b> | <b>11.42395</b> | <b>.0022128</b> | <b>.0006740</b> | <b>.0181218</b> | <b>2.605761</b> |
| #2 | <b>.0000244</b> | <b>.0000527</b> | <b>11.37416</b> | <b>.0022086</b> | <b>.0008384</b> | <b>.0177553</b> | <b>2.620103</b> |
| #3 | <b>.0001589</b> | <b>.0000603</b> | <b>11.37231</b> | <b>.0024683</b> | <b>.0007963</b> | <b>.0177538</b> | <b>2.584449</b> |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Mn2576          | Mg2790          | Ni2316          | Ag3280          | Na5895          | V_2924          | Zn2138          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.0605942</b> | <b>1.659545</b> | <b>.0015950</b> | <b>-.000531</b> | <b>6.432601</b> | <b>.0017181</b> | <b>.0905776</b> |
| Stddev | .0007114        | .015946         | .0001852        | .000318         | .038431         | .0023700        | .0004760        |
| %RSD   | 1.174077        | .9608474        | 11.61040        | 59.89939        | .5974457        | 137.9447        | .5254679        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>.0612514</b> | <b>1.651006</b> | <b>.0014881</b> | <b>-.000198</b> | <b>6.418763</b> | <b>.0028579</b> | <b>.0911017</b> |
| #2 | <b>.0606925</b> | <b>1.649687</b> | <b>.0018089</b> | <b>-.000831</b> | <b>6.476035</b> | <b>-.001006</b> | <b>.0904586</b> |
| #3 | <b>.0598388</b> | <b>1.677942</b> | <b>.0014881</b> | <b>-.000563</b> | <b>6.403005</b> | <b>.003303</b>  | <b>.0901724</b> |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | K_7664          | B_2496          | Mo2020          | Sn1899          | Ti3361          | Si2881          | P_1774          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>1.778971</b> | <b>.0075071</b> | <b>.0008992</b> | <b>-.005166</b> | <b>.0546512</b> | <b>2.763358</b> | <b>.5010053</b> |
| Stddev | .037477         | .0004727        | .0001462        | .000008         | .0037657        | .062156         | .0020151        |
| %RSD   | 2.106641        | 6.297099        | 16.26204        | .1604307        | 6.890344        | 2.249276        | .4022135        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>1.735707</b> | <b>.0070532</b> | <b>.0008593</b> | <b>-.005168</b> | <b>.0569540</b> | <b>2.827735</b> | <b>.5023301</b> |
| #2 | <b>1.801429</b> | <b>.0079967</b> | <b>.0007771</b> | <b>-.005173</b> | <b>.0503055</b> | <b>2.703693</b> | <b>.5019996</b> |
| #3 | <b>1.799777</b> | <b>.0074715</b> | <b>.0010612</b> | <b>-.005157</b> | <b>.0566939</b> | <b>2.758647</b> | <b>.4986863</b> |

Sample Name: Q2904-04LX5      Acquired: 8/21/2025 17:31:12      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |          |          |          |
|--------|----------|----------|----------|
| Elem   | S_1820   | Li6707   | Sr4077   |
| Units  | ppm      | ppm      | ppm      |
| Avg    | .6115367 | -.006164 | .0300408 |
| Stddev | .0099849 | .000605  | .0001688 |
| %RSD   | 1.632754 | 9.809841 | .5620441 |

|    |          |          |          |
|----|----------|----------|----------|
| #1 | .6200889 | -.006819 | .0301864 |
| #2 | .6139572 | -.006047 | .0300802 |
| #3 | .6005641 | -.005627 | .0298557 |

|           |          |          |          |          |          |
|-----------|----------|----------|----------|----------|----------|
| Int. Std. | Y_2243   | Y_3600   | Y_3710   | Y_2243   | In2306   |
| Units     | Cts/S    | Cts/S    | Cts/S    | Cts/S    | Cts/S    |
| Avg       | 6438.724 | 109946.1 | 11630.20 | 5046.855 | 7946.465 |
| Stddev    | 11.614   | 77.0     | 31.50    | 18.722   | 9.753    |
| %RSD      | .1803848 | .0700674 | .2708043 | .3709717 | .1227280 |

|    |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|
| #1 | 6444.259 | 110001.3 | 11593.87 | 5054.168 | 7948.855 |
| #2 | 6446.536 | 109858.1 | 11649.94 | 5025.580 | 7954.801 |
| #3 | 6425.377 | 109978.7 | 11646.78 | 5060.818 | 7935.740 |

Sample Name: Q2904-04MS      Acquired: 8/21/2025 17:35:28      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | As1890          | Tl1908          | Pb2203          | Se1960          | Sb2068          | Al3961          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.7810873</b> | <b>1.724198</b> | <b>.9078584</b> | <b>1.924113</b> | <b>.7995962</b> | <b>2.122281</b> |
| Stddev | .0018564        | .023652         | .0045717        | .006714         | .0026594        | .007257         |
| %RSD   | .2376691        | 1.371791        | .5035663        | .3489427        | .3325876        | .3419648        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | .7789440 | 1.707590 | .9027074 | 1.916765 | .7967098 | 2.127282 |
| #2 | .7821898 | 1.751279 | .9114343 | 1.929929 | .8019470 | 2.113957 |
| #3 | .7821282 | 1.713725 | .9094334 | 1.925645 | .8001319 | 2.125604 |

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Ba4934          | Be2348          | Cd2265          | Ca3736          | Cr2677          | Co2286          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.3532026</b> | <b>.1857388</b> | <b>.1862524</b> | <b>56.79588</b> | <b>.4043724</b> | <b>.1941308</b> |
| Stddev | .0028466        | .0002598        | .0007584        | .13673          | .0024181        | .0007037        |
| %RSD   | .8059289        | .1398574        | .4071875        | .2407356        | .5979970        | .3625113        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | .3542201 | .1857765 | .1853835 | 56.95181 | .4016633 | .1934200 |
| #2 | .3554006 | .1854622 | .1865923 | 56.73937 | .4051416 | .1941451 |
| #3 | .3499871 | .1859776 | .1867813 | 56.69647 | .4063124 | .1948272 |

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Cu2247          | Fe2404          | Mn2576          | Mg2790          | Ni2316          | Ag3280          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.3789035</b> | <b>3.299503</b> | <b>.2264785</b> | <b>10.07603</b> | <b>.4802867</b> | <b>.0274954</b> |
| Stddev | .0012052        | .009791         | .0020732        | .04359          | .0017107        | .0005233        |
| %RSD   | .3180773        | .2967504        | .9154041        | .4325930        | .3561748        | 1.903360        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | .3775194 | 3.302539 | .2277596 | 10.08408 | .4783585 | .0270460 |
| #2 | .3797211 | 3.307417 | .2275892 | 10.02898 | .4808791 | .0280699 |
| #3 | .3794699 | 3.288554 | .2240866 | 10.11503 | .4816223 | .0273701 |

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Na5895          | V_2924          | Zn2138          | K_7664          | B_2496          | Mo2020          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>41.24898</b> | <b>.3022008</b> | <b>.2355766</b> | <b>14.87173</b> | <b>.2774292</b> | <b>.4271433</b> |
| Stddev | .34050          | .0016754        | .0013255        | .11050          | .0009646        | .0012908        |
| %RSD   | .8254695        | .5544080        | .5626695        | .7430114        | .3476796        | .3021988        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | 41.41591 | .3007948 | .2360347 | 14.88098 | .2784250 | .4256673 |
| #2 | 41.47380 | .3040546 | .2340828 | 14.97730 | .2773633 | .4280611 |
| #3 | 40.85723 | .3017530 | .2366123 | 14.75689 | .2764992 | .4277015 |

Sample Name: Q2904-04MS      Acquired: 8/21/2025 17:35:28      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |          |          |            |          |            |          |
|--------|----------|----------|------------|----------|------------|----------|
| Elem   | Sn1899   | Ti3361   | Si2881     | P_1774   | S_1820     | Li6707   |
| Units  | ppm      | ppm      | ppm        | ppm      | ppm        | ppm      |
| Avg    | .6529352 | .1964301 | F 12.62121 | 6.056002 | F 10.04123 | .1742179 |
| Stddev | .0022481 | .0009988 | .02058     | .017511  | .05625     | .0009468 |
| %RSD   | .3442985 | .5084956 | .1630912   | .2891554 | .5602089   | .5434298 |
| #1     | .6504984 | .1956877 | 12.61653   | 6.036437 | 9.97630    | .1745986 |
| #2     | .6533790 | .1975657 | 12.60336   | 6.061364 | 10.07227   | .1749150 |
| #3     | .6549283 | .1960369 | 12.64373   | 6.070206 | 10.07513   | .1731401 |

|        |          |
|--------|----------|
| Elem   | Sr4077   |
| Units  | ppm      |
| Avg    | .3911062 |
| Stddev | .0026584 |
| %RSD   | .6797132 |
| #1     | .3928380 |
| #2     | .3924352 |
| #3     | .3880454 |

|           |          |          |          |          |          |
|-----------|----------|----------|----------|----------|----------|
| Int. Std. | Y_2243   | Y_3600   | Y_3710   | Y_2243   | In2306   |
| Units     | Cts/S    | Cts/S    | Cts/S    | Cts/S    | Cts/S    |
| Avg       | 6311.228 | 110130.5 | 11659.18 | 4972.435 | 7578.829 |
| Stddev    | 14.854   | 247.5    | 15.81    | 49.408   | 22.722   |
| %RSD      | .2353624 | .2247637 | .1356318 | .9936441 | .2998092 |
| #1        | 6327.254 | 110341.0 | 11658.73 | 4989.418 | 7604.751 |
| #2        | 6297.922 | 110192.8 | 11675.22 | 5011.113 | 7562.356 |
| #3        | 6308.508 | 109857.8 | 11643.60 | 4916.775 | 7569.379 |

Sample Name: Q2904-04MSD      Acquired: 8/21/2025 17:39:25      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | As1890          | Tl1908          | Pb2203          | Se1960          | Sb2068          | Al3961          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.7995126</b> | <b>1.813733</b> | <b>.9284386</b> | <b>1.967129</b> | <b>.8152163</b> | <b>2.206968</b> |
| Stddev | .0017642        | .093577         | .0015293        | .007596         | .0028315        | .010278         |
| %RSD   | .2206642        | 5.159350        | .1647122        | .3861581        | .3473331        | .4657054        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | .7974892 | 1.712716 | .9298976 | 1.959184 | .8165212 | 2.217307 |
| #2 | .8007292 | 1.831026 | .9268476 | 1.967883 | .8119676 | 2.206845 |
| #3 | .8003193 | 1.897457 | .9285705 | 1.974320 | .8171601 | 2.196752 |

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Ba4934          | Be2348          | Cd2265          | Ca3736          | Cr2677          | Co2286          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.3728053</b> | <b>.1882497</b> | <b>.1910463</b> | <b>61.21196</b> | <b>.4142465</b> | <b>.1988812</b> |
| Stddev | .0018591        | .0013368        | .0003584        | .10137          | .0007047        | .0001484        |
| %RSD   | .4986786        | .7101024        | .1875981        | .1656042        | .1701109        | .0746189        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | .3733443 | .1892505 | .1906868 | 61.23669 | .4136222 | .1988299 |
| #2 | .3743353 | .1887670 | .1910485 | 61.29868 | .4141068 | .1990485 |
| #3 | .3707362 | .1867316 | .1914036 | 61.10052 | .4150106 | .1987653 |

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Cu2247          | Fe2404          | Mn2576          | Mg2790          | Ni2316          | Ag3280          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.3899179</b> | <b>3.470047</b> | <b>.2448314</b> | <b>10.56891</b> | <b>.4924349</b> | <b>.0360795</b> |
| Stddev | .0003442        | .019834         | .0017718        | .01674          | .0004481        | .0036513        |
| %RSD   | .0882871        | .5715642        | .7236595        | .1583614        | .0909908        | 10.12020        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | .3897681 | 3.457986 | .2468640 | 10.56928 | .4929267 | .0402918 |
| #2 | .3896738 | 3.459217 | .2440166 | 10.58546 | .4920498 | .0341303 |
| #3 | .3903116 | 3.492938 | .2436137 | 10.55199 | .4923282 | .0338164 |

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Na5895          | V_2924          | Zn2138          | K_7664          | B_2496          | Mo2020          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>44.30821</b> | <b>.3084957</b> | <b>.2433587</b> | <b>15.42850</b> | <b>.2811272</b> | <b>.4369917</b> |
| Stddev | .08912          | .0013364        | .0008102        | .04194          | .0027245        | .0007245        |
| %RSD   | .2011323        | .4332044        | .3329066        | .2718516        | .9691496        | .1657825        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | 44.22391 | .3085933 | .2426790 | 15.38049 | .2838198 | .4365233 |
| #2 | 44.29925 | .3071132 | .2442552 | 15.44701 | .2811900 | .4366257 |
| #3 | 44.40147 | .3097806 | .2431419 | 15.45801 | .2783718 | .4378262 |



Sample Name: Q2904-04MSD      Acquired: 8/21/2025 17:39:25      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |          |          |            |          |            |          |
|--------|----------|----------|------------|----------|------------|----------|
| Elem   | Sn1899   | Ti3361   | Si2881     | P_1774   | S_1820     | Li6707   |
| Units  | ppm      | ppm      | ppm        | ppm      | ppm        | ppm      |
| Avg    | .6697100 | .2005726 | F 13.47793 | 6.217964 | F 11.78671 | .1801011 |
| Stddev | .0021876 | .0013848 | .08661     | .040344  | .14322     | .0008870 |
| %RSD   | .3266448 | .6904418 | .6426132   | .6488328 | 1.215056   | .4924790 |
| #1     | .6672039 | .2009320 | 13.41865   | 6.171918 | 11.62825   | .1810859 |
| #2     | .6712370 | .2017423 | 13.43781   | 6.234870 | 11.82495   | .1798522 |
| #3     | .6706890 | .1990435 | 13.57733   | 6.247106 | 11.90692   | .1793652 |

|        |          |
|--------|----------|
| Elem   | Sr4077   |
| Units  | ppm      |
| Avg    | .4161966 |
| Stddev | .0014159 |
| %RSD   | .3401917 |
| #1     | .4167168 |
| #2     | .4172787 |
| #3     | .4145942 |

|           |          |          |          |          |          |
|-----------|----------|----------|----------|----------|----------|
| Int. Std. | Y_2243   | Y_3600   | Y_3710   | Y_2243   | In2306   |
| Units     | Cts/S    | Cts/S    | Cts/S    | Cts/S    | Cts/S    |
| Avg       | 6308.226 | 108884.7 | 11683.18 | 4924.852 | 7561.231 |
| Stddev    | 7.145    | 81.5     | 88.93    | 22.962   | 1.529    |
| %RSD      | .1132680 | .0748890 | .7611581 | .4662432 | .0202155 |
| #1        | 6300.478 | 108829.6 | 11623.62 | 4951.180 | 7559.580 |
| #2        | 6309.643 | 108846.1 | 11640.52 | 4914.399 | 7561.517 |
| #3        | 6314.556 | 108978.3 | 11785.40 | 4908.976 | 7562.597 |

Sample Name: Q2909-04A      Acquired: 8/21/2025 17:43:23      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | As1890          | Tl1908          | Pb2203          | Se1960          | Sb2068          | Al3961          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.7927433</b> | <b>1.857239</b> | <b>.9379807</b> | <b>1.958342</b> | <b>.7979972</b> | <b>3.647627</b> |
| Stddev | .0050259        | .056211         | .0019708        | .003301         | .0012882        | .032125         |
| %RSD   | .6339922        | 3.026590        | .2101110        | .1685380        | .1614340        | .8807064        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | .7922754 | 1.893032 | .9399233 | 1.954894 | .7990776 | 3.620295 |
| #2 | .7879677 | 1.792451 | .9359828 | 1.958658 | .7965715 | 3.683013 |
| #3 | .7979869 | 1.886234 | .9380359 | 1.961473 | .7983426 | 3.639574 |

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Ba4934          | Be2348          | Cd2265          | Ca3736          | Cr2677          | Co2286          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.3280794</b> | <b>.1889971</b> | <b>.1886969</b> | <b>55.81401</b> | <b>.4077736</b> | <b>.1970510</b> |
| Stddev | .0006537        | .0007490        | .0003132        | .13921          | .0013612        | .0002183        |
| %RSD   | .1992402        | .3963020        | .1659630        | .2494222        | .3338202        | .1107626        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | .3285531 | .1886530 | .1890379 | 55.85948 | .4074547 | .1972264 |
| #2 | .3283515 | .1898564 | .1884221 | 55.92481 | .4092660 | .1968066 |
| #3 | .3273337 | .1884821 | .1886308 | 55.65775 | .4066002 | .1971200 |

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Cu2247          | Fe2404          | Mn2576          | Mg2790          | Ni2316          | Ag3280          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.3835794</b> | <b>7.900345</b> | <b>.3278667</b> | <b>9.996789</b> | <b>.4916525</b> | <b>.0684018</b> |
| Stddev | .0006886        | .023423         | .0010373        | .043853         | .0006151        | .0027654        |
| %RSD   | .1795154        | .2964768        | .3163751        | .4386696        | .1251078        | 4.042893        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | .3843743 | 7.902408 | .3274966 | 9.976462 | .4921943 | .0659682 |
| #2 | .3831665 | 7.922669 | .3290383 | 10.04712 | .4917793 | .0714090 |
| #3 | .3831973 | 7.875960 | .3270652 | 9.96679  | .4909839 | .0678282 |

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Na5895          | V_2924          | Zn2138          | K_7664          | B_2496          | Mo2020          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>38.89859</b> | <b>.3079048</b> | <b>.3933463</b> | <b>16.17111</b> | <b>.2915425</b> | <b>.4190161</b> |
| Stddev | .08327          | .0020229        | .0013702        | .05003          | .0012836        | .0009752        |
| %RSD   | .2140724        | .6570019        | .3483569        | .3093762        | .4402764        | .2327480        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | 38.83985 | .3056660 | .3937515 | 16.11845 | .2913617 | .4194691 |
| #2 | 38.99388 | .3096013 | .3944682 | 16.21800 | .2929069 | .4178968 |
| #3 | 38.86202 | .3084471 | .3918191 | 16.17689 | .2903589 | .4196826 |

Sample Name: Q2909-04A      Acquired: 8/21/2025 17:43:23      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |          |          |            |          |          |          |
|--------|----------|----------|------------|----------|----------|----------|
| Elem   | Sn1899   | Ti3361   | Si2881     | P_1774   | S_1820   | Li6707   |
| Units  | ppm      | ppm      | ppm        | ppm      | ppm      | ppm      |
| Avg    | .6507265 | .2839861 | F 13.55467 | 6.840753 | 7.727715 | .1765925 |
| Stddev | .0022410 | .0054116 | .06665     | .030307  | .066984  | .0004923 |
| %RSD   | .3443802 | 1.905596 | .4916911   | .4430412 | .8668000 | .2787559 |
| #1     | .6513086 | .2806797 | 13.50409   | 6.862241 | 7.771972 | .1766324 |
| #2     | .6482519 | .2810473 | 13.52973   | 6.806087 | 7.650652 | .1770635 |
| #3     | .6526190 | .2902313 | 13.63019   | 6.853930 | 7.760522 | .1760815 |

|        |          |
|--------|----------|
| Elem   | Sr4077   |
| Units  | ppm      |
| Avg    | .3693599 |
| Stddev | .0016634 |
| %RSD   | .4503457 |
| #1     | .3693807 |
| #2     | .3710127 |
| #3     | .3676861 |

|           |          |          |          |          |          |
|-----------|----------|----------|----------|----------|----------|
| Int. Std. | Y_2243   | Y_3600   | Y_3710   | Y_2243   | In2306   |
| Units     | Cts/S    | Cts/S    | Cts/S    | Cts/S    | Cts/S    |
| Avg       | 6339.483 | 108885.0 | 11680.14 | 4961.994 | 7576.251 |
| Stddev    | 16.450   | 48.0     | 31.01    | 17.643   | 19.576   |
| %RSD      | .2594913 | .0441100 | .2655063 | .3555717 | .2583860 |
| #1        | 6330.162 | 108885.1 | 11662.30 | 4949.249 | 7562.269 |
| #2        | 6358.477 | 108836.9 | 11662.17 | 4954.603 | 7598.624 |
| #3        | 6329.810 | 108933.0 | 11715.95 | 4982.131 | 7567.860 |

Sample Name: Q2902-01      Acquired: 8/21/2025 17:47:20      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | As1890          | Tl1908          | Pb2203          | Se1960          | Sb2068          | Al3961          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>-.002391</b> | <b>-.003553</b> | <b>.0001902</b> | <b>.0048518</b> | <b>.0018928</b> | <b>.3133593</b> |
| Stddev | .000935         | .002343         | .0009300        | .0021481        | .0006866        | .0064366        |
| %RSD   | 39.12156        | 65.94620        | 488.9753        | 44.27377        | 36.27531        | 2.054075        |

|    |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>-.002943</b> | <b>-.002353</b> | <b>-.000797</b> | <b>.0048679</b> | <b>.0025022</b> | <b>.3061754</b> |
| #2 | <b>-.001311</b> | <b>-.006253</b> | <b>.001050</b>  | <b>.0069918</b> | <b>.0011489</b> | <b>.3186019</b> |
| #3 | <b>-.002919</b> | <b>-.002053</b> | <b>.000317</b>  | <b>.0026957</b> | <b>.0020274</b> | <b>.3153005</b> |

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Ba4934          | Be2348          | Cd2265          | Ca3736          | Cr2677          | Co2286          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.1438387</b> | <b>.0000510</b> | <b>.0000444</b> | <b>66.90113</b> | <b>.0040447</b> | <b>.0011932</b> |
| Stddev | .0005577        | .0000487        | .0000217        | .18574          | .0003801        | .0000566        |
| %RSD   | .3876972        | 95.43524        | 48.98760        | .2776385        | 9.396985        | 4.746461        |

|    |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>.1433509</b> | <b>.0000088</b> | <b>.0000197</b> | <b>66.68666</b> | <b>.0043542</b> | <b>.0011366</b> |
| #2 | <b>.1444466</b> | <b>.0000400</b> | <b>.0000608</b> | <b>67.00830</b> | <b>.0036205</b> | <b>.0011932</b> |
| #3 | <b>.1437186</b> | <b>.0001043</b> | <b>.0000525</b> | <b>67.00844</b> | <b>.0041594</b> | <b>.0012498</b> |

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Cu2247          | Fe2404          | Mn2576          | Mg2790          | Ni2316          | Ag3280          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.0793953</b> | <b>.3823387</b> | <b>.0796692</b> | <b>11.08085</b> | <b>.0035299</b> | <b>-.000744</b> |
| Stddev | .0000876        | .0078821        | .0008433        | .06182          | .0001493        | .000202         |
| %RSD   | .1103106        | 2.061560        | 1.058454        | .5579385        | 4.228301        | 27.11116        |

|    |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>.0794202</b> | <b>.3914145</b> | <b>.0788908</b> | <b>11.01421</b> | <b>.0034689</b> | <b>-.000724</b> |
| #2 | <b>.0794677</b> | <b>.3772086</b> | <b>.0795518</b> | <b>11.09198</b> | <b>.0037000</b> | <b>-.000553</b> |
| #3 | <b>.0792979</b> | <b>.3783931</b> | <b>.0805650</b> | <b>11.13634</b> | <b>.0034208</b> | <b>-.000955</b> |

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Na5895          | V_2924          | Zn2138          | K_7664          | B_2496          | Mo2020          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>32.93417</b> | <b>.0013641</b> | <b>.0502776</b> | <b>4.881016</b> | <b>.0151287</b> | <b>.0013172</b> |
| Stddev | .05502          | .0008485        | .0001566        | .047492         | .0005164        | .0000809        |
| %RSD   | .1670735        | 62.20176        | .3114605        | .9729920        | 3.413356        | 6.142996        |

|    |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>32.88629</b> | <b>.0014560</b> | <b>.0503003</b> | <b>4.827740</b> | <b>.0145327</b> | <b>.0012459</b> |
| #2 | <b>32.92193</b> | <b>.0004733</b> | <b>.0504216</b> | <b>4.896397</b> | <b>.0154440</b> | <b>.0014052</b> |
| #3 | <b>32.99428</b> | <b>.0021628</b> | <b>.0501109</b> | <b>4.918911</b> | <b>.0154093</b> | <b>.0013006</b> |

Sample Name: Q2902-01      Acquired: 8/21/2025 17:47:20      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                   |                 |                 |                 |
|--------|-----------------|-----------------|-------------------|-----------------|-----------------|-----------------|
| Elem   | Sn1899          | Ti3361          | Si2881            | P_1774          | S_1820          | Li6707          |
| Units  | ppm             | ppm             | ppm               | ppm             | ppm             | ppm             |
| Avg    | <b>-.017133</b> | <b>.0021177</b> | <b>F 12.05940</b> | <b>.5758250</b> | <b>6.658432</b> | <b>-.016792</b> |
| Stddev | .000346         | .0003901        | .00983            | .0016850        | .047815         | .000894         |
| %RSD   | 2.021032        | 18.41960        | .0814875          | .2926249        | .7181087        | 5.323285        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | -.017268 | .0019411 | 12.06376 | .5772370 | 6.672171 | -.015779 |
| #2 | -.016740 | .0018472 | 12.06630 | .5762784 | 6.697872 | -.017471 |
| #3 | -.017392 | .0025649 | 12.04815 | .5739597 | 6.605251 | -.017125 |

|        |                 |
|--------|-----------------|
| Elem   | Sr4077          |
| Units  | ppm             |
| Avg    | <b>.2328086</b> |
| Stddev | .0010274        |
| %RSD   | .4413117        |

|    |                 |
|----|-----------------|
| #1 | <b>.2316264</b> |
| #2 | <b>.2334856</b> |
| #3 | <b>.2333137</b> |

|           |                 |                 |                 |                 |                 |
|-----------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Int. Std. | Y_2243          | Y_3600          | Y_3710          | Y_2243          | In2306          |
| Units     | Cts/S           | Cts/S           | Cts/S           | Cts/S           | Cts/S           |
| Avg       | <b>6312.120</b> | <b>111575.7</b> | <b>11556.60</b> | <b>4998.754</b> | <b>7622.324</b> |
| Stddev    | 12.108          | 27.3            | 58.91           | 5.203           | 10.531          |
| %RSD      | .1918173        | .0244934        | .5097209        | .1040861        | .1381632        |

|    |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|
| #1 | 6308.591 | 111549.8 | 11618.21 | 5001.298 | 7621.102 |
| #2 | 6325.600 | 111573.1 | 11500.84 | 4992.769 | 7633.413 |
| #3 | 6302.169 | 111604.3 | 11550.75 | 5002.196 | 7612.458 |

Sample Name: Q2904-01      Acquired: 8/21/2025 17:51:32      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | As1890          | Tl1908          | Pb2203          | Se1960          | Sb2068          | Al3961          | Ba4934          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.0006529</b> | <b>-.004051</b> | <b>.0366392</b> | <b>.0023659</b> | <b>.0022949</b> | <b>3.112929</b> | <b>.0819375</b> |
| Stddev | .0011328        | .000353         | .0006141        | .0018951        | .0013163        | .008040         | .0005719        |
| %RSD   | 173.4987        | 8.726332        | 1.676170        | 80.10064        | 57.36006        | .2582698        | .6979208        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>-.000240</b> | <b>-.003746</b> | <b>.0360014</b> | <b>.0043720</b> | <b>.0010521</b> | <b>3.121931</b> | <b>.0821618</b> |
| #2 | <b>.000272</b>  | <b>-.004438</b> | <b>.0372265</b> | <b>.0006059</b> | <b>.0021583</b> | <b>3.106461</b> | <b>.0812874</b> |
| #3 | <b>.001927</b>  | <b>-.003968</b> | <b>.0366898</b> | <b>.0021198</b> | <b>.0036742</b> | <b>3.110397</b> | <b>.0823631</b> |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Be2348          | Cd2265          | Ca3736          | Cr2677          | Co2286          | Cu2247          | Fe2404          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.0001732</b> | <b>.0003353</b> | <b>47.88733</b> | <b>.0096493</b> | <b>.0028714</b> | <b>.0713555</b> | <b>10.69458</b> |
| Stddev | .0000322        | .0000301        | .09875          | .0001338        | .0001506        | .0006110        | .08880          |
| %RSD   | 18.59034        | 8.972276        | .2062184        | 1.386833        | 5.244126        | .8562174        | .8303202        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>.0002021</b> | <b>.0003628</b> | <b>47.98060</b> | <b>.0095023</b> | <b>.0027012</b> | <b>.0706935</b> | <b>10.60328</b> |
| #2 | <b>.0001385</b> | <b>.0003031</b> | <b>47.78388</b> | <b>.0096817</b> | <b>.0029258</b> | <b>.0714755</b> | <b>10.69981</b> |
| #3 | <b>.0001789</b> | <b>.0003400</b> | <b>47.89750</b> | <b>.0097640</b> | <b>.0029872</b> | <b>.0718976</b> | <b>10.78065</b> |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Mn2576          | Mg2790          | Ni2316          | Ag3280          | Na5895          | V_2924          | Zn2138          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.2502553</b> | <b>6.887170</b> | <b>.0082587</b> | <b>.0002059</b> | <b>26.90134</b> | <b>.0087531</b> | <b>.3923787</b> |
| Stddev | .0013087        | .007762         | .0004625        | .0001128        | .21760          | .0012646        | .0007854        |
| %RSD   | .5229281        | .1127072        | 5.599741        | 54.74959        | .8088755        | 14.44741        | .2001607        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>.2513519</b> | <b>6.893218</b> | <b>.0082887</b> | <b>.0000984</b> | <b>26.65340</b> | <b>.0077857</b> | <b>.3932213</b> |
| #2 | <b>.2488066</b> | <b>6.878417</b> | <b>.0087055</b> | <b>.0001961</b> | <b>26.99008</b> | <b>.0101841</b> | <b>.3922478</b> |
| #3 | <b>.2506074</b> | <b>6.889875</b> | <b>.0077820</b> | <b>.0003233</b> | <b>27.06055</b> | <b>.0082895</b> | <b>.3916669</b> |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | K_7664          | B_2496          | Mo2020          | Sn1899          | Ti3361          | Si2881          | P_1774          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>7.122079</b> | <b>.0370451</b> | <b>.0041864</b> | <b>-.015087</b> | <b>.1377839</b> | <b>9.440646</b> | <b>2.182240</b> |
| Stddev | .048966         | .0006295        | .0000827        | .000072         | .0008420        | .089684         | .010751         |
| %RSD   | .6875228        | 1.699251        | 1.975147        | .4756844        | .6111232        | .9499812        | .4926587        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>7.067119</b> | <b>.0367502</b> | <b>.0042813</b> | <b>-.015026</b> | <b>.1384239</b> | <b>9.338470</b> | <b>2.186427</b> |
| #2 | <b>7.138059</b> | <b>.0366171</b> | <b>.0041477</b> | <b>-.015166</b> | <b>.1368300</b> | <b>9.506341</b> | <b>2.170025</b> |
| #3 | <b>7.161058</b> | <b>.0377678</b> | <b>.0041302</b> | <b>-.015070</b> | <b>.1380977</b> | <b>9.477126</b> | <b>2.190267</b> |

Sample Name: Q2904-01      Acquired: 8/21/2025 17:51:32      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |          |          |          |
|--------|----------|----------|----------|
| Elem   | S_1820   | Li6707   | Sr4077   |
| Units  | ppm      | ppm      | ppm      |
| Avg    | 2.522873 | -.009835 | .1256099 |
| Stddev | .013376  | .002088  | .0003474 |
| %RSD   | .5301756 | 21.22497 | .2765356 |

|    |          |          |          |
|----|----------|----------|----------|
| #1 | 2.523037 | -.011949 | .1259285 |
| #2 | 2.509416 | -.009782 | .1252395 |
| #3 | 2.536166 | -.007775 | .1256616 |

|           |          |          |          |          |          |
|-----------|----------|----------|----------|----------|----------|
| Int. Std. | Y_2243   | Y_3600   | Y_3710   | Y_2243   | In2306   |
| Units     | Cts/S    | Cts/S    | Cts/S    | Cts/S    | Cts/S    |
| Avg       | 6461.363 | 112964.5 | 12014.06 | 5083.959 | 7753.311 |
| Stddev    | 7.759    | 383.2    | 66.78    | 14.656   | 1.805    |
| %RSD      | .1200889 | .3392636 | .5558895 | .2882831 | .0232863 |

|    |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|
| #1 | 6470.214 | 113406.1 | 11940.19 | 5067.392 | 7755.223 |
| #2 | 6455.732 | 112768.2 | 12070.17 | 5095.236 | 7751.636 |
| #3 | 6458.142 | 112719.1 | 12031.81 | 5089.248 | 7753.073 |

Sample Name: CCV04      Acquired: 8/21/2025 18:04:19      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1: CCV04      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | As1890          | Tl1908          | Pb2203          | Se1960          | Sb2068          | Al3961          | Ba4934          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>5.055623</b> | <b>4.875659</b> | <b>5.014797</b> | <b>5.057976</b> | <b>5.072961</b> | <b>9.996915</b> | <b>10.12900</b> |
| Stddev | .019146         | .073159         | .005613         | .017027         | .006153         | .010016         | .03913          |
| %RSD   | .3787114        | 1.500490        | .1119293        | .3366446        | .1212837        | .1001873        | .3863512        |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | 5.055825 | 4.859353 | 5.012942 | 5.056287 | 5.068760 | 9.995313 | 10.13372 |
| #2 | 5.036377 | 4.812030 | 5.010347 | 5.041857 | 5.070100 | 10.00763 | 10.16555 |
| #3 | 5.074667 | 4.955595 | 5.021103 | 5.075786 | 5.080023 | 9.98780  | 10.08771 |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Be2348          | Cd2265          | Ca3736          | Cr2677          | Co2286          | Cu2247          | Fe2404          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.2464221</b> | <b>2.524128</b> | <b>25.25881</b> | <b>1.003352</b> | <b>2.529233</b> | <b>1.277377</b> | <b>5.162225</b> |
| Stddev | .0013750        | .003452         | .05492          | .001766         | .003284         | .002731         | .032175         |
| %RSD   | .5579884        | .1367554        | .2174357        | .1760016        | .1298500        | .2137961        | .6232703        |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | .2451274 | 2.524221 | 25.26926 | 1.005110 | 2.526924 | 1.276146 | 5.199258 |
| #2 | .2478654 | 2.520631 | 25.30775 | 1.003366 | 2.527782 | 1.275477 | 5.146281 |
| #3 | .2462736 | 2.527533 | 25.19941 | 1.001579 | 2.532993 | 1.280506 | 5.141135 |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Mn2576          | Mg2790          | Ni2316          | Ag3280          | Na5895          | V_2924          | Zn2138          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>2.542974</b> | <b>24.93438</b> | <b>2.520553</b> | <b>1.257237</b> | <b>25.17364</b> | <b>2.538247</b> | <b>2.550995</b> |
| Stddev | .013197         | .08923          | .001772         | .000966         | .19960          | .002743         | .001684         |
| %RSD   | .5189559        | .3578412        | .0702910        | .0768740        | .7928924        | .1080557        | .0660288        |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | 2.539246 | 24.86508 | 2.519190 | 1.258146 | 25.39057 | 2.537740 | 2.549152 |
| #2 | 2.557634 | 25.03505 | 2.519913 | 1.256221 | 25.13259 | 2.541208 | 2.552455 |
| #3 | 2.532043 | 24.90300 | 2.522556 | 1.257343 | 24.99776 | 2.535793 | 2.551377 |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | K_7664          | B_2496          | Mo2020          | Sn1899          | Ti3361          | Si2881          | P_1774          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>24.70635</b> | <b>4.949275</b> | <b>5.087841</b> | <b>5.037345</b> | <b>5.094251</b> | <b>5.093072</b> | <b>5.003620</b> |
| Stddev | .08535          | .035931         | .010551         | .012834         | .013755         | .047367         | .019621         |
| %RSD   | .3454468        | .7259757        | .2073672        | .2547761        | .2700068        | .9300320        | .3921443        |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | 24.78689 | 4.915139 | 5.086130 | 5.035315 | 5.082498 | 5.140511 | 4.989562 |
| #2 | 24.61690 | 4.986765 | 5.078251 | 5.025647 | 5.109379 | 5.045777 | 4.995261 |
| #3 | 24.71528 | 4.945921 | 5.099143 | 5.051073 | 5.090875 | 5.092926 | 5.026037 |



Sample Name: CCV04      Acquired: 8/21/2025 18:04:19      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1: CCV04      Custom ID2:      Custom ID3:  
Comment:

|        |          |          |          |
|--------|----------|----------|----------|
| Elem   | S_1820   | Li6707   | Sr4077   |
| Units  | ppm      | ppm      | ppm      |
| Avg    | 4.961873 | 4.695111 | 5.128431 |
| Stddev | .026853  | .011159  | .097072  |
| %RSD   | .5411870 | .2376746 | 1.892829 |

|    |          |          |          |
|----|----------|----------|----------|
| #1 | 4.967702 | 4.698268 | 5.020876 |
| #2 | 4.932584 | 4.704352 | 5.209538 |
| #3 | 4.985332 | 4.682714 | 5.154880 |

|           |          |          |          |          |          |
|-----------|----------|----------|----------|----------|----------|
| Int. Std. | Y_2243   | Y_3600   | Y_3710   | Y_2243   | In2306   |
| Units     | Cts/S    | Cts/S    | Cts/S    | Cts/S    | Cts/S    |
| Avg       | 6115.308 | 105956.2 | 11016.39 | 4837.992 | 7087.772 |
| Stddev    | 6.761    | 196.1    | 69.08    | 9.667    | 6.629    |
| %RSD      | .1105578 | .1851160 | .6271099 | .1998152 | .0935313 |

|    |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|
| #1 | 6121.291 | 105744.2 | 11079.53 | 4846.900 | 7095.209 |
| #2 | 6116.661 | 105993.2 | 10942.59 | 4839.362 | 7085.625 |
| #3 | 6107.974 | 106131.2 | 11027.04 | 4827.712 | 7082.482 |

Sample Name: CCB04      Acquired: 8/21/2025 18:08:31      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1: CCB04      Custom ID2:      Custom ID3:  
Comment:

| Elem   | As1890   | Tl1908   | Pb2203   | Se1960   | Sb2068   | Al3961   | Ba4934   |
|--------|----------|----------|----------|----------|----------|----------|----------|
| Units  | ppm      | ppm      | ppm      | ppm      | ppm      | ppm      | ppm      |
| Avg    | .0008513 | -.000304 | .0000699 | .0006792 | -.001610 | .0072135 | -.003111 |
| Stddev | .0028944 | .000663  | .0012484 | .0012800 | .001264  | .0057756 | .001238  |
| %RSD   | 339.9985 | 217.9799 | 1787.216 | 188.4394 | 78.53526 | 80.06571 | 39.79009 |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | -.000506 | -.000557 | .0014996 | .0002677 | -.001636 | .0023038 | -.004141 |
| #2 | -.001115 | .000448  | -.000485 | -.000344 | -.002861 | .0135771 | -.003456 |
| #3 | .004175  | -.000804 | -.000805 | .002114  | -.000333 | .0057596 | -.001738 |

| Elem   | Be2348   | Cd2265   | Ca3736   | Cr2677   | Co2286   | Cu2247   | Fe2404   |
|--------|----------|----------|----------|----------|----------|----------|----------|
| Units  | ppm      | ppm      | ppm      | ppm      | ppm      | ppm      | ppm      |
| Avg    | -.000009 | .0001662 | .0012408 | -.000193 | .0000801 | .0001223 | -.000966 |
| Stddev | .000046  | .0000023 | .0056315 | .000102  | .0000371 | .0000996 | .005692  |
| %RSD   | 527.5152 | 1.373739 | 453.8637 | 52.69073 | 46.37411 | 81.41477 | 588.9989 |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | -.000022 | .0001681 | -.004601 | -.000289 | .0000372 | .0002294 | .001719  |
| #2 | .000042  | .0001637 | .006635  | -.000204 | .0001017 | .0001049 | .002887  |
| #3 | -.000047 | .0001669 | .001688  | -.000086 | .0001013 | .0000326 | -.007504 |

| Elem   | Mn2576   | Mg2790   | Ni2316   | Ag3280   | Na5895   | V_2924   | Zn2138   |
|--------|----------|----------|----------|----------|----------|----------|----------|
| Units  | ppm      | ppm      | ppm      | ppm      | ppm      | ppm      | ppm      |
| Avg    | .0001987 | -.002089 | -.000065 | -.000585 | .2278252 | -.000602 | -.000334 |
| Stddev | .0000492 | .018674  | .000095  | .000145  | .0463244 | .001744  | .000070  |
| %RSD   | 24.76702 | 893.8788 | 147.3674 | 24.74972 | 20.33329 | 289.9666 | 21.09678 |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | .0001861 | -.003577 | .000028  | -.000593 | .1779156 | -.002027 | -.000275 |
| #2 | .0002529 | -.019975 | -.000059 | -.000437 | .2361148 | .001344  | -.000412 |
| #3 | .0001570 | .017285  | -.000162 | -.000726 | .2694450 | -.001122 | -.000314 |

| Elem   | K_7664   | B_2496   | Mo2020   | Sn1899   | Ti3361   | Si2881   | P_1774   |
|--------|----------|----------|----------|----------|----------|----------|----------|
| Units  | ppm      | ppm      | ppm      | ppm      | ppm      | ppm      | ppm      |
| Avg    | .3638591 | .0012803 | .0004978 | -.002169 | -.001889 | .0312835 | .0031340 |
| Stddev | .0534873 | .0005937 | .0000898 | .000716  | .001032  | .0107315 | .0002356 |
| %RSD   | 14.69999 | 46.37502 | 18.03329 | 33.00429 | 54.62774 | 34.30392 | 7.517193 |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | .3046718 | .0019602 | .0004475 | -.002499 | -.001827 | .0194514 | .0033427 |
| #2 | .3781706 | .0010167 | .0006015 | -.001347 | -.000889 | .0340112 | .0031808 |
| #3 | .4087348 | .0008641 | .0004445 | -.002659 | -.002950 | .0403878 | .0028785 |

Sample Name: CCB04      Acquired: 8/21/2025 18:08:31      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1: CCB04      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|
| Elem   | S_1820          | Li6707          | Sr4077          |
| Units  | ppm             | ppm             | ppm             |
| Avg    | <b>-.002456</b> | <b>-.004652</b> | <b>.0001518</b> |
| Stddev | .002244         | .000486         | .0000877        |
| %RSD   | 91.35982        | 10.45503        | 57.77978        |

|    |                 |                 |                 |
|----|-----------------|-----------------|-----------------|
| #1 | <b>-.004980</b> | <b>-.004142</b> | <b>.0002227</b> |
| #2 | <b>-.000685</b> | <b>-.004704</b> | <b>.0001789</b> |
| #3 | <b>-.001704</b> | <b>-.005111</b> | <b>.0000537</b> |

|           |                 |                 |                 |                 |                 |
|-----------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Int. Std. | Y_2243          | Y_3600          | Y_3710          | Y_2243          | In2306          |
| Units     | Cts/S           | Cts/S           | Cts/S           | Cts/S           | Cts/S           |
| Avg       | <b>6410.067</b> | <b>110693.9</b> | <b>11236.64</b> | <b>5055.771</b> | <b>8113.333</b> |
| Stddev    | 3.535           | 261.2           | 25.29           | 28.707          | 5.959           |
| %RSD      | .0551510        | .2359911        | .2250619        | .5678161        | .0734467        |

|    |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>6411.875</b> | <b>110797.7</b> | <b>11208.21</b> | <b>5088.357</b> | <b>8119.883</b> |
| #2 | <b>6405.993</b> | <b>110396.7</b> | <b>11256.63</b> | <b>5034.214</b> | <b>8108.234</b> |
| #3 | <b>6412.332</b> | <b>110887.2</b> | <b>11245.08</b> | <b>5044.741</b> | <b>8111.880</b> |

Sample Name: Q2915-01      Acquired: 8/21/2025 18:12:49      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | As1890          | Tl1908          | Pb2203          | Se1960          | Sb2068          | Al3961          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.0417861</b> | <b>-.014370</b> | <b>.1350552</b> | <b>.0082151</b> | <b>-.009260</b> | <b>120.1077</b> |
| Stddev | .0010618        | .002244         | .0003810        | .0015418        | .000812         | .2125           |
| %RSD   | 2.541016        | 15.61876        | .2821394        | 18.76725        | 8.765350        | .1769234        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | .0429835 | -.016209 | .1346225 | .0094237 | -.010065 | 119.9595 |
| #2 | .0409592 | -.011869 | .1353408 | .0087429 | -.008442 | 120.3512 |
| #3 | .0414157 | -.015032 | .1352023 | .0064788 | -.009272 | 120.0124 |

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Ba4934          | Be2348          | Cd2265          | Ca3736          | Cr2677          | Co2286          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.3428480</b> | <b>.0049444</b> | <b>.0020133</b> | <b>2.031198</b> | <b>.1413618</b> | <b>.0408279</b> |
| Stddev | .0008894        | .0000268        | .0000281        | .010196         | .0002737        | .0000473        |
| %RSD   | .2594236        | .5417598        | 1.397227        | .5019567        | .1935832        | .1159534        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | .3427253 | .0049148 | .0020159 | 2.020342 | .1414397 | .0408824 |
| #2 | .3437925 | .0049515 | .0020400 | 2.040571 | .1415881 | .0408048 |
| #3 | .3420264 | .0049669 | .0019839 | 2.032680 | .1410577 | .0407965 |

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Cu2247          | Fe2404          | Mn2576          | Mg2790          | Ni2316          | Ag3280          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.1269414</b> | <b>146.2795</b> | <b>.6430848</b> | <b>22.66943</b> | <b>.1294116</b> | <b>.0054060</b> |
| Stddev | .0005221        | .4993           | .0014448        | .05252          | .0002789        | .0004109        |
| %RSD   | .4112948        | .3413313        | .2246684        | .2316878        | .2155222        | 7.600665        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | .1275390 | 146.3010 | .6436343 | 22.61803 | .1290963 | .0054960 |
| #2 | .1265736 | 145.7698 | .6441742 | 22.72301 | .1296261 | .0049575 |
| #3 | .1267116 | 146.7677 | .6414458 | 22.66724 | .1295124 | .0057644 |

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Na5895          | V_2924          | Zn2138          | K_7664          | B_2496          | Mo2020          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>1.065926</b> | <b>.1975552</b> | <b>.4356108</b> | <b>6.609424</b> | <b>.1295057</b> | <b>.0016255</b> |
| Stddev | .005476         | .0027087        | .0004619        | .033879         | .0022203        | .0001128        |
| %RSD   | .5137519        | 1.371096        | .1060475        | .5125819        | 1.714451        | 6.937936        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | 1.060017 | .1980170 | .4353043 | 6.570679 | .1307386 | .0016735 |
| #2 | 1.066930 | .1946453 | .4353861 | 6.633475 | .1269425 | .0017064 |
| #3 | 1.070830 | .2000033 | .4361422 | 6.624119 | .1308359 | .0014967 |

Sample Name: Q2915-01      Acquired: 8/21/2025 18:12:49      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                   |                 |                 |                 |
|--------|-----------------|-----------------|-------------------|-----------------|-----------------|-----------------|
| Elem   | Sn1899          | Ti3361          | Si2881            | P_1774          | S_1820          | Li6707          |
| Units  | ppm             | ppm             | ppm               | ppm             | ppm             | ppm             |
| Avg    | <b>-.002314</b> | <b>.9338169</b> | <b>F 17.67976</b> | <b>1.005888</b> | <b>1.255987</b> | <b>.2012460</b> |
| Stddev | .001102         | .0052441        | .25526            | .007831         | .001334         | .0003328        |
| %RSD   | 47.63069        | .5615792        | 1.443798          | .7785346        | .1062505        | .1653808        |

|    |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>-.001783</b> | <b>.9394115</b> | <b>17.42303</b> | <b>1.013708</b> | <b>1.257522</b> | <b>.2015945</b> |
| #2 | <b>-.001579</b> | <b>.9330263</b> | <b>17.93352</b> | <b>1.005910</b> | <b>1.255100</b> | <b>.2012122</b> |
| #3 | <b>-.003582</b> | <b>.9290130</b> | <b>17.68274</b> | <b>.998046</b>  | <b>1.255339</b> | <b>.2009314</b> |

|        |                 |
|--------|-----------------|
| Elem   | Sr4077          |
| Units  | ppm             |
| Avg    | <b>-.111794</b> |
| Stddev | .000437         |
| %RSD   | .3912392        |

|    |                 |
|----|-----------------|
| #1 | <b>-.111676</b> |
| #2 | <b>-.111427</b> |
| #3 | <b>-.112278</b> |

|           |                 |                 |                 |                 |                 |
|-----------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Int. Std. | Y_2243          | Y_3600          | Y_3710          | Y_2243          | In2306          |
| Units     | Cts/S           | Cts/S           | Cts/S           | Cts/S           | Cts/S           |
| Avg       | <b>6548.863</b> | <b>112374.6</b> | <b>12171.22</b> | <b>5140.126</b> | <b>7401.174</b> |
| Stddev    | 5.819           | 141.4           | 58.73           | 25.891          | 1.926           |
| %RSD      | .0888477        | .1258144        | .4824957        | .5037030        | .0260246        |

|    |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>6554.035</b> | <b>112500.8</b> | <b>12157.57</b> | <b>5147.956</b> | <b>7399.014</b> |
| #2 | <b>6549.992</b> | <b>112401.1</b> | <b>12120.53</b> | <b>5111.224</b> | <b>7401.795</b> |
| #3 | <b>6542.563</b> | <b>112221.8</b> | <b>12235.57</b> | <b>5161.199</b> | <b>7402.712</b> |

Sample Name: Q2915-03      Acquired: 8/21/2025 18:16:53      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | As1890          | Tl1908          | Pb2203          | Se1960          | Sb2068          | Al3961          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.1124279</b> | <b>-.028817</b> | <b>.1621671</b> | <b>.0123101</b> | <b>-.016123</b> | <b>125.5446</b> |
| Stddev | .0030823        | .002350         | .0023774        | .0027341        | .001213         | .1523           |
| %RSD   | 2.741540        | 8.155501        | 1.466031        | 22.20989        | 7.522712        | .1213301        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | .1091766 | -.028755 | .1639521 | .0147350 | -.014789 | 125.7116 |
| #2 | .1153074 | -.031198 | .1630809 | .0093470 | -.016420 | 125.4134 |
| #3 | .1127997 | -.026498 | .1594684 | .0128485 | -.017159 | 125.5086 |

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Ba4934          | Be2348          | Cd2265          | Ca3736          | Cr2677          | Co2286          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.2676333</b> | <b>.0079518</b> | <b>.0033714</b> | <b>3.465405</b> | <b>.1832075</b> | <b>.0707758</b> |
| Stddev | .0018292        | .0001602        | .0000352        | .016602         | .0001997        | .0001521        |
| %RSD   | .6834692        | 2.015038        | 1.044661        | .4790857        | .1089852        | .2149104        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | .2696994 | .0080698 | .0034050 | 3.481567 | .1832190 | .0707643 |
| #2 | .2662202 | .0080162 | .0033348 | 3.466254 | .1830023 | .0706298 |
| #3 | .2669803 | .0077694 | .0033743 | 3.448395 | .1834012 | .0709333 |

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Cu2247          | Fe2404          | Mn2576          | Mg2790          | Ni2316          | Ag3280          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.2375258</b> | <b>256.5339</b> | <b>.9110510</b> | <b>31.28282</b> | <b>.1985940</b> | <b>.0123434</b> |
| Stddev | .0002372        | .4273           | .0053582        | .09251          | .0001752        | .0002513        |
| %RSD   | .0998524        | .1665606        | .5881336        | .2957209        | .0882266        | 2.036062        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | .2377988 | 256.0773 | .9161854 | 31.32625 | .1986717 | .0120574 |
| #2 | .2374082 | 256.6004 | .9114735 | 31.17658 | .1987170 | .0124442 |
| #3 | .2373703 | 256.9241 | .9054941 | 31.34562 | .1983934 | .0125287 |

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Na5895          | V_2924          | Zn2138          | K_7664          | B_2496          | Mo2020          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>1.090858</b> | <b>.2716454</b> | <b>.5531765</b> | <b>6.920796</b> | <b>.2282091</b> | <b>.0031930</b> |
| Stddev | .006832         | .0015316        | .0012098        | .057957         | .0006447        | .0002242        |
| %RSD   | .6262994        | .5638262        | .2186945        | .8374377        | .2825186        | 7.020947        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | 1.091352 | .2726905 | .5520642 | 6.883745 | .2280699 | .0030614 |
| #2 | 1.083792 | .2723585 | .5530007 | 6.891057 | .2289121 | .0034518 |
| #3 | 1.097430 | .2698873 | .5544645 | 6.987586 | .2276454 | .0030657 |

Sample Name: Q2915-03      Acquired: 8/21/2025 18:16:53      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |          |          |            |          |          |          |
|--------|----------|----------|------------|----------|----------|----------|
| Elem   | Sn1899   | Ti3361   | Si2881     | P_1774   | S_1820   | Li6707   |
| Units  | ppm      | ppm      | ppm        | ppm      | ppm      | ppm      |
| Avg    | .0081320 | 1.087665 | F 17.35267 | 3.220238 | 1.061821 | .2525805 |
| Stddev | .0004191 | .024328  | .31465     | .013081  | .006466  | .0003471 |
| %RSD   | 5.153295 | 2.236724 | 1.813276   | .4062165 | .6089182 | .1374058 |
| #1     | .0079177 | 1.060117 | 17.18337   | 3.222322 | 1.054968 | .2525702 |
| #2     | .0078634 | 1.106203 | 17.15892   | 3.232151 | 1.067814 | .2522387 |
| #3     | .0086149 | 1.096675 | 17.71573   | 3.206239 | 1.062681 | .2529326 |

|        |          |
|--------|----------|
| Elem   | Sr4077   |
| Units  | ppm      |
| Avg    | -.209294 |
| Stddev | .000972  |
| %RSD   | .4642975 |
| #1     | -.208879 |
| #2     | -.208600 |
| #3     | -.210405 |

|           |          |          |          |          |          |
|-----------|----------|----------|----------|----------|----------|
| Int. Std. | Y_2243   | Y_3600   | Y_3710   | Y_2243   | In2306   |
| Units     | Cts/S    | Cts/S    | Cts/S    | Cts/S    | Cts/S    |
| Avg       | 6618.287 | 115113.1 | 12691.94 | 5228.492 | 7284.019 |
| Stddev    | 9.926    | 147.4    | 60.17    | 18.551   | 13.360   |
| %RSD      | .1499837 | .1280717 | .4740871 | .3548131 | .1834158 |
| #1        | 6609.644 | 115242.6 | 12624.02 | 5224.853 | 7270.706 |
| #2        | 6616.089 | 115144.1 | 12713.23 | 5248.594 | 7283.926 |
| #3        | 6629.128 | 114952.7 | 12738.58 | 5212.030 | 7297.426 |

Sample Name: Q2917-01      Acquired: 8/21/2025 18:20:57      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | As1890          | Tl1908          | Pb2203          | Se1960          | Sb2068          | Al3961          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.0898205</b> | <b>-.028277</b> | <b>.2967600</b> | <b>.0087665</b> | <b>-.019026</b> | <b>157.1029</b> |
| Stddev | .0011440        | .001203         | .0017688        | .0022731        | .001607         | .1702           |
| %RSD   | 1.273671        | 4.255515        | .5960436        | 25.92938        | 8.445851        | .1083154        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | .0910539 | -.027370 | .2988024 | .0071240 | -.020685 | 156.9302 |
| #2 | .0887940 | -.027818 | .2957411 | .0113607 | -.018916 | 157.1079 |
| #3 | .0896137 | -.029642 | .2957364 | .0078147 | -.017477 | 157.2704 |

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Ba4934          | Be2348          | Cd2265          | Ca3736          | Cr2677          | Co2286          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.8289757</b> | <b>.0102982</b> | <b>.0094517</b> | <b>78.88180</b> | <b>.2167087</b> | <b>.1594678</b> |
| Stddev | .0021663        | .0000197        | .0000054        | .09100          | .0012933        | .0002854        |
| %RSD   | .2613225        | .1909203        | .0572927        | .1153570        | .5967790        | .1789515        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | .8272151 | .0102803 | .0094574 | 78.77928 | .2160692 | .1591483 |
| #2 | .8283171 | .0103192 | .0094467 | 78.91311 | .2158597 | .1595574 |
| #3 | .8313949 | .0102950 | .0094510 | 78.95300 | .2181971 | .1596975 |

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Cu2247          | Fe2404          | Mn2576          | Mg2790          | Ni2316          | Ag3280          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.3856256</b> | <b>320.6846</b> | <b>4.332600</b> | <b>58.22946</b> | <b>.2263591</b> | <b>.0146720</b> |
| Stddev | .0012964        | 1.5545          | .010815         | .16077          | .0001414        | .0005334        |
| %RSD   | .3361733        | .4847543        | .2496089        | .2760922        | .0624597        | 3.635507        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | .3845612 | 319.8410 | 4.322442 | 58.05806 | .2262285 | .0143288 |
| #2 | .3870693 | 319.7342 | 4.331390 | 58.25342 | .2265092 | .0144006 |
| #3 | .3852464 | 322.4785 | 4.343969 | 58.37690 | .2263394 | .0152865 |

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Na5895          | V_2924          | Zn2138          | K_7664          | B_2496          | Mo2020          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>11.92015</b> | <b>.6265775</b> | <b>.6024616</b> | <b>13.89019</b> | <b>1.796482</b> | <b>.0063910</b> |
| Stddev | .05089          | .0054428        | .0002151        | .03057          | .009020         | .0002322        |
| %RSD   | .4269401        | .8686643        | .0357065        | .2201094        | .5020917        | 3.633961        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | 11.92606 | .6204964 | .6026053 | 13.89156 | 1.787497 | .0065893 |
| #2 | 11.86656 | .6309928 | .6025651 | 13.85896 | 1.796412 | .0064480 |
| #3 | 11.96783 | .6282433 | .6022143 | 13.92006 | 1.805536 | .0061355 |



Sample Name: Q2917-01      Acquired: 8/21/2025 18:20:57      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |          |          |            |          |          |          |
|--------|----------|----------|------------|----------|----------|----------|
| Elem   | Sn1899   | Ti3361   | Si2881     | P_1774   | S_1820   | Li6707   |
| Units  | ppm      | ppm      | ppm        | ppm      | ppm      | ppm      |
| Avg    | .0109171 | 6.215221 | F 13.62531 | 7.217569 | 5.945126 | .1660885 |
| Stddev | .0008602 | .019938  | .06987     | .039183  | .051431  | .0016480 |
| %RSD   | 7.879205 | .3207953 | .5128168   | .5428823 | .8650889 | .9922496 |
| #1     | .0119056 | 6.192199 | 13.55189   | 7.228490 | 5.947036 | .1674861 |
| #2     | .0103383 | 6.226737 | 13.69100   | 7.174085 | 5.892768 | .1665083 |
| #3     | .0105075 | 6.226729 | 13.63303   | 7.250133 | 5.995576 | .1642712 |

|        |          |
|--------|----------|
| Elem   | Sr4077   |
| Units  | ppm      |
| Avg    | .0346322 |
| Stddev | .0008340 |
| %RSD   | 2.408094 |
| #1     | .0352090 |
| #2     | .0350117 |
| #3     | .0336760 |

|           |          |          |          |          |          |
|-----------|----------|----------|----------|----------|----------|
| Int. Std. | Y_2243   | Y_3600   | Y_3710   | Y_2243   | In2306   |
| Units     | Cts/S    | Cts/S    | Cts/S    | Cts/S    | Cts/S    |
| Avg       | 7080.311 | 123332.7 | 14046.33 | 5536.880 | 6744.526 |
| Stddev    | 10.534   | 447.6    | 33.38    | 7.761    | 9.542    |
| %RSD      | .1487835 | .3629600 | .2376549 | .1401612 | .1414765 |
| #1        | 7091.140 | 123585.4 | 14084.75 | 5532.805 | 6754.383 |
| #2        | 7079.694 | 123596.9 | 14024.38 | 5545.829 | 6743.859 |
| #3        | 7070.099 | 122815.9 | 14029.87 | 5532.005 | 6735.334 |

Sample Name: Q2919-01      Acquired: 8/21/2025 18:24:58      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |          |          |          |          |          |          |
|--------|----------|----------|----------|----------|----------|----------|
| Elem   | As1890   | Tl1908   | Pb2203   | Se1960   | Sb2068   | Al3961   |
| Units  | ppm      | ppm      | ppm      | ppm      | ppm      | ppm      |
| Avg    | .0740423 | -.022834 | .4307981 | .0054601 | -.018248 | 183.1637 |
| Stddev | .0006510 | .002370  | .0004797 | .0035123 | .001829  | .3060    |
| %RSD   | .8792525 | 10.38102 | .1113455 | 64.32549 | 10.02358 | .1670418 |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | .0740629 | -.020703 | .4313520 | .0029952 | -.020008 | 183.4507 |
| #2 | .0733812 | -.025387 | .4305181 | .0094817 | -.018380 | 183.1985 |
| #3 | .0746828 | -.022411 | .4305243 | .0039035 | -.016357 | 182.8418 |

|        |          |          |          |          |          |          |
|--------|----------|----------|----------|----------|----------|----------|
| Elem   | Ba4934   | Be2348   | Cd2265   | Ca3736   | Cr2677   | Co2286   |
| Units  | ppm      | ppm      | ppm      | ppm      | ppm      | ppm      |
| Avg    | .7861062 | .0100362 | .0131588 | 184.2837 | .3236202 | .1808829 |
| Stddev | .0010488 | .0000232 | .0001089 | .2465    | .0006772 | .0000140 |
| %RSD   | .1334189 | .2307520 | .8273577 | .1337803 | .2092573 | .0077321 |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | .7870924 | .0100178 | .0132188 | 184.5565 | .3241431 | .1808866 |
| #2 | .7862219 | .0100287 | .0132244 | 184.2177 | .3238623 | .1808675 |
| #3 | .7850044 | .0100622 | .0130331 | 184.0768 | .3228552 | .1808947 |

|        |          |          |          |          |          |          |
|--------|----------|----------|----------|----------|----------|----------|
| Elem   | Cu2247   | Fe2404   | Mn2576   | Mg2790   | Ni2316   | Ag3280   |
| Units  | ppm      | ppm      | ppm      | ppm      | ppm      | ppm      |
| Avg    | .4194451 | 330.3032 | 4.077253 | 73.44865 | .3210138 | .0124965 |
| Stddev | .0005490 | .4146    | .006559  | .21079   | .0002939 | .0005225 |
| %RSD   | .1308861 | .1255158 | .1608585 | .2869923 | .0915633 | 4.180729 |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | .4199969 | 329.8246 | 4.083000 | 73.67806 | .3208733 | .0119743 |
| #2 | .4188989 | 330.5304 | 4.078651 | 73.40438 | .3213517 | .0124960 |
| #3 | .4194397 | 330.5545 | 4.070108 | 73.26351 | .3208165 | .0130192 |

|        |          |          |          |          |          |          |
|--------|----------|----------|----------|----------|----------|----------|
| Elem   | Na5895   | V_2924   | Zn2138   | K_7664   | B_2496   | Mo2020   |
| Units  | ppm      | ppm      | ppm      | ppm      | ppm      | ppm      |
| Avg    | 12.69649 | .6157390 | .8462235 | 23.59442 | .3371876 | .0086647 |
| Stddev | .03036   | .0007386 | .0016462 | .06240   | .0007342 | .0001440 |
| %RSD   | .2391099 | .1199493 | .1945295 | .2644788 | .2177435 | 1.661899 |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | 12.66422 | .6163172 | .8454516 | 23.55265 | .3369404 | .0086441 |
| #2 | 12.70077 | .6159927 | .8451052 | 23.56446 | .3380135 | .0085321 |
| #3 | 12.72448 | .6149069 | .8481138 | 23.66616 | .3366089 | .0088179 |

Sample Name: Q2919-01      Acquired: 8/21/2025 18:24:58      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                   |                 |                   |                 |                 |
|--------|-----------------|-------------------|-----------------|-------------------|-----------------|-----------------|
| Elem   | Sn1899          | Ti3361            | Si2881          | P_1774            | S_1820          | Li6707          |
| Units  | ppm             | ppm               | ppm             | ppm               | ppm             | ppm             |
| Avg    | <b>.0294904</b> | <b>F 10.11607</b> | <b>9.433192</b> | <b>F 10.48146</b> | <b>5.757076</b> | <b>.1927462</b> |
| Stddev | .0007077        | .00465            | .066527         | .00315            | .021321         | .0007358        |
| %RSD   | 2.399856        | .0459460          | .7052388        | .0300242          | .3703442        | .3817618        |
| #1     | .0302249        | 10.12110          | 9.499889        | 10.47905          | 5.772447        | .1920152        |
| #2     | .0294335        | 10.11518          | 9.432851        | 10.48502          | 5.766046        | .1934867        |
| #3     | .0288128        | 10.11193          | 9.366837        | 10.48030          | 5.732736        | .1927366        |

|        |                 |
|--------|-----------------|
| Elem   | Sr4077          |
| Units  | ppm             |
| Avg    | <b>-.098487</b> |
| Stddev | .000447         |
| %RSD   | .4540583        |
| #1     | <b>-.097977</b> |
| #2     | <b>-.098674</b> |
| #3     | <b>-.098811</b> |

|           |                 |                 |                 |                 |                 |
|-----------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Int. Std. | Y_2243          | Y_3600          | Y_3710          | Y_2243          | In2306          |
| Units     | Cts/S           | Cts/S           | Cts/S           | Cts/S           | Cts/S           |
| Avg       | <b>7103.234</b> | <b>124476.3</b> | <b>14253.10</b> | <b>5606.765</b> | <b>6433.596</b> |
| Stddev    | 7.876           | 137.1           | 41.31           | 16.022          | 6.185           |
| %RSD      | .1108812        | .1101108        | .2898440        | .2857568        | .0961400        |
| #1        | 7103.282        | 124370.3        | 14206.26        | 5591.257        | 6432.285        |
| #2        | 7111.085        | 124631.1        | 14284.34        | 5623.255        | 6440.331        |
| #3        | 7095.333        | 124427.4        | 14268.71        | 5605.782        | 6428.171        |

Sample Name: Q2919-01DUP      Acquired: 8/21/2025 18:28:59      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | As1890          | Tl1908          | Pb2203          | Se1960          | Sb2068          | Al3961          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.0808521</b> | <b>-.025723</b> | <b>.2950924</b> | <b>.0093308</b> | <b>-.018014</b> | <b>156.1076</b> |
| Stddev | .0031093        | .002241         | .0016214        | .0037852        | .000475         | .1778           |
| %RSD   | 3.845623        | 8.710756        | .5494468        | 40.56739        | 2.636295        | .1139278        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | .0774185 | -.026698 | .2940365 | .0106308 | -.017519 | 156.1663 |
| #2 | .0834774 | -.027312 | .2969592 | .0050668 | -.018055 | 156.2486 |
| #3 | .0816605 | -.023160 | .2942814 | .0122947 | -.018467 | 155.9078 |

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Ba4934          | Be2348          | Cd2265          | Ca3736          | Cr2677          | Co2286          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.5708636</b> | <b>.0093834</b> | <b>.0120856</b> | <b>76.05268</b> | <b>.2580745</b> | <b>.2675611</b> |
| Stddev | .0018999        | .0000309        | .0001017        | .07497          | .0006486        | .0004500        |
| %RSD   | .3328043        | .3293044        | .8413389        | .0985796        | .2513132        | .1681720        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | .5730213 | .0093477 | .0120330 | 76.12815 | .2573845 | .2672708 |
| #2 | .5701276 | .0093997 | .0122028 | 75.97821 | .2581674 | .2673330 |
| #3 | .5694418 | .0094027 | .0120210 | 76.05169 | .2586716 | .2680794 |

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Cu2247          | Fe2404          | Mn2576          | Mg2790          | Ni2316          | Ag3280          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>4.251222</b> | <b>335.5442</b> | <b>3.468222</b> | <b>70.30810</b> | <b>.4225294</b> | <b>.0171347</b> |
| Stddev | .000920         | .7991           | .009417         | .18791          | .0004563        | .0003660        |
| %RSD   | .0216338        | .2381467        | .2715113        | .2672691        | .1079954        | 2.136305        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | 4.250465 | 336.3203 | 3.474916 | 70.21093 | .4222009 | .0174483 |
| #2 | 4.250955 | 334.7240 | 3.457454 | 70.18867 | .4223369 | .0167325 |
| #3 | 4.252245 | 335.5883 | 3.472295 | 70.52470 | .4230504 | .0172234 |

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Na5895          | V_2924          | Zn2138          | K_7664          | B_2496          | Mo2020          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>11.42293</b> | <b>.5577827</b> | <b>.6457775</b> | <b>23.64584</b> | <b>.3650455</b> | <b>.0057174</b> |
| Stddev | .01508          | .0042605        | .0003803        | .04166          | .0003978        | .0003450        |
| %RSD   | .1320546        | .7638356        | .0588837        | .1761960        | .1089667        | 6.033394        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | 11.44014 | .5620134 | .6462156 | 23.66103 | .3654563 | .0053361 |
| #2 | 11.41662 | .5578419 | .6455327 | 23.67777 | .3646622 | .0060078 |
| #3 | 11.41201 | .5534929 | .6455843 | 23.59871 | .3650180 | .0058085 |

Sample Name: Q2919-01DUP      Acquired: 8/21/2025 18:28:59      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

| Elem   | Sn1899   | Ti3361   | Si2881   | P_1774     | S_1820     | Li6707   |
|--------|----------|----------|----------|------------|------------|----------|
| Units  | ppm      | ppm      | ppm      | ppm        | ppm        | ppm      |
| Avg    | .0161124 | 9.383941 | 7.722247 | F 12.40869 | F 31.77034 | .1927430 |
| Stddev | .0005785 | .011894  | .199970  | .01035     | .08338     | .0017644 |
| %RSD   | 3.590488 | .1267515 | 2.589532 | .0834192   | .2624471   | .9153904 |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | .0165136 | 9.396673 | 7.735393 | 12.39985 | 31.77883 | .1946988 |
| #2 | .0154493 | 9.373114 | 7.915320 | 12.42007 | 31.84916 | .1922591 |
| #3 | .0163744 | 9.382036 | 7.516028 | 12.40614 | 31.68304 | .1912711 |

| Elem   | Sr4077   |
|--------|----------|
| Units  | ppm      |
| Avg    | -.166632 |
| Stddev | .000512  |
| %RSD   | .3070195 |

|    |          |
|----|----------|
| #1 | -.167112 |
| #2 | -.166094 |
| #3 | -.166690 |

| Int. Std. | Y_2243   | Y_3600   | Y_3710   | Y_2243   | In2306   |
|-----------|----------|----------|----------|----------|----------|
| Units     | Cts/S    | Cts/S    | Cts/S    | Cts/S    | Cts/S    |
| Avg       | 7387.483 | 129351.5 | 14698.69 | 5856.026 | 6665.444 |
| Stddev    | 6.416    | 289.2    | 57.23    | 16.511   | .790     |
| %RSD      | .0868543 | .2236115 | .3893608 | .2819569 | .0118594 |

|    |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|
| #1 | 7388.592 | 129428.9 | 14703.38 | 5875.091 | 6666.056 |
| #2 | 7380.584 | 129594.2 | 14753.43 | 5846.348 | 6665.725 |
| #3 | 7393.273 | 129031.4 | 14639.26 | 5846.639 | 6664.552 |

Sample Name: Q2919-01LX5      Acquired: 8/21/2025 18:33:01      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | As1890          | Tl1908          | Pb2203          | Se1960          | Sb2068          | Al3961          | Ba4934          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.0187440</b> | <b>-.005764</b> | <b>.0877854</b> | <b>.0017829</b> | <b>-.005040</b> | <b>43.52656</b> | <b>.1812657</b> |
| Stddev | .0009201        | .001533         | .0018207        | .0024043        | .001859         | .03824          | .0014834        |
| %RSD   | 4.908599        | 26.59830        | 2.074076        | 134.8496        | 36.88145        | .0878441        | .8183320        |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | .0186864 | -.004860 | .0861902 | -.000890 | -.006455 | 43.48269 | .1809895 |
| #2 | .0196916 | -.007535 | .0873970 | .003768  | -.005731 | 43.55280 | .1828677 |
| #3 | .0178541 | -.004899 | .0897690 | .002471  | -.002935 | 43.54420 | .1799398 |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Be2348          | Cd2265          | Ca3736          | Cr2677          | Co2286          | Cu2247          | Fe2404          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.0026862</b> | <b>.0016421</b> | <b>45.17232</b> | <b>.0792830</b> | <b>.0357188</b> | <b>.1100708</b> | <b>74.79508</b> |
| Stddev | .0000732        | .0000625        | .07782          | .0002153        | .0000658        | .0005020        | .51884          |
| %RSD   | 2.724892        | 3.805290        | .1722789        | .2716136        | .1842693        | .4560902        | .6936789        |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | .0027612 | .0016802 | 45.18897 | .0790491 | .0356430 | .1106200 | 74.56833 |
| #2 | .0026826 | .0016761 | 45.08752 | .0793267 | .0357614 | .1096355 | 75.38869 |
| #3 | .0026149 | .0015700 | 45.24047 | .0794731 | .0357520 | .1099571 | 74.42821 |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Mn2576          | Mg2790          | Ni2316          | Ag3280          | Na5895          | V_2924          | Zn2138          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>1.019691</b> | <b>18.12186</b> | <b>.0643240</b> | <b>.0012720</b> | <b>2.835658</b> | <b>.1508933</b> | <b>.2013800</b> |
| Stddev | .001550         | .03217          | .0001649        | .0005289        | .032450         | .0033507        | .0004835        |
| %RSD   | .1520198        | .1775306        | .2563786        | 41.57992        | 1.144369        | 2.220598        | .2401123        |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | 1.020288 | 18.11971 | .0641772 | .0011412 | 2.812031 | .1539078 | .2019362 |
| #2 | 1.020854 | 18.09081 | .0645025 | .0018540 | 2.872658 | .1472856 | .2010593 |
| #3 | 1.017931 | 18.15505 | .0642924 | .0008207 | 2.822285 | .1514866 | .2011446 |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | K_7664          | B_2496          | Mo2020          | Sn1899          | Ti3361          | Si2881          | P_1774          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>5.351944</b> | <b>.0538258</b> | <b>.0020971</b> | <b>.0034225</b> | <b>2.465478</b> | <b>2.865527</b> | <b>2.079138</b> |
| Stddev | .056661         | .0029777        | .0001144        | .0003386        | .012741         | .052784         | .006123         |
| %RSD   | 1.058692        | 5.532203        | 5.455833        | 9.893004        | .5167905        | 1.842048        | .2944998        |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | 5.286532 | .0544134 | .0022292 | .0032432 | 2.475703 | 2.866859 | 2.082908 |
| #2 | 5.383486 | .0564659 | .0020301 | .0038131 | 2.469527 | 2.917633 | 2.082432 |
| #3 | 5.385814 | .0505980 | .0020320 | .0032113 | 2.451204 | 2.812089 | 2.072073 |

Sample Name: Q2919-01LX5      Acquired: 8/21/2025 18:33:01      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |          |          |          |
|--------|----------|----------|----------|
| Elem   | S_1820   | Li6707   | Sr4077   |
| Units  | ppm      | ppm      | ppm      |
| Avg    | 1.101115 | .0416522 | -.018893 |
| Stddev | .008409  | .0017150 | .000482  |
| %RSD   | .7636935 | 4.117440 | 2.550018 |

|    |          |          |          |
|----|----------|----------|----------|
| #1 | 1.102063 | .0423370 | -.018466 |
| #2 | 1.109010 | .0429190 | -.019415 |
| #3 | 1.092272 | .0397006 | -.018798 |

|           |          |          |          |          |          |
|-----------|----------|----------|----------|----------|----------|
| Int. Std. | Y_2243   | Y_3600   | Y_3710   | Y_2243   | In2306   |
| Units     | Cts/S    | Cts/S    | Cts/S    | Cts/S    | Cts/S    |
| Avg       | 6437.986 | 112125.0 | 11511.86 | 5155.119 | 7298.787 |
| Stddev    | 3.284    | 375.1    | 14.42    | 17.973   | .833     |
| %RSD      | .0510079 | .3344976 | .1252277 | .3486447 | .0114112 |

|    |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|
| #1 | 6434.501 | 112240.0 | 11495.71 | 5135.732 | 7298.781 |
| #2 | 6441.023 | 111705.9 | 11523.41 | 5171.226 | 7299.624 |
| #3 | 6438.433 | 112429.1 | 11516.47 | 5158.398 | 7297.958 |

Sample Name: Q2919-01MS      Acquired: 8/21/2025 18:37:06      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | As1890          | Tl1908          | Pb2203          | Se1960          | Sb2068          | Al3961          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.7159700</b> | <b>1.830524</b> | <b>1.277576</b> | <b>1.605129</b> | <b>.3308924</b> | <b>157.9330</b> |
| Stddev | .0025378        | .046718         | .001077         | .005804         | .0004691        | .2868           |
| %RSD   | .3544514        | 2.552170        | .0843069        | .3615993        | .1417828        | .1815994        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | .7170426 | 1.881210 | 1.278197 | 1.610776 | .3303518 | 157.6239 |
| #2 | .7177954 | 1.821175 | 1.278200 | 1.605429 | .3311925 | 158.1904 |
| #3 | .7130721 | 1.789187 | 1.276333 | 1.599180 | .3311329 | 157.9848 |

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Ba4934          | Be2348          | Cd2265          | Ca3736          | Cr2677          | Co2286          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.7350288</b> | <b>.1618146</b> | <b>.2050185</b> | <b>62.08103</b> | <b>.5790102</b> | <b>.3596787</b> |
| Stddev | .0027855        | .0005998        | .0006199        | .19055          | .0017522        | .0004138        |
| %RSD   | .3789628        | .3706679        | .3023800        | .3069388        | .3026114        | .1150377        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | .7324147 | .1611623 | .2055664 | 61.86979 | .5807795 | .3599420 |
| #2 | .7379588 | .1623424 | .2043456 | 62.23996 | .5772757 | .3592018 |
| #3 | .7347128 | .1619390 | .2051436 | 62.13333 | .5789754 | .3598923 |

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Cu2247          | Fe2404          | Mn2576          | Mg2790          | Ni2316          | Ag3280          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.6123166</b> | <b>296.3468</b> | <b>3.660136</b> | <b>68.40794</b> | <b>.7612561</b> | <b>.0778885</b> |
| Stddev | .0009722        | .3075           | .015112         | .28115          | .0007653        | .0003376        |
| %RSD   | .1587732        | .1037542        | .4128809        | .4109929        | .1005359        | .4333913        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | .6111956 | 296.7009 | 3.643074 | 68.10812 | .7620242 | .0777944 |
| #2 | .6129285 | 296.1928 | 3.671835 | 68.66568 | .7604936 | .0782631 |
| #3 | .6128258 | 296.1468 | 3.665500 | 68.45001 | .7612505 | .0776079 |

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Na5895          | V_2924          | Zn2138          | K_7664          | B_2496          | Mo2020          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>14.41697</b> | <b>.8486672</b> | <b>.8024835</b> | <b>30.86043</b> | <b>.5359220</b> | <b>.3382972</b> |
| Stddev | .03565          | .0034084        | .0016929        | .11851          | .0038596        | .0003405        |
| %RSD   | .2472702        | .4016200        | .2109526        | .3840268        | .7201734        | .1006564        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | 14.45601 | .8447315 | .8044055 | 30.99424 | .5402107 | .3380120 |
| #2 | 14.38614 | .8506334 | .8012140 | 30.76868 | .5327281 | .3386742 |
| #3 | 14.40876 | .8506366 | .8018310 | 30.81839 | .5348272 | .3382053 |



Sample Name: Q2919-01MS      Acquired: 8/21/2025 18:37:06      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                   |                 |                   |                 |                 |
|--------|-----------------|-------------------|-----------------|-------------------|-----------------|-----------------|
| Elem   | Sn1899          | Ti3361            | Si2881          | P_1774            | S_1820          | Li6707          |
| Units  | ppm             | ppm               | ppm             | ppm               | ppm             | ppm             |
| Avg    | <b>.6773015</b> | <b>F 10.42611</b> | <b>6.506285</b> | <b>F 13.62076</b> | <b>4.751687</b> | <b>.3417537</b> |
| Stddev | .0018592        | .03087            | .129404         | .09388            | .047684         | .0017241        |
| %RSD   | .2744985        | .2960991          | 1.988914        | .6892115          | 1.003514        | .5044972        |
| #1     | .6783671        | 10.39294          | 6.569638        | 13.69193          | 4.781301        | .3397635        |
| #2     | .6783826        | 10.45399          | 6.357411        | 13.65599          | 4.777080        | .3427068        |
| #3     | .6751547        | 10.43141          | 6.591806        | 13.51437          | 4.696681        | .3427909        |

|        |                 |
|--------|-----------------|
| Elem   | Sr4077          |
| Units  | ppm             |
| Avg    | <b>.0477347</b> |
| Stddev | .0010770        |
| %RSD   | 2.256222        |
| #1     | .0468696        |
| #2     | .0489409        |
| #3     | .0473934        |

|           |                 |                 |                 |                 |                 |
|-----------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Int. Std. | Y_2243          | Y_3600          | Y_3710          | Y_2243          | In2306          |
| Units     | Cts/S           | Cts/S           | Cts/S           | Cts/S           | Cts/S           |
| Avg       | <b>7133.548</b> | <b>125448.2</b> | <b>13941.72</b> | <b>5677.915</b> | <b>6694.084</b> |
| Stddev    | 14.768          | 125.3           | 89.01           | 37.438          | 3.625           |
| %RSD      | .2070233        | .0998763        | .6384353        | .6593606        | .0541542        |
| #1        | 7150.123        | 125520.6        | 14043.76        | 5677.507        | 6697.299        |
| #2        | 7121.790        | 125520.4        | 13880.01        | 5715.556        | 6690.155        |
| #3        | 7128.731        | 125303.5        | 13901.40        | 5640.683        | 6694.798        |

Sample Name: Q2919-01MSD      Acquired: 8/21/2025 18:41:01      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | As1890          | Tl1908          | Pb2203          | Se1960          | Sb2068          | Al3961          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.6951951</b> | <b>1.765852</b> | <b>1.339890</b> | <b>1.553047</b> | <b>.3088191</b> | <b>165.6428</b> |
| Stddev | .0015054        | .011843         | .001188         | .001665         | .0006938        | .0907           |
| %RSD   | .2165405        | .6706775        | .0886654        | .1071957        | .2246627        | .0547623        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | .6943182 | 1.753650 | 1.338554 | 1.551666 | .3083572 | 165.5398 |
| #2 | .6969334 | 1.777300 | 1.340285 | 1.552579 | .3084833 | 165.7108 |
| #3 | .6943338 | 1.766606 | 1.340830 | 1.554895 | .3096169 | 165.6777 |

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Ba4934          | Be2348          | Cd2265          | Ca3736          | Cr2677          | Co2286          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.7507278</b> | <b>.1583223</b> | <b>.2017184</b> | <b>63.44466</b> | <b>.5896189</b> | <b>.3564192</b> |
| Stddev | .0029410        | .0005726        | .0001326        | .08845          | .0024018        | .0004268        |
| %RSD   | .3917561        | .3616511        | .0657521        | .1394082        | .4073511        | .1197398        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | .7528087 | .1581301 | .2015663 | 63.47265 | .5923787 | .3561957 |
| #2 | .7473631 | .1589662 | .2017794 | 63.34560 | .5880019 | .3561507 |
| #3 | .7520116 | .1578705 | .2018096 | 63.51573 | .5884760 | .3569113 |

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Cu2247          | Fe2404          | Mn2576          | Mg2790          | Ni2316          | Ag3280          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.5804489</b> | <b>305.0112</b> | <b>4.105403</b> | <b>66.11670</b> | <b>.7578364</b> | <b>.0778043</b> |
| Stddev | .0006636        | 1.6092          | .009784         | .02579          | .0014764        | .0002959        |
| %RSD   | .1143275        | .5275763        | .2383311        | .0390050        | .1948202        | .3802935        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | .5810384 | 306.2969 | 4.112628 | 66.12239 | .7564927 | .0780345 |
| #2 | .5805783 | 303.2066 | 4.094268 | 66.13917 | .7575994 | .0774706 |
| #3 | .5797302 | 305.5300 | 4.109313 | 66.08854 | .7594169 | .0779080 |

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Na5895          | V_2924          | Zn2138          | K_7664          | B_2496          | Mo2020          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>14.56294</b> | <b>.8265445</b> | <b>.8724586</b> | <b>28.97777</b> | <b>.4991138</b> | <b>.3269881</b> |
| Stddev | .12459          | .0028485        | .0026350        | .21319          | .0050597        | .0003610        |
| %RSD   | .8555321        | .3446284        | .3020183        | .7357050        | 1.013732        | .1104101        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | 14.65017 | .8276664 | .8701163 | 29.01424 | .5040958 | .3272675 |
| #2 | 14.42025 | .8233059 | .8719481 | 28.74869 | .4939799 | .3271163 |
| #3 | 14.61841 | .8286613 | .8753115 | 29.17036 | .4992658 | .3265805 |

Sample Name: Q2919-01MSD      Acquired: 8/21/2025 18:41:01      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |          |          |          |            |          |          |
|--------|----------|----------|----------|------------|----------|----------|
| Elem   | Sn1899   | Ti3361   | Si2881   | P_1774     | S_1820   | Li6707   |
| Units  | ppm      | ppm      | ppm      | ppm        | ppm      | ppm      |
| Avg    | .6779763 | 8.984700 | 8.494615 | F 14.25118 | 5.780556 | .3477414 |
| Stddev | .0015500 | .021374  | .101465  | .02603     | .006287  | .0019198 |
| %RSD   | .2286226 | .2378949 | 1.194464 | .1826612   | .1087611 | .5520857 |
| #1     | .6790074 | 8.983408 | 8.395910 | 14.22118   | 5.777877 | .3483141 |
| #2     | .6787277 | 8.964001 | 8.489302 | 14.26454   | 5.776052 | .3456004 |
| #3     | .6761938 | 9.006691 | 8.598632 | 14.26782   | 5.787739 | .3493097 |

|        |          |
|--------|----------|
| Elem   | Sr4077   |
| Units  | ppm      |
| Avg    | .0523324 |
| Stddev | .0011319 |
| %RSD   | 2.162821 |
| #1     | .0510743 |
| #2     | .0532681 |
| #3     | .0526548 |

|           |          |          |          |          |          |
|-----------|----------|----------|----------|----------|----------|
| Int. Std. | Y_2243   | Y_3600   | Y_3710   | Y_2243   | In2306   |
| Units     | Cts/S    | Cts/S    | Cts/S    | Cts/S    | Cts/S    |
| Avg       | 7242.283 | 125302.1 | 14090.07 | 5678.064 | 6729.443 |
| Stddev    | 3.286    | 414.3    | 19.73    | 28.023   | 5.419    |
| %RSD      | .0453687 | .3306535 | .1400456 | .4935340 | .0805324 |
| #1        | 7243.261 | 124897.0 | 14083.45 | 5699.683 | 6735.676 |
| #2        | 7238.619 | 125725.0 | 14074.50 | 5688.105 | 6726.803 |
| #3        | 7244.969 | 125284.2 | 14112.26 | 5646.403 | 6725.849 |

Sample Name: Q2919-01A      Acquired: 8/21/2025 18:44:56      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | As1890          | Tl1908          | Pb2203          | Se1960          | Sb2068          | Al3961          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.7075905</b> | <b>1.780131</b> | <b>1.303163</b> | <b>1.560451</b> | <b>.6376224</b> | <b>177.6790</b> |
| Stddev | .0029072        | .022641         | .000441         | .006985         | .0011818        | .2244           |
| %RSD   | .4108571        | 1.271888        | .0338567        | .4475964        | .1853523        | .1262832        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | .7056472 | 1.796184 | 1.303176 | 1.561890 | .6389833 | 177.8779 |
| #2 | .7061916 | 1.754234 | 1.303597 | 1.552860 | .6370303 | 177.7232 |
| #3 | .7109327 | 1.789976 | 1.302715 | 1.566605 | .6368536 | 177.4358 |

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Ba4934          | Be2348          | Cd2265          | Ca3736          | Cr2677          | Co2286          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.9019042</b> | <b>.1560732</b> | <b>.2027625</b> | <b>162.0091</b> | <b>.6107803</b> | <b>.3893434</b> |
| Stddev | .0051169        | .0011108        | .0002342        | .2500           | .0017304        | .0005733        |
| %RSD   | .5673444        | .7117244        | .1154962        | .1543343        | .2833069        | .1472531        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | .9068639 | .1573436 | .2027451 | 162.2726 | .6123742 | .3895859 |
| #2 | .9022056 | .1555910 | .2025376 | 161.9795 | .6089399 | .3886887 |
| #3 | .8966433 | .1552849 | .2030049 | 161.7752 | .6110269 | .3897556 |

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Cu2247          | Fe2404          | Mn2576          | Mg2790          | Ni2316          | Ag3280          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>1.408553</b> | <b>330.6995</b> | <b>4.100240</b> | <b>73.84036</b> | <b>.8170625</b> | <b>.0766106</b> |
| Stddev | .003044         | .8589           | .024907         | .09255          | .0007872        | .0004087        |
| %RSD   | .2160747        | .2597160        | .6074530        | .1253374        | .0963414        | .5334563        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | 1.410572 | 331.1187 | 4.124233 | 73.93996 | .8161914 | .0769544 |
| #2 | 1.405052 | 331.2682 | 4.101977 | 73.75701 | .8177230 | .0767187 |
| #3 | 1.410034 | 329.7115 | 4.074510 | 73.82411 | .8172730 | .0761588 |

|        |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Na5895          | V_2924          | Zn2138          | K_7664          | B_2496          | Mo2020          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>15.03046</b> | <b>.8324670</b> | <b>.9365862</b> | <b>31.49675</b> | <b>.5416905</b> | <b>.3314282</b> |
| Stddev | .06869          | .0020299        | .0011592        | .03618          | .0012736        | .0003813        |
| %RSD   | .4569750        | .2438453        | .1237665        | .1148707        | .2351228        | .1150399        |

|    |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|
| #1 | 15.09668 | .8304388 | .9377348 | 31.53274 | .5422041 | .3310845 |
| #2 | 15.03514 | .8344987 | .9366070 | 31.46038 | .5426270 | .3313619 |
| #3 | 14.95955 | .8324636 | .9354167 | 31.49713 | .5402402 | .3318384 |

Sample Name: Q2919-01A      Acquired: 8/21/2025 18:44:56      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                   |                 |                   |                   |                 |
|--------|-----------------|-------------------|-----------------|-------------------|-------------------|-----------------|
| Elem   | Sn1899          | Ti3361            | Si2881          | P_1774            | S_1820            | Li6707          |
| Units  | ppm             | ppm               | ppm             | ppm               | ppm               | ppm             |
| Avg    | <b>.6982344</b> | <b>F 10.06127</b> | <b>9.215615</b> | <b>F 16.32842</b> | <b>F 10.91247</b> | <b>.3512395</b> |
| Stddev | .0008720        | .03047            | .054088         | .06271            | .03376            | .0020990        |
| %RSD   | .1248797        | .3028091          | .5869208        | .3840772          | .3094085          | .5975868        |
| #1     | .6991253        | 10.08550          | 9.154413        | 16.39481          | 10.90987          | .3529734        |
| #2     | .6981951        | 10.07123          | 9.257001        | 16.27019          | 10.88008          | .3518392        |
| #3     | .6973827        | 10.02707          | 9.235429        | 16.32025          | 10.94746          | .3489060        |

|        |                 |
|--------|-----------------|
| Elem   | Sr4077          |
| Units  | ppm             |
| Avg    | <b>.0470781</b> |
| Stddev | .0011243        |
| %RSD   | 2.388119        |
| #1     | .0483566        |
| #2     | .0466339        |
| #3     | .0462437        |

|           |                 |                 |                 |                 |                 |
|-----------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Int. Std. | Y_2243          | Y_3600          | Y_3710          | Y_2243          | In2306          |
| Units     | Cts/S           | Cts/S           | Cts/S           | Cts/S           | Cts/S           |
| Avg       | <b>7119.415</b> | <b>124721.5</b> | <b>14126.72</b> | <b>5654.288</b> | <b>6466.272</b> |
| Stddev    | 7.795           | 296.2           | 72.80           | 17.208          | 5.979           |
| %RSD      | .1094908        | .2374685        | .5153696        | .3043364        | .0924635        |
| #1        | 7116.006        | 124398.7        | 14046.39        | 5655.832        | 6468.195        |
| #2        | 7128.334        | 124784.8        | 14145.44        | 5670.673        | 6471.052        |
| #3        | 7113.906        | 124980.8        | 14188.34        | 5636.361        | 6459.568        |

Sample Name: Q2909-01      Acquired: 8/21/2025 18:48:51      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | As1890          | Tl1908          | Pb2203          | Se1960          | Sb2068          | Al3961          | Ba4934          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.0531659</b> | <b>-.034694</b> | <b>.2101619</b> | <b>.0100910</b> | <b>.0214269</b> | <b>7.708439</b> | <b>2.359019</b> |
| Stddev | .0005300        | .001261         | .0013106        | .0034807        | .0016156        | .017146         | .008824         |
| %RSD   | .9968473        | 3.633260        | .6235993        | 34.49337        | 7.539796        | .2224307        | .3740667        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>.0537640</b> | <b>-.033363</b> | <b>.2086490</b> | <b>.0100733</b> | <b>.0231034</b> | <b>7.709322</b> | <b>2.354043</b> |
| #2 | <b>.0529791</b> | <b>-.034849</b> | <b>.2109477</b> | <b>.0135806</b> | <b>.0212973</b> | <b>7.725127</b> | <b>2.369207</b> |
| #3 | <b>.0527546</b> | <b>-.035869</b> | <b>.2108891</b> | <b>.0066192</b> | <b>.0198801</b> | <b>7.690869</b> | <b>2.353807</b> |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Be2348          | Cd2265          | Ca3736          | Cr2677          | Co2286          | Cu2247          | Fe2404          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.0051401</b> | <b>.0069384</b> | <b>28.59287</b> | <b>.8194494</b> | <b>.0327334</b> | <b>2.327143</b> | <b>313.1918</b> |
| Stddev | .0000686        | .0001025        | .02719          | .0015015        | .0001775        | .002582         | .6662           |
| %RSD   | 1.334546        | 1.477223        | .0951088        | .1832330        | .5421878        | .1109309        | .2127185        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>.0050655</b> | <b>.0070339</b> | <b>28.61830</b> | <b>.8206471</b> | <b>.0326381</b> | <b>2.329966</b> | <b>313.6309</b> |
| #2 | <b>.0051546</b> | <b>.0069513</b> | <b>28.56420</b> | <b>.8177649</b> | <b>.0326240</b> | <b>2.324901</b> | <b>313.5194</b> |
| #3 | <b>.0052003</b> | <b>.0068301</b> | <b>28.59613</b> | <b>.8199363</b> | <b>.0329382</b> | <b>2.326564</b> | <b>312.4253</b> |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Mn2576          | Mg2790          | Ni2316          | Ag3280          | Na5895          | V_2924          | Zn2138          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>1.782573</b> | <b>4.347266</b> | <b>.4084340</b> | <b>.0175815</b> | <b>34.66841</b> | <b>.1309478</b> | <b>7.879060</b> |
| Stddev | .001537         | .008115         | .0004652        | .0006459        | .10759          | .0021350        | .012269         |
| %RSD   | .0862419        | .1866706        | .1138994        | 3.673622        | .3103407        | 1.630407        | .1557133        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>1.781406</b> | <b>4.345059</b> | <b>.4081053</b> | <b>.0168899</b> | <b>34.74227</b> | <b>.1305631</b> | <b>7.890670</b> |
| #2 | <b>1.784315</b> | <b>4.356256</b> | <b>.4082305</b> | <b>.0181690</b> | <b>34.71798</b> | <b>.1290314</b> | <b>7.880286</b> |
| #3 | <b>1.781997</b> | <b>4.340483</b> | <b>.4089663</b> | <b>.0176855</b> | <b>34.54497</b> | <b>.1332490</b> | <b>7.866224</b> |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | K_7664          | B_2496          | Mo2020          | Sn1899          | Ti3361          | Si2881          | P_1774          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>58.29439</b> | <b>.6533873</b> | <b>1.255246</b> | <b>.2406852</b> | <b>.6376840</b> | <b>3.566366</b> | <b>1.260876</b> |
| Stddev | .14677          | .0030521        | .001921         | .0017441        | .0073264        | .040034         | .002551         |
| %RSD   | .2517789        | .4671156        | .1530715        | .7246220        | 1.148906        | 1.122553        | .2023131        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>58.33280</b> | <b>.6569043</b> | <b>1.256724</b> | <b>.2394804</b> | <b>.6309602</b> | <b>3.574474</b> | <b>1.257946</b> |
| #2 | <b>58.41814</b> | <b>.6518236</b> | <b>1.255939</b> | <b>.2426851</b> | <b>.6454921</b> | <b>3.601726</b> | <b>1.262603</b> |
| #3 | <b>58.13223</b> | <b>.6514339</b> | <b>1.253074</b> | <b>.2398900</b> | <b>.6365995</b> | <b>3.522898</b> | <b>1.262080</b> |

Sample Name: Q2909-01      Acquired: 8/21/2025 18:48:51      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1:      Custom ID2:      Custom ID3:  
Comment:

|        |          |          |          |
|--------|----------|----------|----------|
| Elem   | S_1820   | Li6707   | Sr4077   |
| Units  | ppm      | ppm      | ppm      |
| Avg    | 6.961816 | .0526988 | -.152665 |
| Stddev | .041706  | .0016149 | .000608  |
| %RSD   | .5990616 | 3.064427 | .3980374 |
| #1     | 6.940486 | .0544532 | -.153314 |
| #2     | 7.009872 | .0512743 | -.152571 |
| #3     | 6.935088 | .0523691 | -.152109 |

|           |          |          |          |          |          |
|-----------|----------|----------|----------|----------|----------|
| Int. Std. | Y_2243   | Y_3600   | Y_3710   | Y_2243   | In2306   |
| Units     | Cts/S    | Cts/S    | Cts/S    | Cts/S    | Cts/S    |
| Avg       | 6235.251 | 110290.7 | 12040.41 | 4959.235 | 7199.636 |
| Stddev    | 6.984    | 246.5    | 56.44    | 24.164   | 9.438    |
| %RSD      | .1120112 | .2234912 | .4687555 | .4872470 | .1310903 |
| #1        | 6235.072 | 110344.5 | 12087.80 | 4977.886 | 7207.737 |
| #2        | 6242.322 | 110505.9 | 12055.48 | 4931.938 | 7201.898 |
| #3        | 6228.357 | 110021.8 | 11977.97 | 4967.881 | 7189.272 |

Sample Name: CCV05      Acquired: 8/21/2025 18:52:52      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1: CCV05      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | As1890          | Tl1908          | Pb2203          | Se1960          | Sb2068          | Al3961          | Ba4934          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>5.043385</b> | <b>5.066846</b> | <b>4.964780</b> | <b>5.067674</b> | <b>5.053709</b> | <b>9.969313</b> | <b>10.07556</b> |
| Stddev | .006001         | .072137         | .002448         | .018069         | .011222         | .048030         | .14705          |
| %RSD   | .1189813        | 1.423712        | .0493012        | .3565497        | .2220596        | .4817747        | 1.459456        |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | 5.047006 | 5.149466 | 4.961966 | 5.088337 | 5.066051 | 10.02468 | 10.24325 |
| #2 | 5.036458 | 5.034712 | 4.966421 | 5.054839 | 5.044117 | 9.94433  | 9.96863  |
| #3 | 5.046690 | 5.016360 | 4.965952 | 5.059847 | 5.050959 | 9.93892  | 10.01479 |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Be2348          | Cd2265          | Ca3736          | Cr2677          | Co2286          | Cu2247          | Fe2404          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.2420413</b> | <b>2.499897</b> | <b>25.10179</b> | <b>.9955650</b> | <b>2.505581</b> | <b>1.265645</b> | <b>5.215457</b> |
| Stddev | .0006775        | .003212         | .05996          | .0040186        | .004675         | .000629         | .034840         |
| %RSD   | .2799302        | .1284698        | .2388588        | .4036508        | .1865793        | .0497336        | .6680115        |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | .2427185 | 2.500213 | 25.16285 | .9955243 | 2.503312 | 1.265536 | 5.207346 |
| #2 | .2420422 | 2.496540 | 25.04300 | .9915670 | 2.502473 | 1.265076 | 5.185388 |
| #3 | .2413634 | 2.502940 | 25.09952 | .9996039 | 2.510957 | 1.266321 | 5.253637 |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Mn2576          | Mg2790          | Ni2316          | Ag3280          | Na5895          | V_2924          | Zn2138          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>2.530896</b> | <b>24.82455</b> | <b>2.498531</b> | <b>1.250339</b> | <b>25.37857</b> | <b>2.524936</b> | <b>2.520795</b> |
| Stddev | .007285         | .02121          | .005479         | .002779         | .18397          | .012681         | .002287         |
| %RSD   | .2878335        | .0854222        | .2192843        | .2222657        | .7249182        | .5022161        | .0907110        |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | 2.538736 | 24.80074 | 2.496405 | 1.250529 | 25.39090 | 2.538507 | 2.520027 |
| #2 | 2.524336 | 24.84142 | 2.494433 | 1.247469 | 25.18874 | 2.522914 | 2.523367 |
| #3 | 2.529616 | 24.83149 | 2.504754 | 1.253018 | 25.55607 | 2.513389 | 2.518991 |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | K_7664          | B_2496          | Mo2020          | Sn1899          | Ti3361          | Si2881          | P_1774          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>24.87085</b> | <b>4.879337</b> | <b>5.049160</b> | <b>5.003927</b> | <b>5.065877</b> | <b>5.163411</b> | <b>5.019421</b> |
| Stddev | .18861          | .012719         | .010645         | .015041         | .009903         | .013422         | .026791         |
| %RSD   | .7583745        | .2606705        | .2108285        | .3005897        | .1954826        | .2599516        | .5337533        |

|    |          |          |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|----------|----------|
| #1 | 24.82108 | 4.891084 | 5.061404 | 5.001841 | 5.076005 | 5.162206 | 5.031216 |
| #2 | 24.71211 | 4.881096 | 5.043977 | 4.990038 | 5.056216 | 5.150632 | 4.988755 |
| #3 | 25.07936 | 4.865830 | 5.042099 | 5.019903 | 5.065410 | 5.177396 | 5.038290 |



Sample Name: CCV05      Acquired: 8/21/2025 18:52:52      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1: CCV05      Custom ID2:      Custom ID3:  
Comment:

|        |          |          |          |
|--------|----------|----------|----------|
| Elem   | S_1820   | Li6707   | Sr4077   |
| Units  | ppm      | ppm      | ppm      |
| Avg    | 4.981026 | 4.693947 | 5.111582 |
| Stddev | .024651  | .022299  | .029889  |
| %RSD   | .4949031 | .4750492 | .5847351 |
| #1     | 4.991737 | 4.716098 | 5.140043 |
| #2     | 4.952831 | 4.671504 | 5.114258 |
| #3     | 4.998509 | 4.694239 | 5.080444 |

|           |          |          |          |          |          |
|-----------|----------|----------|----------|----------|----------|
| Int. Std. | Y_2243   | Y_3600   | Y_3710   | Y_2243   | In2306   |
| Units     | Cts/S    | Cts/S    | Cts/S    | Cts/S    | Cts/S    |
| Avg       | 6111.564 | 105887.9 | 11170.54 | 4827.578 | 7089.463 |
| Stddev    | 3.721    | 336.1    | 45.29    | 12.854   | 10.929   |
| %RSD      | .0608832 | .3173709 | .4054141 | .2662647 | .1541574 |
| #1        | 6107.318 | 105733.7 | 11120.39 | 4816.827 | 7096.391 |
| #2        | 6114.256 | 106273.4 | 11182.79 | 4841.816 | 7095.135 |
| #3        | 6113.118 | 105656.6 | 11208.45 | 4824.091 | 7076.865 |

Sample Name: CCB05      Acquired: 8/21/2025 18:57:04      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1: CCB05      Custom ID2:      Custom ID3:  
Comment:

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | As1890          | Tl1908          | Pb2203          | Se1960          | Sb2068          | Al3961          | Ba4934          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>-.001549</b> | <b>-.000776</b> | <b>-.000920</b> | <b>.0008140</b> | <b>-.001034</b> | <b>.0023458</b> | <b>-.004634</b> |
| Stddev | .000634         | .001153         | .000792         | .0017567        | .000417         | .0048027        | .000642         |
| %RSD   | 40.96269        | 148.5438        | 86.10947        | 215.8224        | 40.32092        | 204.7398        | 13.85290        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>-.000818</b> | <b>.000235</b>  | <b>-.000020</b> | <b>.0028422</b> | <b>-.001221</b> | <b>.0016787</b> | <b>-.004241</b> |
| #2 | <b>-.001956</b> | <b>-.000532</b> | <b>-.001230</b> | <b>-.000223</b> | <b>-.001326</b> | <b>-.002089</b> | <b>-.005374</b> |
| #3 | <b>-.001872</b> | <b>-.002032</b> | <b>-.001511</b> | <b>-.000177</b> | <b>-.000557</b> | <b>.007447</b>  | <b>-.004286</b> |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Be2348          | Cd2265          | Ca3736          | Cr2677          | Co2286          | Cu2247          | Fe2404          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>-.000013</b> | <b>.0000270</b> | <b>-.012291</b> | <b>-.000208</b> | <b>-.000000</b> | <b>-.000056</b> | <b>-.005856</b> |
| Stddev | .000052         | .0000309        | .006668         | .000155         | .000102         | .000105         | .001077         |
| %RSD   | 393.8739        | 114.5274        | 54.25321        | 74.15076        | 20998.59        | 186.5338        | 18.39005        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>-.000048</b> | <b>.0000544</b> | <b>-.019948</b> | <b>-.000337</b> | <b>.000113</b>  | <b>-.000137</b> | <b>-.004623</b> |
| #2 | <b>-.000037</b> | <b>.0000330</b> | <b>-.009168</b> | <b>-.000037</b> | <b>-.000085</b> | <b>-.000094</b> | <b>-.006614</b> |
| #3 | <b>.000046</b>  | <b>-.000006</b> | <b>-.007757</b> | <b>-.000251</b> | <b>-.000029</b> | <b>.000062</b>  | <b>-.006332</b> |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | Mn2576          | Mg2790          | Ni2316          | Ag3280          | Na5895          | V_2924          | Zn2138          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>-.000417</b> | <b>.0233433</b> | <b>-.000205</b> | <b>-.000335</b> | <b>.2334840</b> | <b>.0000302</b> | <b>-.000945</b> |
| Stddev | .000283         | .0089300        | .000122         | .000349         | .0196456        | .0033873        | .000233         |
| %RSD   | 67.85348        | 38.25517        | 59.20338        | 104.2178        | 8.414122        | 11233.85        | 24.65849        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>-.000530</b> | <b>.0332589</b> | <b>-.000340</b> | <b>-.000007</b> | <b>.2109890</b> | <b>.0033722</b> | <b>-.001149</b> |
| #2 | <b>-.000095</b> | <b>.0159350</b> | <b>-.000171</b> | <b>-.000297</b> | <b>.2472677</b> | <b>-.003401</b> | <b>-.000994</b> |
| #3 | <b>-.000626</b> | <b>.0208359</b> | <b>-.000105</b> | <b>-.000702</b> | <b>.2421954</b> | <b>.000119</b>  | <b>-.000691</b> |

|        |                 |                 |                 |                 |                 |                 |                 |
|--------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Elem   | K_7664          | B_2496          | Mo2020          | Sn1899          | Ti3361          | Si2881          | P_1774          |
| Units  | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             | ppm             |
| Avg    | <b>.4600530</b> | <b>.0018835</b> | <b>.0003130</b> | <b>-.002512</b> | <b>-.002209</b> | <b>.0174798</b> | <b>.0031034</b> |
| Stddev | .0747272        | .0007553        | .0001147        | .000285         | .000113         | .0052015        | .0008406        |
| %RSD   | 16.24318        | 40.10154        | 36.64296        | 11.36318        | 5.108191        | 29.75702        | 27.08570        |

|    |                 |                 |                 |                 |                 |                 |                 |
|----|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| #1 | <b>.3750379</b> | <b>.0019025</b> | <b>.0003729</b> | <b>-.002297</b> | <b>-.002189</b> | <b>.0231287</b> | <b>.0024782</b> |
| #2 | <b>.4897742</b> | <b>.0026291</b> | <b>.0003854</b> | <b>-.002404</b> | <b>-.002107</b> | <b>.0164227</b> | <b>.0027730</b> |
| #3 | <b>.5153468</b> | <b>.0011189</b> | <b>.0001808</b> | <b>-.002836</b> | <b>-.002330</b> | <b>.0128881</b> | <b>.0040589</b> |

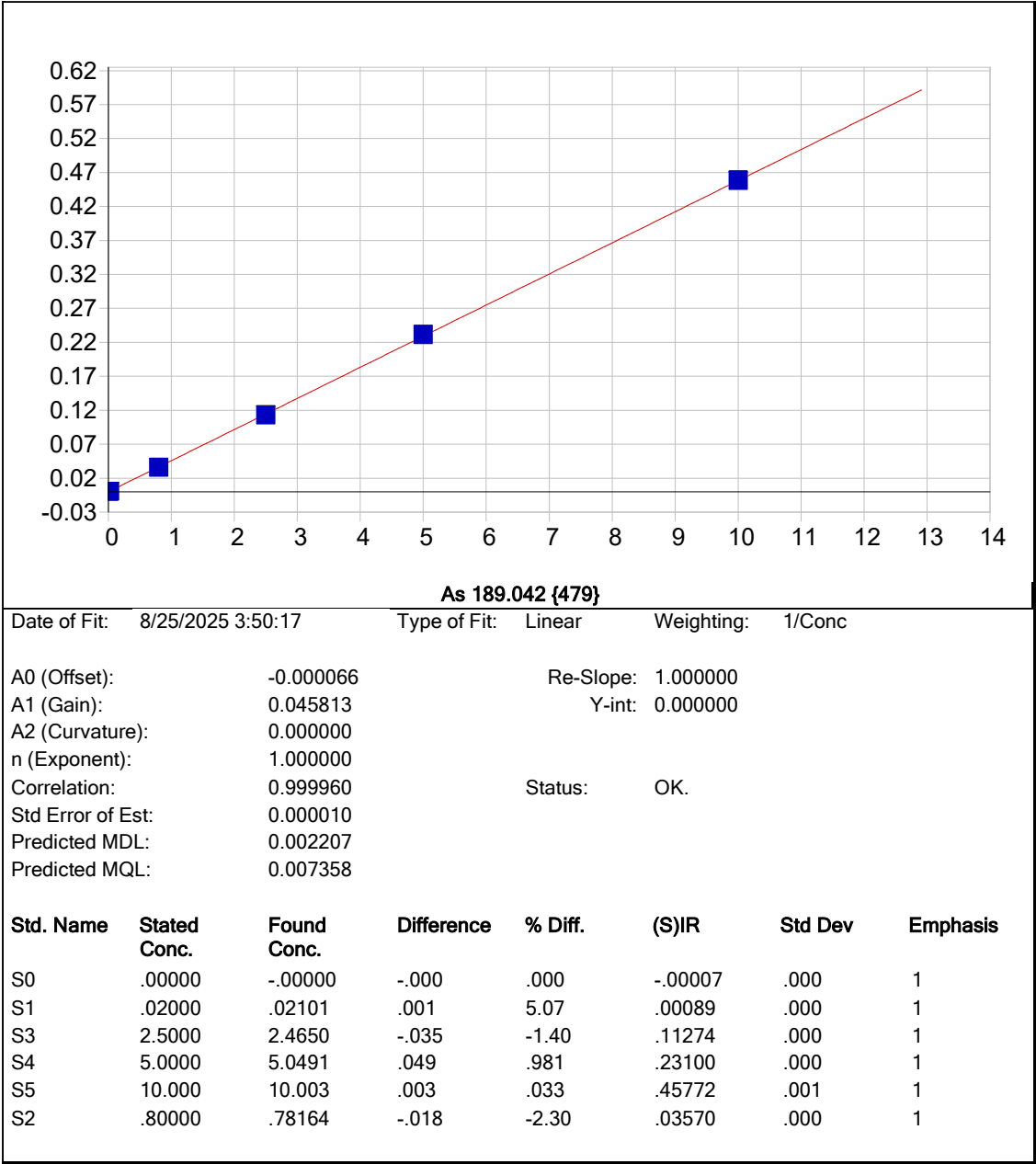
Sample Name: CCB05      Acquired: 8/21/2025 18:57:04      Type: Unk  
Method: 6010-200.7 NEW(v123)      Mode: CONC      Corr. Factor: 1.000000  
User: Jaswal      Custom ID1: CCB05      Custom ID2:      Custom ID3:  
Comment:

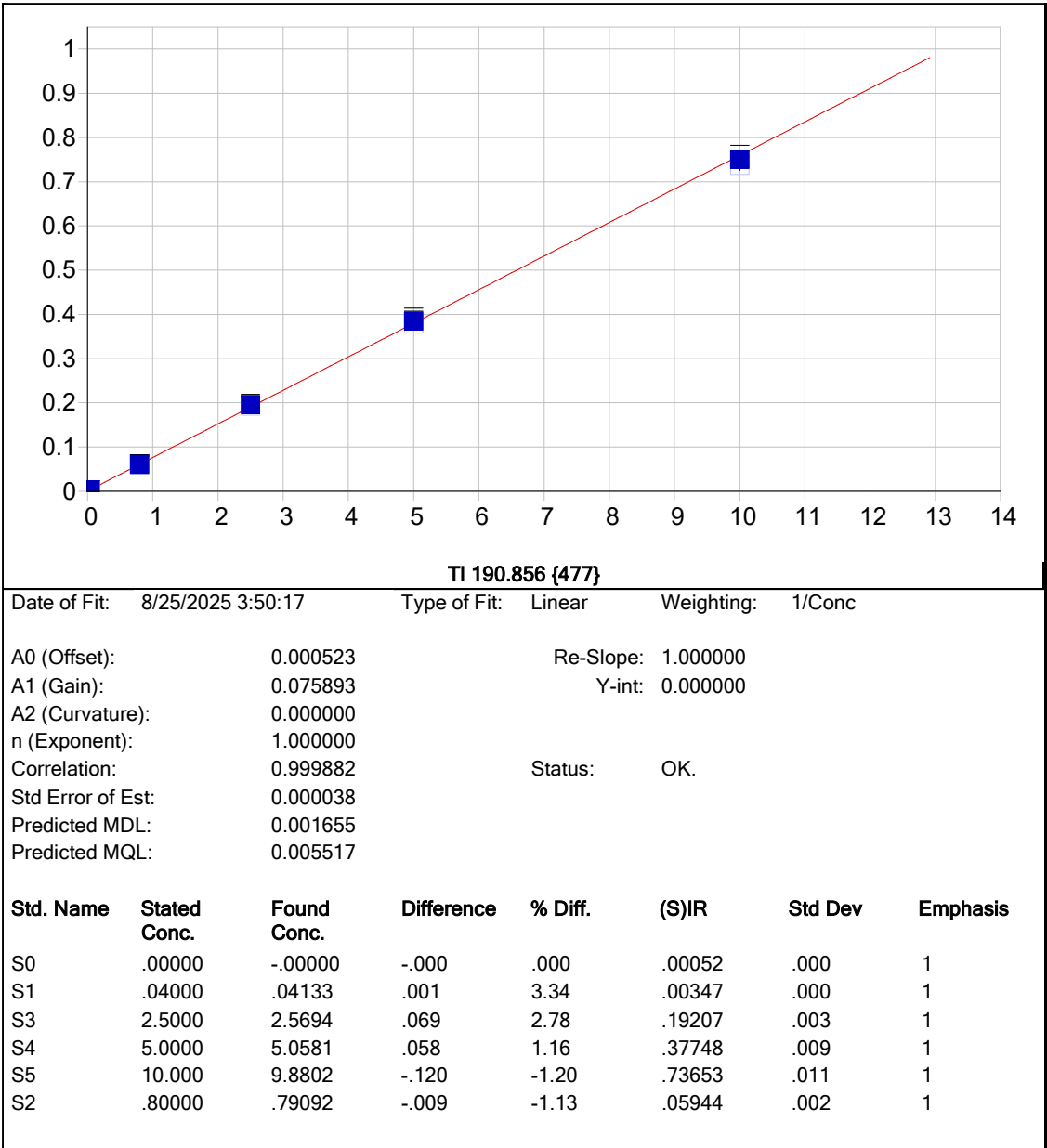
|        |          |          |          |
|--------|----------|----------|----------|
| Elem   | S_1820   | Li6707   | Sr4077   |
| Units  | ppm      | ppm      | ppm      |
| Avg    | -.004406 | -.004809 | .0000392 |
| Stddev | .002289  | .000320  | .0000319 |
| %RSD   | 51.95812 | 6.644943 | 81.51156 |

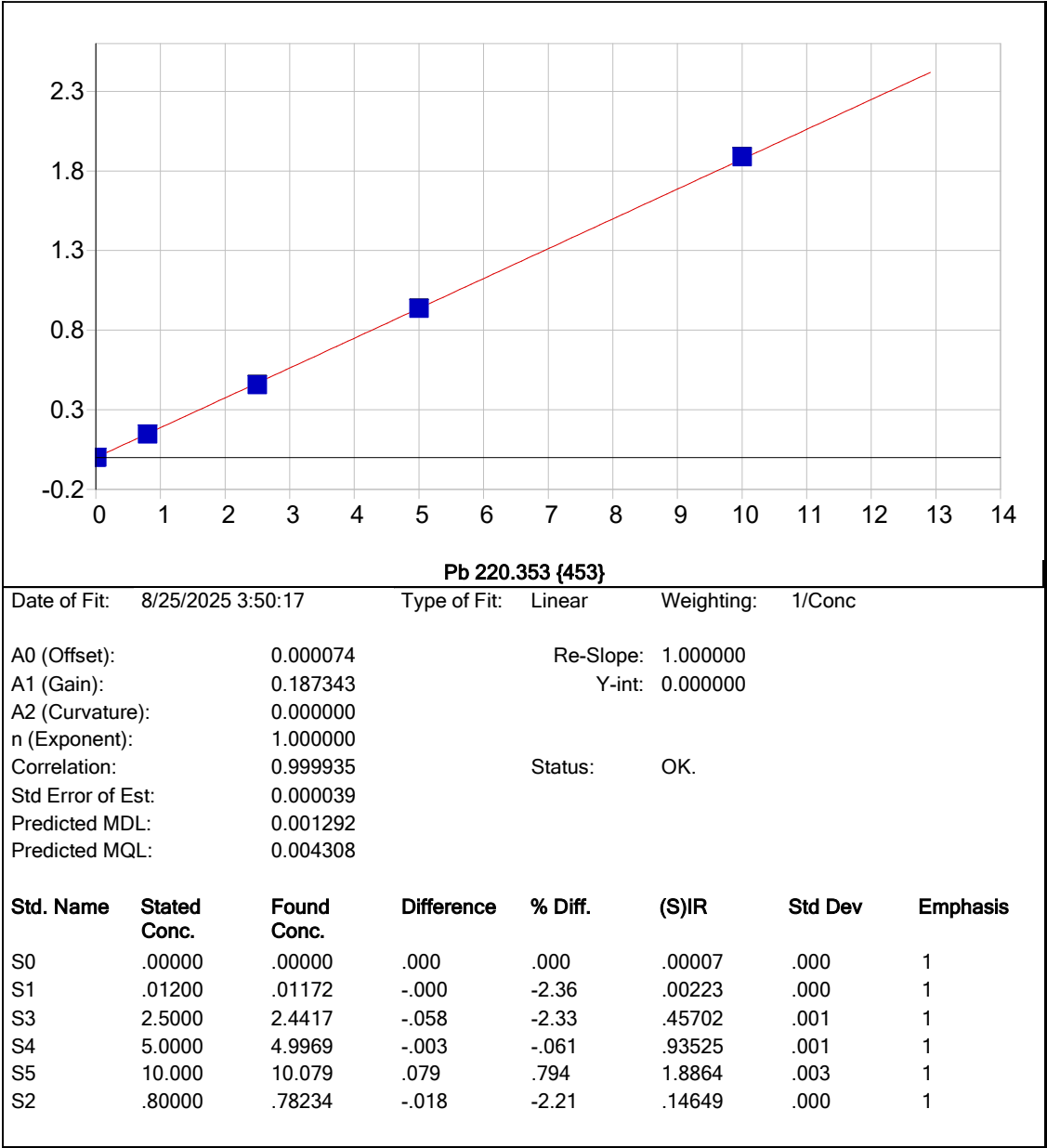
|    |          |          |          |
|----|----------|----------|----------|
| #1 | -.001945 | -.004719 | .0000177 |
| #2 | -.006472 | -.004544 | .0000240 |
| #3 | -.004803 | -.005164 | .0000758 |

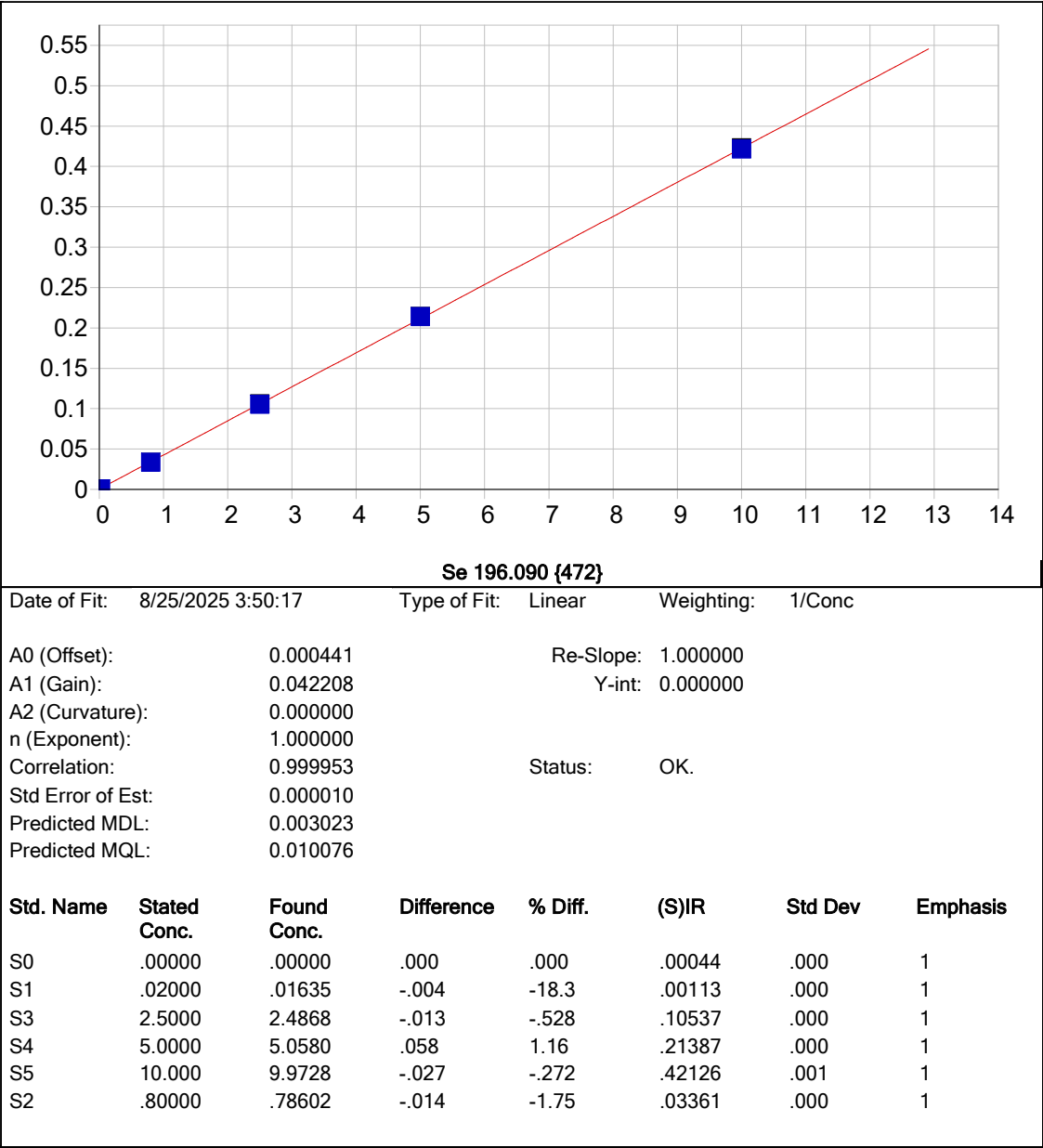
|           |          |          |          |          |          |
|-----------|----------|----------|----------|----------|----------|
| Int. Std. | Y_2243   | Y_3600   | Y_3710   | Y_2243   | In2306   |
| Units     | Cts/S    | Cts/S    | Cts/S    | Cts/S    | Cts/S    |
| Avg       | 6412.996 | 111641.6 | 11223.51 | 5052.746 | 8110.366 |
| Stddev    | 10.909   | 121.8    | 42.87    | 20.658   | 9.343    |
| %RSD      | .1701095 | .1091302 | .3819561 | .4088471 | .1152008 |

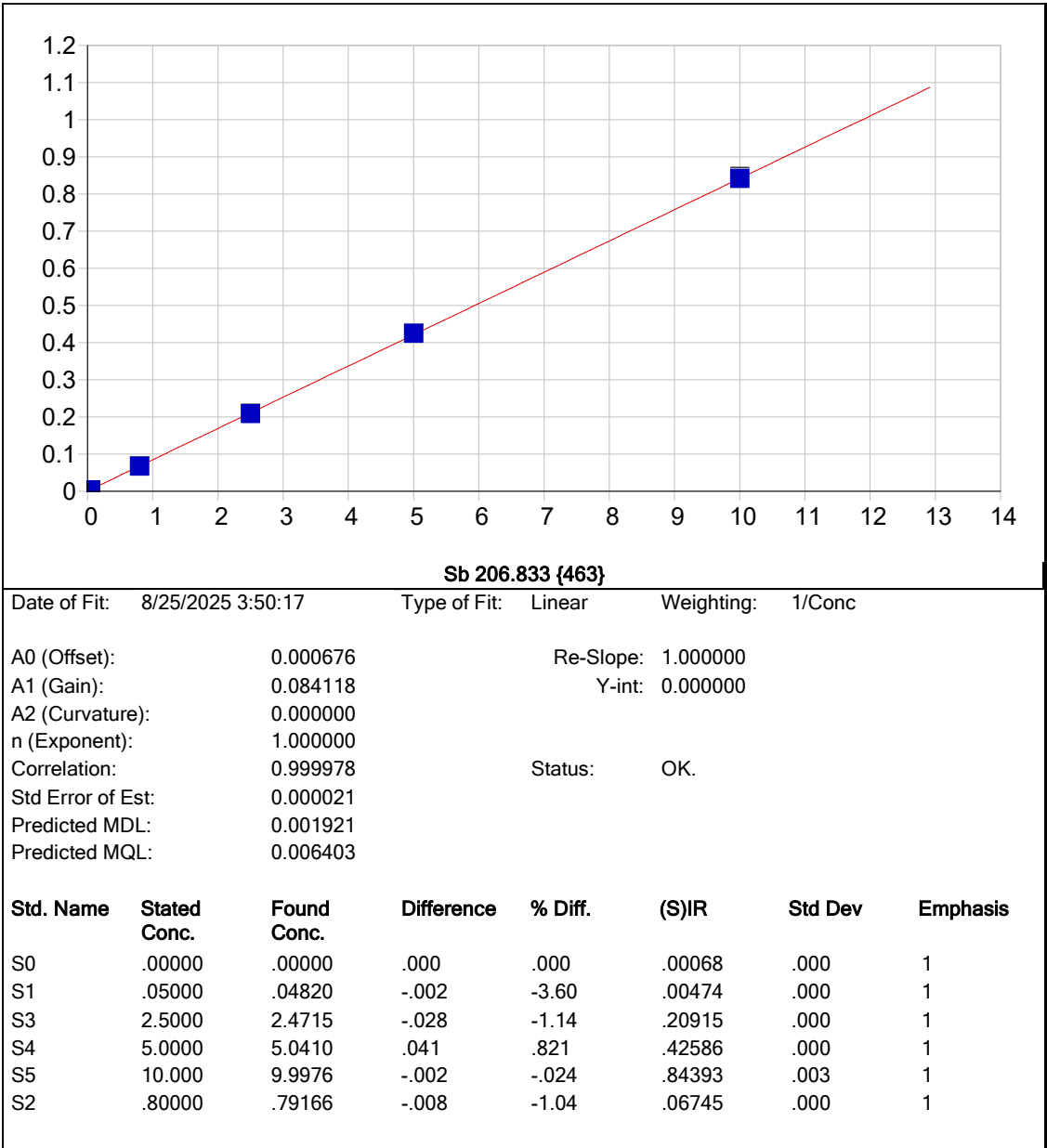
|    |          |          |          |          |          |
|----|----------|----------|----------|----------|----------|
| #1 | 6400.913 | 111775.8 | 11174.47 | 5076.469 | 8100.013 |
| #2 | 6422.122 | 111611.1 | 11242.18 | 5043.051 | 8118.171 |
| #3 | 6415.952 | 111538.0 | 11253.87 | 5038.719 | 8112.914 |







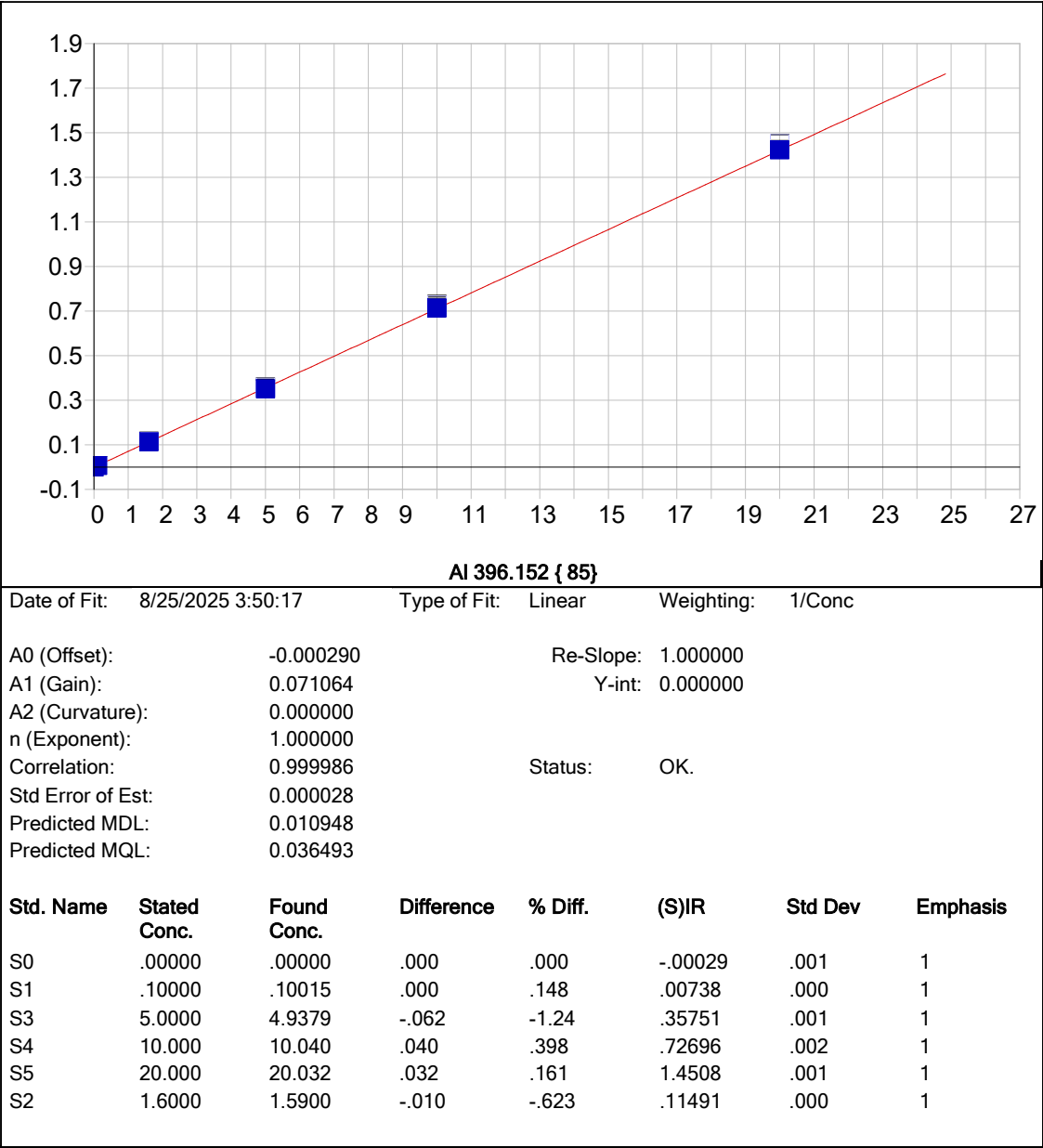


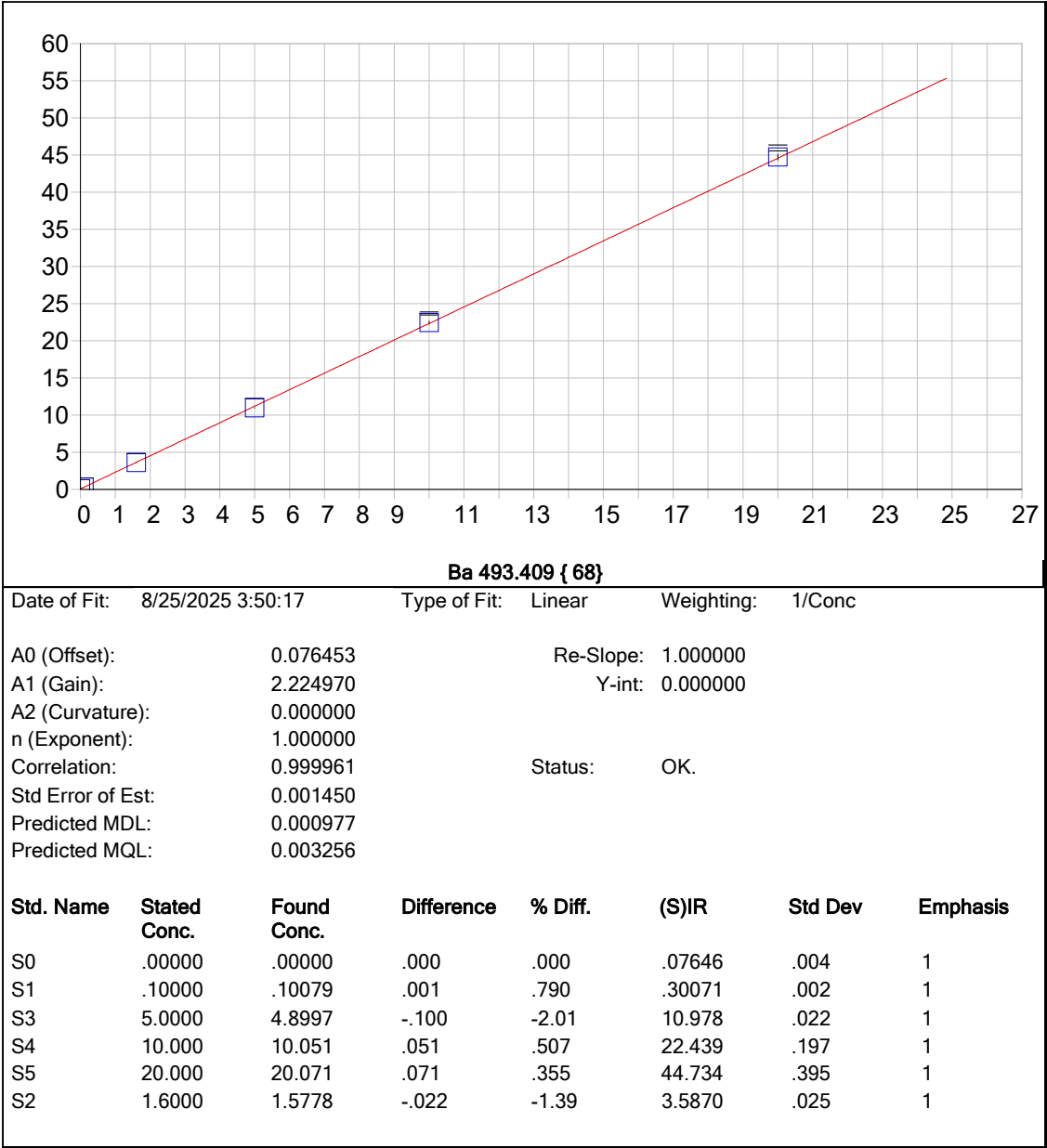


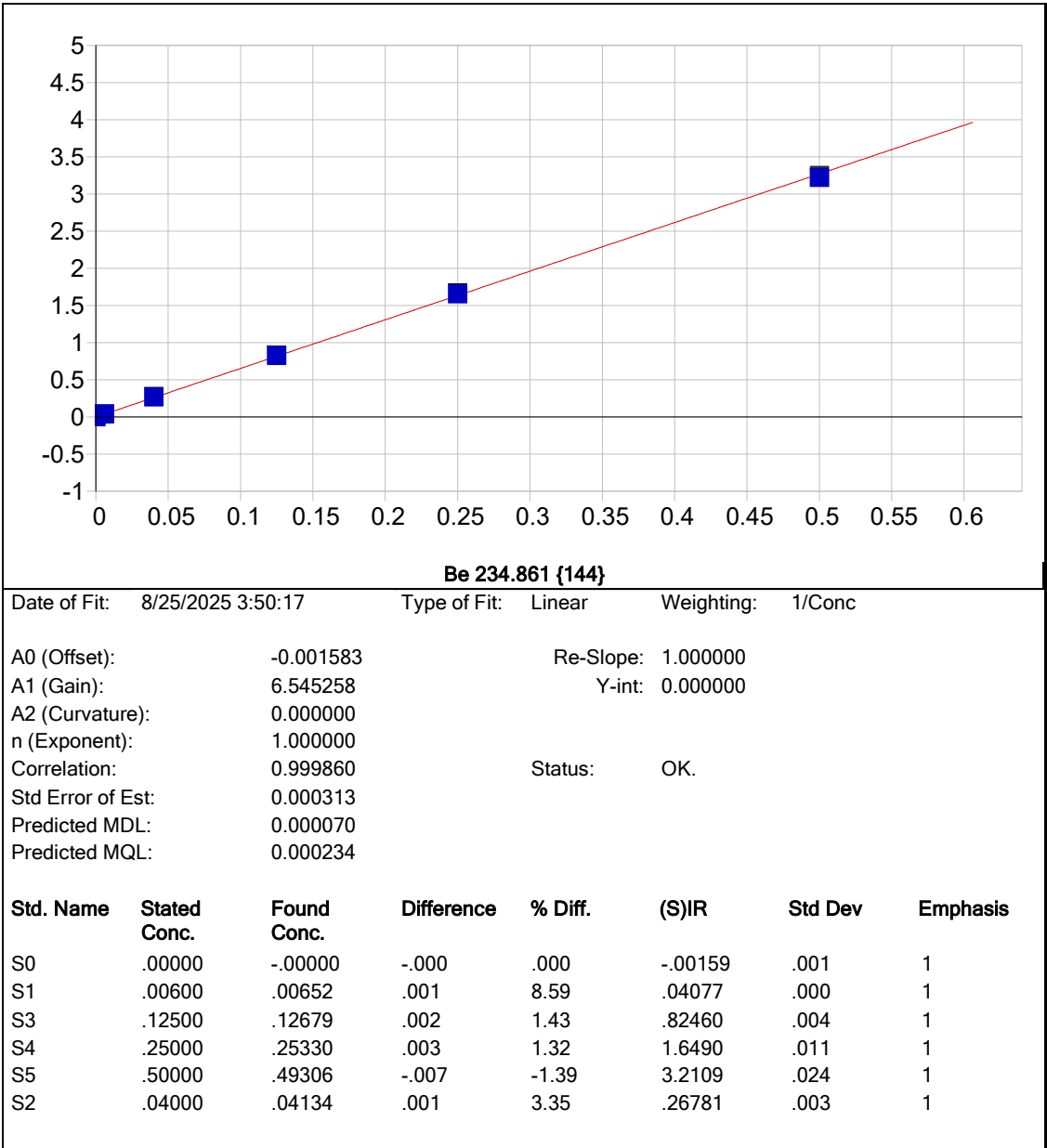
Date of Fit: 8/25/2025 3:50:17      Type of Fit: Linear      Weighting: 1/Conc

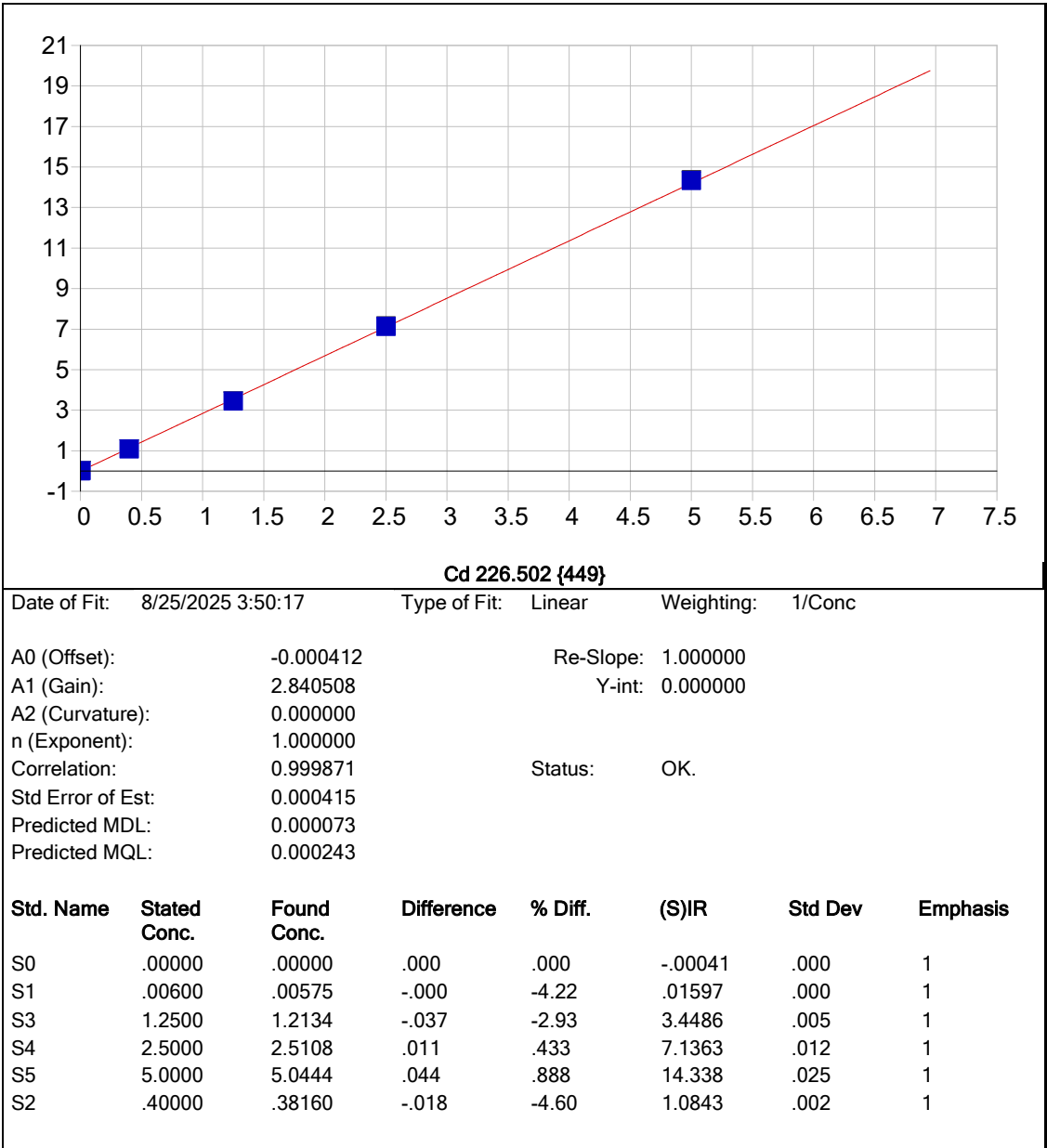
A0 (Offset): 0.000676      Re-Slope: 1.000000  
A1 (Gain): 0.084118      Y-int: 0.000000  
A2 (Curvature): 0.000000  
n (Exponent): 1.000000  
Correlation: 0.999978      Status: OK.  
Std Error of Est: 0.000021  
Predicted MDL: 0.001921  
Predicted MQL: 0.006403



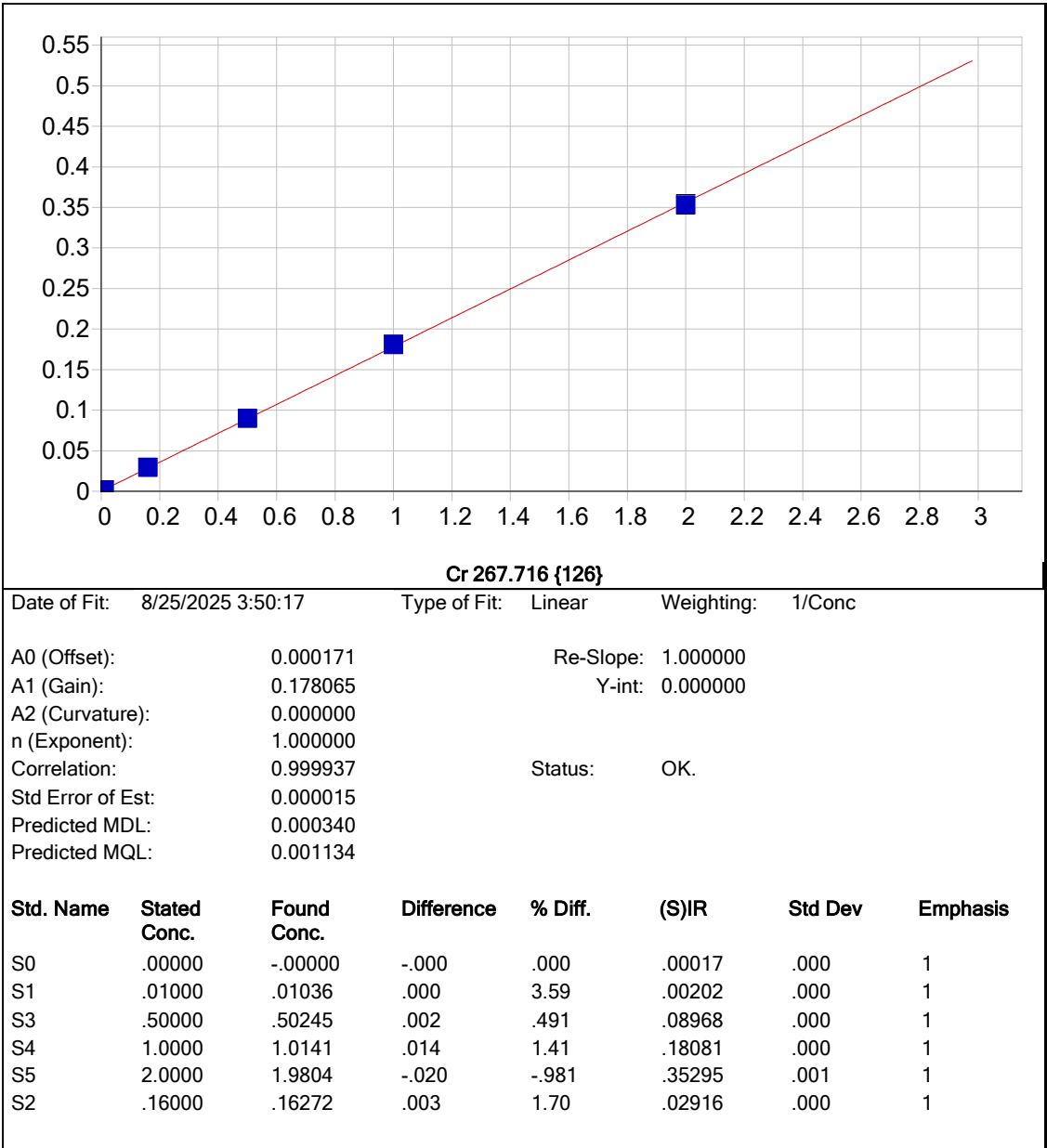


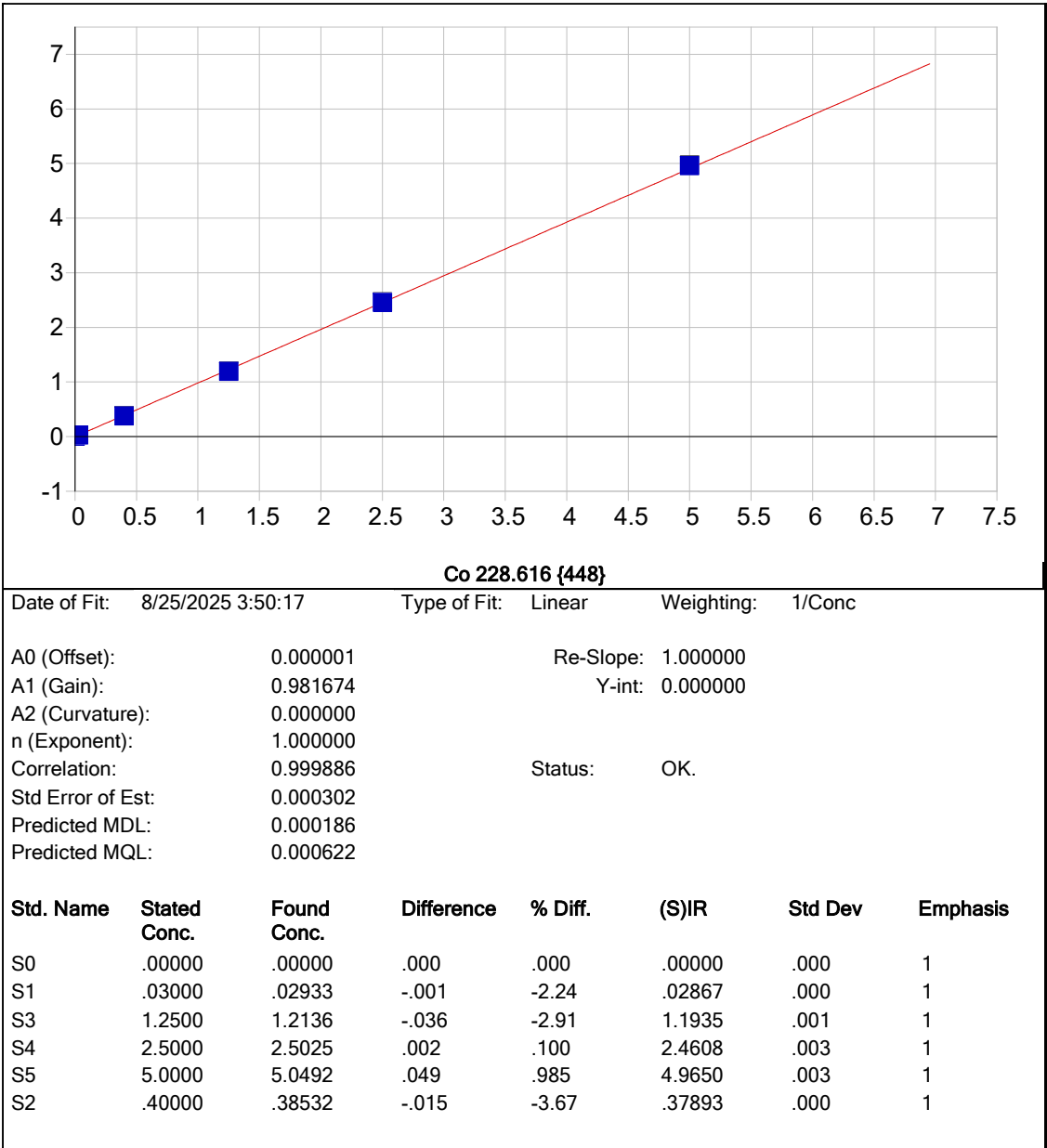


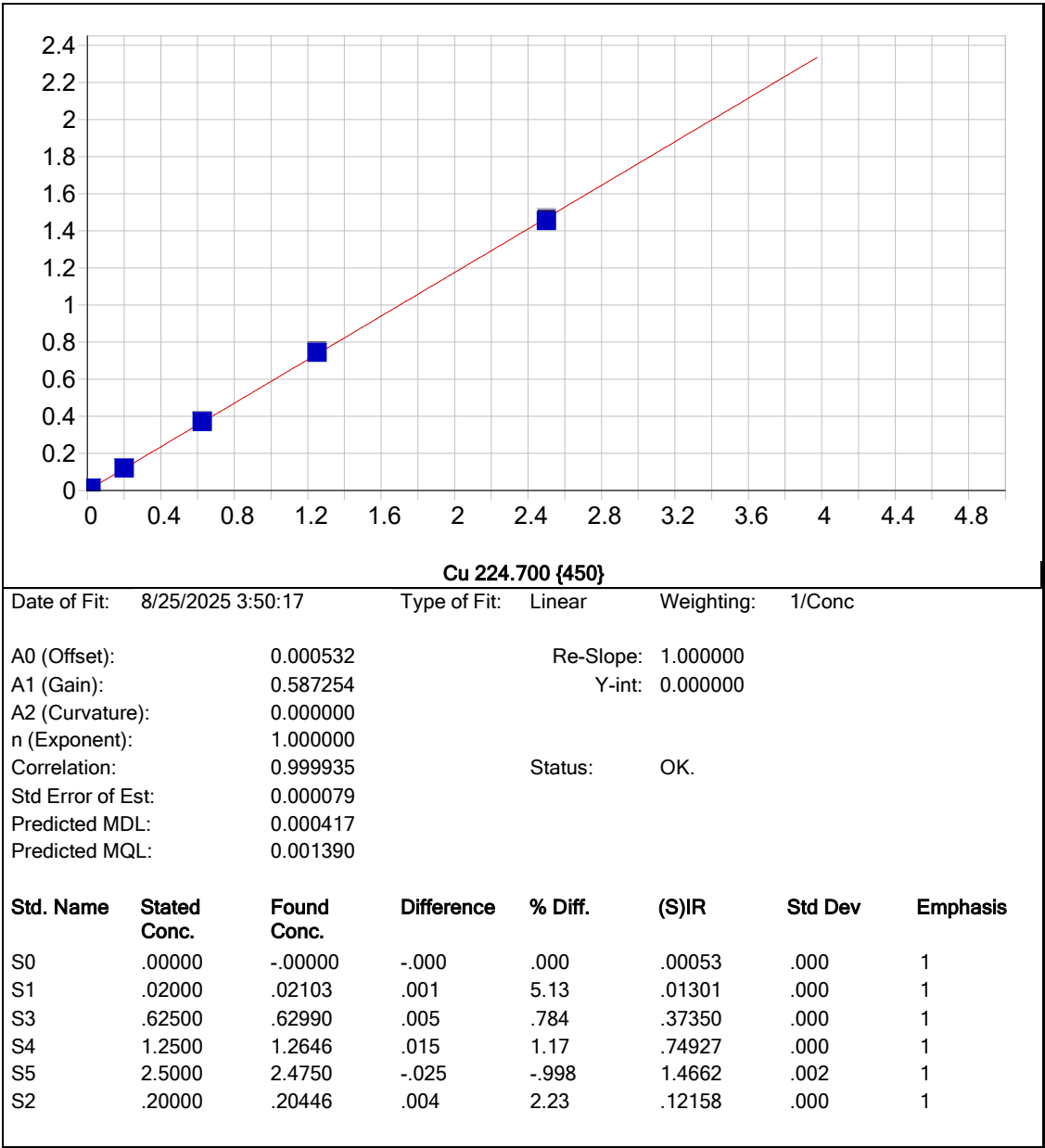




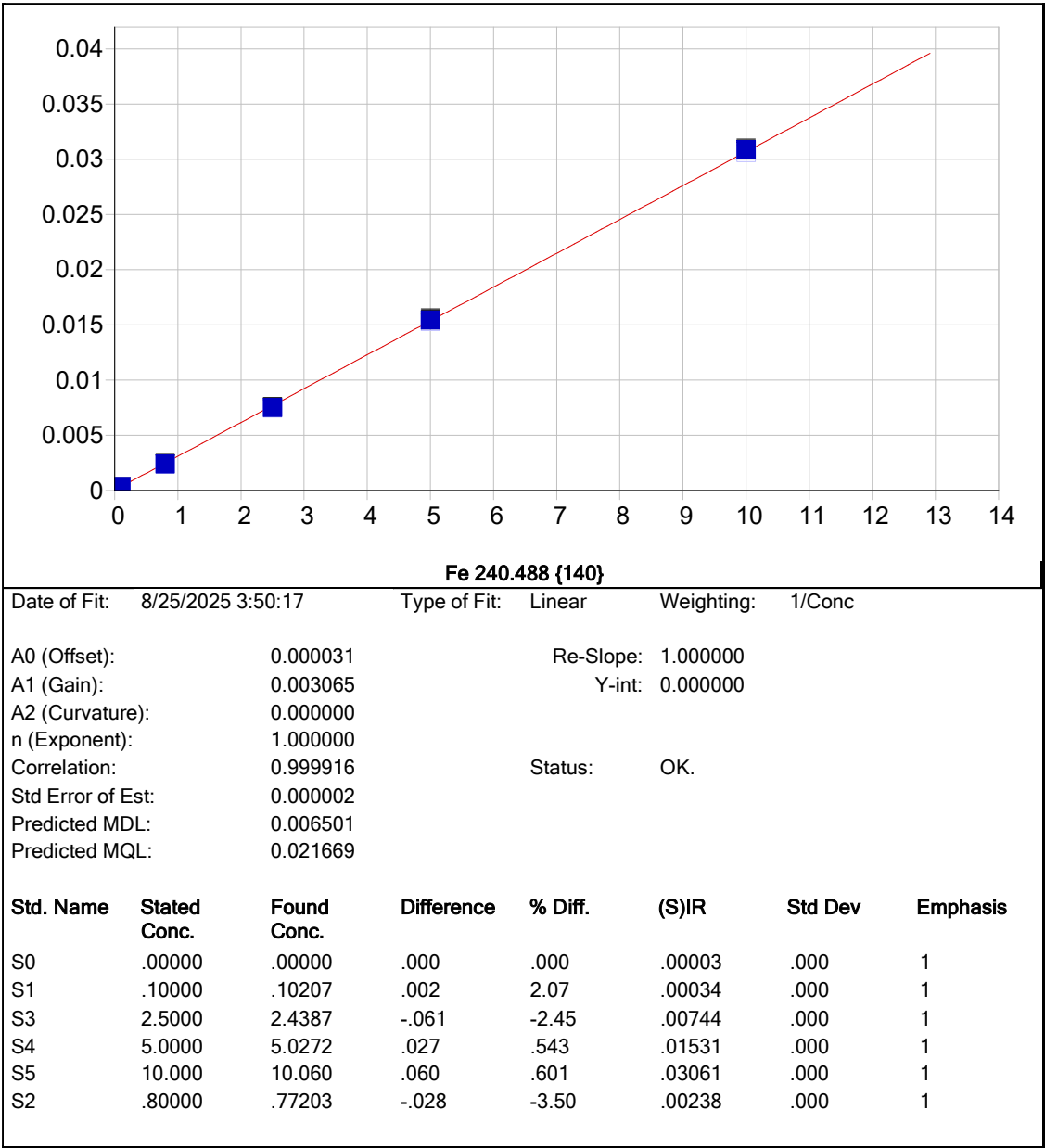


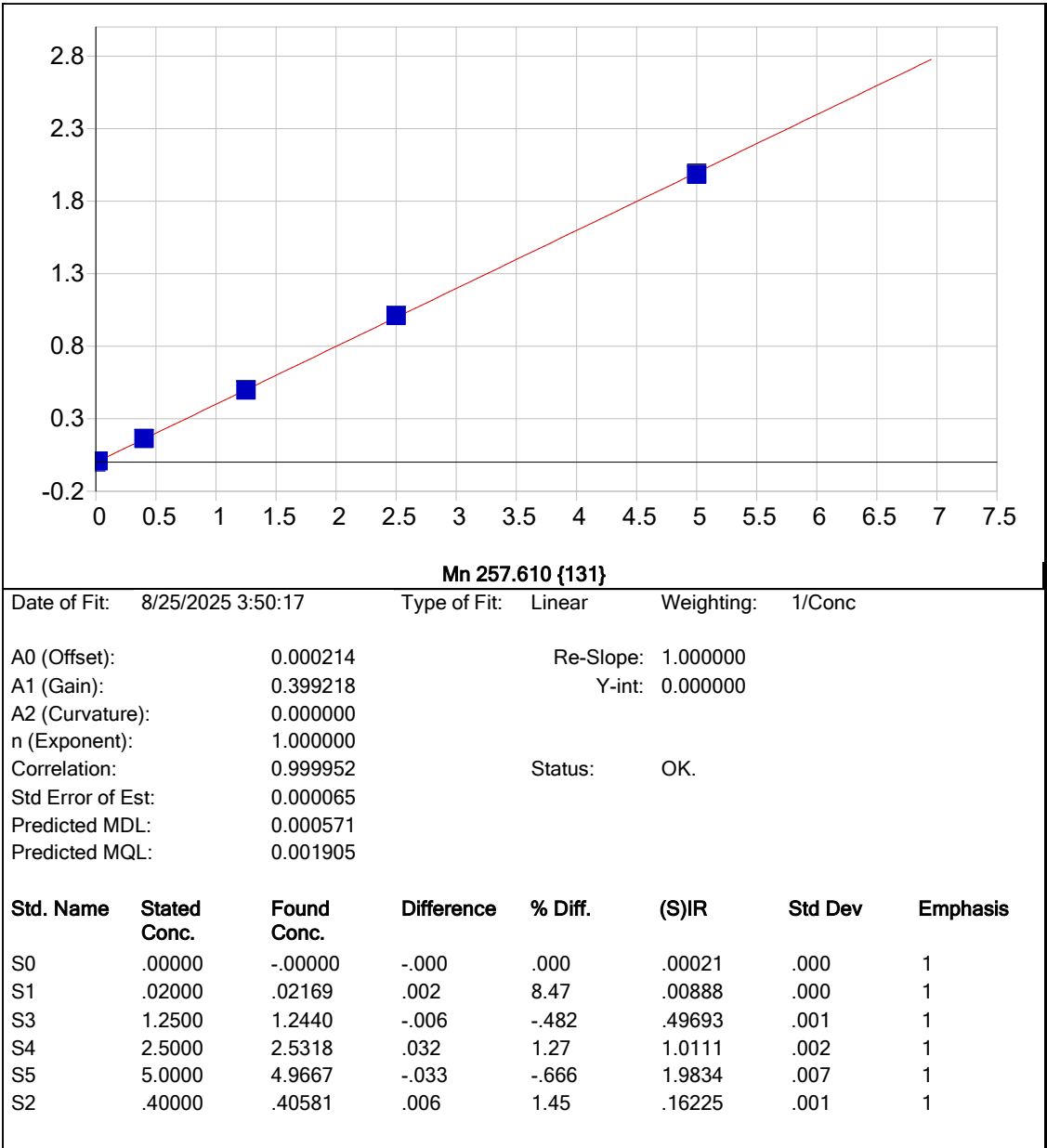


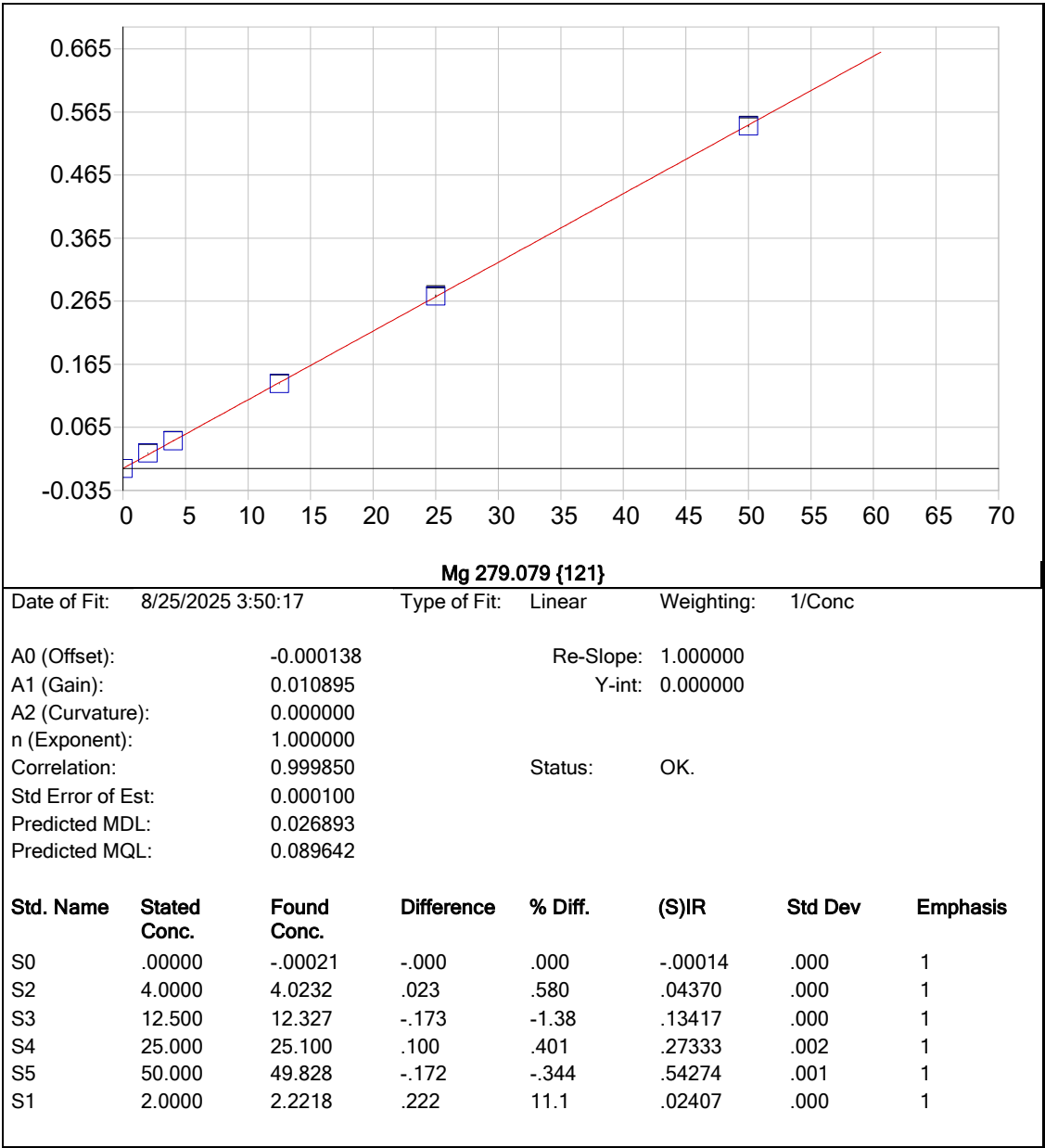


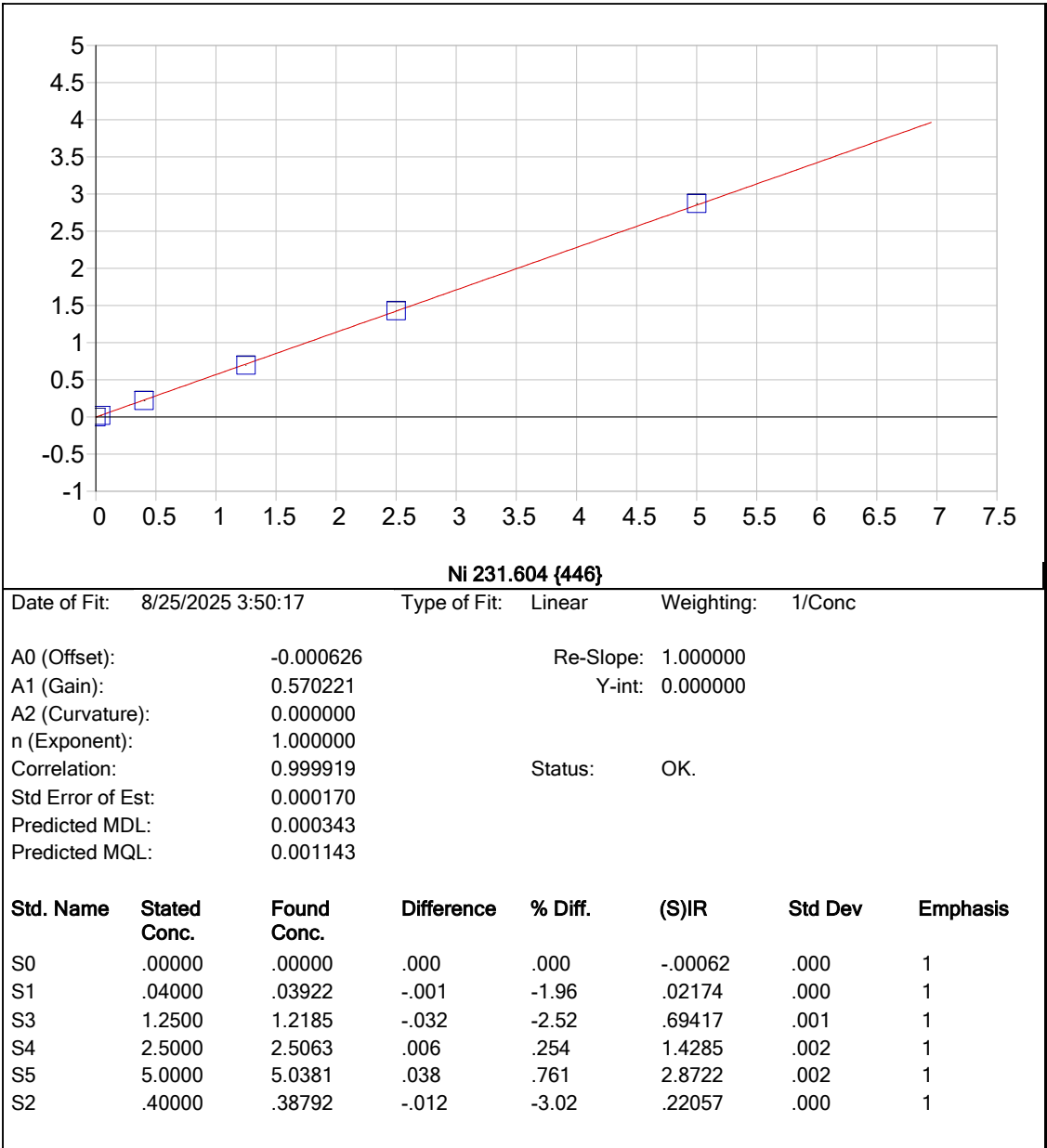


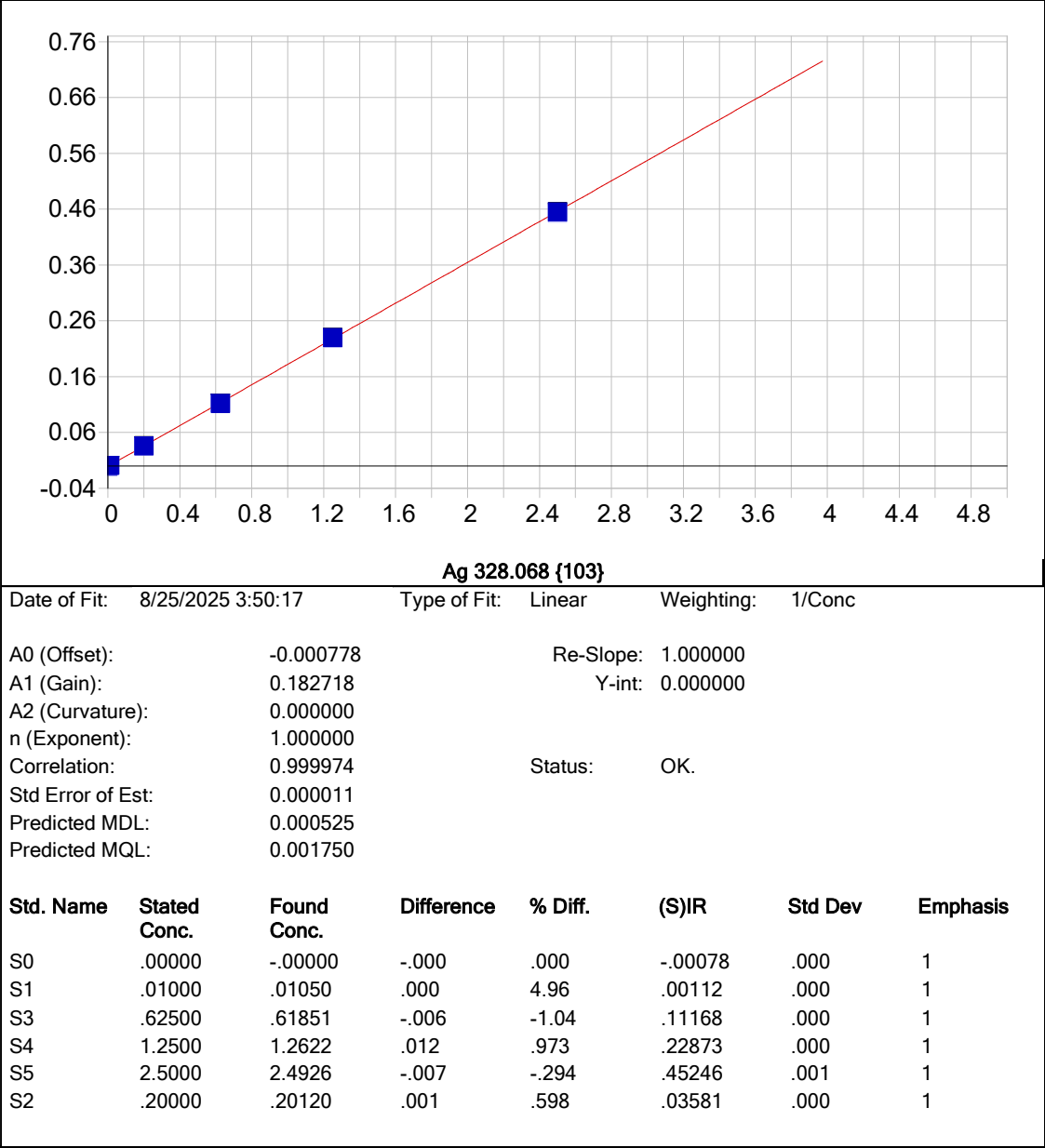


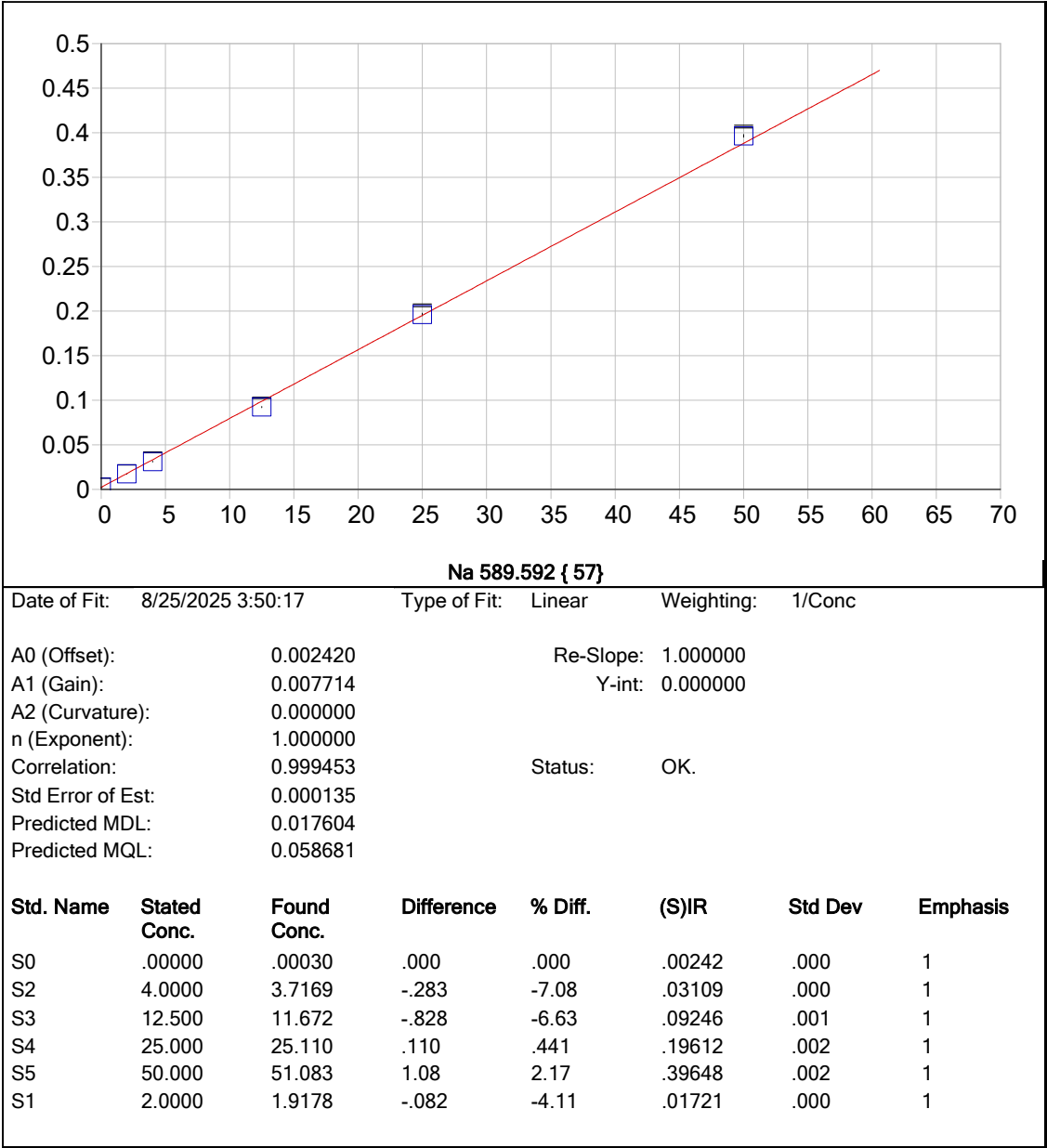


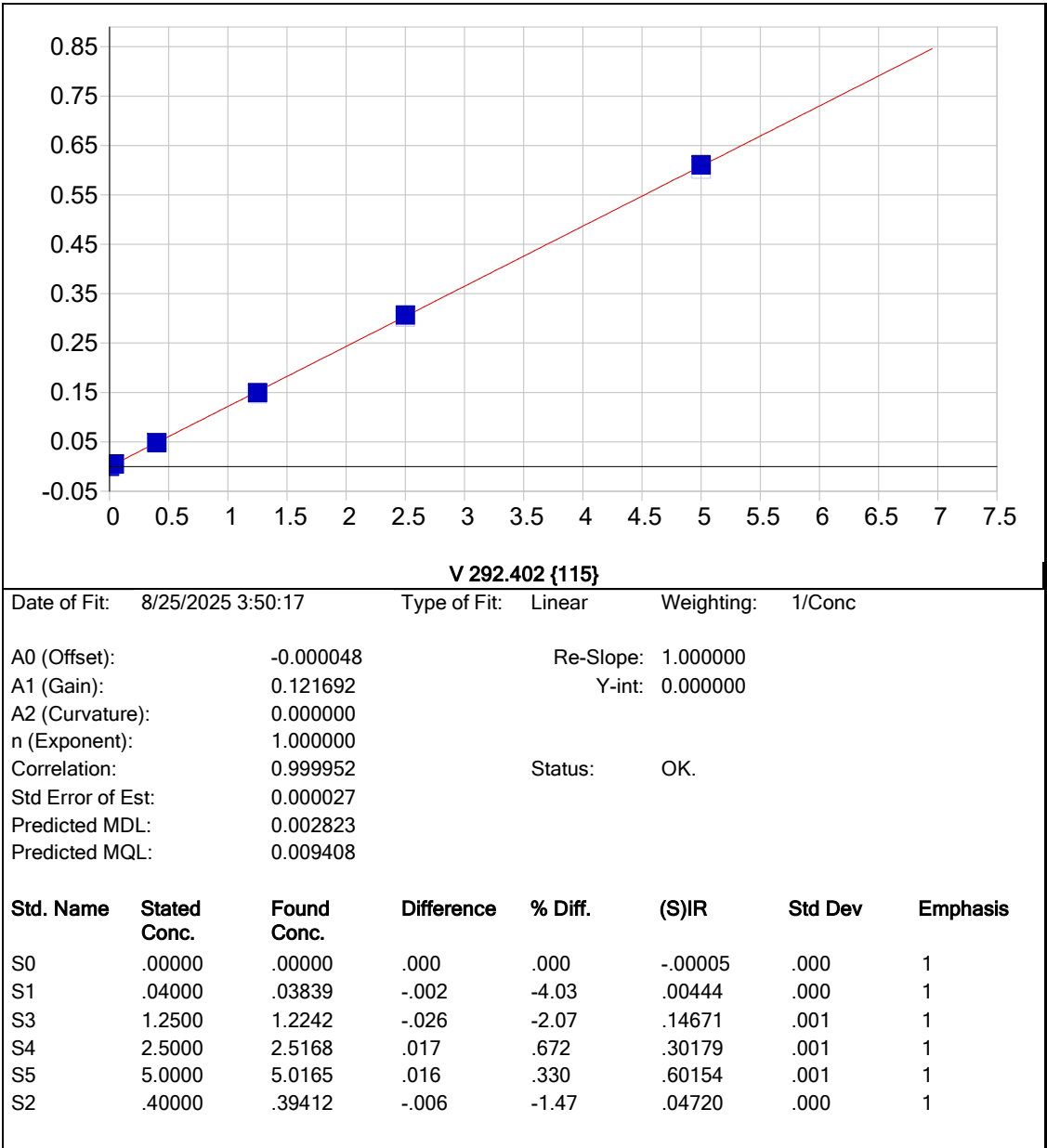


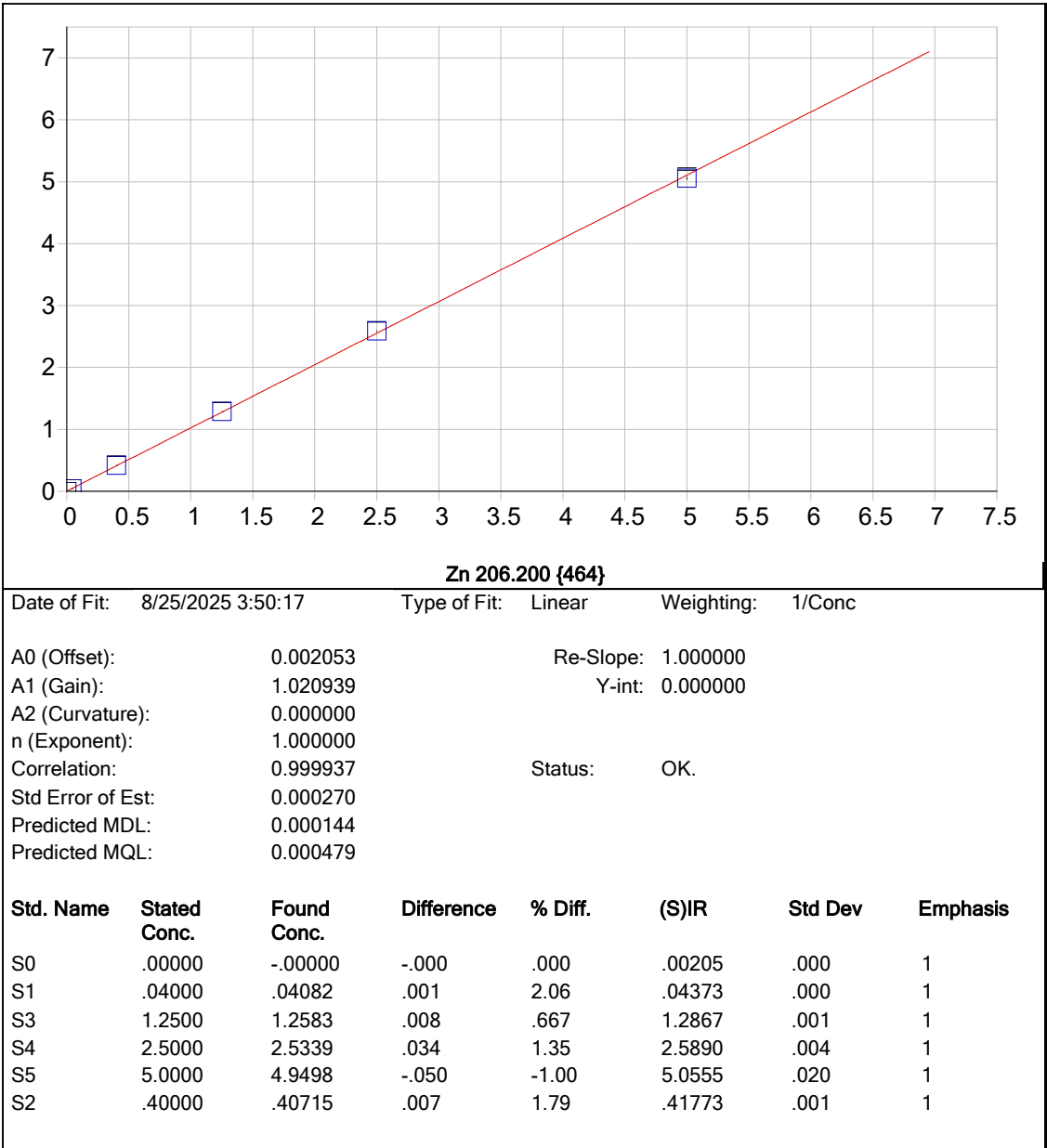




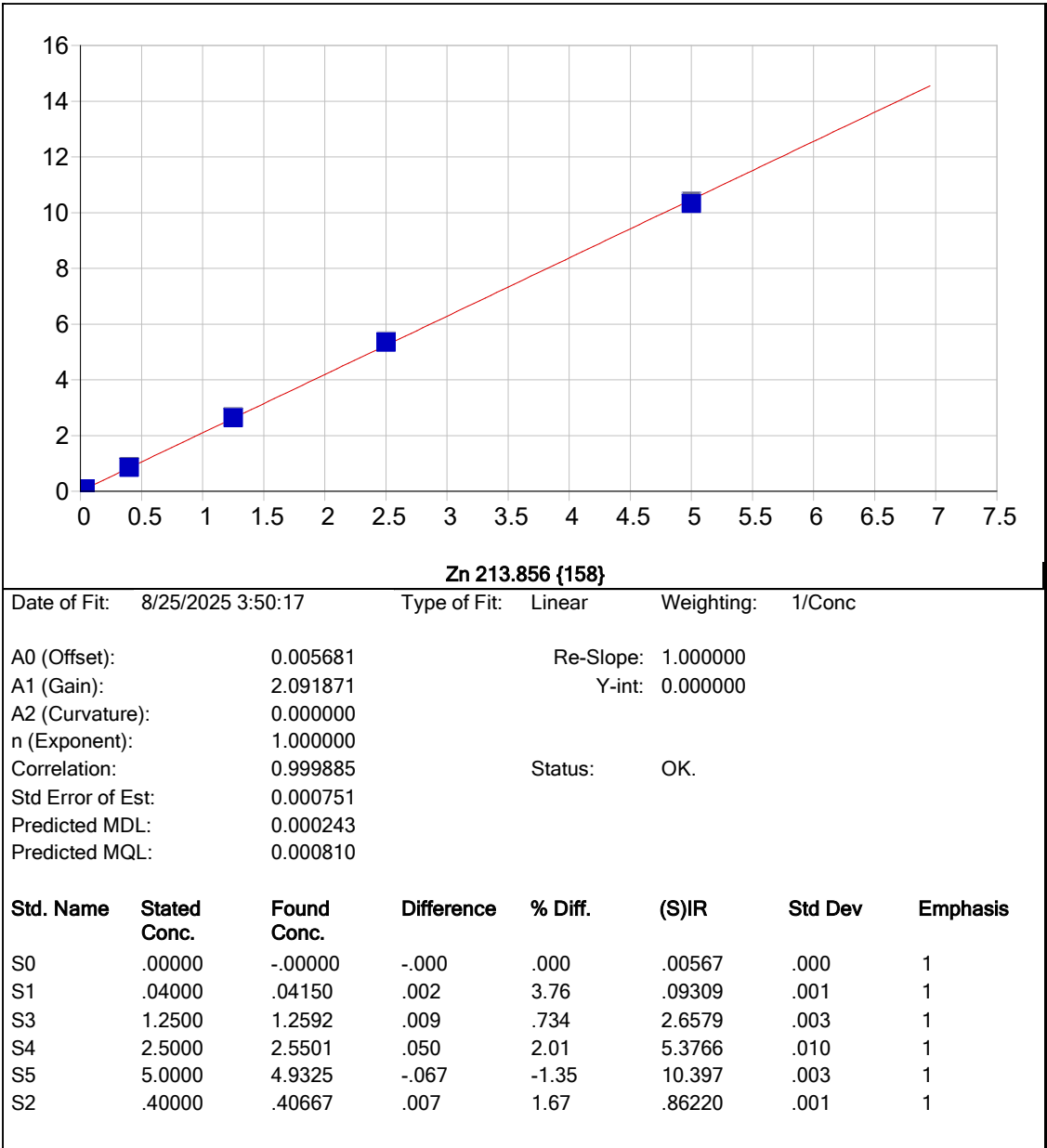


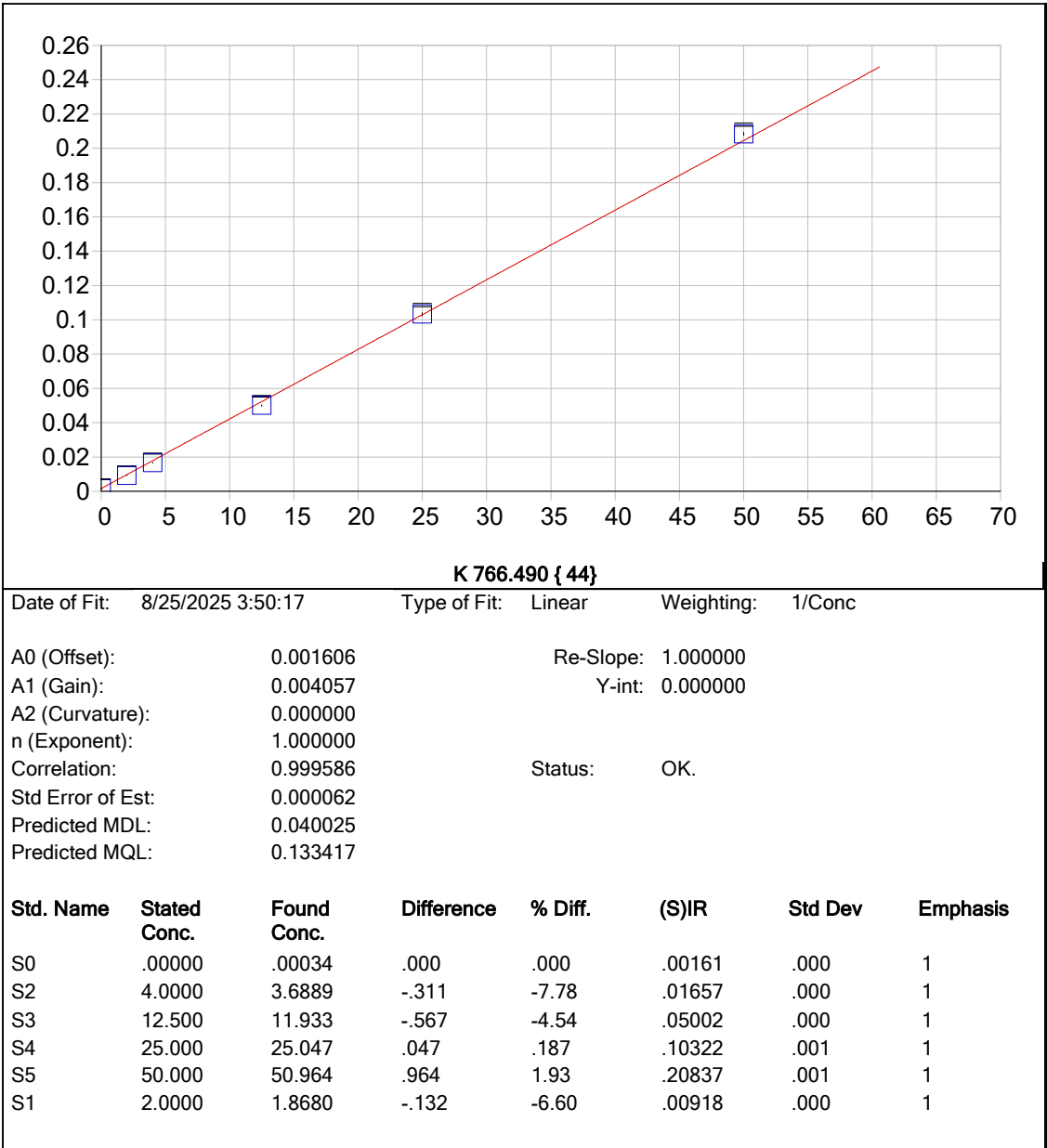


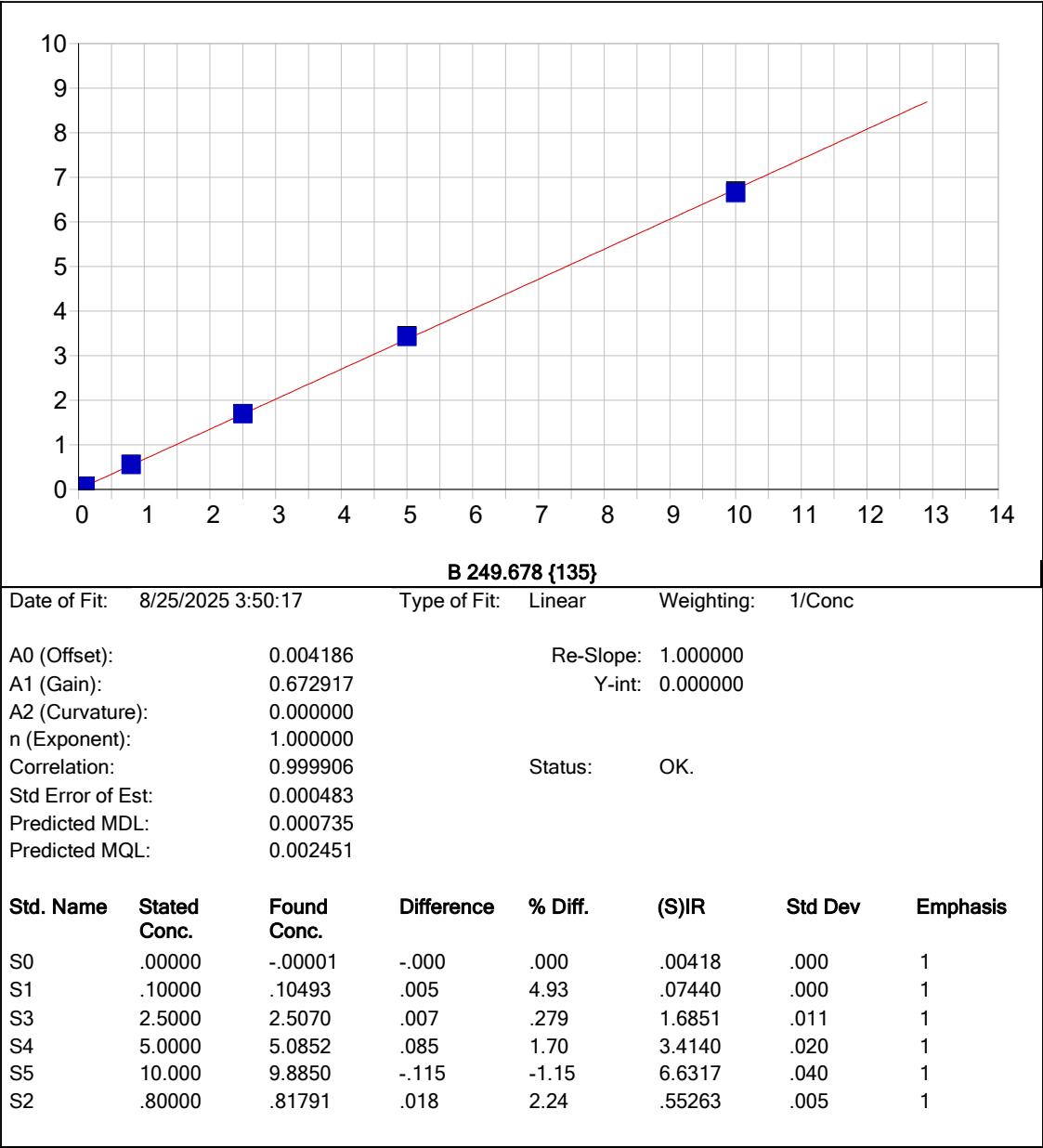


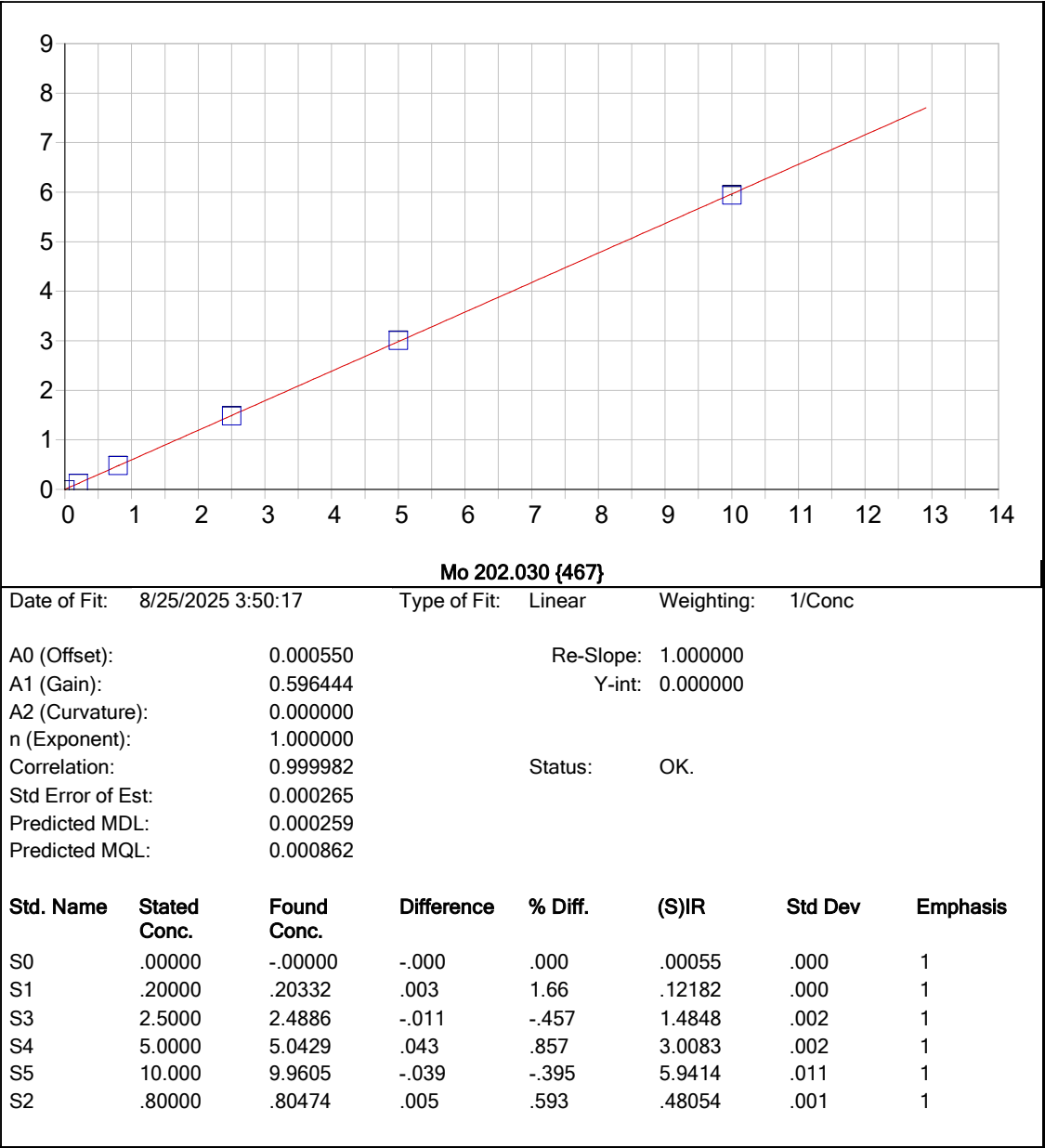


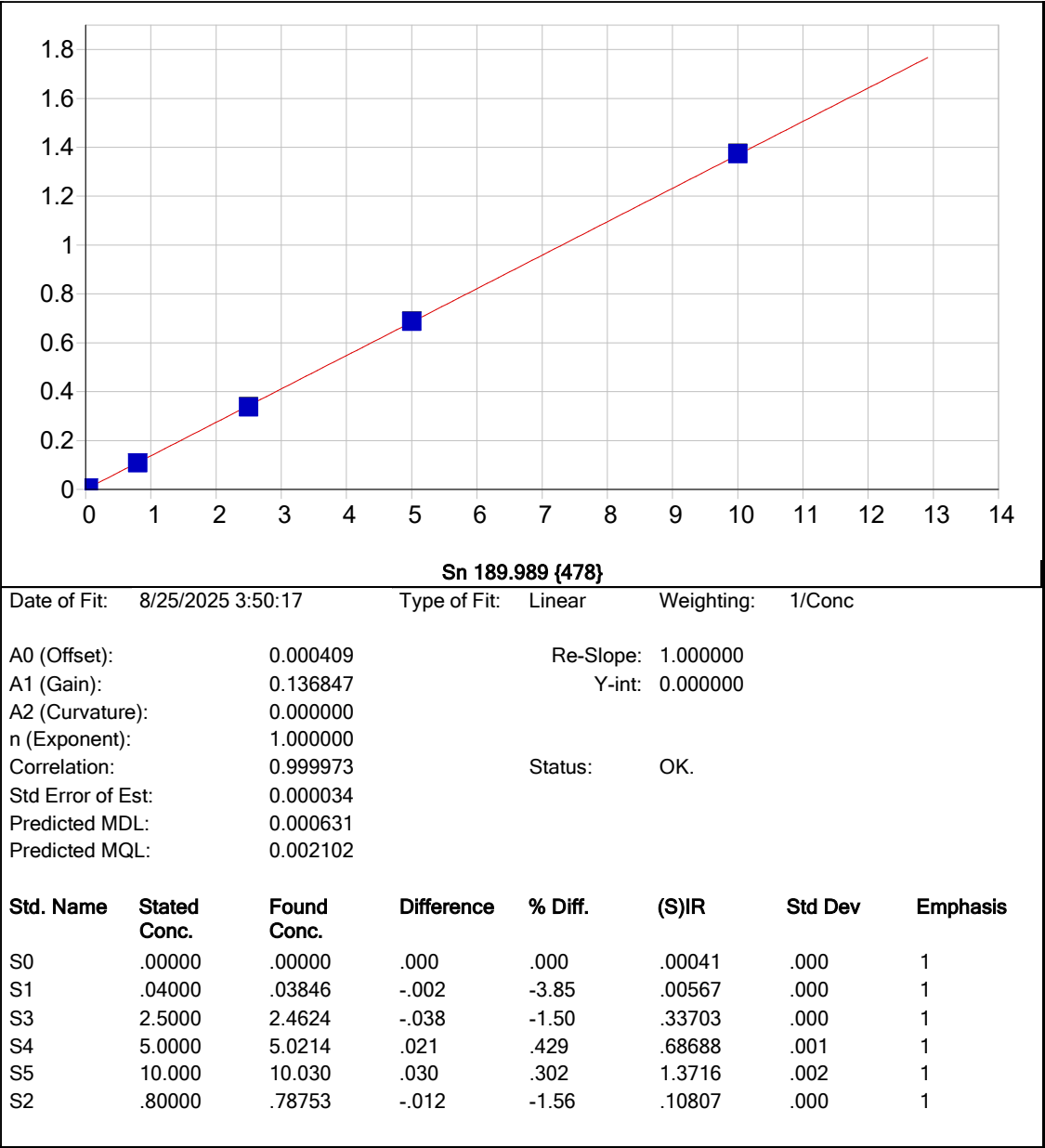


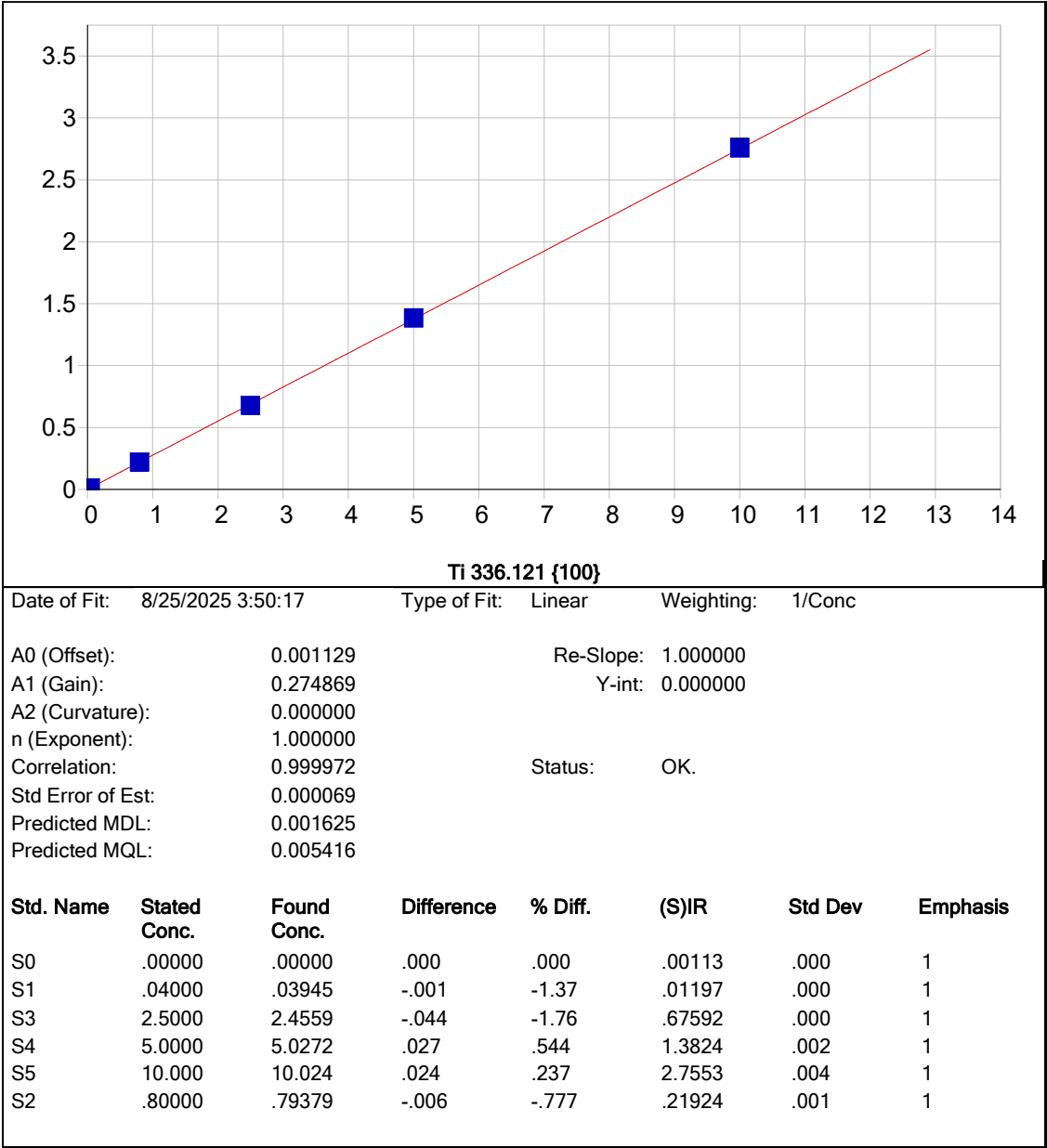


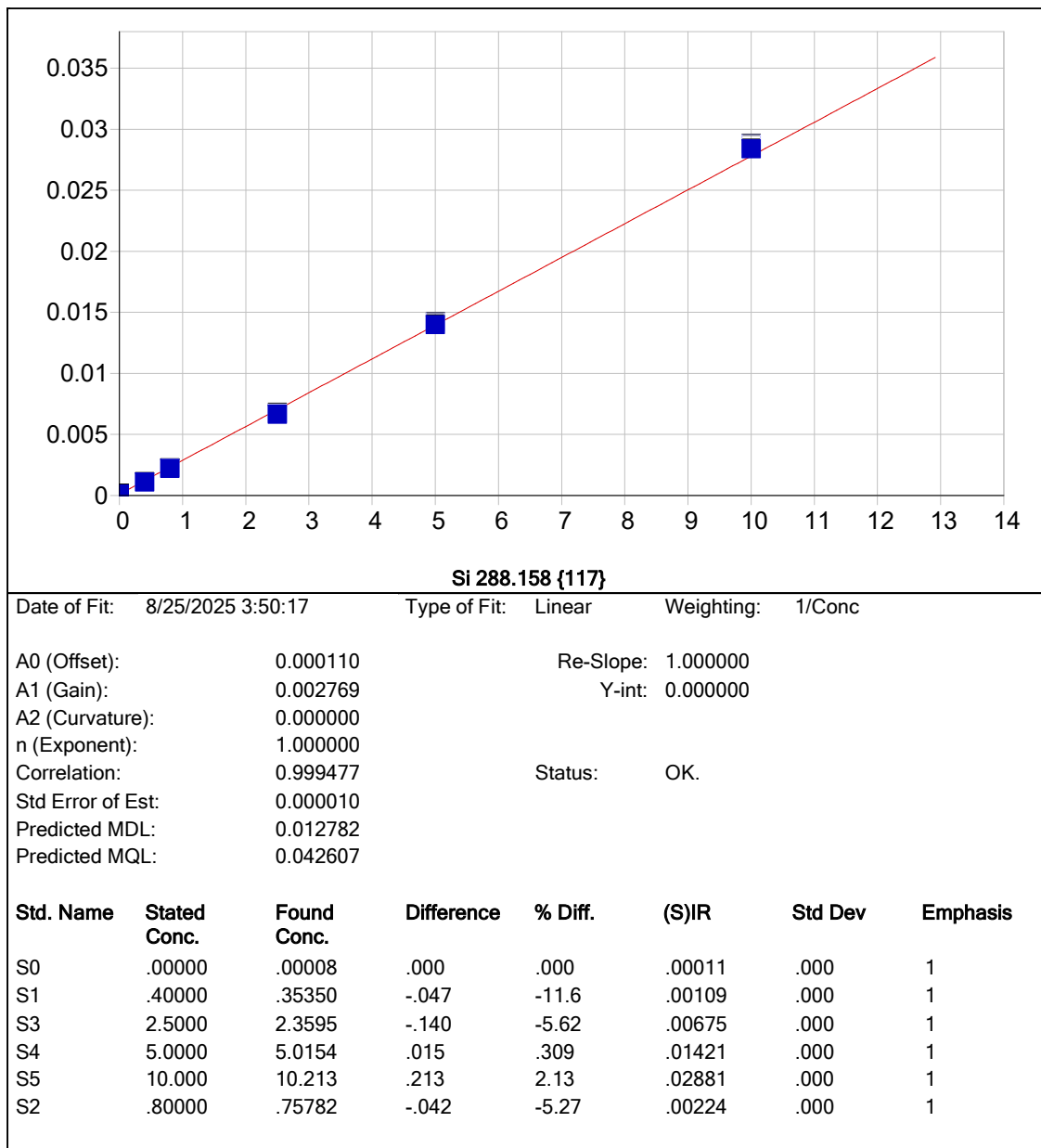


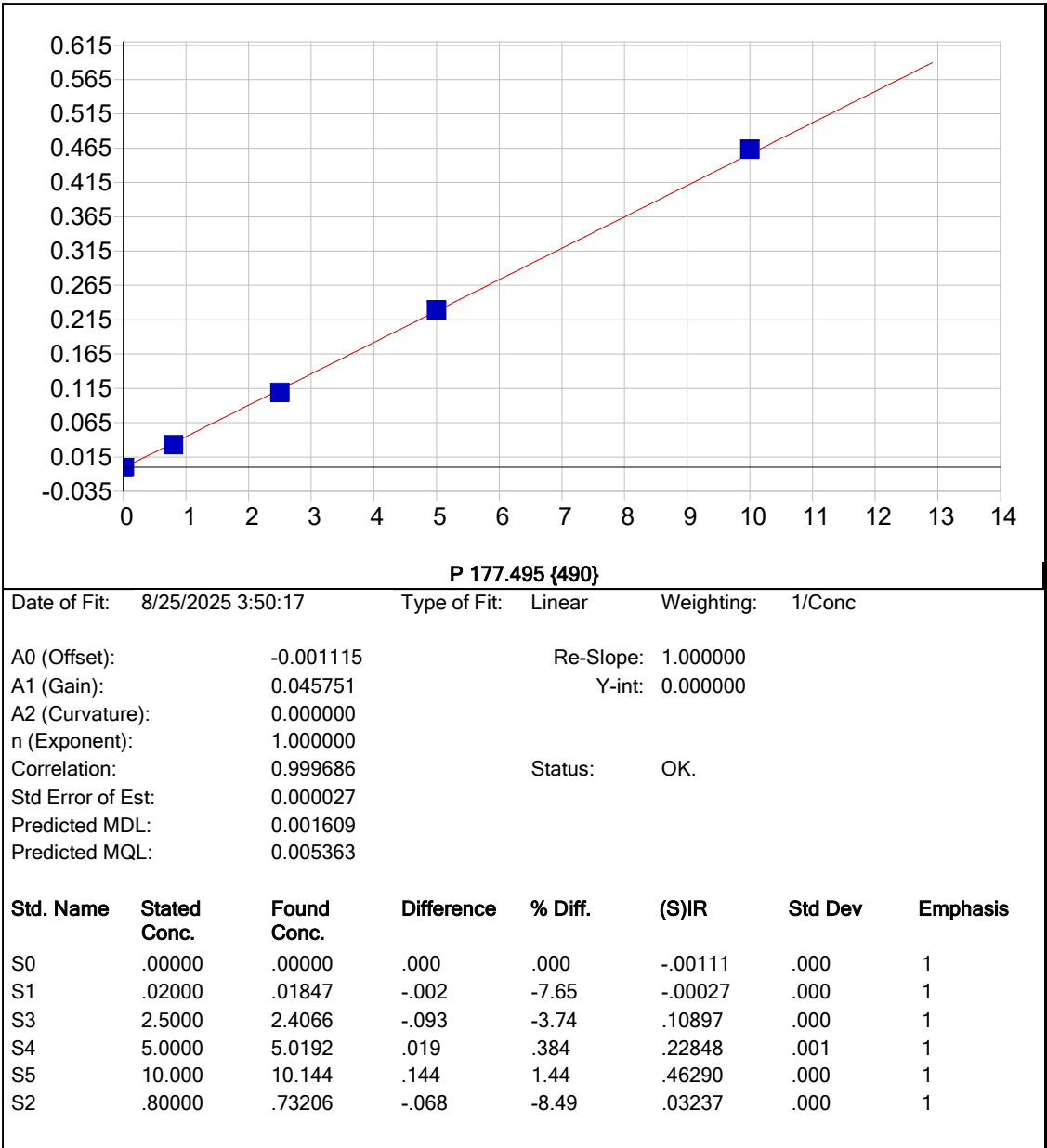




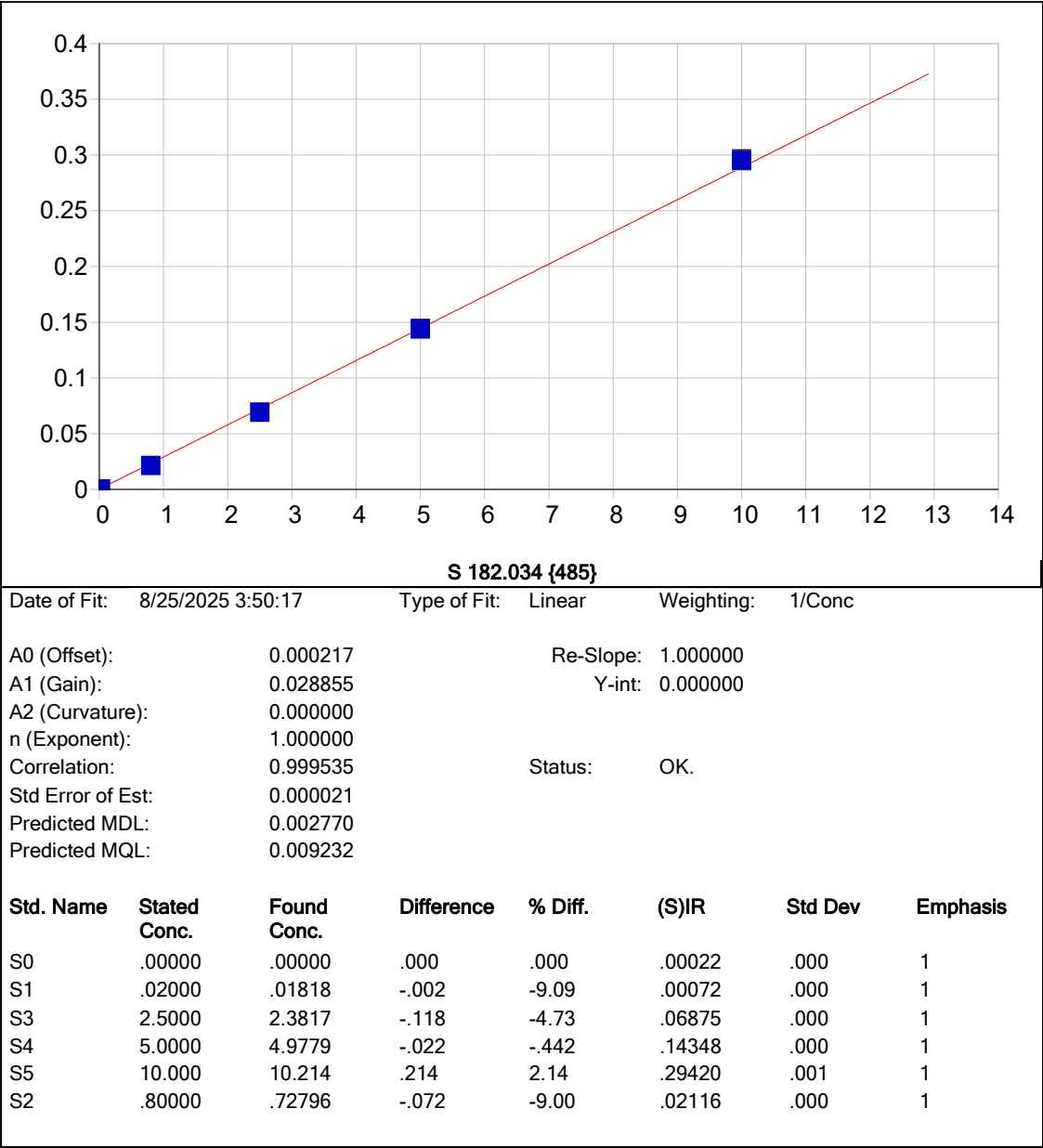


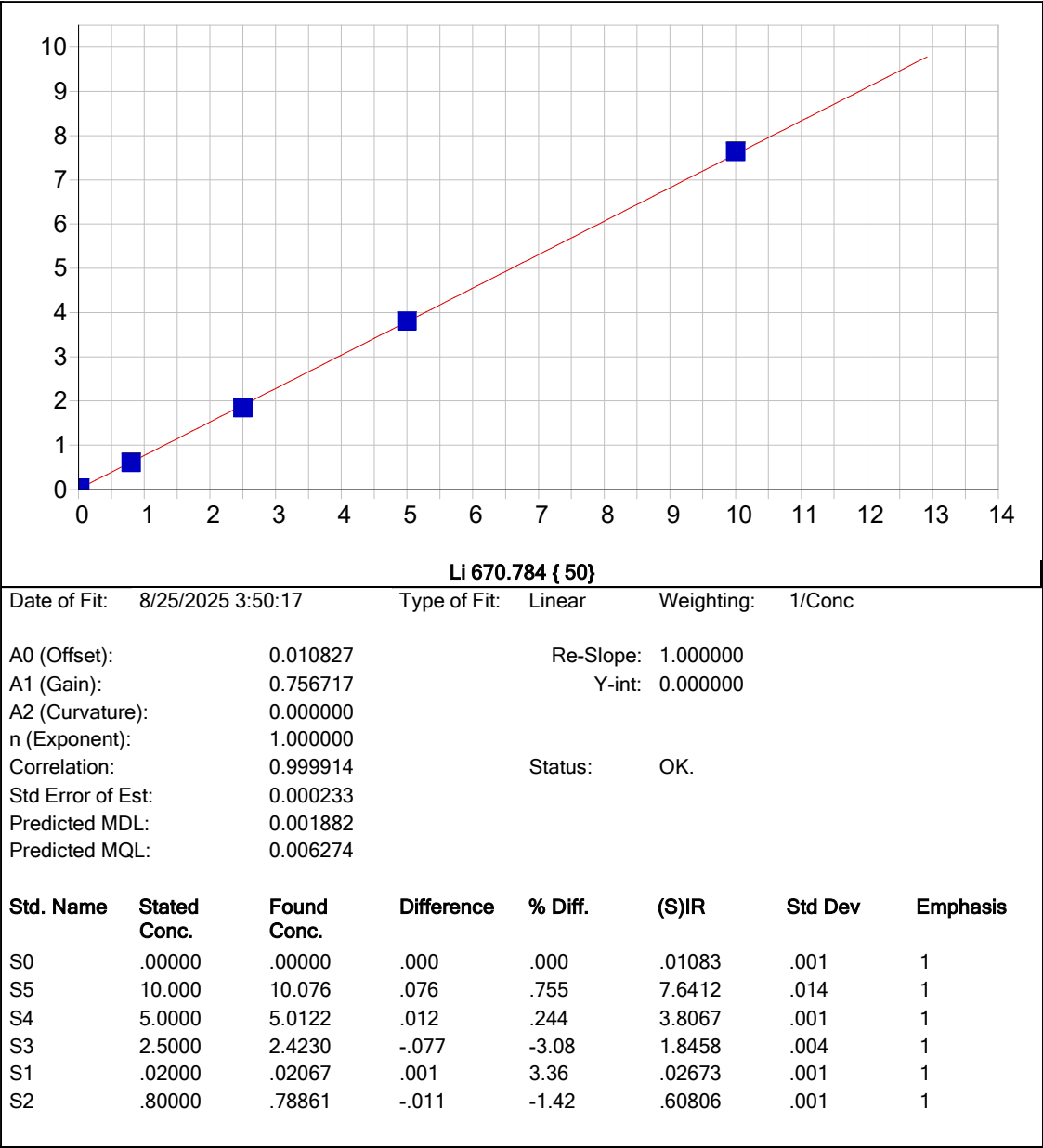


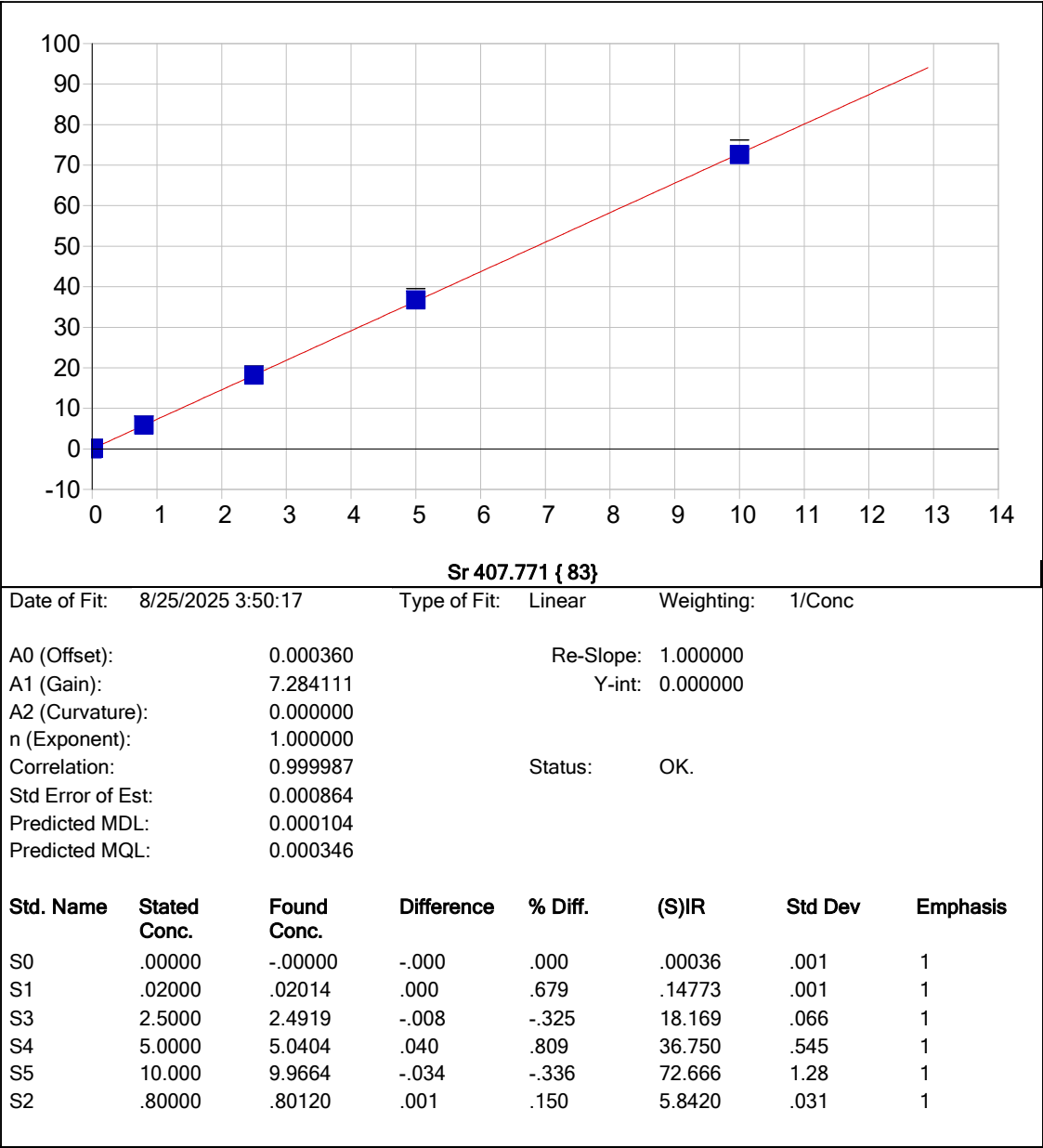


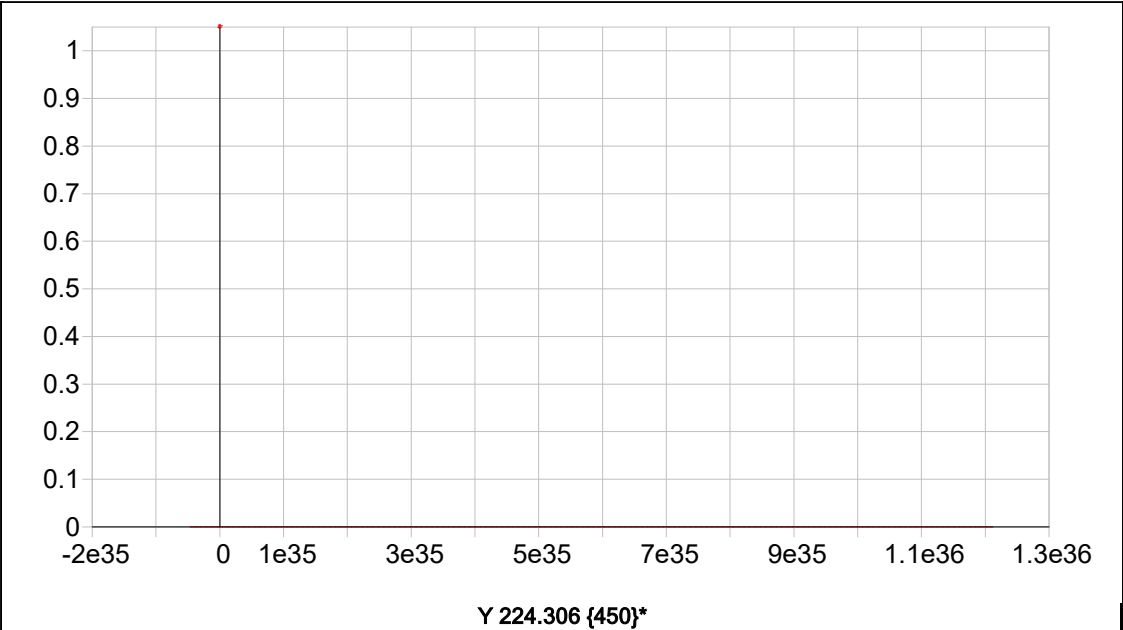








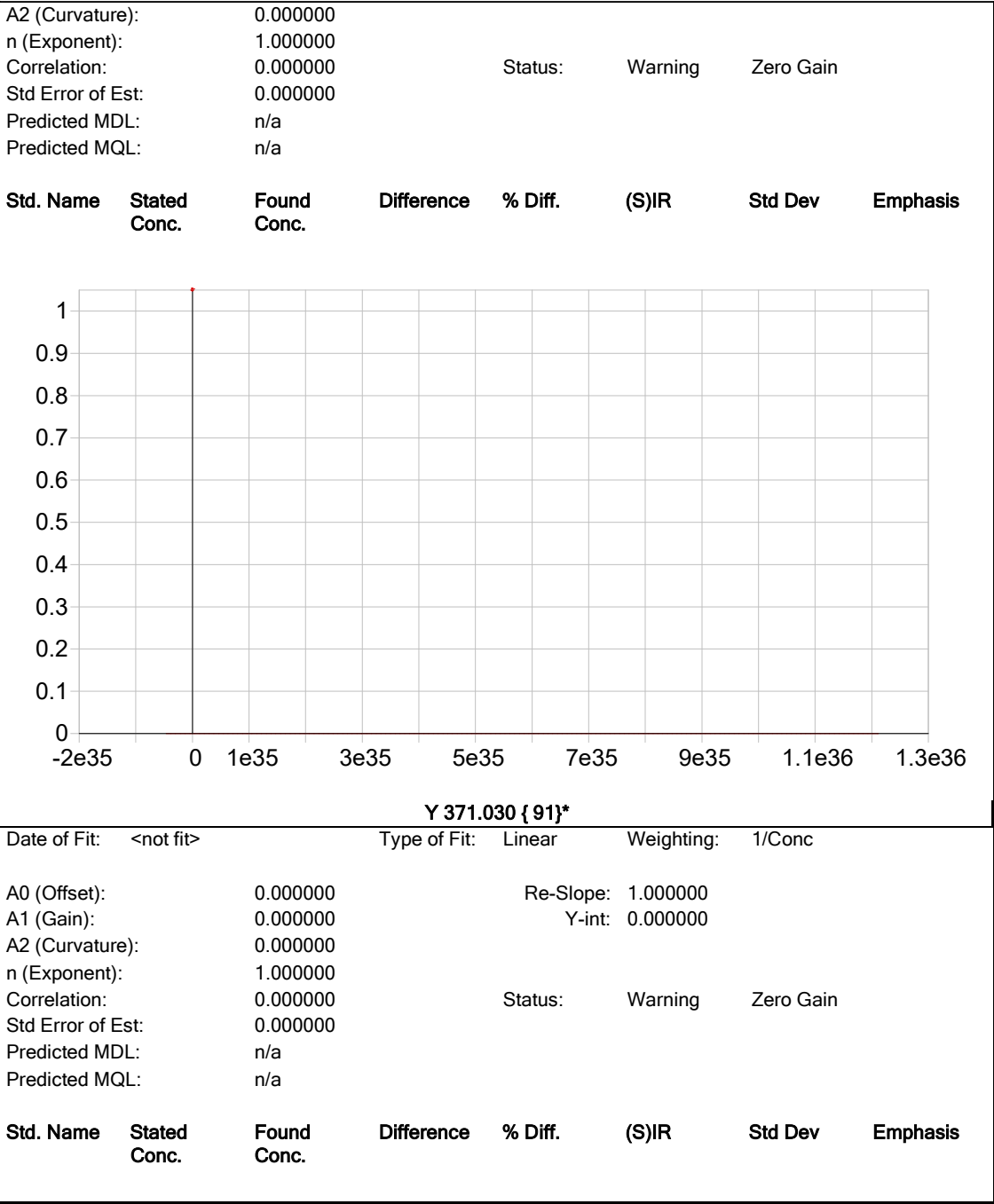


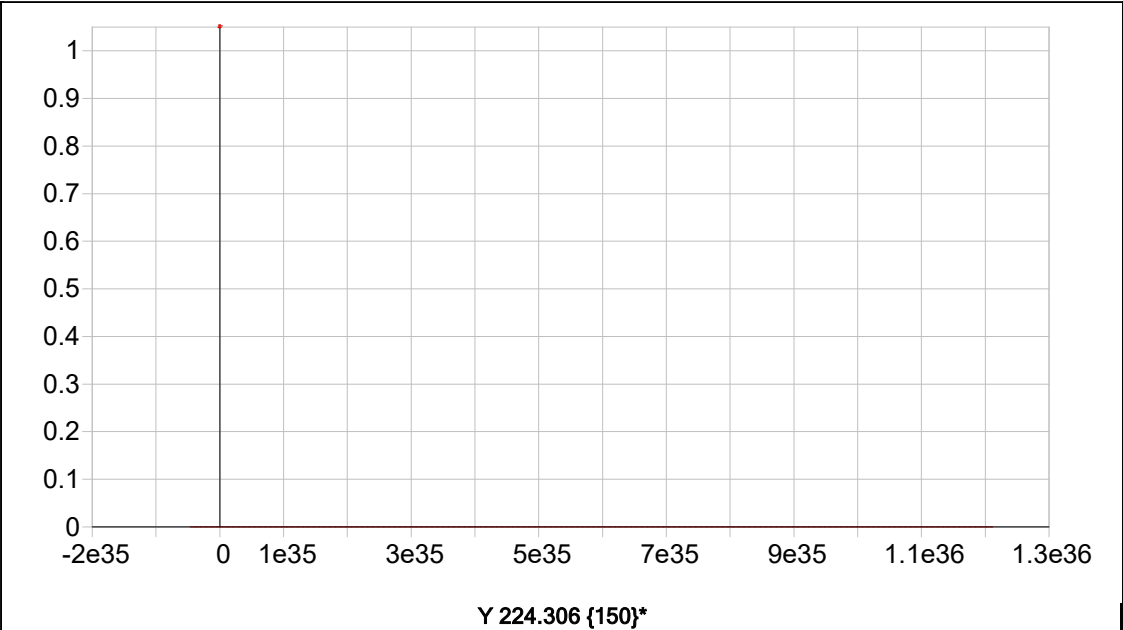


|                   |                   |              |          |            |        |
|-------------------|-------------------|--------------|----------|------------|--------|
| Date of Fit:      | 8/25/2025 3:50:17 | Type of Fit: | Linear   | Weighting: | 1/Conc |
| A0 (Offset):      | 0.000000          | 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 |
|-----------|--------------|-------------|------------|---------|-------|---------|----------|
|-----------|--------------|-------------|------------|---------|-------|---------|----------|

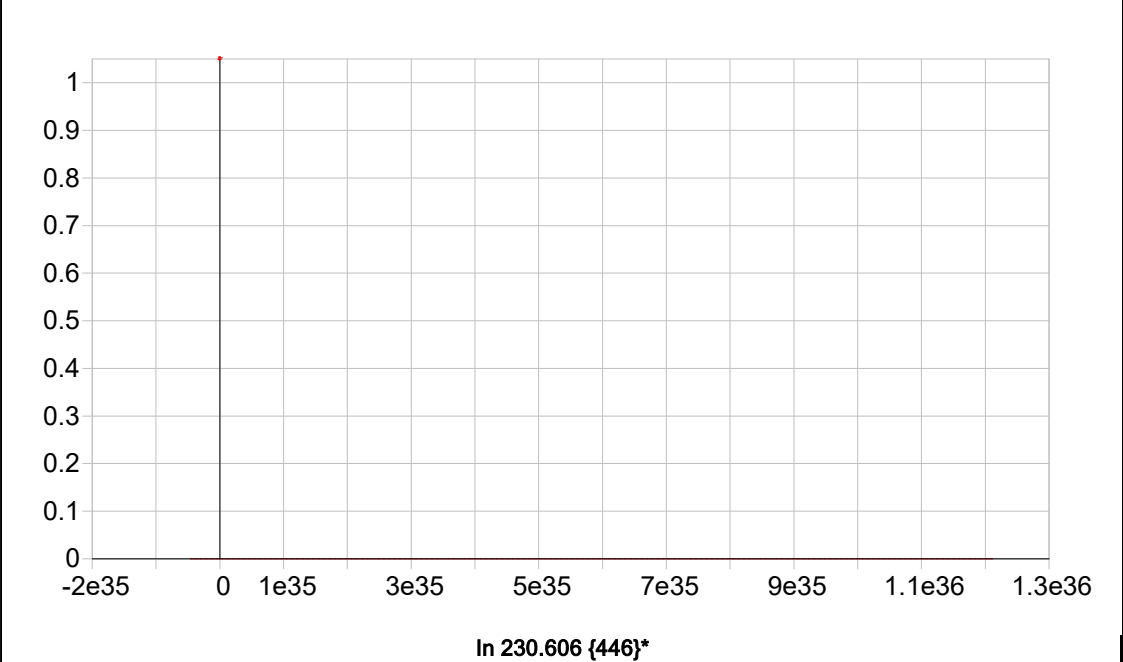
|              |           |              |          |            |        |
|--------------|-----------|--------------|----------|------------|--------|
| Date of Fit: | <not fit> | Type of Fit: | Linear   | Weighting: | 1/Conc |
| A0 (Offset): | 0.000000  | Re-Slope:    | 1.000000 |            |  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





|                   |           |  |              |          |            |        |
|-------------------|-----------|--|--------------|----------|------------|--------|
| 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 |
|-----------|--------------|-------------|------------|---------|-------|---------|----------|
|-----------|--------------|-------------|------------|---------|-------|---------|----------|



|              |           |  |              |          |            |        |
|--------------|-----------|--|--------------|----------|------------|--------|
| 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    |            | Status: | Warning | Zero Gain |          |
| n (Exponent):     |              | 1.000000    |            |         |         |           |          |
| Correlation:      |              | 0.000000    |            |         |         |           |          |
| 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 |

SOP ID : M3010A-Digestion-17

SDG No : N/A

Matrix : WATER

Pipette ID: ICP A

Balance ID : N/A

Filter paper ID : N/A

pH Strip ID : M6069

Hood ID : #3

Block ID: 1. HOT BLOCK #1 2. N/A

Start Digest Date: 08/20/2025 Time : 13:30 Temp : 96 °C

End Digest Date: 08/20/2025 Time : 16:32 Temp : 96 °C

Digestion tube ID: M5595

Block thermometer ID: MET-DIG. #1

Dig Technician Signature: *SLV*

Supervisor Signature: *[Signature]*

Temp : 1. 96°C 2. N/A

| Standard Name | MLS USED | STD REF. # FROM LOG |
|---------------|----------|---------------------|
| LFS-1         | 0.25     | M6180               |
| LFS-2         | 0.25     | M6181               |
| N/A           | N/A      | N/A                 |
| N/A           | N/A      | N/A                 |
| N/A           | N/A      | N/A                 |

| Chemical Used | ML/SAMPLE USED | Lot Number |
|---------------|----------------|------------|
| Conc. HNO3    | 3.00           | M6158      |
| 1:1 HCL       | 5.00           | MP85156    |
| 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        |
| N/A           | N/A            | N/A        |
| N/A           | N/A            | N/A        |

## Extraction Conformance/Non-Conformance Comments:

HOT BLOCK#1 CELL#50 96C

| Date / Time    | Prepped Sample Relinquished By/Location | Received By/Location |
|----------------|-----------------------------------------|----------------------|
| 08/20/25 17:32 | <i>SLV met d/o</i>                      | <i>[Signature]</i>   |
|                | Preparation Group                       | Analysis Group       |



| Lab Sample ID | Client Sample ID          | pH | Initial Vol (ml) | Final Vol (ml) | Color Before | Color After | Clarity Before | Clarity After | Comment     | Prep Pos |
|---------------|---------------------------|----|------------------|----------------|--------------|-------------|----------------|---------------|-------------|----------|
| PB169324BL    | PBW324                    | <2 | 50               | 25             | Colorless    | Colorless   | Clear          | Clear         | N/A         | 12       |
| PB169324BS    | LCS324                    | <2 | 50               | 25             | Colorless    | Colorless   | Clear          | Clear         | M6180,M6181 | 13       |
| Q2902-01      | OUTFALL-DSN-001           | <2 | 50               | 25             | Colorless    | Colorless   | Clear          | Clear         | N/A         | 14       |
| Q2902-04      | OUTFALL-DSN-002           | <2 | 50               | 25             | Colorless    | Colorless   | Clear          | Clear         | N/A         | 15       |
| Q2902-04MS    | OUTFALL-DSN-002MS         | <2 | 50               | 25             | Colorless    | Colorless   | Clear          | Clear         | M6180,M6181 | 17       |
| Q2902-04MSD   | OUTFALL-DSN-002MSD        | <2 | 50               | 25             | Colorless    | Colorless   | Clear          | Clear         | M6180,M6181 | 18       |
| Q2902-04DUP   | OUTFALL-DSN-002DUP        | <2 | 50               | 25             | Colorless    | Colorless   | Clear          | Clear         | N/A         | 16       |
| Q2904-01      | 001 WILLETS PT BLVD(JULY) | <2 | 50               | 25             | Colorless    | Colorless   | Clear          | Clear         | N/A         | 19       |
| Q2904-02      | 002 35TH AVE (JULY)       | <2 | 50               | 25             | Colorless    | Colorless   | Clear          | Clear         | N/A         | 20       |

# WORKLIST(Hardcopy Internal Chain)

Worklist Name : PB169324

Worklist ID : 191364

Department : Digestion

Date : 08-20-2025 09:51:01

| Sample   | Customer Sample            | Matrix | Test            | Preservative       | Customer | Raw Sample<br>Storage<br>Location | Collect Date | Method |
|----------|----------------------------|--------|-----------------|--------------------|----------|-----------------------------------|--------------|--------|
| Q2902-01 | OUTFALL-DSN-001            | Water  | Metals Group3   | 1:1 HNO3 to pH < 2 | TRIS02   | J23                               | 08/19/2025   | 200.7  |
| Q2902-04 | OUTFALL-DSN-002            | Water  | Metals Group3   | 1:1 HNO3 to pH < 2 | TRIS02   | J23                               | 08/19/2025   | 200.7  |
| Q2904-01 | 001 williets Pt Blvd(July) | Water  | Metals Group 10 | 1:1 HNO3 to pH < 2 | TULL01   | J33                               | 08/19/2025   | 200.7  |
| Q2904-02 | 002 35th Ave (JULY)        | Water  | Metals Group 10 | 1:1 HNO3 to pH < 2 | TULL01   | J33                               | 08/19/2025   | 200.7  |

Date/Time 08/20/25 13:15

Raw Sample Received by: S18met dia

Raw Sample Relinquished by: APC sm

Date/Time 08/20/25 14:15

Raw Sample Received by: APC sm

Raw Sample Relinquished by: S18met dia

**Instrument ID:** P4

**Daily Analysis Runlog For Sequence/QC Batch ID # LB136917**

|                  |                                                 |              |                       |
|------------------|-------------------------------------------------|--------------|-----------------------|
| Review By        | jaswal                                          | Review On    | 8/22/2025 5:35:45 AM  |
| Supervise By     | Janvi                                           | Supervise On | 8/22/2025 12:08:42 PM |
| <b>STD. NAME</b> | <b>STD REF.#</b>                                |              |                       |
| ICAL Standard    | MP86640,MP86656,MP86653,MP86643,MP86642,MP86641 |              |                       |
| ICV Standard     | MP86752,MP86656                                 |              |                       |
| CCV Standard     | MP86646                                         |              |                       |
| ICSA Standard    | MP86651,MP86753                                 |              |                       |
| CRI Standard     | MP86656                                         |              |                       |
| LCS Standard     |                                                 |              |                       |
| Chk Standard     | MP86647,MP86648                                 |              |                       |

| Sr# | SampleId | ClientID | QcType   | Date           | Comment         | Operator | Status |
|-----|----------|----------|----------|----------------|-----------------|----------|--------|
| 1   | S0       | S0       | CAL1     | 08/21/25 13:58 |                 | Jaswal   | OK     |
| 2   | S1       | S1       | CAL2     | 08/21/25 14:03 |                 | Jaswal   | OK     |
| 3   | S2       | S2       | CAL3     | 08/21/25 14:07 |                 | Jaswal   | OK     |
| 4   | S3       | S3       | CAL4     | 08/21/25 14:11 |                 | Jaswal   | OK     |
| 5   | S4       | S4       | CAL5     | 08/21/25 14:15 |                 | Jaswal   | OK     |
| 6   | S5       | S5       | CAL6     | 08/21/25 14:19 |                 | Jaswal   | OK     |
| 7   | ICV01    | ICV01    | ICV      | 08/21/25 14:24 | ICV Fail for Pb | Jaswal   | OK     |
| 8   | LLICV01  | LLICV01  | LLICV    | 08/21/25 14:33 |                 | Jaswal   | OK     |
| 9   | ICB01    | ICB01    | ICB      | 08/21/25 14:37 |                 | Jaswal   | OK     |
| 10  | CRI01    | CRI01    | CRDL     | 08/21/25 14:41 |                 | Jaswal   | OK     |
| 11  | ICSA01   | ICSA01   | ICSA     | 08/21/25 14:45 |                 | Jaswal   | OK     |
| 12  | ICSAB01  | ICSAB01  | ICSAB    | 08/21/25 14:50 |                 | Jaswal   | OK     |
| 13  | ICSADL   | ICSADL   | ICSA     | 08/21/25 14:54 |                 | Jaswal   | OK     |
| 14  | ICSABDL  | ICSABDL  | ICSAB    | 08/21/25 14:59 |                 | Jaswal   | OK     |
| 15  | CCV01    | CCV01    | CCV      | 08/21/25 15:03 |                 | Jaswal   | OK     |
| 16  | CCB01    | CCB01    | CCB      | 08/21/25 15:07 |                 | Jaswal   | OK     |
| 17  | LR-2     | LR-2     | HIGH STD | 08/21/25 15:16 |                 | Jaswal   | OK     |
| 18  | LR-3     | LR-3     | HIGH STD | 08/21/25 15:20 |                 | Jaswal   | OK     |

Instrument ID: P4

**Daily Analysis Runlog For Sequence/QC Batch ID # LB136917**

|              |        |              |                       |
|--------------|--------|--------------|-----------------------|
| Review By    | jaswal | Review On    | 8/22/2025 5:35:45 AM  |
| Supervise By | Janvi  | Supervise On | 8/22/2025 12:08:42 PM |

| STD. NAME     | STD REF.#                                       |
|---------------|-------------------------------------------------|
| ICAL Standard | MP86640,MP86656,MP86653,MP86643,MP86642,MP86641 |
| ICV Standard  | MP86752,MP86656                                 |
| CCV Standard  | MP86646                                         |
| ICSA Standard | MP86651,MP86753                                 |
| CRI Standard  | MP86656                                         |
| LCS Standard  |                                                 |
| Chk Standard  | MP86647,MP86648                                 |

|    |             |                |          |                |                                               |        |        |
|----|-------------|----------------|----------|----------------|-----------------------------------------------|--------|--------|
| 19 | PB169331BL  | PB169331BL     | MB       | 08/21/25 15:25 |                                               | Jaswal | OK     |
| 20 | PB169331BS  | PB169331BS     | LCS      | 08/21/25 15:34 |                                               | Jaswal | OK     |
| 21 | PB169325TB  | PB169325TB     | MB       | 08/21/25 15:43 |                                               | Jaswal | OK     |
| 22 | Q2840-05    | 0804-SOIL      | SAM      | 08/21/25 15:52 |                                               | Jaswal | OK     |
| 23 | Q2857-12    | 72-12002       | SAM      | 08/21/25 16:01 |                                               | Jaswal | OK     |
| 24 | Q2883-04    | RBR2520553     | SAM      | 08/21/25 16:10 |                                               | Jaswal | OK     |
| 25 | LR-1        | LR-1           | HIGH STD | 08/21/25 16:14 |                                               | Jaswal | OK     |
| 26 | Q2909-02    | 4065           | SAM      | 08/21/25 16:19 |                                               | Jaswal | OK     |
| 27 | CCV02       | CCV02          | CCV      | 08/21/25 16:23 |                                               | Jaswal | OK     |
| 28 | CCB02       | CCB02          | CCB      | 08/21/25 16:27 |                                               | Jaswal | OK     |
| 29 | Q2909-02DUP | 4065DUP        | DUP      | 08/21/25 16:32 |                                               | Jaswal | OK     |
| 30 | Q2909-02L   | 4065L          | SD       | 08/21/25 16:36 |                                               | Jaswal | OK     |
| 31 | Q2909-02MS  | 4065MS         | MS       | 08/21/25 16:40 |                                               | Jaswal | OK     |
| 32 | Q2909-02MSD | 4065MSD        | MSD      | 08/21/25 16:45 |                                               | Jaswal | OK     |
| 33 | Q2909-02A   | 4065A          | PS       | 08/21/25 16:49 | 0.1ml of each M6004 and M6017 in 10ml sample. | Jaswal | OK     |
| 34 | PB169324BL  | PB169324BL     | MB       | 08/21/25 16:53 | Not use                                       | Jaswal | Not Ok |
| 35 | PB169324BS  | PB169324BS     | LCS      | 08/21/25 16:57 | Not use                                       | Jaswal | Not Ok |
| 36 | Q2814-23    | TW-17M-W       | SAM      | 08/21/25 17:01 |                                               | Jaswal | OK     |
| 37 | Q2916-01    | EO-03-08202025 | SAM      | 08/21/25 17:06 |                                               | Jaswal | OK     |

Instrument ID: P4

**Daily Analysis Runlog For Sequence/QC Batch ID # LB136917**

|              |        |              |                       |
|--------------|--------|--------------|-----------------------|
| Review By    | jaswal | Review On    | 8/22/2025 5:35:45 AM  |
| Supervise By | Janvi  | Supervise On | 8/22/2025 12:08:42 PM |

| STD. NAME     | STD REF.#                                       |
|---------------|-------------------------------------------------|
| ICAL Standard | MP86640,MP86656,MP86653,MP86643,MP86642,MP86641 |
| ICV Standard  | MP86752,MP86656                                 |
| CCV Standard  | MP86646                                         |
| ICSA Standard | MP86651,MP86753                                 |
| CRI Standard  | MP86656                                         |
| LCS Standard  |                                                 |
| Chk Standard  | MP86647,MP86648                                 |

|    |             |                          |     |                |         |        |        |
|----|-------------|--------------------------|-----|----------------|---------|--------|--------|
| 38 | Q2904-02    | 002 35th Ave (JULY)      | SAM | 08/21/25 17:10 | Not use | Jaswal | Not Ok |
| 39 | CCV03       | CCV03                    | CCV | 08/21/25 17:14 |         | Jaswal | OK     |
| 40 | CCB03       | CCB03                    | CCB | 08/21/25 17:18 |         | Jaswal | OK     |
| 41 | Q2902-04    | OUTFALL-DSN-002          | SAM | 08/21/25 17:22 | Not use | Jaswal | Not Ok |
| 42 | Q2902-04DUP | OUTFALL-DSN-002D         | DUP | 08/21/25 17:26 | Not use | Jaswal | Not Ok |
| 43 | Q2902-04L   | OUTFALL-DSN-002L         | SD  | 08/21/25 17:31 | Not use | Jaswal | Not Ok |
| 44 | Q2902-04MS  | OUTFALL-DSN-002M         | MS  | 08/21/25 17:35 | Not use | Jaswal | Not Ok |
| 45 | Q2902-04MSD | OUTFALL-DSN-002M         | MSD | 08/21/25 17:39 | Not use | Jaswal | Not Ok |
| 46 | Q2902-04A   | OUTFALL-DSN-002A         | PS  | 08/21/25 17:43 | Not use | Jaswal | Not Ok |
| 47 | Q2902-01    | OUTFALL-DSN-001          | SAM | 08/21/25 17:47 |         | Jaswal | OK     |
| 48 | Q2904-01    | 001 willets Pt Blvd(july | SAM | 08/21/25 17:51 | Not use | Jaswal | Not Ok |
| 49 | CCV04       | CCV04                    | CCV | 08/21/25 18:04 |         | Jaswal | OK     |
| 50 | CCB04       | CCB04                    | CCB | 08/21/25 18:08 |         | Jaswal | OK     |
| 51 | Q2915-01    | BRIDGE-WEST              | SAM | 08/21/25 18:12 |         | Jaswal | OK     |
| 52 | Q2915-03    | BRIDGE-EAST              | SAM | 08/21/25 18:16 |         | Jaswal | OK     |
| 53 | Q2917-01    | OR-02-082025             | SAM | 08/21/25 18:20 |         | Jaswal | OK     |
| 54 | Q2919-01    | OK-02-08202025           | SAM | 08/21/25 18:24 |         | Jaswal | OK     |
| 55 | Q2919-01DUP | OK-02-08202025DUP        | DUP | 08/21/25 18:28 |         | Jaswal | OK     |
| 56 | Q2919-01L   | OK-02-08202025L          | SD  | 08/21/25 18:33 |         | Jaswal | OK     |
| 57 | Q2919-01MS  | OK-02-08202025MS         | MS  | 08/21/25 18:37 |         | Jaswal | OK     |

Instrument ID: P4

**Daily Analysis Runlog For Sequence/QC Batch ID # LB136917**

|                  |                                                 |              |                       |
|------------------|-------------------------------------------------|--------------|-----------------------|
| Review By        | jaswal                                          | Review On    | 8/22/2025 5:35:45 AM  |
| Supervise By     | Janvi                                           | Supervise On | 8/22/2025 12:08:42 PM |
| <b>STD. NAME</b> | <b>STD REF.#</b>                                |              |                       |
| ICAL Standard    | MP86640,MP86656,MP86653,MP86643,MP86642,MP86641 |              |                       |
| ICV Standard     | MP86752,MP86656                                 |              |                       |
| CCV Standard     | MP86646                                         |              |                       |
| ICSA Standard    | MP86651,MP86753                                 |              |                       |
| CRI Standard     | MP86656                                         |              |                       |
| LCS Standard     |                                                 |              |                       |
| Chk Standard     | MP86647,MP86648                                 |              |                       |

|    |             |                   |     |                |                                               |        |    |
|----|-------------|-------------------|-----|----------------|-----------------------------------------------|--------|----|
| 58 | Q2919-01MSD | OK-02-08202025MSD | MSD | 08/21/25 18:41 |                                               | Jaswal | OK |
| 59 | Q2919-01A   | OK-02-08202025A   | PS  | 08/21/25 18:44 | 0.1ml of each M6004 and M6017 in 10ml sample. | Jaswal | OK |
| 60 | Q2909-01    | 4065              | SAM | 08/21/25 18:48 |                                               | Jaswal | OK |
| 61 | CCV05       | CCV05             | CCV | 08/21/25 18:52 |                                               | Jaswal | OK |
| 62 | CCB05       | CCB05             | CCB | 08/21/25 18:57 |                                               | Jaswal | OK |

**Instrument ID:** P4

**Daily Analysis Runlog For Sequence/QC Batch ID # LB136940**

|              |              |
|--------------|--------------|
| Review By    | Review On    |
| Supervise By | Supervise On |

| STD. NAME                                                                                                      | STD REF.# |
|----------------------------------------------------------------------------------------------------------------|-----------|
| ICAL Standard<br>ICV Standard<br>CCV Standard<br>ICSA Standard<br>CRI Standard<br>LCS Standard<br>Chk Standard |           |

| Sr# | SampleId | ClientID | QcType   | Date           | Comment | Operator | Status |
|-----|----------|----------|----------|----------------|---------|----------|--------|
| 1   | S0       | S0       | CAL1     | 08/22/25 11:12 |         | Jaswal   | OK     |
| 2   | S1       | S1       | CAL2     | 08/22/25 11:16 |         | Jaswal   | OK     |
| 3   | S2       | S2       | CAL3     | 08/22/25 11:20 |         | Jaswal   | OK     |
| 4   | S3       | S3       | CAL4     | 08/22/25 11:24 |         | Jaswal   | OK     |
| 5   | S4       | S4       | CAL5     | 08/22/25 11:28 |         | Jaswal   | OK     |
| 6   | S5       | S5       | CAL6     | 08/22/25 11:33 |         | Jaswal   | OK     |
| 7   | ICV01    | ICV01    | ICV      | 08/22/25 11:37 |         | Jaswal   | OK     |
| 8   | LLICV01  | LLICV01  | LLICV    | 08/22/25 11:45 |         | Jaswal   | OK     |
| 9   | ICB01    | ICB01    | ICB      | 08/22/25 11:50 |         | Jaswal   | OK     |
| 10  | CRI01    | CRI01    | CRDL     | 08/22/25 11:56 |         | Jaswal   | OK     |
| 11  | ICSA01   | ICSA01   | ICSA     | 08/22/25 12:00 |         | Jaswal   | OK     |
| 12  | ICSAB01  | ICSAB01  | ICSAB    | 08/22/25 12:04 |         | Jaswal   | OK     |
| 13  | ICSADL   | ICSADL   | ICSA     | 08/22/25 12:09 |         | Jaswal   | OK     |
| 14  | ICSABDL  | ICSABDL  | ICSAB    | 08/22/25 12:13 |         | Jaswal   | OK     |
| 15  | CCV01    | CCV01    | CCV      | 08/22/25 12:18 |         | Jaswal   | OK     |
| 16  | CCB01    | CCB01    | CCB      | 08/22/25 12:22 |         | Jaswal   | OK     |
| 17  | LR-2     | LR-2     | HIGH STD | 08/22/25 12:31 |         | Jaswal   | OK     |
| 18  | LR-3     | LR-3     | HIGH STD | 08/22/25 12:35 |         | Jaswal   | OK     |

Instrument ID: P4

**Daily Analysis Runlog For Sequence/QC Batch ID # LB136940**

|              |              |
|--------------|--------------|
| Review By    | Review On    |
| Supervise By | Supervise On |

| STD. NAME                                                                                                      | STD REF.# |
|----------------------------------------------------------------------------------------------------------------|-----------|
| ICAL Standard<br>ICV Standard<br>CCV Standard<br>ICSA Standard<br>CRI Standard<br>LCS Standard<br>Chk Standard |           |

|    |             |                          |          |                |  |        |    |
|----|-------------|--------------------------|----------|----------------|--|--------|----|
| 19 | PB169324BL  | PB169324BL               | MB       | 08/22/25 12:45 |  | Jaswal | OK |
| 20 | Q2902-04    | OUTFALL-DSN-002          | SAM      | 08/22/25 13:07 |  | Jaswal | OK |
| 21 | Q2902-04DUP | OUTFALL-DSN-002D         | DUP      | 08/22/25 13:14 |  | Jaswal | OK |
| 22 | LR-1        | LR-1                     | HIGH STD | 08/22/25 13:19 |  | Jaswal | OK |
| 23 | Q2902-04L   | OUTFALL-DSN-002L         | SD       | 08/22/25 13:27 |  | Jaswal | OK |
| 24 | Q2902-04MS  | OUTFALL-DSN-002M         | MS       | 08/22/25 13:32 |  | Jaswal | OK |
| 25 | CCV02       | CCV02                    | CCV      | 08/22/25 13:36 |  | Jaswal | OK |
| 26 | CCB02       | CCB02                    | CCB      | 08/22/25 13:40 |  | Jaswal | OK |
| 27 | Q2902-04MSD | OUTFALL-DSN-002M         | MSD      | 08/22/25 13:44 |  | Jaswal | OK |
| 28 | Q2902-04A   | OUTFALL-DSN-002A         | PS       | 08/22/25 13:48 |  | Jaswal | OK |
| 29 | Q2904-01    | 001 willets Pt Blvd(july | SAM      | 08/22/25 13:52 |  | Jaswal | OK |
| 30 | Q2904-02    | 002 35th Ave (JULY)      | SAM      | 08/22/25 13:56 |  | Jaswal | OK |
| 31 | PB169324BS  | PB169324BS               | LCS      | 08/22/25 14:00 |  | Jaswal | OK |
| 32 | PB169338BL  | PB169338BL               | MB       | 08/22/25 14:04 |  | Jaswal | OK |
| 33 | PB169338BS  | PB169338BS               | LCS      | 08/22/25 14:09 |  | Jaswal | OK |
| 34 | Q2909-03    | 4066                     | SAM      | 08/22/25 14:13 |  | Jaswal | OK |
| 35 | Q2909-04    | 4067                     | SAM      | 08/22/25 14:17 |  | Jaswal | OK |
| 36 | Q2909-04DUP | 4067DUP                  | DUP      | 08/22/25 14:21 |  | Jaswal | OK |
| 37 | CCV03       | CCV03                    | CCV      | 08/22/25 14:25 |  | Jaswal | OK |
| 38 | CCB03       | CCB03                    | CCB      | 08/22/25 14:30 |  | Jaswal | OK |



Instrument ID: P4

**Daily Analysis Runlog For Sequence/QC Batch ID # LB136940**

|              |              |
|--------------|--------------|
| Review By    | Review On    |
| Supervise By | Supervise On |

| STD. NAME                                                                                                      | STD REF.# |
|----------------------------------------------------------------------------------------------------------------|-----------|
| ICAL Standard<br>ICV Standard<br>CCV Standard<br>ICSA Standard<br>CRI Standard<br>LCS Standard<br>Chk Standard |           |

|    |             |             |     |                |         |        |          |
|----|-------------|-------------|-----|----------------|---------|--------|----------|
| 39 | Q2909-04L   | 4067L       | SD  | 08/22/25 14:34 |         | Jaswal | OK       |
| 40 | Q2909-04A   | 4067A       | PS  | 08/22/25 14:46 |         | Jaswal | OK       |
| 41 | PB169332BL  | PB169332BL  | MB  | 08/22/25 14:50 |         | Jaswal | OK       |
| 42 | PB169332BS  | PB169332BS  | LCS | 08/22/25 14:55 |         | Jaswal | OK       |
| 43 | Q2927-01    | A6121M      | SAM | 08/22/25 14:59 |         | Jaswal | OK       |
| 44 | Q2934-01    | ENV-SW01    | SAM | 08/22/25 15:03 |         | Jaswal | OK       |
| 45 | Q2934-03    | ENV-SW03    | SAM | 08/22/25 15:07 |         | Jaswal | OK       |
| 46 | Q2909-04MS  | 4067MS      | MS  | 08/22/25 15:12 |         | Jaswal | OK       |
| 47 | Q2909-04MSD | 4067MSD     | MSD | 08/22/25 15:22 |         | Jaswal | OK       |
| 48 | Q2934-04    | ENV-SW04    | SAM | 08/22/25 15:26 | Na high | Jaswal | Dilution |
| 49 | CCV04       | CCV04       | CCV | 08/22/25 15:44 |         | Jaswal | OK       |
| 50 | CCB04       | CCB04       | CCB | 08/22/25 15:48 |         | Jaswal | OK       |
| 51 | Q2934-02    | ENV-SW02    | SAM | 08/22/25 15:53 | NOT USE | Jaswal | Not Ok   |
| 52 | Q2934-02DUP | ENV-SW02DUP | DUP | 08/22/25 15:57 | NOT USE | Jaswal | Not Ok   |
| 53 | Q2934-02L   | ENV-SW02L   | SD  | 08/22/25 16:01 | NOT USE | Jaswal | Not Ok   |
| 54 | Q2934-02MS  | ENV-SW02MS  | MS  | 08/22/25 16:05 | NOT USE | Jaswal | Not Ok   |
| 55 | Q2934-02MSD | ENV-SW02MSD | MSD | 08/22/25 16:09 | NOT USE | Jaswal | Not Ok   |
| 56 | Q2934-02A   | ENV-SW02A   | PS  | 08/22/25 16:13 | NOT USE | Jaswal | Not Ok   |
| 57 | PB169358BL  | PB169358BL  | MB  | 08/22/25 16:17 | NOT USE | Jaswal | Not Ok   |
| 58 | PB169358BS  | PB169358BS  | LCS | 08/22/25 16:21 | NOT USE | Jaswal | Not Ok   |

Instrument ID: P4

**Daily Analysis Runlog For Sequence/QC Batch ID # LB136940**

|                                                                                                                |                  |
|----------------------------------------------------------------------------------------------------------------|------------------|
| Review By                                                                                                      | Review On        |
| Supervise By                                                                                                   | Supervise On     |
| <b>STD. NAME</b>                                                                                               | <b>STD REF.#</b> |
| ICAL Standard<br>ICV Standard<br>CCV Standard<br>ICSA Standard<br>CRI Standard<br>LCS Standard<br>Chk Standard |                  |

|    |            |            |     |                |                 |        |          |
|----|------------|------------|-----|----------------|-----------------|--------|----------|
| 59 | Q2934-04DL | ENV-SW04DL | SAM | 08/22/25 16:25 | 3x for Na       | Jaswal | Confirms |
| 60 | CCV05      | CCV05      | CCV | 08/22/25 16:30 | CCV fail for TI | Jaswal | OK       |
| 61 | CCB05      | CCB05      | CCB | 08/22/25 16:34 |                 | Jaswal | OK       |

## Prep Standard - Chemical Standard Summary

**Order ID :** Q2902

**Test :** Metals Group3

**Prepbatch ID :** PB169324,

**Sequence ID/Qc Batch ID:** LB136917, LB136917, LB136940, LB136940,

**Standard ID :**

MP85156, MP86640, MP86641, MP86642, MP86643, MP86646, MP86647, MP86648, MP86651, MP86653, MP86655, MP86656, MP86752, MP86753,

**Chemical ID :**

M5467, M5658, M5697, M5748, M5798, M5799, M5800, M5801, M5805, M5814, M5816, M5820, M5962, M5969, M5970, M5979, M5985, M5998, M6021, M6023, M6027, M6028, M6030, M6032, M6058, M6076, M6077, M6086, M6128, M6137, M6140, M6142, M6144, M6145, M6146, M6151, M6158, M6159, M6162, M6163, M6164, M6165, M6171, M6174, M6176, M6177, M6178, M6179, M6180, M6181, M6182, M6184, W3112,

## Metals STANDARD PREPARATION LOG

| <u>Recipe ID</u> | <u>NAME</u> | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|-------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 170              | 1:1HCL      | <a href="#">MP85156</a> | 04/07/2025       | 09/06/2025             | Kareem Khairalla   | None           | None             | Sarabjit Jaswal      |
|                  |             |                         |                  |                        |                    |                |                  | 04/07/2025           |

**FROM** 1250.00000ml of M6151 + 1250.00000ml of W3112 = Final Quantity: 2500.000 ml

| <u>Recipe ID</u> | <u>NAME</u>                   | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u>         | <u>Supervised By</u> |
|------------------|-------------------------------|-------------------------|------------------|------------------------|--------------------|----------------|--------------------------|----------------------|
| 902              | ICP AES CAL BLK ( SO/ICB/CCB) | <a href="#">MP86640</a> | 08/06/2025       | 08/27/2025             | Janvi Patel        | None           | METALS_PIPETTE_1 (ICP A) | Sarabjit Jaswal      |
|                  |                               |                         |                  |                        |                    |                |                          | 08/07/2025           |

**FROM** 125.00000ml of M6151 + 2350.00000ml of W3112 + 25.00000ml of M6162 = Final Quantity: 500.000 ml



| <u>Recipe ID</u>                                                                                                                                                                                                                                                    | <u>NAME</u>          | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u>       | <u>Supervised By</u> |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------------|----------------------|
| 907                                                                                                                                                                                                                                                                 | ICP AES STD S ( S5 ) | <a href="#">MP86641</a> | 08/06/2025       | 08/27/2025             | Janvi Patel        | None           | METALS_PIPETTE_1 (ICP) | Sarabjit Jaswal      |
| <p><b>FROM</b> 5.00000ml of M5467 + 5.00000ml of M5820 + 5.00000ml of M5969 + 5.00000ml of M5970 + 5.00000ml of M5998 + 5.00000ml of M6077 + 5.00000ml of M6146 + 5.00000ml of M6174 + 5.00000ml of M6176 + 455.00000ml of MP86640 = Final Quantity: 500.000 ml</p> |                      |                         |                  |                        |                    |                |                        |                      |

| <u>Recipe ID</u>                                                                              | <u>NAME</u>    | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u>       | <u>Supervised By</u> |
|-----------------------------------------------------------------------------------------------|----------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------------|----------------------|
| 910                                                                                           | ICP AES STD S4 | <a href="#">MP86642</a> | 08/06/2025       | 08/27/2025             | Janvi Patel        | None           | METALS_PIPETTE_1 (ICP) | Sarabjit Jaswal      |
| <p><b>FROM</b> 50.00000ml of MP86640 + 50.00000ml of MP86641 = Final Quantity: 100.000 ml</p> |                |                         |                  |                        |                    |                |                        |                      |



| <u>Recipe ID</u> | <u>NAME</u>    | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u>       | <u>Supervised By</u>          |
|------------------|----------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------------|-------------------------------|
| 909              | ICP AES STD S3 | <a href="#">MP86643</a> | 08/06/2025       | 08/27/2025             | Janvi Patel        | None           | METALS_PIPETTE_1 (ICP) | Sarabjit Jaswal<br>08/07/2025 |

| FROM                                          |                   | A)         |
|-----------------------------------------------|-------------------|------------|
| 25.00000ml of MP86641 + 75.00000ml of MP86640 | = Final Quantity: | 100.000 ml |

| <u>Recipe ID</u> | <u>NAME</u>      | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u>       | <u>Supervised By</u>          |
|------------------|------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------------|-------------------------------|
| 911              | ICP AES CCV SOLN | <a href="#">MP86646</a> | 08/06/2025       | 08/27/2025             | Janvi Patel        | None           | METALS_PIPETTE_1 (ICP) | Sarabjit Jaswal<br>08/07/2025 |

| FROM                                          |                              | A) |
|-----------------------------------------------|------------------------------|----|
| 50.00000ml of MP86640 + 50.00000ml of MP86641 | = Final Quantity: 100.000 ml |    |



| <u>Recipe ID</u>                                                                                                                                                             | <u>NAME</u>          | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u>       | <u>Supervised By</u> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------------|----------------------|
| 919                                                                                                                                                                          | ICP AES INTERNAL STD | <a href="#">MP86647</a> | 08/06/2025       | 08/27/2025             | Janvi Patel        | None           | METALS_PIPETTE_1 (ICP) | Sarabjit Jaswal      |
| <p style="text-align: right;">A)</p> <p><b>FROM</b> 1.00000ml of M6179 + 10.00000ml of M5985 + 1969.00000ml of W3112 + 20.00000ml of M6162 = Final Quantity: 2000.000 ml</p> |                      |                         |                  |                        |                    |                |                        |                      |

| <u>Recipe ID</u>                                                                               | <u>NAME</u>        | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u>       | <u>Supervised By</u> |
|------------------------------------------------------------------------------------------------|--------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------------|----------------------|
| 903                                                                                            | ICP AES RINSE SOLN | <a href="#">MP86648</a> | 08/06/2025       | 08/27/2025             | Janvi Patel        | None           | METALS_PIPETTE_1 (ICP) | Sarabjit Jaswal      |
| <p><b>FROM</b> 200.00000ml of M6162 + 9800.00000ml of W3112 = Final Quantity: 10000.000 ml</p> |                    |                         |                  |                        |                    |                |                        |                      |



| <u>Recipe ID</u> | <u>NAME</u>       | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u>      | <u>Supervised By</u>          |
|------------------|-------------------|-------------------------|------------------|------------------------|--------------------|----------------|-----------------------|-------------------------------|
| 904              | ICP AES ICSA SOLN | <a href="#">MP86651</a> | 08/06/2025       | 08/27/2025             | Janvi Patel        | None           | METALS_PIPETTE_1 (ICP | Sarabjit Jaswal<br>08/07/2025 |

| FROM                                                                   |  | A) |
|------------------------------------------------------------------------|--|----|
| 5.00000ml of M6182 + 45.00000ml of MP86640 = Final Quantity: 50.000 ml |  |    |

| <u>Recipe ID</u> | <u>NAME</u>    | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u>      | <u>Supervised By</u>                             |
|------------------|----------------|-------------------------|------------------|------------------------|--------------------|----------------|-----------------------|--------------------------------------------------|
| 3913             | ICP AES STD S2 | <a href="#">MP86653</a> | 08/06/2025       | 08/27/2025             | Janvi Patel        | None           | METALS_PIPETTE_1 (ICP | <div>Sarabjit Jaswal</div> <div>08/07/2025</div> |

| FROM                                                                     |  | A) |
|--------------------------------------------------------------------------|--|----|
| 4.00000ml of MP86641 + 46.00000ml of MP86640 = Final Quantity: 50.000 ml |  |    |



## Metals STANDARD PREPARATION LOG

[illegible]

| <u>Recipe ID</u>                                                                            | <u>NAME</u>             | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u>      | <u>Supervised By</u> |
|---------------------------------------------------------------------------------------------|-------------------------|-------------------------|------------------|------------------------|--------------------|----------------|-----------------------|----------------------|
| 2951                                                                                        | ICP AES S1/CRI WORK STD | <a href="#">MP86656</a> | 08/06/2025       | 08/27/2025             | Janvi Patel        | None           | METALS_PIPETTE_1 (ICP | Sarabjit Jaswal      |
| <p><b>FROM</b> 1.00000ml of MP86655 + 49.00000ml of MP86640 = Final Quantity: 50.000 ml</p> |                         |                         |                  |                        |                    |                |                       |                      |



| <u>Recipe ID</u>                                                                                                                                              | <u>NAME</u>    | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u>       | <u>Supervised By</u>          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------------|-------------------------------|
| 4163                                                                                                                                                          | NEW ICV-060925 | <a href="#">MP86752</a> | 08/06/2025       | 08/27/2025             | Janvi Patel        | None           | METALS_PIPETTE_1 (ICP) | Sarabjit Jaswal<br>08/14/2025 |
| <p><b>FROM</b>      0.20000ml of M6058 + 0.40000ml of M6163 + 0.40000ml of M6164 + 0.40000ml of M6165 + 48.60000ml of MP86640 = Final Quantity: 50.000 ml</p> |                |                         |                  |                        |                    |                |                        |                               |

| <u>Recipe ID</u> | <u>NAME</u>                                                                                                       | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u>         | <u>Supervised By</u>          |
|------------------|-------------------------------------------------------------------------------------------------------------------|-------------------------|------------------|------------------------|--------------------|----------------|--------------------------|-------------------------------|
| 3494             | ICP AES ICSAB SOLN-1                                                                                              | <a href="#">MP86753</a> | 08/06/2025       | 08/27/2025             | Janvi Patel        | None           | METALS_PIPETTE_1 (ICP A) | Sarabjit Jaswal<br>08/14/2025 |
| <u>FROM</u>      | 0.05000ml of M6076 + 5.00000ml of M6182 + 5.00000ml of M6184 + 39.95000ml of MP86640 = Final Quantity: 100.000 ml |                         |                  |                        |                    |                |                          |                               |

## CHEMICAL RECEIPT LOG BOOK

| Supplier                 | ItemCode / ItemName            | Lot #  | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|--------------------------|--------------------------------|--------|-----------------|-------------------------|-----------------------------|----------------|
| Absolute Standards, Inc. | 57058 / Cerium, 1000PPM, 100ML | 020623 | 02/06/2026      | 03/06/2023 / bin        | 03/01/2023 / bin            | M5467          |

| Supplier                 | ItemCode / ItemName                    | Lot #  | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|--------------------------|----------------------------------------|--------|-----------------|-------------------------|-----------------------------|----------------|
| Absolute Standards, Inc. | 58024 / Chromium, Cr, 500 ml, 1000 PPM | 060523 | 06/05/2026      | 08/28/2023 / jaswal     | 08/25/2023 / jaswal         | M5658          |

| Supplier                 | ItemCode / ItemName          | Lot #  | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|--------------------------|------------------------------|--------|-----------------|-------------------------|-----------------------------|----------------|
| Absolute Standards, Inc. | 58029 / Cu, 1000 PPM, 500 ml | 102523 | 10/25/2026      | 04/03/2024 / jaswal     | 10/27/2023 / jaswal         | M5697          |

| Supplier                 | ItemCode / ItemName   | Lot #  | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|--------------------------|-----------------------|--------|-----------------|-------------------------|-----------------------------|----------------|
| Absolute Standards, Inc. | / Nickel (Ni) 1000PPM | 091223 | 09/12/2026      | 01/02/2024 / bin        | 12/20/2023 / jaswal         | M5748          |

| 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          |

## CHEMICAL RECEIPT LOG BOOK

| 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. | 58120 / Ca, 10000 PPM, 500 ml | 122223 | 12/22/2026      | 04/17/2025 / Janvi      | 01/03/2024 / jaswal         | M5805          |

| Supplier                 | ItemCode / ItemName         | Lot #  | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|--------------------------|-----------------------------|--------|-----------------|-------------------------|-----------------------------|----------------|
| Absolute Standards, Inc. | 57005 / B, 1000 PPM, 125 ml | 071123 | 07/11/2026      | 03/26/2024 / Sohil      | 01/03/2024 / jaswal         | M5814          |

| Supplier                 | ItemCode / ItemName         | Lot #  | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|--------------------------|-----------------------------|--------|-----------------|-------------------------|-----------------------------|----------------|
| Absolute Standards, Inc. | 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. | 57015 / P, 1000 PPM, 125 ml | 091123 | 09/11/2026      | 05/01/2024 / jaswal     | 02/09/2024 / jaswal         | M5820          |

## CHEMICAL RECEIPT LOG BOOK

| 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. | 57016 / S, 1000 PPM, 125 ml | 122923 | 03/31/2026      | 03/31/2025 / kareem     | 06/11/2024 / Jaswal         | M5969          |

| Supplier                 | ItemCode / ItemName          | Lot #  | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|--------------------------|------------------------------|--------|-----------------|-------------------------|-----------------------------|----------------|
| Absolute Standards, Inc. | 57003 / Li, 1000 PPM, 125 ml | 061224 | 06/21/2027      | 07/01/2024 / Jaswal     | 07/01/2024 / Jaswal         | M5970          |

| Supplier           | ItemCode / ItemName                | Lot #       | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|--------------------|------------------------------------|-------------|-----------------|-------------------------|-----------------------------|----------------|
| Inorganic Ventures | CGTI1-1 / TITANIUM 125mL 1000ug/mL | T2-TI719972 | 08/05/2026      | 08/06/2025 / Janvi      | 02/22/2024 / Jaswal         | M5979          |

| 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-CAL-3 / CLP CAL SOLUTION #3, 125mL | T2-MEB727800 | 07/30/2026      | 07/30/2025 / Janvi      | 02/22/2024 / kareem         | M5998          |

## CHEMICAL RECEIPT LOG BOOK

| Supplier                 | ItemCode / ItemName         | Lot #  | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|--------------------------|-----------------------------|--------|-----------------|-------------------------|-----------------------------|----------------|
| Absolute Standards, Inc. | 57023 / V, 1000 PPM, 125 ml | 062424 | 06/24/2027      | 09/28/2024 / jaswal     | 08/05/2024 / Jaswal         | M6021          |

| Supplier                 | ItemCode / ItemName          | Lot #   | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|--------------------------|------------------------------|---------|-----------------|-------------------------|-----------------------------|----------------|
| Absolute Standards, Inc. | 57081 / TI, 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. | 57028 / Ni, 1000 PPM, 125 ml | 062024 | 06/20/2027      | 06/04/2025 / Janvi      | 08/05/2024 / Jaswal         | M6027          |

| Supplier                 | ItemCode / ItemName          | Lot #  | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|--------------------------|------------------------------|--------|-----------------|-------------------------|-----------------------------|----------------|
| Absolute Standards, Inc. | 57048 / Cd, 1000 PPM, 125 ml | 070124 | 07/01/2027      | 08/05/2024 / kareem     | 08/05/2024 / Jaswal         | M6028          |

| Supplier                 | ItemCode / ItemName          | Lot #  | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|--------------------------|------------------------------|--------|-----------------|-------------------------|-----------------------------|----------------|
| Absolute Standards, Inc. | 57047 / Ag, 1000 PPM, 125 ml | 122823 | 12/28/2026      | 08/05/2024 / kareem     | 08/05/2024 / Jaswal         | M6030          |

| Supplier                 | ItemCode / ItemName          | Lot #  | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|--------------------------|------------------------------|--------|-----------------|-------------------------|-----------------------------|----------------|
| Absolute Standards, Inc. | 57056 / Ba, 1000 PPM, 125 ml | 010924 | 01/09/2027      | 01/14/2025 / Jaswal     | 08/05/2024 / Jaswal         | M6032          |

## CHEMICAL RECEIPT LOG BOOK

| Supplier           | ItemCode / ItemName                                                    | Lot #        | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|--------------------|------------------------------------------------------------------------|--------------|-----------------|-------------------------|-----------------------------|----------------|
| Inorganic Ventures | CHEM-QC-4 /<br>CHEM-QC-4, Second Source, 1000 ug/ml, B, Mo, Si, Sn, Ti | V2-MEB746173 | 01/29/2026      | 01/29/2025 / JANVI      | 08/22/2024 / Jaswal         | M6058          |

| Supplier           | ItemCode / ItemName         | Lot #        | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|--------------------|-----------------------------|--------------|-----------------|-------------------------|-----------------------------|----------------|
| Inorganic Ventures | Z9651Q /<br>CHEM-CLP-4/.25L | V2-MEB746762 | 01/01/2026      | 01/01/2025 / kareem     | 09/19/2024 / kareem         | M6076          |

| Supplier           | ItemCode / ItemName         | Lot #        | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|--------------------|-----------------------------|--------------|-----------------|-------------------------|-----------------------------|----------------|
| Inorganic Ventures | Z9651Q /<br>CHEM-CLP-4/.25L | V2-MEB746762 | 09/06/2029      | 01/23/2025 / kareem     | 09/19/2024 / kareem         | M6077          |

| Supplier                 | ItemCode / ItemName                | Lot #  | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|--------------------------|------------------------------------|--------|-----------------|-------------------------|-----------------------------|----------------|
| Absolute Standards, Inc. | 58120 / Calcium, 500 ml, 10000 PPM | 082324 | 08/23/2027      | 03/06/2025 / JANVI      | 10/14/2024 / jaswal         | M6086          |

| 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 | 101124 | 10/11/2027      | 01/13/2025 / kareem     | 01/13/2025 / kareem         | M6128          |

| Supplier           | ItemCode / ItemName               | Lot #       | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|--------------------|-----------------------------------|-------------|-----------------|-------------------------|-----------------------------|----------------|
| Inorganic Ventures | CGSI1-1 / SILICON 125mL 1000ug/mL | V2-SI744713 | 07/10/2029      | 01/14/2025 / Jaswal     | 10/03/2024 / Jaswal         | M6137          |

## 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 | 011025 | 01/10/2028      | 06/25/2025 / Janvi      | 01/13/2025 / Jaswal         | M6140          |

| Supplier                 | ItemCode / ItemName          | Lot #  | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|--------------------------|------------------------------|--------|-----------------|-------------------------|-----------------------------|----------------|
| Absolute Standards, Inc. | 58119 / K, 10000 PPM, 500 ml | 103024 | 10/30/2027      | 05/06/2025 / JANVI      | 01/13/2025 / Jaswal         | M6142          |

| 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 | 072424 | 07/24/2027      | 01/23/2025 / kareem     | 01/13/2025 / Jaswal         | M6144          |

| 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 | 121724 | 12/17/2027      | 02/04/2025 /            | 01/13/2025 / Jaswal         | M6145          |

| 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 | 071724 | 07/17/2027      | 01/31/2025 / kareem     | 10/18/2024 / kareem         | M6146          |

| 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) | 22G2862015 | 02/17/2026      | 02/18/2025 / Sagar      | 01/15/2025 / Sagar          | M6151          |



## CHEMICAL RECEIPT LOG BOOK

| Supplier         | ItemCode / ItemName                                   | Lot #      | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|------------------|-------------------------------------------------------|------------|-----------------|-------------------------|-----------------------------|----------------|
| Seidler Chemical | BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L) | 24D1062002 | 09/09/2025      | 03/10/2025 / Eman       | 02/02/2025 / Sagar          | M6158          |

| 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 | 011325 | 03/18/2026      | 03/18/2025 / kareem     | 02/09/2025 / kareem         | M6159          |

| 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) | 24H0162012 | 11/27/2025      | 05/27/2025 / Sagar      | 04/27/2025 / Sagar          | M6162          |

| Supplier           | ItemCode / ItemName                                   | Lot #        | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|--------------------|-------------------------------------------------------|--------------|-----------------|-------------------------|-----------------------------|----------------|
| Inorganic Ventures | QCP-CICV-1-125ML / EPA CLP ICP Verification Standard1 | V2-MEB744107 | 06/08/2026      | 06/09/2025 / jaswal     | 06/06/2025 / jaswal         | M6163          |

| Supplier           | ItemCode / ItemName                                   | Lot #        | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|--------------------|-------------------------------------------------------|--------------|-----------------|-------------------------|-----------------------------|----------------|
| Inorganic Ventures | QCP-CICV-2-125ML / EPA CLP ICP Verification Standard2 | U2-MEB733713 | 06/08/2026      | 06/09/2025 / jaswal     | 06/09/2025 / jaswal         | M6164          |

| Supplier           | ItemCode / ItemName                                   | Lot #        | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|--------------------|-------------------------------------------------------|--------------|-----------------|-------------------------|-----------------------------|----------------|
| Inorganic Ventures | QCP-CICV-3-125ML / EPA CLP ICP Verification Standard3 | V2-MEB749572 | 06/08/2026      | 06/09/2025 / jaswal     | 06/09/2025 / jaswal         | M6165          |

## 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 | 011525 | 01/15/2028      | 07/15/2025 /            | 02/13/2025 / Janvi          | M6171          |

| 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 | V2-MEB742428 | 07/31/2026      | 07/31/2025 / Janvi      | 05/05/2025 / Janvi          | M6174          |

| 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 | 092724 | 09/27/2027      | 08/06/2025 / Janvi      | 08/06/2025 / Janvi          | M6176          |

| Supplier                 | ItemCode / ItemName | Lot #  | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|--------------------------|---------------------|--------|-----------------|-------------------------|-----------------------------|----------------|
| Absolute Standards, Inc. | / Lead (Pb) 1000PPM | 031525 | 03/15/2028      | 08/06/2025 / Janvi      | 08/06/2025 / Janvi          | M6177          |

| Supplier                 | ItemCode / ItemName          | Lot #  | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|--------------------------|------------------------------|--------|-----------------|-------------------------|-----------------------------|----------------|
| Absolute Standards, Inc. | 57042 / Mo, 1000 PPM, 125 ml | 080528 | 08/05/2028      | 08/06/2025 / Janvi      | 08/06/2025 / Janvi          | M6178          |

| 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 | 08/05/2026      | 08/06/2025 / Janvi      | 06/02/2024 / Janvi          | M6179          |

## CHEMICAL RECEIPT LOG BOOK

| Supplier           | ItemCode / ItemName                                      | Lot #        | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|--------------------|----------------------------------------------------------|--------------|-----------------|-------------------------|-----------------------------|----------------|
| Inorganic Ventures | WW-LFS-1 / Laboratory Fortified Stock Solution 1, 125 ml | W2-MEB752149 | 02/05/2026      | 08/06/2025 / Janvi      | 07/22/2025 / Janvi          | M6180          |

| Supplier           | ItemCode / ItemName                                      | Lot #         | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|--------------------|----------------------------------------------------------|---------------|-----------------|-------------------------|-----------------------------|----------------|
| Inorganic Ventures | WW-LFS-2 / Laboratory Fortified Stock Solution 2, 125 ml | V2-MEB7433480 | 02/05/2026      | 08/06/2025 / Janvi      | 07/22/2025 / Janvi          | M6181          |

| 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 | 02/05/2026      | 08/06/2025 / Janvi      | 03/06/2024 / Janvi          | M6182          |

| 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 | 02/05/2026      | 08/06/2025 / Janvi      | 03/06/2024 / Janvi          | M6184          |

| 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          |



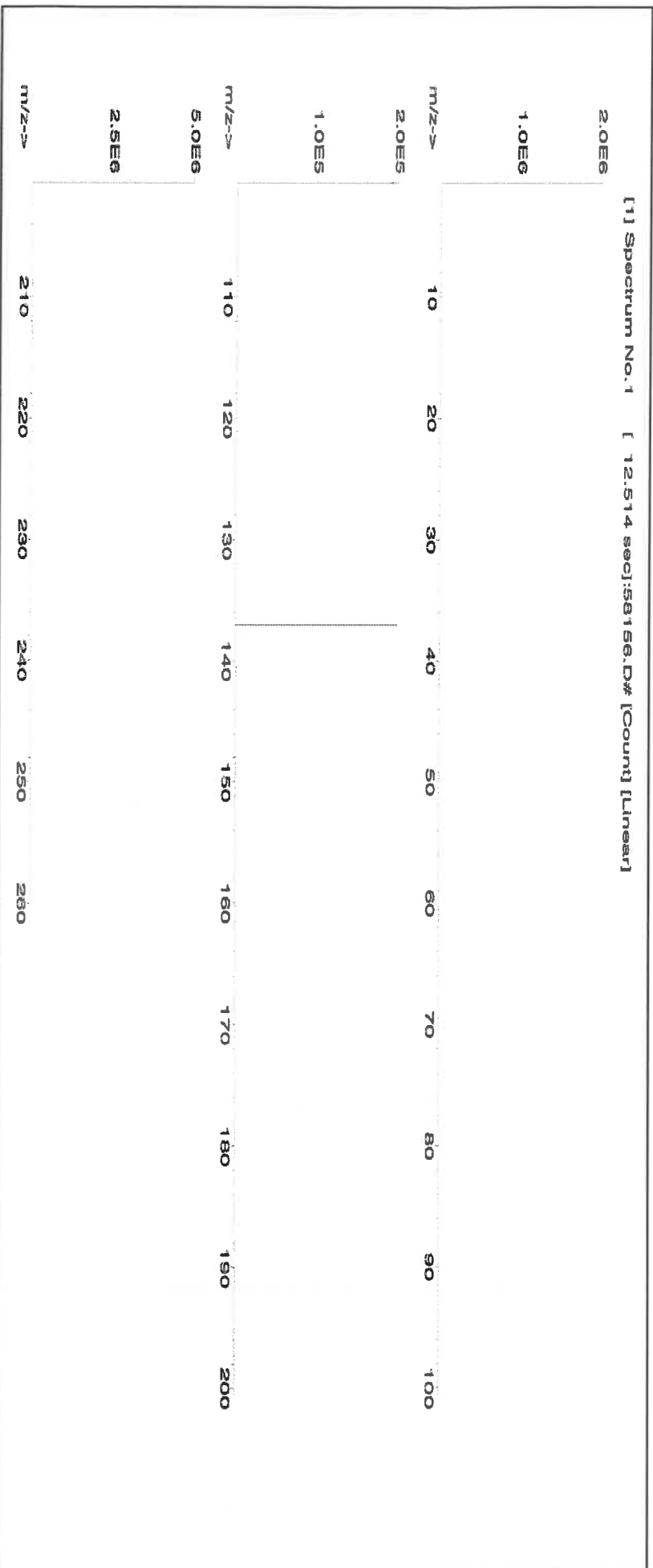
**CERTIFIED WEIGHT REPORT:**

|                |                   |        |
|----------------|-------------------|--------|
| Formulated By: | Giovanni Esposito | 010924 |
| Reviewed By:   | Pedro L. Rentas   | 010924 |

## SDS information

[illegible]

|                        |       |            |      |        |      |      |         |         |        |     |            |           |                   |       |
|------------------------|-------|------------|------|--------|------|------|---------|---------|--------|-----|------------|-----------|-------------------|-------|
| 1. Barium nitrate (Ba) | IN023 | BAD0201941 | 1000 | 99.999 | 0.10 | 52.3 | 3.82417 | 3.82441 | 1000.1 | 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:**

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 certified (+/-) 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).



**CERTIFIED WEIGHT REPORT:**

Lot # **58120** **122223** **Calcium (Ca)**  
**Part Number:**  
**Description:**  
**Expiration Date:** 122226  
**Recommended Storage:** Ambient (20 °C)  
**Nominal Concentration (µg/mL):** 10000  
**NIST Test Number:** 6UTB  
**Weight shown below was diluted to (mL):** 4000.0

**Solvent:** 24002546 Nitric Acid

**Lot #** **58120** **122223** **Calcium (Ca)**

**2%** **80.0** **Nitric Acid**

**(mL)**

|                          |                   |
|--------------------------|-------------------|
| <i>Giovanni Caporaso</i> |                   |
| Formulated By:           | Giovanni Esposito |
| Reviewed By:             | Pedro L. Renteria |
|                          | 122223            |

| Compound | Lot    | Nominal       | Purity | Uncertainty | Assay | Target     | Actual     | Actual        | Expanded    | SDS Information                        | NIST |
|----------|--------|---------------|--------|-------------|-------|------------|------------|---------------|-------------|----------------------------------------|------|
|          | Number | Conc. (µg/mL) | (%)    | Purity (%)  | (%)   | Weight (g) | Weight (g) | Conc. (µg/mL) | +/- (µg/mL) | (Solvent Safety Info. On Attached pg.) | SRM  |

1. Calcium carbonate (Ca) IN014 CAD0302383 10000 99.999 0.10 39.9 100.2525 100.2670 10001.4 20.0 471.34-1 5 mg/m3 off-ral >2000mg/kg 3109a

[1] Spectrum No.1 [ 12.514 sec]:58120.D# [Count] [Linear]





**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 | Pt | <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 | Bu | <0.02 | In | <0.02 | Mg | <0.01 | Os | <0.02 | Rh | <0.02 | Ag | <0.02 | Ti | <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 | 30    | 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 | Pr | <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 | Tl | <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 certified (+/-) 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).



**CERTIFIED WEIGHT REPORT:**

Part Number: **58120**  
Lot Number: **082324**  
Description: **Calcium (Ca)**

Solvent: **24002546 Nitric Acid**

Lot # **MC055 / MB086 / MB087**

Expiration Date: **082327**

Recommended Storage: **Ambient (20 °C)**

Nominal Concentration (µg/mL): **10000**

NIST Test Number: **6UTB**

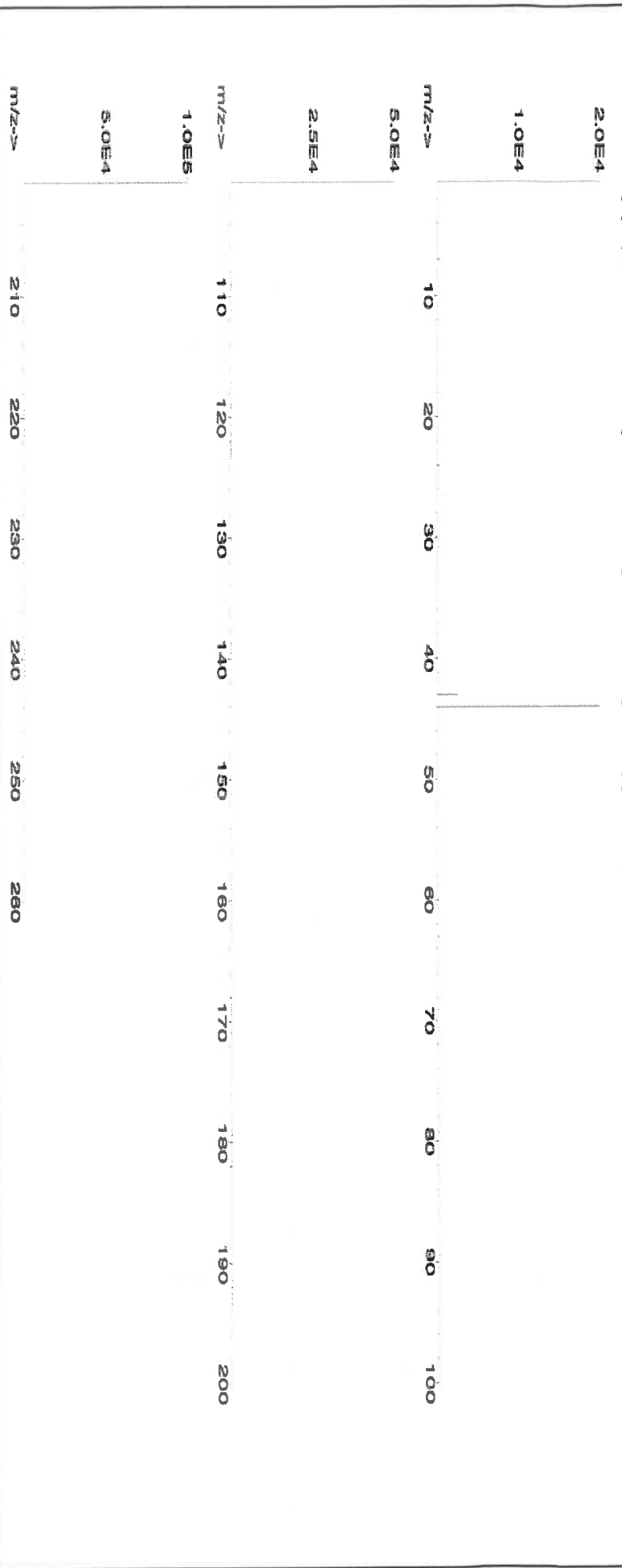
5E-05 Balance Uncertainty

Weight shown below was diluted to (mL): **4000.1** 0.15 Flask Uncertainty

|                          |                        |
|--------------------------|------------------------|
| <i>Giovanni Esposito</i> |                        |
| Formulated By:           | Giovanni Esposito      |
| Reviewed By:             | <i>Pedro L. Rentas</i> |
|                          | Pedro L. Rentas        |
|                          | 082324                 |

| SDS Information           |       |             |                       |            |                        |           |                   |                    |                      |
|---------------------------|-------|-------------|-----------------------|------------|------------------------|-----------|-------------------|--------------------|----------------------|
| Compound                  | RM#   | Lot Number  | Nominal Conc. (µg/mL) | Purity (%) | Uncertainty Purity (%) | Assay (%) | Target Weight (g) | Actual Weight (g)  | Actual Conc. (µg/mL) |
| 1. Calcium carbonate (Ca) | IN014 | CAD03202383 | 10000                 | 99.999     | 0.10                   | 39.9      | 100.2537          | 100.2656           | 10001.2              |
|                           |       |             |                       |            |                        |           | 20.0              | 471.34-1           | 5 mg/m3              |
|                           |       |             |                       |            |                        |           |                   | ort-rat >2000mg/kg | 3109a                |

[1] Spectrum No. 1 [12.514 sec]: 58120.D\* [Count] [Linear]







**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 | Pt | <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  | Tm | <0.02 | Yb | <0.02 |
| Be | <0.01 | Cr | <0.02 | Ga | <0.02 | Fe | 30    | Hg | <0.2  | P  | <0.02 | Ru | <0.02 | Sr | <0.02 | Sn | <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 | Su | <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 certified (+/-) 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).



**CERTIFIED WEIGHT REPORT:**

**Part Number:**  
**Lot Number:**  
**Description:**

57048  
070124  
Cadmium (Cd)

**Solvent:** 24002546 Nitric Acid

*R: 815/24*

**Lot #**

**2%** 40.0 Nitric Acid (mL)

**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

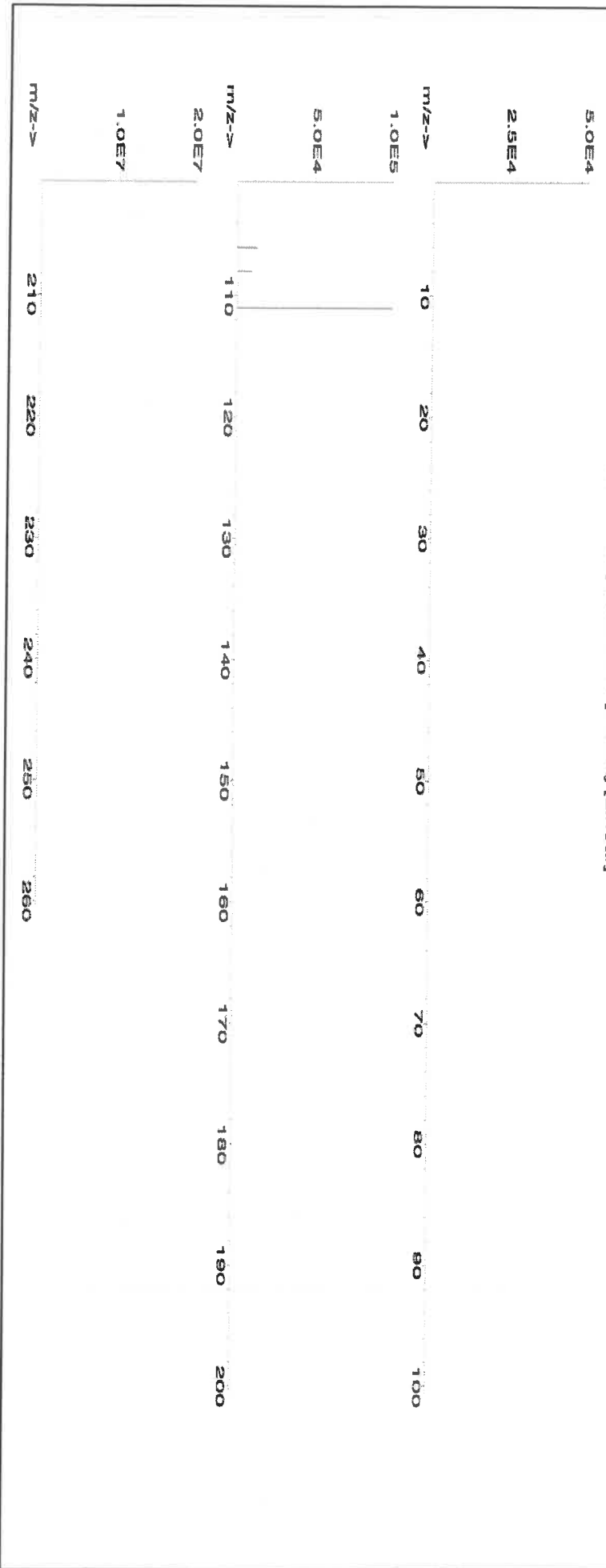
|                        |                 |
|------------------------|-----------------|
| <i>Aleah O'Brady</i>   |                 |
| Formulated By:         | Aleah O'Brady   |
|                        | 070124          |
| <i>Pedro L. Rentas</i> |                 |
| Reviewed By:           | Pedro L. Rentas |
|                        | 070124          |

**SDS Information**

| Compound | Lot Number | Nominal Conc. (µg/mL) | Purity (%) | Uncertainty (%) | Assay (%) | Target Weight (g) | Actual Weight (g) | Actual Conc. (µg/mL) | Expanded Uncertainty +/- (µg/mL) | CAS# | OSHA PEL (TWA) | LD50 | NIST SRM |
|----------|------------|-----------------------|------------|-----------------|-----------|-------------------|-------------------|----------------------|----------------------------------|------|----------------|------|----------|
|----------|------------|-----------------------|------------|-----------------|-----------|-------------------|-------------------|----------------------|----------------------------------|------|----------------|------|----------|

1. Cadmium nitrate tetrahydrate (Cd) IN024 CDM09221A1 1000 99.999 0.10 36.5 5.4797 5.4804 1000.1 2.0 10022-68-1 0.01 mg/m3 or-rat 60.2mg/kg 3108

[1] Spectrum No.1 [12.514 sec]:\$8148.D# [Count] [Linear]





**Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):**

**Trace Metals Verification by ICP-MS (µg/mL)**

|    |       |    |       |    |       |    |       |    |       |    |       |    |       |    |       |    |       |    |       |
|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|
| Al | <0.02 | Cd | <0.2  | Dy | <0.02 | Hf | <0.02 | Li | <0.02 | Ni | <0.02 | Pt | <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 | Ba | <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 | Cd | <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 | Pr | <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 certified (+/-) 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).



M5467 R: 03/01/23 (14)

CERTIFIED WEIGHT REPORT:

Part Number:  
Lot Number:  
Description:

57058  
020623  
Cerium (Ce)

Expiration Date:  
Recommended Storage:  
Nominal Concentration (µg/mL):  
NIST Test Number:

020626  
Ambient (20 °C)  
1000  
6UTB

Weight shown below was diluted to (mL):

1000.12 0.058 Balance Uncertainty  
Flask Uncertainty

Solvent: 21110221 Nitric Acid

2% 20.0 Nitric Acid (mL)

|                |                 |
|----------------|-----------------|
|                |                 |
| Formulated By: | Lawrence Barry  |
|                |                 |
| Reviewed By:   | Pedro L. Rentas |

Expanded Uncertainty  
+/- (µg/mL)

SDS Information

(Solvent Safety Info. On Attached pg.)  
LD50: OSHA PEL (TWA)

CAS#

Actual Conc. (µg/mL)

Actual Weight (g)

Target Weight (g)

Assay Purity (%)

Uncertainty (%)

Nominal Conc. (µg/mL)

Lot Number

RM#

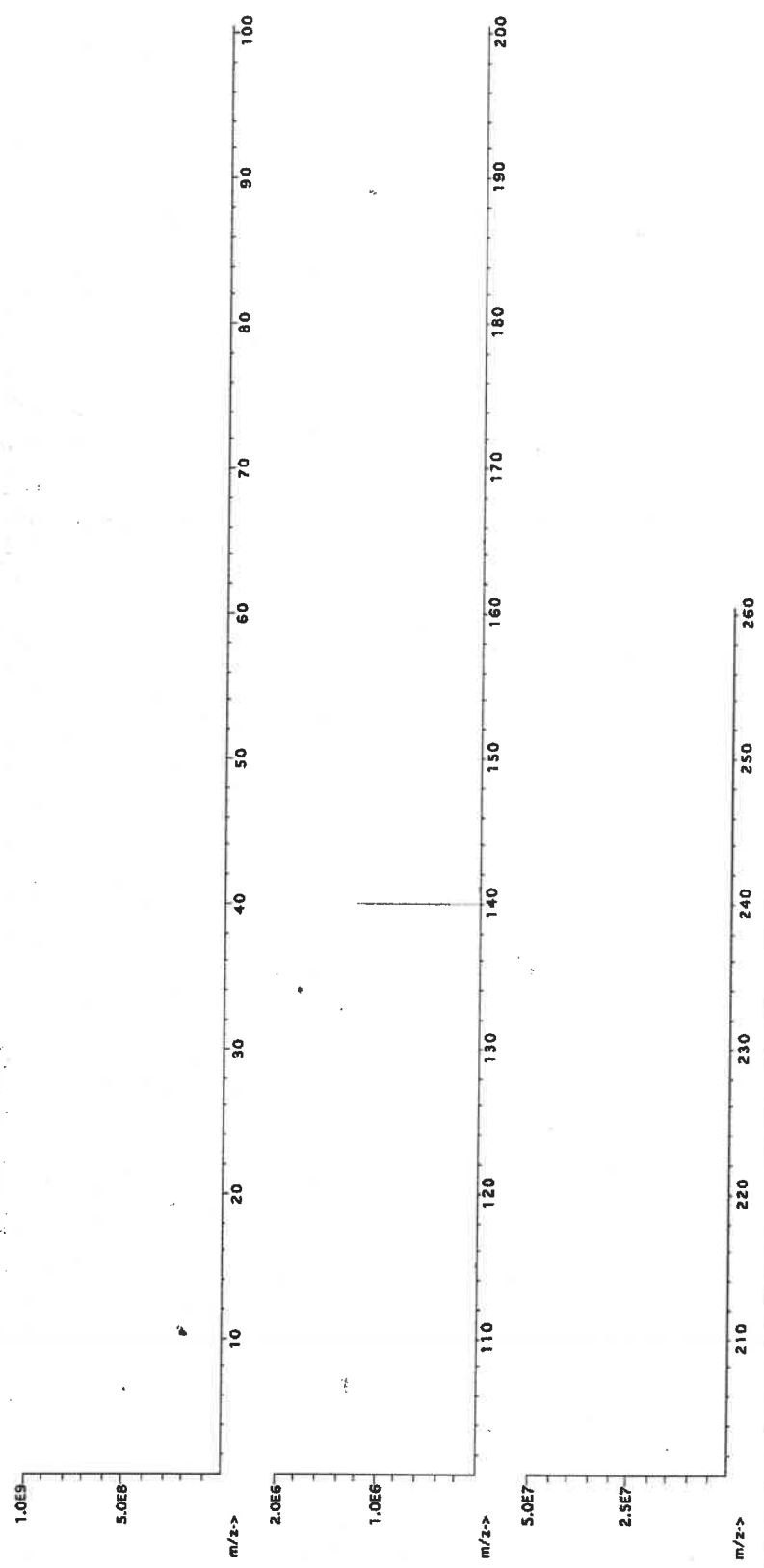
Compound

1. Cerium nitrate hexahydrate (Ce)

IN146 Z512CEB1

1000 99.999 0.10 32.8 3.04919 3.04921 1000.0 2.0 10294-41-4 NA NA NA

[1] Spectrum No.1 [ 43.472 sec]58158.D# [Count] [Linear]





**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 | Tc | <0.02 | U  | <0.02 |
| As | <0.2  | Ce | T     | Eu | <0.02 | In | <0.02 | Mg | <0.02 | 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 | <0.02 | 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 certified (+/-) 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).



**CERTIFIED WEIGHT REPORT:**

Part Number: 58024  
Lot Number: 060523  
Description: Chromium (Cr)

Lot #  
21110221  
Solvent: Nitric Acid

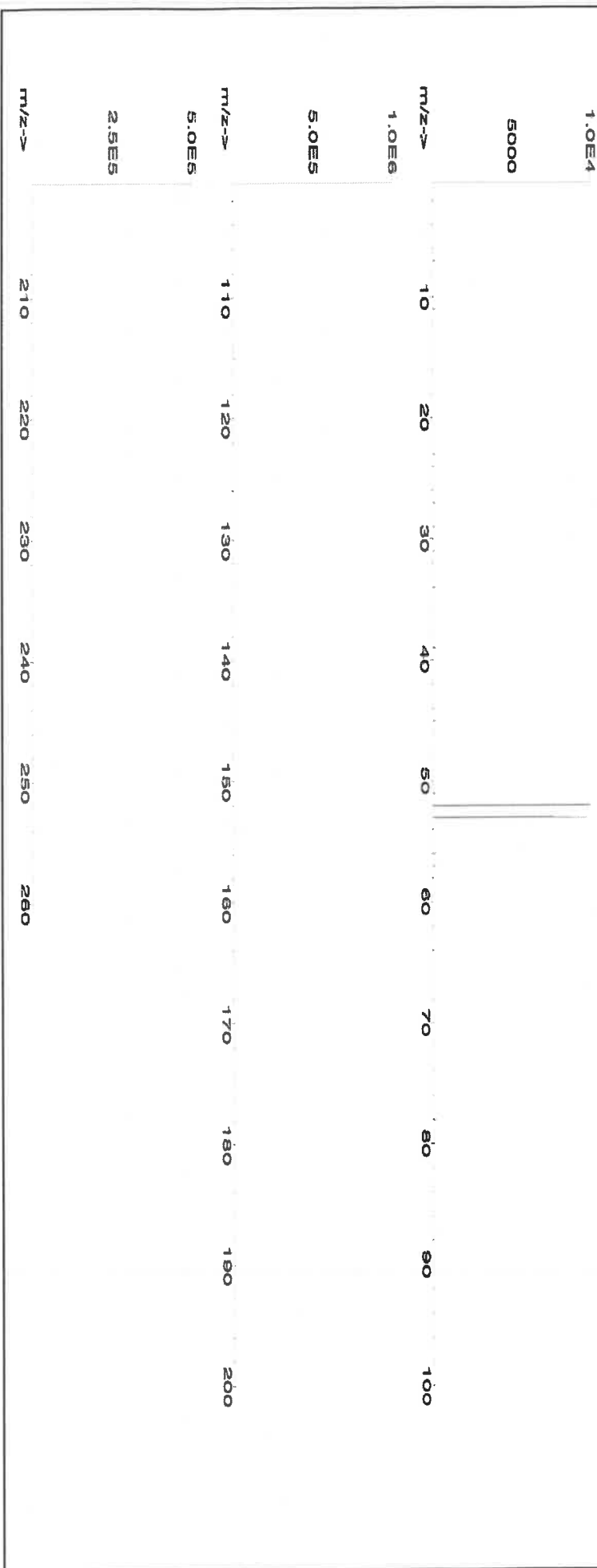
|                |                  |
|----------------|------------------|
|                |                  |
| Formulated By: | Lawrence Barry   |
|                | 060523           |
|                |                  |
| Reviewed By:   | Pedro L. Henrias |
|                | 060523           |

Expiration Date: 060526  
Recommended Storage: Ambient (20 °C)  
Nominal Concentration (µg/mL): 1000  
NIST Test Number: 6UTB  
Volume shown below was diluted to (mL): 2000.02  
5E-05 Balance Uncertainty  
0.058 Flask Uncertainty

| Compound | Part Number | Lot Number | Dilution Factor | Initial Vol. (mL) | Uncertainty (mL) | Nominal Conc. (µg/mL) | Initial Conc. (µg/mL) | Final Conc. (µg/mL) | Expanded Uncertainty +/- (µg/mL) | 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 or rat 3250 mg/kg 3112a

[1] Spectrum No.1 [31.393 sec]:57024.D# [Count] [Linear]





**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:**

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 certified (+/-) 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).



Certified Reference Material CRM

M5697 R: 10/27/23



ANAB ISO 17034 Accredited  
AR-1539 Certificate Number  
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 58029  
Lot Number: 102523  
Description: Copper (Cu)

Lot # 24002546  
Solvent: Nitric Acid

2.0% 40.0 Nitric Acid  
(mL)

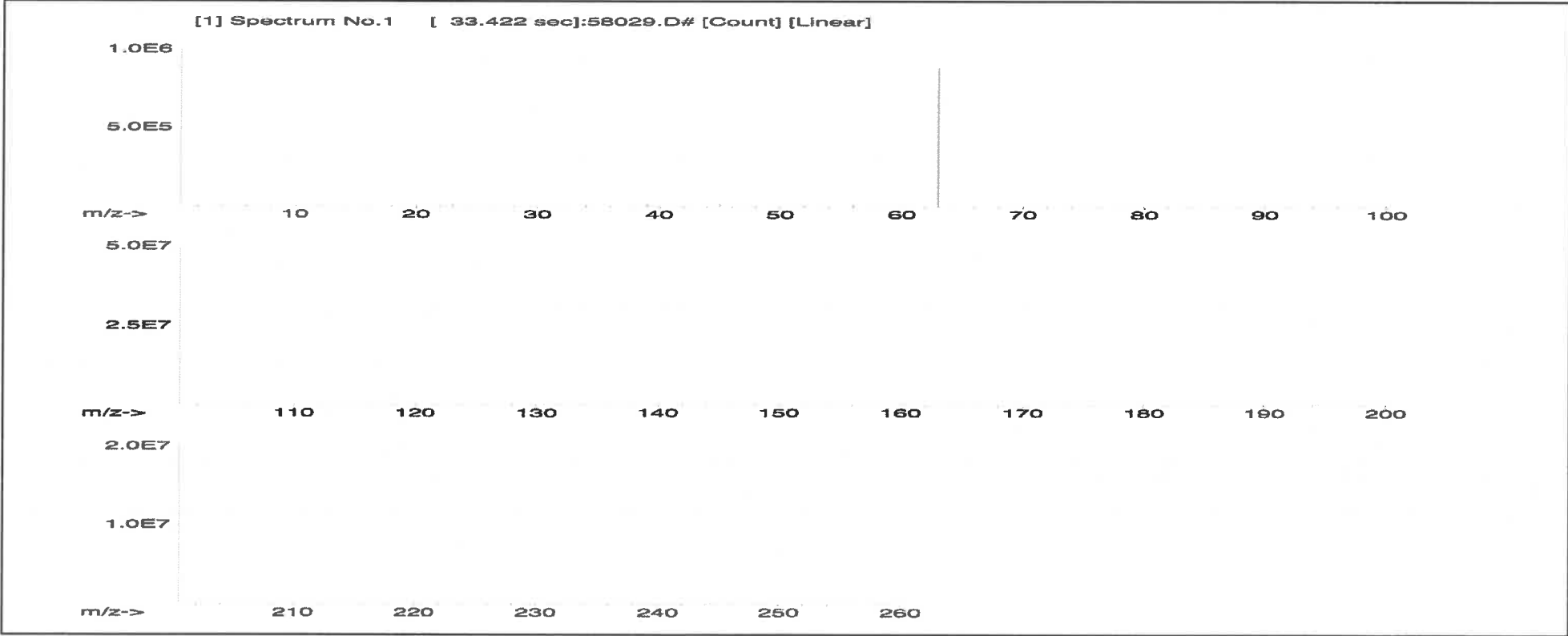
|                |                 |        |
|----------------|-----------------|--------|
|                |                 |        |
| Formulated By: | Benson Chan     | 102523 |
|                |                 |        |
| Reviewed By:   | Pedro L. Rentas | 102523 |

Expiration Date: 102526  
Recommended Storage: Ambient (20 °C)  
Nominal Concentration (µg/mL): 1000  
NIST Test Number: 6UTB

Volume shown below was diluted to (mL): 2000.02 5E-05 Balance Uncertainty  
0.058 Flask Uncertainty

| Expanded |             |            |                 |                   |                          |                       |                       |                     |                                  | SDS Information                        |                |          |
|----------|-------------|------------|-----------------|-------------------|--------------------------|-----------------------|-----------------------|---------------------|----------------------------------|----------------------------------------|----------------|----------|
|          |             |            |                 |                   |                          |                       |                       |                     |                                  | (Solvent Safety Info. On Attached pg.) |                |          |
| 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) | CAS#                                   | OSHA PEL (TWA) | NIST SRM |

|                                       |       |        |        |       |       |      |         |        |     |            |         |                        |
|---------------------------------------|-------|--------|--------|-------|-------|------|---------|--------|-----|------------|---------|------------------------|
| 1. Copper(II) nitrate trihydrate (Cu) | 58129 | 100223 | 0.1000 | 200.0 | 0.084 | 1000 | 10000.1 | 1000.0 | 2.2 | 10031-43-3 | 1 mg/m3 | ori-rat 794 mg/kg 3114 |
|---------------------------------------|-------|--------|--------|-------|-------|------|---------|--------|-----|------------|---------|------------------------|







**Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):**

**Trace Metals Verification by ICP-MS (µg/mL)**

|    |       |    |       |    |       |    |       |    |       |    |       |    |       |    |       |    |       |    |       |
|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|
| Al | <0.02 | Cd | <0.02 | Dy | <0.02 | Hf | <0.02 | Li | <0.02 | Ni | <0.02 | Pr | <0.02 | Se | <0.2  | Tb | <0.02 | W  | <0.02 |
| Sb | <0.02 | Ca | <0.2  | Er | <0.02 | Ho | <0.02 | Lu | <0.02 | Nb | <0.02 | Re | <0.02 | Si | <0.02 | Te | <0.02 | U  | <0.02 |
| As | <0.2  | Ce | <0.02 | Eu | <0.02 | In | <0.02 | Mg | <0.01 | Os | <0.02 | Rh | <0.02 | Ag | <0.02 | Tl | <0.02 | V  | <0.02 |
| Ba | <0.02 | Cs | <0.02 | Gd | <0.02 | Ir | <0.02 | Mn | <0.02 | Pd | <0.02 | Rb | <0.02 | Na | <0.2  | Th | <0.02 | Yb | <0.02 |
| Be | <0.01 | Cr | <0.02 | Ga | <0.02 | Fe | <0.2  | Hg | <0.2  | P  | <0.02 | Ru | <0.02 | Sr | <0.02 | Tm | <0.02 | Y  | <0.02 |
| Bi | <0.02 | Co | <0.02 | Ge | <0.02 | La | <0.02 | Mo | <0.02 | Pt | <0.02 | Sm | <0.02 | S  | <0.02 | Sn | <0.02 | Zn | <0.02 |
| B  | <0.02 | Cu | T     | Au | <0.02 | Pb | <0.02 | Nd | <0.02 | K  | <0.2  | Sc | <0.02 | Ta | <0.02 | Ti | <0.02 | Zr | <0.02 |

(T) = Target analyte

**Physical Characterization:**

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- \* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- \* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- \* 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 certified (+/-) 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).



**CERTIFIED WEIGHT REPORT:**

Part Number: **57028**  
Lot Number: **091223**  
Description: **Nickel (NI)**

Lot # **24002546** Solvent: **Nitric Acid**

Expiration Date: **091226**  
Recommended Storage: **Ambient (20 °C)**  
Nominal Concentration (µg/mL): **1000**

2.0% 40.0 (mL) Nitric Acid

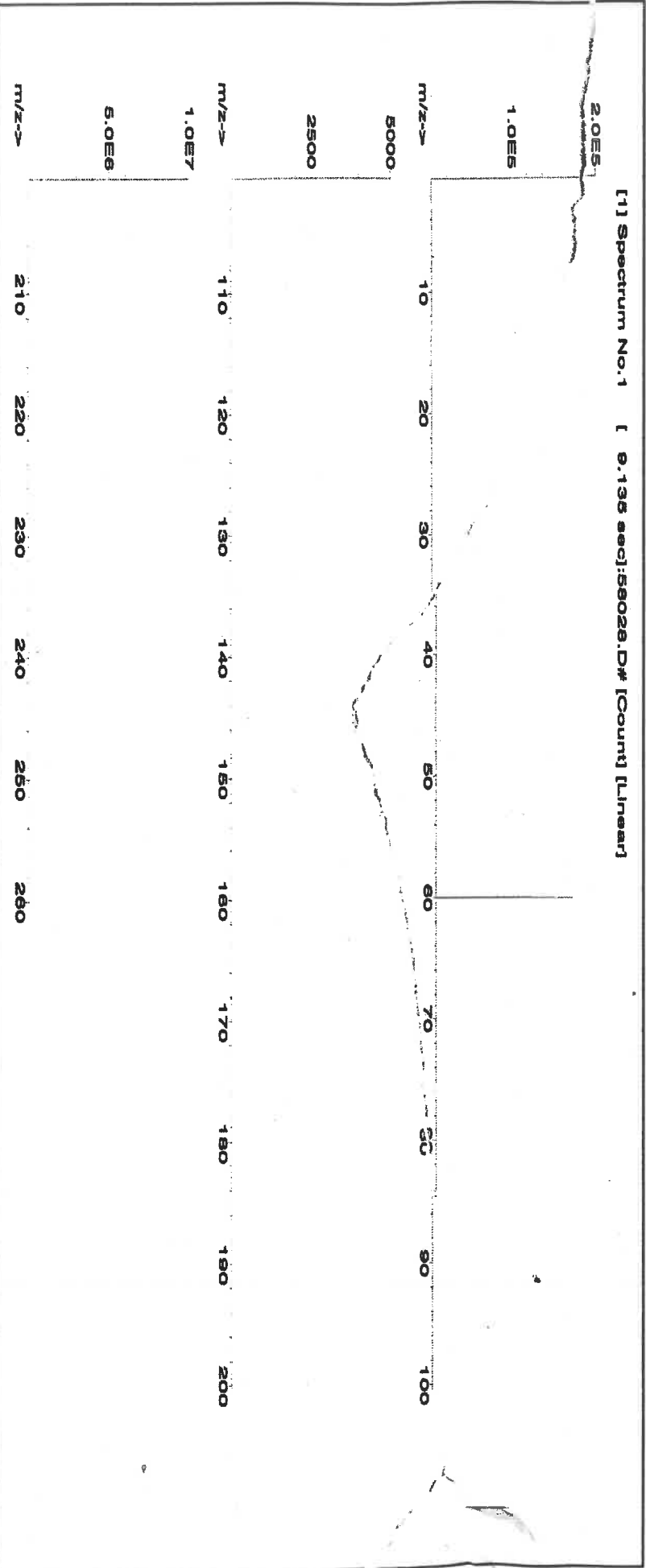
NIST Test Number: **6U7B**

Volume shown below was diluted to (mL): **2000.02** Balance Uncertainty: **5E-05** Flask Uncertainty: **0.056**

|                |                          |        |
|----------------|--------------------------|--------|
| Formulated By: | <i>Lawrence Barry</i>    | 091223 |
| Reviewed By:   | <i>Pedro L. Renteria</i> | 091223 |

| Compound | Part Number | Lot Number | Dilution Factor | Initial Vol. (mL) | Uncertainty (mL) | Pipette (mL) | Nominal Conc. (µg/mL) | Initial Conc. (µg/mL) | Final Conc. (µg/mL) | Expanded Uncertainty +/- (µg/mL) | CAS# | OSHA PEL (TWA) | LD50 | NIST SRM |
|----------|-------------|------------|-----------------|-------------------|------------------|--------------|-----------------------|-----------------------|---------------------|----------------------------------|------|----------------|------|----------|
|----------|-------------|------------|-----------------|-------------------|------------------|--------------|-----------------------|-----------------------|---------------------|----------------------------------|------|----------------|------|----------|

1. Nickel(II) nitrate hexahydrate (NI) 58128 062023 0.1000 200.0 0.084 1000 10000.4 1000.0 2.2 13478-00-7 1 mg/m3 or-rel 1620 mg/kg 3136





**Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):**

**Trace Metals Verification by ICP-MS (µg/mL)**

|    |       |    |       |    |       |    |       |    |       |    |       |    |       |    |       |    |       |    |       |
|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|
| Al | <0.02 | Cd | <0.02 | Dy | <0.02 | Hf | <0.02 | Li | <0.02 | Ni | T     | Pr | <0.02 | Se | <0.2  | Tb | <0.02 | W  | <0.02 |
| Sb | <0.02 | Ca | <0.2  | Er | <0.02 | Ho | <0.02 | Lu | <0.02 | Nb | <0.02 | Re | <0.02 | Si | <0.02 | Te | <0.02 | U  | <0.02 |
| As | <0.2  | Ce | <0.02 | Eu | <0.02 | In | <0.02 | Mg | <0.01 | Os | <0.02 | Rh | <0.02 | Ag | <0.02 | Tl | <0.02 | V  | <0.02 |
| Ba | <0.02 | Cs | <0.02 | Gd | <0.02 | Ir | <0.02 | Mn | <0.02 | Pd | <0.02 | Rb | <0.02 | Na | <0.2  | Tb | <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 certified (+/-) 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).



**CERTIFIED WEIGHT REPORT:**

**Part Number:** 57004  
**Lot Number:** 102523  
**Description:** Beryllium (Be)

**Lot #** 24002546  
**Solvent:** Nitric Acid

**Expiration Date:**

102526

2.0%

40.0 (mL)

Nitric Acid

**Recommended Storage:**

Ambient (20 °C)

**Nominal Concentration (µg/mL):**

1000

**NIST Test Number:**

6UTB

Volume shown below was diluted to (mL): 2000.02

5E-05 Balance Uncertainty

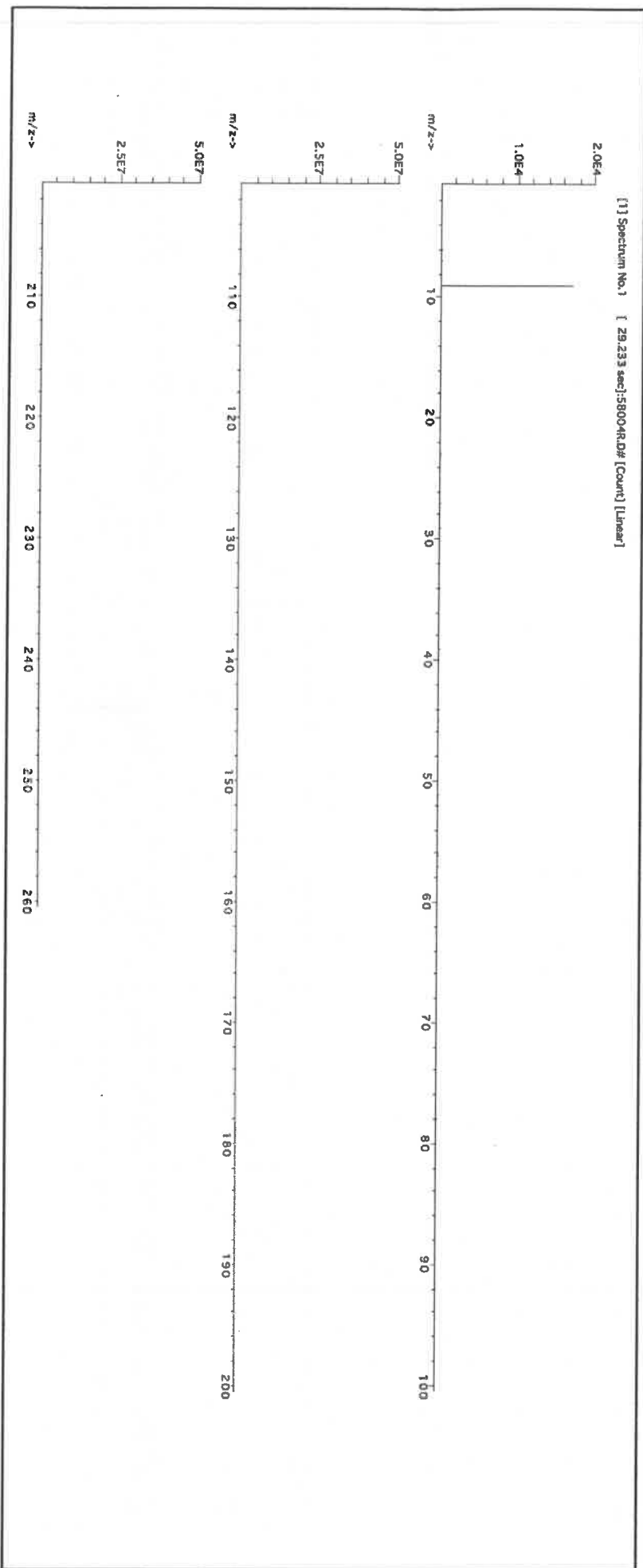
0.058 Flask Uncertainty

|                |                 |        |
|----------------|-----------------|--------|
| Formulated By: | Benson Chan     | 102523 |
| Reviewed By:   | Pedro L. Rentas | 102523 |

**SDS Information**

| Compound | Part Number | Lot | Dilution Factor | Initial Vol. (mL) | Uncertainty Pipette (mL) | Nominal Conc. (µg/mL) | Initial Conc. (µg/mL) | Final Conc. (µg/mL) | Expanded Uncertainty +/- (µg/mL) | 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 | 0.2µg/m3 | intrinsc-rat 3.16mg/kg | NA |
|---------------------------|-------|--------|--------|-------|-------|------|---------|--------|-----|------------|----------|------------------------|----|





## Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS ( $\mu\text{g/mL}$ )

|    |       |    |       |    |       |    |       |    |       |    |       |    |       |    |       |    |       |    |       |
|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|
| Al | <0.02 | Cd | <0.02 | Dy | <0.02 | Hf | <0.02 | Li | <0.02 | Ni | <0.02 | Pt | <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 | Tc | <0.02 | U  | <0.02 |
| As | <0.02 | Ce | <0.02 | Eu | <0.02 | In | <0.02 | Mg | <0.01 | Os | <0.02 | Rh | <0.02 | Ag | <0.02 | Ti | <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 | <0.02 | 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 | Ta | <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 | Tl | <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 certified (+/-) 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).



**Certified Reference Material CRM**



**CERTIFIED WEIGHT REPORT:**

Part Number: 57050  
Lot Number: 071123  
Description: Tin (Sn)

Solvents: 21110221 Nitric Acid  
22D0562008 Hydrochloric acid

Lot # R-02509124 M599

Expiration Date: 071126  
Recommended Storage: Ambient (20 °C)  
Nominal Concentration (µg/mL): 1000  
NIST Test Number: 6UTB

Weight shown below was diluted to (mL):

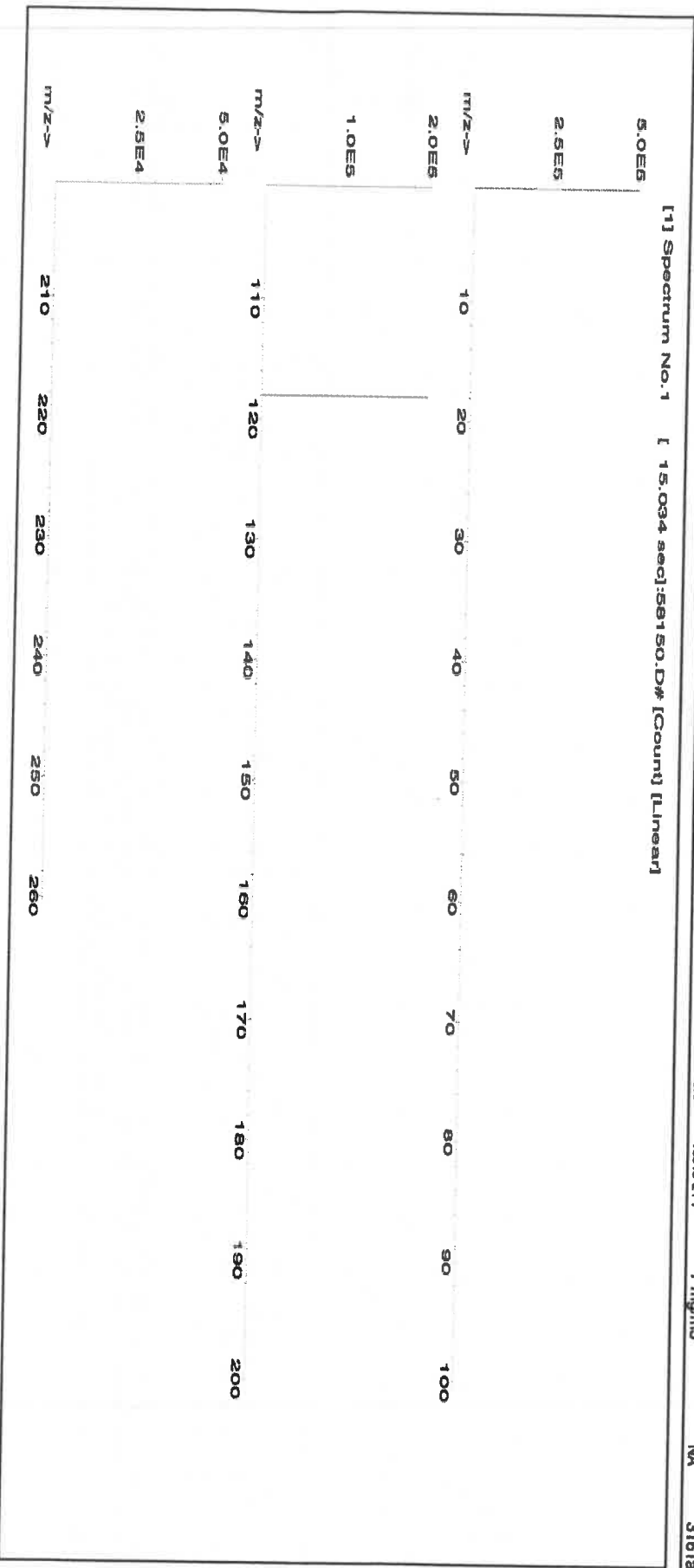
5E-05 Balance Uncertainty  
0.058 Flask Uncertainty

|                               |  |
|-------------------------------|--|
| Formulated By: Benson Chan    |  |
| 071123                        |  |
| Reviewed By: Pedro L. Rientas |  |
| 071123                        |  |

| Compound | Lot Number | Nominal Conc. (µg/mL) | Purity (%) | Uncertainty (%) | Assay (%) | Target Weight (g) | Actual Weight (g) | Actual Conc. (µg/mL) | Expanded Uncertainty +/- (µg/mL) | CAS# | OSHA PEL (TWA) | LD50 | NIST SRM |
|----------|------------|-----------------------|------------|-----------------|-----------|-------------------|-------------------|----------------------|----------------------------------|------|----------------|------|----------|
|----------|------------|-----------------------|------------|-----------------|-----------|-------------------|-------------------|----------------------|----------------------------------|------|----------------|------|----------|

1. Ammonium hexafluoroantimonate(V) (Sn) INO10 SMD042023A1 1000 99.999 0.10 44.2 1.13107 1.13286 1001.6 2.0 16919-24-7 7 mg/m3 NA 3161a

[1] Spectrum No. 1 [ 15.034 sec]:56150.D# [Count] [Linear]





**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 | Ti | <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 | Ta | <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 | Tl | <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 certified (+/-) 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).



R: 02/09/24 115800 (54)

CERTIFIED WEIGHT REPORT:

Part Number: 57027  
Lot Number: 091923  
Description: Cobalt (Co)

Expiration Date: 091926  
Recommended Storage: Ambient (20 °C)  
Nominal Concentration (µg/mL): 1000  
NIST Test Number: 6UTB  
Volume shown below was diluted to (mL): 2000.02

Lot # 24002546  
Solvent: Nitric Acid

2.0% Nitric Acid  
40.0 (mL)

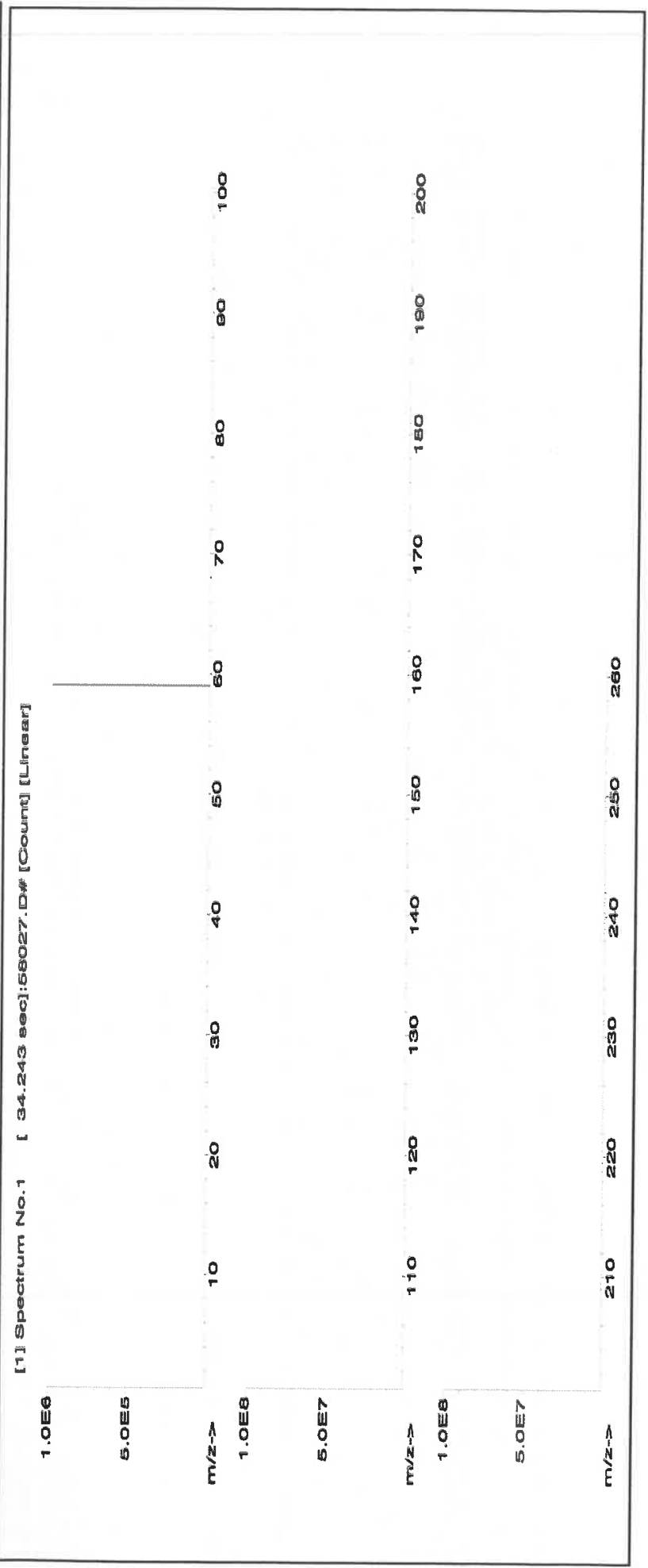
|                |                 |
|----------------|-----------------|
|                |                 |
| Formulated By: | Lawrence Barry  |
|                |                 |
| Reviewed By:   | Pedro L. Rentas |

SDS Information

Expanded Uncertainty +/- (µg/mL)  
Final Conc. (µg/mL)  
Initial Conc. (µg/mL)  
Nominal Conc. (µg/mL)  
Pipette (mL)  
Initial Vol. (mL)  
Dilution Factor  
Part Number  
Lot Number

(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 | <0.02 | Os | <0.01 | 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 | <0.2  | Na | <0.02 | 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     | 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 certified (+/-) 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).



**CERTIFIED WEIGHT REPORT:**

**Part Number:**  
**Lot Number:**  
**Description:**

**57033**  
**111323**  
**Arsenic (As)**

**Lot #**  
**Solvent:**

**24002546**  
**Nitric Acid**

**Expiration Date:**

**111326**

**2.0%**  
**80.0 (mL)**

**Nitric Acid**

**Recommended Storage:**

**Ambient (20 °C)**

**Nominal Concentration (µg/mL):**

**1000**

**NIST Test Number:**

**6UTB**

**Volume shown below was diluted to (mL):**

**4000.0**

**5E-05**

**Balance Uncertainty**  
**Flask Uncertainty**

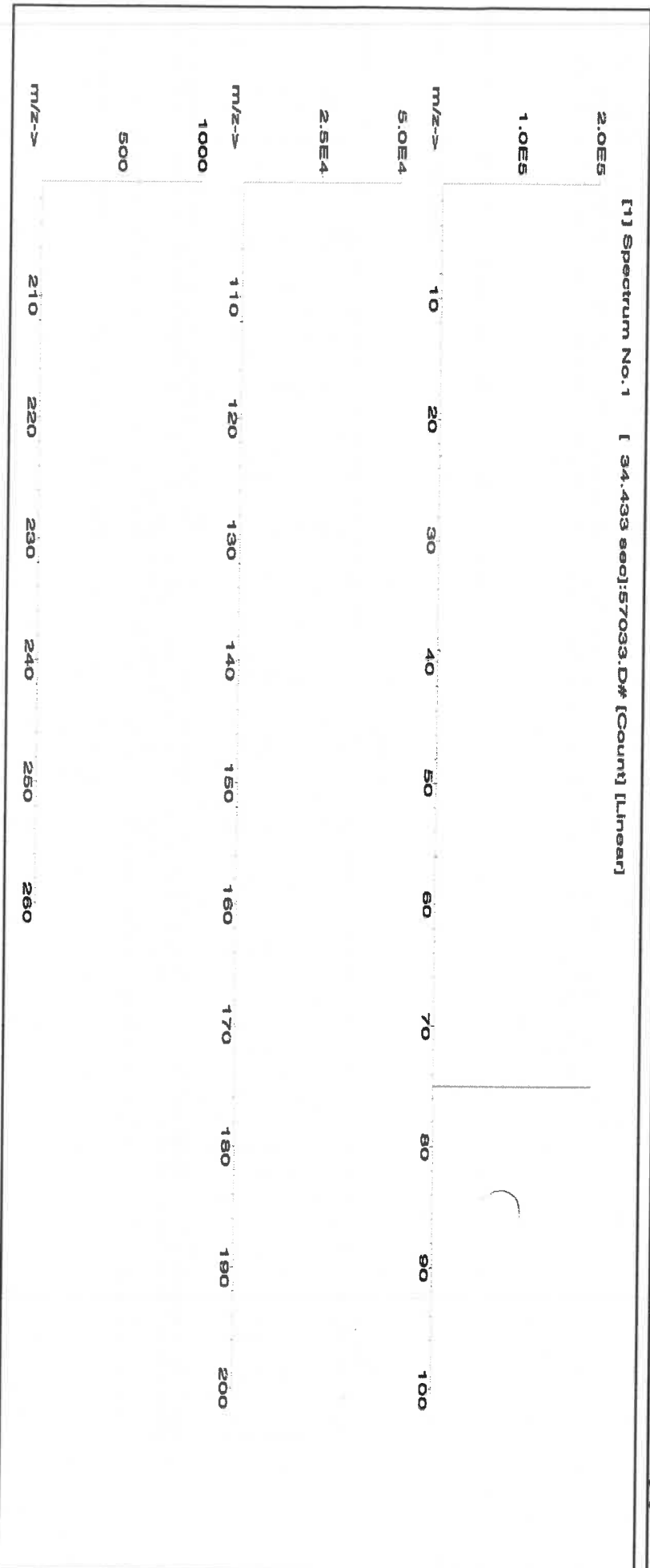
|                       |                        |
|-----------------------|------------------------|
|                       |                        |
| <b>Formulated By:</b> | <b>Lawrence Barry</b>  |
| <b>Reviewed By:</b>   |                        |
|                       | <b>Pedro L. Rendas</b> |
|                       | <b>111323</b>          |

**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 | or-rat 500 mg/kg | 3103a |
|-----------------|-------|--------|--------|-------|-------|------|---------|--------|-----|-----------|-----------|------------------|-------|

**[1] Spectrum No. 1 [ 34.433 sec]:57033.D# [Count] [Linear]**





**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  | Tl <sub>h</sub> | <0.02 | Yb | <0.02 |
| Bc | <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 <sup>*</sup> | <0.02 | La | <0.02 | Mo | <0.02 | Pt | <0.02 | Sm | <0.02 | S  | <0.02 | Sa              | <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 certified (+/-) 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).



**CERTIFIED WEIGHT REPORT:**

Part Number: **57005**  
Lot Number: **071123**  
Description: **Boron (B)**

Solvent: MKB0857V Ammonium hydroxide

Lot #

AI: 021009124 M5814

|                |                  |
|----------------|------------------|
|                |                  |
| Formulated By: | Benson Chan      |
| Reviewed By:   | Pedro L. Rientas |
|                | 071123           |

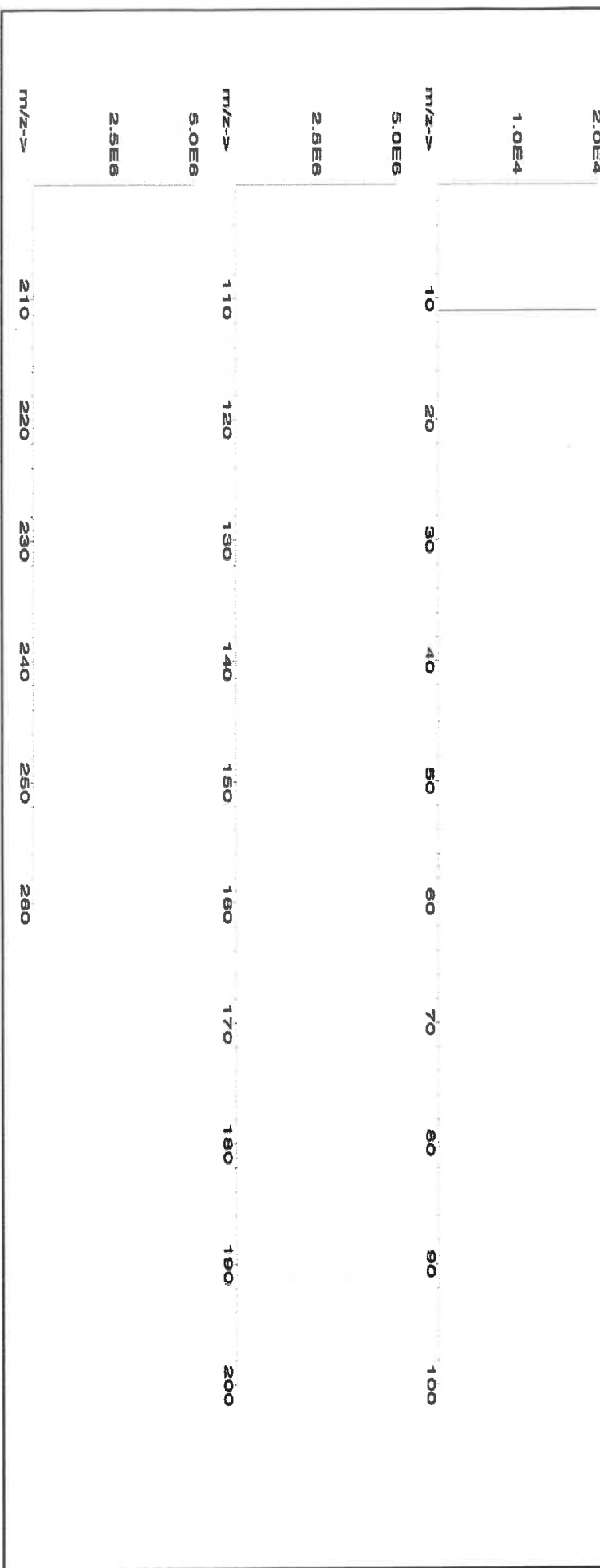
Expiration Date: 071126  
Recommended Storage: Ambient (20 °C)  
Nominal Concentration (µg/mL): 1000  
NIST Test Number: 6UTB  
Weight shown below was diluted to (mL): 1999.48  
5E-05 Balance Uncertainty  
0.058 Flask Uncertainty  
2.0% 40.0 Ammonium hydroxide (mL)

**SDS Information**

| 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) | CAS# | OSHA PEL (TWA) | LD50 | NIST SRM |
|----------|-----|------------|-----------------------|------------|------------------------|-----------|-------------------|-------------------|----------------------|----------------------------------|------|----------------|------|----------|
|----------|-----|------------|-----------------------|------------|------------------------|-----------|-------------------|-------------------|----------------------|----------------------------------|------|----------------|------|----------|

1. Boric acid (B) IN018 BV082018A1 1000 99.999 0.10 17.3 11.55772 11.56201 1000.4 2.0 10043-35-3 2 mg/m3 or-nat 2660 mg/kg 3107

[1] Spectrum No. 1 [12.275 sec]:56105.D# [Count] [Linear]





**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 | Pt | <0.02 | Se | <0.2  | Tb | <0.02 | W  | <0.02 |
| Sb | <0.02 | Ca | <0.2  | Er | <0.02 | Ho | <0.02 | Lu | <0.02 | Nb | <0.02 | Re | <0.02 | Si | <0.02 | Te | <0.02 | U  | <0.02 |
| As | <0.2  | Ce | <0.02 | Eu | <0.02 | In | <0.02 | Mg | <0.01 | Os | <0.02 | Rh | <0.02 | Ag | <0.02 | Tl | <0.02 | V  | <0.02 |
| Ba | <0.02 | Cs | <0.02 | Gd | <0.02 | Ir | <0.02 | Mn | <0.02 | Pd | <0.02 | Rb | <0.02 | Na | <0.2  | Th | <0.02 | Yb | <0.02 |
| Be | <0.01 | Cr | <0.02 | Ga | <0.02 | Fe | <0.2  | Hg | <0.2  | P  | <0.02 | Ru | <0.02 | Sr | <0.02 | Tm | <0.02 | Y  | <0.02 |
| Bi | <0.02 | Co | <0.02 | Ge | <0.02 | La | <0.02 | Mo | <0.02 | Pt | <0.02 | Sm | <0.02 | S  | <0.02 | Sn | <0.02 | Zn | <0.02 |
| B  | T     | Cu | <0.02 | Au | <0.02 | Pb | <0.02 | Nd | <0.02 | K  | <0.2  | Sc | <0.02 | Ta | <0.02 | Ti | <0.02 | Zr | <0.02 |

(T) = Target analyte

**Physical Characterization:**

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- \* 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 certified (+/-) 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).



**CERTIFIED WEIGHT REPORT:**

Part Number:  
Lot Number:  
Description:

57016  
122923  
Sulfur (S)

Lot #

ASTM Type 1 Water

|                |                 |
|----------------|-----------------|
|                |                 |
| Formulated By: | Benson Chan     |
| Reviewed By:   | Pedro L. Rentas |
| 122923         |                 |

Expiration Date:  
Recommended Storage:  
Nominal Concentration (µg/mL):  
NIST Test Number:

122926  
Ambient (20 °C)  
1000  
6L7B

Weight shown below was diluted to (mL):

4000.0  
0.06  
Balance Uncertainty  
Flask Uncertainty

**Compound**

RM#

Lot Number

Nominal Conc. (µg/mL)

Purity (%)

Uncertainty (%)

Assay (%)

Target Weight (g)

Actual Weight (g)

Actual Conc. (µg/mL)

Expanded Uncertainty +/- (µg/mL)

CAS#

OSHA PEL (TWA)

LD50

NIST SRM

**SDS Information**

(Solvent Safety Info. On Attached pg.)

NA

off-rel 4250mg/kg

3181

**1. Ammonium sulfate (S)**

IN117 SLBR725v

1000

99.9

0.10

24.3

16.4979

16.4980

1000.0

2.0

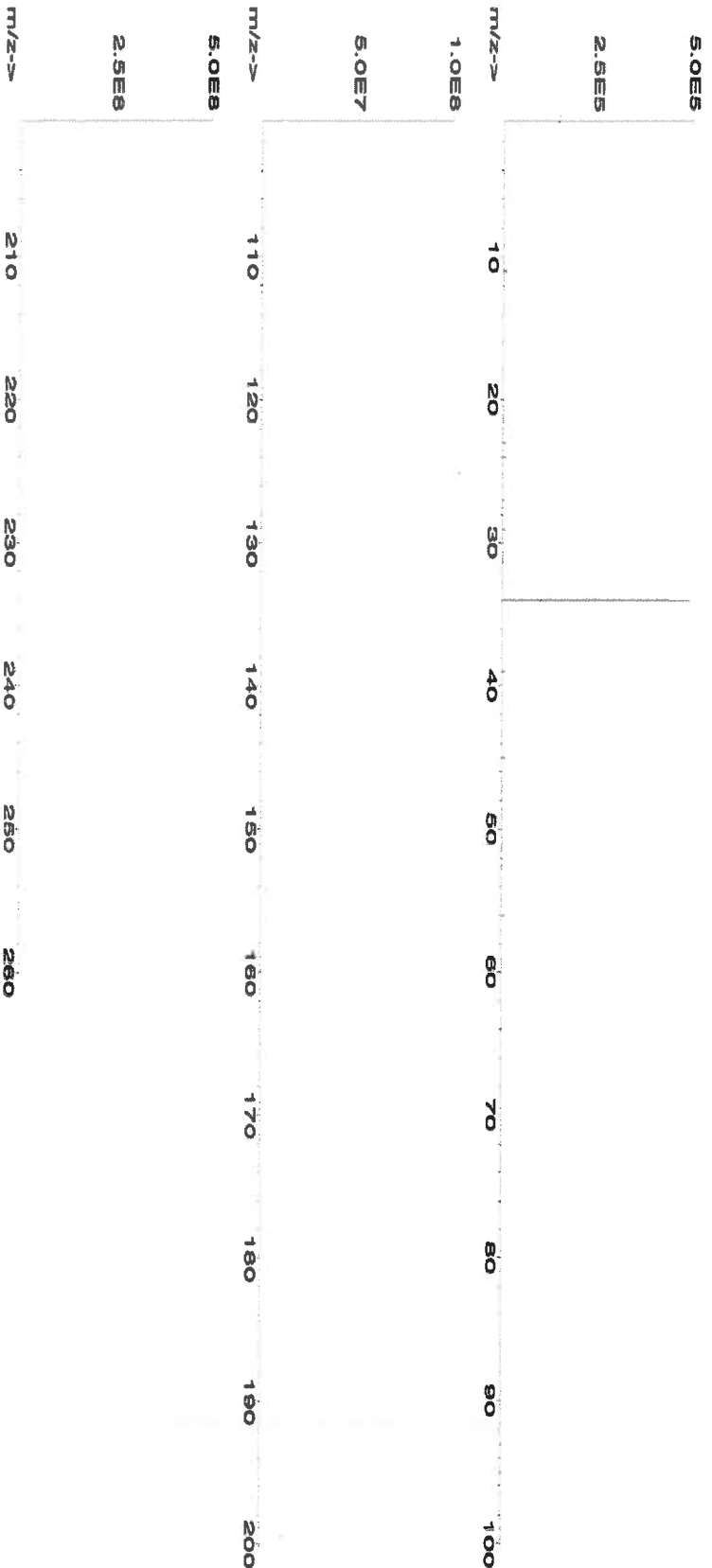
7783-20-2

NA

off-rel 4250mg/kg

3181

[1] Spectrum No. 1 [33.603 sec]:57016.D# [Count] [Linear]





**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 | La | <0.02 | Nb | <0.02 | Re | <0.02 | Si | <0.02 | Te | <0.02 | U  | <0.02 |
| As | <0.2  | Ce | <0.02 | Ba | <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 | Ru | <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 | S  | <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 | Ta | <0.02 | Ti | <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 certified (+/-) 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).



**CERTIFIED WEIGHT REPORT:**

Part Number: **57015**  
Lot Number: **091123**  
Description: **Phosphorous (P)**

Solvent: **24002546 Nitric Acid**

Lot #

R: 02109124 M5820

Expiration Date: **091126**  
Recommended Storage: **Ambient (20 °C)**  
Nominal Concentration (µg/mL): **1000**  
NIST Test Number: **6LJB**

2% **40.0 (mL)** **Nitric Acid**

Weight shown below was diluted to (mL): **2000.02** **5E-05** Balance Uncertainty  
**0.058** Flask Uncertainty

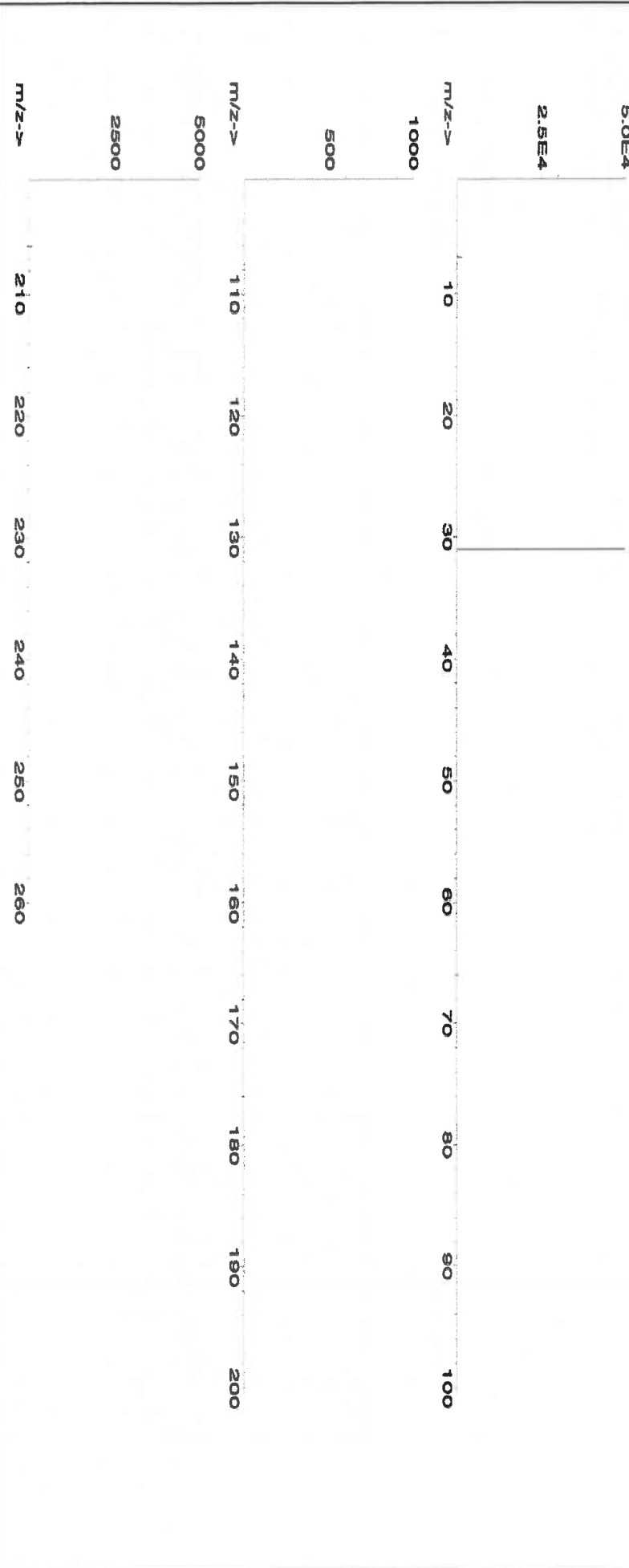
|                |                 |
|----------------|-----------------|
|                |                 |
| Formulated By: | Lawrence Barry  |
|                |                 |
| Reviewed By:   | Pedro L. Rentas |
| 091123         |                 |

**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) | CAS# | OSHA PEL (TWA) | LD50 | NIST SRM |
|-----|------------|-----------------------|------------|------------------------|-----------|-------------------|-------------------|----------------------|----------------------------------|------|----------------|------|----------|
|-----|------------|-----------------------|------------|------------------------|-----------|-------------------|-------------------|----------------------|----------------------------------|------|----------------|------|----------|

1. Ammonium dihydrogen phosphate (P) IN008 PY062019A1 1000 99.999 0.10 27.5 7.2729 7.2730 1000.0 2.0 7722-76-1 5 mg/m3 xH-rat >2000mg/kg 3186

[1] Spectrum No.1 [ 12.074 sec]:58115.D# [Count] [Linear]







**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 | Tc | <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 | Sa | <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 certified (+/-) 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).



R: 06/14/2014



**Lot #** **Solvent:**

24002546

## Nitric Acid

### Selenium (Se)

**Expiration Date:**

**Recommended Storage:**

**Nominal Concentration ( $\mu\text{g/mL}$ ):**

**NIST Test Number:**

Volume shown below was diluted to (mL): 2000.07

5E-05 Balance Uncertainty

0.100 Flask Uncertainty

|                |                 |        |
|----------------|-----------------|--------|
| Formulated By: | Benson Chan     | 060624 |
| Reviewed By:   | Pedro L. Rentas | 060624 |

## SDS Information

## Expanded

## Uncertainty

(Solvent Safety Info. On Attached pg.)

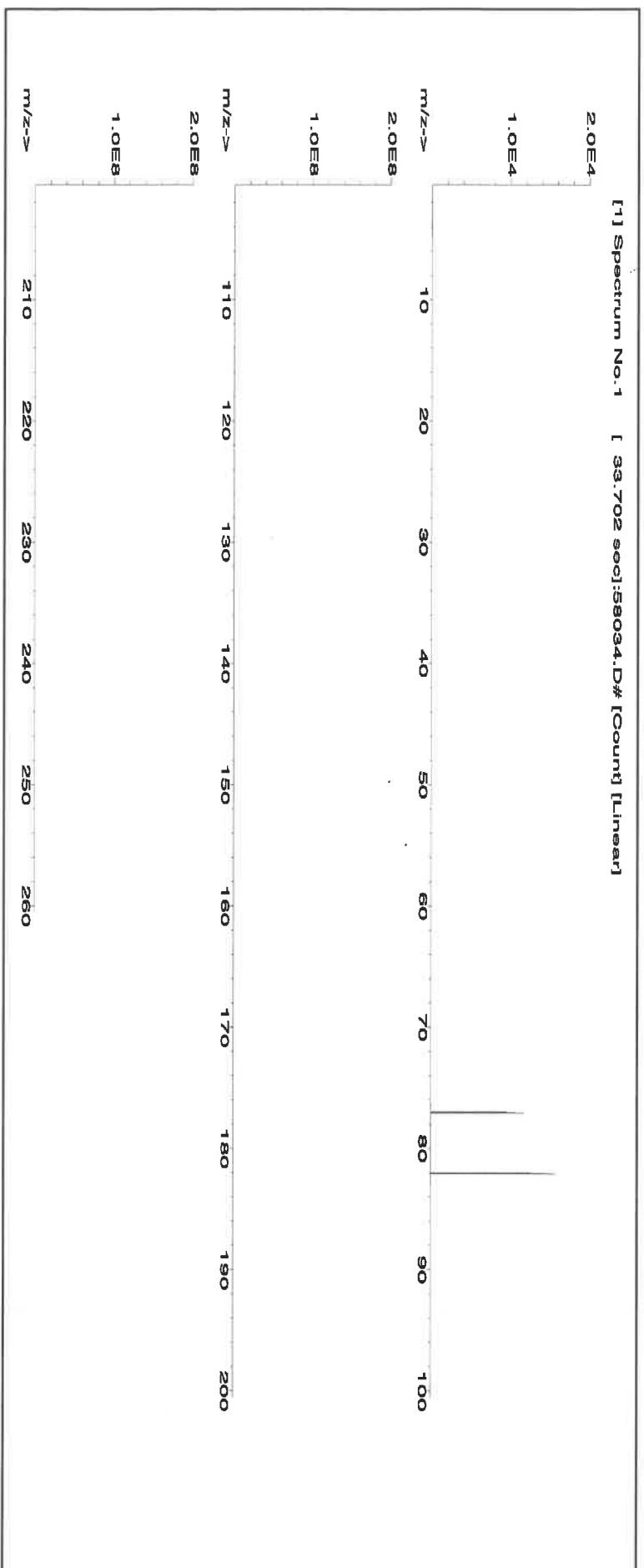
 $+/-$  ( $\mu\text{g/mL}$ )

| CAS#       | OSHA PEL (TWA)        |
|------------|-----------------------|
| 10102-93-2 | 0.1 mg/m <sup>3</sup> |
| 10102-94-1 | 0.1 mg/m <sup>3</sup> |
| 10102-95-0 | 0.1 mg/m <sup>3</sup> |
| 10102-96-9 | 0.1 mg/m <sup>3</sup> |
| 10102-97-8 | 0.1 mg/m <sup>3</sup> |
| 10102-98-7 | 0.1 mg/m <sup>3</sup> |
| 10102-99-6 | 0.1 mg/m <sup>3</sup> |
| 10103-00-5 | 0.1 mg/m <sup>3</sup> |
| 10103-01-4 | 0.1 mg/m <sup>3</sup> |
| 10103-02-3 | 0.1 mg/m <sup>3</sup> |
| 10103-03-2 | 0.1 mg/m <sup>3</sup> |
| 10103-04-1 | 0.1 mg/m <sup>3</sup> |
| 10103-05-0 | 0.1 mg/m <sup>3</sup> |
| 10103-06-9 | 0.1 mg/m <sup>3</sup> |
| 10103-07-8 | 0.1 mg/m <sup>3</sup> |
| 10103-08-7 | 0.1 mg/m <sup>3</sup> |
| 10103-09-6 | 0.1 mg/m <sup>3</sup> |
| 10103-10-5 | 0.1 mg/m <sup>3</sup> |
| 10103-11-4 | 0.1 mg/m <sup>3</sup> |
| 10103-12-3 | 0.1 mg/m <sup>3</sup> |
| 10103-13-2 | 0.1 mg/m <sup>3</sup> |
| 10103-14-1 | 0.1 mg/m <sup>3</sup> |
| 10103-15-0 | 0.1 mg/m <sup>3</sup> |
| 10103-16-9 | 0.1 mg/m <sup>3</sup> |
| 10103-17-8 | 0.1 mg/m <sup>3</sup> |
| 10103-18-7 | 0.1 mg/m <sup>3</sup> |
| 10103-19-6 | 0.1 mg/m <sup>3</sup> |
| 10103-20-5 | 0.1 mg/m <sup>3</sup> |
| 10103-21-4 | 0.1 mg/m <sup>3</sup> |
| 10103-22-3 | 0.1 mg/m <sup>3</sup> |
| 10103-23-2 | 0.1 mg/m <sup>3</sup> |
| 10103-24-1 | 0.1 mg/m <sup>3</sup> |
| 10103-25-0 | 0.1 mg/m <sup>3</sup> |
| 10103-26-9 | 0.1 mg/m <sup>3</sup> |
| 10103-27-8 | 0.1 mg/m <sup>3</sup> |
| 10103-28-7 | 0.1 mg/m <sup>3</sup> |
| 10103-29-6 | 0.1 mg/m <sup>3</sup> |
| 10103-30-5 | 0.1 mg/m <sup>3</sup> |
| 10103-31-4 | 0.1 mg/m <sup>3</sup> |
| 10103-32-3 | 0.1 mg/m <sup>3</sup> |
| 10103-33-2 | 0.1 mg/m <sup>3</sup> |
| 10103-34-1 | 0.1 mg/m <sup>3</sup> |
| 10103-35-0 | 0.1 mg/m <sup>3</sup> |
| 10103-36-9 | 0.1 mg/m <sup>3</sup> |
| 10103-37-8 | 0.1 mg/m <sup>3</sup> |
| 10103-38-7 | 0.1 mg/m <sup>3</sup> |
| 10103-39-6 | 0.1 mg/m <sup>3</sup> |
| 10103-40-5 | 0.1 mg/m <sup>3</sup> |
| 10103-41-4 | 0.1 mg/m <sup>3</sup> |
| 10103-42-3 | 0.1 mg/m <sup>3</sup> |
| 10103-43-2 | 0.1 mg/m <sup>3</sup> |
| 10103-44-1 | 0.1 mg/m <sup>3</sup> |
| 10103-45-0 | 0.1 mg/m <sup>3</sup> |
| 10103-46-9 | 0.1 mg/m <sup>3</sup> |
| 10103-47-8 | 0.1 mg/m <sup>3</sup> |
| 10103-48-7 | 0.1 mg/m <sup>3</sup> |
| 10103-49-6 | 0.1 mg/m <sup>3</sup> |
| 10103-50-5 | 0.1 mg/m <sup>3</sup> |
| 10103-51-4 | 0.1 mg/m <sup>3</sup> |
| 10103-52-3 | 0.1 mg/m <sup>3</sup> |
| 10103-53-2 | 0.1 mg/m <sup>3</sup> |
| 10103-54-1 | 0.1 mg/m <sup>3</sup> |
| 10103-55-0 | 0.1 mg/m <sup>3</sup> |
| 10103-56-9 | 0.1 mg/m <sup>3</sup> |
| 10103-57-8 | 0.1 mg/m <sup>3</sup> |
| 10103-58-7 | 0.1 mg/m <sup>3</sup> |
| 10103-59-6 | 0.1 mg/m <sup>3</sup> |
| 10103-60-5 | 0.1 mg/m <sup>3</sup> |
| 10103-61-4 | 0.1 mg/m <sup>3</sup> |
| 10103-62-3 | 0.1 mg/m <sup>3</sup> |
| 10103-63-2 | 0.1 mg/m <sup>3</sup> |
| 10103-64-1 | 0.1 mg/m <sup>3</sup> |
| 10103-65-0 | 0.1 mg/m <sup>3</sup> |
| 10103-66-9 | 0.1 mg/m <sup>3</sup> |
| 10103-67-8 | 0.1 mg/m <sup>3</sup> |
| 10103-68-7 | 0.1 mg/m <sup>3</sup> |
| 10103-69-6 | 0.1 mg/m <sup>3</sup> |
| 10103-70-5 | 0.1 mg/m <sup>3</sup> |
| 10103-71-4 | 0.1 mg/m <sup>3</sup> |
| 10103-72-3 | 0.1 mg/m <sup>3</sup> |
| 10103-73-2 | 0.1 mg/m <sup>3</sup> |
| 10103-74-1 | 0.1 mg/m <sup>3</sup> |
| 10103-75-0 | 0.1 mg/m <sup>3</sup> |
| 10103-76-9 | 0.1 mg/m <sup>3</sup> |
| 10103-77-8 | 0.1 mg/m <sup>3</sup> |
| 10103-78-7 | 0.1 mg/m <sup>3</sup> |
| 10103-79-6 | 0.1 mg/m <sup>3</sup> |
| 10103-80-5 | 0.1 mg/m <sup>3</sup> |
| 10103-81-4 | 0.1 mg/m <sup>3</sup> |
| 10103-82-3 | 0.1 mg/m <sup>3</sup> |
| 10103-83-2 | 0.1 mg/m <sup>3</sup> |
| 10103-84-1 | 0.1 mg/m <sup>3</sup> |
| 10103-85-0 | 0.1 mg/m <sup>3</sup> |
| 10103-86-9 | 0.1 mg/m <sup>3</sup> |
| 10103-87-8 | 0.1 mg/m <sup>3</sup> |
| 10103-88-7 | 0.1 mg/m <sup>3</sup> |
| 10103-89-6 | 0.1 mg/m <sup>3</sup> |
| 10103-90-5 | 0.1 mg/m <sup>3</sup> |
| 10103-91-4 | 0.1 mg/m <sup>3</sup> |
| 10103-92-3 | 0.1 mg/m <sup>3</sup> |
| 10103-93-2 | 0.1 mg/m <sup>3</sup> |
| 10103-94   |                       |

1050

SRM

|                  |       |        |        |       |       |      |         |               |            |           |           |                   |      |
|------------------|-------|--------|--------|-------|-------|------|---------|---------------|------------|-----------|-----------|-------------------|------|
| 1. Selenium (Se) | 58134 | 071223 | 0.1000 | 200.0 | 0.084 | 1000 | 10002.5 | <b>1000.0</b> | <b>2.2</b> | 7782-49-2 | 0.2 mg/m3 | or-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 | Pt | <0.02 | Se | T     | Tb | 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 | 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 | V  | <0.02 |
| Ba | <0.02 | Cs | <0.02 | Gd | <0.02 | Ir | <0.02 | Mn | <0.02 | Pd | <0.02 | Ru | <0.02 | Na | <0.2  | Th | Yb | <0.02 |
| Be | <0.01 | Cr | <0.02 | Ga | <0.02 | Fe | <0.2  | Hg | <0.2  | P  | <0.02 | Sr | <0.02 | S  | <0.02 | Tm | Y  | <0.02 |
| Bi | <0.02 | Co | <0.02 | Ge | <0.02 | La | <0.02 | Mo | <0.02 | Pt | <0.02 | Sm | <0.02 | Ta | <0.02 | Sn | Zn | <0.02 |
| B  | <0.02 | Cu | <0.02 | Au | <0.02 | Pb | <0.02 | Nd | <0.02 | K  | <0.2  | Sc | <0.02 |    | <0.02 | Ti | 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 certified (+/-) 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).



**CERTIFIED WEIGHT REPORT:**

Part Number: 57016  
Lot Number: 122923  
Description: Sulfur (S)

Lot #  
Solvent: 122923 ASTM Type 1 Water

|                |                 |
|----------------|-----------------|
|                |                 |
| Formulated By: | Benson Chan     |
|                |                 |
| Reviewed By:   | Pedro L. Rentas |

Expiration Date: 122926  
Recommended Storage: Ambient (20 °C)  
Nominal Concentration (µg/mL): 1000  
NIST Test Number: 6UTB  
Weight shown below was diluted to (mL): 4000.0  
5E-05 Balance Uncertainty  
0.06 Flask Uncertainty

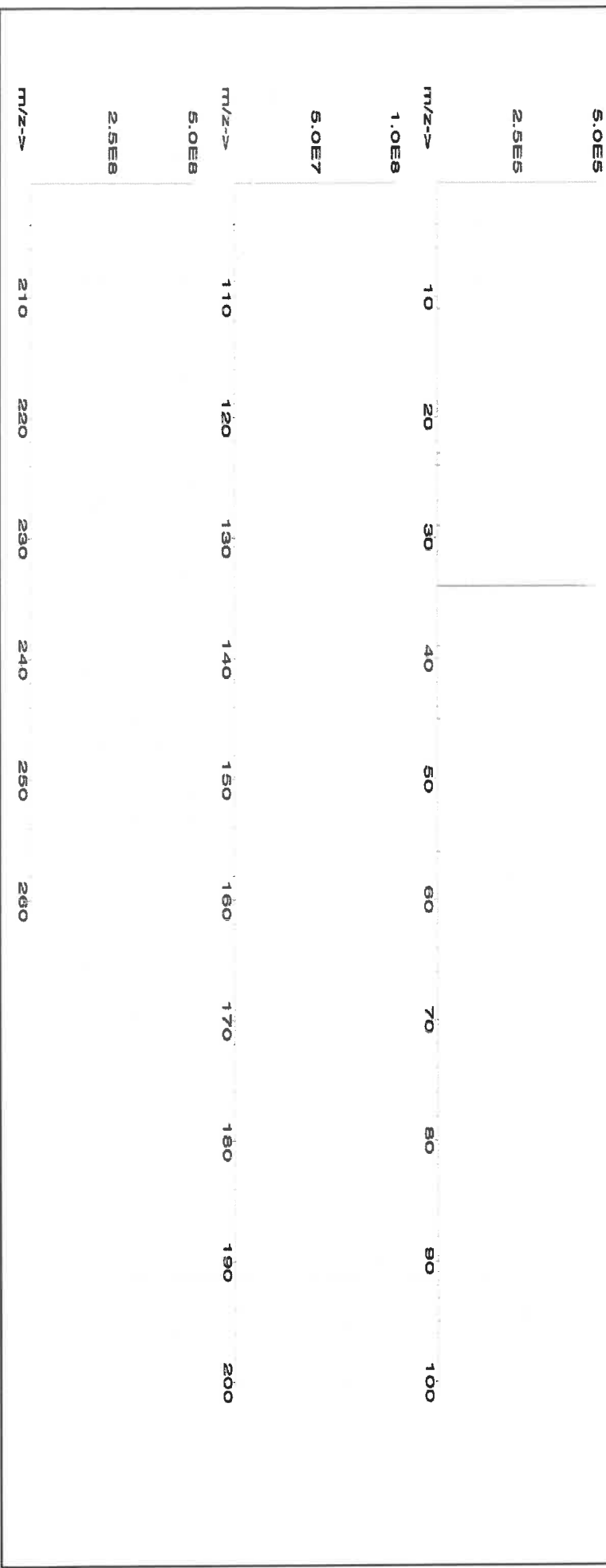
| Compound | Lot Number | Nominal Conc. (µg/mL) | Purity (%) | Uncertainty (%) | Assay (%) | Target Weight (g) | Actual Weight (g) | Actual Conc. (µg/mL) | Expanded Uncertainty |         | NIST SRM |
|----------|------------|-----------------------|------------|-----------------|-----------|-------------------|-------------------|----------------------|----------------------|---------|----------|
|          |            |                       |            |                 |           |                   |                   |                      | ±                    | (µg/mL) |          |

**SDS Information**

(Solvent Safety Info. On Attached pg.)  
CAS# OSHA PEL (TWA) LD50

1. Ammonium sulfate (S) IN117 SLBR725V 1000 99.9 0.10 24.3 16.4979 16.4980 1000.0 2.0 7783-20-2 NA or-rel 4250mg/kg 3181

[1] Spectrum No. 1 [ 33.603 sec]:57016.D# [Count] [Linear]



**Absolute Standards, Inc.**  
800-368-1131  
www.absolutestandards.com



**Certified Reference Material CRM**

M5970 M5971

R. J. 10/12/24

ANAB ISO 17034 Accredited  
AR-1539 Certificate Number  
https://AbsoluteStandards.com

**CERTIFIED WEIGHT REPORT:**

Part Number: **57003**  
Lot Number: **062124**  
Description: **Lithium (Li)**  
Expiration Date: **06/127**  
Recommended Storage: **Ambient (20 °C)**  
Nominal Concentration (µg/mL): **1000**  
NIST Test Number: **6UTB**  
Volume shown below was diluted to (mL): **250.11**  
SE-05 Balance Uncertainty  
0.016 Flask Uncertainty

Lot # **24002546**  
Solvent: **Nitric Acid**

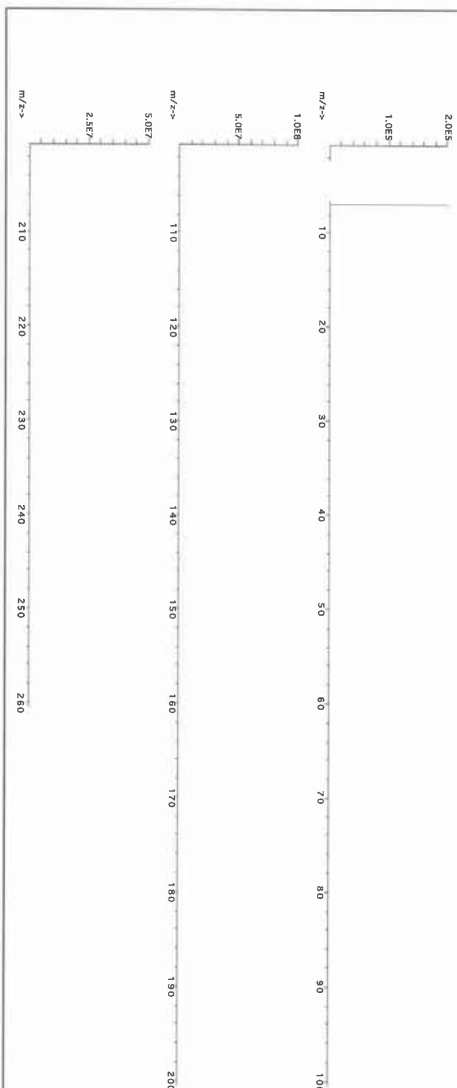
2.0% 5.0 (mL) Nitric Acid

|                   |                   |
|-------------------|-------------------|
| Microvial Capable |                   |
| Formulated By:    | Giovanni Esposito |
|                   | 062124            |
| Reviewed By:      | Pedro L. Parias   |
|                   | 062124            |

| Compound |        | Part   |        | Lot    |        | Dilution  |              | Initial       |               | Uncertainty |              | Nominal       |               | Initial   |              | Final         |               | Expanded    |           | SDS Information |                | NIST |    |
|----------|--------|--------|--------|--------|--------|-----------|--------------|---------------|---------------|-------------|--------------|---------------|---------------|-----------|--------------|---------------|---------------|-------------|-----------|-----------------|----------------|------|----|
| Number   | Factor | Number | Factor | Number | Factor | Vol. (mL) | Pipette (mL) | Conc. (µg/mL) | Conc. (µg/mL) | Vol. (mL)   | Pipette (mL) | Conc. (µg/mL) | Conc. (µg/mL) | Vol. (mL) | Pipette (mL) | Conc. (µg/mL) | Conc. (µg/mL) | Uncertainty | ± (µg/mL) | CAS#            | OSHA PEL (TWA) | LD50 | SM |

|                         |       |        |        |      |       |      |         |        |     |           |         |                   |    |
|-------------------------|-------|--------|--------|------|-------|------|---------|--------|-----|-----------|---------|-------------------|----|
| 1. Lithium nitrate (Li) | 58103 | 070622 | 0.1000 | 25.0 | 0.004 | 1000 | 10000.4 | 1000.0 | 2.0 | 7790-68-4 | 5 mg/m3 | or-hal 1428 mg/kg | NA |
|-------------------------|-------|--------|--------|------|-------|------|---------|--------|-----|-----------|---------|-------------------|----|

[1] Spectrum No. 1 [ 32.093 sec; 15000.0Hz Count [Lines]





# Certificate of Analysis

MS978, MS979



Refine your results. Redefine your industry.

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).



## 2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution

Catalog Number: CGT1

Lot Number: T2-T1719972

Matrix: 2% (v/v) HNO<sub>3</sub>

Value / Analyte(s): tr. HF

1 000 µg/mL ea.

Titanium

Ti Metal

Starting Material Lot#: 2094

Starting Material Purity: 99.9975%

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:

$X_{CRM/RM} = (k_p) (V_{char})$   
 $X_p$  = mean of Assay Method A with

$U_{char A}$  = the standard uncertainty of characterization Method A

$U_{char A} = (U_{char A})^2 / (2 \times (V_{char})^2)$

$U_{char A} = (U_{char A})^2 / (2 \times (V_{char})^2)$

$U_{char A} = (U_{char A})^2 / (2 \times (V_{char})^2)$

$U_{char A} = (U_{char A})^2 / (2 \times (V_{char})^2)$

$U_{char A} = (U_{char A})^2 / (2 \times (V_{char})^2)$

$U_{char A} = (U_{char A})^2 / (2 \times (V_{char})^2)$

$U_{char A} = (U_{char A})^2 / (2 \times (V_{char})^2)$

$U_{char A} = (U_{char A})^2 / (2 \times (V_{char})^2)$

$U_{char A} = (U_{char A})^2 / (2 \times (V_{char})^2)$

$U_{char A} = (U_{char A})^2 / (2 \times (V_{char})^2)$

$U_{char A} = (U_{char A})^2 / (2 \times (V_{char})^2)$

$U_{char A} = (U_{char A})^2 / (2 \times (V_{char})^2)$

$U_{char A} = (U_{char A})^2 / (2 \times (V_{char})^2)$

$U_{char A} = (U_{char A})^2 / (2 \times (V_{char})^2)$

$U_{char A} = (U_{char A})^2 / (2 \times (V_{char})^2)$

$U_{char A} = (U_{char A})^2 / (2 \times (V_{char})^2)$

$U_{char A} = (U_{char A})^2 / (2 \times (V_{char})^2)$

$U_{char A} = (U_{char A})^2 / (2 \times (V_{char})^2)$

$U_{char A} = (U_{char A})^2 / (2 \times (V_{char})^2)$

$U_{char A} = (U_{char A})^2 / (2 \times (V_{char})^2)$

$U_{char A} = (U_{char A})^2 / (2 \times (V_{char})^2)$

$U_{char A} = (U_{char A})^2 / (2 \times (V_{char})^2)$

$U_{char A} = (U_{char A})^2 / (2 \times (V_{char})^2)$

$U_{char A} = (U_{char A})^2 / (2 \times (V_{char})^2)$

$U_{char A} = (U_{char A})^2 / (2 \times (V_{char})^2)$

$U_{char A} = (U_{char A})^2 / (2 \times (V_{char})^2)$

$U_{char A} = (U_{char A})^2 / (2 \times (V_{char})^2)$

$U_{char A} = (U_{char A})^2 / (2 \times (V_{char})^2)$

$U_{char A} = (U_{char A})^2 / (2 \times (V_{char})^2)$

$U_{char A} = (U_{char A})^2 / (2 \times (V_{char})^2)$

$U_{char A} = (U_{char A})^2 / (2 \times (V_{char})^2)$

$U_{char A} = (U_{char A})^2 / (2 \times (V_{char})^2)$

$U_{char A} = (U_{char A})^2 / (2 \times (V_{char})^2)$

$U_{char A} = (U_{char A})^2 / (2 \times (V_{char})^2)$

$U_{char A} = (U_{char A})^2 / (2 \times (V_{char})^2)$

$U_{char A} = (U_{char A})^2 / (2 \times (V_{char})^2)$

$U_{char A} = (U_{char A})^2 / (2 \times (V_{char})^2)$

$U_{char A} = (U_{char A})^2 / (2 \times (V_{char})^2)$

$U_{char A} = (U_{char A})^2 / (2 \times (V_{char})^2)$

$U_{char A} = (U_{char A})^2 / (2 \times (V_{char})^2)$

$U_{char A} = (U_{char A})^2 / (2 \times (V_{char})^2)$

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 UHPA-filtered Clean Room. An UHPA-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 | < | 0.000986 |      |   |          |
| O B  | < | 0.008929 | M Ge | < | 0.002146 | M Os | < | 0.000269 | O Sr | < | 0.000986 |      |   |          |
| 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 Th | < | 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 | < | 0.001341 |      |   |          |
| M Co | < | 0.000268 | M K  | < | 0.001172 | M Rb | < | 0.000268 | M Tl | < | 0.000268 |      |   |          |
| M Cr | < | 0.000752 | O Li | < | 0.000268 | M Re | < | 0.000268 | M Tm | < | 0.000268 |      |   |          |
| M Cs | < | 0.000268 | M Lu | < | 0.000268 | M Rh | < | 0.000268 | M U  | < | 0.000268 |      |   |          |
| O Cu | < | 0.010890 | O Mg | < | 0.005445 | I S  | < | 0.006976 | M Y  | < | 0.002146 |      |   |          |
| M Dy | < | 0.000268 | O Mn | < | 0.003267 | M Sb | < | 0.004900 | M Yb | < | 0.000536 |      |   |          |
| M Er | < | 0.000268 | M Mo | < | 0.000774 | O Sc | < | 0.004900 | M Yb | < | 0.000536 |      |   |          |

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](http://www.inorganicventures.com/TCT)

**Atomic Weight; Valence:** Soluble in concentrated HCl, HF, H<sub>3</sub>PO<sub>4</sub>, H<sub>2</sub>SO<sub>4</sub> and HNO<sub>3</sub>. 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% HNO<sub>3</sub> / LDPE container. 1-10,000 ppm single element solutions as the Ti(F)-6-2 chemically stable for years in 2-5% HNO<sub>3</sub> / trace HF in an LDPE container.

**Ti Containing Samples (Preparation and Solution) - Metal (Soluble in H<sub>2</sub>O / HF caution - powder reacts violently):** Oxide - low temperature history anatase or rutile (Dissolved by heating in 1:1:1 H<sub>2</sub>O / HF / H<sub>2</sub>SO<sub>4</sub>); K<sub>2</sub>SiO<sub>3</sub> - no KF if silica not present); Organic Matrices (Dry ash at 450°C in P10 and dissolve by heating with 1:1:1 H<sub>2</sub>O / HF / H<sub>2</sub>SO<sub>4</sub> or fuse ash with pyrosulfate if oxide is as plastic pigment and likely in brookite crystaline form).

**Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):**

| Technique/Line                                                    | Estimated D.L.         | 14 ppt             |
|-------------------------------------------------------------------|------------------------|--------------------|
| ICP-MS 48 amu                                                     | N/A                    | 32S160, 32S14N,    |
| ICP-OES 323.452 nm                                                | 0.0054 / 0.00092 µg/mL | 14N17N2, 36Ar12C,  |
| ICP-OES 334.941 nm                                                | 0.0038 / 0.00028 µg/mL | 48Ca, [96X=2       |
| ICP-OES 336.121 nm                                                | 0.0053 / 0.00034 µg/mL | 14N17N2, 36Ar12C,  |
| HF Note: This standard should not be prepared or stored in glass. |                        | W, Mo, Co          |
|                                                                   |                        | Nb, Ta, Cr, U      |
|                                                                   |                        | Ce, Ar, Ni         |
|                                                                   |                        | Ru]]               |
|                                                                   |                        | (where X = Zr, Mo, |

## 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: 800.868.6786; 540.565.3030; Fax: 540.565.3030; Email: info@inorganicventures.com; <http://www.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 Kozlikowski  
Manager, Quality Control

*TD9784*

Certifying Officer:

Paul Gaines  
Chairman / Senior Technical Director

*Paul Gaines*



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

M5985  
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).



## 2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution  
Catalog Number: CGIN10  
Lot Number: U2-IN729349  
Matrix: 5% (v/v) HNO<sub>3</sub>  
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<br>ICP Assay NIST SRM 3124a Lot Number: 110516  |
| Assay Method #2 | 10035 ± 25 µg/mL<br>EDTA NIST SRM 928 Lot Number: 928            |
| Assay Method #3 | 10001 ± 33 µg/mL<br>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:

$$X_{CRM/RM} = \sum (w_i) (X_i)$$

$X_i$  = 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:

$$w_i = (1/u_{char i}^2) / (\sum (1/u_{char i}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (k) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char} = [\sum (w_i)^2 (u_{char i}^2)]^{1/2}$  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

$$CRM/RM \text{ Expanded Uncertainty } (k) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

$k$  = 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 | <        | 0.000760 | 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](http://www.inorganicventures.com/TCT)

**Atomic Weight; Valence; Coordination Number; Chemical Form In Solution** - 114.82 +3 6 In(H<sub>2</sub>O)<sub>6</sub>+3

**Chemical Compatibility** -Soluble in HCl, HNO<sub>3</sub>, and H<sub>2</sub>SO<sub>4</sub>. 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% HNO<sub>3</sub> / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO<sub>3</sub> / LDPE container.

**In Containing Samples (Preparation and Solution)** -Metal (Best dissolved in HCl / HNO<sub>3</sub>); Oxide (Soluble in mineral acids); Ores (Carbonate fusion in PtO followed by HCl dissolution); Organic Matrices (Sulfuric/peroxide digestion or dry ash and dissolution in dilute HCl).

**Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):**

| Technique/Line     | Estimated D.L.     | Order | Interferences (underlined indicates severe) |
|--------------------|--------------------|-------|---------------------------------------------|
| ICP-MS 115 amu     | 1 ppt              | n/a   | 115Sn, 99Ru16O                              |
| ICP-OES 158.583 nm | 0.05 / 0.002 µg/mL | 1     |                                             |
| ICP-OES 230.606 nm | 0.1 / 0.03 µg/mL   | 1     | Ni, Os                                      |
| ICP-OES 325.609 nm | 0.2 / 0.05 µg/mL   | 1     | Mn, Mo, Th                                  |

## 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

## 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

## 10.0 QUALITY STANDARD DOCUMENTATION

### 10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

### 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

### 10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; Info@inorganicventures.com

## 11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

### 11.1 Certification Issue Date

February 21, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

### 11.2 Lot Expiration Date

- February 21, 2028

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

### 11.3 Period of Validity

- Sealed TCT Bag Open Date: \_\_\_\_\_

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

## 12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

### Certificate Approved By:

Thomas Kozikowski  
Manager, Quality Control



### Certifying Officer:

Paul Gaines  
Chairman / Senior Technical Director



# Certificate of Analysis

300 Technology Drive  
 Christiansburg, VA 24073 USA  
 inorganicventures.com

R: 2/22/24  
 MS997

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).



## 2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution  
 Catalog Number: CLPP-CAL-3  
 Lot Number: T2-MEB727800  
 Matrix: 7% (v/v) HNO<sub>3</sub>  
 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 ± 7 µg/mL | Cadmium, Cd  | 500.0 ± 2.2 µg/mL |
| Lead, Pb     | 1 000 ± 4 µg/mL | Selenium, Se | 1 000 ± 6 µg/mL   |
| Thallium, Tl | 1 000 ± 7 µg/mL |              |                   |

Density: 1.042 g/mL (measured at 20 ± 4 °C)

### Assay Information:

| ANALYTE | METHOD     | NIST SRM# | SRM LOT#     |
|---------|------------|-----------|--------------|
| As      | ICP Assay  | 3103a     | 100818       |
| As      | Calculated |           | See Sec. 4.2 |
| 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,  $X_{\text{CRM/RM}}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{\text{CRM/RM}} = \sum (w_i) (X_i)$$

$X_i$  = mean of Assay Method  $i$  with standard uncertainty  $u_{\text{char } i}$

$w_i$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{\text{char } i}^2) / (\sum (1/u_{\text{char } i}^2))$$

$$\text{CRM/RM Expanded Uncertainty } (Z) = U_{\text{CRM/RM}} = k (u_{\text{char}}^2 + u_{\text{bb}}^2 + u_{\text{ts}}^2 + u_{\text{ts}}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{\text{char}} = [\sum (w_i)^2 (u_{\text{char } i}^2)]^{1/2}$  where  $u_{\text{char } i}$  are the errors from each characterization method

$u_{\text{bb}}$  = bottle to bottle homogeneity standard uncertainty

$u_{\text{ts}}$  = long term stability standard uncertainty (storage)

$u_{\text{ts}}$  = transport stability standard uncertainty

### Characterization of CRM/RM by One Method

Certified Value,  $X_{\text{CRM/RM}}$ , where one method of characterization is used is the mean of individual results:

$$X_{\text{CRM/RM}} = (X_a) (u_{\text{char } a})$$

$X_a$  = mean of Assay Method A with

$u_{\text{char } a}$  = the standard uncertainty of characterization Method A

$$\text{CRM/RM Expanded Uncertainty } (Z) = U_{\text{CRM/RM}} = k (u_{\text{char } a}^2 + u_{\text{bb}}^2 + u_{\text{ts}}^2 + u_{\text{ts}}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{\text{char } a}$  = the errors from characterization

$u_{\text{bb}}$  = bottle to bottle homogeneity standard uncertainty

$u_{\text{ts}}$  = long term stability standard uncertainty (storage)

$u_{\text{ts}}$  = 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](http://www.inorganicventures.com/TCT)

## **8.0 HAZARDOUS INFORMATION**

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

## **9.0 HOMOGENEITY**

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

## **10.0 QUALITY STANDARD DOCUMENTATION**

### **10.1 ISO 9001 Quality Management System Registration**

- QSR Certificate Number QSR-1034

### **10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"**

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

### **10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"**

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; [inorganicventures.com](http://inorganicventures.com); [info@inorganicventures.com](mailto:info@inorganicventures.com)

## **11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY**

### **11.1 Certification Issue Date**

December 21, 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**

- **December 21, 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



# Certificate of Analysis

R: 08/22/24 M6058, M6059

300 Technology Drive  
Christiansburg, VA 24073 USA  
inorganicventures.comP: 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).



## 2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution  
Catalog Number: CHEM-CLP-4  
Lot Number: V2-MEB746172  
Matrix: 3% (v/v) HNO<sub>3</sub>  
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 ± 5 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 | 1 000 ± 6 µg/mL |                |                 |

Density: 1.032 g/mL (measured at 20 ± 4 °C)

### Assay Information:

| ANALYTE | METHOD     | NIST SRM#          | SRM LOT#     |
|---------|------------|--------------------|--------------|
| B       | ICP Assay  | 3107               | 190605       |
| B       | Calculated |                    | See Sec. 4.2 |
| Mo      | ICP Assay  | traceable to 3134  | U2-MO739068  |
| Si      | ICP Assay  | Traceable to 3150  | S2-SI702546  |
| Sn      | ICP Assay  | 3161a              | 140917       |
| Ti      | ICP Assay  | traceable to 3162a | T2-TI725816  |

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,  $X_{\text{CRM/RM}}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{\text{CRM/RM}} = \sum(w_i)(X_i)$$

$X_i$  = mean of Assay Method  $i$  with standard uncertainty  $u_{\text{char } i}$

$w_i$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{\text{char } i}^2) / (\sum(1/u_{\text{char } i}^2))$$

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k (u_{\text{char}}^2 + u_{\text{bb}}^2 + u_{\text{its}}^2 + u_{\text{ts}}^2)^{1/2}$$

$k$  = coverage factor = 2

$$u_{\text{char}} = [\sum(w_i)^2 (u_{\text{char } i})^2]^{1/2} \text{ where } u_{\text{char } i} \text{ are the errors from each characterization method}$$

$u_{\text{bb}}$  = bottle to bottle homogeneity standard uncertainty

$u_{\text{its}}$  = long term stability standard uncertainty (storage)

$u_{\text{ts}}$  = transport stability standard uncertainty

#### Characterization of CRM/RM by One Method

Certified Value,  $X_{\text{CRM/RM}}$ , where one method of characterization is used is the mean of individual results:

$$X_{\text{CRM/RM}} = (X_a) (u_{\text{char } a})$$

$X_a$  = mean of Assay Method A with

$u_{\text{char } a}$  = the standard uncertainty of characterization Method A

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k (u_{\text{char } a}^2 + u_{\text{bb}}^2 + u_{\text{its}}^2 + u_{\text{ts}}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{\text{char } a}$  = the errors from characterization

$u_{\text{bb}}$  = bottle to bottle homogeneity standard uncertainty

$u_{\text{its}}$  = long term stability standard uncertainty (storage)

$u_{\text{ts}}$  = 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).

<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](http://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](http://inorganicventures.com); [info@inorganicventures.com](mailto:info@inorganicventures.com)

## **11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY**

### **11.1 Certification Issue Date**

August 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**

- **August 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





Refine your results. Redefine your industry.

300 Technology Drive  
Christiansburg, VA 24073 USA  
inorganicventures.com

# Certificate of Analysis

M6074  
M6075  
M6076  
M6077

P: 800-669-6799/540-585-3030

F: 540-585-3012

info@inorganicventures.com

EXP: 9/6/2029

## 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).



## 2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution  
Catalog Number: CHEM-CLP-4  
Lot Number: V2-MEB746762  
Matrix: 3% (v/v) HNO<sub>3</sub>  
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 ± 5 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 | 1 000 ± 6 µg/mL |                |                 |

Density: 1.033 g/mL (measured at 20 ± 4 °C)

### Assay Information:

| ANALYTE | METHOD     | NIST SRM#          | SRM LOT#     |
|---------|------------|--------------------|--------------|
| B       | ICP Assay  | 3107               | 190605       |
| B       | Calculated |                    | See Sec. 4.2 |
| Mo      | ICP Assay  | traceable to 3134  | U2-MO739068  |
| Si      | ICP Assay  | Traceable to 3150  | S2-SI702546  |
| Sn      | ICP Assay  | 3161a              | 140917       |
| Ti      | ICP Assay  | traceable to 3162a | T2-TI725816  |

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:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

$X_i$  = 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:

$$w_i = (1/u_{char\ i}^2) / (\sum(1/u_{char\ i}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k(u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char} = [\sum(w_i)^2(u_{char\ i}^2)]^{1/2}$  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

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k(u_{char\ a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

$k$  = 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](http://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](http://inorganicventures.com); [info@inorganicventures.com](mailto:info@inorganicventures.com)

## **11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY**

### **11.1 Certification Issue Date**

September 06, 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**

- **September 06, 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





Refine your results. Redefine your industry.

300 Technology Drive  
Christiansburg, VA 24073 USA  
inorganicventures.com

# Certificate of Analysis

M6074  
M6075  
M6076  
M6077

P: 800-669-6799/540-585-3030

F: 540-585-3012

info@inorganicventures.com

EXP: 9/6/2029

## 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).



## 2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution  
Catalog Number: CHEM-CLP-4  
Lot Number: V2-MEB746762  
Matrix: 3% (v/v) HNO<sub>3</sub>  
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 ± 5 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 | 1 000 ± 6 µg/mL |                |                 |

Density: 1.033 g/mL (measured at 20 ± 4 °C)

### Assay Information:

| ANALYTE | METHOD     | NIST SRM#          | SRM LOT#     |
|---------|------------|--------------------|--------------|
| B       | ICP Assay  | 3107               | 190605       |
| B       | Calculated |                    | See Sec. 4.2 |
| Mo      | ICP Assay  | traceable to 3134  | U2-MO739068  |
| Si      | ICP Assay  | Traceable to 3150  | S2-SI702546  |
| Sn      | ICP Assay  | 3161a              | 140917       |
| Ti      | ICP Assay  | traceable to 3162a | T2-TI725816  |

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,  $X_{\text{CRM/RM}}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{\text{CRM/RM}} = \sum(w_i)(X_i)$$

$X_i$  = mean of Assay Method  $i$  with standard uncertainty  $u_{\text{char } i}$

$w_i$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{\text{char } i}^2) / (\sum(1/u_{\text{char } i}^2))$$

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k(u_{\text{char}}^2 + u_{\text{bb}}^2 + u_{\text{Its}}^2 + u_{\text{ts}}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{\text{char}} = [\sum(w_i)^2(u_{\text{char } i}^2)]^{1/2}$  where  $u_{\text{char } i}$  are the errors from each characterization method

$u_{\text{bb}}$  = bottle to bottle homogeneity standard uncertainty

$u_{\text{Its}}$  = long term stability standard uncertainty (storage)

$u_{\text{ts}}$  = transport stability standard uncertainty

#### Characterization of CRM/RM by One Method

Certified Value,  $X_{\text{CRM/RM}}$ , where one method of characterization is used is the mean of individual results:

$$X_{\text{CRM/RM}} = (X_a)(u_{\text{char } a})$$

$X_a$  = mean of Assay Method A with

$u_{\text{char } a}$  = the standard uncertainty of characterization Method A

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k(u_{\text{char } a}^2 + u_{\text{bb}}^2 + u_{\text{Its}}^2 + u_{\text{ts}}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{\text{char } a}$  = the errors from characterization

$u_{\text{bb}}$  = bottle to bottle homogeneity standard uncertainty

$u_{\text{Its}}$  = long term stability standard uncertainty (storage)

$u_{\text{ts}}$  = 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](http://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](http://inorganicventures.com); [info@inorganicventures.com](mailto:info@inorganicventures.com)

## **11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY**

### **11.1 Certification Issue Date**

September 06, 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**

- **September 06, 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





**CERTIFIED WEIGHT REPORT:**

Part Number:  
Lot Number:  
Description:

**58025**  
**101124**  
**Manganese (Mn)**

*R-71113128*

Lot #  
Solvent: 24002546 Nitric Acid

Expiration Date:

101127

2% 80.0 (mL) Nitric Acid

Recommended Storage:

Ambient (20 °C)

Nominal Concentration (µg/mL):

1000

NIST Test Number:

6UTB

Weight shown below was diluted to (mL):

4000.2

0.10 Flask Uncertainty

|                          |                          |
|--------------------------|--------------------------|
| <i>Giovanni Esposito</i> |                          |
| Formulated By:           | Giovanni Esposito        |
| Reviewed By:             | <i>Pedro L. Renteria</i> |
|                          | 101124                   |

**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) | CAS# | OSHA PEL (TWA) | LD50 | NIST SRM |
|-----|------------|-----------------------|------------|------------------------|-----------|-------------------|-------------------|----------------------|----------------------------------|------|----------------|------|----------|
|-----|------------|-----------------------|------------|------------------------|-----------|-------------------|-------------------|----------------------|----------------------------------|------|----------------|------|----------|

1. Manganese(II) nitrate hydrate (Mn) IN031 MNM02020A1 1000 99.999 0.10 20.8 19.2322 19.2344 1000.1 2.0 15710-66-4 5 mg/m3 or-rel >300mg/kg 3132

[1] Spectrum No.1 [ 34.243 sec]:57025.D# [Count] [Linear]

|       |     |     |     |     |     |     |     |     |     |     |  |  |  |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|
| 5.0E6 |     |     |     |     |     |     |     |     |     |     |  |  |  |
| 2.5E6 |     |     |     |     |     |     |     |     |     |     |  |  |  |
| m/z-> | 10  | 20  | 30  | 40  | 50  | 60  | 70  | 80  | 90  | 100 |  |  |  |
| 1.0E6 |     |     |     |     |     |     |     |     |     |     |  |  |  |
| 5.0E7 |     |     |     |     |     |     |     |     |     |     |  |  |  |
| m/z-> | 110 | 120 | 130 | 140 | 150 | 160 | 170 | 180 | 190 | 200 |  |  |  |
| 1.0E6 |     |     |     |     |     |     |     |     |     |     |  |  |  |
| 5.0E7 |     |     |     |     |     |     |     |     |     |     |  |  |  |
| m/z-> | 210 | 220 | 230 | 240 | 250 | 260 |     |     |     |     |  |  |  |



**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 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 certified (+/-) 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).



# 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

M6137  
R-71013124

## 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).



## 2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution  
Catalog Number: CGSI1  
Lot Number: V2-SI744713  
Matrix: tr. HNO<sub>3</sub>  
tr. HF  
Value / Analyte(s): 1 000 µg/mL ea:  
Silicon  
Starting Material: Silica  
Starting Material Lot#: 1771  
Starting Material Purity: 99.9981%

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 999 ± 6 µg/mL  
Density: 1.003 g/mL (measured at 20 ± 4 °C)

### Assay Information:

|                 |                                                                               |
|-----------------|-------------------------------------------------------------------------------|
| Assay Method #1 | 999 ± 5 µg/mL<br>ICP Assay NIST SRM Traceable to 3150 Lot Number: S2-SI702546 |
| Assay Method #2 | 1000 ± 7 µg/mL<br>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:

$$X_{CRM/RM} = \sum (w_i) (X_i)$$

$X_i$  = 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:

$$w_i = (1/u_{char i}^2) / (\sum (1/u_{char i}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (z) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char} = [\sum (w_i)^2 (u_{char i}^2)]^{1/2}$  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

$$CRM/RM \text{ Expanded Uncertainty } (z) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

$k$  = 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 | < | 0.000310 | M | Eu | < | 0.000310 | O | Na | 0.001656 | M        | Se | <  | 0.022000 | M        | Zn | <  | 0.002500 |          |
| M | Al |   | 0.010787 | M | Fe | < | 0.027000 | M | Nb | <        | 0.001300 | s  | Si | <        |          | O  | Zr | <        | 0.001900 |
| M | As | < | 0.001900 | M | Ga | < | 0.001300 | M | Nd | <        | 0.000310 | M  | Sm | <        | 0.000310 |    |    |          |          |
| M | Au | < | 0.000910 | M | Gd | < | 0.000310 | M | Ni | <        | 0.005500 | M  | Sn |          | 0.000096 |    |    |          |          |
| M | B  |   | 0.016180 | M | Ge | < | 0.001900 | M | Os | <        | 0.000610 | O  | Sr |          | 0.000092 |    |    |          |          |
| M | Ba |   | 0.000096 | M | Hf |   | 0.000423 | i | P  | <        |          | M  | Ta |          | 0.002542 |    |    |          |          |
| O | Be | < | 0.000570 | M | Hg | < | 0.000610 | M | Pb | <        | 0.000310 | M  | Tb | <        | 0.000310 |    |    |          |          |
| M | Bi | < | 0.000310 | M | Ho | < | 0.000610 | M | Pd | <        | 0.000610 | M  | Te | <        | 0.000910 |    |    |          |          |
| O | Ca |   | 0.011557 | M | In | < | 0.000310 | M | Pr | <        | 0.000310 | M  | Th | <        | 0.001900 |    |    |          |          |
| M | Cd | < | 0.000310 | M | Ir | < | 0.000310 | M | Pt | <        | 0.000310 | M  | Ti |          | 0.001078 |    |    |          |          |
| M | Ce | < | 0.000610 | O | K  |   | 0.000577 | M | Rb | <        | 0.009100 | M  | Tl | <        | 0.000310 |    |    |          |          |
| M | Co | < | 0.001600 | M | La | < | 0.000310 | M | Re | <        | 0.000310 | M  | Tm | <        | 0.000310 |    |    |          |          |
| M | Cr | < | 0.010000 | O | Li | < | 0.000460 | M | Rh | <        | 0.000310 | M  | U  | <        | 0.000310 |    |    |          |          |
| M | Cs | < | 0.000310 | M | Lu | < | 0.000310 | M | Ru | <        | 0.000310 | O  | V  | <        | 0.001300 |    |    |          |          |
| M | Cu | < | 0.002500 | O | Mg |   | 0.001348 | O | S  | <        | 0.570000 | M  | W  | <        | 0.001900 |    |    |          |          |
| M | Dy | < | 0.000310 | M | Mn | < | 0.002500 | M | Sb | <        | 0.000310 | M  | Y  | <        | 0.000310 |    |    |          |          |
| M | Er | < | 0.000310 | M | Mo | < | 0.000310 | O | Sc | <        | 0.000590 | M  | Yb | <        | 0.000310 |    |    |          |          |

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](http://www.inorganicventures.com/TCT)

**Atomic Weight; Valence; Coordination Number; Chemical Form In Solution** - 28.09 +4 6 Si(OH)x(F)y2-

**Chemical Compatibility** -Soluble in HCl, HF, H3PO4 H2SO4 and HNO3 as the Si(OH)x(F)y2-. 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 silicic acid (silicic acid is soluble up to &sim;100 ppm in water) in all dilute acids except HF.

**Stability** - 2-100 ppb levels - stability unknown - (alone or mixed with all other metals) as the Si(OH)x(F)y2-. 1-10,000 ppm single element solutions as the Si(OH)x(F)y2- chemically stable for years in 2-5 % HNO3 / trace HF in a LDPE container.

**Si Containing Samples (Preparation and Solution)** -Metal (Soluble in 1:1:1 H2O / HF / HNO3); Oxide - SiO2, amorphous (dissolve by heating in 1:1:1 H2O / HF / HNO3); Oxide - quartz (fuse in Pt0 with Na2CO3); Geological Samples(fuse in Pt0with Na2CO3 followed by HCl solution of the fuseate); Organic Matrices containing silicates and non volatile silicon compounds (dry ash at 4500C in Pt0 and dissolve by gently warming with 1:1:1 H2O / HF / H2SO4 or fuse / ash with Na2CO3 and dissolve fuseate with HCl / H2O ); Silicone Oils - dimethyl silicones depolymerize to form volatile monomer units when heated (Measure directly in alcoholic KOH / xylene mixture where sample is treated first with the KOH at 60-1000C to "unzip" the Si- O-Si polymeric structure or digest with conc. H2SO4 / H2O2 followed by cooling and dissolution of the dehydrated silica with HF.) Note that the direct analysis of silicone oils in an organic solvent will result in false high results due to high vapor pressure of volatile monomer units like hexamethylcyclotrisiloxane. The KOH forms the K2+Si(CH3)2O= salt which is not volatile at room temperature.

**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 28 amu      | 4000 - 8000 ppt   | N/A   | N2, 12C16O                                  |
| ICP-OES 212.412 nm | 0.02/0.01 µg/mL   | 1     | Hf, Os, Mo, Ta                              |
| ICP-OES 251.611 nm | 0.012/0.003 µg/mL | 1     | Ta, U, Zn, Th                               |
| ICP-OES 288.158 nm | 0.03/0.004 µg/mL  | 1     | Ta, Ce, Cr, Cd, Th                          |

**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; [info@inorganicventures.com](mailto:info@inorganicventures.com);

## 11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

### 11.1 Certification Issue Date

July 10, 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

- July 10, 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





**CERTIFIED WEIGHT REPORT:**

**Part Number:**  
**Lot Number:**  
**Description:**

**58126**  
**011025**  
**Iron (Fe)**

**R-2113125**

**Solvent:** 24012496 Nitric Acid

**Lot #**

**Expiration Date:**  
**Recommended Storage:**  
**Nominal Concentration (µg/mL):**  
**NIST Test Number:**

**011028**  
**Ambient (20 °C)**  
**10000**  
**6U7B**

**M6140**

**2%** **40.0 (mL)** **Nitric Acid**

**Weight shown below was diluted to (mL):**

**2000.07** **0.100** **Flask Uncertainty**

|                |                   |        |
|----------------|-------------------|--------|
| Formulated By: | Benson Chan       | 011025 |
| Reviewed By:   | Pedro L. Renteria | 011025 |

**Compound**

**Lot**  
**Number**

**Nominal**  
**Conc. (µg/mL)**

**Purity**  
**(%)**

**Uncertainty**  
**(%)**

**Assay**  
**(%)**

**Target**  
**Weight (g)**

**Actual**  
**Weight (g)**

**Actual**  
**Conc. (µg/mL)**

**Expanded**  
**Uncertainty**  
**± (µg/mL)**

**CAS#**

**OSHA PEL (TWA)**

**LDSO**

**NIST**

**SFM**

**1. Iron(III) nitrate nonahydrate (Fe)**

**IN028 FED082023A1**

**10000**

**99.999**

**0.10**

**13.0**

**153.8534**

**#####**

**10000.2**

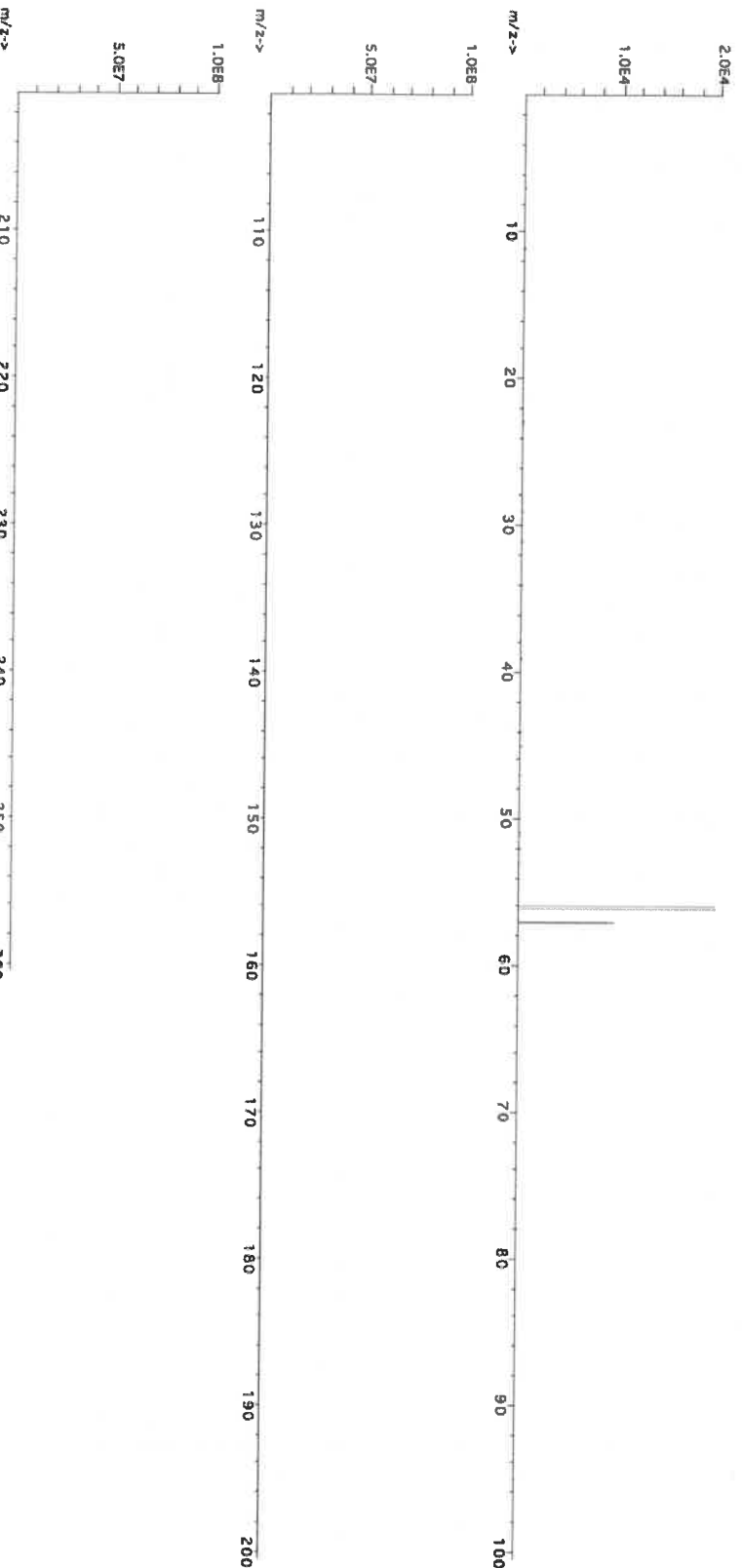
**20.0**

**7782-61-8**

**1 mg/m<sup>3</sup>**

**or-rel 3250mg/kg 3126A**

[1] Spectrum No.1 [ 30.763 sec]58126.D# [Count] [Linear]







**CERTIFIED WEIGHT REPORT:**

**Part Number:** 57119  
**Lot Number:** 103024  
**Description:** Potassium (K)

R-21113125

**Lot #** 24002546  
**Solvent:** Nitric Acid

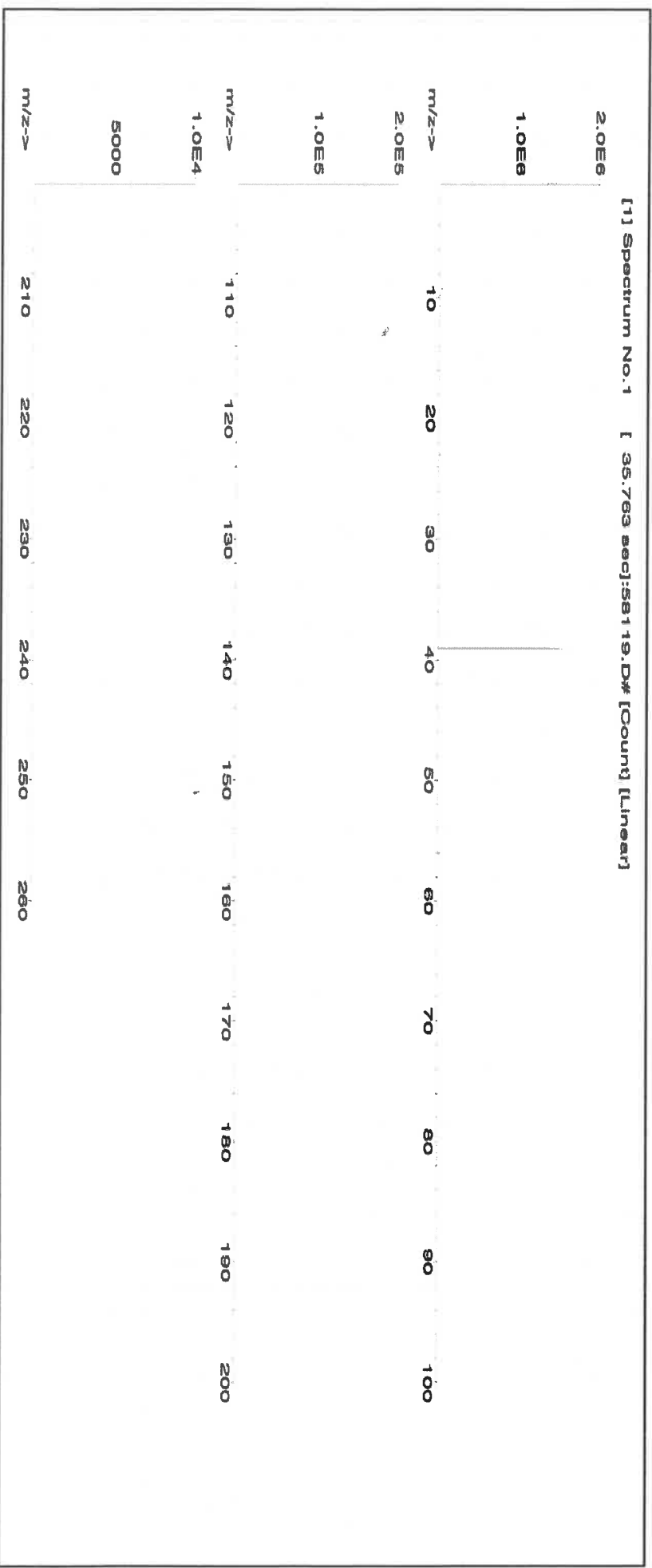
**Expiration Date:** 103027  
**Recommended Storage:** Ambient (20 °C)  
**Nominal Concentration (µg/mL):** 10000  
**NIST Test Number:** 6UTB  
**Weight shown below was diluted to (mL):** 4000.1  
**SE-05 Balance Uncertainty:** 0.15  
**Flask Uncertainty:** 0.15

|                          |                   |
|--------------------------|-------------------|
| <i>Giovanni Esposito</i> |                   |
| Formulated By:           | Giovanni Esposito |
| Reviewed By:             | Pedro L. Renteria |
|                          | 103024            |

| Compound | Lot Number | Nominal Conc. (µg/mL) | Purity (%) | Uncertainty Purity (%) | Assay (%) | Target Weight (g) | Actual Weight (g) | Actual Conc. (µg/mL) | Expanded Uncertainty +/- (µg/mL) | CAS# | OSHA PEL (TWA) | LD50 | NIST SRM |
|----------|------------|-----------------------|------------|------------------------|-----------|-------------------|-------------------|----------------------|----------------------------------|------|----------------|------|----------|
|          |            |                       |            |                        |           |                   |                   |                      |                                  |      |                |      |          |

1. Potassium nitrate (K) IN034 KD062022A1 10000 99.999 0.10 37.7 106.1040 ##### 10001.1 20.0 7757-79-1 5 mg/m3 orl-rat 3750 mg/kg 3141a

[1] Spectrum No. 1 [ 35.763 sec]:58119.D# [Count] [Linear]





**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 | Pt | <0.02 | Se | <0.2  | Tb | <0.02 | W  | <0.02 |
| Sb | <0.02 | Ca | <0.2  | Er | <0.02 | Ho | <0.02 | Lu | <0.02 | Nb | <0.02 | Re | <0.02 | Si | <0.02 | Te | <0.02 | U  | <0.02 |
| As | <0.2  | Ce | <0.02 | Eu | <0.02 | In | <0.02 | Mg | <0.01 | Os | <0.02 | Rh | <0.02 | Ag | <0.02 | Tl | <0.02 | V  | <0.02 |
| Ba | <0.02 | Cs | <0.02 | Gd | <0.02 | Ir | <0.02 | Mn | <0.02 | Pd | <0.02 | Rb | <0.02 | Na | <0.2  | Th | <0.02 | Yb | <0.02 |
| Be | <0.01 | Cr | <0.02 | Ga | <0.02 | Fe | <0.2  | Hg | <0.2  | P  | <0.02 | Ru | <0.02 | Sr | <0.02 | Tm | <0.02 | Y  | <0.02 |
| Bi | <0.02 | Co | <0.02 | Ge | <0.02 | La | <0.02 | Mo | <0.02 | Pt | <0.02 | Sm | <0.02 | S  | <0.02 | Sn | <0.02 | Zn | <0.02 |
| B  | <0.02 | Cu | <0.02 | Au | <0.02 | Pb | <0.02 | Nd | <0.02 | K  | T     | Sc | <0.02 | Ta | <0.02 | Ti | <0.02 | Zr | <0.02 |

(T) = Target analyte

**Physical Characterization:**

Homogeneity: No heterogeneity was observed in the preparation of this standard.

**Certified by:**

- \* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- \* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- \* All standard containers are meticulously cleaned prior to use.
- \* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- \* Standards are certified (+/-) 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).





**CERTIFIED WEIGHT REPORT:**

**Part Number:** 58111  
**Lot Number:** 072424  
**Description:** Sodium (Na)

**Lot #**

R → 11/13/25 Solvent: 24002546 Nitric Acid

**Expiration Date:** 072427  
**Recommended Storage:** Ambient (20 °C)  
**Nominal Concentration (µg/mL):** 10000  
**NIST Test Number:** 6UTB  
**Weight shown below was diluted to (mL):** 4000.2  
**5E-05 Balance Uncertainty**  
**0.10 Flask Uncertainty**

M6144 2% 80.0 (mL) Nitric Acid

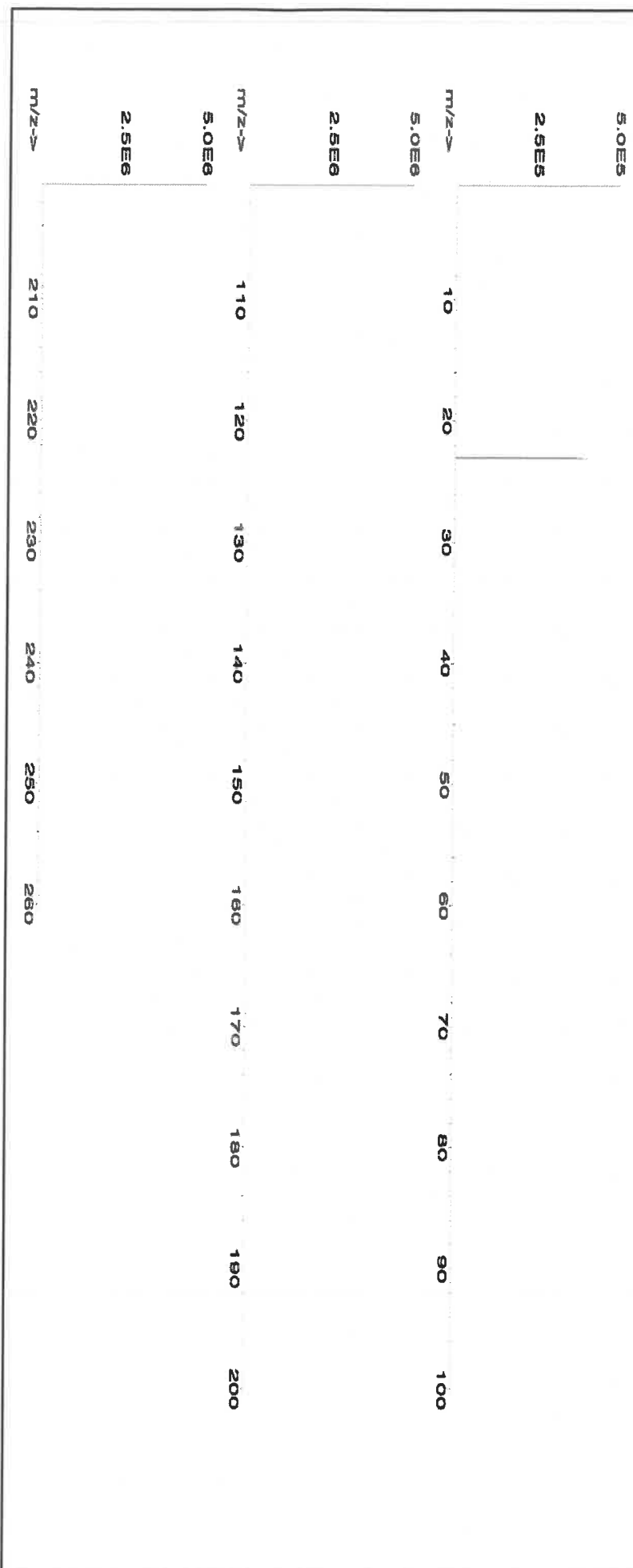
|                |                   |        |
|----------------|-------------------|--------|
| Formulated By: | Benson Chan       | 072424 |
| Reviewed By:   | Pedro L. Renteria | 072424 |

**SDS Information**

| Compound | Lot Number | Nominal Conc. (µg/mL) | Purity (%) | Uncertainty Purity (%) | Assay (%) | Target Weight (g) | Actual Weight (g) | Actual Conc. (µg/mL) | Expanded Uncertainty +/- (µg/mL) | CAS# | OSHA PEL (TWA) | LD50 | NIST SRM |
|----------|------------|-----------------------|------------|------------------------|-----------|-------------------|-------------------|----------------------|----------------------------------|------|----------------|------|----------|
|----------|------------|-----------------------|------------|------------------------|-----------|-------------------|-------------------|----------------------|----------------------------------|------|----------------|------|----------|

1. Sodium nitrate (Na) IN036 NAV01201511 10000 99.999 0.10 26.9 148.7096 ##### 10000.0 20.0 7631-99-4 5 mg/m3 orl-rat 3430 mg/kg 3152a

[1] Spectrum No. 1 [ 8.935 sec]: 58111.D# [Count] [Linear]





**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 | Pt | <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 | Rb | <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     | Tb | <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 certified (+/-) 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).



**CERTIFIED WEIGHT REPORT:**

Part Number: **58030** Lot # **121724**  
Description: **Zinc (Zn)**

Expiration Date:

121727

*M6145*

2%

40.0 (mL)

Nitric Acid

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

|                      |                        |
|----------------------|------------------------|
| <i>Aleah O'Brady</i> |                        |
| Formulated By:       | Aleah O'Brady          |
| Reviewed By:         | <i>Pedro L. Rentes</i> |
|                      | Pedro L. Rentes        |
|                      | 121724                 |

**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)

CAS#

OSHA PEL (TWA)

LD50

NIST SRM

**SDS Information**

(Solvent Safety Info. On Attached pg.)

**1. Zinc nitrate hexahydrate (Zn)**

IN016 ZNE032021A1

1000

99.999

0.10

24.3

8.2308

8.2311

1000.0

2.0

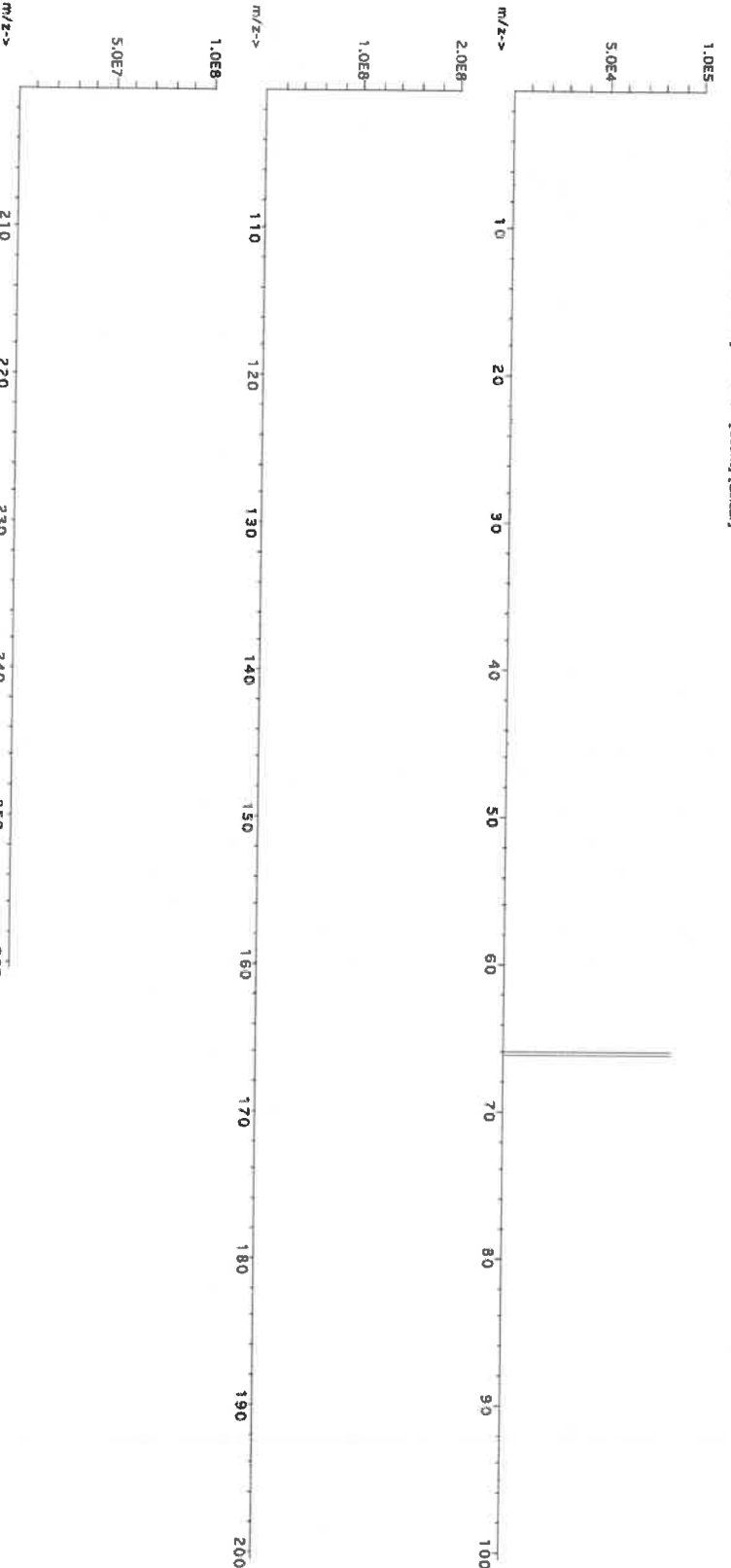
10196-18-6

1 mg/m3

or-tat 1190mg/kg

3168

[1] Spectrum No.1 [ 31.103 sec;58130.D# [Count] [Linear]





**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 | Bu | <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 certified (+/-) 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).

Hydrochloric Acid, 36.5–38.0%  
BAKER INSTRA-ANALYZED® Reagent  
For Trace Metal Analysis

 **avantor™**



M6151

R → 11/15/25

Material No.: 9530-33  
Batch No.: 22G2862015  
Manufactured Date: 2022-06-15  
Retest Date: 2027-06-14  
Revision No.: 0

## Certificate of Analysis

| Test                                      | Specification | Result      |
|-------------------------------------------|---------------|-------------|
| ACS – Assay (as HCl) (by acid–base titrn) | 36.5 – 38.0 % | 37.9 %      |
| ACS – Color (APHA)                        | ≤ 10          | 5           |
| ACS – Residue after Ignition              | ≤ 3 ppm       | < 1 ppm     |
| ACS – Specific Gravity at 60°/60°F        | 1.185 – 1.192 | 1.191       |
| ACS – Bromide (Br)                        | ≤ 0.005 %     | < 0.005 %   |
| ACS – Extractable Organic Substances      | ≤ 5 ppm       | < 1 ppm     |
| ACS – Free Chlorine (as Cl <sub>2</sub> ) | ≤ 0.5 ppm     | < 0.5 ppm   |
| Phosphate (PO <sub>4</sub> )              | ≤ 0.05 ppm    | < 0.03 ppm  |
| Sulfate (SO <sub>4</sub> )                | ≤ 0.5 ppm     | < 0.3 ppm   |
| Sulfite (SO <sub>3</sub> )                | ≤ 0.8 ppm     | 0.3 ppm     |
| Ammonium (NH <sub>4</sub> )               | ≤ 3 ppm       | < 1 ppm     |
| Trace Impurities – Arsenic (As)           | ≤ 0.010 ppm   | < 0.003 ppm |
| Trace Impurities – Aluminum (Al)          | ≤ 10.0 ppb    | 1.3 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    | 163.0 ppb   |
| Trace Impurities – Chromium (Cr)          | ≤ 1.0 ppb     | 0.7 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     | 0.6 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

 **avantorsm**



Material No.: 9530-33  
Batch No.: 22G2862015

| 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    | 2.9 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     | 0.8 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   | < 10.0 ppb |
| Trace Impurities – Silver (Ag)                         | ≤ 1.0 ppb     | 0.5 ppb    |
| Trace Impurities – Sodium (Na)                         | ≤ 100.0 ppb   | 2.3 ppb    |
| Trace Impurities – Strontium (Sr)                      | ≤ 1.0 ppb     | < 0.2 ppb  |
| Trace Impurities – Tantalum (Ta)                       | ≤ 1.0 ppb     | 1.6 ppb    |
| Trace Impurities – Thallium (Tl)                       | ≤ 5.0 ppb     | < 2.0 ppb  |
| Trace Impurities – Tin (Sn)                            | ≤ 5.0 ppb     | 4.0 ppb    |
| Trace Impurities – Titanium (Ti)                       | ≤ 1.0 ppb     | 1.5 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     | 0.3 ppb    |

>>> Continued on page 3 >>>

Hydrochloric Acid, 36.5–38.0%  
BAKER INSTRA–ANALYZED® Reagent  
For Trace Metal Analysis



Material No.: 9530-33  
Batch No.: 22G2862015

| 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

A handwritten signature in cursive script that reads 'Jamie Ethier'.  
Jamie Ethier  
Vice President Global Quality

Nitric Acid 69%  
CMOS

avantor™



R- 0210212025

m - 6158

Material No.: 9606-03  
Batch No.: 24D1062002  
Manufactured Date: 2024-03-26  
Retest Date: 2029-03-25  
Revision No.: 0

## Certificate of Analysis

| Test                              | Specification | Result      |
|-----------------------------------|---------------|-------------|
| Assay (HNO <sub>3</sub> )         | 69.0 – 70.0 % | 69.7 %      |
| Appearance                        | Passes Test   | Passes Test |
| Color (APHA)                      | ≤ 10          | 5           |
| Residue after Ignition            | ≤ 2 ppm       | 1 ppm       |
| Chloride (Cl)                     | ≤ 0.08 ppm    | < 0.03 ppm  |
| Phosphate (PO <sub>4</sub> )      | ≤ 0.10 ppm    | < 0.03 ppm  |
| Sulfate (SO <sub>4</sub> )        | ≤ 0.2 ppm     | < 0.2 ppm   |
| Trace Impurities – Aluminum (Al)  | ≤ 40.0 ppb    | < 1.0 ppb   |
| Arsenic and Antimony (as As)      | ≤ 5.0 ppb     | < 2.0 ppb   |
| Trace Impurities – Barium (Ba)    | ≤ 10.0 ppb    | < 1.0 ppb   |
| Trace Impurities – Beryllium (Be) | ≤ 10.0 ppb    | < 1.0 ppb   |
| Trace Impurities – Bismuth (Bi)   | ≤ 20.0 ppb    | < 10.0 ppb  |
| Trace Impurities – Boron (B)      | ≤ 10.0 ppb    | < 5.0 ppb   |
| Trace Impurities – Cadmium (Cd)   | ≤ 50 ppb      | < 1 ppb     |
| Trace Impurities – Calcium (Ca)   | ≤ 50.0 ppb    | 2.3 ppb     |
| Trace Impurities – Chromium (Cr)  | ≤ 30.0 ppb    | < 1.0 ppb   |
| Trace Impurities – Cobalt (Co)    | ≤ 10.0 ppb    | < 1.0 ppb   |
| Trace Impurities – Copper (Cu)    | ≤ 10.0 ppb    | < 1.0 ppb   |
| Trace Impurities – Gallium (Ga)   | ≤ 10.0 ppb    | < 1.0 ppb   |
| Trace Impurities – Germanium (Ge) | ≤ 20 ppb      | < 10 ppb    |
| Trace Impurities – Gold (Au)      | ≤ 20 ppb      | < 5 ppb     |
| Heavy Metals (as Pb)              | ≤ 100 ppb     | 100 ppb     |
| Trace Impurities – Iron (Fe)      | ≤ 40.0 ppb    | < 1.0 ppb   |
| Trace Impurities – Lead (Pb)      | ≤ 20.0 ppb    | < 10.0 ppb  |
| Trace Impurities – Lithium (Li)   | ≤ 10.0 ppb    | < 1.0 ppb   |
| Trace Impurities – Magnesium (Mg) | ≤ 20 ppb      | < 1 ppb     |
| Trace Impurities – Manganese (Mn) | ≤ 10.0 ppb    | < 1.0 ppb   |
| Trace Impurities – Nickel (Ni)    | ≤ 20.0 ppb    | < 5.0 ppb   |

>>> Continued on page 2 >>>



Nitric Acid 69%  
CMOS

 **avantor™**



Material No.: 9606-03  
Batch No.: 24D1062002

| Test                                | Specification | Result     |
|-------------------------------------|---------------|------------|
| Trace Impurities – Niobium (Nb)     | ≤ 50.0 ppb    | < 1.0 ppb  |
| Trace Impurities – Potassium (K)    | ≤ 50 ppb      | 16 ppb     |
| Trace Impurities – Silicon (Si)     | ≤ 50 ppb      | < 10 ppb   |
| Trace Impurities – Silver (Ag)      | ≤ 20.0 ppb    | < 1.0 ppb  |
| Trace Impurities – Sodium (Na)      | ≤ 150.0 ppb   | < 5.0 ppb  |
| Trace Impurities – Strontium (Sr)   | ≤ 30.0 ppb    | < 1.0 ppb  |
| Trace Impurities – Tantalum (Ta)    | ≤ 10.0 ppb    | < 5.0 ppb  |
| Trace Impurities – Thallium (Tl)    | ≤ 10.0 ppb    | < 5.0 ppb  |
| Trace Impurities – Tin (Sn)         | ≤ 20.0 ppb    | < 10.0 ppb |
| Trace Impurities – Titanium (Ti)    | ≤ 10.0 ppb    | < 1.0 ppb  |
| Trace Impurities – Vanadium (V)     | ≤ 10.0 ppb    | < 1.0 ppb  |
| Trace Impurities – Zinc (Zn)        | ≤ 20.0 ppb    | < 1.0 ppb  |
| Trace Impurities – Zirconium (Zr)   | ≤ 10.0 ppb    | < 1.0 ppb  |
| Particle Count – 0.5 µm and greater | ≤ 60 par/ml   | 10 par/ml  |
| Particle Count – 1.0 µm and greater | ≤ 10 par/ml   | 3 par/ml   |

>>> Continued on page 3 >>>

Nitric Acid 69%  
CMOS

 **avantor™**



Material No.: 9606-03  
Batch No.: 24D1062002

| Test | Specification | Result |
|------|---------------|--------|
|------|---------------|--------|

For Microelectronic Use

Country of Origin: USA  
Packaging Site: Phillipsburg Mfg Ctr & DC



Jamie Croak  
Director Quality Operations, Bioscience Production

Nitric Acid 69%  
CMOS

 **avantors<sup>TM</sup>**



m-6162

Material No.: 9606-03  
Batch No.: 24H0162012  
Manufactured Date: 2024-06-28  
Retest Date: 2029-06-27  
Revision No.: 0

R. Date :- 04/27/2025

## Certificate of Analysis

| Test                              | Specification | Result      |
|-----------------------------------|---------------|-------------|
| Assay (HNO <sub>3</sub> )         | 69.0 – 70.0 % | 69.7 %      |
| Appearance                        | Passes Test   | Passes Test |
| Color (APHA)                      | ≤ 10          | 5           |
| Residue after Ignition            | ≤ 2 ppm       | < 1 ppm     |
| Chloride (Cl)                     | ≤ 0.08 ppm    | 0.03 ppm    |
| Phosphate (PO <sub>4</sub> )      | ≤ 0.10 ppm    | < 0.03 ppm  |
| Sulfate (SO <sub>4</sub> )        | ≤ 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    | < 1.0 ppb   |
| Trace Impurities – Boron (B)      | ≤ 10.0 ppb    | 0.1 ppb     |
| Trace Impurities – Cadmium (Cd)   | ≤ 50 ppb      | < 1 ppb     |
| Trace Impurities – Calcium (Ca)   | ≤ 50.0 ppb    | 0.3 ppb     |
| Trace Impurities – Chromium (Cr)  | ≤ 30.0 ppb    | 0.1 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      | < 1 ppb     |
| Trace Impurities – Gold (Au)      | ≤ 20 ppb      | < 1 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    | < 1.0 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    | < 1.0 ppb   |

>>> Continued on page 2 >>>

Nitric Acid 69%  
CMOS

 **avantor™**



Material No.: 9606-03  
Batch No.: 24H0162012

| Test                                | Specification | Result    |
|-------------------------------------|---------------|-----------|
| Trace Impurities – Niobium (Nb)     | ≤ 50.0 ppb    | < 1.0 ppb |
| Trace Impurities – Potassium (K)    | ≤ 50 ppb      | < 1 ppb   |
| Trace Impurities – Silicon (Si)     | ≤ 50 ppb      | 1 ppb     |
| Trace Impurities – Silver (Ag)      | ≤ 20.0 ppb    | < 1.0 ppb |
| Trace Impurities – Sodium (Na)      | ≤ 150.0 ppb   | < 1.0 ppb |
| Trace Impurities – Strontium (Sr)   | ≤ 30.0 ppb    | < 1.0 ppb |
| Trace Impurities – Tantalum (Ta)    | ≤ 10.0 ppb    | < 1.0 ppb |
| Trace Impurities – Thallium (Tl)    | ≤ 10.0 ppb    | < 1.0 ppb |
| Trace Impurities – Tin (Sn)         | ≤ 20.0 ppb    | < 1.0 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   | 13 par/ml |
| Particle Count – 1.0 µm and greater | ≤ 10 par/ml   | 5 par/ml  |

>>> Continued on page 3 >>>

Nitric Acid 69%  
CMOS

 **avantor™**



Material No.: 9606-03  
Batch No.: 24H0162012

| Test | Specification | Result |
|------|---------------|--------|
|------|---------------|--------|

For Microelectronic Use

Country of Origin: USA  
Packaging Site: Phillipsburg Mfg Ctr & DC



Jamie Croak  
Director Quality Operations, Bioscience Production

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).



## 2.0 PRODUCT DESCRIPTION

|                     |                                     |            |  |
|---------------------|-------------------------------------|------------|--|
| Product Code:       | Multi Analyte Custom Grade Solution |            |  |
| Catalog Number:     | QCP-CICV-1                          |            |  |
| Lot Number:         | V2-MEB744107                        |            |  |
| Matrix:             | 7% (v/v) HNO <sub>3</sub>           |            |  |
| Value / Analyte(s): | 2 500 µg/mL ea:                     |            |  |
|                     | Calcium,                            | Potassium, |  |
|                     | Magnesium,                          | Sodium,    |  |
|                     | 1 000 µg/mL ea:                     |            |  |
|                     | Aluminum,                           | Barium,    |  |
|                     | 500 µg/mL ea:                       |            |  |
|                     | Iron,                               |            |  |
|                     | 250 µg/mL ea:                       |            |  |
|                     | Nickel,                             | Vanadium,  |  |
|                     | Zinc,                               | Cobalt,    |  |
|                     | Manganese,                          |            |  |
|                     | 125 µg/mL ea:                       |            |  |
|                     | Silver,                             | Copper,    |  |
|                     | 100 µg/mL ea:                       |            |  |
|                     | Chromium,                           |            |  |
|                     | 25 µg/mL ea:                        |            |  |
|                     | Beryllium                           |            |  |

**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   |
|---------------|--------------------|---------------|-------------------|
| Aluminum, Al  | 1 000 ± 4 µg/mL    | Barium, Ba    | 1 000 ± 6 µg/mL   |
| Beryllium, Be | 24.98 ± 0.12 µg/mL | Calcium, Ca   | 2 500 ± 8 µg/mL   |
| Chromium, Cr  | 99.9 ± 0.6 µg/mL   | Cobalt, Co    | 250.2 ± 1.2 µg/mL |
| Copper, Cu    | 125.0 ± 0.5 µg/mL  | Iron, Fe      | 500.0 ± 2.2 µg/mL |
| Magnesium, Mg | 2 500 ± 11 µg/mL   | Manganese, Mn | 249.9 ± 1.1 µg/mL |
| Nickel, Ni    | 250.0 ± 1.2 µg/mL  | Potassium, K  | 2 500 ± 11 µg/mL  |
| Silver, Ag    | 125.0 ± 0.6 µg/mL  | Sodium, Na    | 2 500 ± 11 µg/mL  |
| Vanadium, V   | 250.0 ± 1.1 µg/mL  | Zinc, Zn      | 249.9 ± 1.1 µg/mL |

**Density:** 1.081 g/mL (measured at 20 ± 4 °C)

**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       |
| Cu      | ICP Assay   | 3114      | 120618       |
| 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     | 200413       |
| Na      | Gravimetric |           | See Sec. 4.2 |
| Ni      | ICP Assay   | 3136      | 120619       |
| Ni      | EDTA        | 928       | 928          |
| V       | ICP 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,  $X_{\text{CRM/RM}}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{\text{CRM/RM}} = \sum(w_i)(X_i)$$

$X_i$  = mean of Assay Method  $i$  with standard uncertainty  $u_{\text{char } i}$

$w_i$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{\text{char } i}^2) / (\sum(1/u_{\text{char } i}^2))$$

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k (u_{\text{char}}^2 + u_{\text{bb}}^2 + u_{\text{Its}}^2 + u_{\text{ts}}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{\text{char}} = [\sum(w_i)^2 (u_{\text{char } i})^2]^{1/2}$  where  $u_{\text{char } i}$  are the errors from each characterization method

$u_{\text{bb}}$  = bottle to bottle homogeneity standard uncertainty

$u_{\text{Its}}$  = long term stability standard uncertainty (storage)

$u_{\text{ts}}$  = transport stability standard uncertainty

#### Characterization of CRM/RM by One Method

Certified Value,  $X_{\text{CRM/RM}}$ , where one method of characterization is used is the mean of individual results:

$$X_{\text{CRM/RM}} = (X_a) (u_{\text{char } a})$$

$X_a$  = mean of Assay Method A with

$u_{\text{char } a}$  = the standard uncertainty of characterization Method A

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k (u_{\text{char } a}^2 + u_{\text{bb}}^2 + u_{\text{Its}}^2 + u_{\text{ts}}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{\text{char } a}$  = the errors from characterization

$u_{\text{bb}}$  = bottle to bottle homogeneity standard uncertainty

$u_{\text{Its}}$  = long term stability standard uncertainty (storage)

$u_{\text{ts}}$  = 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), <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](http://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](http://inorganicventures.com); [info@inorganicventures.com](mailto:info@inorganicventures.com)

## **11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY**

### **11.1 Certification Issue Date**

May 22, 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**

- **May 22, 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:

Justin Dirico  
Stock Processing Supervisor



#### Certificate Approved By:

Jodie Wall  
Stock VSM Coordinator



#### Certifying Officer:

Paul Gaines  
Chairman / Senior Technical Director



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).



## 2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution  
Catalog Number: QCP-CICV-2  
Lot Number: U2-MEB733713  
Matrix: 3% (w/v) Tartaric acid  
1% (v/v) HNO<sub>3</sub>  
Value / Analyte(s): 500 µg/mL ea:  
Antimony

**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 |
|--------------|-------------------|---------|-----------------|
| Antimony, Sb | 500.0 ± 2.8 µg/mL |         |                 |

**Density:** 1.017 g/mL (measured at 20 ± 4 °C)

### Assay Information:

| ANALYTE | METHOD    | NIST SRM# | SRM LOT# |
|---------|-----------|-----------|----------|
| Sb      | ICP Assay | 3102a     | 140911   |

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:

$$X_{CRM/RM} = \sum (w_i) (X_i)$$

$X_i$  = 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:

$$w_i = (1/u_{char i}^2) / (\sum (1/u_{char i}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char} = [\sum (w_i)^2 (u_{char i})^2]^{1/2}$  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

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

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). <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](https://www.inorganicventures.com/TCT)

#### 8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

#### 9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

## 10.0 QUALITY STANDARD DOCUMENTATION

### 10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

### 10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

### 10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

## 11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

### 11.1 Certification Issue Date

June 01, 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

- **June 01, 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



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).



## 2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution  
Catalog Number: QCP-CICV-3  
Lot Number: V2-MEB749572  
Matrix: 7% (v/v) HNO<sub>3</sub>  
Value / Analyte(s):  
500 µg/mL ea:  
Arsenic, Lead,  
Selenium, Thallium,  
250 µg/mL ea:  
Cadmium

**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   |
|--------------|-------------------|--------------|-------------------|
| Arsenic, As  | 500.0 ± 3.1 µg/mL | Cadmium, Cd  | 250.1 ± 1.1 µg/mL |
| Lead, Pb     | 500.0 ± 2.3 µg/mL | Selenium, Se | 500.0 ± 3.2 µg/mL |
| Thallium, Tl | 500.0 ± 3.0 µg/mL |              |                   |

**Density:** 1.040 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      |
| 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,  $X_{\text{CRM/RM}}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{\text{CRM/RM}} = \sum (w_i) (X_i)$$

$X_i$  = mean of Assay Method  $i$  with standard uncertainty  $u_{\text{char } i}$

$w_i$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{\text{char } i}^2) / (\sum (1/u_{\text{char } i}^2))$$

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k (u_{\text{char}}^2 + u_{\text{bb}}^2 + u_{\text{Its}}^2 + u_{\text{ts}}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{\text{char}} = [\sum (w_i)^2 (u_{\text{char } i})^2]^{1/2}$  where  $u_{\text{char } i}$  are the errors from each characterization method

$u_{\text{bb}}$  = bottle to bottle homogeneity standard uncertainty

$u_{\text{Its}}$  = long term stability standard uncertainty (storage)

$u_{\text{ts}}$  = transport stability standard uncertainty

#### Characterization of CRM/RM by One Method

Certified Value,  $X_{\text{CRM/RM}}$ , where one method of characterization is used is the mean of individual results:

$$X_{\text{CRM/RM}} = (X_a) (u_{\text{char } a})$$

$X_a$  = mean of Assay Method A with

$u_{\text{char } a}$  = the standard uncertainty of characterization Method A

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k (u_{\text{char } a}^2 + u_{\text{bb}}^2 + u_{\text{Its}}^2 + u_{\text{ts}}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{\text{char } a}$  = the errors from characterization

$u_{\text{bb}}$  = bottle to bottle homogeneity standard uncertainty

$u_{\text{Its}}$  = long term stability standard uncertainty (storage)

$u_{\text{ts}}$  = 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), <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](http://www.inorganicventures.com/TCT)

## **8.0 HAZARDOUS INFORMATION**

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

## **9.0 HOMOGENEITY**

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

## **10.0 QUALITY STANDARD DOCUMENTATION**

### **10.1 ISO 9001 Quality Management System Registration**

- QSR Certificate Number QSR-1034

### **10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"**

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

### **10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"**

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; [inorganicventures.com](http://inorganicventures.com); [info@inorganicventures.com](mailto:info@inorganicventures.com)

## **11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY**

### **11.1 Certification Issue Date**

January 02, 2025

- 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 02, 2030**

- 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:

Justin Dirico  
Stock Processing Supervisor



#### Certificate Approved By:

Jodie Wall  
Stock VSM Coordinator



#### Certifying Officer:

Paul Gaines  
Chairman / Senior Technical Director





**Certified Reference Material CRM**



ANAB ISO 17034 Accredited  
AR-1539 Certificate Number  
https://AbsoluteStandards.com

**CERTIFIED WEIGHT REPORT:**

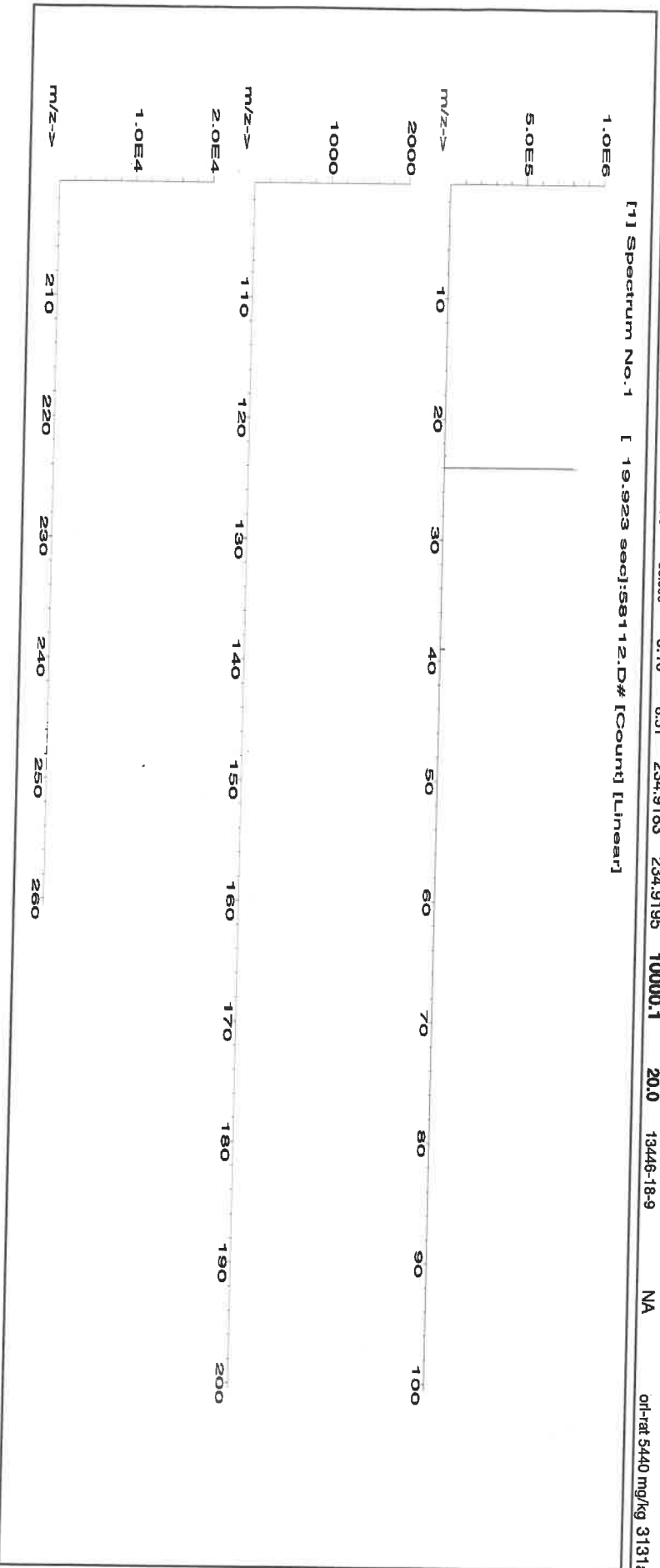
**Part Number:** 58112  
**Lot Number:** 011525  
**Description:** Magnesium (Mg)  
**Solvent:** 24012496 Nitric Acid

**Expiration Date:** 011528  
**Recommended Storage:** Ambient (20 °C)  
**Nominal Concentration (µg/mL):** 10000  
**NIST Test Number:** 6UTB  
**Weight shown below was diluted to (mL):** 2000.07  
**Balance Uncertainty:** 5E-05  
**Flask Uncertainty:** 0.100

|                |                 |        |
|----------------|-----------------|--------|
| Formulated By: | Benson Chan     | 011525 |
| Reviewed By:   | Pedro L. Rentas | 011525 |

**Compound**

1. Magnesium nitrate hexahydrate (Mg) IN030 MGD05023A1 10000 99.999 0.10 8.51 234.9183 234.9195 10000.1 20.0 13446-18-9 NA off-ret 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 | Ku | <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 certified (+/-) 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).

# 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

M6174  
R → S1/S124

## 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).



## 2.0 PRODUCT DESCRIPTION

|                     |                                     |            |
|---------------------|-------------------------------------|------------|
| Product Code:       | Multi Analyte Custom Grade Solution |            |
| Catalog Number:     | CLPP-CAL-1                          |            |
| Lot Number:         | V2-MEB742428                        |            |
| Matrix:             | 5% (v/v) HNO <sub>3</sub>           |            |
| 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 | 50.03 ± 0.30 µg/mL | Calcium, Ca   | 5 000 ± 16 µg/mL  |
| Chromium, Cr  | 200.0 ± 1.1 µg/mL  | Cobalt, Co    | 500.0 ± 2.3 µg/mL |
| Copper, Cu    | 250.0 ± 1.1 µg/mL  | Iron, Fe      | 1 000 ± 4 µg/mL   |
| Magnesium, Mg | 5 000 ± 22 µg/mL   | Manganese, Mn | 499.9 ± 2.2 µg/mL |
| Nickel, Ni    | 500.1 ± 2.3 µg/mL  | Potassium, K  | 5 000 ± 22 µg/mL  |
| Silver, Ag    | 250.0 ± 1.1 µg/mL  | Sodium, Na    | 5 000 ± 22 µg/mL  |
| Vanadium, V   | 500.0 ± 2.2 µg/mL  | Zinc, Zn      | 500.0 ± 2.2 µg/mL |

Density: 1.117 g/mL (measured at 20 ± 4 °C)

**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       |
| Ca      | ICP Assay   | 3109a     | 130213       |
| Ca      | EDTA        | 928       | 928          |
| Co      | ICP Assay   | 3113      | 190630       |
| Co      | EDTA        | 928       | 928          |
| Cr      | ICP Assay   | 3112a     | 170630       |
| Cu      | ICP Assay   | 3114      | 120618       |
| 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     | 200413       |
| Na      | Gravimetric |           | See Sec. 4.2 |
| Ni      | ICP Assay   | 3136      | 120619       |
| Ni      | EDTA        | 928       | 928          |
| V       | ICP 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,  $X_{\text{CRM/RM}}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{\text{CRM/RM}} = \sum (w_i) (X_i)$$

$X_i$  = mean of Assay Method  $i$  with standard uncertainty  $u_{\text{char } i}$

$w_i$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{\text{char } i})^2 / (\sum (1/u_{\text{char } i})^2)$$

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k (u_{\text{char}}^2 + u_{\text{bb}}^2 + u_{\text{Its}}^2 + u_{\text{ts}}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{\text{char}} = [\sum (w_i)^2 (u_{\text{char } i})^2]^{1/2}$  where  $u_{\text{char } i}$  are the errors from each characterization method

$u_{\text{bb}}$  = bottle to bottle homogeneity standard uncertainty

$u_{\text{Its}}$  = long term stability standard uncertainty (storage)

$u_{\text{ts}}$  = transport stability standard uncertainty

#### Characterization of CRM/RM by One Method

Certified Value,  $X_{\text{CRM/RM}}$ , where one method of characterization is used is the mean of individual results:

$$X_{\text{CRM/RM}} = (X_a) (u_{\text{char } a})$$

$X_a$  = mean of Assay Method A with

$u_{\text{char } a}$  = the standard uncertainty of characterization Method A

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k (u_{\text{char } a}^2 + u_{\text{bb}}^2 + u_{\text{Its}}^2 + u_{\text{ts}}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{\text{char } a}$  = the errors from characterization

$u_{\text{bb}}$  = bottle to bottle homogeneity standard uncertainty

$u_{\text{Its}}$  = long term stability standard uncertainty (storage)

$u_{\text{ts}}$  = 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). <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](http://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; [info@inorganicventures.com](mailto:info@inorganicventures.com);

## **11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY**

### **11.1 Certification Issue Date**

March 22, 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 22, 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:

Jodie Wall  
Stock VSM Coordinator



#### Certifying Officer:

Paul Gaines  
Chairman / Senior Technical Director





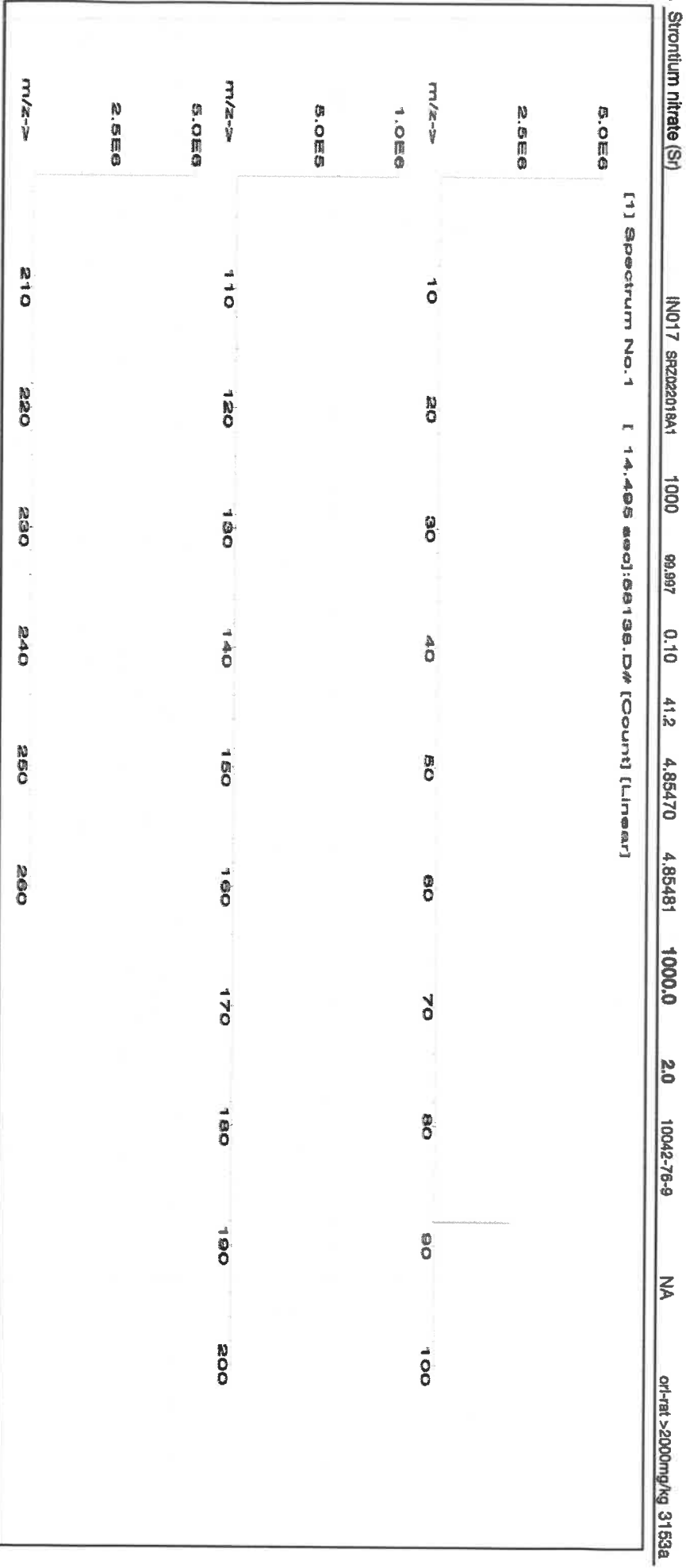


**CERTIFIED WEIGHT REPORT:**

Part Number: **57038** Lot # **24002546** Solvent: **Nitric Acid**  
 Lot Number: **092724**  
 Description: **Strontium (Sr)**  
 Expiration Date: **092727** 2% 40.0 Nitric Acid (mL)  
 Recommended Storage: **Ambient (20 °C)**  
 Nominal Concentration (µg/mL): **1000**  
 NIST Test Number: **8UTB** 5E-05 Balance Uncertainty  
 Weight shown below was diluted to (mL): **2000.07** 0.100 Flask Uncertainty

|                    |                 |
|--------------------|-----------------|
| <i>[Signature]</i> |                 |
| Formulated By:     | Benson Chan     |
|                    | 092724          |
| Reviewed By:       | Pedro L. Rentas |
|                    | 092724          |

| SDS Information        |                   |                       |            |                        |           |                   |                   |                      |                                  |
|------------------------|-------------------|-----------------------|------------|------------------------|-----------|-------------------|-------------------|----------------------|----------------------------------|
| Compound               | Lot               | Nominal Conc. (µg/mL) | Purity (%) | Uncertainty Purity (%) | Assay (%) | Target Weight (g) | Actual Weight (g) | Actual Conc. (µg/mL) | Expanded Uncertainty +/- (µg/mL) |
| Strontium nitrate (Sr) | IN017 SR2022018A1 | 1000                  | 99.997     | 0.10                   | 41.2      | 4.85470           | 4.85481           | 1000.0               | 2.0                              |
|                        |                   |                       |            |                        |           | 10042-76-9        | NA                |                      | or -rel >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 | Pt | <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 | Bu | <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 certified (+/-) 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).



**CERTIFIED WEIGHT REPORT:**

**Part Number:**  
**Lot Number:**  
**Description:**

57042  
080525  
Molybdenum (Mo)

57042  
080525  
Molybdenum (Mo)

57042  
080525  
Molybdenum (Mo)

**Solvent:**  
Ammonium hydroxide  
ASTM Type 1 Water

**Expiration Date:**

080528

**Recommended Storage:**

Ambient (15 - 30 °C)

**Nominal Concentration (µg/mL):**

1000

**NIST Test Number:**

6UTB

**Volume shown below was diluted to (mL):**

1999.41

5E-05

Balance Uncertainty

0.058

Fork Uncertainty

R → 8/6/25  
M6177

0.5%

10.0

Ammonium hydroxide

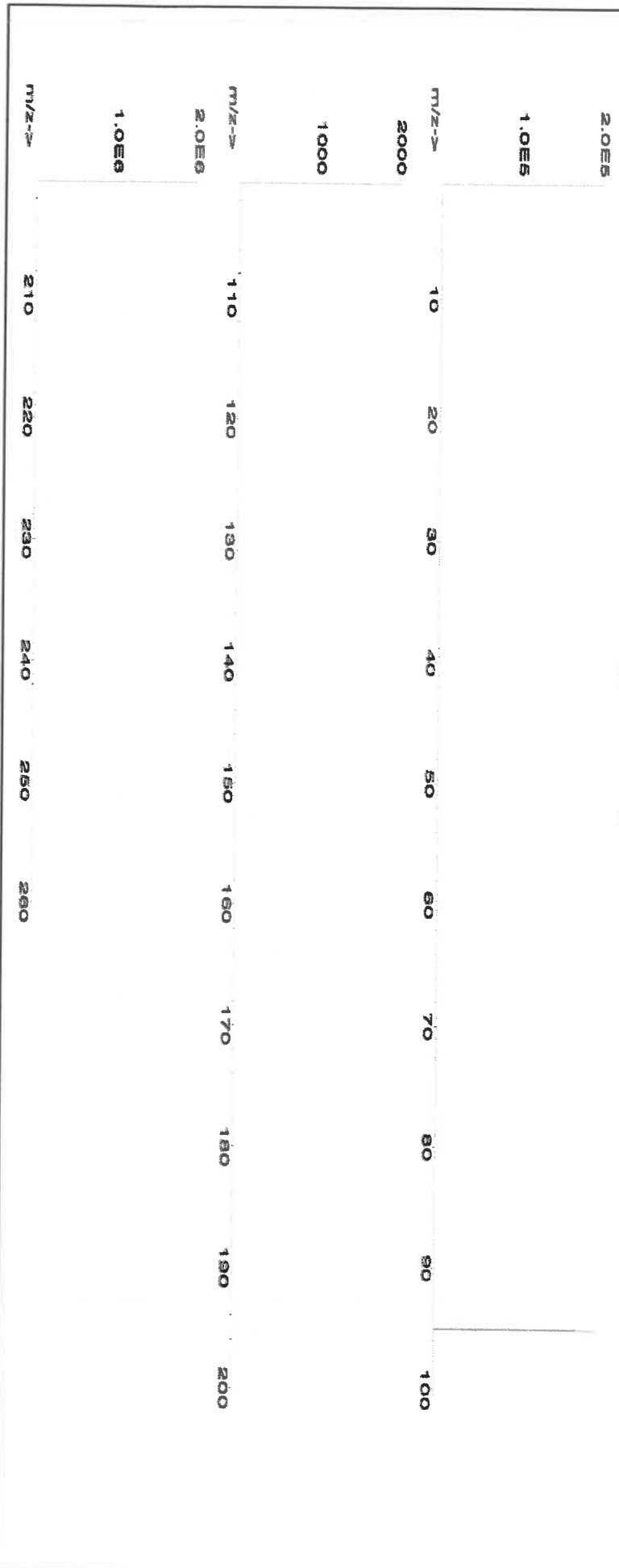
|                |                   |        |
|----------------|-------------------|--------|
| Formulated By: | Benson Chan       | 080525 |
| Reviewed By:   | Pedro L. Renteria | 080525 |

**SDS Information**

| 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) | CAS# | OSHA PEL (TWA) | LD50 | NIST SRM |
|----------|-------------|------------|-----------------|-------------------|--------------------------|-----------------------|-----------------------|---------------------|----------------------------------|------|----------------|------|----------|
|----------|-------------|------------|-----------------|-------------------|--------------------------|-----------------------|-----------------------|---------------------|----------------------------------|------|----------------|------|----------|

1. Ammonium molybdate (Mo) 58142 112322 0.1000 200.0 0.084 1000 10001.4 1000.5 2.2 13106-76-8 5 mg(Mo)/mL 0.1-0.333 mg/kg 3134

[1] Spectrum No. 1 [ 8.594 sec]:57042.D# [Count] [Linear]





**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  |
| Sb                                          | <0.02 | Ca | <0.2  | Er | <0.02 | Ho | <0.02 | Lu | <0.02 | Nb | <0.02 | Re | <0.02 | Si | <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 |
| Ba                                          | <0.02 | Ce | <0.02 | Gd | <0.02 | Ir | <0.02 | Mn | <0.02 | Pd | <0.02 | Rb | <0.02 | Na | <0.2  |
| Be                                          | <0.01 | Cr | <0.02 | Ga | <0.02 | Fe | <0.2  | Hg | <0.2  | P  | <0.02 | Ru | <0.02 | Sr | <0.02 |
| Bi                                          | <0.02 | Co | <0.02 | Ge | <0.02 | La | <0.02 | Mo | T     | Pt | <0.02 | Sm | <0.02 | S  | <0.02 |
| B                                           | <0.02 | Cu | <0.02 | Au | <0.02 | Pb | <0.02 | Nd | <0.02 | K  | <0.2  | Sc | <0.02 | Te | <0.02 |
|                                             |       |    |       |    |       |    |       |    |       |    |       |    |       | Tb | <0.02 |
|                                             |       |    |       |    |       |    |       |    |       |    |       |    |       | Ti | <0.02 |
|                                             |       |    |       |    |       |    |       |    |       |    |       |    |       | Th | <0.02 |
|                                             |       |    |       |    |       |    |       |    |       |    |       |    |       | Tm | <0.02 |
|                                             |       |    |       |    |       |    |       |    |       |    |       |    |       | Sn | <0.02 |
|                                             |       |    |       |    |       |    |       |    |       |    |       |    |       | Tl | <0.02 |
|                                             |       |    |       |    |       |    |       |    |       |    |       |    |       | U  | <0.02 |
|                                             |       |    |       |    |       |    |       |    |       |    |       |    |       | V  | <0.02 |
|                                             |       |    |       |    |       |    |       |    |       |    |       |    |       | Yb | <0.02 |
|                                             |       |    |       |    |       |    |       |    |       |    |       |    |       | Y  | <0.02 |
|                                             |       |    |       |    |       |    |       |    |       |    |       |    |       | Zn | <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 by an ISO17025 certified organization with weights traceable through NIST to the SI kilogram (see above).
- \* Standards are certified (+/-) 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).
- Rev 1.0, 2/25/2025



**CERTIFIED WEIGHT REPORT:**

**Part Number:**  
**Lot Number:**  
**Description:**

**57082**  
**031525**  
**Lead (Pb)**

**Lot #**

**Nitric Acid**

**Expiration Date:**

**031528**

**2%**

**40.0**

**Nitric Acid**

**Recommended Storage:**

**Ambient (20 °C)**

**Nominal Concentration (µg/mL):**

**1000**

**NIST Test Number:**

**6UTB**

**Weight shown below was diluted to (mL):**

**2000.07**

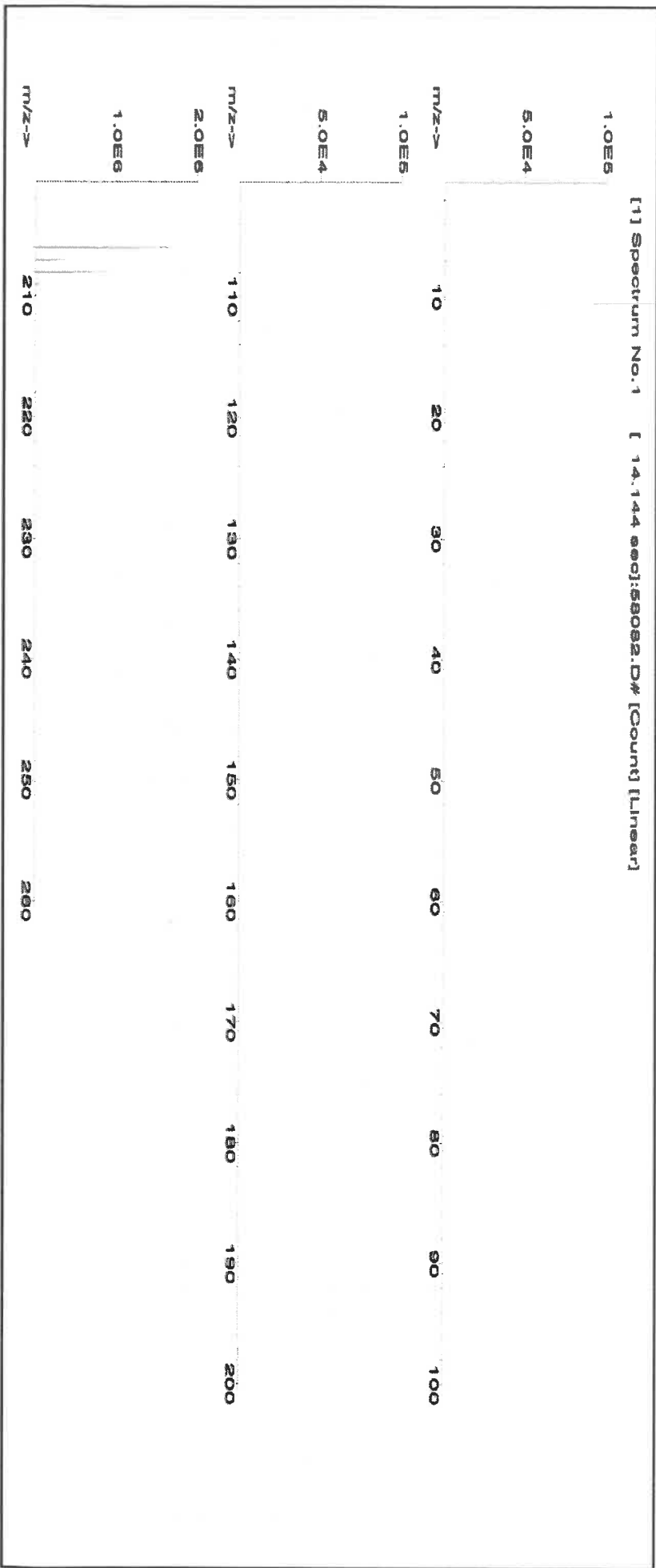
**0.10 Flask Uncertainty**

**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) | CAS# | OSHA PEL (TWA) | LD50 | NIST SRM |
|-----|------------|-----------------------|------------|------------------------|-----------|-------------------|-------------------|----------------------|----------------------------------|------|----------------|------|----------|
|-----|------------|-----------------------|------------|------------------------|-----------|-------------------|-------------------|----------------------|----------------------------------|------|----------------|------|----------|

1. **Lead(II) nitrate (Pb)** IN029 PBD122016A1 1000 99.999 0.10 62.5 3.20015 3.20067 1000.2 2.0 10099-74-8 0.05 mg/m3 Intrins-ral 93 mg/kg 3128

[1] Spectrum No. 1 [ 14.144 sec]:58082.D# [Count] [Linear]





**Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):**

**Trace Metals Verification by ICP-MS ( $\mu\text{g/mL}$ )**

|    |       |    |       |    |       |    |       |    |       |    |       |    |       |    |       |    |       |    |       |
|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|
| Al | <0.02 | Cd | <0.02 | Dy | <0.02 | Hf | <0.02 | Li | <0.02 | Ni | <0.02 | Pt | <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 | Tc | <0.02 | U  | <0.02 |
| As | <0.2  | Ce | <0.02 | Bu | <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  | Se | <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 certified (+/-) 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).

# 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

M6179  
R → 612/24

## 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).



## 2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution

Catalog Number: CGY10

Lot Number: V2-Y740548

Matrix: 2% (v/v) HNO<sub>3</sub>

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:

$$X_{CRM/RM} = \sum (w_i) (X_i)$$

$X_i$  = 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:

$$w_i = (1/u_{char i}^2) / (\sum (1/u_{char i}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char} = [\sum (w_i)^2 (u_{char i}^2)]^{1/2}$  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

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{char a}$  = the errors from characterization

$u_{bb}$  = bottle to bottle homogeneity standard uncertainty

$u_{lts}$  = long term stability standard uncertainty (storage)

$u_{ts}$  = transport stability standard uncertainty

## 4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

### 4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

### 4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

### 4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

## 5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

|        |          |        |          |        |          |        |          |        |          |
|--------|----------|--------|----------|--------|----------|--------|----------|--------|----------|
| M Ag < | 0.004600 | M Eu   | 0.009037 | M Na   | 0.086360 | M Se < | 0.005200 | M Zn   | 0.030125 |
| M Al   | 0.014862 | O Fe   | 0.002410 | M Nb < | 0.000570 | O Si   | 0.024100 | O Zr < | 0.002600 |
| M As < | 0.003500 | M Ga < | 0.000570 | M Nd   | 0.000923 | M Sm   | 0.000461 |        |          |
| M Au < | 0.001700 | M Gd < | 0.003500 | M Ni < | 0.005700 | M Sn < | 0.002300 |        |          |
| O B    | 0.002209 | M Ge < | 0.005200 | M Os < | 0.001200 | M Sr < | 0.004600 |        |          |
| O Ba < | 0.002500 | M Hf < | 0.000570 | n P <  |          | M Ta < | 0.000570 |        |          |
| O Be < | 0.001400 | M Hg < | 0.000570 | M Pb   | 0.005020 | M Tb   | 0.001044 |        |          |
| M Bi < | 0.003500 | M Ho   | 0.009037 | M Pd < | 0.005100 | M Te < | 0.002300 |        |          |
| O Ca   | 0.009841 | M In < | 0.002300 | M Pr < | 0.002300 | M Th < | 0.000570 |        |          |
| M Cd < | 0.000570 | M Ir < | 0.000570 | M Pt < | 0.000570 | M Ti < | 0.003500 |        |          |
| M Ce < | 0.002300 | O K    | 0.018677 | M Rb < | 0.000570 | M Tl < | 0.000570 |        |          |
| M Co < | 0.000570 | M La   | 0.000461 | M Re < | 0.000570 | M Tm < | 0.003500 |        |          |
| M Cr < | 0.004000 | O Li < | 0.009300 | M Rh < | 0.008000 | M U <  | 0.000570 |        |          |
| M Cs < | 0.000570 | M Lu   | 0.000582 | M Ru < | 0.000570 | M V    | 0.001265 |        |          |
| M Cu   | 0.002610 | O Mg   | 0.001486 | n S <  |          | M W <  | 0.002300 |        |          |
| M Dy   | 0.003815 | M Mn   | 0.000582 | M Sb   | 0.005422 | s Y <  |          |        |          |
| M Er   | 0.003615 | M Mo < | 0.005700 | M Sc < | 0.001200 | M Yb   | 0.001827 |        |          |

M - Checked by ICP-MS

O - Checked by ICP-OES

i - Spectral Interference

n - Not Checked For

s - Solution Standard Element

## 6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.



6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures [Terms and Conditions of Sale](https://www.inorganicventures.com/terms-and-conditions-sale). <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](http://www.inorganicventures.com/TCT)

**Atomic Weight; Valence; Coordination Number; Chemical Form In Solution** - 88.91 +3 6 Y(OH)(H<sub>2</sub>O)<sub>x+2</sub>  
**Chemical Compatibility** -Soluble in HCl, H<sub>2</sub>SO<sub>4</sub> and HNO<sub>3</sub>. Avoid HF, H<sub>3</sub>PO<sub>4</sub> 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% HNO<sub>3</sub> / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO<sub>3</sub> / LDPE container.

**Y Containing Samples (Preparation and Solution)** - Metal (Soluble in acids); Oxide (Dissolve by heating in H<sub>2</sub>O / HNO<sub>3</sub>); Ores (Carbonate fusion in PtO followed by HCl dissolution); Organic Matrices (Dry ash and dissolve in 1:1 H<sub>2</sub>O / HCl or HNO<sub>3</sub>).

**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   | <u>73Ge16O</u> , <u>178Hf+2</u>             |
| 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



# 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).



## 2.0 PRODUCT DESCRIPTION

|                 |                                     |
|-----------------|-------------------------------------|
| Product Code:   | Multi Analyte Custom Grade Solution |
| Catalog Number: | WW-LFS-1                            |
| Lot Number:     | W2-MEB752149                        |
| Matrix:         | 5% (v/v) HNO <sub>3</sub>           |

M6180  
R-37/22/23

|                     |                 |            |
|---------------------|-----------------|------------|
| Value / Analyte(s): | 1 000 µg/mL ea: |            |
|                     | Potassium,      |            |
|                     | 600 µg/mL ea:   |            |
|                     | Phosphorus,     |            |
|                     | 300 µg/mL ea:   |            |
|                     | Sodium,         | Iron,      |
|                     | 200 µg/mL ea:   |            |
|                     | Magnesium,      | Aluminum,  |
|                     | Cerium,         | Selenium,  |
|                     | Thallium,       |            |
|                     | 100 µg/mL ea:   |            |
|                     | Lead,           | Calcium,   |
|                     | 80 µg/mL ea:    |            |
|                     | Arsenic,        |            |
|                     | 70 µg/mL ea:    |            |
|                     | Mercury,        |            |
|                     | 50 µg/mL ea:    |            |
|                     | Nickel,         |            |
|                     | 40 µg/mL ea:    |            |
|                     | Chromium,       |            |
|                     | 30 µg/mL ea:    |            |
|                     | Copper,         | Boron,     |
|                     | Vanadium,       |            |
|                     | 20 µg/mL ea:    |            |
|                     | Zinc,           | Strontium, |
|                     | Barium,         | Beryllium, |
|                     | Cadmium,        | Cobalt,    |
|                     | Manganese,      | Lithium,   |
|                     | 7.5 µg/mL ea:   |            |
|                     | Silver          |            |

### 3.0 CERTIFIED VALUES AND UNCERTAINTIES

| ANALYTE       | CERTIFIED VALUE    | ANALYTE       | CERTIFIED VALUE    |
|---------------|--------------------|---------------|--------------------|
| Aluminum, Al  | 200.2 ± 0.7 µg/mL  | Arsenic, As   | 80.1 ± 0.5 µg/mL   |
| Barium, Ba    | 20.02 ± 0.12 µg/mL | Beryllium, Be | 20.02 ± 0.11 µg/mL |
| Boron, B      | 30.02 ± 0.15 µg/mL | Cadmium, Cd   | 20.04 ± 0.09 µg/mL |
| Calcium, Ca   | 100.1 ± 0.3 µg/mL  | Cerium, Ce    | 200.2 ± 1.0 µg/mL  |
| Chromium, Cr  | 40.02 ± 0.26 µg/mL | Cobalt, Co    | 20.03 ± 0.09 µg/mL |
| Copper, Cu    | 30.03 ± 0.13 µg/mL | Iron, Fe      | 300.3 ± 1.3 µg/mL  |
| Lead, Pb      | 100.1 ± 0.5 µg/mL  | Lithium, Li   | 20.03 ± 0.09 µg/mL |
| Magnesium, Mg | 200.2 ± 0.9 µg/mL  | Manganese, Mn | 19.99 ± 0.09 µg/mL |
| Mercury, Hg   | 70.0 ± 0.3 µg/mL   | Nickel, Ni    | 50.05 ± 0.22 µg/mL |
| Phosphorus, P | 600.5 ± 2.9 µg/mL  | Potassium, K  | 1 001 ± 4 µg/mL    |
| Selenium, Se  | 200.2 ± 1.1 µg/mL  | Silver, Ag    | 7.52 ± 0.03 µg/mL  |
| Sodium, Na    | 300.3 ± 1.3 µg/mL  | Strontium, Sr | 20.02 ± 0.10 µg/mL |
| Thallium, Tl  | 200.2 ± 1.0 µg/mL  | Vanadium, V   | 30.02 ± 0.13 µg/mL |
| Zinc, Zn      | 20.05 ± 0.09 µg/mL |               |                    |

Density: 1.037 g/mL (measured at 20 ± 5 °C)

Assay Information:

| <b>ANALYTE</b> | <b>METHOD</b> | <b>NIST SRM#</b>   | <b>SRM LOT#</b> |
|----------------|---------------|--------------------|-----------------|
| Ag             | ICP Assay     | 3151               | 160729          |
| Ag             | Volhard       | 999c               | 999c            |
| Al             | ICP Assay     | 3101a              | 140903          |
| Al             | EDTA          | 928                | 928             |
| As             | ICP Assay     | 3103a              | 100818          |
| B              | ICP Assay     | 3107               | 190605          |
| B              | Calculated    |                    | See Sec. 4.2    |
| Ba             | ICP Assay     | 3104a              | 140909          |
| Ba             | Gravimetric   |                    | See Sec. 4.2    |
| Be             | ICP Assay     | 3105a              | 090514          |
| Ca             | ICP Assay     | 3109a              | 130213          |
| Ca             | EDTA          | 928                | 928             |
| Cd             | ICP Assay     | 3108               | 130116          |
| Cd             | EDTA          | 928                | 928             |
| Ce             | ICP Assay     | 3110               | 160830          |
| Ce             | EDTA          | 928                | 928             |
| Co             | ICP Assay     | 3113               | 190630          |
| Co             | EDTA          | 928                | 928             |
| Cr             | ICP Assay     | 3112a              | 170630          |
| Cu             | ICP Assay     | 3114               | 120618          |
| Cu             | EDTA          | 928                | 928             |
| Fe             | ICP Assay     | 3126a              | 140812          |
| Fe             | EDTA          | 928                | 928             |
| Hg             | ICP Assay     | 3133               | 160921          |
| Hg             | EDTA          | 928                | 928             |
| K              | ICP Assay     | 3141a              | 140813          |
| K              | Gravimetric   |                    | See Sec. 4.2    |
| Li             | ICP Assay     | 3129a              | 100714          |
| Li             | Gravimetric   |                    | See Sec. 4.2    |
| Mg             | ICP Assay     | 3131a              | 140110          |
| Mg             | EDTA          | 928                | 928             |
| Mn             | ICP Assay     | 3132               | 050429          |
| Mn             | EDTA          | 928                | 928             |
| Na             | ICP Assay     | 3152a              | 200413          |
| Na             | Gravimetric   |                    | See Sec. 4.2    |
| Ni             | ICP Assay     | 3136               | 120619          |
| Ni             | EDTA          | 928                | 928             |
| P              | ICP Assay     | 3139a              | 060717          |
| P              | Acidimetric   | 84L                | 84L             |
| Pb             | ICP Assay     | 3128               | 101026          |
| Pb             | EDTA          | 928                | 928             |
| Se             | ICP Assay     | 3149               | 100901          |
| Sr             | EDTA          | 928                | 928             |
| Sr             | ICP Assay     | Traceable to 3153a | K2-SR650985     |
| Tl             | ICP Assay     | 3158               | 151215          |
| V              | ICP 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,  $X_{\text{CRM/RM}}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{\text{CRM/RM}} = \sum (w_i) (X_i)$$

$X_i$  = mean of Assay Method  $i$  with standard uncertainty  $u_{\text{char } i}$

$w_i$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{\text{char } i}^2) / (\sum (1/u_{\text{char } i}^2))$$

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k (u_{\text{char}}^2 + u_{\text{bb}}^2 + u_{\text{ITS}}^2 + u_{\text{TS}}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{\text{char}} = [\sum (w_i)^2 (u_{\text{char } i}^2)]^{1/2}$  where  $u_{\text{char } i}$  are the errors from each characterization method

$u_{\text{bb}}$  = bottle to bottle homogeneity standard uncertainty

$u_{\text{ITS}}$  = long term stability standard uncertainty (storage)

$u_{\text{TS}}$  = transport stability standard uncertainty

#### Characterization of CRM/RM by One Method

Certified Value,  $X_{\text{CRM/RM}}$ , where one method of characterization is used is the mean of individual results:

$$X_{\text{CRM/RM}} = (X_a) (u_{\text{char } a})$$

$X_a$  = mean of Assay Method A with

$u_{\text{char } a}$  = the standard uncertainty of characterization Method A

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k (u_{\text{char } a}^2 + u_{\text{bb}}^2 + u_{\text{ITS}}^2 + u_{\text{TS}}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{\text{char } a}$  = the errors from characterization

$u_{\text{bb}}$  = bottle to bottle homogeneity standard uncertainty

$u_{\text{ITS}}$  = long term stability standard uncertainty (storage)

$u_{\text{TS}}$  = 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° - 25° C to minimize the effects of transpiration. Use at 20° ± 5° 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](http://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; [Info@inorganicventures.com](mailto:Info@inorganicventures.com);

## **11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY**

### **11.1 Certification Issue Date**

April 08, 2025

- 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**

- **April 08, 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:

Justin Dirico  
Stock Processing Supervisor



#### Certificate Approved By:

Jodie Wall  
Stock VSM Coordinator



#### Certifying Officer:

Paul Gaines  
Chairman / Senior Technical Director



300 Technology Drive  
Christiansburg, VA 24073 USA  
inorganicventures.com

# Certificate of Analysis

P: 800-669-6799/540-585-3030  
F: 540-585-3012  
info@inorganicventures.com

M6181  
R → 7/22/28

## 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).



## 2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution  
Catalog Number: WW-LFS-2  
Lot Number: V2-MEB743480  
Matrix: 5% (v/v) HNO<sub>3</sub>  
tr. HF  
Value / Analyte(s):  
200 µg/mL ea:  
Silica,  
80 µg/mL ea:  
Antimony,  
70 µg/mL ea:  
Tin,  
40 µg/mL ea:  
Molybdenum,  
20 µg/mL ea:  
Titanium

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

| ANALYTE                  | CERTIFIED VALUE    | ANALYTE        | CERTIFIED VALUE    |
|--------------------------|--------------------|----------------|--------------------|
| Antimony, Sb             | 80.1 ± 0.5 µg/mL   | Molybdenum, Mo | 40.05 ± 0.22 µg/mL |
| Silica, SiO <sub>2</sub> | 200.3 ± 1.4 µg/mL  | Tin, Sn        | 70.1 ± 0.4 µg/mL   |
| Titanium, Ti             | 20.03 ± 0.12 µg/mL |                |                    |

Density: 1.025 g/mL (measured at 20 ± 4 °C)

### Assay Information:

| ANALYTE          | METHOD     | NIST SRM#          | SRM LOT#     |
|------------------|------------|--------------------|--------------|
| Mo               | ICP Assay  | 3134               | 130418       |
| Sb               | ICP Assay  | 3102a              | 140911       |
| SiO <sub>2</sub> | Calculated |                    | See Sec. 4.2 |
| Sn               | ICP Assay  | 3161a              | 140917       |
| Ti               | ICP Assay  | traceable to 3162a | T2-TI725816  |

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,  $X_{\text{CRM/RM}}$ , where two or more methods of characterization are used is the weighted mean of the results:

$$X_{\text{CRM/RM}} = \sum (w_i) (X_i)$$

$X_i$  = mean of Assay Method  $i$  with standard uncertainty  $u_{\text{char } i}$

$w_i$  = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{\text{char } i})^2 / (\sum (1/u_{\text{char } i})^2)$$

$$\text{CRM/RM Expanded Uncertainty (z)} = U_{\text{CRM/RM}} = k (u_{\text{char}}^2 + u_{\text{bb}}^2 + u_{\text{Its}}^2 + u_{\text{ts}}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{\text{char}} = [\sum ((w_i)^2 (u_{\text{char } i})^2)]^{1/2}$  where  $u_{\text{char } i}$  are the errors from each characterization method

$u_{\text{bb}}$  = bottle to bottle homogeneity standard uncertainty

$u_{\text{Its}}$  = long term stability standard uncertainty (storage)

$u_{\text{ts}}$  = transport stability standard uncertainty

#### Characterization of CRM/RM by One Method

Certified Value,  $X_{\text{CRM/RM}}$ , where one method of characterization is used is the mean of individual results:

$$X_{\text{CRM/RM}} = (X_a) (u_{\text{char } a})$$

$X_a$  = mean of Assay Method A with

$u_{\text{char } a}$  = the standard uncertainty of characterization Method A

$$\text{CRM/RM Expanded Uncertainty (z)} = U_{\text{CRM/RM}} = k (u_{\text{char } a}^2 + u_{\text{bb}}^2 + u_{\text{Its}}^2 + u_{\text{ts}}^2)^{1/2}$$

$k$  = coverage factor = 2

$u_{\text{char } a}$  = the errors from characterization

$u_{\text{bb}}$  = bottle to bottle homogeneity standard uncertainty

$u_{\text{Its}}$  = long term stability standard uncertainty (storage)

$u_{\text{ts}}$  = 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](http://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](http://inorganicventures.com); [info@inorganicventures.com](mailto:info@inorganicventures.com)

## **11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY**

### **11.1 Certification Issue Date**

May 07, 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**

- **May 07, 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:

Justin Dirico  
Stock Processing Supervisor



#### Certificate Approved By:

Thomas Kozikowski  
Stock VS Manager



#### Certifying Officer:

Paul Gaines  
Chairman / Senior Technical Director





R→03/06/24

Instructions for QATS Reference Material: ICP-AES ICS

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.



M6182

(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,





**QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY**  
**"An ISO 9001:2015 Certified Program"**

**Instructions for QATS Reference Material: ICP-AES ICS**

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<sub>3</sub>. 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<sub>3</sub>. 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<br>(µg/L) | Low<br>Limit<br>(µg/L) | High<br>Limit<br>(µg/L) | Part A<br>+Part B<br>(µg/L) | Low<br>Limit<br>(µg/L) | High<br>Limit<br>(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                    |

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.



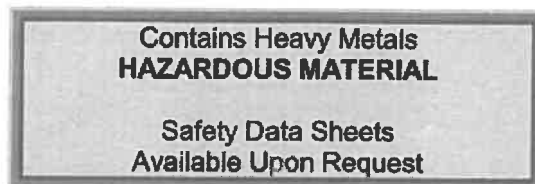
Instructions for QATS Reference Material: ICP-AES ICS

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.



M6184

(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,







**Instructions for QATS Reference Material: ICP-AES ICS**

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<sub>3</sub>. 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<sub>3</sub>. Analyze this ICSAB solution by ICP-AES.

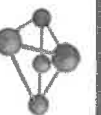
**(D) "CERTIFIED VALUE" CONCENTRATIONS OF QATS ICP-AES ICS SOLUTION(S)**

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<br>(µg/L) | Low<br>Limit<br>(µg/L) | High<br>Limit<br>(µg/L) | Part A<br>+Part B<br>(µg/L) | Low<br>Limit<br>(µg/L) | High<br>Limit<br>(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                    |

The acceptance ranges for all analytes in parentheses in the above table were determined using the listed certified value  $\pm 1$  times the associated CLP SOW CRQL. The acceptance ranges for all other analytes were determined using the certified value  $\pm 15$  percent of the listed certified value.



CERTIFIED WEIGHT REPORT:

Part Number:  
Lot Number:  
Description:

57028  
062024  
Nickel (NI)

Lot #  
Solvent:

24002546  
Nitric Acid

Formulated By: Benson Chan  
Reviewed By: Pedro L. Rentes

062024  
062024

Expiration Date:

062027

2.0%

40.0  
(mL)

Nitric Acid

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

Expanded

SDS Information

Compound

| Part Number | Lot Number | Dilution Factor | Initial Vol. (mL) | Uncertainty (mL) | Normal Conc. (µg/mL) | Initial Conc. (µg/mL) | Final Conc. (µg/mL) | Uncertainty +/- (µg/mL) | CAS# | OSHA PEL (TWA) | LD50 | NIST SRM |
|-------------|------------|-----------------|-------------------|------------------|----------------------|-----------------------|---------------------|-------------------------|------|----------------|------|----------|
|-------------|------------|-----------------|-------------------|------------------|----------------------|-----------------------|---------------------|-------------------------|------|----------------|------|----------|

|                                        |       |        |        |       |       |      |         |        |     |            |         |                    |      |
|----------------------------------------|-------|--------|--------|-------|-------|------|---------|--------|-----|------------|---------|--------------------|------|
| 1. Nickel(II) nitrate hexahydrate (NI) | 58128 | 062023 | 0.1000 | 200.0 | 0.084 | 1000 | 10000.4 | 1000.0 | 2.2 | 13478-00-7 | 1 mg/m3 | orl-rat 1620 mg/kg | 3136 |
|----------------------------------------|-------|--------|--------|-------|-------|------|---------|--------|-----|------------|---------|--------------------|------|

[1] Spectrum No.1 [ 9.136 sec]:58028.D# [Count] [Linear]

2.OES

1.OES

m/z--> 10 20 30 40 50 60 70 80 90 100

5000

2500

m/z--> 110 120 130 140 150 160 170 180 190 200

1.OE7

5.OE6

m/z--> 210 220 230 240 250 260



**Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):**

**Trace Metals Verification by ICP-MS (µg/mL)**

|    |       |    |       |    |       |    |       |    |       |    |       |    |       |    |       |    |       |    |       |
|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|----|-------|
| Al | <0.02 | Cd | <0.02 | Dy | <0.02 | Hf | <0.02 | Li | <0.02 | Ni | T     | Pr | <0.02 | Se | <0.2  | Tb | <0.02 | W  | <0.02 |
| Sb | <0.02 | Ca | <0.2  | Er | <0.02 | Ho | <0.02 | Lu | <0.02 | Nb | <0.02 | Re | <0.02 | Si | <0.02 | Te | <0.02 | U  | <0.02 |
| As | <0.2  | Ce | <0.02 | Eu | <0.02 | In | <0.02 | Mg | <0.01 | Os | <0.02 | Rh | <0.02 | Ag | <0.02 | Tl | <0.02 | V  | <0.02 |
| Ba | <0.02 | Cs | <0.02 | Gd | <0.02 | Ir | <0.02 | Mn | <0.02 | Pd | <0.02 | Rb | <0.02 | Na | <0.2  | Th | <0.02 | Yb | <0.02 |
| Be | <0.01 | Cr | <0.02 | Ga | <0.02 | Fe | <0.2  | Hg | <0.2  | P  | <0.02 | Ru | <0.02 | Sr | <0.02 | Tm | <0.02 | Y  | <0.02 |
| Bi | <0.02 | Co | <0.02 | Ge | <0.02 | La | <0.02 | Mo | <0.02 | Pt | <0.02 | Sm | <0.02 | S  | <0.02 | Sn | <0.02 | Zn | <0.02 |
| B  | <0.02 | Cu | <0.02 | Au | <0.02 | Pb | <0.02 | Nd | <0.02 | K  | <0.2  | Sc | <0.02 | Ta | <0.02 | Ti | <0.02 | Zr | <0.02 |

(T) = Target analyte

**Physical Characterization:**

Homogeneity: No heterogeneity was observed in the preparation of this standard.

**Certified by:**

- \* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- \* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- \* All standard containers are meticulously cleaned prior to use.
- \* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- \* Standards are certified (+/-) 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).



M6030



**CERTIFIED WEIGHT REPORT:**

Part Number: **57047**  
Lot Number: **122823**  
Description: **Silver (Ag)**  
Solvent: 24002546 Nitric Acid  
Lot #

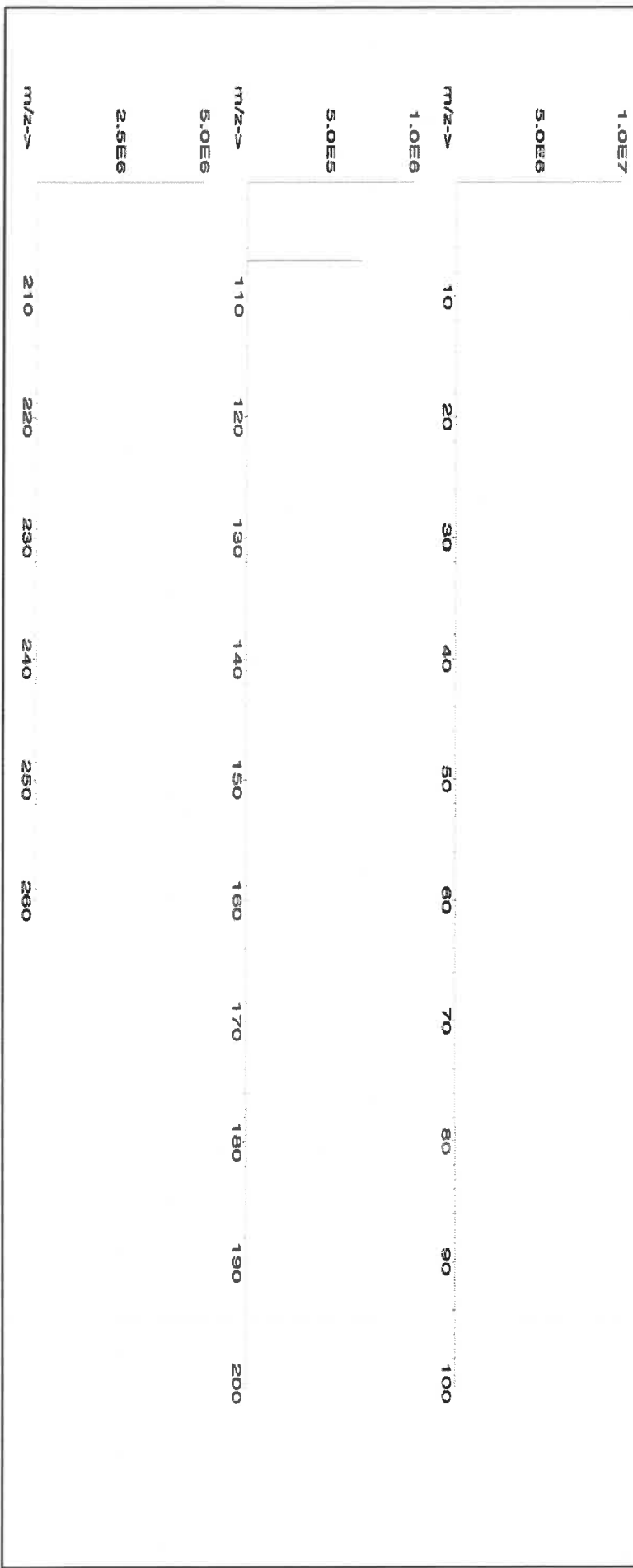
Expiration Date: 122826  
Recommended Storage: Ambient (20 °C)  
Nominal Concentration (µg/mL): 1000  
NIST Test Number: 6UTB

Weight shown below was diluted to (mL): 4000.30  
5E-05 Balance Uncertainty  
0.058 Flask Uncertainty

|                |                 |
|----------------|-----------------|
|                |                 |
| Formulated By: | Benson Chan     |
| Reviewed By:   | Pedro L. Rentas |
| 122823         |                 |

| SDS Information        |       |            |                       |            |                        |           |                   |                   |                      |
|------------------------|-------|------------|-----------------------|------------|------------------------|-----------|-------------------|-------------------|----------------------|
| Compound               | RM#   | Lot Number | Nominal Conc. (µg/mL) | Purity (%) | Uncertainty Purity (%) | Assay (%) | Target Weight (g) | Actual Weight (g) | Actual Conc. (µg/mL) |
| 1. Silver nitrate (Ag) | IN035 | J0612AGA1  | 1000.0                | 99.999     | 0.10                   | 63.7      | 6.27992           | 6.27998           | 1000.0               |
|                        |       |            |                       |            |                        |           | 2.0               | 7761-88-8         | 10 µg/mL             |
|                        |       |            |                       |            |                        |           |                   |                   | NA                   |
|                        |       |            |                       |            |                        |           |                   |                   | 3151                 |

[1] Spectrum No. 1 [ 14.044 sec]:58147.D# [Count] [Linear]





**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 | Pt | <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:

- \* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- \* Purified acids, 18.2 meghom 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 certified (+/-) 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).



*R: 10/18/24*  
**Certified Reference Material CRM**



**CERTIFIED WEIGHT REPORT:**

**Part Number:**

**57051**

**Lot #**  
**24002546**

**Solvent:**  
**Nitric Acid**

**Lot Number:**

**071724**

**Description:**

**Antimony (Sb)**

**Expiration Date:**

**071727**

**Recommended Storage:**

**Ambient (20 °C)**

**Nominal Concentration (µg/mL):**

**1000**

**NIST Test Number:**

**6UJB**

**Volume shown below was diluted to (mL):**

**2000.26**

**5E-05 Balance Uncertainty**

**0.058 Flask Uncertainty**

**2.0%**

**40.0 (mL)**

**Nitric Acid**

**Formulated By:**

**Giovanni Esposito**

**071724**

**Reviewed By:**

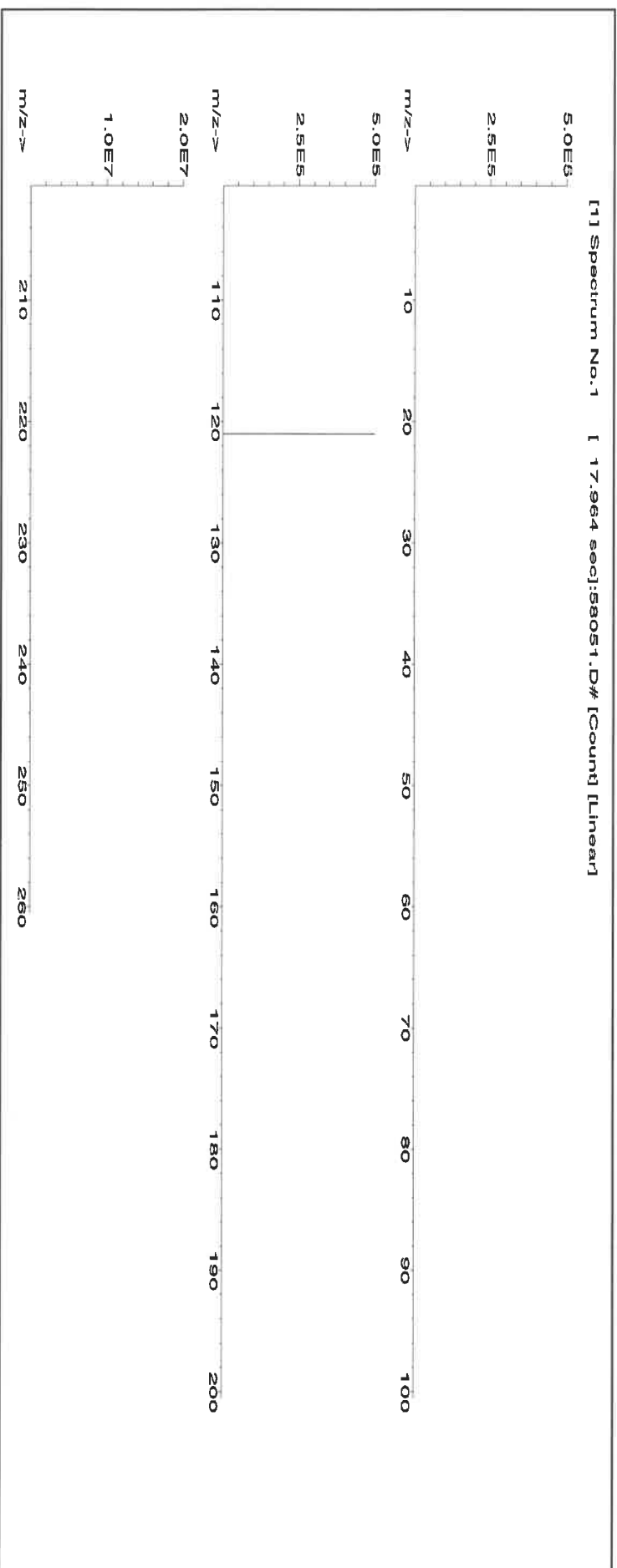
**Pedro L. Rentas**

**071724**

**SDS Information**

| 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) | CAS# | OSHA PEL (TWA) | LD50 | NIST SRM |
|----------|-------------|------------|-----------------|-------------------|--------------------------|-----------------------|-----------------------|---------------------|----------------------------------|------|----------------|------|----------|
|----------|-------------|------------|-----------------|-------------------|--------------------------|-----------------------|-----------------------|---------------------|----------------------------------|------|----------------|------|----------|

1. Antimony (Sb) 58151 060324 0.1000 200.0 0.084 1000 10001.4 1000.0 2.2 7440-36-0 0.5 mg/m3 orl-rat 7000 mg/kg 3102a





Har P. R.









**CERTIFIED WEIGHT REPORT:**

**Part Number:** 57081  
**Lot Number:** 062724  
**Description:** Thallium (TI)

**Lot #**

**Solvent:** 24002546 Nitric Acid

**2%** 40.0 Nitric Acid (mL)

**Expiration Date:**

062727

**Recommended Storage:** Ambient (20 °C)

**Nominal Concentration (µg/mL):**

1000

**NIST Test Number:**

6UTB

**Weight shown below was diluted to (mL):** 2000.1

5E-05 Balance Uncertainty  
0.10 Flask Uncertainty

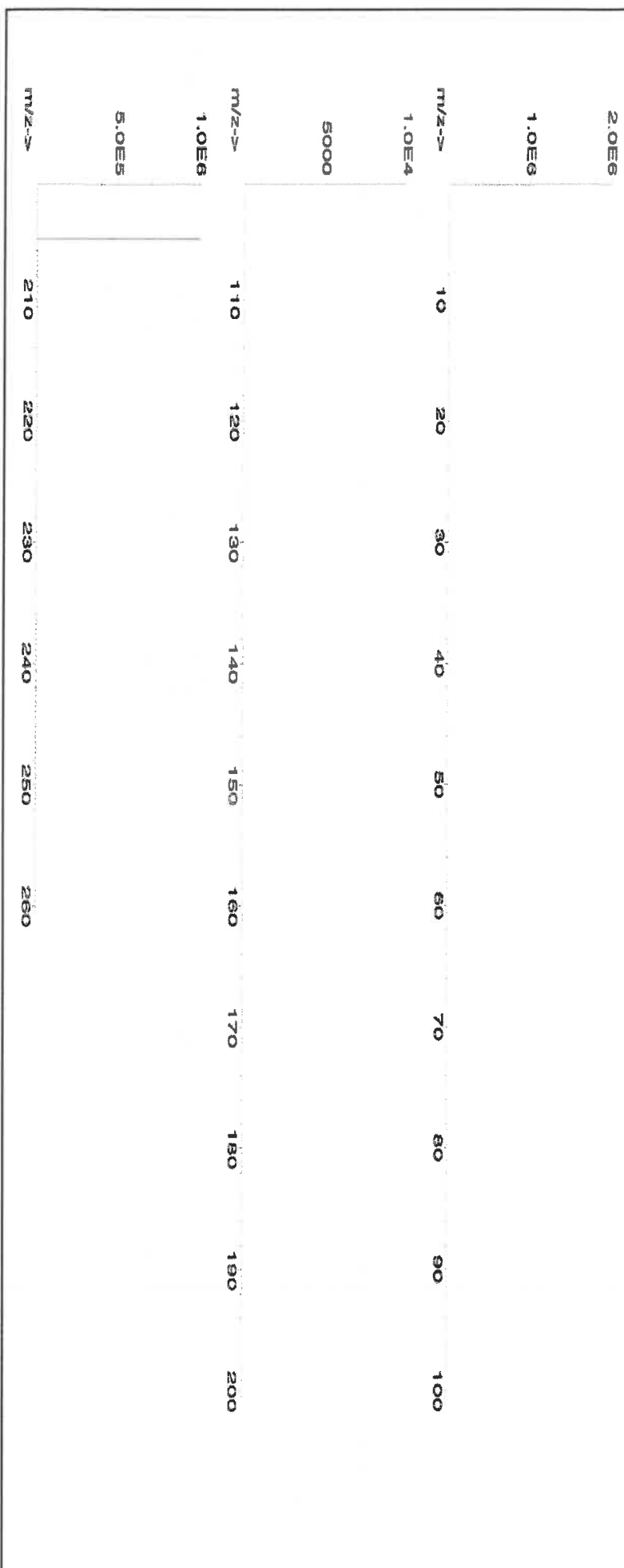
|                      |                        |
|----------------------|------------------------|
| <i>Aleah O'Brady</i> |                        |
| Formulated By:       | Aleah O'Brady          |
|                      | 062724                 |
| Reviewed By:         | <i>Pedro L. Rendas</i> |
|                      | Pedro L. Rendas        |
|                      | 062724                 |

**SDS Information**

| Compound | Lot Number | Nominal Conc. (µg/mL) | Purity (%) | Uncertainty (%) | Assay (%) | Target Weight (g) | Actual Weight (g) | Actual Conc. (µg/mL) | Expanded Uncertainty +/- (µg/mL) | CAS# | OSHA PEL (TWA) | LD50 | NIST SRM |
|----------|------------|-----------------------|------------|-----------------|-----------|-------------------|-------------------|----------------------|----------------------------------|------|----------------|------|----------|
|----------|------------|-----------------------|------------|-----------------|-----------|-------------------|-------------------|----------------------|----------------------------------|------|----------------|------|----------|

1. Thallium nitrate (TI) 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

[1] Spectrum No.1 [ 14.044 sec]:57081.D# [Count] [Linear]





**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 | Pt | <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 | 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  | Tm | <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 | Sn | <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 | Ti | <0.02 | Zn | <0.02 |
| B  | <0.02 | Cu | <0.02 | Au | <0.02 | Pb | <0.02 | Nd | <0.02 | K  | <0.2  | Se | <0.02 | Ta | <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 certified (+/-) 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).



**Certified Reference Material CRM**

M6021



**CERTIFIED WEIGHT REPORT:**

Part Number: **57023**  
Lot Number: **062424**  
Description: **Vanadium (V)**

Lot # **24002546**  
Solvent: **Nitric Acid**

|                |                 |
|----------------|-----------------|
| Aleah O'Brady  |                 |
| Formulated By: | Aleah O'Brady   |
|                | 062424          |
| Reviewed By:   | Pedro L. Rantas |
|                | 062424          |

Expiration Date: **062427**  
Recommended Storage: **Ambient (20 °C)**  
Nominal Concentration (µg/mL): **1000**  
NIST Test Number: **6UTB**

Volume shown below was diluted to (mL): **2000.3**  
**0.06** Balance Uncertainty  
**Flask Uncertainty**

| Compound                     | Part Number | Lot Number | Dilution Factor | Initial Vol. (mL) | Uncertainty (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.) | 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 or-at 58.1mg/kg                   | 3165     |

[1] Spectrum No.1 [ 34.243 sec]:58023.D# [Count] [Linear]

|       |        |     |     |     |     |     |     |     |     |     |     |
|-------|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 2.0E6 | m/z--> | 10  | 20  | 30  | 40  | 50  | 60  | 70  | 80  | 90  | 100 |
| 1.0E7 | m/z--> | 110 | 120 | 130 | 140 | 150 | 160 | 170 | 180 | 190 | 200 |
| 5.0E8 | m/z--> | 210 | 220 | 230 | 240 | 250 | 260 |     |     |     |     |
| 2.5E9 | m/z--> |     |     |     |     |     |     |     |     |     |     |



**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  |
| Sb                                          | <0.02 | Ca | <0.2  | Er | <0.02 | Ho | <0.02 | Lu | <0.02 | Nb | <0.02 | Re | <0.02 | Si | <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 |
| Ba                                          | <0.02 | Cs | <0.02 | Gd | <0.02 | Ir | <0.02 | Mn | <0.02 | Pd | <0.02 | Ru | <0.02 | Na | <0.2  |
| Be                                          | <0.01 | Cr | <0.02 | Ga | <0.02 | Fe | <0.2  | Hg | <0.2  | P  | <0.02 | Sr | <0.02 | S  | <0.02 |
| Bi                                          | <0.02 | Co | <0.02 | Ge | <0.02 | La | <0.02 | Mo | <0.02 | Pt | <0.02 | Sm | <0.02 | Ta | <0.02 |
| B                                           | <0.02 | Cu | <0.02 | Au | <0.02 | Pb | <0.02 | Nd | <0.02 | K  | <0.2  | Sc | <0.02 | Ti | <0.02 |
|                                             |       |    |       |    |       |    |       |    |       |    |       |    |       | Tb | <0.02 |
|                                             |       |    |       |    |       |    |       |    |       |    |       |    |       | Te | <0.02 |
|                                             |       |    |       |    |       |    |       |    |       |    |       |    |       | Tl | <0.02 |
|                                             |       |    |       |    |       |    |       |    |       |    |       |    |       | Th | <0.02 |
|                                             |       |    |       |    |       |    |       |    |       |    |       |    |       | Tm | <0.02 |
|                                             |       |    |       |    |       |    |       |    |       |    |       |    |       | Sn | <0.02 |
|                                             |       |    |       |    |       |    |       |    |       |    |       |    |       | Ti | <0.02 |
|                                             |       |    |       |    |       |    |       |    |       |    |       |    |       | W  | <0.02 |
|                                             |       |    |       |    |       |    |       |    |       |    |       |    |       | U  | <0.02 |
|                                             |       |    |       |    |       |    |       |    |       |    |       |    |       | V  | T     |
|                                             |       |    |       |    |       |    |       |    |       |    |       |    |       | Yb | <0.02 |
|                                             |       |    |       |    |       |    |       |    |       |    |       |    |       | Y  | <0.02 |
|                                             |       |    |       |    |       |    |       |    |       |    |       |    |       | Zn | <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 certified (+/-) 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).



# SHIPPING DOCUMENTS

CLIENT INFORMATION

REPORT TO BE SENT TO:  
COMPANY: Tris Pharma, Inc.  
ADDRESS: 2033 ROUTE 130  
CITY: MONMOUTH JUNCTION STATE: NJ ZIP: 08852  
ATTENTION: Nikki Tierney  
PHONE: 732-823-4398 FAX: N/A

CLIENT PROJECT INFORMATION

PROJECT NAME: QUARTERLY  
PROJECT NO.: LOCATION:  
PROJECT MANAGER: Nikki Tierney  
e-mail: NMTIERNEY@trispharma.com  
PHONE: SAME FAX: N/A

CLIENT BILLING INFORMATION

BILL TO: PO#: 213644  
ADDRESS: SAME  
CITY: STATE: ZIP:  
ATTENTION: PHONE:

ANALYSIS

DATA TURNAROUND INFORMATION

FAX (RUSH) DAYS\*  
HARDCOPY (DATA PACKAGE): DAYS\*  
EDD: 10 DAYS\*

\*TO BE APPROVED BY CHEMTECH  
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS

DATA DELIVERABLE INFORMATION

☒ Level 1 (Results Only) ☐ Level 4 (QC + Full Raw Data)  
☐ Level 2 (Results + QC) ☐ NJ Reduced ☐ US EPA CLP  
☐ Level 3 (Results + QC) ☐ NYS ASP A ☐ NYS ASP B  
+ Raw Data ☐ Other  
☐ EDD FORMAT

1. BOD-5 2. TSS 3. Metals GRP 3 4. COD 5. VOCS GRP 1 6. Non-Polar Material 7. 8. 9.

PRESERVATIVES

COMMENTS

| ALLIANCE<br>SAMPLE<br>ID | PROJECT<br>SAMPLE IDENTIFICATION | SAMPLE<br>MATRIX | SAMPLE<br>TYPE |          | SAMPLE<br>COLLECTION |                | # OF BOTTLES | PRESERVATIVES |          |          |          |          |          |  |  |  | COMMENTS |
|--------------------------|----------------------------------|------------------|----------------|----------|----------------------|----------------|--------------|---------------|----------|----------|----------|----------|----------|--|--|--|----------|
|                          |                                  |                  | COMP           | GRAB     | DATE                 | TIME           |              | E             | E        | B        | C        | A        | C        |  |  |  |          |
| 1. <u>DSN-001</u>        | <u>OUTFALL DSN-001</u>           | <u>WW</u>        |                | <u>X</u> | <u>8/19/25</u>       | <u>9:59 AM</u> | <u>7</u>     | <u>X</u>      | <u>X</u> | <u>X</u> | <u>X</u> | <u>X</u> | <u>X</u> |  |  |  |          |
| 2. <u>DSN-002</u>        | <u>OUTFALL DSN-002</u>           | <u>WW</u>        |                | <u>X</u> | <u>8/19/25</u>       | <u>9:15 AM</u> | <u>7</u>     | <u>X</u>      | <u>X</u> | <u>X</u> | <u>X</u> | <u>X</u> | <u>X</u> |  |  |  |          |
| 3.                       |                                  |                  |                |          |                      |                |              |               |          |          |          |          |          |  |  |  |          |
| 4.                       |                                  |                  |                |          |                      |                |              |               |          |          |          |          |          |  |  |  |          |
| 5.                       |                                  |                  |                |          |                      |                |              |               |          |          |          |          |          |  |  |  |          |
| 6.                       |                                  |                  |                |          |                      |                |              |               |          |          |          |          |          |  |  |  |          |
| 7.                       |                                  |                  |                |          |                      |                |              |               |          |          |          |          |          |  |  |  |          |
| 8.                       |                                  |                  |                |          |                      |                |              |               |          |          |          |          |          |  |  |  |          |
| 9.                       |                                  |                  |                |          |                      |                |              |               |          |          |          |          |          |  |  |  |          |
| 10.                      |                                  |                  |                |          |                      |                |              |               |          |          |          |          |          |  |  |  |          |

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

|                                                     |                                       |                                                   |                                                                                                                                                                           |
|-----------------------------------------------------|---------------------------------------|---------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| RELINQUISHED BY SAMPLER:<br>1. <u>Nikki Tierney</u> | DATE/TIME:<br><u>8/19/25 11:11 AM</u> | RECEIVED BY:<br><u>[Signature]</u> <u>8-19-25</u> | Conditions of bottles or coolers at receipt: <input type="checkbox"/> COMPLIANT <input type="checkbox"/> NON COMPLIANT <input type="checkbox"/> COOLER TEMP <u>5.0</u> °C |
| RELINQUISHED BY SAMPLER:<br>2.                      | DATE/TIME:                            | RECEIVED BY:<br>2.                                | Comments:                                                                                                                                                                 |
| RELINQUISHED BY SAMPLER:<br>3. <u>[Signature]</u>   | DATE/TIME:<br><u>8-19-25</u>          | RECEIVED BY:<br>3.                                |                                                                                                                                                                           |

Page \_\_\_\_ of CLIENT: ☐ Hand Delivered ☐ Other Shipment Complete ☐ YES ☐ NO

### Laboratory Certification

| Certified By         | License No.      |
|----------------------|------------------|
|                      |                  |
| CAS EPA CLP Contract | 68HERH20D0011    |
|                      |                  |
| Connecticut          | PH-0830          |
|                      |                  |
| DOD ELAP (ANAB)      | L2219            |
|                      |                  |
| Maine                | 2024021          |
|                      |                  |
| Maryland             | 296              |
|                      |                  |
| New Hampshire        | 255424 Rev 1     |
|                      |                  |
| New Jersey           | 20012            |
|                      |                  |
| New York             | 11376            |
|                      |                  |
| Pennsylvania         | 68-00548         |
|                      |                  |
| Soil Permit          | 525-24-234-08441 |
|                      |                  |
| Texas                | TX-C25-00189     |
|                      |                  |
| Virginia             | 460312           |



## LOGIN REPORT/SAMPLE TRANSFER

|                                                |        |                                              |                                   |
|------------------------------------------------|--------|----------------------------------------------|-----------------------------------|
| <b>Order ID :</b> Q2902                        | TRIS02 | <b>Order Date :</b> 8/19/2025 12:17:00 PM    | <b>Project Mgr :</b>              |
| <b>Client Name :</b> Tris Pharma, Inc.         |        | <b>Project Name :</b> Quarterly              | <b>Report Type :</b> Results Only |
| <b>Client Contact :</b> Nichole Nikki Ferrari  |        | <b>Receive DateTime :</b> 8/19/2025 09:29 PM | <b>EDD Type :</b> EXCEL NOCLEANUP |
| <b>Invoice Name :</b> Tris Pharma, Inc.        |        | <b>Purchase Order :</b>                      | <b>Hard Copy Date :</b>           |
| <b>Invoice Contact :</b> Nichole Nikki Ferrari |        |                                              | <b>Date Signoff :</b>             |

| LAB ID   | CLIENT ID       | MATRIX | SAMPLE DATE | SAMPLE TIME | TEST         | TEST GROUP | METHOD | FAX DATE     | DUE DATES |
|----------|-----------------|--------|-------------|-------------|--------------|------------|--------|--------------|-----------|
| Q2902-01 | OUTFALL-DSN-001 | Water  | 08/19/2025  | 09:59       |              |            |        |              |           |
|          |                 |        |             |             | VOCMS Group1 |            | 624.1  | 10 Bus. Days |           |
| Q2902-02 | Q2902-1MS       | Water  | 08/19/2025  | 09:59       |              |            |        |              |           |
|          |                 |        |             |             | VOCMS Group1 |            | 624.1  | 10 Bus. Days |           |
| Q2902-03 | Q2902-1MSD      | Water  | 08/19/2025  | 09:59       |              |            |        |              |           |
|          |                 |        |             |             | VOCMS Group1 |            | 624.1  | 10 Bus. Days |           |
| Q2902-04 | OUTFALL-DSN-002 | Water  | 08/19/2025  | 09:15       |              |            |        |              |           |
|          |                 |        |             |             | VOCMS Group1 |            | 624.1  | 10 Bus. Days |           |

Relinquished By : 

Date / Time : 8/20/25 0810

Received on 8/19/25 @ 1725  
Placed in SM-REF 2

Received By : 

Date / Time : 8/20/25 810

Storage Area : VOA Refridgerator Room