

## Cover Page

**Order ID :** Q2811

**Project ID :** PVSC Monthly 2025

**Client :** Ardmore Chemical

**Lab Sample Number**

Q2811-01  
Q2811-02

**Client Sample Number**

EFF-WASTE WATER  
EFF-WASTE WATER

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature : \_\_\_\_\_

Date: 8/13/2025

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

## 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  |

## APPENDIX A

### QA REVIEW GENERAL DOCUMENTATION

Project #: Q2811

Completed

For thorough review, the report must have the following:

#### GENERAL:

Are all original paperwork present (chain of custody, record of communication,airbill, sample management lab chronicle, login page)

✓

Check chain-of-custody for proper relinquish/return of samples

✓

Is the chain of custody signed and complete

✓

Check internal chain-of-custody for proper relinquish/return of samples /sample extracts

✓

Collect information for each project id from server. Were all requirements followed

✓

#### COVER PAGE:

Do numbers of samples correspond to the number of samples in the Chain of Custody on login page

✓

Do lab numbers and client Ids on cover page agree with the Chain of Custody

✓

#### CHAIN OF CUSTODY:

Do requested analyses on Chain of Custody agree with form I results

✓

Do requested analyses on Chain of Custody agree with the log-in page

✓

Were the correct method log-in for analysis according to the Analytical Request and Chain of Custody

✓

Were the samples received within hold time

✓

Were any problems found with the samples at arrival recorded in the Sample Management Laboratory Chronicle

✓

#### ANALYTICAL:

Was method requirement followed?

✓

Was client requirement followed?

✓

Does the case narrative summarize all QC failure?

✓

All runlogs and manual integration are reviewed for requirements

✓

All manual calculations and /or hand notations verified

✓

QA Review Signature: KETAN PATEL

Date: 08/13/2025

## LAB CHRONICLE

**OrderID:** Q2811  
**Client:** Ardmore Chemical  
**Contact:** Michael Sharphouse

**OrderDate:** 8/8/2025 1:07:00 PM  
**Project:** PVSC Monthly 2025  
**Location:** J21,VOA Lab

| LabID    | ClientID        | Matrix | Test    | Method           | Sample Date               | Prep Date | Anal Date         | Received        |
|----------|-----------------|--------|---------|------------------|---------------------------|-----------|-------------------|-----------------|
| Q2811-01 | EFF-WASTE WATER | WATER  |         |                  | <b>08/08/25<br/>11:00</b> |           |                   | <b>08/08/25</b> |
|          |                 |        | Cyanide | SM4500-CN<br>C,E |                           | 08/11/25  | 08/11/25<br>12:47 |                 |
| Q2811-02 | EFF-WASTE WATER | WATER  |         |                  | <b>08/08/25<br/>11:00</b> |           |                   | <b>08/08/25</b> |
|          |                 |        | BOD5    | SM5210 B         |                           |           | 08/08/25<br>15:50 |                 |
|          |                 |        | TSS     | SM2540 D         |                           |           | 08/11/25<br>10:00 |                 |



# SAMPLE DATA

## Report of Analysis

|                   |                   |                 |                |
|-------------------|-------------------|-----------------|----------------|
| Client:           | Ardmore Chemical  | Date Collected: | 08/08/25 11:00 |
| Project:          | PVSC Monthly 2025 | Date Received:  | 08/08/25       |
| Client Sample ID: | EFF-WASTE WATER   | SDG No.:        | Q2811          |
| Lab Sample ID:    | Q2811-01          | Matrix:         | WATER          |
|                   |                   | % Solid:        | 0              |

| Parameter | Conc.  | Qua. | DF | MDL    | LOQ / CRQL | Units | Prep Date      | Date Ana.      | Ana Met.                     |
|-----------|--------|------|----|--------|------------|-------|----------------|----------------|------------------------------|
| Cyanide   | 0.0020 | J    | 1  | 0.0012 | 0.0050     | mg/L  | 08/11/25 08:10 | 08/11/25 12:47 | SM 4500-CN<br>C-21 plus E-21 |

Comments: \_\_\_\_\_

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

H = Sample Analysis Out Of Hold Time

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:           | Ardmore Chemical  | Date Collected: | 08/08/25 11:00 |
| Project:          | PVSC Monthly 2025 | Date Received:  | 08/08/25       |
| Client Sample ID: | EFF-WASTE WATER   | SDG No.:        | Q2811          |
| Lab Sample ID:    | Q2811-02          | Matrix:         | WATER          |
|                   |                   | % Solid:        | 0              |

| Parameter | Conc. | Qua. | DF | MDL  | LOQ / CRQL | Units | Prep Date | Date Ana.      | Ana Met.     |
|-----------|-------|------|----|------|------------|-------|-----------|----------------|--------------|
| BOD5      | 605   |      | 1  | 0.20 | 2.00       | mg/L  |           | 08/08/25 15:50 | SM 5210 B-16 |
| TSS       | 30.0  |      | 1  | 1.00 | 4.00       | mg/L  |           | 08/11/25 10:00 | SM 2540 D-20 |

Comments:

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  
H = Sample Analysis Out Of Hold Time

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



# QC RESULT SUMMARY



### Initial and Continuing Calibration Verification

**Client:** Ardmore Chemical

**SDG No.:** Q2811

**Project:** PVSC Monthly 2025

**RunNo.:** LB136770

| Analyte               |      | Units | Result | True Value | %<br>Recovery | Acceptance<br>Window (%R) | Analysis<br>Date |
|-----------------------|------|-------|--------|------------|---------------|---------------------------|------------------|
| Sample ID:<br>Cyanide | ICV1 | mg/L  | 0.095  | 0.099      | 96            | 85-115                    | 08/11/2025       |
| Sample ID:<br>Cyanide | CCV1 | mg/L  | 0.24   | 0.25       | 96            | 90-110                    | 08/11/2025       |
| Sample ID:<br>Cyanide | CCV2 | mg/L  | 0.24   | 0.25       | 96            | 90-110                    | 08/11/2025       |

### Initial and Continuing Calibration Blank Summary

**Client:** Ardmore Chemical

**SDG No.:** Q2811

**Project:** PVSC Monthly 2025

**RunNo.:** LB136770

| Analyte    |             | Units | Result | Acceptance<br>Limits | Conc<br>Qual | MDL    | RDL   | Analysis<br>Date |
|------------|-------------|-------|--------|----------------------|--------------|--------|-------|------------------|
| Sample ID: | <b>ICB1</b> |       |        |                      |              |        |       |                  |
| Cyanide    |             | mg/L  | 0.0014 | 0.0025               | J            | 0.0012 | 0.005 | 08/11/2025       |
| Sample ID: | <b>CCB1</b> |       |        |                      |              |        |       |                  |
| Cyanide    |             | mg/L  | 0.0015 | 0.0025               | J            | 0.0012 | 0.005 | 08/11/2025       |
| Sample ID: | <b>CCB2</b> |       |        |                      |              |        |       |                  |
| Cyanide    |             | mg/L  | 0.0016 | 0.0025               | J            | 0.0012 | 0.005 | 08/11/2025       |

## Preparation Blank Summary

**Client:** Ardmore Chemical

**SDG No.:** Q2811

**Project:** PVSC Monthly 2025

| Analyte               | Units                     | Result   | Acceptance<br>Limits | Conc<br>Qual | MDL    | RDL   | Analysis<br>Date |
|-----------------------|---------------------------|----------|----------------------|--------------|--------|-------|------------------|
| Sample ID:<br>BOD5    | <b>LB136764BL</b><br>mg/L | < 0.2000 | 0.2000               | U            | 0.20   | 2.0   | 08/08/2025       |
| Sample ID:<br>TSS     | <b>LB136765BL</b><br>mg/L | < 2.0000 | 2.0000               | U            | 1      | 4     | 08/11/2025       |
| Sample ID:<br>Cyanide | <b>PB169182BL</b><br>mg/L | 0.0015   | 0.0025               | J            | 0.0012 | 0.005 | 08/11/2025       |

### Matrix Spike Summary

|                   |                   |   |          |
|-------------------|-------------------|---|----------|
| <b>Client:</b>    | Ardmore Chemical  | <b>SDG No.:</b>                         | Q2811    |
| <b>Project:</b>   | PVSC Monthly 2025 | <b>Sample ID:</b>                       | Q2811-01 |
| <b>Client ID:</b> | EFF-WASTE WATERMS | <b>Percent Solids for Spike Sample:</b> | 0        |

| Analyte | Units | Acceptance<br>Limit %R | Spiked<br>Result | Conc.<br>Qualifier | Sample<br>Result | Conc.<br>Qualifier | Spike<br>Added | Dilution<br>Factor | %<br>Rec | Qual | Analysis<br>Date |
|---------|-------|------------------------|------------------|--------------------|------------------|--------------------|----------------|--------------------|----------|------|------------------|
| Cyanide | mg/L  | 75-125                 | 0.039            |                    | 0.0020           | J                  | 0.04           | 1                  | 93       |      | 08/11/2025       |

## Matrix Spike Summary

|                   |                    |   |          |
|-------------------|--------------------|---|----------|
| <b>Client:</b>    | Ardmore Chemical   | <b>SDG No.:</b>                         | Q2811    |
| <b>Project:</b>   | PVSC Monthly 2025  | <b>Sample ID:</b>                       | Q2811-01 |
| <b>Client ID:</b> | EFF-WASTE WATERMSD | <b>Percent Solids for Spike Sample:</b> | 0        |

| Analyte | Units | Acceptance<br>Limit %R | Spiked<br>Result | Conc.<br>Qualifier | Sample<br>Result | Conc.<br>Qualifier | Spike<br>Added | Dilution<br>Factor | %<br>Rec | Qual | Analysis<br>Date |
|---------|-------|------------------------|------------------|--------------------|------------------|--------------------|----------------|--------------------|----------|------|------------------|
| Cyanide | mg/L  | 75-125                 | 0.039            |                    | 0.0020           | J                  | 0.04           | 1                  | 93       |      | 08/11/2025       |

## Duplicate Sample Summary

|   |  |
|---|--|
| <b>Client:</b> Ardmore Chemical<br><b>Project:</b> PVSC Monthly 2025<br><b>Client ID:</b> CompDUP | <b>SDG No.:</b> Q2811<br><b>Sample ID:</b> Q2789-02<br><b>Percent Solids for Spike Sample:</b> 0 |
|---|--|

| Analyte | Units | Acceptance<br>Limit | Sample<br>Result | Conc.<br>Qualifier | Duplicate<br>Result | Conc.<br>Qualifier | Dilution<br>Factor | RPD/<br>AD | Qual | Analysis<br>Date |
|---------|-------|---------------------|------------------|--------------------|---------------------|--------------------|--------------------|------------|------|------------------|
| TSS     | mg/L  | +/-5                | 377              |                    | 387                 |                    | 1                  | 2.62       |      | 08/11/2025       |

### Duplicate Sample Summary

|                   |                    |   |          |
|-------------------|--------------------|---|----------|
| <b>Client:</b>    | Ardmore Chemical   | <b>SDG No.:</b>                         | Q2811    |
| <b>Project:</b>   | PVSC Monthly 2025  | <b>Sample ID:</b>                       | Q2811-01 |
| <b>Client ID:</b> | EFF-WASTE WATERDUP | <b>Percent Solids for Spike Sample:</b> | 0        |

| Analyte | Units | Acceptance<br>Limit | Sample<br>Result | Conc.<br>Qualifier | Duplicate<br>Result | Conc.<br>Qualifier | Dilution<br>Factor | RPD/<br>AD | Qual | Analysis<br>Date |
|---------|-------|---------------------|------------------|--------------------|---------------------|--------------------|--------------------|------------|------|------------------|
| Cyanide | mg/L  | +/-20               | 0.0020           | J                  | 0.0019              | J                  | 1                  | 5          |      | 08/11/2025       |

## Duplicate Sample Summary

|                                      |   |
|--------------------------------------|---|
| <b>Client:</b> Ardmore Chemical      | <b>SDG No.:</b> Q2811                     |
| <b>Project:</b> PVSC Monthly 2025    | <b>Sample ID:</b> Q2811-01                |
| <b>Client ID:</b> EFF-WASTE WATERMSD | <b>Percent Solids for Spike Sample:</b> 0 |

| Analyte | Units | Acceptance<br>Limit | Sample<br>Result | Conc.<br>Qualifier | Duplicate<br>Result | Conc.<br>Qualifier | Dilution<br>Factor | RPD/<br>AD | Qual | Analysis<br>Date |
|---------|-------|---------------------|------------------|--------------------|---------------------|--------------------|--------------------|------------|------|------------------|
| Cyanide | mg/L  | +/-20               | 0.039            |                    | 0.039               |                    | 1                  | 0          |      | 08/11/2025       |



### Duplicate Sample Summary

|                   |                    |   |          |
|-------------------|--------------------|---|----------|
| <b>Client:</b>    | Ardmore Chemical   | <b>SDG No.:</b>                         | Q2811    |
| <b>Project:</b>   | PVSC Monthly 2025  | <b>Sample ID:</b>                       | Q2811-02 |
| <b>Client ID:</b> | EFF-WASTE WATERDUP | <b>Percent Solids for Spike Sample:</b> | 0        |

| Analyte | Units | Acceptance<br>Limit | Sample<br>Result | Conc.<br>Qualifier | Duplicate<br>Result | Conc.<br>Qualifier | Dilution<br>Factor | RPD/<br>AD | Qual | Analysis<br>Date |
|---------|-------|---------------------|------------------|--------------------|---------------------|--------------------|--------------------|------------|------|------------------|
| BOD5    | mg/L  | +/-20               | 605              |                    | 617                 |                    | 1                  | 2          |      | 08/08/2025       |

### Laboratory Control Sample Summary

**Client:** Ardmore Chemical

**SDG No.:** Q2811

**Project:** PVSC Monthly 2025

**Run No.:** LB136764

| Analyte   | Units      | True Value | Result | Conc. Qualifier | % Recovery | Dilution Factor | Acceptance Limit %R | Analysis Date |
|-----------|------------|------------|--------|-----------------|------------|-----------------|---------------------|---------------|
| Sample ID | LB136764BS |            |        |                 |            |                 |                     |               |
| BOD5      | mg/L       | 198        | 208    |                 | 105        | 1               | 84.6-115.4          | 08/08/2025    |

### Laboratory Control Sample Summary

**Client:** Ardmore Chemical

**SDG No.:** Q2811

**Project:** PVSC Monthly 2025

**Run No.:** LB136765

| Analyte   | Units      | True Value | Result | Conc. Qualifier | % Recovery | Dilution Factor | Acceptance Limit %R | Analysis Date |
|-----------|------------|------------|--------|-----------------|------------|-----------------|---------------------|---------------|
| Sample ID | LB136765BS |            |        |                 |            |                 |                     |               |
| TSS       | mg/L       | 550        | 531    |                 | 96         | 1               | 90-110              | 08/11/2025    |

### Laboratory Control Sample Summary

**Client:** Ardmore Chemical

**SDG No.:** Q2811

**Project:** PVSC Monthly 2025

**Run No.:** LB136770

| Analyte   | Units      | True Value | Result | Conc. Qualifier | % Recovery | Dilution Factor | Acceptance Limit %R | Analysis Date |
|-----------|------------|------------|--------|-----------------|------------|-----------------|---------------------|---------------|
| Sample ID | PB169182BS |            |        |                 |            |                 |                     |               |
| Cyanide   | mg/L       | 0.1        | 0.098  |                 | 98         | 1               | 85-115              | 08/11/2025    |



# RAW DATA

# BOD5 LOG

ANALYST: rubin  
Inst Id :DO METER  
LB :LB136764

Reviewed By:jignesh  
On:8/14/2025 10:00:24  
AM

SUPERVISOR: jignesh

QC BATCH ID: LB136764

Analysis Date: 08/08/2025

BOD Water: WP114228

MANGANOUS SULFATE SOLUTION: W3103

Starch: W3149

Alkaline Iodide Azide: W3109

Sulfuric acid, 1N: WP112832

Sodium Thiosulfate, 0.025N: W3105

POLYSEED: WP114230

NaOH, 1N: WP113878

GGA: WP114229

IncubatorID: INCUBATOR #3

Chlorine Strips: W3155

GuageID: 0511064

pH Strips: W3215

Zero DO: WP114055

| Lab SampleID | Client ID | Bottle No. | VOL. ML | Initial Reading (ML) | Final Reading (ML) | Difference | Average |
|--------------|-----------|------------|---------|----------------------|--------------------|------------|---------|
| WINKLER 1    | WINKLER 1 | 1          | 300     | 0.0                  | 9.8                | 9.8        | 9.8     |
| WINKLER 2    | WINKLER 2 | 2          | 300     | 10.00                | 19.8               | 9.8        | 9.8     |

Meter Calibration1: 9.41

Zero DO Reading1: 0.15 mg/L (<=0.2 Criteria)

Barometric Pressure1: 765 mmHg

DO Meter BOD fluid reading for winkler comparison: 9.98

## After Incubation

Meter Calibration2: 8.74

Zero DO Reading2: 0.10 mg/L (<=0.2 Criteria)

Barometric Pressure2: 755 mmHg

QC BATCH ID: LB136764

INCUBATOR TEMP IN(C): 19.9

INCUBATOR TEMP OUT(C): 20.0

TIME IN: 15:50

TIME OUT: 14:00

DATE IN: 08/08/2025

DATE OUT: 08/13/2025

| Lab SampleID | Bottle No. | Check CL | Initial PH | Final PH | Temp °C | Sam Vol. (mL) | D.O.1 Initial | D.O.2 Final | Depletion | BOD Result (mg/L) | Avg Result (mg/L) | Comment     |
|--------------|------------|----------|------------|----------|---------|---------------|---------------|-------------|-----------|-------------------|-------------------|-------------|
| LB136764BL   | 1          | No       | 6.81       | N/A      | 20.80   | 300           | 9.98          | 9.96        | 0.02      | 0.02              | 0.02              |             |
| POLYSEED     | 1          |          |            |          |         | 10            | 9.92          | 7.12        | 2.8       | 0.56              | 0.62              |             |
| POLYSEED     | 2          |          |            |          |         | 15            | 9.89          | 5.07        | 4.82      | 0.64              |                   |             |
| POLYSEED     | 3          |          |            |          |         | 20            | 9.84          | 3.21        | 6.63      | 0.66              |                   |             |
| GGA          | 1          |          |            |          |         | 6             | 9.90          | 5.22        | 4.68      | 203               | 208.33            |             |
| GGA          | 2          |          |            |          |         | 6             | 9.90          | 5.09        | 4.81      | 209.5             |                   |             |
| GGA          | 3          |          |            |          |         | 6             | 9.87          | 5.00        | 4.87      | 212.5             |                   |             |
| Q2810-01     | 1          | No       | 4.80       | 6.70     | 20.90   | 5             | 9.94          | 1.01        | 8.93      | 498.6             | 498.6             | pH Adjusted |
| Q2810-01     | 2          |          |            |          |         | 20            | 9.90          | 0.33        | -         | 0                 |                   |             |
| Q2810-01     | 3          |          |            |          |         | 50            | 9.42          | 0.22        | -         | 0                 |                   |             |
| Q2810-01     | 4          |          |            |          |         | 150           | 7.09          | 0.19        | -         | 0                 |                   |             |
| Q2811-02     | 1          | No       | 8.15       | 6.91     | 20.70   | 5             | 9.90          | 8.89        | -         | 0                 | 605               | pH Adjusted |
| Q2811-02     | 2          |          |            |          |         | 10            | 9.87          | 8.22        | -         | 0                 |                   |             |
| Q2811-02     | 3          |          |            |          |         | 20            | 9.85          | 5.63        | 4.22      | 540               |                   |             |
| Q2811-02     | 4          |          |            |          |         | 30            | 9.82          | 2.50        | 7.32      | 670               |                   |             |
| Q2811-02DUP  | 1          | No       | 8.15       | 6.91     | 20.70   | 5             | 9.92          | 8.81        | -         | 0                 | 617.25            | pH Adjusted |
| Q2811-02DUP  | 2          |          |            |          |         | 10            | 9.86          | 8.54        | -         | 0                 |                   |             |
| Q2811-02DUP  | 3          |          |            |          |         | 20            | 9.84          | 5.57        | 4.27      | 547.5             |                   |             |
| Q2811-02DUP  | 4          |          |            |          |         | 30            | 9.81          | 2.32        | 7.49      | 687               |                   |             |
| Q2813-01     | 1          | No       | 8.35       | 7.11     | 20.20   | 1             | 9.91          | 8.81        | -         | 0                 | 5991              | pH Adjusted |
| Q2813-01     | 2          |          |            |          |         | 5             | 9.86          | 8.21        | -         | 0                 |                   |             |
| Q2813-01     | 3          |          |            |          |         | 10            | 9.84          | 6.69        | 3.15      | 7590              |                   |             |
| Q2813-01     | 4          |          |            |          |         | 50            | 9.46          | 1.52        | 7.94      | 4392              |                   |             |
| Q2813-01     | 5          |          |            |          |         | 100           | 9.03          | 0.32        | -         | 0                 |                   |             |
| Q2813-05     | 1          | No       | 8.38       | 7.39     | 20.30   | 1             | 9.92          | 8.62        | -         | 0                 | 5790              | pH Adjusted |
| Q2813-05     | 2          |          |            |          |         | 5             | 9.90          | 8.40        | -         | 0                 |                   |             |
| Q2813-05     | 3          |          |            |          |         | 10            | 9.82          | 7.27        | 2.55      | 5790              |                   |             |
| Q2813-05     | 4          |          |            |          |         | 50            | 9.74          | 0.64        | -         | 0                 |                   |             |
| Q2813-05     | 5          |          |            |          |         | 100           | 8.90          | 0.35        | -         | 0                 |                   |             |

NOTE: 2ml POLYSEED added to GGA and all the Samples, but not in Blank.

NOTE (For, CBOD5): 0.16 g Nitrification Inhibitor added to GGA and all the Samples, but not in Blank.

**TOTAL SUSPENDED SOLIDS - SM2540D**

**SUPERVISOR:** rubina

**ANALYST:** jignesh

**Date:** 08/08/2025

**Run Number:** LB136765

**BalanceID:** WC-SC-6

**OvenID:** WC OVEN-1

**FilterID:** 17416528

**ThermometerID:** WET OVEN#1

**TEMP1 IN:** 104 °C 08/08/2025 14:00 **TEMP1 OUT:** 103 °C 08/08/2025 15:30  
**TEMP2 IN:** 104 °C 08/08/2025 16:00 **TEMP2 OUT:** 103 °C 08/08/2025 17:00  
**TEMP3 IN:** 104 °C 08/11/2025 10:00 **TEMP3 OUT:** 103 °C 08/11/2025 11:30  
**TEMP4 IN:** 104 °C 08/11/2025 12:00 **TEMP4 OUT:** 103 °C 08/11/2025 13:35

| Dish # | Lab ID      | Client ID          | Empty Dish Weight (g) | Final Empty Dish Weight (g) | Sample Volume (ml) | 1st Empty Dish+Sample weight after 1.5hr drying @103-@105°C (g) | 2nd Empty Dish+Sample weight after 1.5hr drying @103-@105°C (g) | Final Empty Dish+Sample weight after 1.5hr drying @103-@105°C (g) | Weight (g) | Result mg/L |
|--------|-------------|--------------------|-----------------------|-----------------------------|--------------------|---|---|---|------------|-------------|
| 1      | LB136765BL  | LB136765BL         | 1.5206                | 1.5207                      | 100                | 1.5207  | 1.5207  | 1.5207  | 0.0000     | 0           |
| 2      | LB136765BS  | LB136765BS         | 1.4853                | 1.4854                      | 100                | 1.5385  | 1.5385  | 1.5385  | 0.0531     | 531         |
| 3      | Q2789-02    | Comp               | 1.4883                | 1.4883                      | 70                 | 1.5147  | 1.5147  | 1.5147  | 0.0264     | 377.1       |
| 4      | Q2789-02DUP | CompDUP            | 1.4859                | 1.4859                      | 70                 | 1.5129  | 1.5130  | 1.5130  | 0.0271     | 387.1       |
| 5      | Q2805-02    | RW8-SP303-20250807 | 1.4726                | 1.4727                      | 1800               | 1.4730  | 1.4731  | 1.4731  | 0.0004     | 0.2         |
| 6      | Q2810-01    | MH-892025          | 1.4753                | 1.4753                      | 300                | 1.5575  | 1.5575  | 1.5575  | 0.0822     | 274         |
| 7      | Q2811-02    | EFF-WASTE WATER    | 1.4686                | 1.4686                      | 750                | 1.4911  | 1.4911  | 1.4911  | 0.0225     | 30          |
| 8      | Q2813-01    | EFFLUENT           | 1.4912                | 1.4912                      | 20                 | 1.6767  | 1.6767  | 1.6767  | 0.1855     | 9275        |
| 9      | Q2813-04    | AERATION           | 1.5005                | 1.5005                      | 20                 | 1.5670  | 1.5670  | 1.5670  | 0.0665     | 3325        |

A = Sample Volume (ml)  
 B = Final Empty Dish Weight (g)  
 C = Final Empty Dish + Sample weight after 1.5 hr drying @105°C(g)  
 D = Weight (g)

**Weight (g) = C - B**

**Result mg/L =  $\frac{D}{A} \times 1000 \times 1000$**



# WORKLIST(Hardcopy Internal Chain)

UP 136765

WorkList Name : TSS Q2810      WorkList ID : 191188      Department : Wet-Chemistry      Date : 08-11-2025 07:52:11

| Sample   | Customer Sample       | Matrix | Test | Preservative | Customer | Raw Sample Storage Location | Collect Date | Method   |
|----------|-----------------------|--------|------|--------------|----------|-----------------------------|--------------|----------|
| Q2789-02 | B Comp                | Water  | TSS  | Cool 4 deg C | ARAM01   | J21                         | 08/06/2025   | SM2540 D |
| Q2805-02 | BL RW8-SP303-20250807 | Water  | TSS  | Cool 4 deg C | TETR06   | J22                         | 08/07/2025   | SM2540 D |
| Q2810-01 | D MH-892025           | Water  | TSS  | Cool 4 deg C | EURO03   | D21                         | 08/08/2025   | SM2540 D |
| Q2811-02 | B EFF-WASTE WATER     | Water  | TSS  | Cool 4 deg C | ARDM01   | J21                         | 08/08/2025   | SM2540 D |
| Q2813-01 | D EFFLUENT            | Water  | TSS  | Cool 4 deg C | HOLL01   | J41                         | 08/08/2025   | SM2540 D |
| Q2813-04 | AERATION              | Water  | TSS  | Cool 4 deg C | HOLL01   | J41                         | 08/08/2025   | SM2540 D |

Date/Time 08-11-25 08:00  
 Raw Sample Received by: SB wcl  
 Raw Sample Relinquished by: JDCSM

Date/Time 08-11-25 14:30  
 Raw Sample Received by: JDCSM  
 Raw Sample Relinquished by: SB wcl

613

Test results

Aquakem 7.2AQ1

Page:

Alliance Technical Group

284 Sheffield Street, Mountainside, NJ 07092

Reviewed by : RM

Instrument ID : Konelab

8/11/2025 12:57

Test: Total CN

| Sample Id   | Result  | Dil. 1 + | Response | Errors |
|-------------|---------|----------|----------|--------|
| ICV1        | 95.351  | 0.0      | 0.078    |        |
| ICB1        | 1.429   | 0.0      | 0.001    |        |
| CCV1        | 242.427 | 0.0      | 0.200    |        |
| CCB1        | 1.476   | 0.0      | 0.001    |        |
| RL CHECK    | 5.544   | 0.0      | 0.004    |        |
| PB169182BL  | 1.460   | 0.0      | 0.001    |        |
| PB169182BS  | 97.680  | 0.0      | 0.080    |        |
| MIDPB169182 | 242.319 | 0.0      | 0.199    |        |
| Q2811-01    | 1.982   | 0.0      | 0.001    |        |
| Q2811-01DUP | 1.864   | 0.0      | 0.001    |        |
| Q2811-01MS  | 39.342  | 0.0      | 0.032    |        |
| Q2811-01MSD | 39.368  | 0.0      | 0.032    |        |
| CCV2        | 243.325 | 0.0      | 0.200    |        |
| CCB2        | 1.606   | 0.0      | 0.001    |        |

110% (50-150)

96% (90-110)

08/11/2025  
RM

N 14  
 Mean 72.512  
 SD 98.0039  
 CV% 135.15

Calibration results

Aquakem 7.2AQ1

Page:

Alliance Technical Group

284 Sheffield Street, Mountainside, NJ 07092

Reviewed by : RM

Instrument ID : Konelab

8/11/2025 11:15

Test Total CN

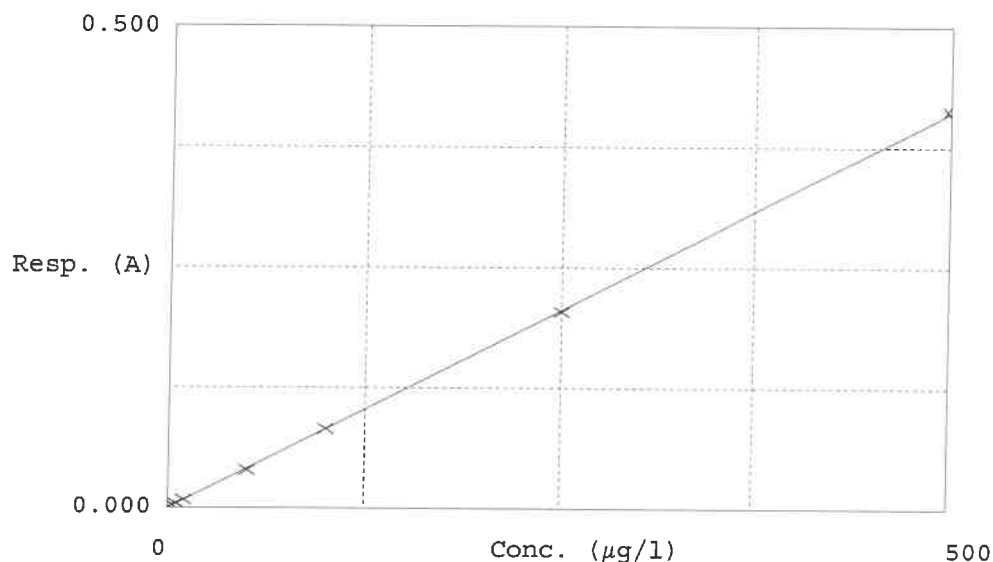
Accepted 8/11/2025 11:15

Factor 1214

Bias 0

Coeff. of det. 0.999938

Errors



|   | Calibrator | Response | Calc. con. | Conc.    | Errors |
|---|------------|----------|------------|----------|--------|
| 1 | 0.0PPBCN   | 0.001    | 1.6181     | 0.0000   | -      |
| 2 | 5.0PPBCN   | 0.004    | 5.6869     | 5.0000   | 137    |
| 3 | 10PPBCN    | 0.008    | 10.3866    | 10.0000  | 39     |
| 4 | 50PPBCN    | 0.039    | 48.0238    | 50.0000  | -4.0   |
| 5 | 100PPBCN   | 0.082    | 100.1562   | 100.0000 | 0.2    |
| 6 | 250PPBCN   | 0.204    | 247.9532   | 250.0000 | -0.8   |
| 7 | 500PPBCN   | 0.413    | 501.1752   | 500.0000 | 0.2    |

08/11/2025  
RM

Aquakem v. 7.2AQ1

Results from time period:

Mon Aug 11 12:40:19 2025

Mon Aug 11 12:55:07 2025

| Sample Id   | Sam/Ctr/c | Test short r | Test type | Result   | Result unit | Result date and time | Stat |
|-------------|-----------|--------------|-----------|----------|-------------|----------------------|------|
| 0.OPPBCN    | A         | Total CN     | P         | 1.6181   | µg/l        | 8/11/2025 10:04:52   |      |
| 5.OPPBCN    | A         | Total CN     | P         | 5.6869   | µg/l        | 8/11/2025 10:04:53   |      |
| 10PPBCN     | A         | Total CN     | P         | 10.3866  | µg/l        | 8/11/2025 10:04:54   |      |
| 50PPBCN     | A         | Total CN     | P         | 48.0238  | µg/l        | 8/11/2025 10:04:55   |      |
| 100PPBCN    | A         | Total CN     | P         | 100.1562 | µg/l        | 8/11/2025 10:04:56   |      |
| 250PPBCN    | A         | Total CN     | P         | 247.9532 | µg/l        | 8/11/2025 10:04:57   |      |
| 500PPBCN    | A         | Total CN     | P         | 501.1752 | µg/l        | 8/11/2025 10:04:58   |      |
| ICV1        | S         | Total CN     | P         | 95.3506  | µg/l        | 8/11/2025 12:40:19   |      |
| ICB1        | S         | Total CN     | P         | 1.4289   | µg/l        | 8/11/2025 12:40:21   |      |
| CCV1        | S         | Total CN     | P         | 242.4268 | µg/l        | 8/11/2025 12:40:23   |      |
| CCB1        | S         | Total CN     | P         | 1.4759   | µg/l        | 8/11/2025 12:40:25   |      |
| RL CHECK    | S         | Total CN     | P         | 5.5442   | µg/l        | 8/11/2025 12:47:51   |      |
| PB169182BL  | S         | Total CN     | P         | 1.4601   | µg/l        | 8/11/2025 12:47:52   |      |
| PB169182BS  | S         | Total CN     | P         | 97.6797  | µg/l        | 8/11/2025 12:47:55   |      |
| MIDPB169182 | S         | Total CN     | P         | 242.3194 | µg/l        | 8/11/2025 12:47:57   |      |
| Q2811-01    | S         | Total CN     | P         | 1.9817   | µg/l        | 8/11/2025 12:47:59   |      |
| Q2811-01DUP | S         | Total CN     | P         | 1.8645   | µg/l        | 8/11/2025 12:48:01   |      |
| Q2811-01MS  | S         | Total CN     | P         | 39.3417  | µg/l        | 8/11/2025 12:55:00   |      |
| Q2811-01MSD | S         | Total CN     | P         | 39.3677  | µg/l        | 8/11/2025 12:55:01   |      |
| CCV2        | S         | Total CN     | P         | 243.3254 | µg/l        | 8/11/2025 12:55:05   |      |
| CCB2        | S         | Total CN     | P         | 1.6064   | µg/l        | 8/11/2025 12:55:07   |      |

SOP ID : MSM4500-CN C,E-Cyanide-13

SDG No : N/A

Start Digest Date: 08/11/2025 Time : 08:10 Temp : 124 °C

Matrix : WATER

End Digest Date: 08/11/2025 Time : 09:40 Temp : 127 °C

Pipette ID : WC

Balance ID : N/A

Hood ID : HOOD#1

Digestion tube ID : M5595

Block Thermometer ID : WC CYANIDE

Block ID : MC-1, MC-2

Filter paper ID : N/A

Prep Technician Signature: 

Weigh By : N/A

pH Meter ID : N/A

Supervisor Signature: 

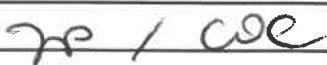
| Standardized Name | MLS USED | STD REF. # FROM LOG |
|-------------------|----------|---------------------|
| LCSW              | 1.0ML    | WP113838            |
| MS/MSD SPIKE SOL. | 0.40ML   | WP113837            |
| PBW               | 50.ML    | W3112               |
| RL CHECK          | 50.ML    | WP114248            |
| N/A               | N/A      | N/A                 |

| Chemical Used         | ML/SAMPLE USED | Lot Number |
|-----------------------|----------------|------------|
| 0.25N NaOH            | 50.ML          | WP113836   |
| 50% v/v H2SO4         | 5.ML           | WP112826   |
| 51% w/v MgCL2         | 2.ML           | WP112827   |
| pH Paper 0-14         | N/A            | W3215      |
| Nitrate/Nitrite Strip | N/A            | W3182      |
| Lead Acetate strip    | N/A            | W3134      |
| KI-starch paper       | N/A            | W3155      |
| N/A                   | N/A            | N/A        |
| N/A                   | N/A            | N/A        |
| N/A                   | N/A            | N/A        |

| LAB SAMPLE ID | CLIENT SAMPLE ID | Wt(g)/Vol(ml) | Comment  |
|---------------|------------------|---------------|----------|
| S0            | S0               | N/A           | N/A      |
| S5.0          | S5.0             | N/A           | N/A      |
| S10.0         | S10.0            | N/A           | N/A      |
| S100.0        | S100.0           | N/A           | N/A      |
| S250.0        | S250.0           | N/A           | N/A      |
| S500.0        | S500.0           | N/A           | N/A      |
| ICV           | ICV              | 0.5ML         | W3012    |
| ICB           | ICB              | N/A           | N/A      |
| CCV           | CCV              | N/A           | N/A      |
| CCB           | CCB              | N/A           | N/A      |
| Midrange      | Midrange         | 2.5ML         | WP113837 |
| HIGHSTD       | HIGHSTD          | N/A           | N/A      |
| LOWSTD        | LOWSTD           | N/A           | N/A      |

Extraction Conformance/Non-Conformance Comments:

N/A

| Date / Time      | Prepped Sample Relinquished By/Location   | Received By/Location |
|------------------|---|----------------------|
| 08/11/2025 09:55 |  / COE | RM (WV)              |
|                  | Preparation Group   | Analysis Group       |

| Lab Sample ID | Client Sample ID   | Initial Vol (ml) | Final Vol (ml) | pH  | Sulfide  | Oxidizing | Nitrate/ Nitrite | Comment | Prep Pos |
|---------------|--------------------|------------------|----------------|-----|----------|-----------|------------------|---------|----------|
| PB169182BL    | PBW182             | 50               | 50             | >12 | Negative | Negative  | Negative         | N/A     | N/A      |
| PB169182BS    | LCS182             | 50               | 50             | >12 | Negative | Negative  | Negative         | N/A     | N/A      |
| Q2811-01DUP   | EFF-WASTE WATERDUP | 50               | 50             | >12 | Negative | Negative  | Negative         | N/A     | N/A      |
| Q2811-01MS    | EFF-WASTE WATERMS  | 50               | 50             | >12 | Negative | Negative  | Negative         | N/A     | N/A      |
| Q2811-01MSD   | EFF-WASTE WATERMSD | 50               | 50             | >12 | Negative | Negative  | Negative         | N/A     | N/A      |
| Q2811-01      | EFF-WASTE WATER    | 50               | 50             | >12 | Negative | Negative  | Negative         | N/A     | N/A      |

WORKLIST(Hardcopy Internal Chain)

WorkList Name : cn w q2811

WorkList ID : 191182

Department : Distillation

Date : 08-08-2025 13:54:15

| Sample       | Customer Sample | Matrix | Test    | Preservative       | Customer | Raw Sample<br>Storage<br>Location | Collect Date | Method      |
|--------------|-----------------|--------|---------|--------------------|----------|-----------------------------------|--------------|-------------|
| Q2811-01 - C | EFF-WASTE WATER | Water  | Cyanide | 1:1 NaOH to pH >12 | ARDM01   | J21                               | 08/08/2025   | SM4500-CN C |

Date/Time 08/08/2025 07.30  
Raw Sample Received by: Jd wrc  
Raw Sample Relinquished by: Jd wrc

Date/Time 08/11/2025 08.35  
Raw Sample Received by: JTCm  
Raw Sample Relinquished by: Jd wrc

**Instrument ID:** DO METER

**Daily Analysis Runlog For Sequence/QC Batch ID # LB136764**

|                  |  |              |                       |
|------------------|--|--------------|-----------------------|
| Review By        | rubina   | Review On    | 8/14/2025 9:49:24 AM  |
| Supervise By     | jignesh  | Supervise On | 8/14/2025 10:00:24 AM |
| SubDirectory     | LB136764   | Test         | BOD5                  |
| <b>STD. NAME</b> | <b>STD REF.#</b>   |              |                       |
| ICAL Standard    | N/A  |              |                       |
| ICV Standard     | N/A  |              |                       |
| CCV Standard     | N/A  |              |                       |
| ICSA Standard    | N/A  |              |                       |
| CRI Standard     | N/A  |              |                       |
| LCS Standard     | N/A  |              |                       |
| Chk Standard     | WP114228,W3149,WP112832,W3103,W3109,W3105,WP114230,WP114229,WP113878 |              |                       |

| Sr# | SampleId    | ClientID        | QcType | Date           | Comment   | Operator | Status |
|-----|-------------|-----------------|--------|----------------|---|----------|--------|
| 1   | LB136764BL  | LB136764BL      | MB     | 08/08/25 15:50 |   | rubina   | OK     |
| 2   | LB136764BS  | LB136764BS      | LCS    | 08/08/25 15:50 |   | rubina   | OK     |
| 3   | Q2810-01    | MH-892025       | SAM    | 08/08/25 15:50 |   | rubina   | OK     |
| 4   | Q2811-02    | EFF-WASTE WATER | SAM    | 08/08/25 15:50 |   | rubina   | OK     |
| 5   | Q2811-02DUP | EFF-WASTE WATER | DUP    | 08/08/25 15:50 |   | rubina   | OK     |
| 6   | Q2813-01    | EFFLUENT        | SAM    | 08/08/25 15:50 | Due to bad matrix difference between highest and lowest results is >30% for | rubina   | OK     |
| 7   | Q2813-05    | INFLUENT        | SAM    | 08/08/25 15:50 |   | rubina   | OK     |



**Instrument ID:** WC SC-3

**Daily Analysis Runlog For Sequence/QC Batch ID # LB136765**

|                  |                  |              |                      |
|------------------|------------------|--------------|----------------------|
| Review By        | jignesh          | Review On    | 8/12/2025 2:27:51 PM |
| Supervise By     | rubina           | Supervise On | 8/12/2025 2:30:28 PM |
| SubDirectory     | LB136765         | Test         | TSS                  |
| <b>STD. NAME</b> | <b>STD REF.#</b> |              |                      |
| ICAL Standard    | N/A              |              |                      |
| ICV Standard     | N/A              |              |                      |
| CCV Standard     | N/A              |              |                      |
| ICSA Standard    | N/A              |              |                      |
| CRI Standard     | N/A              |              |                      |
| LCS Standard     | N/A              |              |                      |
| Chk Standard     | N/A              |              |                      |

| Sr# | SampleID    | ClientID          | QcType | Date           | Comment | Operator | Status |
|-----|-------------|-------------------|--------|----------------|---------|----------|--------|
| 1   | LB136765BL  | LB136765BL        | MB     | 08/11/25 10:00 |         | jignesh  | OK     |
| 2   | LB136765BS  | LB136765BS        | LCS    | 08/11/25 10:00 |         | jignesh  | OK     |
| 3   | Q2789-02    | Comp              | SAM    | 08/11/25 10:00 |         | jignesh  | OK     |
| 4   | Q2789-02DUP | CompDUP           | DUP    | 08/11/25 10:00 |         | jignesh  | OK     |
| 5   | Q2805-02    | RW8-SP303-2025080 | SAM    | 08/11/25 10:00 |         | jignesh  | OK     |
| 6   | Q2810-01    | MH-892025         | SAM    | 08/11/25 10:00 |         | jignesh  | OK     |
| 7   | Q2811-02    | EFF-WASTE WATER   | SAM    | 08/11/25 10:00 |         | jignesh  | OK     |
| 8   | Q2813-01    | EFFLUENT          | SAM    | 08/11/25 10:00 |         | jignesh  | OK     |
| 9   | Q2813-04    | AERATION          | SAM    | 08/11/25 10:00 |         | jignesh  | OK     |

**Instrument ID:** KONELAB

**Daily Analysis Runlog For Sequence/QC Batch ID # LB136770**

|                  |  |              |                      |
|------------------|--|--------------|----------------------|
| Review By        | rubina   | Review On    | 8/11/2025 4:40:53 PM |
| Supervise By     | Sohil  | Supervise On | 8/12/2025 3:09:34 PM |
| SubDirectory     | LB136770   | Test         | Cyanide              |
| <b>STD. NAME</b> | <b>STD REF.#</b>   |              |                      |
| ICAL Standard    | WP114243,WP114244,WP114245,WP114246,WP114247,WP114248,WP114249 |              |                      |
| ICV Standard     | W3012  |              |                      |
| CCV Standard     | WP114244   |              |                      |
| ICSA Standard    | N/A  |              |                      |
| CRI Standard     | N/A  |              |                      |
| LCS Standard     | WP113838   |              |                      |
| Chk Standard     | WP112643,WP112900,WP114251                                     |              |                      |

| Sr# | SampleId    | ClientID        | QcType | Date           | Comment | Operator | Status |
|-----|-------------|-----------------|--------|----------------|---------|----------|--------|
| 1   | 0.0PPBCN    | 0.0PPBCN        | CAL1   | 08/11/25 10:04 |         | rubina   | OK     |
| 2   | 5.0PPBCN    | 5.0PPBCN        | CAL2   | 08/11/25 10:04 |         | rubina   | OK     |
| 3   | 10PPBCN     | 10PPBCN         | CAL3   | 08/11/25 10:04 |         | rubina   | OK     |
| 4   | 50PPBCN     | 50PPBCN         | CAL4   | 08/11/25 10:04 |         | rubina   | OK     |
| 5   | 100PPBCN    | 100PPBCN        | CAL5   | 08/11/25 10:04 |         | rubina   | OK     |
| 6   | 250PPBCN    | 250PPBCN        | CAL6   | 08/11/25 10:04 |         | rubina   | OK     |
| 7   | 500PPBCN    | 500PPBCN        | CAL7   | 08/11/25 10:04 |         | rubina   | OK     |
| 8   | ICV1        | ICV1            | ICV    | 08/11/25 12:40 |         | rubina   | OK     |
| 9   | ICB1        | ICB1            | ICB    | 08/11/25 12:40 |         | rubina   | OK     |
| 10  | CCV1        | CCV1            | CCV    | 08/11/25 12:40 |         | rubina   | OK     |
| 11  | CCB1        | CCB1            | CCB    | 08/11/25 12:40 |         | rubina   | OK     |
| 12  | RL          | RL              | SAM    | 08/11/25 12:47 |         | rubina   | OK     |
| 13  | PB169182BL  | PB169182BL      | MB     | 08/11/25 12:47 |         | rubina   | OK     |
| 14  | PB169182BS  | PB169182BS      | LCS    | 08/11/25 12:47 |         | rubina   | OK     |
| 15  | MIDPB169182 | MIDPB169182     | SAM    | 08/11/25 12:47 |         | rubina   | OK     |
| 16  | Q2811-01    | EFF-WASTE WATER | SAM    | 08/11/25 12:47 |         | rubina   | OK     |
| 17  | Q2811-01DUP | EFF-WASTE WATER | DUP    | 08/11/25 12:48 |         | rubina   | OK     |
| 18  | Q2811-01MS  | EFF-WASTE WATER | MS     | 08/11/25 12:55 |         | rubina   | OK     |

Instrument ID: KONELAB

**Daily Analysis Runlog For Sequence/QC Batch ID # LB136770**

|                  |  |              |                      |
|------------------|--|--------------|----------------------|
| Review By        | rubina   | Review On    | 8/11/2025 4:40:53 PM |
| Supervise By     | Sohil  | Supervise On | 8/12/2025 3:09:34 PM |
| SubDirectory     | LB136770   | Test         | Cyanide              |
| <b>STD. NAME</b> | <b>STD REF.#</b>   |              |                      |
| ICAL Standard    | WP114243,WP114244,WP114245,WP114246,WP114247,WP114248,WP114249 |              |                      |
| ICV Standard     | W3012  |              |                      |
| CCV Standard     | WP114244   |              |                      |
| ICSA Standard    | N/A  |              |                      |
| CRI Standard     | N/A  |              |                      |
| LCS Standard     | WP113838   |              |                      |
| Chk Standard     | WP112643,WP112900,WP114251                                     |              |                      |

|    |             |                 |     |                |  |        |    |
|----|-------------|-----------------|-----|----------------|--|--------|----|
| 19 | Q2811-01MSD | EFF-WASTE WATER | MSD | 08/11/25 12:55 |  | rubina | OK |
| 20 | CCV2        | CCV2            | CCV | 08/11/25 12:55 |  | rubina | OK |
| 21 | CCB2        | CCB2            | CCB | 08/11/25 12:55 |  | rubina | OK |

## Prep Standard - Chemical Standard Summary

**Order ID :** Q2811

**Test :** BOD5,Cyanide,TSS

**Prepbatch ID :** PB169182,

**Sequence ID/Qc Batch ID:** LB136764, LB136765, LB136770,

**Standard ID :**

WP112643, WP112826, WP112827, WP112832, WP112900, WP113836, WP113837, WP113838, WP113878, WP114228, WP114229, WP114230, WP114242, WP114243, WP114244, WP114245, WP114246, WP114247, WP114248, WP114249, WP114251,

**Chemical ID :**

M6041, M6151, W2653, W2654, W2668, W3012, W3019, W3103, W3105, W3109, W3112, W3113, W3139, W3144, W3149, W3152, W3182, W3203, W3212, W3214, W3215, W3224,

| <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>       |
|--|-------------|--------------------------|------------------|------------------------|--------------------|-------------------------|------------------|----------------------------|
| 539  | CN BUFFER   | <a href="#">WP112643</a> | 04/09/2025       | 10/09/2025             | Niha Farheen Shaik | WETCHEM_SCALE_5 (WCS-5) | None             | Iwona Zarych<br>04/09/2025 |
| <b><u>FROM</u></b> 138.00000gram of W2668 + 862.00000ml of W3112 = Final Quantity: 1000.000 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>       |
|--|--------------------------|--------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------------|
| 1714   | Sulfuric Acid, 50% (v/v) | <a href="#">WP112826</a> | 04/25/2025       | 10/25/2025             | Rubina Mughal      | None           | None             | Iwona Zarych<br>04/25/2025 |
| <b><u>FROM</u></b> 1000.00000ml of M6041 + 1000.00000ml of W3112 = Final Quantity: 2000.000 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>           |
|--|---|--------------------------|------------------|------------------------|--------------------|----------------------------------|------------------|--------------------------------|
| 3214   | Magnesium Chloride For Cyanide 2.5M(51%W/V) | <a href="#">WP112827</a> | 04/25/2025       | 10/25/2025             | Rubina Mughal      | WETCHEM_S<br>CALE_8 (WC<br>SC-7) | None             | Iwona Zarych<br><br>04/25/2025 |
| <b><u>FROM</u></b> 500.00000ml of W3112 + 510.00000gram of W3152 = Final Quantity: 1000.000 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>       |
|------------------|---|--------------------------|------------------|------------------------|--------------------|----------------|---------------------------|----------------------------|
| 1841             | Sulfuric Acid, 1N   | <a href="#">WP112832</a> | 04/25/2025       | 10/25/2025             | Rubina Mughal      | None           | WETCHEM_FIPETTE_3<br>(WC) | Iwona Zarych<br>04/25/2025 |
| <u>FROM</u>      | 2.80000ml of M6041 + 97.20000ml of W3112 = 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>       |
|------------------|---|--------------------------|------------------|------------------------|--------------------|-------------------------|------------------|----------------------------|
| 607              | PYRIDINE-BARBITURIC ACID  | <a href="#">WP112900</a> | 05/01/2025       | 08/18/2025             | Rubina Mughal      | WETCHEM_SCALE_8 (WCS-7) | Glass Pipette-A  | Iwona Zarych<br>05/01/2025 |
| <u>FROM</u>      | 145.00000ml of W3112 + 15.00000gram of W3203 + 15.00000ml of M6151 + 75.00000ml of W3019 = Final Quantity: 250.000 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>       |
|---|--|--------------------------|------------------|------------------------|--------------------|-------------------------|------------------|----------------------------|
| 11  | Sodium hydroxide absorbing solution 0.25 N | <a href="#">WP113836</a> | 07/08/2025       | 12/31/2025             | Rubina Mughal      | WETCHEM_SCALE_8 (WCS-7) | None             | Iwona Zarych<br>07/08/2025 |
| <b><u>FROM</u></b> 21.00000L of W3112 + 210.00000gram of W3113 = Final Quantity: 21.000 L |  |                          |                  |                        |                    |                         |                  |                            |

## Wet Chemistry 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>           |
|---|---------------------------------------|--------------------------|------------------|------------------------|--------------------|----------------|---------------------------|--------------------------------|
| 3850  | Cyanide MS-MSD spiking solution, 5PPM | <a href="#">WP113837</a> | 07/08/2025       | 11/30/2025             | Rubina Mughal      | None           | WETCHEM_FIPETTE_3<br>(WC) | Iwona Zarych<br><br>07/08/2025 |
| <b>FROM</b> 1.00000ml of W3214 + 199.00000ml of WP113836 = Final Quantity: 200.000 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>           |
|---|----------------------------------|--------------------------|------------------|------------------------|--------------------|----------------|---------------------------|--------------------------------|
| 3371  | Cyanide LCS Spike Solution, 5PPM | <a href="#">WP113838</a> | 07/08/2025       | 12/24/2025             | Rubina Mughal      | None           | WETCHEM_FIPETTE_3<br>(WC) | Iwona Zarych<br><br>07/08/2025 |
| <b>FROM</b> 1.00000ml of W3224 + 199.00000ml of WP113836 = Final Quantity: 200.000 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>         |
|--|----------------------|--------------------------|------------------|------------------------|--------------------|----------------------------------|------------------|------------------------------|
| 1571   | Sodium hydroxide, 1N | <a href="#">WP113878</a> | 07/09/2025       | 12/31/2025             | Iwona Zarych       | WETCHEM_S<br>CALE_7 (WC<br>SC-6) | None             | Jignesh Parikh<br>07/09/2025 |
| <b><u>FROM</u></b> 4.00000gram of W3113 + 96.00000ml of W3112 = 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> |
|--------------------|--------------------|--|------------------|------------------------|--------------------|----------------|-------------------|----------------------|
| 127                | BOD Dilution fluid | <a href="#">WP114228</a>   | 08/08/2025       | 08/09/2025             | Rubina Mughal      | None           | WETCHEM_PIPETTE_3 | Iwona Zarych         |
| <b><u>FROM</u></b> |                    | 18.00000L of W3112 + 3.00000PILLOW of W3144 = Final Quantity: 18.000 L |                  |                        |                    |                |                   |                      |



| <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>       |
|---|-----------------------------------|--------------------------|------------------|------------------------|--------------------|---------------------------|------------------|----------------------------|
| 129   | Glutamic acid-glucose mix for BOD | <a href="#">WP114229</a> | 08/08/2025       | 08/09/2025             | Rubina Mughal      | WETCHEM_SCALE_7 (WC SC-6) | None             | Iwona Zarych<br>08/11/2025 |
| <b>FROM</b> 0.15000gram of W2653 + 0.15000gram of W2654 + 1000.00000ml of W3112 = Final Quantity: 1000.000 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>       |
|--|-----------------------|--------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------------|
| 128  | polyseed seed control | <a href="#">WP114230</a> | 08/08/2025       | 08/09/2025             | Rubina Mughal      | None           | None             | Iwona Zarych<br>08/11/2025 |
| <b><u>FROM</u></b> 1.00000PILLOW of W3212 + 300.00000ml of WP114228 = Final Quantity: 300.000 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>       |
|--|--|--------------------------|------------------|------------------------|--------------------|----------------|---------------------------|----------------------------|
| 3456   | Cyanide Intermediate Working Std, 5PPM | <a href="#">WP114242</a> | 08/11/2025       | 08/12/2025             | Rubina Mughal      | None           | WETCHEM_FIPETTE_3<br>(WC) | Iwona Zarych<br>08/11/2025 |
| <b><u>FROM</u></b> 0.25000ml of W3214 + 49.75000ml of WP113836 = Final Quantity: 50.000 ml |  |                          |                  |                        |                    |                |                           |                            |

[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>       |
|---|-------------------------------------|--------------------------|------------------|------------------------|--------------------|----------------|---------------------------|----------------------------|
| 3761  | Calibration-CCV CN Standard 250 ppb | <a href="#">WP114244</a> | 08/11/2025       | 08/12/2025             | Rubina Mughal      | None           | WETCHEM_FIPETTE_3<br>(WC) | Iwona Zarych<br>08/11/2025 |
| <b><u>FROM</u></b> 2.50000ml of WP114242 + 47.50000ml of WP113836 = 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>       |
|---|------------------------------|--------------------------|------------------|------------------------|--------------------|----------------|---------------------------|----------------------------|
| 6   | Calibration Standard 100 ppb | <a href="#">WP114245</a> | 08/11/2025       | 08/12/2025             | Rubina Mughal      | None           | WETCHEM_FIPETTE_3<br>(WC) | Iwona Zarych<br>08/11/2025 |
| <b><u>FROM</u></b> 1.00000ml of WP114242 + 49.00000ml of WP113836 = 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> |
|---|-----------------------------|--------------------------|------------------|------------------------|--------------------|----------------|-------------------|----------------------|
| 7   | Calibration Standard 50 ppb | <a href="#">WP114246</a> | 08/11/2025       | 08/12/2025             | Rubina Mughal      | None           | WETCHEM_PIPETTE_3 | Iwona Zarych         |
| <p>(WC)</p> <p><b>FROM</b> 0.50000ml of WP114242 + 49.50000ml of WP113836 = 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> |
|---|-----------------------------|--------------------------|------------------|------------------------|--------------------|----------------|-------------------|----------------------|
| 8   | Calibration Standard 10 ppb | <a href="#">WP114247</a> | 08/11/2025       | 08/12/2025             | Rubina Mughal      | None           | WETCHEM_PIPETTE_3 | Iwona Zarych         |
| <p>(WC)</p> <p><b>FROM</b> 1.00000ml of WP114243 + 49.00000ml of WP113836 = 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> |
|---|----------------------------|--------------------------|------------------|------------------------|--------------------|----------------|-------------------|----------------------|
| 9   | Calibration Standard 5 ppb | <a href="#">WP114248</a> | 08/11/2025       | 08/12/2025             | Rubina Mughal      | None           | WETCHEM_PIPETTE_3 | Iwona Zarych         |
| <p>(WC)</p> <p><b>FROM</b> 0.50000ml of WP114243 + 49.50000ml of WP113836 = 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>       |
|---|--------------------------|--------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------------|
| 167   | 0 ppb CN calibration std | <a href="#">WP114249</a> | 08/11/2025       | 08/12/2025             | Rubina Mughal      | None           | None             | Iwona Zarych<br>08/11/2025 |
| <b><u>FROM</u></b> 50.00000ml of WP113836 = 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>           |
|------------------|--|--------------------------|------------------|------------------------|--------------------|----------------------------------|--------------------|--------------------------------|
| 1582             | Chloramine T solution, 0.014M  | <a href="#">WP114251</a> | 08/11/2025       | 08/12/2025             | Rubina Mughal      | WETCHEM_S<br>CALE_5 (WC<br>SC-5) | Glass<br>Pipette-A | Iwona Zarych<br><br>08/11/2025 |
| <u>FROM</u>      | 0.08000gram of W3139 + 20.00000ml of W3112 = Final Quantity: 20.000 ml |                          |                  |                        |                    |                                  |                    |                                |

## CHEMICAL RECEIPT LOG BOOK

| Supplier         | ItemCode / ItemName                                     | Lot #      | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|------------------|---|------------|-----------------|-------------------------|-----------------------------|----------------|
| Seidler Chemical | BA-9673-33 / Sulfuric Acid, Instra-Analyzed (cs/6c2.5L) | 23D2462010 | 03/20/2028      | 08/16/2024 / mohan      | 08/16/2024 / mohan          | M6041          |

| 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 | 08/17/2025      | 02/18/2025 / Sagar      | 01/15/2025 / Sagar          | M6151          |

| Supplier                    | ItemCode / ItemName                           | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|-----------------------------|---|----------|-----------------|-------------------------|-----------------------------|----------------|
| PCI Scientific Supply, Inc. | AC156212500 / GLUTAMIC ACID BIOCHEM REG, 250G | A0405990 | 01/24/2030      | 01/24/2020 / apatel     | 01/24/2020 / apatel         | W2653          |

| Supplier                    | ItemCode / ItemName                                 | Lot #   | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|-----------------------------|---|---------|-----------------|-------------------------|-----------------------------|----------------|
| PCI Scientific Supply, Inc. | D16-500 / DEXTROSE ANHYDROUS ACS REAGENT, 500G(New) | 186122A | 01/24/2030      | 01/24/2020 / apatel     | 01/24/2020 / apatel         | W2654          |

| Supplier                    | ItemCode / ItemName   | Lot #      | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|-----------------------------|---|------------|-----------------|-------------------------|-----------------------------|----------------|
| PCI Scientific Supply, Inc. | J3818-5 / SODIUM PHOSPHATE, MONOBAS/HYD, CRYST, ACS, 2.5 KG | 0000225799 | 12/03/2025      | 04/05/2021 / Alexander  | 02/10/2020 / apatel         | W2668          |

| Supplier | ItemCode / ItemName | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|---------------------|----------|-----------------|-------------------------|-----------------------------|----------------|
| EPA      | / ICV-CN            | ICV6-400 | 12/31/2025      | 01/08/2025 / lwona      | 02/20/2020 / lwona          | W3012          |



## CHEMICAL RECEIPT LOG BOOK

| Supplier      | ItemCode / ItemName     | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---------------|-------------------------|----------|-----------------|-------------------------|-----------------------------|----------------|
| SIGMA ALDRICH | 270970-1L / Pyridine 1L | SHBQ2113 | 04/03/2028      | 04/03/2023 / lwona      | 04/03/2023 / lwona          | W3019          |

| Supplier                    | ItemCode / ItemName                      | Lot #   | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|-----------------------------|--|---------|-----------------|-------------------------|-----------------------------|----------------|
| PCI Scientific Supply, Inc. | 4620-32 / MANGANOUS SULFATE SOLUTION-364 | 2403J02 | 03/31/2026      | 04/22/2024 / lwona      | 04/22/2024 / lwona          | W3103          |

| Supplier                    | ItemCode / ItemName                           | Lot #   | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|-----------------------------|---|---------|-----------------|-------------------------|-----------------------------|----------------|
| PCI Scientific Supply, Inc. | AL69870-8 / SODIUM THIOSULFATE,0.025N,4LIT RE | 4403S13 | 09/30/2025      | 04/22/2024 / lwona      | 04/22/2024 / lwona          | W3105          |

| Supplier                    | ItemCode / ItemName                    | Lot #   | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|-----------------------------|--|---------|-----------------|-------------------------|-----------------------------|----------------|
| PCI Scientific Supply, Inc. | AL04100-4 / Alkaline Iodide Azide, 1 L | 1405D67 | 04/30/2026      | 05/23/2024 / lwona      | 05/23/2024 / lwona          | W3109          |

| 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 / lwona      | 07/03/2024 / lwona          | W3112          |

| Supplier                    | ItemCode / ItemName                        | Lot #      | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|-----------------------------|--|------------|-----------------|-------------------------|-----------------------------|----------------|
| PCI Scientific Supply, Inc. | PC19510-7 / Sodium Hydroxide Pellets 12 Kg | 23B1556310 | 12/31/2025      | 07/08/2024 / lwona      | 07/08/2024 / lwona          | W3113          |

## CHEMICAL RECEIPT LOG BOOK

| Supplier                    | ItemCode / ItemName                 | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|-----------------------------|-------------------------------------|----------|-----------------|-------------------------|-----------------------------|----------------|
| PCI Scientific Supply, Inc. | JTE494-6 / CHLORAMINE-T BAKER 250GM | 10239484 | 09/09/2029      | 09/09/2024 / lwona      | 09/09/2024 / lwona          | W3139          |

| Supplier | ItemCode / ItemName  | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|--|-------|-----------------|-------------------------|-----------------------------|----------------|
| HACH     | 1486266 / BOD Nutrient Buffer Pillows, 6 mL concentrate to make 6 L, 50/pk | A4169 | 06/30/2029      | 11/20/2024 / rubina     | 10/01/2024 / lwona          | W3144          |

| Supplier                    | ItemCode / ItemName             | Lot #   | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|-----------------------------|---------------------------------|---------|-----------------|-------------------------|-----------------------------|----------------|
| PCI Scientific Supply, Inc. | AL70850-8 / Starch Solution, 4L | 4408P62 | 08/31/2026      | 10/16/2024 / lwona      | 10/16/2024 / lwona          | W3149          |

| Supplier                    | ItemCode / ItemName                                  | Lot #           | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|-----------------------------|--|-----------------|-----------------|-------------------------|-----------------------------|----------------|
| PCI Scientific Supply, Inc. | 01237-10KG / Megnasium Chloride Hexahydrate ACS 10KG | 002126-2019-201 | 11/25/2029      | 11/25/2024 / lwona      | 11/25/2024 / lwona          | W3152          |

| Supplier                    | ItemCode / ItemName                              | Lot #  | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|-----------------------------|--|--------|-----------------|-------------------------|-----------------------------|----------------|
| PCI Scientific Supply, Inc. | 470112-662 / TEST STRIPES, NITRATE/NITRITE, PK50 | 436101 | 04/30/2027      | 08/05/2025 / lwona      | 02/26/2025 / lwona          | W3182          |

| Supplier                    | ItemCode / ItemName                    | Lot #     | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|-----------------------------|--|-----------|-----------------|-------------------------|-----------------------------|----------------|
| PCI Scientific Supply, Inc. | EM-BX0035-3 / Barbituric Acid, 100 gms | WXBF3271V | 05/16/2029      | 04/21/2025 / lwona      | 04/21/2025 / lwona          | W3203          |

## CHEMICAL RECEIPT LOG BOOK

| Supplier                    | ItemCode / ItemName  | Lot #  | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|-----------------------------|----------------------|--------|-----------------|-------------------------|-----------------------------|----------------|
| PCI Scientific Supply, Inc. | 136742-80 / POLYSEED | 132409 | 09/30/2026      | 05/21/2025 / lwona      | 05/21/2025 / lwona          | W3212          |

| Supplier                    | ItemCode / ItemName                | Lot #   | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|-----------------------------|------------------------------------|---------|-----------------|-------------------------|-----------------------------|----------------|
| PCI Scientific Supply, Inc. | RC2543-4 / CYANIDE STD 1000PPM 4OZ | 1505H73 | 11/30/2025      | 05/21/2025 / lwona      | 05/21/2025 / lwona          | W3214          |

| Supplier                    | ItemCode / ItemName                         | Lot #   | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|-----------------------------|---|---------|-----------------|-------------------------|-----------------------------|----------------|
| PCI Scientific Supply, Inc. | 140444 / TEST PAPERS,PH 0-14,.5 SENSI,100PK | 10D3242 | 12/31/2028      | 06/09/2025 / lwona      | 06/09/2025 / lwona          | W3215          |

| Supplier                    | ItemCode / ItemName                                  | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|-----------------------------|--|----------|-----------------|-------------------------|-----------------------------|----------------|
| PCI Scientific Supply, Inc. | LC135457 / Cyanide Standard, 1000 PPM, Second Source | 45060288 | 12/24/2025      | 07/07/2025 / lwona      | 07/07/2025 / lwona          | W3224          |



**ACROS ORGANICS** part of Thermo Fisher Scientific





**Version** 0  
**Molecular weight** 147.13  
**Molecular formula** C5 H9 N O4  
**CAS No** 56-86-0  
**Linear formula** HO2CCH2CH2CH(NH2)CO2H  
**Flash point (°C)**

## Certificate of Analysis

This is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Acros Organics expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Products are for research use or further manufacturing. Not for direct administration to human or animals. It is the responsibility of the purchaser, formulator or those performing further manufacturing to determine suitability based upon the intended use of the end product. Products are tested to meet the analytical requirements of the noted grade. The following information is the actual analytical results obtained.

|                              |                         |                                    |               |
|------------------------------|-------------------------|------------------------------------|---------------|
| <b>Catalog Number</b>        | 15621                   | <b>Quality Test / Release Date</b> | 13 March 2019 |
| <b>Lot Number</b>            | A0405990                | <b>Suggested Retest Date</b>       | March 2022    |
| <b>Description</b>           | L(+)-Glutamic acid, 99% |                                    |               |
| <b>Country of Origin</b>     | CHINA                   |                                    |               |
| <b>Declaration of Origin</b> | plant                   |                                    |               |

|                       |   |
|-----------------------|---|
| <b>Origin Comment</b> | The product is made by fermentation of sugar molasses |
|-----------------------|---|

| Result Name               | Specifications                                       | Test Value                               |
|---------------------------|--|--|
| Appearance (Color)        | White  | White                                    |
| Appearance (Form)         | Powder   | Powder                                   |
| Infrared spectrum         | Conforms   | Conforms                                 |
| Titration with NaOH       | 98.5 to 100.5 % (On dried substance)                 | 99.32 % (On dried substance)             |
| Loss on drying            | ≤0.5 % (105°C, 3 hrs)                                | 0.002 % (105°C, 3 hrs)                   |
| Heavy metals (as Pb)      | ≤10 ppm  | ≤10 ppm                                  |
| Sulfated ash              | ≤0.1 %   | 0.08 %                                   |
| Other amino acids         | not detectable                                       | not detectable                           |
| Specific optical rotation | +30.5° to +32.5° (20°C, 589 nm) (on dried substance) | +32° (20°C, 589 nm) (on dried substance) |
| Specific optical rotation | (c=10, 2N HCl)                                       | (c=10, 2N HCl)                           |
| Chloride (Cl)             | ≤200 ppm   | ≤200 ppm                                 |
| Iron (Fe)                 | ≤30 ppm  | ≤10 ppm                                  |
| Sulfate (SO4)             | ≤300 ppm   | ≤200 ppm                                 |
| Ammonium (NH4)            | ≤200 ppm   | ≤200 ppm                                 |
| Arsenic oxide (As2O3)     | ≤1 ppm   | ≤1 ppm                                   |



A handwritten signature in black ink, which appears to read "L. Van den Broek".

L. Van den Broek, QA Manager

Issued: 24 January 2020

Acros Organics

ENA23, zone 1, nr 1350, Janssen Pharmaceuticaaan 3a, B-2440 Geel, Belgium

Tel +32 14/57.52.11 - Fax +32 14/59.34.34 Internet: <http://www.acros.com>

1 Reagent Lane, Fair Lawn, NJ 07410, USA Fax 201-796-1329

W3019  
Rec 4/3/23

3050 Spruce Street, Saint Louis, MO 63103, USA

Website: [www.sigmaaldrich.com](http://www.sigmaaldrich.com)Email USA: [techserv@sial.com](mailto:techserv@sial.com)Outside USA: [eurtechserv@sial.com](mailto:eurtechserv@sial.com)

## Certificate of Analysis

Product Name:

Pyridine - anhydrous, 99.8%

Product Number:

270970

Batch Number:

SHBQ2113

Brand:

SIAL

CAS Number:

110-86-1

MDL Number:

MFCD00011732

Formula:

C<sub>5</sub>H<sub>5</sub>N

Formula Weight:

79.10 g/mol

Quality Release Date:

15 DEC 2022



| Test                    | Specification         | Result     |
|-------------------------|-----------------------|------------|
| Appearance (Color)      | Colorless             | Colorless  |
| Appearance (Form)       | Liquid                | Liquid     |
| Infrared Spectrum       | Conforms to Structure | Conforms   |
| Purity (GC)             | ≥ 99.75 %             | 99.99 %    |
| Water (by Karl Fischer) | ≤ 0.003 %             | 0.002 %    |
| Residue on Evaporation  | ≤ 0.0005 %            | < 0.0001 % |

  
Larry Coers, Director  
Quality Control  
Sheboygan Falls, WI US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at [Sigma-Aldrich.com](http://Sigma-Aldrich.com). For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.





## Certificate of Analysis

1 Reagent Lane  
Fair Lawn, NJ 07410  
201.796.7100 tel  
201.796.1329 fax

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System  
Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120632

This is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Thermo Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Products are for research use or further manufacturing. Not for direct administration to humans or animals. It is the responsibility of the final formulator and end user to determine suitability based upon the intended use of the end product. Products are tested to meet the analytical requirements of the noted grade. The following information is the actual analytical results obtained.

|                   |   |                             |            |
|-------------------|---|-----------------------------|------------|
| Catalog Number    | D16   | Quality Test / Release Date | 03/19/2019 |
| Lot Number        | 186122A   |                             |            |
| Description       | DEXTROSE, ANHYDROUS, A.C.S.   |                             |            |
| Country of Origin | United States   | Suggested Retest Date       | Mar/2022   |
| Chemical Origin   | Organic - Plant   |                             |            |
| BSE/TSE Comment   | No animal products are used as starting raw material ingredients, or used in processing, including lubricants, processing aids, or any other material that might migrate to the finished product. |                             |            |
| Chemical Comment  |   |                             |            |

| N/A                      |                  |                                 |                        |
|--------------------------|------------------|---------------------------------|------------------------|
| Result Name              | Units            | Specifications                  | Test Value             |
| APPEARANCE               |                  | REPORT                          | White, granular powder |
| TITRATABLE ACID          | MEQ/G            | <= 0.002                        | <0.002                 |
| STARCH                   |                  | = PASS TEST                     | pass test              |
| SPECIFIC ROTATION @ 25 C | DEGREES (+ OR -) | Inclusive Between +52.5 - +53.0 | 53.0                   |
| SULFATE & SULFITE        | %                | <= 0.005                        | <0.005                 |
| IRON (Fe)                | ppm              | <= 5                            | <5                     |
| CHLORIDE                 | %                | <= 0.01                         | <0.01                  |
| IGNITION RESIDUE         | %                | <= 0.02                         | <0.02                  |
| IDENTIFICATION           | PASS/FAIL        | = PASS TEST                     | pass test              |
| HEAVY METALS (as Pb)     | ppm              | <= 5                            | <5                     |
| LOSS ON DRYING @ 105 C   | %                | <= 0.2                          | <0.2                   |
| INSOLUBLE MATTER         | %                | <= 0.005                        | 0.002                  |

*Jerisa Bailey-Wyche*

Quality Assurance Specialist - Certificate of Analysis Fair Lawn

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.  
If there are any questions with this certificate, please call at (800) 227-6701.

\*Based on suggested storage condition.



R: 02/20/20  
53

Instructions for QATS Reference Material: *Inorganic ICV Solutions*

For ICP-MS use: dilute the ICV1 concentrate 50-fold with 1% (v/v) nitric acid; pipet 2 mL of the concentrate into a 100 mL volumetric flask and dilute to volume with 1% (v/v) nitric acid.

**ICV5-0415**

For the cold vapor analysis of mercury by AA: dilute the ICV5 concentrate 100-fold with 2% (v/v) nitric acid; pipet 1 mL of the concentrate into a 100 mL volumetric flask and dilute to volume with 2% (v/v) nitric acid. The ICV5 concentrate is prepared in 0.05% (w/v)  $K_2Cr_2O_7$  and 5% (v/v) nitric acid.

**ICV6-0400**

For the analysis of cyanide: dilute the ICV6 concentrate 100-fold with Type II water; pipet 1 mL of the concentrate into a 100 mL volumetric flask and dilute to volume with Type II water. Distill this solution along with the samples before analysis. The cyanide concentrate is prepared from  $K_3Fe(CN)_6$ , Type II water, and 0.1 % sodium hydroxide, and will decompose rapidly if exposed to light.

**NOTE:** USE TYPE II WATER AND HIGH-PURITY ACIDS FOR ALL DILUTIONS.

**(D) CERTIFIED CONCENTRATIONS OF QATS ICV1, ICV5, AND ICV6 SOLUTIONS**

| ICV1-1014 |  |  |
|-----------|--|--|
| Element   | Concentration (µg/L)<br>(after 10-fold dilution) | Concentration (µg/L)<br>(after 50-fold dilution) |
| Al        | 2520   | 504  |
| Sb        | 1010   | 202  |
| As        | 997  | 199  |
| Ba        | 518  | 104  |
| Be        | 514  | 103  |
| Cd        | 514  | 103  |
| Ca        | 10000  | 2000   |
| Cr        | 517  | 103  |
| Co        | 521  | 104  |
| Cu        | 505  | 101  |
| Fe        | 10100  | 2020   |
| Pb        | 1030   | 206  |
| Mg        | 5990   | 1198   |
| Mn        | 524  | 105  |
| Ni        | 525  | 105  |
| K         | 9940   | 1988   |
| Se        | 1030   | 206  |
| Ag        | 252  | 50   |
| Na        | 10100  | 2020   |
| Tl        | 1040   | 208  |
| V         | 504  | 101  |
| Zn        | 1010   | 202  |

| ICV5-0415 |   | ICV6-0400       |   |
|-----------|---|-----------------|---|
| Element   | Concentration (µg/L)<br>(after 100-fold dilution) | Analyte         | Concentration (µg/L)<br>(after 100-fold dilution) |
| Hg        | 4.0   | CN <sup>-</sup> | 99  |

W3011  
W3012  
W3013  
W3014  
W3015



Sulfuric Acid  
BAKER INSTRA-ANALYZED® Reagent  
For Trace Metal Analysis  
Low Selenium

avantor™



M 6041-4b  
MS

Material No.: 9673-33  
Batch No.: 23D2462010  
Manufactured Date: 2023-03-22  
Retest Date: 2028-03-20  
Revision No.: 0

## Certificate of Analysis

| Test   | Specification | Result      |
|--|---------------|-------------|
| ACS – Assay (H <sub>2</sub> SO <sub>4</sub> )                | 95.0 – 98.0 % | 96.1 %      |
| Appearance   | Passes Test   | Passes Test |
| ACS – Color (APHA)   | ≤ 10          | 5           |
| ACS – Residue after Ignition                                 | ≤ 3 ppm       | < 1 ppm     |
| ACS – Substances Reducing Permanganate (as SO <sub>2</sub> ) | ≤ 2 ppm       | < 2 ppm     |
| Ammonium (NH <sub>4</sub> )                                  | ≤ 1 ppm       | 1 ppm       |
| Chloride (Cl)  | ≤ 0.1 ppm     | < 0.1 ppm   |
| Nitrate (NO <sub>3</sub> )                                   | ≤ 0.2 ppm     | < 0.1 ppm   |
| Phosphate (PO <sub>4</sub> )                                 | ≤ 0.5 ppm     | < 0.1 ppm   |
| Trace Impurities – Aluminum (Al)                             | ≤ 30.0 ppb    | < 5.0 ppb   |
| Arsenic and Antimony (as As)                                 | ≤ 4.0 ppb     | < 2.0 ppb   |
| Trace Impurities – Boron (B)                                 | ≤ 10.0 ppb    | 8.5 ppb     |
| Trace Impurities – Cadmium (Cd)                              | ≤ 2.0 ppb     | < 0.3 ppb   |
| Trace Impurities – Chromium (Cr)                             | ≤ 6.0 ppb     | < 0.4 ppb   |
| Trace Impurities – Cobalt (Co)                               | ≤ 0.5 ppb     | < 0.3 ppb   |
| Trace Impurities – Copper (Cu)                               | ≤ 1.0 ppb     | < 0.1 ppb   |
| Trace Impurities – Gold (Au)                                 | ≤ 10.0 ppb    | 0.5 ppb     |
| Heavy Metals (as Pb)   | ≤ 500.0 ppb   | < 100.0 ppb |
| Trace Impurities – Iron (Fe)                                 | ≤ 50.0 ppb    | 1.3 ppb     |
| Trace Impurities – Lead (Pb)                                 | ≤ 0.5 ppb     | < 0.5 ppb   |
| Trace Impurities – Magnesium (Mg)                            | ≤ 7.0 ppb     | 0.8 ppb     |
| Trace Impurities – Manganese (Mn)                            | ≤ 1.0 ppb     | < 0.4 ppb   |
| Trace Impurities – Mercury (Hg)                              | ≤ 0.5 ppb     | < 0.1 ppb   |
| Trace Impurities – Nickel (Ni)                               | ≤ 2.0 ppb     | 0.3 ppb     |
| Trace Impurities – Potassium (K)                             | ≤ 500.0 ppb   | < 2.0 ppb   |
| Trace Impurities – Selenium (Se)                             | ≤ 50.0 ppb    | < 0.1 ppb   |
| Trace Impurities – Silicon (Si)                              | ≤ 100.0 ppb   | 31.5 ppb    |
| Trace Impurities – Silver (Ag)                               | ≤ 1.0 ppb     | < 0.3 ppb   |

>>> Continued on page 2 >>>

Sulfuric Acid  
BAKER INSTRA-ANALYZED® Reagent  
For Trace Metal Analysis  
Low Selenium

 **avantor™**



Material No.: 9673-33  
Batch No.: 23D2462010

| Test                              | Specification    | Result    |
|-----------------------------------|------------------|-----------|
| Trace Impurities – Sodium (Na)    | $\leq 500.0$ ppb | 5.4 ppb   |
| Trace Impurities – Strontium (Sr) | $\leq 5.0$ ppb   | < 0.2 ppb |
| Trace Impurities – Tin (Sn)       | $\leq 5.0$ ppb   | < 0.8 ppb |
| Trace Impurities – Zinc (Zn)      | $\leq 5.0$ ppb   | 0.4 ppb   |

For Laboratory, Research, or Manufacturing Use

Country of Origin: USA  
Packaging Site: Phillipsburg Mfg Ctr & DC

  
Jamie Ethier  
Vice President Global Quality

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

 **avantor**™

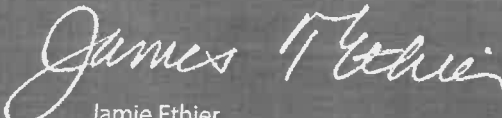


Material No.: 9530-33  
Batch No.: 22G2862015

| 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

  
Jamie Ethier  
Vice President Global Quality

Sodium Phosphate, Monobasic, Monohydrate,  
Crystal  
BAKER ANALYZED® A.C.S. Reagent

(sodium dihydrogen phosphate, monohydrate)



Material No.: 3818-05  
Batch No.: 0000225799  
Manufactured Date: 2018/12/05  
Retest Date: 2025/12/03  
Revision No: 1

## Certificate of Analysis

Meets ACS Reagent Chemical Requirements,

| Test   | Specification  | Result    |
|--|----------------|-----------|
| Assay ( $\text{NaH}_2\text{PO}_4 \cdot \text{H}_2\text{O}$ ) | 98.0 – 102.0 % | 99.5      |
| pH of 5% Solution at 25°C                                    | 4.1 – 4.5      | 4.3       |
| Insoluble Matter   | $\leq 0.01$ %  | $< 0.01$  |
| Chloride (Cl)  | $\leq 5$ ppm   | $< 5$     |
| ACS – Sulfate ( $\text{SO}_4$ )                              | $\leq 0.003$ % | $< 0.003$ |
| Calcium (Ca)   | $\leq 0.005$ % | $< 0.005$ |
| Potassium (K)  | $\leq 0.01$ %  | $< 0.01$  |
| Heavy Metals (as Pb)   | $\leq 0.001$ % | $< 0.001$ |
| Trace Impurities – Iron (Fe)                                 | $\leq 0.001$ % | $< 0.001$ |

For Laboratory, Research or Manufacturing Use  
Meets Reagent Specifications for testing USP/NF monographs

Country of Origin: IN  
Packaging Site: Paris Mfg Ctr & DC

  
Jamie Ethier  
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700  
Avantor Performance Materials, LLC  
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700



# Certificate of Analysis

**Manganous Sulfate Solution, 364 g/L****Lot Number:** 2403J02**Product Number:** 4620**Manufacture Date:** MAR 15, 2024**Expiration Date:** MAR 2026

| Name                          | CAS#       | Grade           |
|-------------------------------|------------|-----------------|
| Water                         | 7732-18-5  | ACS/ASTM/USP/EP |
| Manganous Sulfate Monohydrate | 10034-96-5 | Reagent         |
| Sulfuric Acid                 | 7664-93-9  | ACS             |

| Test                        | Specification | Result  |
|-----------------------------|---------------|---------|
| Appearance                  | Pink liquid   | Passed  |
| Assay (by Refractive Index) | 360-368 g/L   | 367 g/L |

| Specification              | Reference       |
|----------------------------|-----------------|
| Manganous Sulfate Solution | ASTM (D 888 A)  |
| Manganous Sulfate Solution | ASTM (D 888 A)  |
| Manganous Sulfate Solution | APHA (4500-O E) |
| Manganous Sulfate Solution | APHA (4500-O F) |
| Manganous Sulfate Solution | APHA (4500-O D) |
| Manganous Sulfate Solution | APHA (4500-O E) |
| Manganous Sulfate Solution | APHA (4500-O F) |
| Manganous Sulfate Solution | APHA (4500-O D) |
| Manganous Sulfate Solution | APHA (4500-O C) |
| Manganous Sulfate Solution | APHA (4500-O C) |
| Manganous Sulfate Solution | EPA (360.2)     |
| Manganous Sulfate Solution | EPA (360.2)     |

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

| Part Number | Size / Package Type | Shelf Life (Unopened Container) |
|-------------|---------------------|---------------------------------|
| 4620-32     | 1 L natural poly    | 24 months                       |

**Recommended Storage:** 15°C - 30°C (59°F - 86°F)



Jose Pena (03/15/2024)

Operations Manager

This document is designed to comply with ISO Guide 31 "Reference Materials --  
Contents of Certificates and Labels."

This test report shall not be reproduced, except in full, without the written approval of Ricca Chemical Company.



# Certificate of Analysis

## Sodium Thiosulfate, 0.0250 Normal (N/40)

**Lot Number:** 4403S13

**Product Number:** 7900

**Manufacture Date:** MAR 29, 2024

**Expiration Date:** SEP 2025

This product is specially formulated to increase its stability. A preservative is added to prevent bacterial contamination. However, all Sodium Thiosulfate solutions are subject to slow chemical deterioration and should be restandardized periodically.

| Name                            | CAS#        | Grade           |
|---------------------------------|-------------|-----------------|
| Water                           | 7732-18-5   | ACS/ASTM/USP/EP |
| Sodium Thiosulfate Pentahydrate | 10102-17-7  | ACS             |
| Organic Preservative            | Proprietary |                 |
| Sodium Carbonate                | 497-19-8    | ACS             |

| Test                                | Specification             | Result            | NIST SRM# |
|-------------------------------------|---------------------------|-------------------|-----------|
| Appearance                          | Colorless liquid          | Passed            |           |
| Assay (vs. Potassium Iodate/Starch) | 0.02499-0.02501 N at 20°C | 0.02501 N at 20°C | 136       |

| Specification                                  | Reference           |
|--|---------------------|
| Standard Sodium Thiosulfate Solution, 0.0250 N | APHA (4500-S2- F)   |
| Standard Sodium Thiosulfate Titrant            | APHA (4500-O D)     |
| Standard Sodium Thiosulfate Titrant            | APHA (4500-O E)     |
| Standard Sodium Thiosulfate Titrant            | APHA (4500-O F)     |
| Standard Sodium Thiosulfate Titrant, 0.025 N   | APHA (4500-CI B)    |
| Standard Sodium Thiosulfate Titrant            | APHA (4500-O C)     |
| Standard Sodium Thiosulfate Titrant, 0.025 M   | APHA (5530 C)       |
| Standard Sodium Thiosulfate Solution (0.025 N) | EPA (SW-846) (9031) |
| Standard Sodium Thiosulfate solution (0.025 N) | EPA (SW-846) (9034) |

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

| Part Number | Size / Package Type | Shelf Life (Unopened Container) |
|-------------|---------------------|---------------------------------|
| 7900-1      | 4 L natural poly    | 18 months                       |
| 7900-16     | 500 mL natural poly | 18 months                       |
| 7900-1CT    | 4 L Cubitainer®     | 18 months                       |
| 7900-32     | 1 L natural poly    | 18 months                       |

**Recommended Storage:** 15°C - 30°C (59°F - 86°F)



Paul Brandon (03/29/2024)

Production Manager

This document is designed to comply with ISO Guide 31 "Reference Materials --  
Contents of Certificates and Labels."

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# Certificate of Analysis

## Alkaline-Iodide-Azide, Pomeroy Formulation for Dissolved Oxygen (DO) Analysis

**Lot Number:** 1405D67

**Product Number:** 535

**Manufacture Date:** APR 05, 2024

**Expiration Date:** APR 2026

This solution is intended for use with samples with high Dissolved Oxygen content (above 15 mg/L) and for samples with high concentrations of organic material.

| Name             | CAS#       | Grade           |
|------------------|------------|-----------------|
| Water            | 7732-18-5  | ACS/ASTM/USP/EP |
| Sodium Iodide    | 7681-82-5  | ACS             |
| Sodium Hydroxide | 1310-73-2  | ACS             |
| Sodium Azide     | 26628-22-8 | Reagent         |

| Test        | Specification    | Result |
|-------------|------------------|--------|
| Appearance  | Colorless liquid | Passed |
| Free Iodine | To Pass Test     | Passed |

| Specification   | Reference      |
|---|----------------|
| Alkaline Iodide-Sodium Azide Solution II  | ASTM (D 888 A) |
| Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured. |                |

| Part Number | Size / Package Type | Shelf Life (Unopened Container) |
|-------------|---------------------|---------------------------------|
| 535-32      | 1 L natural poly    | 24 months                       |

**Recommended Storage:** 15°C - 30°C (59°F - 86°F)



Heidi J Green (04/05/2024)  
Operations Manager

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## Sodium Hydroxide (Pellets)

**Material:** 0583  
**Grade:** ACS GRADE  
**Batch Number:** 23B1556310

Chemical Formula: NaOH  
Molecular Weight: 40  
CAS #: 1310-73-2  
Appearance:

Manufacture Date: 12/14/2022  
Expiration Date: 12/31/2025

Storage: Room Temperature

Pellets

| TEST               | SPECIFICATION | ANALYSIS | DISPOSITION |
|--------------------|---------------|----------|-------------|
| Calcium            | <= 0.005 %    | <0.005 % | PASS        |
| Chloride           | <= 0.005 %    | 0.002 %  | PASS        |
| Heavy Metals       | <= 0.002 %    | <0.002 % | PASS        |
| Iron               | <= 0.001 %    | <0.001 % | PASS        |
| Magnesium          | <= 0.002 %    | <0.002 % | PASS        |
| Mercury            | <= 0.1 ppm    | <0.1 ppm | PASS        |
| Nickel             | <= 0.001 %    | <0.001 % | PASS        |
| Nitrogen Compounds | <= 0.001 %    | <0.001 % | PASS        |
| Phosphate          | <= 0.001 %    | <0.001 % | PASS        |
| Potassium          | <= 0.02 %     | <0.02 %  | PASS        |
| Purity             | >= 97.0 %     | 99.2 %   | PASS        |
| Sodium Carbonate   | <= 1.0 %      | 0.5 %    | PASS        |
| Sulfate            | <= 0.003 %    | <0.003 % | PASS        |

Internal ID #: 710

### Signature

We certify that this batch conforms to the specifications listed.

This document has been electronically produced and is valid without a signature.

Leona Edwardson, Quality Control Sr. Manager - Solon  
VWR Chemicals, LLC.  
28600 Fountain Parkway, Solon OH 44139 USA

### Additional Information

Analysis may have been rounded to significant digits in specification limits.

Product meets analytical specifications of the grades listed.



## Sodium Hydroxide (Pellets)

**Material:** 0583  
**Grade:** ACS GRADE  
**Batch Number:** 23B1556310

Chemical Formula: NaOH  
Molecular Weight: 40  
CAS #: 1310-73-2  
Appearance:

Manufacture Date: 12/14/2022  
Expiration Date: 12/31/2025

Storage: Room Temperature

Pellets

Spec Set: 0583ACS

Internal ID #: 710

### Signature

We certify that this batch conforms to the specifications listed.

This document has been electronically produced and is valid without a signature.

Leona Edwardson, Quality Control Sr. Manager - Solon  
VWR Chemicals, LLC.  
28600 Fountain Parkway, Solon OH 44139 USA

### Additional Information

Analysis may have been rounded to significant digits in specification limits.

Product meets analytical specifications of the grades listed.

W3139 Received on 9/9/24 by IZ

Product No.: A12044  
Product: Chloramine-T trihydrate, 98%  
Lot No.: 10239484

|                               |              |
|-------------------------------|--------------|
| Appearance:                   | White powder |
| Melting Point:                | 166°C(dec)   |
| Assay (Iodometric titration): | 100.5%       |
| Identification (FTIR):        | Conforms     |

Order our products online [thermofisher.com/chemicals](https://thermofisher.com/chemicals)

**This document has been electronically generated and does not require a signature.**

Products are processed under ISO 9001:2015 quality management systems and samples are tested for conformance to the noted specifications. Certain data may have been supplied by third parties. We disclaim the implied warranties of merchantability and fitness for a particular purpose, and the accuracy of third party data or information associated with the product. Products are for research and development use only. Products are not for direct administration to humans or animals. It is the responsibility of the final formulator or end user to determine suitability, and to qualify and/or validate each product for its intended use.



An ISO 9001 Certified Company

Loveland, CO 80539

(970) 669-3050

## Certificate of Analysis

*This is a Component of 1486266 / LOT A4169*

**PRODUCT:** BOD Nutrient Buffer Pillows

**PRODUCT NUMBER:** 1486227

**LOT NUMBER:** A4169

**MANUFACTURE DATE:** 06/24/2024

**DATE OF ANALYSIS:** 07/03/2024

| TEST  | SPECIFICATIONS   | RESULTS   |
|---|------------------|-----------|
| Calcium Concentration of a diluted pillow         | 0.93 to 1.29 ppm | 0.960 ppm |
| Magnesium Concentration of a diluted pillow       | 0.35 to 0.48 ppm | 0.390 ppm |
| pH in a 6 L of DI water                           | 7.1 to 7.6       | 7.37      |
| Ammonia Concentration of a diluted pillow         | 0.57 to 0.79 ppm | 0.593 ppm |
| Iron Concentration of a diluted pillow            | 0.27 to 0.36 ppm | 0.311 ppm |
| Sterility   | To Pass          | Passed    |
| Phosphorus Concentration of a diluted pillow      | 7.6 to 10.3 ppm  | 8.32 ppm  |
| Five Day Change in Dissolved Oxygen Concentration | -0.2 to 0.2 ppm  | 0.03 ppm  |

The expiration date is Jun 2029

Certified by: *Scott Als*

Analytical Services Chemist



# Certificate of Analysis

## Starch Indicator, 0.5% (w/v), Mercury Free, for Iodometric Titrations

Lot Number: 4408P62

Product Number: 8000

Manufacture Date: AUG 28, 2024

Expiration Date: AUG 2026

This product is Mercury-free.

| Name            | CAS#      | Grade           |
|-----------------|-----------|-----------------|
| Water           | 7732-18-5 | ACS/ASTM/USP/EP |
| Starch, soluble | 9005-84-9 | ACS             |
| Salicylic Acid  | 69-72-7   | ACS             |

| Test                | Specification                                     | Result |
|---------------------|---|--------|
| Appearance          | White translucent liquid                          | Passed |
| Suitability for Use | Colorless (Iodine absent) - Blue (Iodine present) | Passed |

| Specification             | Reference           |
|---------------------------|---------------------|
| Starch Solution           | APHA (4500-S2- F)   |
| Starch Indicator Solution | APHA (4500-CI B)    |
| Starch Indicator          | APHA (4500-SO32- B) |
| Starch indicator solution | APHA (2350 B)       |
| Starch indicator solution | APHA (2350 E)       |
| Starch Solution           | APHA (510 B)        |
| Starch Solution           | APHA (5530 C)       |
| Starch Indicator          | APHA (4500-CI C)    |
| Starch Indicator          | EPA (345.1)         |

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

| Part Number | Size / Package Type | Shelf Life (Unopened Container) |
|-------------|---------------------|---------------------------------|
| 8000-1      | 4 L natural poly    | 24 months                       |
| 8000-16     | 500 mL natural poly | 24 months                       |
| 8000-32     | 1 L natural poly    | 24 months                       |

**Recommended Storage:** 15°C - 30°C (59°F - 86°F)



A handwritten signature in blue ink that reads "Paul Brandon". The signature is fluid and cursive, with the first name "Paul" and last name "Brandon" clearly distinguishable.

Paul Brandon (08/28/2024)  
Production Manager

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# *Chem-Impex International, Inc.*

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**Tel: (630) 766-2112****E-mail: sales@chemimpex.com****Shipping and Correspondence:**

935 Dillon Drive

Wood Dale, IL 60191

**Fax: (630) 766-2218****Web site: www.chemimpex.com****Manufacturing site:**

825 Dillon Drive

Wood Dale, IL 60191

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## *Certificate of Analysis*

|                         |                                       |
|-------------------------|---------------------------------------|
| <b>Catalogue Number</b> | 01237                                 |
| <b>Lot Number</b>       | 002126-2019-201                       |
| <b>Product</b>          | <b>Magnesium chloride hexahydrate</b> |

Magnesium chloride•6H<sub>2</sub>O

|                          |                                      |
|--------------------------|--------------------------------------|
| <b>CAS Number</b>        | 7791-18-6                            |
| <b>Molecular Formula</b> | MgCl <sub>2</sub> •6H <sub>2</sub> O |

|                         |       |
|-------------------------|-------|
| <b>Molecular Weight</b> | 203.3 |
|-------------------------|-------|

---

|                           |   |
|---------------------------|---|
| <b>Appearance</b>         | White crystals  |
| <b>Solubility</b>         | 167 g in 100 mL water   |
| <b>Melting Point</b>      | ~ 115 °C  |
| <b>Heavy Metals</b>       | 4.393 ppm   |
| <b>Anion</b>              | Nitrate (NO <sub>3</sub> ) : < 0.001%<br>Phosphate (PO <sub>4</sub> ) : < 5 ppm<br>Sulfate (SO <sub>4</sub> ) : < 0.002%  |
| <b>Cation</b>             | Ammonium (NH <sub>4</sub> ) : < 0.002%<br>Barium (Ba) : 0.005%<br>Calcium (Ca) : 0.01%<br>Iron (Fe) : 4.5 ppm<br>Manganese (Mn) : 0.624 ppm<br>Potassium (K) : 0.004%<br>Sodium (Na) : 0.000003%<br>Strontium (Sr) : 0.005% |
| <b>Insoluble material</b> | 0.0021%   |
| <b>Assay by titration</b> | 100.83%   |
| <b>Grade</b>              | ACS reagent   |
| <b>Storage</b>            | Store at RT   |

## ***Certificate of Analysis***

**Catalog Number: 01237**

**Lot Number: 002126-2019-201**

---

**Remarks**

See material safety data sheet for additional information

For laboratory use only

**The foregoing is a copy of the Certificate of Analysis as provided by our supplier**

A handwritten signature in black ink, appearing to read 'Bala Kumar', with a stylized flourish at the end.

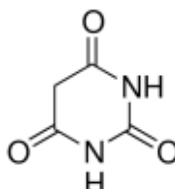
**Bala Kumar**  
**Quality Control Manager**

## Certificate of Analysis

Product Name:

Barbituric acid - ReagentPlus®, 99%

Product Number: 185698  
Batch Number: WXBFB3271V  
Brand: SIAL  
CAS Number: 67-52-7  
Formula: C<sub>4</sub>H<sub>4</sub>N<sub>2</sub>O<sub>3</sub>  
Formula Weight: 128.09 g/mol  
Quality Release Date: 16 MAY 2024



| Test                       | Specification         | Result   |
|----------------------------|-----------------------|----------|
| Appearance (Colour)        | White to Off-White    | White    |
| Appearance (Form)          | Powder                | Powder   |
| Infrared spectrum          | Conforms to Structure | Conforms |
| Purity (Titration by NaOH) | 98.5 - 101.5 %        | 100.4 %  |
| GC (area %)                | ≥ 98 %                | 100 %    |
| VPCT                       |                       |          |



Kang Chen  
Quality Manager  
Wuxi, China CN

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at [Sigma-Aldrich.com](http://Sigma-Aldrich.com). For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.



N3212 Received on 5/21/25 by 12



## CERTIFICATE OF ANALYSIS

PO BOX 130549 Spring, TX 77393  
Phone: (281) 298-9410 Fax: (281) 298-9411

**FINISHED PRODUCT, LOT NUMBER, MFG. /EXP DATE:**

PolySeed® • Part No. P-110 • Lot 132409 • Mfg. Date: 09/2024 • Exp. Date: 09/2026

**FORMULATION:**

The formulation for this product contains a range of naturally occurring microorganisms, which are known to be non-pathogenic to man or animals.

**VIABLE COUNT, FINAL TEST RESULT:**

The product has been fully tested in accordance with Finished Product Specifications and contains a minimum viable count of  $4.00 \times 10^9$  cfu/g.

**GLUCOSE/GLUTAMIC-ACID RESULTS:**

Tested results within acceptable range  $198 \pm 30.5$  mg/L (167.5 - 228.5 mg/L). GGA Lot# 43100020 – Average Test Result: 202.1

See [www.polyseed.com](http://www.polyseed.com) for details.

**SEED CONTROL FACTOR:**

Tested results within acceptable range 0.6 – 1.0 see [www.polyseed.com](http://www.polyseed.com) for details

**SALMONELLA TEST RESULT:**

The product has been shown to be Salmonella negative using procedures recommended in the Microbiology Laboratory Guidebook, published by the USDA Food Safety and Inspection Service.

The purpose of this document is to ensure that the Finished Product conforms to the above specification.

Signature: \_\_\_\_\_

*Quality Control Department*

Date: 09/13/2024

POLYSEED.Ref.1.19

Revised Jan 24

# Certificate of Analysis

## Cyanide Standard, 1000 ppm CN<sup>-</sup>

**Lot Number:** 1505H73

**Product Number:** 2543

**Manufacture Date:** MAY 08, 2025

**Expiration Date:** NOV 2025

This standard is prepared using accurate volumetric techniques from material that has been assayed against Silver Nitrate solution certified traceable to NIST Standard Reference Material 999. The certified value reported is the prepared value based upon the method of preparation of the material. The uncertainty in the prepared value is the combined uncertainty based on the stability of the assayed Potassium Cyanide, and the uncertainty in the mass and volume measurements.

Use 0.16% (w/v) (0.04 N) Sodium Hydroxide or 0.225 % (w/v) (0.04 N) Potassium Hydroxide to make dilutions of this standard. Restandardize weekly if extreme accuracy is required.

| Name              | CAS#      | Grade              |
|-------------------|-----------|--------------------|
| Water             | 7732-18-5 | ACS/ASTM/USP/EP    |
| Potassium Cyanide | 151-50-8  | ACS                |
| Sodium Hydroxide  | 1310-73-2 | Reagent (from ACS) |

| Test                       | Specification    | Result   |
|----------------------------|------------------|----------|
| Appearance                 | Colorless liquid | Passed   |
| Cyanide (CN <sup>-</sup> ) | 995-1005 ppm     | 1000 ppm |

| Specification  | Reference              |
|--|------------------------|
| Stock Standard Cyanide Solution                                  | APHA (4500-CN- F)      |
| Stock Cyanide Solution   | APHA (4500-CN- E)      |
| Stock Cyanide Solution   | APHA (4500-CN- K)      |
| Stock Cyanide Solution   | APHA (4500-CN- H)      |
| Cyanide Reference Solution (1000 mg/L)                           | EPA (SW-846) (7.3.3.2) |
| Cyanide Calibration Stock Solution (1,000 mg/L CN <sup>-</sup> ) | EPA (SW-846) (9213)    |
| Stock Cyanide Solution   | EPA (335.3)            |
| Stock Cyanide Solution   | EPA (335.2)            |
| Cyanide Solution Stock   | ASTM (D 4282)          |
| Simple Cyanide Solution, Stock (1.0 g/L CN <sup>-</sup> )        | ASTM (D 4374)          |

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

| Part Number | Size / Package Type | Shelf Life (Unopened Container) |
|-------------|---------------------|---------------------------------|
| 2543-16     | 500 mL amber poly   | 6 months                        |
| 2543-32     | 1 L amber poly      | 6 months                        |
| 2543-4      | 120 mL amber poly   | 6 months                        |

**Recommended Storage:** 2°C - 8°C (36°F - 46°F)



Ernest Mahan (05/08/2025)  
Plant Manager

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Part of TCP Analytical Group

Jackson's Pointe Commerce Park- Building 1000  
1010 Jackson's Pointe Court, Zelienople, PA 16063

## Certificate of Analysis

### Cyanide Standard 1000 ppm (1ml = 1mg CN)

Product Code: **LC13545**

Manufacture Date: June 25, 2025

Lot Number: **45060288**

Expiration Date: December 24, 2025

| Test                  | Specification      | Result         |
|-----------------------|--------------------|----------------|
| Appearance (clarity)  | clear solution     | clear solution |
| Appearance (color)    | colorless          | colorless      |
| Concentration (CN)    | 0.990 - 1.010mg/mL | 1.000mg/mL     |
| Concentration (CN)    | 990 - 1,010ppm     | 1,000ppm       |
| Traceable to NIST SRM | Report             | 999b           |

**Intended Use** - Product is intended for use in manufacturing procedures and laboratory procedures and protocols.

**Storage Information** - Unless noted on the product label, store the product under normal lab conditions in its tightly closed, original container. Do not pipet directly from the container or return unused portions to the container.

**Instructions for Handling and Use** - Please refer to the associated product label and Safety Data Sheet (SDS) for information regarding safety and handling of this product.

**Preparation** - All products are manufactured and tested according to established, documented procedures and methodology. Production documentation records manufacturing data, raw material traceability and testing history on a per lot basis. Balances, thermometers, and glassware are calibrated before first use and on a regular schedule with references traceable to NIST

\*The suffix of the product code may differ from what is on your product label. The suffix will designate the size and be associated with a numeric digit(s). Visit [LabChem.com](http://LabChem.com) for more information\*

| Suffix | 1         | 2         | 3/3S/36/36S                           | 4/4C | 5   | 6   | 7     | 8   | 9    | 20      | 44   | 200  | 246    | 486    |
|--------|-----------|-----------|---------------------------------------|------|-----|-----|-------|-----|------|---------|------|------|--------|--------|
| Size   | 500mL org | 1L or 1kg | 2.5L/2.5L Coated/6x2.5L/6x2.5L Coated | 4L   | 20L | 10L | 125mL | 25g | 100g | 20x20mL | 4x4L | 200L | 24x6mL | 48x6mL |

*Michael Monteleone*

Michael Monteleone  
Chemistry Supervisor - Quality Control  
20250703 15:30:45ahoffman-0-0

ISO9001:2015 Registration #0306-01





# SHIPPING DOCUMENTS

CLIENT INFORMATION

CLIENT PROJECT INFORMATION

CLIENT BILLING INFORMATION

REPORT TO BE SENT TO:

COMPANY: **ARDMORE INC**  
ADDRESS: **29 RIVERSIDE AVE Bldg #14**  
CITY: **Newark** STATE: **NJ** ZIP: **07104**  
ATTENTION: **Michael Sharpousse**  
PHONE: **973 481 2406** FAX:

PROJECT NAME:  
PROJECT NO.: LOCATION:  
PROJECT MANAGER:  
e-mail:  
PHONE: FAX:

BILL TO: PO#:  
ADDRESS:  
CITY STATE: ZIP:  
ATTENTION: PHONE:

ANALYSIS

DATA TURNAROUND INFORMATION

DATA DELIVERABLE INFORMATION

FAX (RUSH) \_\_\_\_\_ DAYS\*  
HARDCOPY (DATA PACKAGE): \_\_\_\_\_ DAYS\*  
EDD: **STANDARD** DAYS\*  
\*TO BE APPROVED BY CHEMTECH  
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS

☐ 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 2 3 4 5 6 7 8 9  
**VOA CN SVOA BOD HSS METALS**

PRESERVATIVES

COMMENTS

| ALLIANCE<br>SAMPLE<br>ID | PROJECT<br>SAMPLE IDENTIFICATION | SAMPLE<br>MATRIX | SAMPLE<br>TYPE |      | SAMPLE<br>COLLECTION |          | # OF BOTTLES |   |   |   |   |   |   |   |   |   | COMMENTS |
|--------------------------|----------------------------------|------------------|----------------|------|----------------------|----------|--------------|---|---|---|---|---|---|---|---|---|----------|
|                          |                                  |                  | COMP           | GRAB | DATE                 | TIME     |              | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |          |
| 1.                       | EFF-WASTE WATER                  | WW               |                | X    | 8/8/25               | 11:00 AM |              | X | X |   |   |   |   |   |   |   |          |
| 2.                       | EFF-WASTE WATER                  | WW               | X              |      | 8/8/25               | 11:00 AM |              |   |   | X | X | X |   |   |   |   |          |
| 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. <b>Albert Sharpousse</b> | DATE/TIME:<br><b>8/8/25 1250</b> | RECEIVED BY:<br>1. <b>[Signature]</b> | Conditions of bottles or coolers at receipt: <input type="checkbox"/> COMPLIANT <input type="checkbox"/> NON COMPLIANT <input type="checkbox"/> COOLER TEMP <b>2.3 °C</b>        |
| RELINQUISHED BY SAMPLER:<br>2. <b>[Signature]</b>       | DATE/TIME:                       | RECEIVED BY:<br>2. <b>[Signature]</b> | Comments: <b>METALS LEAD ZINC</b>  |
| RELINQUISHED BY SAMPLER:<br>3. <b>[Signature]</b>       | DATE/TIME:                       | RECEIVED BY:<br>3. <b>[Signature]</b> | Page ____ of CLIENT: <input type="checkbox"/> Hand Delivered <input type="checkbox"/> Other <b>Shipment Complete</b><br><input type="checkbox"/> YES <input type="checkbox"/> 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                | T104704488       |

## LOGIN REPORT/SAMPLE TRANSFER

Order ID : Q2811 ARDM01

Order Date : 8/8/2025 1:07:00 PM

Project Mgr :

Client Name : Ardmore Chemical

Project Name : PVSC Monthly 2025

Report Type : Level 1

Client Contact : Michael Sharphouse

Receive DateTime : 8/8/2025 12:50:00 PM

EDD Type : NONE

Invoice Name : Ardmore Chemical

Purchase Order :

Hard Copy Date :

Invoice Contact : Michael Sharphouse

Date Signoff :

| LAB ID   | CLIENT ID       | MATRIX | SAMPLE<br>DATE | SAMPLE<br>TIME | TEST   | TEST GROUP | METHOD | FAX DATE | DUE<br>DATES |
|----------|-----------------|--------|----------------|----------------|--------|------------|--------|----------|--------------|
| Q2811-01 | EFF-WASTE WATER | Water  | 08/08/2025     | 11:00          | VOC-PP |            | 624.1  |          | 10 Bus. Days |

Relinquished By : OP

Date / Time : 8/8/25 1330

Received By : JL

Date / Time : 8/8/25 1330

Storage Area : VOA Refridgerator Room