Alliance TECHNICAL GROUP

284 Sheffield Street, Mountainside NJ 07092
Tel. 908-789-8900 Fax: 908-789-8922

# DATA REPORTING QUALIFIERS- INORGANIC

For reporting results, the following " Results Qualifiers" are used:

| | |
|---|---|
| **J** | 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). |
| **U** | Indicates the analyte was analyzed for, but not detected. |
| **ND** | Indicates the analyte was analyzed for, but not detected |
| **E** | Indicates the reported value is estimated because of the presence of interference |
| **M** | Indicates Duplicate injection precision not met. |
| **N** | Indicates the spiked sample recovery is not within control limits. |
| **S** | Indicates the reported value was determined by the Method of Standard Addition (MSA). |
| * | Indicates that the duplicate analysis is not within control limits. |
| + | Indicates the correlation coefficient for the MSA is less than 0.995. |
| **D** | Indicates the reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range. |
| **M** | 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 |
| **OR** | Indicates the analyte's concentration exceeds the calibrated range of the instrument for that specific analysis. |
| **Q** | Indicates the LCS did not meet the control limits requirements |
| H | Sample Analysis Out Of Hold Time |

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# LAB CHRONICLE

| | | | |
|---|---|---|---|
| **OrderID:** | Q1567 | **OrderDate:** | 3/13/2025 1:24:00 PM |
| **Client:** | Holland Manufacturing Co. | **Project:** | Pre Treatment Plant 2025 |
| **Contact:** | Todd Holland | **Location:** | F11 |

| LabID | ClientID | Matrix | Test | Method | Sample Date | Prep Date | Anal Date | Received |
|---|---|---|---|---|---|---|---|---|
| **Q1567-01** | **EFFLUENT** | **WATER** | | | **03/13/25 11:30** | | | **03/13/25** |
| | | | Oil and Grease | 1664A | | | 03/14/25 10:00 | |
| | | | Phosphorus-Ortho | SM4500-P E | | | 03/14/25 15:22 | |
| | | | TSS | SM2540 D | | | 03/17/25 09:30 | |
| | | | Ammonia | SM4500-NH3 | | 03/19/25 | 03/19/25 12:23 | |
| | | | BOD5 | SM5210 B | | | 03/14/25 10:30 | |
| | | | Phosphorus-Total | 365.3 | | 03/14/25 | 03/14/25 14:17 | |
| **Q1567-01DL** | **EFFLUENTDL** | **WATER** | | | **03/13/25 11:30** | | | **03/13/25** |
| | | | Ammonia | SM4500-NH3 | | 03/19/25 | 03/19/25 13:10 | |
| **Q1567-04** | **AERATION 1** | **WATER** | | | **03/13/25 11:30** | | | **03/13/25** |
| | | | TSS | SM2540 D | | | 03/17/25 09:30 | |
| **Q1567-05** | **INFLUENT** | **WATER** | | | **03/13/25 11:30** | | | **03/13/25** |
| | | | Ammonia | SM4500-NH3 | | 03/19/25 | 03/19/25 12:23 | |
| | | | BOD5 | SM5210 B | | | 03/14/25 10:30 | |

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# LAB CHRONICLE

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Q1567-05DL** | **INFLUENTDL** | **WATER** | | | **03/13/25 11:30** | | | **03/13/25** |
| | | | Ammonia | SM4500-NH3 | | 03/19/25 | 03/19/25 13:17 | |

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# SAMPLE DATA

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | Holland Manufacturing Co. | Date Collected: | 03/13/25 11:30 |
| Project: | Pre Treatment Plant 2025 | Date Received: | 03/13/25 |
| Client Sample ID: | EFFLUENT | SDG No.: | Q1567 |
| Lab Sample ID: | Q1567-01 | Matrix: | WATER |
| | | % Solid: | 0 |

| Parameter | Conc. | Qua. | DF | MDL | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|
| Ammonia as N | 956 | OR | 1 | 1.50 | 5.00 | mg/L | 03/19/25 09:00 | 03/19/25 12:23 | SM 4500-NH3 B plus G-11 |
| BOD5 | 11800 | | 1 | 0.20 | 2.00 | mg/L | | 03/14/25 10:30 | SM 5210 B-16 |
| Oil and Grease | 12.7 | | 1 | 0.40 | 5.00 | mg/L | | 03/14/25 10:00 | 1664A |
| Orthophosphate as P | 0.12 | | 1 | 0.0040 | 0.050 | mg/L | | 03/14/25 15:22 | SM 4500-P E-11 |
| Phosphorus, Total | 0.19 | | 1 | 0.0050 | 0.050 | mg/L | 03/14/25 11:30 | 03/14/25 14:17 | 365.3 |
| TSS | 1370 | | 1 | 1.00 | 4.00 | mg/L | | 03/17/25 09:30 | SM 2540 D-15 |

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

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | Holland Manufacturing Co. | Date Collected: | 03/13/25 11:30 |
| Project: | Pre Treatment Plant 2025 | Date Received: | 03/13/25 |
| Client Sample ID: | EFFLUENTDL | SDG No.: | Q1567 |
| Lab Sample ID: | Q1567-01DL | Matrix: | WATER |
| | | % Solid: | 0 |

| Parameter | Conc. | Qua. | DF | MDL | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|
| Ammonia as N | 844 | D | 10 | 15.0 | 50.0 | mg/L | 03/19/25 09:00 | 03/19/25 13:10 | SM 4500-NH3 B plus G-11 |

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

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | Holland Manufacturing Co. | Date Collected: | 03/13/25 11:30 |
| Project: | Pre Treatment Plant 2025 | Date Received: | 03/13/25 |
| Client Sample ID: | AERATION 1 | SDG No.: | Q1567 |
| Lab Sample ID: | Q1567-04 | Matrix: | WATER |
| | | % Solid: | 0 |

| Parameter | Conc. | Qua. | DF | MDL | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|
| TSS | 4390 | | 1 | 1.00 | 4.00 | mg/L | | 03/17/25 09:30 | SM 2540 D-15 |

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

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | Holland Manufacturing Co. | Date Collected: | 03/13/25 11:30 |
| Project: | Pre Treatment Plant 2025 | Date Received: | 03/13/25 |
| Client Sample ID: | INFLUENT | SDG No.: | Q1567 |
| Lab Sample ID: | Q1567-05 | Matrix: | WATER |
| | | % Solid: | 0 |

| Parameter | Conc. | Qua. | DF | MDL | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|
| Ammonia as N | 191 | OR | 1 | 1.50 | 5.00 | mg/L | 03/19/25 09:00 | 03/19/25 12:23 | SM 4500-NH3 B plus G-11 |
| BOD5 | 8970 | | 1 | 0.20 | 2.00 | mg/L | | 03/14/25 10:30 | SM 5210 B-16 |

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

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | Holland Manufacturing Co. | Date Collected: | 03/13/25 11:30 |
| Project: | Pre Treatment Plant 2025 | Date Received: | 03/13/25 |
| Client Sample ID: | INFLUENTDL | SDG No.: | Q1567 |
| Lab Sample ID: | Q1567-05DL | Matrix: | WATER |
| | | % Solid: | 0 |

| Parameter | Conc. | Qua. | DF | MDL | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|
| Ammonia as N | 185 | D | 2 | 3.00 | 10.0 | mg/L | 03/19/25 09:00 | 03/19/25 13:17 | SM 4500-NH3 B plus G-11 |

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

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# Initial and Continuing Calibration Verification

**Client:** Holland Manufacturing Co. **SDG No.:** Q1567

**Project:** Pre Treatment Plant 2025 **RunNo.:** LB135037

| Analyte | Units | Result | True Value | % Recovery | Acceptance Window (%R) | Analysis Date |
|---|---|---|---|---|---|---|
| **Sample ID:** **ICV** | | | | | | |
| Orthophosphate as P | mg/L | 0.508 | 0.50 | 102 | 90-110 | 03/14/2025 |
| **Sample ID:** **CCV1** | | | | | | |
| Orthophosphate as P | mg/L | 0.511 | 0.5 | 102 | 90-110 | 03/14/2025 |
| **Sample ID:** **CCV2** | | | | | | |
| Orthophosphate as P | mg/L | 0.502 | 0.5 | 100 | 90-110 | 03/14/2025 |

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# Initial and Continuing Calibration Verification

**Client:** Holland Manufacturing Co. **SDG No.:** Q1567

**Project:** Pre Treatment Plant 2025 **RunNo.:** LB135041

| Analyte | Units | Result | True Value | % Recovery | Acceptance Window (%R) | Analysis Date |
|---|---|---|---|---|---|---|
| **Sample ID:** ICV | | | | | | |
| Phosphorus, Total | mg/L | 0.490 | 0.50 | 98 | 90-110 | 03/14/2025 |
| **Sample ID:** CCV1 | | | | | | |
| Phosphorus, Total | mg/L | 0.492 | 0.50 | 98 | 90-110 | 03/14/2025 |
| **Sample ID:** CCV2 | | | | | | |
| Phosphorus, Total | mg/L | 0.490 | 0.50 | 98 | 90-110 | 03/14/2025 |

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# Initial and Continuing Calibration Verification

**Client:** Holland Manufacturing Co. **SDG No.:** Q1567

**Project:** Pre Treatment Plant 2025 **RunNo.:** LB135090

| Analyte | Units | Result | True Value | % Recovery | Acceptance Window (%R) | Analysis Date |
|---|---|---|---|---|---|---|
| **Sample ID:** ICV1 | | | | | | |
| Ammonia as N | mg/L | 0.95 | 1 | 95 | 90-110 | 03/19/2025 |
| **Sample ID:** CCV1 | | | | | | |
| Ammonia as N | mg/L | 0.91 | 1 | 91 | 90-110 | 03/19/2025 |
| **Sample ID:** CCV2 | | | | | | |
| Ammonia as N | mg/L | 0.9 | 1 | 90 | 90-110 | 03/19/2025 |
| **Sample ID:** CCV3 | | | | | | |
| Ammonia as N | mg/L | 1 | 1 | 100 | 90-110 | 03/19/2025 |
| **Sample ID:** CCV4 | | | | | | |
| Ammonia as N | mg/L | 0.99 | 1 | 99 | 90-110 | 03/19/2025 |

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# Initial and Continuing Calibration Blank Summary

**Client:** Holland Manufacturing Co. **SDG No.:** Q1567

**Project:** Pre Treatment Plant 2025 **RunNo.:** LB135037

| Analyte | Units | Result | Acceptance Limits | Conc Qual | MDL | RDL | Analysis Date |
|---|---|---|---|---|---|---|---|
| **Sample ID: ICB** | | | | | | | |
| Orthophosphate as P | mg/L | 0.006 | 0.0250 | J | 0.0040 | 0.05 | 03/14/2025 |
| **Sample ID: CCB1** | | | | | | | |
| Orthophosphate as P | mg/L | 0.006 | 0.0250 | J | 0.0040 | 0.05 | 03/14/2025 |
| **Sample ID: CCB2** | | | | | | | |
| Orthophosphate as P | mg/L | 0.006 | 0.0250 | J | 0.0040 | 0.05 | 03/14/2025 |

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# Initial and Continuing Calibration Blank Summary

**Client:** Holland Manufacturing Co. **SDG No.:** Q1567

**Project:** Pre Treatment Plant 2025 **RunNo.:** LB135041

| Analyte | Units | Result | Acceptance Limits | Conc Qual | MDL | RDL | Analysis Date |
|---|---|---|---|---|---|---|---|
| **Sample ID: ICB** | | | | | | | |
| Phosphorus, Total | mg/L | 0.008 | 0.0250 | J | 0.0045 | 0.05 | 03/14/2025 |
| **Sample ID: CCB1** | | | | | | | |
| Phosphorus, Total | mg/L | 0.008 | 0.0250 | J | 0.0045 | 0.05 | 03/14/2025 |
| **Sample ID: CCB2** | | | | | | | |
| Phosphorus, Total | mg/L | 0.008 | 0.0250 | J | 0.0045 | 0.05 | 03/14/2025 |

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# Initial and Continuing Calibration Blank Summary

**Client:** Holland Manufacturing Co. **SDG No.:** Q1567

**Project:** Pre Treatment Plant 2025 **RunNo.:** LB135090

| Analyte | Units | Result | Acceptance Limits | Conc Qual | MDL | RDL | Analysis Date |
|---|---|---|---|---|---|---|---|
| **Sample ID: ICB1** | | | | | | | |
| Ammonia as N | mg/L | < 0.0500 | 0.0500 | U | 0.030 | 0.1 | 03/19/2025 |
| **Sample ID: CCB1** | | | | | | | |
| Ammonia as N | mg/L | < 0.0500 | 0.0500 | U | 0.030 | 0.1 | 03/19/2025 |
| **Sample ID: CCB2** | | | | | | | |
| Ammonia as N | mg/L | < 0.0500 | 0.0500 | U | 0.030 | 0.1 | 03/19/2025 |
| **Sample ID: CCB3** | | | | | | | |
| Ammonia as N | mg/L | 0.053 | 0.0500 | J | 0.030 | 0.1 | 03/19/2025 |
| **Sample ID: CCB4** | | | | | | | |
| Ammonia as N | mg/L | < 0.0500 | 0.0500 | U | 0.030 | 0.1 | 03/19/2025 |

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# Preparation Blank Summary

**Client:** Holland Manufacturing Co. **SDG No.:** Q1567

**Project:** Pre Treatment Plant 2025

| Analyte | Units | Result | Acceptance Limits | Conc Qual | MDL | RDL | Analysis Date |
|---|---|---|---|---|---|---|---|
| **Sample ID:** LB135027BL | | | | | | | |
| Oil and Grease | mg/L | < 2.5000 | 2.5000 | U | 0.4 | 5.0 | 03/14/2025 |
| **Sample ID:** LB135031BL | | | | | | | |
| BOD5 | mg/L | < 0.2000 | 0.2000 | U | 0.20 | 2.0 | 03/14/2025 |
| **Sample ID:** LB135037BL | | | | | | | |
| Orthophosphate as P | mg/L | 0.006 | 0.0250 | J | 0.004 | 0.05 | 03/14/2025 |
| **Sample ID:** LB135048BL | | | | | | | |
| TSS | mg/L | 1 | 2.0000 | J | 1 | 4 | 03/17/2025 |
| **Sample ID:** PB167144BL | | | | | | | |
| Phosphorus, Total | mg/L | 0.008 | 0.0250 | J | 0.005 | 0.05 | 03/14/2025 |
| **Sample ID:** PB167189BL | | | | | | | |
| Ammonia as N | mg/L | < 0.0500 | 0.0500 | U | 0.03 | 0.1 | 03/19/2025 |

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# Matrix Spike Summary

**Client:** Holland Manufacturing Co.
**SDG No.:** Q1567
**Project:** Pre Treatment Plant 2025
**Sample ID:** Q1567-01
**Client ID:** EFFLUENTMS
**Percent Solids for Spike Sample:** 0

| Analyte | Units | Acceptance Limit %R | Spiked Result | Conc. Qualifier | Sample Result | Conc. Qualifier | Spike Added | Dilution Factor | % Rec | Qual | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Phosphorus, Total | mg/L | 90-110 | 0.65 | | 0.19 | | 0.5 | 1 | 91 | | 03/14/2025 |
| Orthophosphate as P | mg/L | 90-110 | 0.55 | | 0.12 | | 0.5 | 1 | 87 | * | 03/14/2025 |

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# Matrix Spike Summary

**Client:** Holland Manufacturing Co.
**SDG No.:** Q1567
**Project:** Pre Treatment Plant 2025
**Sample ID:** Q1567-01
**Client ID:** EFFLUENTMSD
**Percent Solids for Spike Sample:** 0

| Analyte | Units | Acceptance Limit %R | Spiked Result | Conc. Qualifier | Sample Result | Conc. Qualifier | Spike Added | Dilution Factor | % Rec | Qual | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Phosphorus, Total | mg/L | 90-110 | 0.65 | | 0.19 | | 0.5 | 1 | 91 | | 03/14/2025 |
| Orthophosphate as P | mg/L | 90-110 | 0.56 | | 0.12 | | 0.5 | 1 | 88 | * | 03/14/2025 |

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# Matrix Spike Summary

**Client:** Holland Manufacturing Co.
**SDG No.:** Q1567
**Project:** Pre Treatment Plant 2025
**Sample ID:** Q1567-01
**Client ID:** EFFLUENTMS
**Percent Solids for Spike Sample:** 0

| Analyte | Units | Acceptance Limit %R | Spiked Result | Conc. Qualifier | Sample Result | Conc. Qualifier | Spike Added | Dilution Factor | % Rec | Qual | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Oil and Grease | mg/L | 78-114 | 32.9 | | 12.7 | | 20.0 | 1 | 101 | | 03/14/2025 |

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# Matrix Spike Summary

**Client:** Holland Manufacturing Co.
**SDG No.:** Q1567
**Project:** Pre Treatment Plant 2025
**Sample ID:** Q1567-01
**Client ID:** EFFLUENTMSD
**Percent Solids for Spike Sample:** 0

| Analyte | Units | Acceptance Limit %R | Spiked Result | Conc. Qualifier | Sample Result | Conc. Qualifier | Spike Added | Dilution Factor | % Rec | Qual | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Oil and Grease | mg/L | 78-114 | 32.9 | | 12.7 | | 20.0 | 1 | 101 | | 03/14/2025 |

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# Matrix Spike Summary

**Client:** Holland Manufacturing Co.
**SDG No.:** Q1567
**Project:** Pre Treatment Plant 2025
**Sample ID:** Q1567-05
**Client ID:** INFLUENTMS
**Percent Solids for Spike Sample:** 0

| Analyte | Units | Acceptance Limit %R | Spiked Result | Conc. Qualifier | Sample Result | Conc. Qualifier | Spike Added | Dilution Factor | % Rec | Qual | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Ammonia as N | mg/L | 75-125 | 251 | OR | 191 | OR | 50 | 1 | 120 | | 03/19/2025 |

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# Matrix Spike Summary

**Client:** Holland Manufacturing Co.
**SDG No.:** Q1567
**Project:** Pre Treatment Plant 2025
**Sample ID:** Q1567-05
**Client ID:** INFLUENTMSD
**Percent Solids for Spike Sample:** 0

| Analyte | Units | Acceptance Limit %R | Spiked Result | Conc. Qualifier | Sample Result | Conc. Qualifier | Spike Added | Dilution Factor | % Rec | Qual | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Ammonia as N | mg/L | 75-125 | 281 | OR | 191 | OR | 50 | 1 | 180 | * | 03/19/2025 |

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# Duplicate Sample Summary

**Client:** Holland Manufacturing Co.
**SDG No.:** Q1567
**Project:** Pre Treatment Plant 2025
**Sample ID:** Q1551-02
**Client ID:** COMPDUP
**Percent Solids for Spike Sample:** 0

| Analyte | Units | Acceptance Limit | Sample Result | Conc. Qualifier | Duplicate Result | Conc. Qualifier | Dilution Factor | RPD/ AD | Qual | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|---|
| BOD5 | mg/L | +/-20 | 457 | | 454 | | 1 | 0.49 | | 03/14/2025 |
| TSS | mg/L | +/-5 | 438 | | 440 | | 1 | 0.46 | | 03/17/2025 |

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# Duplicate Sample Summary

**Client:** Holland Manufacturing Co.
**SDG No.:** Q1567
**Project:** Pre Treatment Plant 2025
**Sample ID:** Q1567-01
**Client ID:** EFFLUENTDUP
**Percent Solids for Spike Sample:** 0

| Analyte | Units | Acceptance Limit | Sample Result | Conc. Qualifier | Duplicate Result | Conc. Qualifier | Dilution Factor | RPD/ AD | Qual | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|---|
| Orthophosphate as P | mg/L | +/-20 | 0.12 | | 0.12 | | 1 | 2.49 | | 03/14/2025 |
| Phosphorus, Total | mg/L | +/-20 | 0.19 | | 0.19 | | 1 | 1.57 | | 03/14/2025 |

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# Duplicate Sample Summary

**Client:** Holland Manufacturing Co.
**SDG No.:** Q1567
**Project:** Pre Treatment Plant 2025
**Sample ID:** Q1567-01
**Client ID:** EFFLUENTMSD
**Percent Solids for Spike Sample:** 0

| Analyte | Units | Acceptance Limit | Sample Result | Conc. Qualifier | Duplicate Result | Conc. Qualifier | Dilution Factor | RPD/ AD | Qual | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|---|
| Orthophosphate as P | mg/L | +/-20 | 0.55 | | 0.56 | | 1 | 0.54 | | 03/14/2025 |
| Phosphorus, Total | mg/L | +/-20 | 0.65 | | 0.65 | | 1 | 0.46 | | 03/14/2025 |

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# Duplicate Sample Summary

**Client:** Holland Manufacturing Co.
**SDG No.:** Q1567
**Project:** Pre Treatment Plant 2025
**Sample ID:** Q1567-01
**Client ID:** EFFLUENTMSD
**Percent Solids for Spike Sample:** 0

| Analyte | Units | Acceptance Limit | Sample Result | Conc. Qualifier | Duplicate Result | Conc. Qualifier | Dilution Factor | RPD/ AD | Qual | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|---|
| Oil and Grease | mg/L | +/-18 | 32.9 | | 32.9 | | 1 | 0 | | 03/14/2025 |

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

# Duplicate Sample Summary

**Client:** Holland Manufacturing Co.
**SDG No.:** Q1567
**Project:** Pre Treatment Plant 2025
**Sample ID:** Q1567-05
**Client ID:** INFLUENTDUP
**Percent Solids for Spike Sample:** 0

| Analyte | Units | Acceptance Limit | Sample Result | Conc. Qualifier | Duplicate Result | Conc. Qualifier | Dilution Factor | RPD/ AD | Qual | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|---|
| Ammonia as N | mg/L | +/-20 | 191 | OR | 191 | OR | 1 | 0 | | 03/19/2025 |

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

# Duplicate Sample Summary

**Client:** Holland Manufacturing Co.
**SDG No.:** Q1567
**Project:** Pre Treatment Plant 2025
**Sample ID:** Q1567-05
**Client ID:** INFLUENTMSD
**Percent Solids for Spike Sample:** 0

| Analyte | Units | Acceptance Limit | Sample Result | Conc. Qualifier | Duplicate Result | Conc. Qualifier | Dilution Factor | RPD/ AD | Qual | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|---|
| Ammonia as N | mg/L | +/-20 | 251 | OR | 281 | OR | 1 | 11 | | 03/19/2025 |

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

# Laboratory Control Sample Summary

**Client:** Holland Manufacturing Co. **SDG No.:** Q1567

**Project:** Pre Treatment Plant 2025 **Run No.:** LB135027

| Analyte | Units | True Value | Result | Conc. Qualifier | % Recovery | Dilution Factor | Acceptance Limit %R | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| **Sample ID** LB135027BS | | | | | | | | |
| Oil and Grease | mg/L | 20.0 | 16.9 | | 84 | 1 | 78-114 | 03/14/2025 |

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

# Laboratory Control Sample Summary

**Client:** Holland Manufacturing Co. **SDG No.:** Q1567

**Project:** Pre Treatment Plant 2025 **Run No.:** LB135031

| Analyte | Units | True Value | Result | Conc. Qualifier | % Recovery | Dilution Factor | Acceptance Limit %R | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| **Sample ID** LB135031BS | | | | | | | | |
| BOD5 | mg/L | 198 | 191 | | 96 | 1 | 84.6-115.4 | 03/14/2025 |

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

# Laboratory Control Sample Summary

**Client:** Holland Manufacturing Co.
**SDG No.:** Q1567
**Project:** Pre Treatment Plant 2025
**Run No.:** LB135037

| Analyte | Units | True Value | Result | Conc. Qualifier | % Recovery | Dilution Factor | Acceptance Limit %R | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| **Sample ID** LB135037BS | | | | | | | | |
| Orthophosphate as P | mg/L | 0.5 | 0.51 | | 101 | 1 | 90-110 | 03/14/2025 |

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

# Laboratory Control Sample Summary

**Client:** Holland Manufacturing Co.
**SDG No.:** Q1567
**Project:** Pre Treatment Plant 2025
**Run No.:** LB135048

| Analyte | Units | True Value | Result | Conc. Qualifier | % Recovery | Dilution Factor | Acceptance Limit %R | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| **Sample ID** LB135048BS | | | | | | | | |
| TSS | mg/L | 550 | 533 | | 97 | 1 | 90-110 | 03/17/2025 |

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

# Laboratory Control Sample Summary

**Client:** Holland Manufacturing Co.
**SDG No.:** Q1567
**Project:** Pre Treatment Plant 2025
**Run No.:** LB135041

| Analyte | Units | True Value | Result | Conc. Qualifier | % Recovery | Dilution Factor | Acceptance Limit %R | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| **Sample ID PB167144BS** | | | | | | | | |
| Phosphorus, Total | mg/L | 0.50 | 0.50 | | 99 | 1 | 90-110 | 03/14/2025 |

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

# Laboratory Control Sample Summary

**Client:** Holland Manufacturing Co.
**SDG No.:** Q1567
**Project:** Pre Treatment Plant 2025
**Run No.:** LB135090

| Analyte | Units | True Value | Result | Conc. Qualifier | % Recovery | Dilution Factor | Acceptance Limit %R | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| **Sample ID** PB167189BS | | | | | | | | |
| Ammonia as N | mg/L | 1 | 0.99 | | 99 | 1 | 90-110 | 03/19/2025 |

# RAW DATA

# Extraction and Analytical Summary Report

**Analysis Method:** 1664A
**Test:** Oil and Grease
**Run Number:** LB135027
**Analysis Date:** 03/14/2025
**BalanceID:** WC SC-6
**OvenID:** EXT OVEN-3

**ANALYST:** jignesh
**REVIEWED BY:** Iwona
**Extraction Date:** 03/14/2025
**Extration IN Time:** 08:30
**Extration OUT Time:** 09:20
**Thermometer ID:** EXT OVEN#3

| Dish # | Lab ID | Client ID | Matrix | pH | Sample Vol (ml) | Final Volume (ml) | Empty Dish Weight (g) | Final Empty Dish Weight(g) | Silica Gel Weight(g) | Weight After Drying(g) | Final Weight After Drying(g) | Change Weight (g) | Result in ppm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | LB135027BL | LB135027BL | WATER | 1.3 | 1000 | 100 | 2.4893 | 2.4893 | 0 | 2.4894 | 2.4894 | 0.0001 | 0.1 |
| 2 | LB135027BS | LB135027BS | WATER | 1.3 | 1000 | 100 | 2.7403 | 2.7403 | 0 | 2.7572 | 2.7572 | 0.0169 | 16.9 |
| 3 | Q1505-17 | PT-ORG1L-WP | WATER | 1.3 | 880 | 100 | 3.0095 | 3.0095 | 0 | 3.0277 | 3.0277 | 0.0182 | 20.68 |
| 4 | Q1539-01 | TAPIAL3-MW03D-031025-0 | WATER | 1.3 | 1000 | 100 | 3.0349 | 3.0349 | 0 | 3.0355 | 3.0355 | 0.0006 | 0.6 |
| 5 | Q1539-02 | TAPFTA-MW01I-031025-00 | WATER | 1.3 | 1000 | 100 | 3.1041 | 3.1041 | 0 | 3.1045 | 3.1045 | 0.0004 | 0.4 |
| 6 | Q1567-01 | EFFLUENT | WATER | 1.3 | 1000 | 100 | 3.0634 | 3.0634 | 0 | 3.0761 | 3.0761 | 0.0127 | 12.7 |
| 7 | Q1567-02 | Q1567-01MS | WATER | 1.6 | 1000 | 100 | 2.8963 | 2.8963 | 0 | 2.9292 | 2.9292 | 0.0329 | 32.9 |
| 8 | Q1567-03 | Q1567-01MSD | WATER | 1.6 | 1000 | 100 | 3.0147 | 3.0147 | 0 | 3.0476 | 3.0476 | 0.0329 | 32.9 |

**QC Batch#** LB135027 **Test:** Oil and Grease **Analysis Date:** 03/14/2025

## Chemicals Used:

| Chemical Name | Chemical Lot # |
|---|---|
| HEXANE | W3177 |
| pH Paper 0-14 | M6069 |
| Sodium Sulfate | EP2593 |
| 1:1 HCL | WP110826 |
| Silica Gel | NA |
| Sand | NA |

## Standards Used:

| Standard Name | Amount Used | Standard Lot # |
|---|---|---|
| LCSW | 2.5 ML | WP100827 |
| LCSWD | NA | NA |
| MS/MSD | 2.5 ML | WP100828 |

## BALANCE CALIBRATION / OVEN Dessicator Data

### Analytical Balance ID # : WC SC-6

#### Before Analysis

**0.0020 gram Balance:** 0.0019 **(0.0018-0.0022)**
**1.0000 gram Balance:** 1.0004 **(0.9950-1.0050)**
**Bal Check Time:** 08:40

**In OVEN TEMP1 :** 71 °C **Dessicator Time In1 :** 11:26
**In Time1:** 10:00
**Out OVEN TEMP1:** 71 °C **Dessicator Time Out1:** 12:00
**Out Time1:** 11:25

#### After Analysis

**0.0020 gram Balance:** 0.0021 **(0.0018-0.0022)**
**1.0000 gram Balance:** 1.0003 **(0.9950-1.0050)**
**Bal Check Time:** 13:40

**In OVEN TEMP2 :** 70 °C **Dessicator Time In2 :** 13:01
**In Time2:** 12:30
**Out OVEN TEMP2:** 71 °C **Dessicator Time Out2:** 13:35
**Out Time2:** 13:00

LB 135027

# WORKLIST(Hardcopy Internal Chain)

**WorkList Name :** oil & grease q1505 **WorkList ID :** 188266 **Department :** Wet-Chemistry **Date :** 03-14-2025 08:15:48

| Sample | Customer Sample | Matrix | Test | Preservative | Customer | Raw Sample Storage Location | Collect Date | Method |
|---|---|---|---|---|---|---|---|---|
| Q1505-17 | PT-ORG1L-WP | Water | Oil and Grease | Conc H2SO4 to pH < 2 | ALLI03 | QA Of | 03/03/2025 | 1664A |
| Q1539-01 S | TAPIAL3-MW03D-031025-00-T | Water | Oil and Grease | Conc H2SO4 to pH < 2 | WEST04 | I31 | 03/10/2025 | 1664A |
| Q1539-02 S | TAPFTA-MW01I-031025-00-T2 | Water | Oil and Grease | Conc H2SO4 to pH < 2 | WEST04 | I31 | 03/10/2025 | 1664A |
| Q1567-01 E | EFFLUENT | Water | Oil and Grease | Conc H2SO4 to pH < 2 | HOLL01 | F11 | 03/13/2025 | 1664A |
| Q1567-02 | Q1567-01MS | Water | Oil and Grease | Conc H2SO4 to pH < 2 | HOLL01 | F11 | 03/13/2025 | 1664A |
| Q1567-03 | Q1567-01MSD | Water | Oil and Grease | Conc H2SO4 to pH < 2 | HOLL01 | F11 | 03/13/2025 | 1664A |

**Date/Time** 03/14/25 08:25

**Raw Sample Received by:**

**Raw Sample Relinquished by:**

**Date/Time** 03/14/25 13:30

**Raw Sample Received by:**

**Raw Sample Relinquished by:**

Reviewed By:Iwona
On:3/20/2025 10:12:27 AM
Inst Id :DO METER
LB :LB135031

# BOD5 LOG

**ANALYST:** rubir
**SUPERVISOR:** Iwona

**QC BATCH ID:** LB135031
**Analysis Date:** 03/14/2025
**BOD Water:** WP112296
**MANGANOUS SULFATE SOLUTION:** W3103
**Starch:** W3149
**Alkaline Iodide Azide:** W3109
**Sulfuric acid, 1N:** WP110386
**Sodium Thiosulfate, 0.025N:** W3105
**POLYSEED:** WP112298
**NaOH, 1N:** WP111323
**GGA:** WP112297
**IncubatorID:** INCUBATOR #3
**Chlorine Strips:** W3155
**GuageID:** 0511062
**pH Strips:** W3140
**Zero DO:** WP112277

| Lab SampleID | Client ID | Bottle No. | VOL. ML | Initial Reading(ML) | Final Reading(ML) | Difference | Average |
|---|---|---|---|---|---|---|---|
| WINKLER 1 | WINKLER 1 | 1 | 300 | 0.0 | 9.7 | 9.7 | 9.7 |
| WINKLER 2 | WINKLER 2 | 2 | 300 | 9.9 | 19.6 | 9.7 | 9.7 |

Meter Calibration1: 9.43 Zero DO Reading1: 0.08 mg/L (<=0.2 Criteria)

Barometric Pressure1: 765 mmHg DO Meter BOD fluid reading for winkler comparison: 9.77

**After Incubation**

Meter Calibration2: 9.30 Zero DO Reading2: 0.14 mg/L (<=0.2 Criteria)

Barometric Pressure2: 765 mmHg

Alliance TECHNICAL GROUP

**QC BATCH ID:** LB135031

**INCUBATOR TEMP IN(C):** 20.3 **INCUBATOR TEMP OUT(C):** 20.2

**TIME IN:** 10:30 **TIME OUT:** 14:00

**DATE IN:** 03/14/2025 **DATE OUT:** 03/19/2025

| 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LB135031BL | 1 | No | 6.58 | N/A | 20.90 | 300 | 9.76 | 9.74 | 0.02 | 0.02 | 0.02 | |
| POLYSEED | 1 | | | | | 10 | 9.71 | 6.28 | 3.43 | 0.69 | 0.71 | |
| POLYSEED | 2 | | | | | 15 | 9.68 | 4.14 | 5.54 | 0.74 | | |
| POLYSEED | 3 | | | | | 20 | 9.65 | 2.61 | 7.04 | 0.7 | | |
| GGA | 1 | | | | | 6 | 9.72 | 5.29 | 4.43 | 186 | 191 | |
| GGA | 2 | | | | | 6 | 9.69 | 5.14 | 4.55 | 192 | | |
| GGA | 3 | | | | | 6 | 9.68 | 5.07 | 4.61 | 195 | | |
| Q1551-02 | 1 | No | 6.74 | N/A | 20.40 | 0.5 | 9.69 | 8.89 | - | 0 | 456.5 | |
| Q1551-02 | 2 | | | | | 1 | 9.58 | 8.01 | - | 0 | | |
| Q1551-02 | 3 | | | | | 2 | 9.55 | 6.36 | 3.19 | 372 | | |
| Q1551-02 | 4 | | | | | 3 | 9.46 | 3.34 | 6.12 | 541 | | |
| Q1551-02DUP | 1 | No | 6.74 | N/A | 20.40 | 0.5 | 9.69 | 8.76 | - | 0 | 454.25 | |
| Q1551-02DUP | 2 | | | | | 1 | 9.58 | 8.17 | - | 0 | | |
| Q1551-02DUP | 3 | | | | | 2 | 9.54 | 6.42 | 3.12 | 361.5 | | |
| Q1551-02DUP | 4 | | | | | 3 | 9.48 | 3.30 | 6.18 | 547 | | |
| Q1567-01 | 1 | No | 7.68 | 7.11 | 20.30 | 0.1 | 9.61 | 4.98 | 4.63 | 11760 | 11760 | pH Adjuste |
| Q1567-01 | 2 | | | | | 0.5 | 9.56 | 0.22 | - | 0 | | |
| Q1567-01 | 3 | | | | | 1 | 9.54 | 0.17 | - | 0 | | |
| Q1567-01 | 4 | | | | | 5 | 9.51 | 0.09 | - | 0 | | |
| Q1567-01 | 5 | | | | | 10 | 9.30 | 0.02 | - | 0 | | |
| Q1567-05 | 1 | No | 4.44 | 6.93 | 20.30 | 0.01 | 9.61 | 8.64 | - | 0 | 8970 | pH Adjuste |
| Q1567-05 | 2 | | | | | 0.05 | 9.58 | 7.01 | 2.57 | 11160 | | |
| Q1567-05 | 3 | | | | | 0.1 | 9.53 | 6.56 | 2.97 | 6780 | | |
| Q1567-05 | 4 | | | | | 0.5 | 9.40 | 0.19 | - | 0 | | |
| Q1567-05 | 5 | | | | | 1 | 9.37 | 0.04 | - | 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.**

# Analytical Summary Report

Analysis Method: SM4500-P E

Parameter: Phosphorus-Ortho

Run Number: LB135037

ANALYST: Niha

SUPERVISOR REVIEW BY: Iwona

| Reagent/Standard | Lot/Log # |
|---|---|
| calibration std. phosphate 1 ppm | WP112304 |
| calibration std. phosphate 0.5 ppm | WP112303 |
| calibration std. phosphate 0.3 ppm | WP112302 |
| calibration std. phosphate 0.1 ppm | WP112301 |
| calibration std. phosphate 0.05 ppm | WP112300 |
| calibration std. 0 ppm | WP112299 |
| phosphate CCV std. | WP112305 |
| 5N sulfuric acid | WP110380 |
| Combined reagent | WP112308 |
| Phenolphthalein indicator | WP111415 |
| Sodium hydroxide, 1N | WP111323 |
| Phosphate ICV-LCS Std | WP112306 |

**Intercept:** -0.0039 **Slope:** 0.6535 **Regression:** 0.999544

| Seq | Lab ID | True Value (mg/L) | DF | Initial Volume (mL) | Final Volume (mL) | Absorbance Reading at 880nm | Result (mg/L) | %D | AnalDate | AnalTime |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CAL1 | 0.00 | 1 | 50 | 50 | 0.000 | 0.006 | | 03/14/2025 | 15:15 |
| 2 | CAL2 | 0.05 | 1 | 50 | 50 | 0.028 | 0.049 | -2 | 03/14/2025 | 15:15 |
| 3 | CAL3 | 0.10 | 1 | 50 | 50 | 0.065 | 0.105 | 5 | 03/14/2025 | 15:16 |
| 4 | CAL4 | 0.30 | 1 | 50 | 50 | 0.178 | 0.278 | -7.3 | 03/14/2025 | 15:16 |
| 5 | CAL5 | 0.50 | 1 | 50 | 50 | 0.330 | 0.511 | 2.2 | 03/14/2025 | 15:17 |
| 6 | CAL6 | 1.00 | 1 | 50 | 50 | 0.650 | 1.001 | 0.1 | 03/14/2025 | 15:17 |

# Analytical Summary Report

Analysis Method: SM4500-P E
ANALYST: Niha
Parameter: Phosphorus-Ortho
SUPERVISOR REVIEW BY: Iwona
Run Number: LB135037

| Seq | Lab ID | True Value (mg/l) | DF | Initial Volume (mL) | Final Volume (mL) | Absorbance Reading at 880nm | Result (mg/L) | AnalDate | AnalTime |
|---|---|---|---|---|---|---|---|---|---|
| 1 | ICV | 0.50 | 1 | 50 | 50 | 0.328 | 0.508 | 03/14/2025 | 15:18 |
| 2 | ICB | | 1 | 50 | 50 | 0.000 | 0.006 | 03/14/2025 | 15:18 |
| 3 | CCV1 | 0.5 | 1 | 50 | 50 | 0.330 | 0.511 | 03/14/2025 | 15:19 |
| 4 | CCB1 | | 1 | 50 | 50 | 0.000 | 0.006 | 03/14/2025 | 15:19 |
| 5 | RL Check | 0.01 | 1 | 50 | 50 | 0.032 | 0.055 | 03/14/2025 | 15:20 |
| 6 | LB135037BL | | 1 | 50 | 50 | 0.000 | 0.006 | 03/14/2025 | 15:20 |
| 7 | LB135037BS | 0.5 | 1 | 50 | 50 | 0.326 | 0.505 | 03/14/2025 | 15:21 |
| 8 | Q1505-12 | | 10 | 50 | 50 | 0.298 | 0.462 | 03/14/2025 | 15:21 |
| 9 | Q1567-01 | | 1 | 50 | 50 | 0.074 | 0.119 | 03/14/2025 | 15:22 |
| 10 | Q1567-01DUP | | 1 | 50 | 50 | 0.076 | 0.122 | 03/14/2025 | 15:22 |
| 11 | Q1567-01MS | 0.5 | 1 | 50 | 50 | 0.358 | 0.554 | 03/14/2025 | 15:23 |
| 12 | Q1567-01MSD | 0.5 | 1 | 50 | 50 | 0.360 | 0.557 | 03/14/2025 | 15:23 |
| 13 | CCV2 | 0.5 | 1 | 50 | 50 | 0.324 | 0.502 | 03/14/2025 | 15:24 |
| 14 | CCB2 | | 1 | 50 | 50 | 0.000 | 0.006 | 03/14/2025 | 15:24 |

LB135037

# WORKLIST(Hardcopy Internal Chain)

**WorkList Name :** ORTHO P-03142025 **WorkList ID :** 188276 **Department :** Wet-Chemistry **Date :** 03-14-2025 08:37:36

| Sample | Customer Sample | Matrix | Test | Preservative | Customer | Raw Sample Storage Location | Collect Date | Method |
|---|---|---|---|---|---|---|---|---|
| Q1505-12 | PT-NUT1-WP | Water | Phosphorus-Ortho | Cool 4 deg C | ALLI03 | QA Of | 03/03/2025 | SM4500-P E |
| Q1567-01 | EFFLUENT | Water | Phosphorus-Ortho | Cool 4 deg C | HOLL01 | F11 | 03/13/2025 | SM4500-P E |

**Date/Time** 03.14.2025, 10:50
**Raw Sample Received by:** NFLWC
**Raw Sample Relinquished by:** NFLWC



**Date/Time** 03.14.2025, 16:00
**Raw Sample Received by:** NFLWC
**Raw Sample Relinquished by:** NFLWC

# Analytical Summary Report

Analysis Method: 365.3

Parameter: Phosphorus-Total

Run Number: LB135041

ANALYST: Niha

SUPERVISOR REVIEW BY: Iwona

| Reagent/Standard | Lot/Log # |
|---|---|
| calibration std. phosphate 1 ppm | WP112304 |
| calibration std. phosphate 0.5 ppm | WP112303 |
| calibration std. phosphate 0.3 ppm | WP112302 |
| calibration std. phosphate 0.1 ppm | WP112301 |
| calibration std. phosphate 0.05 ppm | WP112300 |
| calibration std. 0 ppm | WP112299 |
| phosphate CCV std. | WP112305 |
| 5N sulfuric acid | WP110380 |
| Combined reagent | WP112308 |
| Phenolphthalein indicator | WP111415 |
| Sodium hydroxide, 1N | WP111323 |
| Phosphate ICV-LCS Std | WP112306 |

**Intercept:** -0.0051 **Slope:** 0.6711 **Regression:** 0.999594

| Seq | Lab ID | True Value (mg/L) | DF | Initial Volume (mL) | Final Volume (mL) | Absorbance Reading at 880nm | Result (mg/L) | %D | AnalDate | AnalTime |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CAL1 | 0.00 | 1 | 50 | 50 | 0.000 | 0.008 | | 03/14/2025 | 14:10 |
| 2 | CAL2 | 0.05 | 1 | 50 | 50 | 0.030 | 0.052 | 4 | 03/14/2025 | 14:10 |
| 3 | CAL3 | 0.10 | 1 | 50 | 50 | 0.066 | 0.106 | 6 | 03/14/2025 | 14:11 |
| 4 | CAL4 | 0.30 | 1 | 50 | 50 | 0.182 | 0.279 | -7 | 03/14/2025 | 14:11 |
| 5 | CAL5 | 0.50 | 1 | 50 | 50 | 0.330 | 0.499 | -0.2 | 03/14/2025 | 14:12 |
| 6 | CAL6 | 1.00 | 1 | 50 | 50 | 0.670 | 1.006 | 0.6 | 03/14/2025 | 14:12 |

Reviewed By:Iwona
On:3/18/2025 4:48:37 PM
Inst Id :SPECTROPHOTOME

# Analytical Summary Report

Analysis Method: 365.3 ANALYST: Niha

Parameter: Phosphorus-Total SUPERVISOR REVIEW BY: Iwona

Run Number: LB135041

| Seq | Lab ID | True Value (mg/l) | DF | Initial Volume (mL) | Final Volume (mL) | Absorbance Reading at 880nm | Result (mg/L) | AnalDate | AnalTime |
|---|---|---|---|---|---|---|---|---|---|
| 1 | ICV | 0.50 | 1 | 50 | 50 | 0.324 | 0.490 | 03/14/2025 | 14:13 |
| 2 | ICB | | 1 | 50 | 50 | 0.000 | 0.008 | 03/14/2025 | 14:13 |
| 3 | CCV1 | 0.50 | 1 | 50 | 50 | 0.325 | 0.492 | 03/14/2025 | 14:14 |
| 4 | CCB1 | | 1 | 50 | 50 | 0.000 | 0.008 | 03/14/2025 | 14:14 |
| 5 | RL Check | 0.01 | 1 | 50 | 50 | 0.032 | 0.055 | 03/14/2025 | 14:15 |
| 6 | PB167144BL | | 1 | 50 | 50 | 0.000 | 0.008 | 03/14/2025 | 14:15 |
| 7 | PB167144BS | 0.50 | 1 | 50 | 50 | 0.328 | 0.496 | 03/14/2025 | 14:16 |
| 8 | Q1505-13 | | 1 | 50 | 50 | 0.774 | 1.161 | 03/14/2025 | 14:16 |
| 9 | Q1567-01 | | 1 | 50 | 50 | 0.124 | 0.192 | 03/14/2025 | 14:17 |
| 10 | Q1567-01DUP | | 1 | 50 | 50 | 0.122 | 0.189 | 03/14/2025 | 14:17 |
| 11 | Q1567-01MS | 0.50 | 1 | 50 | 50 | 0.430 | 0.648 | 03/14/2025 | 14:18 |
| 12 | Q1567-01MSD | 0.50 | 1 | 50 | 50 | 0.428 | 0.645 | 03/14/2025 | 14:18 |
| 13 | Q1505-13 | | 5 | 50 | 50 | 0.273 | 0.414 | 03/14/2025 | 14:19 |
| 14 | CCV2 | 0.50 | 1 | 50 | 50 | 0.324 | 0.490 | 03/14/2025 | 14:19 |
| 15 | CCB2 | | 1 | 50 | 50 | 0.000 | 0.008 | 03/14/2025 | 14:20 |

# TOTAL SUSPENDED SOLIDS - SM2540D

**SUPERVISOR:** Iwona
**ANALYST:** jignesh
**Date:** 03/14/2025
**Run Number:** LB135048
**BalanceID:** WC SC-6
**OvenID:** EXT OVEN-3
**FilterID:** 17416528
**ThermometerID:** WET OVEN#1

| | | | | | |
|---|---|---|---|---|---|
| **TEMP1 IN:** | 103 °C | 03/14/2025 14:00 | **TEMP1 OUT:** | 104 °C | 03/14/2025 15:00 |
| **TEMP2 IN:** | 103 °C | 03/14/2025 15:30 | **TEMP2 OUT:** | 104 °C | 03/14/2025 16:30 |
| **TEMP3 IN:** | 104 °C | 03/17/2025 09:30 | **TEMP3 OUT:** | 103 °C | 03/17/2025 11:00 |
| **TEMP4 IN:** | 104 °C | 03/17/2025 11:30 | **TEMP4 OUT:** | 103 °C | 03/17/2025 13:10 |

| 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 | LB135048BL | LB135048BL | 1.4863 | 1.4863 | 100 | 1.4864 | 1.4864 | 1.4864 | 0.0001 | 1 |
| 2 | LB135048BS | LB135048BS | 1.3025 | 1.3025 | 100 | 1.3558 | 1.3558 | 1.3558 | 0.0533 | 533 |
| 3 | Q1551-02 | COMP | 1.3973 | 1.3973 | 100 | 1.4411 | 1.4411 | 1.4411 | 0.0438 | 438 |
| 4 | Q1551-02DUP | COMPDUP | 1.3627 | 1.3627 | 100 | 1.4067 | 1.4067 | 1.4067 | 0.0440 | 440 |
| 5 | Q1567-01 | EFFLUENT | 1.4793 | 1.4793 | 30 | 1.5204 | 1.5204 | 1.5204 | 0.0411 | 1370 |
| 6 | Q1567-04 | AERATION | 1.3625 | 1.3625 | 30 | 1.4943 | 1.4943 | 1.4943 | 0.1318 | 4393.3 |
| 7 | Q1583-02 | EFF-WASTE WATER | 1.4970 | 1.4970 | 700 | 1.5073 | 1.5073 | 1.5073 | 0.0103 | 14.7 |

**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 =** $\frac{D}{A} * 1000 * 1000$

# WORKLIST(Hardcopy Internal Chain)

LB 135048

**WorkList Name :** tss q1583 **WorkList ID :** 188295 **Department :** Wet-Chemistry **Date :** 03-17-2025 07:56:34

| Sample | Customer Sample | Matrix | Test | Preservative | Customer | Raw Sample Storage Location | Collect Date | Method |
|---|---|---|---|---|---|---|---|---|
| Q1551-02 A | COMP | Water | TSS | Cool 4 deg C | ARAM01 | F11 | 03/12/2025 | SM2540 D |
| Q1567-01 D | EFFLUENT | Water | TSS | Cool 4 deg C | HOLL01 | F11 | 03/13/2025 | SM2540 D |
| Q1567-04 | AERATION | Water | TSS | Cool 4 deg C | HOLL01 | F11 | 03/13/2025 | SM2540 D |
| Q1583-02 B | EFF-WASTE WATER | Water | TSS | Cool 4 deg C | ARDM01 | F11 | 03/14/2025 | SM2540 D |

**Date/Time** 03/17/25 08:15

**Raw Sample Received by:** SB WC)

**Raw Sample Relinquished by:**



**Date/Time** 03/17/25 13:30

**Raw Sample Received by:**

**Raw Sample Relinquished by:** SB WC)

LB135090

Test results | Aquakem 7.2AQ1 | Page: 1

CHEMTECH CONSULTING GROUP INC
284 Sheffield Street, Mountainside, NJ 07092

3/19/2025 13:23 | Reviewed by : RM | Instrument ID : Konelab

Test: Ammonia-N

| Sample Id | Result | Dil. 1 + | Response | Errors |
|---|---|---|---|---|
| ICV1 | 0.952 | 0.0 | 0.168 | |
| ICB1 | -0.033 | 0.0 | 0.019 | |
| CCV1 | 0.909 | 0.0 | 0.162 | |
| CCB1 | -0.039 | 0.0 | 0.018 | |
| PB167189BL | -0.037 | 0.0 | 0.018 | |
| PB167189BS | 0.986 | 0.0 | 0.174 | |
| Q1567-01 | 19.120 | 0.0 | 2.928 | Init abs., Test limit hig |
| Q1567-05 | 3.811 | 0.0 | 0.603 | Test limit high |
| Q1567-05DUP | 3.817 | 0.0 | 0.604 | Test limit high |
| Q1567-05MS | 5.025 | 0.0 | 0.787 | Test limit high |
| Q1567-05MSD | 5.629 | 0.0 | 0.879 | Test limit high |
| RL CHECK | 0.065 | 0.0 | 0.034 | 65% (50-150) |
| PB167197BL | 0.002 | 0.0 | 0.024 | |
| PB167197BS | 0.978 | 0.0 | 0.172 | |
| CCV2 | 0.903 | 0.0 | 0.161 | |
| CCB2 | -0.012 | 0.0 | 0.022 | |
| Q1597-01 | 0.017 | 0.0 | 0.026 | |
| Q1597-01DUP | 0.019 | 0.0 | 0.027 | |
| Q1597-01MS | 0.954 | 0.0 | 0.169 | |
| Q1597-01MSD | 0.931 | 0.0 | 0.165 | |
| Q1597-03 | 0.003 | 0.0 | 0.024 | |
| Q1597-05 | 0.014 | 0.0 | 0.026 | |
| CCV3 | 1.006 | 0.0 | 0.177 | |
| CCB3 | 0.053 | 0.0 | 0.032 | |
| Q1567-01DLX10 | 1.688 | 0.0 | 0.280 | |
| Q1567-05DLX2 | 1.848 | 0.0 | 0.305 | |
| CCV4 | 0.985 | 0.0 | 0.174 | |
| CCB4 | -0.022 | 0.0 | 0.021 | |

03/19/2025 RM

| | |
|---|---|
| N | 28 |
| Mean | 1.770 |
| SD | 3.7433 |
| CV% | 211.43 |

Aquakem v. 7.2AQ1
Results from time period:
Wed Mar 19 10:54:54 2025
Wed Mar 19 13:17:27 2025

| Sample Id | Sam/Ctr/cA | Test short r | Test type | Result | Result unit | Result date and time | Stat |
|---|---|---|---|---|---|---|---|
| 0.0PPM | A | Ammonia-N | P | 0.0112 | mg/l | 3/19/2025 11:18:28 | |
| 0.1PPM | A | Ammonia-N | P | 0.0836 | mg/l | 3/19/2025 11:18:29 | |
| 0.2PPM | A | Ammonia-N | P | 0.2194 | mg/l | 3/19/2025 11:18:30 | |
| 0.4PPM | A | Ammonia-N | P | 0.4351 | mg/l | 3/19/2025 11:18:31 | |
| 1.0PPM | A | Ammonia-N | P | 0.9531 | mg/l | 3/19/2025 11:18:32 | |
| 1.3PPM | A | Ammonia-N | P | 1.2802 | mg/l | 3/19/2025 11:18:33 | |
| 2.0PPM | A | Ammonia-N | P | 2.0508 | mg/l | 3/19/2025 11:18:34 | |
| ICV1 | S | Ammonia-N | P | 0.9521 | mg/l | 3/19/2025 12:12:39 | |
| ICB1 | S | Ammonia-N | P | -0.0329 | mg/l | 3/19/2025 12:12:41 | |
| CCV1 | S | Ammonia-N | P | 0.9085 | mg/l | 3/19/2025 12:12:44 | |
| CCB1 | S | Ammonia-N | P | -0.0393 | mg/l | 3/19/2025 12:12:46 | |
| PB167189BL | S | Ammonia-N | P | -0.0367 | mg/l | 3/19/2025 12:12:50 | |
| PB167189BS | S | Ammonia-N | P | 0.9864 | mg/l | 3/19/2025 12:23:24 | |
| Q1567-01 | S | Ammonia-N | P | 19.1196 | mg/l | 3/19/2025 12:23:26 | |
| Q1567-05 | S | Ammonia-N | P | 3.811 | mg/l | 3/19/2025 12:23:28 | |
| Q1567-05DUP | S | Ammonia-N | P | 3.8165 | mg/l | 3/19/2025 12:23:30 | |
| Q1567-05MS | S | Ammonia-N | P | 5.0252 | mg/l | 3/19/2025 12:23:31 | |
| Q1567-05MSD | S | Ammonia-N | P | 5.6292 | mg/l | 3/19/2025 12:23:32 | |
| RL CHECK | S | Ammonia-N | P | 0.0655 | mg/l | 3/19/2025 12:23:33 | |
| PB167197BL | S | Ammonia-N | P | 0.0021 | mg/l | 3/19/2025 12:34:05 | |
| PB167197BS | S | Ammonia-N | P | 0.9778 | mg/l | 3/19/2025 12:34:08 | |
| CCV2 | S | Ammonia-N | P | 0.9031 | mg/l | 3/19/2025 12:34:09 | |
| CCB2 | S | Ammonia-N | P | -0.0116 | mg/l | 3/19/2025 12:34:11 | |
| Q1597-01 | S | Ammonia-N | P | 0.017 | mg/l | 3/19/2025 13:10:08 | |
| Q1597-01DUP | S | Ammonia-N | P | 0.0186 | mg/l | 3/19/2025 13:10:09 | |
| Q1597-01MS | S | Ammonia-N | P | 0.9535 | mg/l | 3/19/2025 13:10:10 | |
| Q1597-01MSD | S | Ammonia-N | P | 0.9315 | mg/l | 3/19/2025 13:10:11 | |
| Q1597-03 | S | Ammonia-N | P | 0.0034 | mg/l | 3/19/2025 13:10:12 | |
| Q1597-05 | S | Ammonia-N | P | 0.0135 | mg/l | 3/19/2025 13:10:13 | |
| CCV3 | S | Ammonia-N | P | 1.0061 | mg/l | 3/19/2025 13:10:14 | |
| CCB3 | S | Ammonia-N | P | 0.0533 | mg/l | 3/19/2025 13:10:16 | |
| Q1567-01DLX10 | S | Ammonia-N | P | 1.6879 | mg/l | 3/19/2025 13:10:18 | |
| Q1567-05DLX2 | S | Ammonia-N | P | 1.8479 | mg/l | 3/19/2025 13:17:22 | |
| CCV4 | S | Ammonia-N | P | 0.9854 | mg/l | 3/19/2025 13:17:25 | |
| CCB4 | S | Ammonia-N | P | -0.0217 | mg/l | 3/19/2025 13:17:26 | |

Calibration results  Aquakem 7.2AQ1  

CHEMTECH CONSULTING GROUP INC
284 Sheffield Street, Mountainside, NJ 07092

Reviewed by : RM  Instrument ID : Konelab

3/19/2025 11:22

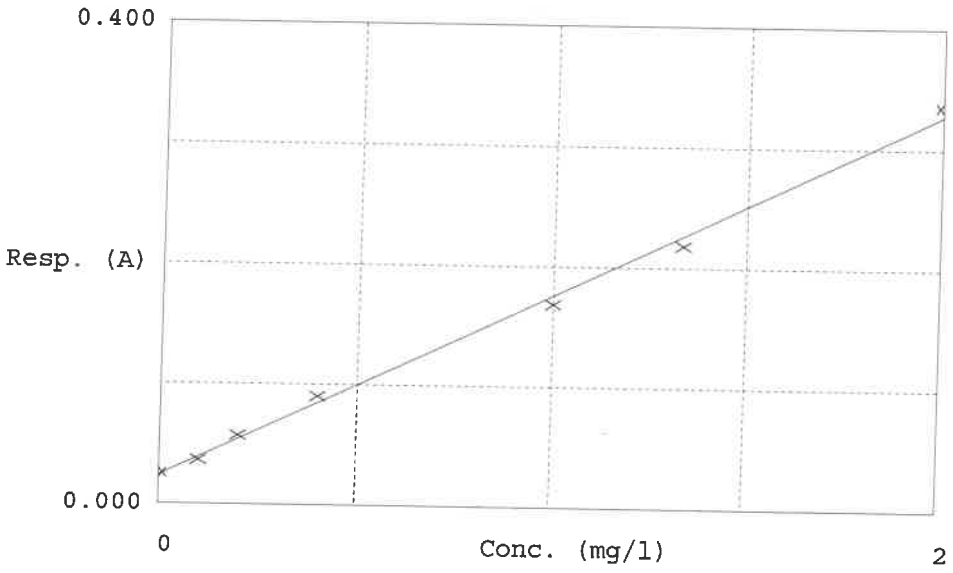
Test Ammonia-N

Accepted 3/19/2025 11:22

Factor 6.583
Bias 0.024

Coeff. of det. 0.997154

Errors




| | Calibrator | Response | Calc. con. | Conc. | Errors |
|---|---|---|---|---|---|
| 1 | 0.00PPM | 0.026 | 0.0112 | 0.0000 | - |
| 2 | NH3-2PPM | 0.037 | 0.0836 | 0.1000 | -16.4 |
| 3 | NH3-2PPM | 0.057 | 0.2194 | 0.2000 | 9.7 |
| 4 | NH3-2PPM | 0.090 | 0.4351 | 0.4000 | 8.8 |
| 5 | NH3-2PPM | 0.169 | 0.9531 | 1.0000 | -4.7 |
| 6 | NH3-2PPM | 0.218 | 1.2802 | 1.3333 | -4.1.5 |
| 7 | NH3-2PPM | 0.335 | 2.0508 | 2.0000 | 2.5 |

RR

03/19/2025
RM

Alliance TECHNICAL GROUP

# Water Phosphorus-Total Preparation Sheet

PB167144

**SOP ID :** M365.3 & SM4500-P E-18

**SDG No :** N/A

**Matrix :** WATER

**Pippete ID :** WC

**Balance ID :** N/A

**Hood ID :** HOOD#3

**Block ID :** WC S-1, WC S-2

**Weigh By :** N/A

**Start Digest Date:** 03/14/2025 **Time :** 11:30 **Temp :** 95 °C

**End Digest Date:** 03/14/2025 **Time :** 12:45 **Temp :** 96 °C

**Digestion tube ID :** M5595

**Filter paper ID :** 400213

**pH Meter ID :** N/A

**Block Thermometer ID :** WC-BLOCK#1

**Prep Technician Signature:** NF

**Supervisor Signature:** LR

| Standared Name | MLS USED | STD REF. # FROM LOG |
|---|---|---|
| LCSW | 0.5ML | WP110401 |
| MS/MSD SPIKE SOL. | 0.5ML | WP110400 |
| PBW | 50ML | W3112 |
| N/A | N/A | N/A |
| N/A | N/A | N/A |

| Chemical Used | ML/SAMPLE USED | Lot Number |
|---|---|---|
| 11N H2SO4 | 1ML | WP109922 |
| AMMONIUM PERSULFATE | 0.4g | W3035 |
| pH Paper 0-14 | N/A | W3140 |
| N/A | N/A | N/A |
| N/A | N/A | N/A |
| N/A | N/A | N/A |
| N/A | N/A | N/A |
| N/A | N/A | N/A |
| N/A | N/A | N/A |
| N/A | N/A | N/A |

| LAB SAMPLE ID | CLIENT SAMPLE ID | Wt(g)/Vol(ml) | Comment |
|---|---|---|---|
| CAL1 | CAL1 | 50.0ML | WP112299 |
| CAL2 | CAL2 | 50.0ML | WP112300 |
| CAL3 | CAL3 | 50.0ML | WP112301 |
| CAL4 | CAL4 | 50.0ML | WP112302 |
| CAL5 | CAL5 | 50.0ML | WP112303 |
| CAL6 | CAL6 | 50.0ML | WP112304 |
| ICV | ICV | 50.0ML | WP112306 |
| ICB | ICB | 50.0ML | W3112 |
| CCV | CCV | 50.0ML | WP112305 |
| CCB | CCB | 50.0ML | W3112 |

**Extraction Conformance/Non-Conformance Comments:**

N/A

| Date / Time | Prepped Sample Relinquished By/Location | Received By/Location |
|---|---|---|
| | | |
| | Preparation Group | Analysis Group |

NF

03.14.2025

Alliance TECHNICAL GROUP

## Water Phosphorus-Total Preparation Sheet

**PB167144**

| Lab Sample ID | Client Sample ID | Initial Vol (ml) | Final Vol (ml) | pH | Sulfide | Oxidizing | Nitrate/ Nitrite | Comment | Prep Pos |
|---|---|---|---|---|---|---|---|---|---|
| PB167144BL | PBW144 | 50 | 50 | <2 | N/A | N/A | N/A | N/A | N/A |
| PB167144BS | LCS144 | 50 | 50 | <2 | N/A | N/A | N/A | N/A | N/A |
| Q1505-13 | PT-NUT2-WP | 50 | 50 | <2 | N/A | N/A | N/A | N/A | N/A |
| Q1567-01 | EFFLUENT | 50 | 50 | <2 | N/A | N/A | N/A | N/A | N/A |
| Q1567-01DUP | EFFLUENTDUP | 50 | 50 | <2 | N/A | N/A | N/A | N/A | N/A |
| Q1567-01MS | EFFLUENTMS | 50 | 50 | <2 | N/A | N/A | N/A | N/A | N/A |
| Q1567-01MSD | EFFLUENTMSD | 50 | 50 | <2 | N/A | N/A | N/A | N/A | N/A |

# WORKLIST(Hardcopy Internal Chain)

**WorkList Name :** TOTAL P-03142025 **WorkList ID :** 188277 **Department :** Distillation **Date :** 03-14-2025 08:37:47

| Sample | Customer Sample | Matrix | Test | Preservative | Customer | Raw Sample Storage Location | Collect Date | Method |
|---|---|---|---|---|---|---|---|---|
| Q1505-13 | PT-NUT2-WP | Water | Phosphorus-Total | Conc H2SO4 to pH < 2 | ALLI03 | QA Of | 03/03/2025 | 365.3 |
| Q1567-01 | EFFLUENT | Water | Phosphorus-Total | Conc H2SO4 to pH < 2 | HOLL01 | F11 | 03/13/2025 | 365.3 |

**Date/Time** 03.14.2025 , 10:50
**Raw Sample Received by:** NF(WC)
**Raw Sample Relinquished by:** MWC)



**Date/Time** 03.14.2025 , 16:00
**Raw Sample Received by:** M.Well
**Raw Sample Relinquished by:** NF(WC)

Alliance TECHNICAL GROUP

# Water Ammonia Preparation Sheet

PB167189

**SOP ID :** MSM4500-NH3 B,G-Ammonia-17

**SDG No :** N/A

**Matrix :** WATER

**Pippete ID :** WC

**Balance ID :** N/A

**Hood ID :** HOOD#2

**Block ID :** WC-DIST-BLOCK-1

**Weigh By :** N/A

**Start Digest Date:** 03/19/2025 **Time :** 09:00 **Temp :** 150 °C

**End Digest Date:** 03/19/2025 **Time :** 10:00 **Temp :** 160 °C

**Digestion tube ID :** M5595

**Filter paper ID :** N/A

**pH Meter ID :** N/A

**Block Thermometer ID :** WC CYANIDE

**Prep Technician Signature:** RM

**Supervisor Signature:** 12

| Standared Name | MLS USED | STD REF. # FROM LOG |
|---|---|---|
| LCSW | 1.0ML | WP112335 |
| MS/MSD SPIKE SOL. | 1.0ML | WP112334 |
| PBW | 50.0ML | W3112 |
| RL CHECK | 0.1ML | WP112334 |
| N/A | N/A | N/A |

| Chemical Used | ML/SAMPLE USED | Lot Number |
|---|---|---|
| BORATE BUFFER | 2.5ML | WP111325 |
| NAOH 6N | 0.5-2.0ML | WP111318 |
| H2SO4 0.04N | 5.0ML | WP110335 |
| pH strip-Ammonia | N/A | W3133 |
| KI-starch paper | N/A | W3155 |
| N/A | N/A | N/A |
| N/A | N/A | N/A |
| N/A | N/A | N/A |
| N/A | N/A | N/A |
| N/A | N/A | N/A |

**Extraction Conformance/Non-Conformance Comments:**

ALL GLASSWEAR ARE STEAMED OUT AND THERE WERE NO TRACE OF AMMONIA USING NESLER REAGENT
WP111604,Due to bad matrix and client history 1ML was taken as an initial volume for Q1567-01 and Q1567-05

| Date / Time | Prepped Sample Relinquished By/Location | Received By/Location |
|---|---|---|
| 03/19/2025 10.40 | RM (WC) | RM (WC) |
| | Preparation Group | Analysis Group |

Alliance TECHNICAL GROUP

## Water Ammonia Preparation Sheet

**PB167189**

| Lab Sample ID | Client Sample ID | Initial Vol (ml) | Final Vol (ml) | pH | Sulfide | Oxidizing | Nitrate/ Nitrite | Comment | Prep Pos |
|---|---|---|---|---|---|---|---|---|---|
| PB167189BL | PBW189 | 50 | 50 | <2 | N/A | Negative | N/A | AFTER ADDING 6N NAOH PH IS 9.5 | N/A |
| PB167189BS | LCS189 | 50 | 50 | <2 | N/A | Negative | N/A | AFTER ADDING 6N NAOH PH IS 9.5 | N/A |
| Q1567-01 | EFFLUENT | 1 | 50 | <2 | N/A | Negative | N/A | AFTER ADDING 6N NAOH PH IS 9.5 | N/A |
| Q1567-05 | INFLUENT | 1 | 50 | <2 | N/A | Negative | N/A | AFTER ADDING 6N NAOH PH IS 9.5 | N/A |
| Q1567-05DUP | INFLUENTDUP | 1 | 50 | <2 | N/A | Negative | N/A | AFTER ADDING 6N NAOH PH IS 9.5 | N/A |
| Q1567-05MS | INFLUENTMS | 1 | 50 | <2 | N/A | Negative | N/A | AFTER ADDING 6N NAOH PH IS 9.5 | N/A |
| Q1567-05MSD | INFLUENTMSD | 1 | 50 | <2 | N/A | Negative | N/A | AFTER ADDING 6N NAOH PH IS 9.5 | N/A |

# WORKLIST(Hardcopy Internal Chain)

**WorkList Name :** AMMONIA-WATER **WorkList ID :** 188351 **Department :** Distillation **Date :** 03-18-2025 14:42:56

| Sample | Customer Sample | Matrix | Test | Preservative | Customer | Raw Sample Storage Location | Collect Date | Method |
|---|---|---|---|---|---|---|---|---|
| Q1567-01 | EFFLUENT | Water | Ammonia | Conc H2SO4 to pH < 2 | HOLL01 | F11 | 03/13/2025 | SM4500-NH3 |
| Q1567-05 | INFLUENT | Water | Ammonia | Conc H2SO4 to pH < 2 | HOLL01 | F11 | 03/13/2025 | SM4500-NH3 |

**Date/Time** 03/19/2025 08.15

**Raw Sample Received by:** RM (WC)

**Raw Sample Relinquished by:** [signature]



**Date/Time** 03/19/2025 10.45

**Raw Sample Received by:** [signature]

**Raw Sample Relinquished by:** RM (WC)

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

**Instrument ID:** WC SC-3

## Daily Analysis Runlog For Sequence/QCBatch ID # LB135027

| | | | |
|---|---|---|---|
| Review By | jignesh | Review On | 3/14/2025 10:47:19 AM |
| Supervise By | Iwona | Supervise On | 3/14/2025 1:47:18 PM |
| SubDirectory | LB135027 | Test | Oil and Grease |

| STD. NAME | STD REF.# |
|---|---|
| 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 | W3177,M6069,EP2593,WP110826,NA,NA,WP100827,NA,WP100828 |

| Sr# | SampleId | ClientID | QcType | Date | Comment | Operator | Status |
|---|---|---|---|---|---|---|---|
| 1 | LB135027BL | LB135027BL | MB | 03/14/25 10:00 | | jignesh | OK |
| 2 | LB135027BS | LB135027BS | LCS | 03/14/25 10:00 | | jignesh | OK |
| 3 | Q1505-17 | PT-ORG1L-WP | SAM | 03/14/25 10:00 | | jignesh | OK |
| 4 | Q1539-01 | TAPIAL3-MW03D-031 | SAM | 03/14/25 10:00 | | jignesh | OK |
| 5 | Q1539-02 | TAPFTA-MW01I-0310 | SAM | 03/14/25 10:00 | | jignesh | OK |
| 6 | Q1567-01 | EFFLUENT | SAM | 03/14/25 10:00 | | jignesh | OK |
| 7 | Q1567-02 | Q1567-01MS | MS | 03/14/25 10:00 | | jignesh | OK |
| 8 | Q1567-03 | Q1567-01MSD | MSD | 03/14/25 10:00 | | jignesh | OK |

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

**Instrument ID:** DO METER

## Daily Analysis Runlog For Sequence/QCBatch ID # LB135031

| | | | |
|---|---|---|---|
| Review By | rubina | Review On | 3/20/2025 10:10:50 AM |
| Supervise By | Iwona | Supervise On | 3/20/2025 10:12:27 AM |
| SubDirectory | LB135031 | Test | BOD5 |

| STD. NAME | STD REF.# |
|---|---|
| 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 | WP112296,W3149,WP110386,W3103,W3109,W3105,WP112298,WP112297,WP111323 |

| Sr# | SampleId | ClientID | QcType | Date | Comment | Operator | Status |
|---|---|---|---|---|---|---|---|
| 1 | LB135031BL | LB135031BL | MB | 03/14/25 10:30 | | rubina | OK |
| 2 | LB135031BS | LB135031BS | LCS | 03/14/25 10:30 | | rubina | OK |
| 3 | Q1551-02 | COMP | SAM | 03/14/25 10:30 | Intermediate dilution-DLX10 | rubina | OK |
| 4 | Q1551-02DUP | COMPDUP | DUP | 03/14/25 10:30 | Intermediate dilution-DLX10 | rubina | OK |
| 5 | Q1567-01 | EFFLUENT | SAM | 03/14/25 10:30 | Intermediate dilution-DLX10 | rubina | OK |
| 6 | Q1567-05 | INFLUENT | SAM | 03/14/25 10:30 | Intermediate dilution-DLX100 | rubina | OK |

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

**Instrument ID:** SPECTROPHOTOMETER-1

## Daily Analysis Runlog For Sequence/QCBatch ID # LB135037

| | | | |
|---|---|---|---|
| Review By | Niha | Review On | 3/17/2025 1:03:07 PM |
| Supervise By | Iwona | Supervise On | 3/18/2025 4:49:36 PM |
| SubDirectory | LB135037 | Test | Phosphorus-Ortho |

| STD. NAME | STD REF.# |
|---|---|
| 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 | WP112304,WP112303,WP112302,WP112301,WP112300,WP112299,WP112305,WP110380,WP112308,WP111415,V |

| Sr# | SampleId | ClientID | QcType | Date | Comment | Operator | Status |
|---|---|---|---|---|---|---|---|
| 1 | CAL1 | CAL1 | CAL | 03/14/25 15:15 | | Niha | OK |
| 2 | CAL2 | CAL2 | CAL | 03/14/25 15:15 | | Niha | OK |
| 3 | CAL3 | CAL3 | CAL | 03/14/25 15:16 | | Niha | OK |
| 4 | CAL4 | CAL4 | CAL | 03/14/25 15:16 | | Niha | OK |
| 5 | CAL5 | CAL5 | CAL | 03/14/25 15:17 | | Niha | OK |
| 6 | CAL6 | CAL6 | CAL | 03/14/25 15:17 | | Niha | OK |
| 7 | ICV | ICV | ICV | 03/14/25 15:18 | | Niha | OK |
| 8 | ICB | ICB | ICB | 03/14/25 15:18 | | Niha | OK |
| 9 | CCV1 | CCV1 | CCV | 03/14/25 15:19 | | Niha | OK |
| 10 | CCB1 | CCB1 | CCB | 03/14/25 15:19 | | Niha | OK |
| 11 | RL Check | RL Check | SAM | 03/14/25 15:20 | | Niha | OK |
| 12 | LB135037BL | LB135037BL | MB | 03/14/25 15:20 | | Niha | OK |
| 13 | LB135037BS | LB135037BS | LCS | 03/14/25 15:21 | | Niha | OK |
| 14 | Q1505-12DL | PT-NUT1-WPDL | SAM | 03/14/25 15:21 | | Niha | OK |
| 15 | Q1567-01 | EFFLUENT | SAM | 03/14/25 15:22 | | Niha | OK |
| 16 | Q1567-01DUP | EFFLUENTDUP | DUP | 03/14/25 15:22 | | Niha | OK |
| 17 | Q1567-01MS | EFFLUENTMS | MS | 03/14/25 15:23 | | Niha | OK |
| 18 | Q1567-01MSD | EFFLUENTMSD | MSD | 03/14/25 15:23 | | Niha | OK |

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**Instrument ID:** SPECTROPHOTOMETER-1

## Daily Analysis Runlog For Sequence/QCBatch ID # LB135037

| | | | |
|---|---|---|---|
| Review By | Niha | Review On | 3/17/2025 1:03:07 PM |
| Supervise By | Iwona | Supervise On | 3/18/2025 4:49:36 PM |
| SubDirectory | LB135037 | Test | Phosphorus-Ortho |

| STD. NAME | STD REF.# |
|---|---|
| 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 | WP112304,WP112303,WP112302,WP112301,WP112300,WP112299,WP112305,WP110380,WP112308,WP111415,V |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 19 | CCV2 | CCV2 | CCV | 03/14/25 15:24 | | Niha | OK |
| 20 | CCB2 | CCB2 | CCB | 03/14/25 15:24 | | Niha | OK |

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**Instrument ID:** SPECTROPHOTOMETER-1

## Daily Analysis Runlog For Sequence/QCBatch ID # LB135041

| | | | |
|---|---|---|---|
| Review By | Niha | Review On | 3/17/2025 1:02:32 PM |
| Supervise By | Iwona | Supervise On | 3/18/2025 4:48:37 PM |
| SubDirectory | LB135041 | Test | Phosphorus-Total |

| STD. NAME | STD REF.# |
|---|---|
| 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 | WP112304,WP112303,WP112302,WP112301,WP112300,WP112299,WP112305,WP110380,WP112308,WP111415,V |

| Sr# | SampleId | ClientID | QcType | Date | Comment | Operator | Status |
|---|---|---|---|---|---|---|---|
| 1 | CAL1 | CAL1 | CAL | 03/14/25 14:10 | | Niha | OK |
| 2 | CAL2 | CAL2 | CAL | 03/14/25 14:10 | | Niha | OK |
| 3 | CAL3 | CAL3 | CAL | 03/14/25 14:11 | | Niha | OK |
| 4 | CAL4 | CAL4 | CAL | 03/14/25 14:11 | | Niha | OK |
| 5 | CAL5 | CAL5 | CAL | 03/14/25 14:12 | | Niha | OK |
| 6 | CAL6 | CAL6 | CAL | 03/14/25 14:12 | | Niha | OK |
| 7 | ICV | ICV | ICV | 03/14/25 14:13 | | Niha | OK |
| 8 | ICB | ICB | ICB | 03/14/25 14:13 | | Niha | OK |
| 9 | CCV1 | CCV1 | CCV | 03/14/25 14:14 | | Niha | OK |
| 10 | CCB1 | CCB1 | CCB | 03/14/25 14:14 | | Niha | OK |
| 11 | RL Check | RL Check | SAM | 03/14/25 14:15 | | Niha | OK |
| 12 | PB167144BL | PB167144BL | MB | 03/14/25 14:15 | | Niha | OK |
| 13 | PB167144BS | PB167144BS | LCS | 03/14/25 14:16 | | Niha | OK |
| 14 | Q1505-13 | PT-NUT2-WP | SAM | 03/14/25 14:16 | | Niha | OK |
| 15 | Q1567-01 | EFFLUENT | SAM | 03/14/25 14:17 | | Niha | OK |
| 16 | Q1567-01DUP | EFFLUENTDUP | DUP | 03/14/25 14:17 | | Niha | OK |
| 17 | Q1567-01MS | EFFLUENTMS | MS | 03/14/25 14:18 | | Niha | OK |
| 18 | Q1567-01MSD | EFFLUENTMSD | MSD | 03/14/25 14:18 | | Niha | OK |

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**Instrument ID:** SPECTROPHOTOMETER-1

## Daily Analysis Runlog For Sequence/QCBatch ID # LB135041

| | | | |
|---|---|---|---|
| Review By | Niha | Review On | 3/17/2025 1:02:32 PM |
| Supervise By | Iwona | Supervise On | 3/18/2025 4:48:37 PM |
| SubDirectory | LB135041 | Test | Phosphorus-Total |

| STD. NAME | STD REF.# |
|---|---|
| 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 | WP112304,WP112303,WP112302,WP112301,WP112300,WP112299,WP112305,WP110380,WP112308,WP111415,V |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 19 | Q1505-13DL | PT-NUT2-WPDL | SAM | 03/14/25 14:19 | | Niha | OK |
| 20 | CCV2 | CCV2 | CCV | 03/14/25 14:19 | | Niha | OK |
| 21 | CCB2 | CCB2 | CCB | 03/14/25 14:20 | | Niha | OK |

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**Instrument ID:** WC SC-3

## Daily Analysis Runlog For Sequence/QCBatch ID # LB135048

| | | | |
|---|---|---|---|
| Review By | jignesh | Review On | 3/17/2025 8:35:45 AM |
| Supervise By | Iwona | Supervise On | 3/17/2025 9:55:06 AM |
| SubDirectory | LB135048 | Test | TSS |

| STD. NAME | STD REF.# |
|---|---|
| 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 | LB135048BL | LB135048BL | MB | 03/17/25 09:30 | | jignesh | OK |
| 2 | LB135048BS | LB135048BS | LCS | 03/17/25 09:30 | | jignesh | OK |
| 3 | Q1551-02 | COMP | SAM | 03/17/25 09:30 | | jignesh | OK |
| 4 | Q1551-02DUP | COMPDUP | DUP | 03/17/25 09:30 | | jignesh | OK |
| 5 | Q1567-01 | EFFLUENT | SAM | 03/17/25 09:30 | | jignesh | OK |
| 6 | Q1567-04 | AERATION 1 | SAM | 03/17/25 09:30 | | jignesh | OK |
| 7 | Q1583-02 | EFF-WASTE WATER | SAM | 03/17/25 09:30 | | jignesh | OK |

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**Instrument ID:** KONELAB

## Daily Analysis Runlog For Sequence/QCBatch ID # LB135090

| | | | |
|---|---|---|---|
| Review By | rubina | Review On | 3/20/2025 1:12:32 PM |
| Supervise By | Iwona | Supervise On | 3/20/2025 2:30:17 PM |
| SubDirectory | LB135090 | Test | Ammonia |

| STD. NAME | STD REF.# |
|---|---|
| ICAL Standard | WP112353 |
| ICV Standard | WP112355 |
| CCV Standard | WP112354 |
| ICSA Standard | N/A |
| CRI Standard | N/A |
| LCS Standard | WP112335 |
| Chk Standard | WP112163,WP111745,WP111385,WP111660 |

| Sr# | SampleId | ClientID | QcType | Date | Comment | Operator | Status |
|---|---|---|---|---|---|---|---|
| 1 | 0.0PPM | 0.0PPM | CAL1 | 03/19/25 11:18 | | rubina | OK |
| 2 | 0.1PPM | 0.1PPM | CAL2 | 03/19/25 11:18 | | rubina | OK |
| 3 | 0.2PPM | 0.2PPM | CAL3 | 03/19/25 11:18 | | rubina | OK |
| 4 | 0.4PPM | 0.4PPM | CAL4 | 03/19/25 11:18 | | rubina | OK |
| 5 | 1.0PPM | 1.0PPM | CAL5 | 03/19/25 11:18 | | rubina | OK |
| 6 | 1.3PPM | 1.3PPM | CAL6 | 03/19/25 11:18 | | rubina | OK |
| 7 | 2.0PPM | 2.0PPM | CAL7 | 03/19/25 11:18 | | rubina | OK |
| 8 | ICV1 | ICV1 | ICV | 03/19/25 12:12 | | rubina | OK |
| 9 | ICB1 | ICB1 | ICB | 03/19/25 12:12 | | rubina | OK |
| 10 | CCV1 | CCV1 | CCV | 03/19/25 12:12 | | rubina | OK |
| 11 | CCB1 | CCB1 | CCB | 03/19/25 12:12 | | rubina | OK |
| 12 | PB167189BL | PB167189BL | MB | 03/19/25 12:12 | | rubina | OK |
| 13 | PB167189BS | PB167189BS | LCS | 03/19/25 12:23 | | rubina | OK |
| 14 | Q1567-01 | EFFLUENT | SAM | 03/19/25 12:23 | High | rubina | Dilution |
| 15 | Q1567-05 | INFLUENT | SAM | 03/19/25 12:23 | High | rubina | Dilution |
| 16 | Q1567-05DUP | INFLUENTDUP | DUP | 03/19/25 12:23 | | rubina | OK |
| 17 | Q1567-05MS | INFLUENTMS | MS | 03/19/25 12:23 | | rubina | OK |
| 18 | Q1567-05MSD | INFLUENTMSD | MSD | 03/19/25 12:23 | | rubina | OK |

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**Instrument ID:** KONELAB

## Daily Analysis Runlog For Sequence/QCBatch ID # LB135090

| | | | |
|---|---|---|---|
| Review By | rubina | Review On | 3/20/2025 1:12:32 PM |
| Supervise By | Iwona | Supervise On | 3/20/2025 2:30:17 PM |
| SubDirectory | LB135090 | Test | Ammonia |

| STD. NAME | STD REF.# |
|---|---|
| ICAL Standard | WP112353 |
| ICV Standard | WP112355 |
| CCV Standard | WP112354 |
| ICSA Standard | N/A |
| CRI Standard | N/A |
| LCS Standard | WP112335 |
| Chk Standard | WP112163,WP111745,WP111385,WP111660 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 19 | RL | RL | SAM | 03/19/25 12:23 | | rubina | OK |
| 20 | PB167197BL | PB167197BL | MB | 03/19/25 12:34 | | rubina | OK |
| 21 | PB167197BS | PB167197BS | LCS | 03/19/25 12:34 | | rubina | OK |
| 22 | CCV2 | CCV2 | CCV | 03/19/25 12:34 | | rubina | OK |
| 23 | CCB2 | CCB2 | CCB | 03/19/25 12:34 | | rubina | OK |
| 24 | Q1597-01 | 1-CONCRETE-SLAB | SAM | 03/19/25 13:10 | | rubina | OK |
| 25 | Q1597-01DUP | 1-CONCRETE-SLABDUP | DUP | 03/19/25 13:10 | | rubina | OK |
| 26 | Q1597-01MS | 1-CONCRETE-SLABMS | MS | 03/19/25 13:10 | | rubina | OK |
| 27 | Q1597-01MSD | 1-CONCRETE-SLABMSD | MSD | 03/19/25 13:10 | | rubina | OK |
| 28 | Q1597-03 | 2-CONCRETE-SLAB | SAM | 03/19/25 13:10 | | rubina | OK |
| 29 | Q1597-05 | 3-CONCRETE-SLAB | SAM | 03/19/25 13:10 | | rubina | OK |
| 30 | CCV3 | CCV3 | CCV | 03/19/25 13:10 | | rubina | OK |
| 31 | CCB3 | CCB3 | CCB | 03/19/25 13:10 | | rubina | OK |
| 32 | Q1567-01DL | EFFLUENTDL | SAM | 03/19/25 13:10 | Report 10X | rubina | Confirms |
| 33 | Q1567-05DL | INFLUENTDL | SAM | 03/19/25 13:17 | Report 2X | rubina | Confirms |
| 34 | CCV4 | CCV4 | CCV | 03/19/25 13:17 | | rubina | OK |
| 35 | CCB4 | CCB4 | CCB | 03/19/25 13:17 | | rubina | OK |

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# Prep Standard - Chemical Standard Summary

**Order ID :** Q1567

**Test :** Ammonia,BOD5,Oil and Grease,Phosphorus-Ortho,Phosphorus-Total,TSS

**Prepbatch ID :** PB167144,PB167189,

**Sequence ID/Qc Batch ID:** LB135027,LB135031,LB135037,LB135041,LB135048,LB135090,

**Standard ID :**
EP2593,WP100827,WP100828,WP109922,WP110149,WP110150,WP110335,WP110380,WP110386,WP110400,WP110401,WP110587,WP110588,WP110826,WP111317,WP111318,WP111323,WP111325,WP111385,WP111415,WP111660,WP111745,WP112163,WP112296,WP112297,WP112298,WP112299,WP112300,WP112301,WP112302,WP112303,WP112304,WP112305,WP112306,WP112307,WP112308,WP112334,WP112335,WP112353,WP112354,WP112355,WP99896,

**Chemical ID :**
E3551,M5673,M6069,M6121,W1992,W1993,W2306,W2606,W2650,W2653,W2654,W2664,W2666,W2699,W2700,W2708,W2783,W2788,W2845,W2858,W2898,W2979,W3035,W3059,W3074,W3103,W3105,W3109,W3112,W3113,W3132,W3133,W3140,W3144,W3149,W3155,W3174,W3177,

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# Extractions STANDARD PREPARATION LOG

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 3923 | Baked Sodium Sulfate | EP2593 | 03/07/2025 | 07/01/2025 | RUPESHKUMAR SHAH | Extraction_SCALE_2 (EX-SC-2) | None | Riteshkumar Patel 03/07/2025 |

**FROM** 4000.00000gram of E3551 = Final Quantity: 4000.000 gram

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 114 | hexavalent chromium color reagent | WP100827 | 02/02/2023 | 02/09/2023 | Rubina Mughal | WETCHEM_SCALE_5 (WC SC-5) | None | Iwona Zarych 02/02/2023 |

**FROM** 0.25000gram of W2979 + 50.00000ml of W2783 = Final Quantity: 50.000 ml

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# Wet Chemistry STANDARD PREPARATION LOG

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 3456 | Cyanide Intermediate Working Std, 5PPM | WP100828 | 02/02/2023 | 02/03/2023 | Iwona Zarych | None | WETCHEM_PIPETTE_3 (WC) | Sohil Jodhani 02/07/2023 |

**FROM** 0.25000ml of W2898 + 49.75000ml of WP99896 = Final Quantity: 50.000 ml

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 1211 | 11 N sulfuric acid | WP109922 | 09/26/2024 | 03/26/2025 | Iwona Zarych | None | None | Jignesh Parikh 10/07/2024 |

**FROM** 306.00000ml of M5673 + 694.00000ml of W3112 = Final Quantity: 1000.000 ml

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# Wet Chemistry STANDARD PREPARATION LOG

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 153 | Ammonia Stock Std. (1000 ppm) | WP110149 | 10/11/2024 | 04/08/2025 | Rubina Mughal | WETCHEM_SCALE_5 (WCSC-5) | None | Iwona Zarych 10/14/2024 |

**FROM** 3.81900gram of W1993 + 996.18100ml of W3112 = Final Quantity: 1000.000 ml

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 1895 | Ammonia Stock Std, 1000PPM-SS | WP110150 | 10/11/2024 | 04/08/2025 | Rubina Mughal | WETCHEM_SCALE_5 (WCSC-5) | None | Iwona Zarych 10/14/2024 |

**FROM** 3.81900gram of W1992 + 996.18100ml of W3112 = Final Quantity: 1000.000 ml

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# Wet Chemistry STANDARD PREPARATION LOG

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 1597 | 0.04 N H2SO4 | WP110335 | 10/22/2024 | 04/22/2025 | Rubina Mughal | None | WETCHEM_PIPETTE_3 (WC) | Iwona Zarych 10/22/2024 |

**FROM** 1.00000ml of M5673 + 999.00000ml of W3112 = Final Quantity: 1000.000 ml

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 126 | 5N sulfuric acid | WP110380 | 10/24/2024 | 04/24/2025 | Rubina Mughal | None | None | Iwona Zarych 10/24/2024 |

**FROM** 140.00000ml of M5673 + 860.00000ml of W3112 = Final Quantity: 1.000 L

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# Wet Chemistry STANDARD PREPARATION LOG

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 1841 | Sulfuric Acid, 1N | WP110386 | 10/24/2024 | 04/24/2025 | Rubina Mughal | None | WETCHEM_PIPETTE_3 (WC) | Iwona Zarych 10/24/2024 |

**FROM** 2.80000ml of M5673 + 97.20000ml of W3112 = Final Quantity: 100.000 ml

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 115 | Phosphate Stock Std. (50 ppm) | WP110400 | 10/24/2024 | 04/23/2025 | Rubina Mughal | WETCHEM_SCALE_5 (WCSC-5) | None | Iwona Zarych 10/25/2024 |

**FROM** 0.11000gram of W2699 + 500.00000ml of W3112 = Final Quantity: 500.000 ml

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# Wet Chemistry STANDARD PREPARATION LOG

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 2790 | Phosphate Stock std, 50PPM-SS | WP110401 | 10/24/2024 | 04/24/2025 | Rubina Mughal | WETCHEM_SCALE_5 (WCSC-5) | None | Iwona Zarych 10/25/2024 |

**FROM** 0.11000gram of W2708 + 500.00000ml of W3112 = Final Quantity: 500.000 ml

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 648 | Ammonium molybdate solution | WP110587 | 11/07/2024 | 05/07/2025 | Niha Farheen Shaik | WETCHEM_SCALE_5 (WCSC-5) | None | Jignesh Parikh 11/07/2024 |

**FROM** 20.00000gram of W2664 + 480.00000ml of W3112 = Final Quantity: 500.000 ml

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# Wet Chemistry STANDARD PREPARATION LOG

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 588 | Potassium Antimonyl Tartrate | WP110588 | 11/07/2024 | 05/07/2025 | Niha Farheen Shaik | WETCHEM_SCALE_5 (WCSC-5) | None | Jignesh Parikh 11/07/2024 |

**FROM** 1.37150gram of W2306 + 500.00000ml of W3112 = Final Quantity: 500.000 ml

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 229 | 1:1 HCL | WP110826 | 11/22/2024 | 05/13/2025 | Jignesh Parikh | None | None | Iwona Zarych 11/22/2024 |

**FROM** 500.00000ml of M6121 + 500.00000ml of W3112 = Final Quantity: 1.000 L

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# Wet Chemistry STANDARD PREPARATION LOG

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 1796 | NaOH, 0.1N | WP111317 | 01/09/2025 | 07/09/2025 | Rubina Mughal | WETCHEM_SCALE_7 (WCSC-6) | None | Iwona Zarych 01/09/2025 |

**FROM** 4.00000gram of W3113 + 996.00000ml of W3112 = Final Quantity: 1000.000 ml

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 1471 | NaOH Solution, 6N | WP111318 | 01/09/2025 | 07/09/2025 | Rubina Mughal | WETCHEM_SCALE_7 (WCSC-6) | None | Iwona Zarych 01/09/2025 |

**FROM** 240.00000gram of W3113 + 760.00000ml of W3112 = Final Quantity: 1000.000 ml

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# Wet Chemistry STANDARD PREPARATION LOG

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 1571 | Sodium hydroxide, 1N | WP111323 | 01/09/2025 | 07/09/2025 | Rubina Mughal | WETCHEM_SCALE_8 (WCSC-7) | None | Iwona Zarych 01/09/2025 |

**FROM** 4.00000gram of W3113 + 96.00000ml of W3112 = Final Quantity: 100.000 ml

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 1494 | BORATE BUFFER | WP111325 | 01/09/2025 | 07/09/2025 | Rubina Mughal | None | None | Iwona Zarych 01/09/2025 |

**FROM** 100.00000L of W3112 + 9.50000gram of W2700 + 88.00000ml of WP111317 = Final Quantity: 100.000 L

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# Wet Chemistry STANDARD PREPARATION LOG

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 290 | Phenol reagent for Ammonia | WP111385 | 01/13/2025 | 07/13/2025 | Rubina Mughal | WETCHEM_SCALE_8 (WCSC-7) | None | Iwona Zarych 01/13/2025 |

**FROM** 3.20000gram of W3113 + 8.30000gram of W2858 + 88.80000ml of W3112 = Final Quantity: 100.000 ml

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 1213 | Phenolphthalein indicator | WP111415 | 01/15/2025 | 06/04/2025 | Niha Farheen Shaik | WETCHEM_SCALE_5 (WCSC-5) | None | Iwona Zarych 01/16/2025 |

**FROM** 0.10000gram of W2650 + 50.00000ml of W2788 + 50.00000ml of W3112 = Final Quantity: 100.000 ml

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# Wet Chemistry STANDARD PREPARATION LOG

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 635 | EDTA BUFFER FOR AMMONIA | WP111660 | 01/28/2025 | 07/28/2025 | Rubina Mughal | WETCHEM_SCALE_8 (WCSC-7) | None | Iwona Zarych 01/28/2025 |

**FROM** 5.50000gram of W3113 + 50.00000gram of W3132 + 950.00000ml of W3112 = Final Quantity: 1000.000 ml

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 289 | Sodium Hypochlorite for Ammonia | WP111745 | 02/03/2025 | 07/31/2025 | Rubina Mughal | None | None | Iwona Zarych 02/03/2025 |

**FROM** 50.00000ml of W3112 + 50.00000ml of W3174 = Final Quantity: 100.000 ml

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# Wet Chemistry STANDARD PREPARATION LOG

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 740 | sodium nitroferricyanide for ammonia | WP112163 | 02/27/2025 | 03/27/2025 | Rubina Mughal | WETCHEM_SCALE_5 (WCSC-5) | None | Iwona Zarych 03/04/2025 |

**FROM** 0.05000gram of W2666 + 99.95000ml of W3112 = Final Quantity: 100.000 ml

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 127 | BOD Dilution fluid | WP112296 | 03/14/2025 | 03/15/2025 | Rubina Mughal | None | None | Iwona Zarych 03/18/2025 |

**FROM** 18.00000L of W3112 + 3.00000PILLOW of W3144 = Final Quantity: 18.000 L

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# Wet Chemistry STANDARD PREPARATION LOG

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 129 | Glutamic acid-glucose mix for BOD | WP112297 | 03/14/2025 | 03/15/2025 | Rubina Mughal | WETCHEM_SCALE_7 (WCSC-6) | None | Iwona Zarych 03/18/2025 |

**FROM** 0.15000gram of W2653 + 0.15000gram of W2654 + 1000.00000ml of W3112 = Final Quantity: 1000.000 ml

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 128 | polyseed seed control | WP112298 | 03/14/2025 | 03/15/2025 | Rubina Mughal | None | None | Iwona Zarych 03/18/2025 |

**FROM** 1.00000PILLOW of W3059 + 300.00000ml of WP112296 = Final Quantity: 300.000 ml

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# Wet Chemistry STANDARD PREPARATION LOG

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 122 | calibration std. 0 ppm | WP112299 | 03/14/2025 | 03/21/2025 | Niha Farheen Shaik | None | None | Iwona Zarych 03/18/2025 |

**FROM** 100.00000ml of W3112 = Final Quantity: 100.000 ml

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 121 | calibration std. phosphate 0.05 ppm | WP112300 | 03/14/2025 | 03/21/2025 | Niha Farheen Shaik | None | WETCHEM_PIPETTE_3 (WC) | Iwona Zarych 03/18/2025 |

**FROM** 99.90000ml of W3112 + 0.10000ml of WP110400 = Final Quantity: 100.000 ml

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# Wet Chemistry STANDARD PREPARATION LOG

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 120 | calibration std. phosphate 0.1 ppm | WP112301 | 03/14/2025 | 03/21/2025 | Niha Farheen Shaik | None | WETCHEM_PIPETTE_3 (WC) | Iwona Zarych 03/18/2025 |

**FROM** 99.80000ml of W3112 + 0.20000ml of WP110400 = Final Quantity: 100.000 ml

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 119 | calibration std. phosphate 0.3 ppm | WP112302 | 03/14/2025 | 03/21/2025 | Niha Farheen Shaik | None | WETCHEM_PIPETTE_3 (WC) | Iwona Zarych 03/18/2025 |

**FROM** 99.40000ml of W3112 + 0.60000ml of WP110400 = Final Quantity: 100.000 ml

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# Wet Chemistry STANDARD PREPARATION LOG

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 118 | calibration std. phosphate 0.5 ppm | WP112303 | 03/14/2025 | 03/21/2025 | Niha Farheen Shaik | None | WETCHEM_PIPETTE_3 (WC) | Iwona Zarych 03/18/2025 |

**FROM** 99.00000ml of W3112 + 1.00000ml of WP110400 = Final Quantity: 100.000 ml

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 117 | calibration std. phosphate 1 ppm | WP112304 | 03/14/2025 | 03/21/2025 | Niha Farheen Shaik | None | WETCHEM_PIPETTE_3 (WC) | Iwona Zarych 03/18/2025 |

**FROM** 98.00000ml of W3112 + 2.00000ml of WP110400 = Final Quantity: 100.000 ml

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# Wet Chemistry STANDARD PREPARATION LOG

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 124 | phosphate CCV std. | WP112305 | 03/14/2025 | 03/21/2025 | Niha Farheen Shaik | None | WETCHEM_PIPETTE_3 (WC) | Iwona Zarych 03/18/2025 |

**FROM** 99.00000ml of W3112 + 1.00000ml of WP110400 = Final Quantity: 100.000 ml

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 3805 | Phosphate ICV-LCS Std | WP112306 | 03/14/2025 | 03/21/2025 | Niha Farheen Shaik | None | WETCHEM_PIPETTE_3 (WC) | Iwona Zarych 03/18/2025 |

**FROM** 99.00000ml of W3112 + 1.00000ml of WP110401 = Final Quantity: 100.000 ml

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# Wet Chemistry STANDARD PREPARATION LOG

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 590 | Ascorbic Acid | WP112307 | 03/14/2025 | 03/21/2025 | Niha Farheen Shaik | WETCHEM_SCALE_5 (WCSC-5) | None | Iwona Zarych 03/18/2025 |

**FROM** 0.52800gram of W3074 + 30.00000ml of W3112 = Final Quantity: 30.000 ml

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 658 | Combined reagent | WP112308 | 03/14/2025 | 03/15/2025 | Niha Farheen Shaik | None | Glass Pipette-A | Iwona Zarych 03/18/2025 |

**FROM** 15.00000ml of WP110587 + 30.00000ml of WP112307 + 5.00000ml of WP110588 + 50.00000ml of WP110380 = Final Quantity: 100.000 ml

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# Wet Chemistry STANDARD PREPARATION LOG

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 1322 | Ammonia Intermediate Std, 50PPM | WP112334 | 03/18/2025 | 04/08/2025 | Rubina Mughal | None | WETCHEM_PIPETTE_3 (WC) | Iwona Zarych 03/18/2025 |

**FROM** 95.00000ml of W3112 + 5.00000ml of WP110149 = Final Quantity: 100.000 ml

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 1639 | Ammonia Intermediate Std-Second source, 50PPM | WP112335 | 03/18/2025 | 04/08/2025 | Rubina Mughal | None | WETCHEM_PIPETTE_3 (WC) | Iwona Zarych 03/18/2025 |

**FROM** 95.00000ml of W3112 + 5.00000ml of WP110150 = Final Quantity: 100.000 ml

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# Wet Chemistry STANDARD PREPARATION LOG

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 275 | Ammonia Calibration Std. (2 ppm) | WP112353 | 03/19/2025 | 03/20/2025 | Rubina Mughal | None | WETCHEM_PIPETTE_3 (WC) | Iwona Zarych 03/20/2025 |

**FROM** 48.00000ml of W3112 + 2.00000ml of WP112334 = Final Quantity: 50.000 ml

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 285 | Ammonia CCV Std. (1 ppm) | WP112354 | 03/19/2025 | 03/20/2025 | Rubina Mughal | None | WETCHEM_PIPETTE_3 (WC) | Iwona Zarych 03/20/2025 |

**FROM** 49.00000ml of W3112 + 1.00000ml of WP112334 = Final Quantity: 50.000 ml

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# Wet Chemistry STANDARD PREPARATION LOG

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 286 | Ammonia ICV Std. (1 ppm) | WP112355 | 03/19/2025 | 03/20/2025 | Rubina Mughal | None | WETCHEM_PIPETTE_3 (WC) | Iwona Zarych 03/20/2025 |

**FROM** 49.00000ml of W3112 + 1.00000ml of WP112335 = Final Quantity: 50.000 ml

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 11 | Sodium hydroxide absorbing solution 0.25 N | WP99896 | 11/15/2022 | 05/15/2023 | Jignesh Parikh | WETCHEM_SCALE_4 (WCSC-4) | None | Iwona Zarych 11/15/2022 |

**FROM** 21.00000L of W2606 + 210.00000gram of W2845 = Final Quantity: 21.000 L

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# CHEMICAL RECEIPT LOG BOOK

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| PCI Scientific Supply, Inc. | PC19631-100 / SODIUM SULFATE, ANHYDROUS, PEST GRADE, 1 | 313201 | 07/01/2025 | 01/03/2024 / Rajesh | 07/20/2023 / Rajesh | E3551 |

| 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 | 09/21/2023 / mohan | 09/05/2023 / mohan | M5673 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| PCI Scientific Supply, Inc. | 140440 / TEST PAPERS,PH,0-2.5,.2SENSI, 100PK | 80A0441 | 02/29/2028 | 09/03/2024 / jignesh | 08/19/2024 / Jaswal | M6069 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Seidler Chemical | BA-9530-33 / Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L) | 0000275677 | 05/13/2025 | 11/13/2024 / Eman | 10/13/2024 / Eman | M6121 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| PCI Scientific Supply, Inc. | J0660-1 / AMMONIUM CHLORIDE, ACS, 500G | WL13B | 04/08/2025 | 04/08/2015 / apatel | 04/08/2015 / apatel | W1992 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| PCI Scientific Supply, Inc. | J0660-1 / AMMONIUM CHLORIDE, ACS, 500G | XE09B | 04/08/2025 | 04/08/2015 / apatel | 04/08/2015 / apatel | W1993 |

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# CHEMICAL RECEIPT LOG BOOK

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| PCI Scientific Supply, Inc. | A1561-500GM / POTASSIUM ANTIMONY TARTRATE TRIHYDRATE, 500G | 2GH0057 | 12/11/2027 | 12/11/2017 / apatel | 12/11/2017 / apatel | W2306 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Seidler Chemical | DIW / DI Water | Daily Lab-Certified | 10/24/2024 | 10/24/2019 / apatel | 10/24/2019 / apatel | W2606 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| PCI Scientific Supply, Inc. | J2870-1 / PHENOLPHTHALEIN, INDICATOR F/TITRATION, 500G | 0000235350 | 06/04/2025 | 01/31/2020 / AMANDEEP | 01/20/2020 / apatel | W2650 |

| 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. | J07716-1 / Ammonium Molybdate 500G | 0000234410 | 02/11/2026 | 02/10/2020 / AMANDEEP | 01/31/2020 / apatel | W2664 |

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# CHEMICAL RECEIPT LOG BOOK

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| PCI Scientific Supply, Inc. | 87683 / Sodium Nitroferricyanide 250g | W12F013 | 02/10/2030 | 02/10/2020 / apatel | 02/10/2020 / apatel | W2666 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| PCI Scientific Supply, Inc. | J3246-1 / POTAS PHOSPHATE, MONO, CRYS, ACS, 500G | 04/2019-20 | 04/23/2025 | 04/23/2020 / apatel | 03/11/2020 / apatel | W2699 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| PCI Scientific Supply, Inc. | J3568-1 / Sodium Borate, 500 gms | 2019111354 | 04/23/2025 | 04/23/2020 / apatel | 03/11/2020 / apatel | W2700 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| PCI Scientific Supply, Inc. | J3246-1 / POTAS PHOSPHATE, MONO, CRYS, ACS, 500G | 99/2019-20 | 05/05/2025 | 05/05/2020 / apatel | 05/05/2020 / apatel | W2708 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Seidler Chemical | BA-9254-03 / Acetone, Ultra Resi (cs/4x4L) | 0000263246 | 06/17/2023 | 12/23/2020 / ketankumar | 12/23/2020 / ketankumar | W2783 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| PCI Scientific Supply, Inc. | PC16721-3 / Isopropanol, 99% | C20F23007 | 06/23/2025 | 12/30/2020 / apatel | 12/30/2020 / apatel | W2788 |

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# CHEMICAL RECEIPT LOG BOOK

| 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 | 21C2456604 | 01/31/2024 | 03/30/2022 / JIGNESH | 06/24/2021 / apatel | W2845 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| PCI Scientific Supply, Inc. | P1060-10 / PHENOL, ACS, 500G | M13H048 | 01/07/2026 | 07/07/2021 / apatel | 07/07/2021 / apatel | W2858 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Supelco | 90157 / Cyanide Standard, 1000ppm from Supelco | HC03107133 | 06/30/2023 | 01/24/2022 / apatel | 01/24/2022 / apatel | W2898 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| PCI Scientific Supply, Inc. | 31390 / 1,5-Diphenylcarbazide | MKCR6636 | 12/09/2027 | 12/09/2022 / Iwona | 12/09/2022 / Iwona | W2979 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| PCI Scientific Supply, Inc. | BDH0214-500G / Ammonium Persulfate Crystal, 500g | MKCR9319 | 06/30/2028 | 03/05/2024 / Iwona | 06/06/2023 / Iwona | W3035 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| PCI Scientific Supply, Inc. | 136742-80 / POLYSEED | 152305 | 05/30/2025 | 02/15/2024 / Rubina | 10/18/2023 / Iwona | W3059 |

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# CHEMICAL RECEIPT LOG BOOK

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| PCI Scientific Supply, Inc. | J0938-7 / Ascorbic Acid, 500 gms | MKCS4627 | 09/30/2025 | 01/16/2024 / Iwona | 01/16/2024 / Iwona | W3074 |

| 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 / Iwona | 04/22/2024 / Iwona | 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,4LITRE | 4403S13 | 09/30/2025 | 04/22/2024 / Iwona | 04/22/2024 / Iwona | 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 / Iwona | 05/23/2024 / Iwona | 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 / Iwona | 07/03/2024 / Iwona | 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 / Iwona | 07/08/2024 / Iwona | W3113 |

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# CHEMICAL RECEIPT LOG BOOK

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| PCI Scientific Supply, Inc. | PC05050-1 / EDTA, disodium salt, dihydrate 1 lb | 2ND0156 | 07/10/2026 | 07/26/2024 / Iwona | 07/26/2024 / Iwona | W3132 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| PCI Scientific Supply, Inc. | 140476 / Test Paper,PH Short Range 9.0/10.0 | L23 | 08/22/2029 | 08/22/2024 / Iwona | 08/22/2024 / Iwona | W3133 |

| 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 | 10D0142 | 09/17/2029 | 09/17/2024 / Iwona | 09/17/2024 / Iwona | W3140 |

| 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 / Iwona | 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 / Iwona | 10/16/2024 / Iwona | W3149 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| PCI Scientific Supply, Inc. | 140730 / TEST PAPER,POT.IOD-STRCH,PK100,CS12 | 14-860 | 12/02/2029 | 12/02/2024 / Iwona | 12/02/2024 / Iwona | W3155 |

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

# CHEMICAL RECEIPT LOG BOOK

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| PCI Scientific Supply, Inc. | J9416-1 / Sodium Hypochlorite 500 ml | 2501J28 | 07/31/2025 | 01/24/2025 / Iwona | 01/24/2025 / Iwona | W3174 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Seidler Chemical | BA-9262-03 / Hexane, Ultra-Resi (cs/4x4L) | 24G1962003 | 08/22/2025 | 02/03/2025 / jignesh | 01/31/2025 / jignesh | W3177 |

# CERTIFICATE OF ANALYSIS



**Printed:** 12/8/2017

**Customer No :** 30017 **Customer :** PCI SCIENTIFIC **Customer PO :** 6035343

**Order Number :** 3008126 **Delivery # :** 58495347

**Catalog :** A1561 Potassium Antimony Tartrate Trihydrate, Reagent, ACS **Lot :** 2GH0057

W2306
Received
12/11/17
AP

**Chemical Formula :** $C_8H_4K_2O_{12}Sb_2.3H_2O$ **Formula Weight :** 667.87

**CAS# :** 28300-74-5

| Test | Limit Min. | Limit Max. | Results |
|---|---|---|---|
| ASSAY ($C_8H_4K_2O_{12}Sb_2.3HO$) | 99.0 | 103.0 % | 101.0 % |
| TITRATABLE ACID OR BASE | -- | 0.020 meq/g | <0.020 meq/g |
| LOSS ON DRYING | -- | 2.7 % | <2.7 % |
| ARSENIC (As) | -- | 0.015 % | <0.015 % |
| APPEARANCE | | | WHITE POWDER |
| DATE OF MANUFACTURE | | | 29-DEC-2015 |

**All pharmaceutical ingredients are tested using current edition of applicable pharmacopeia.**

**Read and understand label and MSDS/SDS before handling any chemical. All Spectrum's chemicals are for manufacturing, processing, repacking or research purposes by experienced personnel only. The customer must ensure to provide its users adequate hazardous material training and appropriate protective gears before handling our chemicals.**

Certificate of Analysis Results Certified By:

Ibad Tirmizi
Director, Quality Assurance, Quality Control
New Brunswick, NJ 08901

spectrum CHEMICAL MFG CORP
SpectrumChemical.com

*Corporate Office:*
755-769 Jersey Ave.
New Brunswick, NJ 08901
(732) 214-1300

*West Coast Plant:*
14422 S. San Pedro St.
Gardena, CA 90248
(310) 516-8000

# Certificate of Analysis

***Date of Release:*** ***12/18/2013***

***Product:*** ***Ammonium Chloride GR ACS*** ***Catalog No.:*** ***AX1270 all size codes***

***Grade:*** ***Meets ACS Specifications*** ***CAS #:*** ***12125-02-9***

***Country of Origin:*** ***India*** ***FW:*** ***53.49***

***Lot No.:*** ***WL13B*** $ClH_4N$

| | Requirement | | | |
|---|---|---|---|---|
| **Characteristic** | **Minimum** | **Maximum** | **Results** | **UOM** |
| Assay (argentometric) | 99.5 | | 99.9 | % |
| Calcium (Ca) | | 0.001 | 0.0001 | % |
| Form | White crystals | | White crystals | |
| Heavy metals (as Pb) | | 5 | 5 | ppm |
| Identification | To pass test | | Passes | |
| Insoluble matter | | 0.005 | 0.002 | % |
| Iron (Fe) | | 2 | 2 | ppm |
| Loss on drying (105 C) | | 0.5 | 0.21 | % |
| Magnesium (Mg) | | 5 | 0.6 | ppm |
| pH of a 5% solution at 25 C | 4.5 | 5.5 | 4.76 | |
| Phosphate (PO4) | | 2 | 2 | ppm |
| Residue after ignition | | 0.01 | 0.002 | % |
| Sulfate (SO4) | | 0.002 | 0.002 | % |

Joe Schoellkopff
---
Quality Control Manager

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



EMD Millipore Corporation
290 Concord Road
Billerica, MA 01821

# Certificate of Analysis

***Date of Release:*** ***5/12/2014***

***Product:*** ***Ammonium Chloride GR ACS*** ***Catalog No.:*** ***AX1270 all size codes***

***Grade:*** ***Meets ACS Specifications*** ***CAS #:*** ***12125-02-9***

***Country of Origin:*** ***India*** ***FW:*** ***53.49***

***Lot No.:*** ***XE09B*** $ClH_4N$

| Characteristic | Requirement Minimum | Maximum | Results | UOM |
|---|---|---|---|---|
| Assay (argentometric) | 99.5 | | 99.8 | % |
| Calcium (Ca) | | 0.001 | 0.0001 | % |
| Form | White crystals | | White crystals | |
| Heavy metals (as Pb) | | 5 | 5 | ppm |
| Identification | To pass test | | Passes | |
| Insoluble matter | | 0.005 | 0.002 | % |
| Iron (Fe) | | 2 | 2 | ppm |
| Loss on drying (105 C) | | 0.5 | 0.22 | % |
| Magnesium (Mg) | | 5 | 0.7 | ppm |
| pH of a 5% solution at 25 C | 4.5 | 5.5 | 4.95 | |
| Phosphate (PO4) | | 2 | 2 | ppm |
| Residue after ignition | | 0.01 | 0.002 | % |
| Sulfate (SO4) | | 0.002 | 0.002 | % |

Joe Schoellkopff
---
Quality Control Manager

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EMD Millipore Corporation
290 Concord Road
Billerica, MA 01821

Subject to Vadodara Jurisdiction

CPC Industries

**CHAMPA PURIE-CHEM INDUSTRIES**

ISO 9001 : 2015 CERTIFIED COMPANY

Importers Exporters Manufacturers & Marketing of Fine Chemicals & Pharmaceuticals

262-263, G.I.D.C. Estate,
Makarpura,
Vadodara - 390 010.
Gujarat - INDIA.

Phone : (F) +91-265-2633314 / 2643723
Fax : (F) +91-265-2638036
E-mail : info@cpcindia.com
Web : www.cpcindia.com

# CERTIFICATE OF ANALYSIS

PRODUCT : POTASSIUM PHOSPHATE MONOBASIC Anhy. - ACS

CERTIFICATE NO : 04/2019-20 DATE 13-05-2019

Date of receipt of sample : 29.04.2019 Quantity : 1000 KGS.

Batch No. /Lot No : 04/2019-20

Mfg. Date : April-2019

1. Characteristic : A White powder

2. Identification : Positive

| | RESULT OBTAINED | LIMITS |
|---|---|---|
| 3. Clearity and colour of solution | : 10% solution is clear and colourless | |
| 4. Assay (on dry basis) | 99.35% | Min.99.00% |
| 5. PH (5% solution) | 4.28 | 4.1-4.5 |
| 6. Loss on Drying | 0.06% | Max 0.2% |
| 7. Heavy Metals | 0.0004% | Max.0.001% |
| 8. iron | 0.001% | Max 0.002% |
| 9. Sulphate | 0.0015% | Max. 0.003% |
| 10. Chloride | 0.0005% | Max.0.001% |
| 11. Insoluble Matter | 0.002% | Max. 0.01% |
| 12. Sodium | 0.0038% | Max. 0.005% |

The sample does comply with specification as per Above.

Analysed by J. A. PATHAK

Quality Control Department

# Certificate of Analysis

1.19533.0500 Cyanide standard solution traceable to SRM from NIST $K_2[Zn(CN)_4]$ in $H_2O$ 1000 mg/l CN Certipur®

Batch HC03107133

| | | Batch Values | |
|---|---|---|---|
| Concentration | β ($CN^-$) | 1002 | mg/l |

Determination method: Argentometric titration.
The content of this solution was determined with silver nitrate standard solution (article number 1.09081) standardized against volumetric standard sodium chloride (article number 1.02406). The expanded measurement uncertainty is ± 0.7 % (k=2 coverage factor for 95% coverage probability). The certified value is traceable to primary standard NIST SRM 999c (NIST: National Institute of Standards and Technology, USA) by means of volumetric standard sodium chloride, measured in the accredited calibration laboratory of Merck KGaA, Darmstadt, Germany in accordance to DIN EN ISO/IEC 17025.

Date of release (DD.MM.YYYY) 02.07.2020
Minimum shelf life (DD.MM.YYYY) 30.06.2023

Ayfer Yildirim
Responsible laboratory manager quality control

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Ammonium Molybdate, 4-Hydrate, Crystal
BAKER ANALYZED® A.C.S. Reagent

(ammonium heptamolybdate, tetrahydrate)

Material No.: 0716-01
Batch No.: 0000234410
Manufactured Date: 2019/02/13
Retest Date: 2026/02/11
Revision No: 1

# Certificate of Analysis

Meets ACS Reagent Chemical Requirements,

| Test | Specification | Result |
|---|---|---|
| Assay (as $MoO_3$) | 81.0 - 83.0 % | 81.4 |
| ACS - Insoluble Matter | <= 0.005 % | < 0.001 |
| Chloride (Cl) | <= 0.002 % | < 0.002 |
| Nitrate ($NO_3$) | Passes Test | PT |
| Arsenate, Phosphate and Silicate (as $SiO_2$) | <= 0.001 % | < 0.001 |
| ACS - Phosphate ($PO_4$) | <= 5 ppm | < 5 |
| Sulfate ($SO_4$) | <= 0.02 % | < 0.02 |
| Heavy Metals (as Pb) | <= 0.001 % | < 0.001 |
| Magnesium (Mg) | <= 0.005 % | < 0.001 |
| Potassium (K) | <= 0.01 % | < 0.01 |
| Sodium (Na) | <= 0.01 % | <0.001 |

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

Country of Origin: US
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

Phenolphthalein, Powder
BAKER ANALYZED® A.C.S. Reagent

Material No.: 2870-01
Batch No.: 0000235350
Manufactured Date: 2018/06/06
Retest Date: 2025/06/04
Revision No: 1

# Certificate of Analysis

Meets ACS Reagent Chemical Requirements,

| Test | Specification | Result |
|---|---|---|
| ACS - Clarity of Solution | Passes Test | PT |
| Visual Transition Interval - pH...8.0 (Colorless) | Passes Test | PT |
| Visual Transition Interval - pH...10.0 (Red) | Passes Test | PT |

For Laboratory, Research or Manufacturing Use

Country of Origin: CN
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

Acetone
ULTRA RESI-ANALYZED
For Organic Residue Analysis

Material No.: 9254-03
Batch No.: 0000263246
Manufactured Date: 2020/06/17
Expiration Date: 2023/06/17
Revision No: 1

# Certificate of Analysis

| Test | Specification | Result |
|---|---|---|
| Assay ($(CH_3)_2CO$) (by GC, corrected for water) | >= 99.4 % | 99.7 |
| Color (APHA) | <= 10 | 5 |
| Residue after Evaporation | <= 1.0000 ppm | 0.1000 |
| Substances Reducing Permanganate | Passes Test | PT |
| Titrable Acid (µeq/g) | <= 0.3 | 0.1 |
| Titrable Base (µeq/g) | <= 0.6 | < 0.1 |
| Water ($H_2O$) | <= 0.5 % | 0.3 |
| FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL) | <= 5 | < 1 |
| ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL) | <= 10 | 5 |

For Laboratory, Research or Manufacturing Use
MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

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

Jamie Ethier
Vice President Global Quality

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

ThermoFisher SCIENTIFIC

# Certificate of Analysis

W2858 Received by AP on 07/07/2021

Product No.: 33213

Product: Phenol, ACS, 99+%, stab.

Lot No.: M13H048

| Test | Limits | Results |
|---|---|---|
| Assay | 99.0 % min | 99.8 % |
| Freezing point | 40.5ºC min | 40.5 ºC |
| Clarity of solution | To pass test | Passes |
| Residue after evaporation | 0.05 % max | < 0.05 % |
| Water | 0.5 % max | 0.2 % |

Retest date: January 7, 2026

ThermoFisher SCIENTIFIC

# Certificate of Analysis

W2666 Recived on 02/10/2020 by AP

Product No.: 87683

Product: Sodium pentacyanonitrosylferrate(III) dihydrate, ACS, 99.0-102.0%

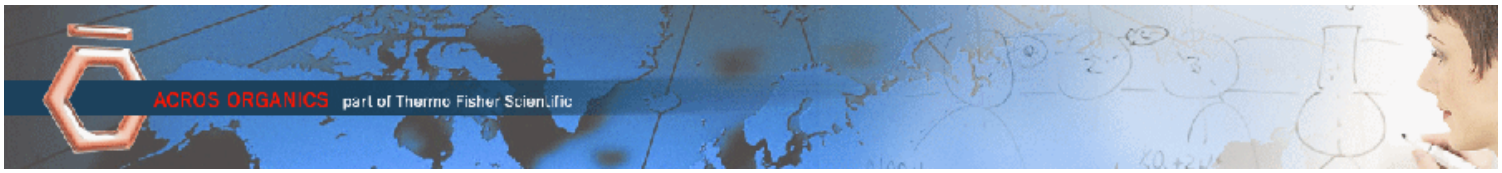
Lot No.: W12F013

| Test | Limits | Results |
|---|---|---|
| Assay | 99.0 - 102.0 % | 99.67 % |
| Insoluble | 0.01 % max | 0.0079 % |
| Chloride | 0.02 % max | Not detected |
| Sulfate | To pass test | Passes test |
| Aqueous solubility | To pass test | Passes test |
| Limit on Ferricyanide | To pass test | Passes test |
| Limit on Ferrocyanide | To pass test | Passes test |



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

This is to certify that units of the lot number above 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 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 above information is the actual analytical results obtained.




ACROS ORGANICS

| | |
|---|---|
| **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 responsiblity 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.

| | | | |
|---|---|---|---|
| **Catalog Number** | 15621 | **Quality Test / Release Date** | 13 March 2019 |
| **Lot Number** | A0405990 | **Suggested Retest Date** | March 2022 |

| | |
|---|---|
| **Description** | L(+)-Glutamic acid,99% |
| **Country of Origin** | CHINA |
| **Declaration of Origin** | plant |

| | |
|---|---|
| **Origin Comment** | 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 |


L. Van den Broek, QA Manager Issued: 24 January 2020

Acros Organics
ENA23, zone 1, nr 1350, Janssen Pharmaceuticalaan 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

# CERTIFICATE OF ANALYSIS

| | |
|---|---|
| **Product Name** | ISOPROPYL ALCOHOL, 99% |
| **Grade** | Meets ACS/USP/NF Monographs |
| **Catalog #** | 231000099, zp231000099 |
| **Lot #** | C20F23007 |
| **Date of Manufacture:** | 06/23/20 |
| **Recommended Retest Date:** | Five Years from Date of Manufacture |

W2788 Received on 12/30/2020 by AP

| TEST | MONO GRAPH | SPECIFICATION | RESULT |
|---|---|---|---|
| Assay (corrected for water) | USP | 99.0% min | 99.92% |
| Assay (corrected for water) | ACS | 99.5% min | |
| Solubility in water | ACS+ | To Pass Test | Pass |
| Appearance | ACS+ | Clear, colorless liquid | Pass |
| Color, APHA | ACS | 10 max | 1 |
| Limit of Nonvolatile Residue | USP+ | NMT 2.5 mg (0.005%) | 0.1 mg |
| Residue after Evaporation | ACS+ | 0.001% max | < 0.001% |
| Specific Gravity | USP | 0.783 - 0.787 @25°C | 0.783 |
| Identification A - Infrared Absorption | USP | To Pass Test | Pass |
| Identification B | USP | To Pass Test | Pass |
| Refractive Index @ 20°C | USP | 1.376-1.378 | 1.377 |
| Acidity | USP+ | NMT 0.70 ml of 0.020N NaOH is required | 0.30 mL |
| Titrable Acid or Base | ACS+ | 0.0001 meq/g max | 0.0001 meq/g |
| Carbonyl Compounds | ACS | Propionaldehyde 0.002% max | < 0.002% |
| | | Acetone 0.002% max | None Detected |
| Limit of Volatile Impurities | USP | Diethyl Ether NMT 0.1% | < 0.1% |
| | | Acetone NMT 0.1% | None Detected |
| | | Diisopropyl Ether NMT 0.1% | < 0.1% |
| | | n-Propyl Alcohol NMT 0.1% | < 0.1% |
| | | 2-Butanol NMT 0.1% | < 0.1% |
| | | Total NMT 1.0% | < 0.1% |
| Water, wt% | ACS | NMT 0.2% | 0.05% |
| Water Determination | USP | NMT 0.5% | |

+ This test is performed quarterly

58 Vale Road, Brookfield, Connecticut, 06804, USA | P. 800.243.5360
www.pharmco.com | www.greenfield.com

## Certification and Compliance Statements

| |
|---|
| This lot of Isopropyl Alcohol complies with all of the current requirements listed in the United States Pharmacopeia, American Chemical Society monographs and the National Formulary. |
| No chemicals whatsoever are used as solvents at any point in the manufacture, processing or packaging of Isopropyl Alcohol. Only Class 2 and Class 3 residual solvents may appear as impurities / related substances / low level contaminants in IPA Concentration of Class 2 Option 1 and Class 3 residual solvents is below limits in the current USP/NF General Chapter <467>. |
| This product is not derived, nor does it come in contact with, any materials derived from bovine or other animal sources. |
| This product is for further commercial manufacturing, laboratory or research use, and may be used as an excipient or a process solvent for pharmaceutical purposes. It is not intended for use as an active ingredient in drug manufacturing nor as a medical device or disinfectant. Appropriate/legal use of this product is the responsibility of the user. |

Approved by: D. Simoncelli, Quality Control Chemist

Date of Approval: 06/23/2020

58 Vale Road, Brookfield, Connecticut, 06804, USA | P. 800.243.5360
www.pharmco.com | www.greenfield.com

Sigma-Aldrich.

W 3035
Lec. 6/6/23 12

3050 Spruce Street, Saint Louis, MO 63103, USA
Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

# Certificate of Analysis

Product Name:
Ammonium persulfate - ACS reagent, ≥98.0%

| | |
|---|---|
| **Product Number:** | **248614** |
| **Batch Number:** | **MKCR9319** |
| Brand: | SIGALD |
| CAS Number: | 7727-54-0 |
| MDL Number: | MFCD00003390 |
| Formula Weight: | 228.20 g/mol |
| Quality Release Date: | 13 OCT 2022 |

$(NH_4)_2S_2O_8$

| Test | Specification | Result |
|---|---|---|
| Appearance (Color) | White to Off White | White |
| Appearance (Form) | Powder or Crystals or Granules or Chunks | Crystals |
| ICP Major Analysis<br>Confirms Sulfur Component | Confirmed | Confirmed |
| Titration by KMNO4 | ≥ 98.0 % | 100.0 % |
| Residue on ignition (Ash) | ≤ 0.05 % | < 0.05 % |
| Insoluble Matter<br>c = 10 %; In Water | ≤ 0.005 % | 0.002 % |
| Chloride and Chlorate (as Cl) | ≤ 0.001 % | < 0.001 % |
| Iron (Fe) | ≤ 0.001 % | < 0.001 % |
| Heavy Metal<br>as Lead | ≤ 0.005 % | < 0.001 % |
| Manganese (Mn) | ≤ 0.5 ppm | < 0.1 ppm |
| Titratable Acid (meq/g) | ≤ 0.04 | < 0.04 |
| Meets ACS Requirements | Current ACS Specification | Conforms |

Larry Coers, Director
Quality Control
Milwaukee, WI US

W 3059
rec. 10/18/23 12

POLYSEED®

# 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 152305 • Mfg. Date: 05/2023 • Exp. Date: 05/2025

**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 x$10^9$ cfu/g.

**GLUCOSE/GLUTAMIC-ACID RESULTS:**
Tested results within acceptable range 198 +/- 30.5 mg/L (167.5 - 228.5 mg/L). GGA Lot# L257-09 – Average Test Result: 203.4

See www.polyseed.com for details.

**SEED CONTROL FACTOR:**
Tested results within acceptable range 0.6 – 1.0 see 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 assure that the Finished Product conforms to the above specification.

Signature: _____ Date: 05/15/2023
*Quality Control Department*

POLYSEED.Ref.1.19 Revised Jan 23

InterLab®
International Laboratory Supply

ISO 9002
DNV
DNV Certification, Inc.
REGISTERED FIRM

# Certificate Of Analysis

Date of Release: 11/14/2019

W2700 Recived by AP on 3/11/2020

Name: **Sodium Borate, Decahydrate**
ACS

Item No: **SX0355 All Sizes**
Lot / Batch No: **2019111354**
Country of Origin: **India**

| Item | Specifications | Analysis |
|---|---|---|
| Assay (Na2B4O7 • 10H2O) | 99.5 - 105.0% | 101.7% |
| Calcium (Ca) | 0.005% max. | 0.003% |
| Chloride (Cl) | 0.001% max. | <0.001% |
| Color | White | Passes Test |
| Form | Crystals | Passes Test |
| Heavy Metals (as Pb) | 0.001% max. | <0.001% |
| Insoluble Matter | 0.005% max. | 0.002% |
| Iron (Fe) | 5 ppm max. | <5 ppm |
| pH of a 0.01 M solution at 25C | 9.15 - 9.20 | 9.17 |
| Phosphate (PO4) | 0.001% max. | <0.001% |
| Sulfate (SO4) | 0.005% max. | <0.005% |

Joe Schoellkopff
---
Quality Control Manager

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

EMD Millipore is a division of Merck KGaA, Darmstadt, Germany

EMD Millipore Corporation
400 Summit Drive
Burlington, MA 01803
U.S.A.

ThermoFisher SCIENTIFIC

# 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 |

Teresa 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.

PRODUCTOS QUIMICOS MONTERREY, S.A. DE C.V.

MIRADOR 201, COL. MIRADOR
MONTERREY, N.L. MEXICO
CP 64070
TEL +52 81 13 52 57 57
www.pqm.com.mx

# CERTIFICATE OF ANALYSIS

| | | | |
|---|---|---|---|
| PRODUCT : | SODIUM SULFATE CRYSTALS ANHYDROUS | | |
| QUALITY : | ACS (CODE RMB3375) | FORMULA : | $Na_2SO_4$ |
| SPECIFICATION NUMBER : | 6399 | RELEASE DATE: | ABR/21/2023 |
| LOT NUMBER : | 313201 | | |

| TEST | SPECIFICATIONS | LOT VALUES |
|---|---|---|
| Assay ($Na_2SO_4$) | Min. 99.0% | 99.7 % |
| pH of a 5% solution at 25°C | 5.2 - 9.2 | 6.1 |
| Insoluble matter | Max. 0.01% | 0.005 % |
| Loss on ignition | Max. 0.5% | 0.1 % |
| Chloride (Cl) | Max. 0.001% | <0.001 % |
| Nitrogen compounds (as N) | Max. 5 ppm | <5 ppm |
| Phosphate ($PO_4$) | Max. 0.001% | <0.001 % |
| Heavy metals (as Pb) | Max. 5 ppm | <5 ppm |
| Iron (Fe) | Max. 0.001% | <0.001 % |
| Calcium (Ca) | Max. 0.01% | 0.002 % |
| Magnesium (Mg) | Max. 0.005% | 0.001 % |
| Potassium (K) | Max. 0.008% | 0.003 % |
| Extraction-concentration suitability | Passes test | Passes test |
| Appearance | Passes test | Passes test |
| Identification | Passes test | Passes test |
| Solubility and foreing matter | Passes test | Passes test |
| Retained on US Standard No. 10 sieve | Max. 1% | 0.1 % |
| Retained on US Standard No. 60 sieve | Min. 94% | 97.3 % |
| Through US Standard No. 60 sieve | Max. 5% | 2.5 % |
| Through US Standard No. 100 sieve | Max. 10% | 0.1 % |

COMMENTS

QC: PhC Irma Belmares

If you need further details, please call our factory or contact our local distributor.

Recd. by RB on 7/24/23 E3551

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

9673- 33

avantor™ | J.T.Baker®

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 ($H_2SO_4$) | 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 SO2) | ≤ 2 ppm | < 2 ppm |
| Ammonium ($NH_4$) | ≤ 1 ppm | 1 ppm |
| Chloride (Cl) | ≤ 0.1 ppm | < 0.1 ppm |
| Nitrate ($NO_3$) | ≤ 0.2 ppm | < 0.1 ppm |
| Phosphate ($PO_4$) | ≤ 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™ | J.T.Baker®

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

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

For Laboratory,Research,or Manufacturing Use

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

James T Ethier

Jamie Ethier
Vice President Global Quality

R: 8/19/24 M6069

MACHEREY-NAGEL

# Certificate of Analysis

## Product information

| | |
|---|---|
| Product | pH-Fix 0.3-2.3 |
| REF | 92180 |
| LOT | 80A0441 |
| Expiration date: | 29.02.2028 |
| Date of examination: | 23.01.2024 |
| Gradation: | pH 0.3-0.7-1.0-1.3-1.6-1.9-2.3 |

## Confirmation

Hereby we confirm, that the above mentioned product has successfully passed our quality control system in accordance with ISO 9001 and meets the specific quality criteria.

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

MACHEREY-NAGEL GmbH & Co. KG
Valencienner Str. 11
52355 Düren · Germany
*www.mn-net.com*

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CH Tel.: +41 62 388 55 00 sales-ch@mn-net.com
FR Tel.: +33 388 68 22 68 sales-fr@mn-net.com
US Tel.: +1 888 321 62 24 sales-us@mn-net.com

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

R → 10/13/24
Met dig

M 6121

Material No.: 9530-33
Batch No.: 0000275677
Manufactured Date: 2020/12/16
Retest Date: 2025/12/15
Revision No: 1

# Certificate of Analysis

| Test | Specification | Result |
|---|---|---|
| ACS - Assay (as HCl) (by acid-base titrn) | 36.5 - 38.0 % | 37.6 |
| ACS - Color (APHA) | <= 10 | 5 |
| ACS - Residue after Ignition | <= 3 ppm | 1 |
| ACS - Specific Gravity at 60°/60°F | 1.185 - 1.192 | 1.190 |
| ACS - Bromide (Br) | <= 0.005 % | < 0.005 |
| ACS - Extractable Organic Substances | <= 5 ppm | 1 |
| ACS - Free Chlorine (as $Cl_2$) | <= 0.5 ppm | < 0.5 |
| Phosphate ($PO_4$) | <= 0.05 ppm | < 0.03 |
| Sulfate ($SO_4$) | <= 0.5 ppm | < 0.3 |
| Sulfite ($SO_3$) | <= 0.8 ppm | 0.3 |
| Ammonium ($NH_4$) | <= 3 ppm | < 1 |
| Trace Impurities - Arsenic (As) | <= 0.010 ppm | < 0.003 |
| Trace Impurities - Aluminum (Al) | <= 10.0 ppb | < 0.2 |
| Arsenic and Antimony (as As) | <= 5 ppb | < 3 |
| Trace Impurities - Barium (Ba) | <= 1.0 ppb | < 0.2 |
| Trace Impurities - Beryllium (Be) | <= 1.0 ppb | < 0.2 |
| Trace Impurities - Bismuth (Bi) | <= 10.0 ppb | < 1.0 |
| Trace Impurities - Boron (B) | <= 20.0 ppb | < 5.0 |
| Trace Impurities - Cadmium (Cd) | <= 1.0 ppb | < 0.3 |
| Trace Impurities - Calcium (Ca) | <= 50.0 ppb | 29.7 |
| Trace Impurities - Chromium (Cr) | <= 1.0 ppb | < 0.4 |
| Trace Impurities - Cobalt (Co) | <= 1.0 ppb | < 0.3 |
| Trace Impurities - Copper (Cu) | <= 1.0 ppb | < 0.1 |
| Trace Impurities - Gallium (Ga) | <= 1.0 ppb | < 0.2 |

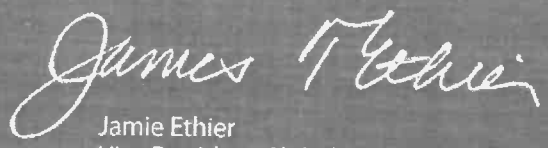
For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

Material No.: 9530-33
Batch No.: 0000275677

| Test | Specification | Result |
|---|---|---|
| Trace Impurities - Germanium (Ge) | <= 3.0 ppb | < 2.0 |
| Trace Impurities - Gold (Au) | <= 4.0 ppb | < 0.2 |
| Heavy Metals (as Pb) | <= 100 ppb | < 50 |
| Trace Impurities - Iron (Fe) | <= 15.0 ppb | <1 |
| Trace Impurities - Lead (Pb) | <= 1.0 ppb | < 0.5 |
| Trace Impurities - Lithium (Li) | <= 1.0 ppb | 0.2 |
| Trace Impurities - Magnesium (Mg) | <= 10.0 ppb | 0.4 |
| Trace Impurities - Manganese (Mn) | <= 1.0 ppb | < 0.4 |
| Trace Impurities - Mercury (Hg) | <= 0.5 ppb | 0.1 |
| Trace Impurities - Molybdenum (Mo) | <= 10.0 ppb | < 5.0 |
| Trace Impurities - Nickel (Ni) | <= 4.0 ppb | < 0.3 |
| Trace Impurities - Niobium (Nb) | <= 1.0 ppb | < 0.2 |
| Trace Impurities - Potassium (K) | <= 9.0 ppb | < 2.0 |
| Trace Impurities - Selenium (Se), For Information Only | ppb | 1.0 |
| Trace Impurities - Silicon (Si) | <= 100.0 ppb | < 10.0 |
| Trace Impurities - Silver (Ag) | <= 1.0 ppb | < 0.3 |
| Trace Impurities - Sodium (Na) | <= 100.0 ppb | < 5.0 |
| Trace Impurities - Strontium (Sr) | <= 1.0 ppb | < 0.2 |
| Trace Impurities - Tantalum (Ta) | <= 1.0 ppb | < 0.9 |
| Trace Impurities - Thallium (Tl) | <= 5.0 ppb | < 2.0 |
| Trace Impurities - Tin (Sn) | <= 5.0 ppb | < 0.8 |
| Trace Impurities - Titanium (Ti) | <= 1.0 ppb | 0.2 |
| Trace Impurities - Vanadium (V) | <= 1.0 ppb | < 0.2 |
| Trace Impurities - Zinc (Zn) | <= 5.0 ppb | 0.3 |
| Trace Impurities - Zirconium (Zr) | <= 1.0 ppb | < 0.1 |

For Laboratory, Research or Manufacturing Use
Product Information (not specifications):
Appearance (clear, fuming liquid)
Meets ACS Specifications

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



Jamie Ethier
Vice President Global Quality

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

Subject to Vadodara Jurisdiction


# CHAMPA PURIE-CHEM INDUSTRIES

ISO 9001 : 2015 CERTIFIED COMPANY

Importers Exporters Manufacturers & Marketing of Fine Chemicals & Pharmaceuticals

262-263, G.I.D.C. Estate,
Makarpura,
Vadodara - 390 010.
Gujarat - INDIA.

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Fax : (F) +91-265-2638036
E-mail : info@cpcindia.com
Web : www.cpcindia.com


W2708 Received on 05/05/20 by AP

## CERTIFICATE OF ANALYSIS

PRODUCT : **POTASSIUM PHOSPHATE MONOBASIC Anhy. - ACS**

CERTIFICATE NO : 99/2019- 20 DATE 26-08-2019

Date of receipt of sample : 22.08.2019 Quantity : 1000 KGS

Batch No. /Lot No : 99/2019- 20

Mfg. Date : Aug-2019

1. Characteristic : A White powder

2. Identification : Positive

| | RESULT OBTAINED | LIMITS |
|---|---|---|
| 3. Clearity and colour of solution | : 10% solution is clear and colourless | |
| 4. Assay (on dry basis) | : 99.27% | Min.99.00% |
| 5. PH (5% solution) | : 4.4 | 4.1-4.5 |
| 6. Loss on Drying | : 0.1% | Max 0.2% |
| 7. Heavy Metals | : 0.0003% | Max.0.001% |
| 8. Iron | : 0.001% | Max 0.002% |
| 9. Sulphate | : 0.001% | Max. 0.003% |
| 10. Chloride | : 0.0005% | Max.0.001% |
| 11. Insoluble Matter | : 0.003% | Max. 0.01% |
| 12. Sodium | : 0.004% | Max. 0.005% |

The sample does comply with specification as per Above.

Analysed by J.A.PATHAK

Quality Control Department

Sigma-Aldrich.

W 2979

Rec: 12/08/22

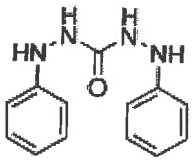
exp. 12/08/27

3050 Spruce Street, Saint Louis, MO 63103, USA
Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

# Certificate of Analysis

Product Name:
1,5-Diphenylcarbazide - ACS reagent

| | |
|---|---|
| **Product Number:** | **259225** |
| **Batch Number:** | **MKCR6636** |
| Brand: | SIAL |
| CAS Number: | 140-22-7 |
| MDL Number: | MFCD00003013 |
| Formula: | C13H14N4O |
| Formula Weight: | 242.28 g/mol |
| Quality Release Date: | 02 JUN 2022 |



| Test | Specification | Result |
|---|---|---|
| Appearance (Color)<br>Off-White to Pink, Light Purple or Tan | Conforms to Requirements | Pink |
| Appearance (Form) | Powder or Chunks | Powder |
| Melting Point | 173.0 - 176.0 °C | 173.0 °C |
| Infrared Spectrum | Conforms to Structure | Conforms |
| Residue on ignition (Ash)<br>15 minutes, 800 Degrees Celsius | ≤ 0.05 % | 0.01 % |
| Solubility | Pass | Pass |
| Sensitivity Test | Pass | Pass |
| Meets ACS Requirements | Current ACS Specification | Conforms |

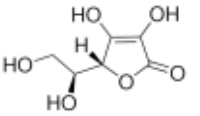
Larry Coers, Director
Quality Control
Milwaukee, WI US

3050 Spruce Street, Saint Louis, MO 63103, USA
Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

W3074 Rec. on 01/16/24 by IZ

# Certificate of Analysis

Product Name:
L-Ascorbic acid - ACS reagent, ≥99%



| | |
|---|---|
| **Product Number:** | **255564** |
| **Batch Number:** | **MKCS4627** |
| Brand: | SIAL |
| CAS Number: | 50-81-7 |
| MDL Number: | MFCD00064328 |
| Formula: | C6H8O6 |
| Formula Weight: | 176.12 g/mol |
| Quality Release Date: | 21 NOV 2022 |
| Recommended Retest Date: | SEP 2025 |

| Test | Specification | Result |
|---|---|---|
| Appearance (Color) | White | White |
| Appearance (Form)<br>Powder, Crystals, Crystalline Powder, Granules and/or Chunks | Conforms to Requirements | Powder |
| Infrared Spectrum | Conforms to Structure | Conforms |
| Optical Rotation<br>(+ ); c = 10%; Water | 20.5 - 21.5 deg | 20.7 deg |
| Titration by Iodine | ≥ 99.0 % | 99.4 % |
| Residue on Ignition | ≤ 0.10 % | 0.03 % |
| Iron (Fe) | ≤ 0.001 % | < 0.001 % |
| Heavy Metals<br>by ICP-OES | ≤ 0.002 % | 0.001 % |
| Recommended Retest Period<br>3 Years | ---------- | ---------- |
| Meets ACS Requirements | Current ACS Specification | Conforms |

Larry Coers, Director
Quality Control
Milwaukee, WI US

RICCA CHEMICAL COMPANY®
W3103 Received on 4/22/24 by IZ

1841 Broad Street
Pocomoke City, MD 21851
http://www.riccachemical.com
1-888-GO-RICCA
customerservice@riccachemical.com

# 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."

RICCA CHEMICAL COMPANY®

1490 Lammers Pike
Batesville, IN 47006
http://www.riccachemical.com
1-888-GO-RICCA
customerservice@riccachemical.com

W3105 Received on 4/22/24 by IZ

# 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-Cl 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."

RICCA CHEMICAL COMPANY®

448 West Fork Dr
Arlington, TX 76012
http://www.riccachemical.com
1-888-GO-RICCA
customerservice@riccachemical.com

# 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

# Certificate of Analysis

# Sodium Hydroxide (Pellets)

**Material:** 0583

**Grade:** ACS GRADE

**Batch Number:** 23B1556310

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

Pellets

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

Storage: Room Temperature

| 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.

# Certificate of Analysis

# Sodium Hydroxide (Pellets)

**Material:** **0583**

**Grade:** **ACS GRADE**

**Batch Number:** **23B1556310**

| | | | |
|---|---|---|---|
| Chemical Formula: | NaOH | Manufacture Date: | 12/14/2022 |
| Molecular Weight: | 40 | Expiration Date: | 12/31/2025 |
| CAS #: | 1310-73-2 | | |
| Appearance: | | 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.

spectrum® CHEMICAL MFG CORP

# Certificate Of Analysis

| | | | |
|---|---|---|---|
| Item Number | ED150 | Lot Number | 2ND0156 |
| Item | Edetate Disodium, Dihydrate, USP | CAS Number | 6381-92-6 |
| Molecular Formula | $C_{10}H_{14}N_2Na_2O_8 \cdot 2H_2O$ | Molecular Weight | 372.24 |

| TEST | SPECIFICATION | | RESULT |
|---|---|---|---|
| | MIN | MAX | |
| ASSAY (DRIED BASIS) | 99.0 | 101.0 % | 99.5 % |
| pH OF A 5% SOLUTION @ 25°C | 4.0 | 6.0 | 4.6 |
| LOSS ON DRYING | 8.7 | 11.4 % | 8.90 % |
| CALCIUM (Ca) | NO PRECIPITATE IS FORMED | | NO PRECIPITATE IS FORMED |
| ELEMENTAL IMPURITIES: | | | . |
| NICKEL (Ni) | AS REPORTED | | <0.3 ppm |
| CHROMIUM (Cr) | AS REPORTED | | <0.3 ppm |
| NITRILOTRIACETIC ACID[$n[(HOCOCH_2)_3N]$] | | 0.1 % | <0.10 % |
| IDENTIFICATION A | MATCHES REFERENCE | | MATCHES REFERENCE |
| IDENTIFICATION B | RED COLOR IS DISCHARGED, LEAVING A YELLOWISH SOLUTION | | RED COLOR IS DISCHARGED, LEAVING A YELLOWISH SOLUTION |
| IDENTIFICATION C | MEETS THE REQUIREMENTS FOR SODIUM | | MEETS THE REQUIREMENTS FOR SODIUM |
| CERTIFIED HALAL | | | CERTIFIED HALAL |
| EXPIRATION DATE | | | 10-JUL-2026 |
| DATE OF MANUFACTURE | | | 11-JUL-2023 |
| APPEARANCE | | | WHITE CRYSTALLINE POWDER |
| RESIDUAL SOLVENTS | | AS REPORTED | NO RESIDUAL SOLVENTS PRESENT |
| MONOGRAPH EDITION | | | USP 2024 |

Certificate of Analysis Results Entered By:

CACEVEDO
Charmian Acevedo
22-MAY-24 08:12:30

Certificate of Analysis Results Approved By:

GHERRERA
Genaro Herrera
22-MAY-24 12:32:01

Spectrum Chemical Mfg Corp
755 Jersey Avenue
New Brunswick 08901 NJ

**All pharmaceutical ingredients are tested using current edition of applicable pharmacopeia.**

**Read and understand label and SDS before handling any chemicals. All Spectrum's chemicals are for manufacturing, processing, repacking or research purposes by experienced personnel only. It is the customer's responsibility to provide adequate hazardous material training and ensure that appropriate Personal Protective Equipment (PPE) is used before handling any chemical.**

The Elemental Impurities standards implemented by USP and other Pharmaceutical Compendia reflect a growing understanding of the toxicology of trace levels of elemental impurities that can remain in drug substances originating from either raw materials or manufacturing processes. Identifying and quantifying impurities can be critical to predicting the best possible patient outcomes. Elemental Impurities has been a requirement of all products meeting USP/NF, EP and BP monographs since January 1, 2018. More information can be found in USP sections <232> Elemental Impurities – Limits and <233> Elemental Impurities – Procedures. Data for drug substances furnished by Spectrum Chemical Mfg. Corp can be used to ensure that patient daily exposures by oral administration to the selected elements are not exceeded in the formulation of pharmaceutical products.

Loveland, CO 80539
(970) 669-3050

An ISO 9001 Certified Company

# *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

RICCA CHEMICAL COMPANY®

W3149 Received on 10/16/24 by IZ

1490 Lammers Pike
Batesville, IN 47006
http://www.riccachemical.com
1-888-GO-RICCA
customerservice@riccachemical.com

# 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-Cl 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-Cl 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)

Paul Brandon (08/28/2024)
Production Manager

RICCA CHEMICAL COMPANY®

1841 Broad Street
Pocomoke City, MD 21851
http://www.riccachemical.com
1-888-GO-RICCA
customerservice@riccachemical.com

# Certificate of Analysis

## Sodium Hypochlorite Solution, 5% available Chlorine

**Lot Number:** 2501J28 **Product Number:** 7495.5

**Manufacture Date:** JAN 17, 2025
**Expiration Date:** JUL 2025

This solution is subject to slow decomposition upon exposure to air. Keep container tightly capped. Refrigeration may improve stability. When used in the Phenate method for Ammonia, APHA recommends replacing this solution about every 2 months.

| Name | CAS# | Grade |
|---|---|---|
| Water | 7732-18-5 | Commercial |
| Sodium Hypochlorite | 7681-52-9 | Commercial |

| Test | Specification | Result | NIST SRM# |
|---|---|---|---|
| Appearance | Colorless to greenish-yellow liquid | Passed | |
| Assay (vs. Sodium Thiosulfate/Starch) | 4.75-5.25 % (w/w) $Cl_2$ | 5.17 % (w/w) $Cl_2$ | 136 |

| Specification | Reference |
|---|---|
| Sodium Hypochlorite, 5% | APHA (4500-NH3 F) |
| Sodium Hypochlorite | ASTM (D 4785) |

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) |
|---|---|---|
| 7495.5-1 | 4 L black poly | 6 months |
| 7495.5-16 | 500 mL amber poly | 6 months |
| 7495.5-32 | 1 L amber poly | 6 months |
| 7495.5-8 | 250 mL amber poly | 6 months |

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

Jose Pena (01/17/2025)
Operations Manager

n-Hexane 95%
ULTRA RESI-ANALYZED
For Organic Residue Analysis

avantor™ | J.T.Baker®

W3147

W3147 update. 02/03/2025 JP

Material No.: 9262-03
Batch No.: 24G1962003
Manufactured Date: 2024-05-23
Expiration Date: 2025-08-22
Revision No.: 0

# Certificate of Analysis

| Test | Specification | Result |
|---|---|---|
| FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL) | ≤ 5 | 3 |
| ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL) | ≤ 10 | 1 |
| ECD-Sensitive Impurities (as Ethylene Dibromide) - Single Impurity Peak (ng/mL) | ≤ 5 | 1 |
| Assay (Total Saturated $C_6$ Isomers) (by GC, corrected for water) | ≥ 99.5 % | 99.7 % |
| Assay (as n-Hexane) (by GC, corrected for water) | ≥ 95 % | 98 % |
| Color (APHA) | ≤ 10 | 5 |
| Residue after Evaporation | ≤ 1.0 ppm | 0.1 ppm |
| Substances Darkened by $H_2SO_4$ | Passes Test | Passes Test |
| Water (by KF, coulometric) | ≤ 0.05 % | < 0.01 % |

For Laboratory,Research,or Manufacturing Use
MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

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

JCroak

Jamie Croak
Director Quality Operations, Bioscience Production

# SHIPPING DOCUMENTS

Alliance TECHNICAL GROUP
284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 • Fax (908) 789-8922
www.chemtech.net

ALLIANCE PROJECT NO. Q1567
QUOTE NO.
COC Number 2046153

## CLIENT INFORMATION

REPORT TO BE SENT TO:
COMPANY: Holland Mfg Co
ADDRESS: 15 Main St
CITY Succasunna STATE: ZIP:
ATTENTION:
PHONE: FAX:

## CLIENT PROJECT INFORMATION

PROJECT NAME: HMC Pretreatment
PROJECT NO.: LOCATION:
PROJECT MANAGER: Todd Holland
e-mail:
PHONE: FAX:

## CLIENT BILLING INFORMATION

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

## DATA TURNAROUND INFORMATION

FAX (RUSH) 5 DAYS*
HARDCOPY (DATA PACKAGE): DAYS*
EDD: DAYS*
*TO BE APPROVED BY CHEMTECH
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS

## DATA DELIVERABLE INFORMATION

☐ Level 1 (Results Only) ☐ Level 4 (QC + Full Raw Data)
☐ Level 2 (Results + QC) ☐ NJ Reduced ☐ US EPA CLP
☐ Level 3 (Results + QC + Raw Data) ☐ NYS ASP A ☐ NYS ASP B ☐ Other
☐ EDD FORMAT

## ANALYSIS

1: BOD5 2: TSS 3: O+G 4: PO4 5: Total P 6: NH3 7: 8: 9:

| ALLIANCE SAMPLE ID | PROJECT SAMPLE IDENTIFICATION | SAMPLE MATRIX | SAMPLE TYPE COMP | SAMPLE TYPE GRAB | SAMPLE COLLECTION DATE | SAMPLE COLLECTION TIME | # OF BOTTLES | PRESERVATIVES 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | E | E | C | C | C | C | | | | ← Specify Preservatives A-HCl B-HN03 C-H2SO4 D-NaOH E-ICE F-OTHER |
| 1. | Effluent | W | | ✓ | 3/13 | 11:30 | 5 | X | X | X | X | X | X | | | | |
| 2. | Aeration #1 | W | | ✓ | 3/13 | 11:30 | 1 | | X | | | | | | | | |
| 3. | Influent | W | | ✓ | 3/13 | 11:30 | 3 | X | | | | | X | | | | |
| 4. | | | | | | | | | | | | | | | | | |
| 5. | | | | | | | | | | | | | | | | | |
| 6. | | | | | | | | | | | | | | | | | |
| 7. | | | | | | | | | | | | | | | | | |
| 8. | | | | | | | | | | | | | | | | | |
| 9. | | | | | | | | | | | | | | | | | |
| 10. | | | | | | | | | | | | | | | | | |

## SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

| RELINQUISHED BY SAMPLER: | DATE/TIME: | RECEIVED BY: |
|---|---|---|
| 1. E Martinez | 3/13 1:30 | 1. |
| 2. [signature] 191 | 3-13-25 14:37 | 2. |
| 3. | | 3. |

Conditions of bottles or coolers at receipt: ☐ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP 3.1-C °C
Comments: Lab to Filter IR Gun # 1

Page ____ of

CLIENT: ☐ Hand Delivered ☐ Other

Shipment Complete ☐ YES ☐ NO



WHITE - ALLIANCE COPY FOR RETURN TO CLIENT YELLOW - ALLIANCE COPY PINK - SAMPLER COPY

284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

# 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 |

QA Control Code: A2070148