



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

Cover Page

Order ID : P4681

Project ID : Parsippany Wastewater Quarterly 2024

Client : METEM A GE POWER Business

Lab Sample Number

P4681-01
P4681-02

Client Sample Number

Q4-WW
PH

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

Signature : _____

Date: 11/20/2024

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

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
"P" for ICP instrument
"PM" for ICP when Microwave Digestion is used
"CV" for Manual Cold Vapor AA
"AV" for automated Cold Vapor AA
"CA" for MIDI-Distillation Spectrophotometric
"AS" for Semi -Automated Spectrophotometric
"C" for Manual Spectrophotometric
"T" for Titrimetric
"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

APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: P4681

Completed

For thorough review, the report must have the following:

GENERAL:

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

✓

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

✓

Is the chain of custody signed and complete

✓

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

✓

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

✓

COVER PAGE:

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

✓

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

✓

CHAIN OF CUSTODY:

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

✓

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

✓

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

✓

Were the samples received within hold time

✓

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

✓

ANALYTICAL:

Was method requirement followed?

✓

Was client requirement followed?

✓

Does the case narrative summarize all QC failure?

✓

All runlogs and manual integration are reviewed for requirements

✓

All manual calculations and /or hand notations verified

✓

QA Review Signature: KETAN PATEL

Date: 11/20/2024

LAB CHRONICLE

| | |
|--|--|
| OrderID: P4681 | OrderDate: 11/1/2024 3:08:00 PM |
| Client: METEM A GE POWER Business | Project: Parsippany Wastewater Quarterly 2024 |
| Contact: Sundas Pervez | Location: L12 |

| LabID | ClientID | Matrix | Test | Method | Sample Date | Prep Date | Anal Date | Received |
|-----------------|--------------|--------------|----------|------------------|---------------------------|-----------|-------------------|-----------------|
| P4681-01 | Q4-WW | WATER | | | 11/01/24 14:55 | | | 11/01/24 |
| | | | Cyanide | SM4500-CN C,E | | 11/11/24 | 11/11/24 12:54 | |
| P4681-02 | PH | WATER | | | 11/01/24 14:55 | | | 11/01/24 |
| | | | Field pH | SM4500-H B | | | 11/01/24 14:56 | |



SAMPLE DATA

Report of Analysis

| | | | |
|-------------------|--------------------------------------|-----------------|----------------|
| Client: | METEM A GE POWER Business | Date Collected: | 11/01/24 14:55 |
| Project: | Parsippany Wastewater Quarterly 2024 | Date Received: | 11/01/24 |
| Client Sample ID: | Q4-WW | SDG No.: | P4681 |
| Lab Sample ID: | P4681-01 | Matrix: | WATER |
| | | % Solid: | 0 |

| Parameter | Conc. | Qua. | DF | MDL | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|-----------|---------|------|----|---------|------------|-------|----------------|----------------|------------------------------|
| Cyanide | 0.00093 | U | 1 | 0.00093 | 0.0050 | mg/L | 11/11/24 08:00 | 11/11/24 12:54 | SM 4500-CN C-16 plus E-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

Report of Analysis

| | | | |
|-------------------|--------------------------------------|-----------------|----------------|
| Client: | METEM A GE POWER Business | Date Collected: | 11/01/24 14:55 |
| Project: | Parsippany Wastewater Quarterly 2024 | Date Received: | 11/01/24 |
| Client Sample ID: | PH | SDG No.: | P4681 |
| Lab Sample ID: | P4681-02 | Matrix: | WATER |
| | | % Solid: | 0 |

| Parameter | Conc. | Qua. | DF | MDL | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|-----------|-------|------|----|-----|------------|-------|-----------|----------------|------------|
| Field pH | 7.09 | | 1 | 0 | 0 | pH | | 11/01/24 14:56 | SM4500-H B |

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



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

Initial and Continuing Calibration Verification

Client: METEM A GE POWER Business
Project: Parsippany Wastewater Quarterly 2024

SDG No.: P4681
RunNo.: LB133393

| Analyte | Units | Result | True Value | % Recovery | Acceptance Window (%R) | Analysis Date |
|-----------------------------------|-------|--------|------------|------------|------------------------|---------------|
| Sample ID: ICV1 Cyanide | mg/L | 0.097 | 0.099 | 98 | 85-115 | 11/11/2024 |
| Sample ID: CCV1 Cyanide | mg/L | 0.25 | 0.25 | 100 | 90-110 | 11/11/2024 |
| Sample ID: CCV2 Cyanide | mg/L | 0.25 | 0.25 | 100 | 90-110 | 11/11/2024 |

Initial and Continuing Calibration Verification

Client: METEM A GE POWER Business
Project: Parsippany Wastewater Quarterly 2024

SDG No.: P4681
RunNo.: LB133523

| Analyte | | Units | Result | True Value | % Recovery | Acceptance Window (%R) | Analysis Date |
|------------|-------------|-------|--------|------------|------------|------------------------|---------------|
| Sample ID: | ICV | | | | | | |
| Field pH | | pH | 7.00 | 7 | 100 | 90-110 | 11/01/2024 |
| Sample ID: | CCV1 | | | | | | |
| Field pH | | pH | 7.00 | 7.00 | 100 | 90-110 | 11/01/2024 |
| Sample ID: | CCV2 | | | | | | |
| Field pH | | pH | 7.00 | 7.00 | 100 | 90-110 | 11/01/2024 |



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

Initial and Continuing Calibration Blank Summary

| | |
|--|-------------------------|
| Client: METEM A GE POWER Business | SDG No.: P4681 |
| Project: Parsippany Wastewater Quarterly 2024 | RunNo.: LB133393 |

| Analyte | Units | Result | Acceptance Limits | Conc Qual | MDL | RDL | Analysis Date |
|----------------------------|-------|----------|-------------------|-----------|---------|-------|---------------|
| Sample ID: ICB1 Cyanide | mg/L | < 0.0025 | 0.0025 | U | 0.00093 | 0.005 | 11/11/2024 |
| Sample ID: CCB1 Cyanide | mg/L | < 0.0025 | 0.0025 | U | 0.00093 | 0.005 | 11/11/2024 |
| Sample ID: CCB2 Cyanide | mg/L | < 0.0025 | 0.0025 | U | 0.00093 | 0.005 | 11/11/2024 |

Preparation Blank Summary

Client: METEM A GE POWER Business **SDG No.:** P4681
Project: Parsippany Wastewater Quarterly 2024

| Analyte | Units | Result | Acceptance Limits | Conc Qual | MDL | RDL | Analysis Date |
|-----------------------|---------------------------|----------|-------------------|-----------|---------|-------|---------------|
| Sample ID: Cyanide | PB164714BL mg/L | < 0.0025 | 0.0025 | U | 0.00093 | 0.005 | 11/11/2024 |

Matrix Spike Summary

| | | | |
|-------------------|--------------------------------------|---|----------|
| Client: | METEM A GE POWER Business | SDG No.: | P4681 |
| Project: | Parsippany Wastewater Quarterly 2024 | Sample ID: | P4762-01 |
| Client ID: | EFF-WWMS | 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 |
|---------|-------|---------------------|---------------|-----------------|---------------|-----------------|-------------|-----------------|-------|------|---------------|
| Cyanide | mg/L | 75-125 | 0.047 | | 0.0027 | J | 0.04 | 1 | 111 | | 11/11/2024 |

Matrix Spike Summary

| | | | |
|-------------------|--------------------------------------|---|----------|
| Client: | METEM A GE POWER Business | SDG No.: | P4681 |
| Project: | Parsippany Wastewater Quarterly 2024 | Sample ID: | P4762-01 |
| Client ID: | EFF-WWMSD | 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 |
|---------|-------|------------------------|------------------|--------------------|------------------|--------------------|----------------|--------------------|----------|------|------------------|
| Cyanide | mg/L | 75-125 | 0.047 | | 0.0027 | J | 0.04 | 1 | 111 | | 11/11/2024 |

Duplicate Sample Summary

| | | | |
|-------------------|--------------------------------------|---|----------|
| Client: | METEM A GE POWER Business | SDG No.: | P4681 |
| Project: | Parsippany Wastewater Quarterly 2024 | Sample ID: | P4681-02 |
| Client ID: | PHDUP | 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 |
|----------|-------|------------------|---------------|-----------------|------------------|-----------------|-----------------|--------|------|---------------|
| Field pH | pH | +/-20 | 7.09 | | 7.10 | | 1 | 0.14 | | 11/01/2024 |

Duplicate Sample Summary

| | |
|--|---|
| Client: METEM A GE POWER Business | SDG No.: P4681 |
| Project: Parsippany Wastewater Quarterly 2024 | Sample ID: P4762-01 |
| Client ID: EFF-WWDUP | 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 |
|---------|-------|---------------------|------------------|--------------------|---------------------|--------------------|--------------------|------------|------|------------------|
| Cyanide | mg/L | +/-20 | 0.0027 | J | 0.0028 | J | 1 | 4 | | 11/11/2024 |

Duplicate Sample Summary

| | | | |
|-------------------|--------------------------------------|---|----------|
| Client: | METEM A GE POWER Business | SDG No.: | P4681 |
| Project: | Parsippany Wastewater Quarterly 2024 | Sample ID: | P4762-01 |
| Client ID: | EFF-WWMSD | 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 |
|---------|-------|------------------|---------------|-----------------|------------------|-----------------|-----------------|--------|------|---------------|
| Cyanide | mg/L | +/-20 | 0.047 | | 0.047 | | 1 | 0 | | 11/11/2024 |

Laboratory Control Sample Summary

| | | | |
|-----------------|--------------------------------------|-----------------|----------|
| Client: | METEM A GE POWER Business | SDG No.: | P4681 |
| Project: | Parsippany Wastewater Quarterly 2024 | Run No.: | LB133393 |

| Analyte | Units | True Value | Result | Conc. Qualifier | % Recovery | Dilution Factor | Acceptance Limit %R | Analysis Date |
|-----------|------------|------------|--------|-----------------|------------|-----------------|---------------------|---------------|
| Sample ID | PB164714BS | | | | | | | |
| Cyanide | mg/L | 0.1 | 0.098 | | 98 | 1 | 85-115 | 11/11/2024 |



RAW DATA

LB1

Test results

Aquakem 7.2AQ1

Page:

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

Reviewed by : NF Instrument ID : Konelab

11/11/2024 13:14

Test: Total CN

| Sample Id | Result | Dil. 1 + | Response | Errors |
|-------------|---------|----------|----------|--------|
| ICV1 | 96.669 | 0.0 | 0.075 | |
| ICB1 | 0.776 | 0.0 | 0.002 | |
| CCV1 | 249.708 | 0.0 | 0.192 | |
| CCB1 | 0.040 | 0.0 | 0.002 | |
| RL CHECK | 5.060 | 0.0 | 0.006 | |
| PB164714BL | 0.317 | 0.0 | 0.002 | |
| PB164714BS | 97.943 | 0.0 | 0.076 | |
| MIDPB164714 | 248.475 | 0.0 | 0.191 | |
| P4632-01 | 2.495 | 0.0 | 0.004 | |
| P4681-01 | 0.171 | 0.0 | 0.002 | |
| P4762-01 | 2.678 | 0.0 | 0.004 | |
| P4762-01DUP | 2.763 | 0.0 | 0.004 | |
| P4762-01MS | 46.628 | 0.0 | 0.037 | |
| P4762-01MSD | 46.723 | 0.0 | 0.037 | |
| CCV2 | 252.119 | 0.0 | 0.193 | |
| CCB2 | -0.195 | 0.0 | 0.002 | |

99.39% (90-110) NF
11.11.2024

N 16
Mean 65.773
SD 97.2223
CV% 147.81

Aquakem v. 7.2AQ1

Results from time period:

Mon Nov 11 11:56:31 2024

Mon Nov 11 13:08:54 2024

| Sample Id | Sam/C | Test short r | Test type | Result | Result unit | Result date and time | Stat |
|-------------|-------|--------------|-----------|----------|-------------|----------------------|------|
| 0.OPPBCN | A | Total CN | P | -0.1072 | µg/l | 11/11/2024 11:56:31 | |
| 5.OPPBCN | A | Total CN | P | 4.4814 | µg/l | 11/11/2024 11:56:32 | |
| 10PPBCN | A | Total CN | P | 9.8012 | µg/l | 11/11/2024 11:56:33 | |
| 50PPBCN | A | Total CN | P | 49.0713 | µg/l | 11/11/2024 11:56:34 | |
| 100PPBCN | A | Total CN | P | 100.1423 | µg/l | 11/11/2024 11:56:35 | |
| 250PPBCN | A | Total CN | P | 253.0749 | µg/l | 11/11/2024 11:56:36 | |
| 500PPBCN | A | Total CN | P | 498.5361 | µg/l | 11/11/2024 11:56:37 | |
| ICV1 | S | Total CN | P | 96.669 | µg/l | 11/11/2024 12:46:32 | |
| ICB1 | S | Total CN | P | 0.7761 | µg/l | 11/11/2024 12:46:34 | |
| CCV1 | S | Total CN | P | 249.7077 | µg/l | 11/11/2024 12:46:35 | |
| CCB1 | S | Total CN | P | 0.0396 | µg/l | 11/11/2024 12:46:38 | |
| RL CHECK | S | Total CN | P | 5.0604 | µg/l | 11/11/2024 12:46:40 | |
| PB164714BL | S | Total CN | P | 0.3169 | µg/l | 11/11/2024 12:46:41 | |
| PB164714BS | S | Total CN | P | 97.943 | µg/l | 11/11/2024 12:54:07 | |
| MIDPB164714 | S | Total CN | P | 248.4752 | µg/l | 11/11/2024 12:54:10 | |
| P4632-01 | S | Total CN | P | 2.4947 | µg/l | 11/11/2024 12:54:11 | |
| P4681-01 | S | Total CN | P | 0.1711 | µg/l | 11/11/2024 12:54:14 | |
| P4762-01 | S | Total CN | P | 2.6782 | µg/l | 11/11/2024 12:54:16 | |
| P4762-01DUP | S | Total CN | P | 2.7628 | µg/l | 11/11/2024 13:00:28 | |
| P4762-01MS | S | Total CN | P | 46.6278 | µg/l | 11/11/2024 13:08:47 | |
| P4762-01MSD | S | Total CN | P | 46.7235 | µg/l | 11/11/2024 13:08:48 | |
| CCV2 | S | Total CN | P | 252.1195 | µg/l | 11/11/2024 13:08:52 | |
| CCB2 | S | Total CN | P | -0.1952 | µg/l | 11/11/2024 13:08:53 | |

=====
 Calibration results

Aquakem 7.2AQ1

Page:

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

Reviewed by : NF Instrument ID : Konelab

11/11/2024 11:56

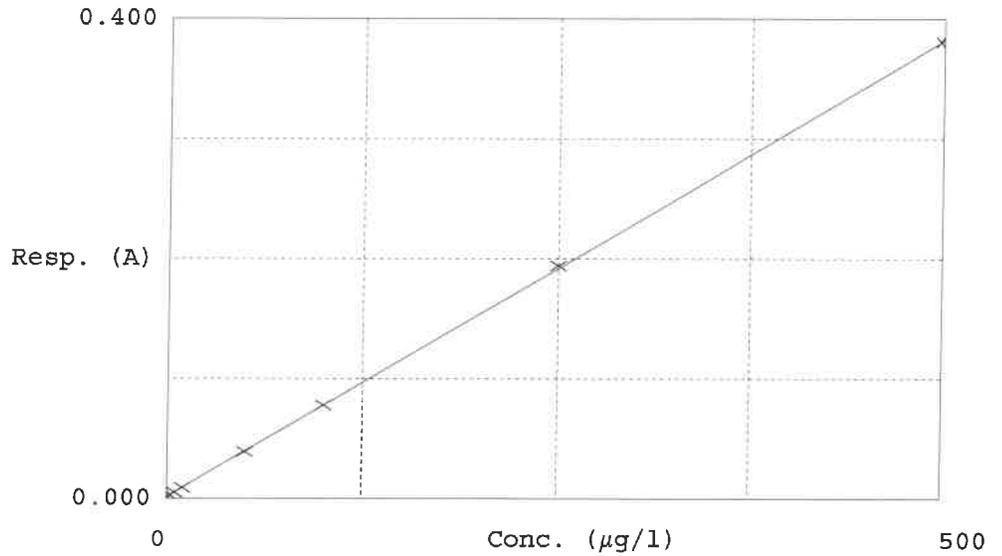
Test Total CN

Accepted 11/11/2024 11:56

Factor 1315
 Bias 0.002

Coeff. of det. 0.999938

Errors



| | Calibrator | Response | Calc. con. | Conc. | Pe Errors |
|---|------------|----------|------------|----------|--------------|
| 1 | 0.0PPBCN | 0.002 | -0.1072 | 0.0000 | |
| 2 | 5.0PPBCN | 0.005 | 4.4814 | 5.0000 | -10.4 |
| 3 | 10PPBCN | 0.009 | 9.8012 | 10.0000 | -2.0 |
| 4 | 50PPBCN | 0.039 | 49.0713 | 50.0000 | -1.9 |
| 5 | 100PPBCN | 0.078 | 100.1423 | 100.0000 | 0.1 |
| 6 | 250PPBCN | 0.194 | 253.0749 | 250.0000 | 1.2 |
| 7 | 500PPBCN | 0.381 | 498.5361 | 500.0000 | -0.3 |

NF
 11.11.2024

SOP ID : MSM4500-CN C,E-Cyanide-12
SDG No : N/A **Start Digest Date:** 11/11/2024 **Time :** 08:00 **Temp :** 123 °C
Matrix : WATER **End Digest Date:** 11/11/2024 **Time :** 09:30 **Temp :** 126 °C
Pipette ID : WC
Balance ID : N/A
Hood ID : HOOD#1 **Digestion tube ID :** M5595 **Block Thermometer ID :** WC CYANIDE
Block ID : MC-1,MC-2 **Filter paper ID :** N/A **Prep Technician Signature:** [Signature]
Weigh By : N/A **pH Meter ID :** N/A **Supervisor Signature:** [Signature]

| Standard Name | MLS USED | STD REF. # FROM LOG |
|-------------------|----------|---------------------|
| LCSW | 1.0ML | WP109549 |
| MS/MSD SPIKE SOL. | 0.4ML | WP110035 |
| PBW | 50.0ML | W3112 |
| RL CHECK | 50.0ML | WP110652 |
| N/A | N/A | N/A |

| Chemical Used | ML/SAMPLE USED | Lot Number |
|-----------------------|----------------|------------|
| 0.25N NaOH | 50.0ML | WP108640 |
| 50% v/v H2SO4 | 5.0ML | WP110391 |
| 51% w/v MgCL2 | 2.0ML | WP110390 |
| pH Paper 0-14 | N/A | W3104 |
| Nitrate/Nitrite Strip | N/A | W3101 |
| Lead Acetate strip | N/A | W3134 |
| KI-starch paper | N/A | W2965 |
| 0.4N Sulfamic Acid | 5ML | WP110388 |
| N/A | N/A | N/A |
| N/A | N/A | N/A |

| LAB SAMPLE ID | CLIENT SAMPLE ID | Wt(g)/Vol(ml) | Comment |
|---------------|------------------|---------------|----------|
| S0 | S0 | N/A | N/A |
| S5.0 | S5.0 | N/A | N/A |
| S10.0 | S10.0 | N/A | N/A |
| S100.0 | S100.0 | N/A | N/A |
| S250.0 | S250.0 | N/A | N/A |
| S500.0 | S500.0 | N/A | N/A |
| ICV | ICV | 0.5ML | W3011 |
| ICB | ICB | N/A | N/A |
| CCV | CCV | N/A | N/A |
| CCB | CCB | N/A | N/A |
| Midrange | Midrange | 2.5ML | WP110035 |
| HIGHSTD | HIGHSTD | N/A | N/A |
| LOWSTD | LOWSTD | N/A | N/A |

Extraction Conformance/Non-Conformance Comments:

N/A

| Date / Time | Prepped Sample Relinquished By/Location | Received By/Location |
|-------------------|---|----------------------|
| 11.11.2024, 09:45 | [Signature] | NF(WC) |
| | Preparation Group | Analysis Group |

| Lab Sample ID | Client Sample ID | Initial Vol (ml) | Final Vol (ml) | pH | Sulfide | Oxidizing | Nitrate/ Nitrite | Comment | Prep Pos |
|---------------|------------------|------------------|----------------|-----|----------|-----------|------------------|---------|----------|
| P4632-01 | EFFLUENT | 50 | 50 | >12 | Negative | Negative | Negative | N/A | N/A |
| P4681-01 | Q4-WW | 50 | 50 | >12 | Negative | Negative | Positive | N/A | N/A |
| P4762-01 | EFF-WW | 50 | 50 | >12 | Negative | Negative | Negative | N/A | N/A |
| P4762-01DUP | EFF-WWDUP | 50 | 50 | >12 | Negative | Negative | Negative | N/A | N/A |
| P4762-01MS | EFF-WWMS | 50 | 50 | >12 | Negative | Negative | Negative | N/A | N/A |
| P4762-01MSD | EFF-WWMSD | 50 | 50 | >12 | Negative | Negative | Negative | N/A | N/A |
| PB164714BL | PBW714 | 50 | 50 | >12 | Negative | Negative | Negative | N/A | N/A |
| PB164714BS | LCS714 | 50 | 50 | >12 | Negative | Negative | Negative | N/A | N/A |

WORKLIST(Hardcopy Internal Chain)

WorkList Name : CN SM-11062024
 WorkList ID : 185167
 Department : Distillation
 Date : 11-06-2024 10:00:10

| Sample | Customer Sample | Matrix | Test | Preservative | Customer | Raw Sample Storage Location | Collect Date | Method |
|----------|-----------------|--------|---------|---------------------|----------|-----------------------------|--------------|-------------|
| P4632-01 | EFFLUENT | Water | Cyanide | 10 N NaOH to pH >12 | LEOI01 | K63 | 10/29/2024 | SM4500-CN C |
| P4681-01 | Q4-WW | Water | Cyanide | 1:1 NaOH to pH >12 | METE01 | L12 | 11/01/2024 | SM4500-CN C |

Date/Time 11.11.2024, 07:40
Raw Sample Received by: MA WOC
Raw Sample Relinquished by: me

Date/Time 11.11.2024, 9:00
Raw Sample Received by: [Signature]
Raw Sample Relinquished by: [Signature]

WORKLIST(Hardcopy Internal Chain)

WorkList Name : cn water p4772 **WorkList ID :** 185277 **Department :** Distillation **Date :** 11-09-2024 07:40:03

| Sample | Customer Sample | Matrix | Test | Preservative | Customer | Raw Sample Storage Location | Collect Date | Method |
|-----------|-----------------|--------|---------|--------------------|----------|-----------------------------|--------------|-------------|
| P4762-01C | EFF-WW | Water | Cyanide | 1:1 NaOH to pH >12 | ARDM01 | L11 | 11/07/2024 | SM4500-CN C |

Date/Time 11.11.2024, 07:40
Raw Sample Received by: J. C. (J. C.)
Raw Sample Relinquished by: J. C. (J. C.)

Date/Time 11.11.2024, 9:00
Raw Sample Received by: J. C. (J. C.)
Raw Sample Relinquished by: J. C. (J. C.)



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

Instrument ID: KONELAB

Daily Analysis Runlog For Sequence/QC Batch ID # LB133393

| | | | |
|--------------|----------|--------------|------------------------|
| Review By | Niha | Review On | 11/13/2024 10:35:03 AM |
| Supervise By | Iwona | Supervise On | 11/13/2024 1:27:28 PM |
| SubDirectory | LB133393 | Test | Cyanide |

| STD. NAME | STD REF.# |
|---------------|--|
| ICAL Standard | WP110647,WP110648,WP110649,WP110650,WP110651,WP110652,WP110653 |
| ICV Standard | W3011 |
| CCV Standard | WP110648 |
| ICSA Standard | N/A |
| CRI Standard | N/A |
| LCS Standard | WP109549 |
| Chk Standard | WP109068,WP110103,WP110645 |

| Sr# | SampleId | ClientID | QcType | Date | Comment | Operator | Status |
|-----|-------------|-------------|--------|----------------|---------|----------|--------|
| 1 | 0.0PPBCN | 0.0PPBCN | CAL1 | 11/11/24 11:56 | | Niha | OK |
| 2 | 5.0PPBCN | 5.0PPBCN | CAL2 | 11/11/24 11:56 | | Niha | OK |
| 3 | 10PPBCN | 10PPBCN | CAL3 | 11/11/24 11:56 | | Niha | OK |
| 4 | 50PPBCN | 50PPBCN | CAL4 | 11/11/24 11:56 | | Niha | OK |
| 5 | 100PPBCN | 100PPBCN | CAL5 | 11/11/24 11:56 | | Niha | OK |
| 6 | 250PPBCN | 250PPBCN | CAL6 | 11/11/24 11:56 | | Niha | OK |
| 7 | 500PPBCN | 500PPBCN | CAL7 | 11/11/24 11:56 | | Niha | OK |
| 8 | ICV1 | ICV1 | ICV | 11/11/24 12:46 | | Niha | OK |
| 9 | ICB1 | ICB1 | ICB | 11/11/24 12:46 | | Niha | OK |
| 10 | CCV1 | CCV1 | CCV | 11/11/24 12:46 | | Niha | OK |
| 11 | CCB1 | CCB1 | CCB | 11/11/24 12:46 | | Niha | OK |
| 12 | RL | RL | SAM | 11/11/24 12:46 | | Niha | OK |
| 13 | PB164714BL | PB164714BL | MB | 11/11/24 12:46 | | Niha | OK |
| 14 | PB164714BS | PB164714BS | LCS | 11/11/24 12:54 | | Niha | OK |
| 15 | MIDPB164714 | MIDPB164714 | SAM | 11/11/24 12:54 | | Niha | OK |
| 16 | P4632-01 | EFFLUENT | SAM | 11/11/24 12:54 | | Niha | OK |
| 17 | P4681-01 | Q4-WW | SAM | 11/11/24 12:54 | | Niha | OK |
| 18 | P4762-01 | EFF-WW | SAM | 11/11/24 12:54 | | Niha | OK |

Instrument ID: KONELAB

Daily Analysis Runlog For Sequence/QC Batch ID # LB133393

| | | | |
|--------------|----------|--------------|------------------------|
| Review By | Niha | Review On | 11/13/2024 10:35:03 AM |
| Supervise By | Iwona | Supervise On | 11/13/2024 1:27:28 PM |
| SubDirectory | LB133393 | Test | Cyanide |

| STD. NAME | STD REF.# |
|---------------|--|
| ICAL Standard | WP110647,WP110648,WP110649,WP110650,WP110651,WP110652,WP110653 |
| ICV Standard | W3011 |
| CCV Standard | WP110648 |
| ICSA Standard | N/A |
| CRI Standard | N/A |
| LCS Standard | WP109549 |
| Chk Standard | WP109068,WP110103,WP110645 |

| ID | Sample Name | Method | Result | Time | Operator | Status |
|----|-------------|-----------|--------|----------------|----------|--------|
| 19 | P4762-01DUP | EFF-WWDUP | DUP | 11/11/24 13:00 | Niha | OK |
| 20 | P4762-01MS | EFF-WWMS | MS | 11/11/24 13:08 | Niha | OK |
| 21 | P4762-01MSD | EFF-WWMSD | MSD | 11/11/24 13:08 | Niha | OK |
| 22 | CCV2 | CCV2 | CCV | 11/11/24 13:08 | Niha | OK |
| 23 | CCB2 | CCB2 | CCB | 11/11/24 13:08 | Niha | OK |



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

Instrument ID: WC PH METER-1

Daily Analysis Runlog For Sequence/QC Batch ID # LB133523

| | | | |
|--------------|-----------|--------------|-----------------------|
| Review By | JSathvara | Review On | 11/20/2024 4:26:55 AM |
| Supervise By | pradip | Supervise On | 11/20/2024 4:29:41 AM |
| SubDirectory | LB133523 | Test | Field pH |

| 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 | W3071,W3071,W3094,W3093,W3071,W3071 |

| Sr# | SampleId | ClientID | QcType | Date | Comment | Operator | Status |
|-----|-------------|----------|--------|----------------|---------|----------|--------|
| 1 | CAL2 | CAL2 | CAL | 11/01/24 14:33 | | gorge | OK |
| 2 | CAL1 | CAL1 | CAL | 11/01/24 14:36 | | gorge | OK |
| 3 | CAL3 | CAL3 | CAL | 11/01/24 14:38 | | gorge | OK |
| 4 | ICV | ICV | ICV | 11/01/24 14:40 | | gorge | OK |
| 5 | CCV1 | CCV1 | CCV | 11/01/24 14:48 | | gorge | OK |
| 6 | P4681-02 | PH | SAM | 11/01/24 14:56 | | gorge | OK |
| 7 | P4681-02DUP | PHDUP | DUP | 11/01/24 14:58 | | gorge | OK |
| 8 | CCV2 | CCV2 | CCV | 11/01/24 15:02 | | gorge | OK |

Prep Standard - Chemical Standard Summary

Order ID : P4681
Test : Cyanide,Field pH
Prepbatch ID : PB164714,
Sequence ID/Qc Batch ID: LB133393,LB133523,

Standard ID :
WP108640,WP109068,WP109549,WP110035,WP110103,WP110390,WP110391,WP110645,WP110646,WP110647,W
P110648,WP110649,WP110650,WP110651,WP110652,WP110653,

Chemical ID :
E3657,M5673,M5929,W2668,W2882,W3001,W3011,W3019,W3071,W3093,W3094,W3101,W3104,W3112,W3138,W31
39,W3142,

Wet Chemistry STANDARD PREPARATION LOG

| <u>Recipe ID</u> | <u>NAME</u> | <u>NO.</u> | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|--|--------------------------|------------------|------------------------|--------------------|----------------------------------|------------------|--------------------------------|
| 11 | Sodium hydroxide absorbing solution 0.25 N | WP108640 | 07/05/2024 | 01/05/2025 | Rubina Mughal | WETCHEM_S CALE_4 (WC SC-4) | None | Iwona Zarych 07/08/2024 |

FROM 21.00000L of W3112 + 210.00000gram of E3657 = Final Quantity: 21.000 L

| <u>Recipe ID</u> | <u>NAME</u> | <u>NO.</u> | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|--------------------------|--------------------------|------------------|------------------------|-----------------------|----------------------------------|------------------|--------------------------------|
| 607 | PYRIDINE-BARBITURIC ACID | WP109068 | 08/06/2024 | 12/08/2024 | Niha Farheen Shaik | WETCHEM_S CALE_5 (WC SC-5) | None | Iwona Zarych 08/07/2024 |

FROM 145.00000ml of W3112 + 15.00000gram of W2882 + 15.00000ml of M5929 + 75.00000ml of W3019 = Final Quantity: 250.000 ml

Wet Chemistry STANDARD PREPARATION LOG

| <u>Recipe ID</u> | <u>NAME</u> | <u>NO.</u> | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|-------------------------------------|--------------------------|------------------|------------------------|-----------------------|----------------|-------------------------------|--------------------------------|
| 3371 | Cyanide LCS Spike Solution, 5PPM | WP109549 | 09/06/2024 | 01/05/2025 | Niha Farheen Shaik | None | WETCHEM_F IPETTE_3 (WC) | Iwona Zarych 09/06/2024 |

FROM 1.00000ml of W3138 + 199.00000ml of WP108640 = Final Quantity: 200.000 ml

| <u>Recipe ID</u> | <u>NAME</u> | <u>NO.</u> | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|--|--------------------------|------------------|------------------------|--------------------|----------------|-------------------------------|--------------------------------|
| 3850 | Cyanide MS-MSD spiking solution, 5PPM | WP110035 | 10/03/2024 | 11/30/2024 | Rubina Mughal | None | WETCHEM_F IPETTE_3 (WC) | Iwona Zarych 10/04/2024 |

FROM 1.00000ml of W3142 + 199.00000ml of WP108640 = Final Quantity: 200.000 ml

Wet Chemistry STANDARD PREPARATION LOG

| <u>Recipe ID</u> | <u>NAME</u> | <u>NO.</u> | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|-------------|--------------------------|------------------|------------------------|--------------------|----------------------------------|------------------|--------------------------------|
| 539 | CN BUFFER | WP110103 | 10/08/2024 | 04/08/2025 | Rubina Mughal | WETCHEM_S CALE_5 (WC SC-5) | None | Iwona Zarych 10/08/2024 |

FROM 138.00000gram of W2668 + 862.00000ml of W3112 = Final Quantity: 1000.000 ml

| <u>Recipe ID</u> | <u>NAME</u> | <u>NO.</u> | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|--|--------------------------|------------------|------------------------|-----------------------|----------------------------------|------------------|--------------------------------|
| 3214 | Magnesium Chloride For Cyanide 2.5M(51%W/V) | WP110390 | 10/24/2024 | 04/24/2025 | Niha Farheen Shaik | WETCHEM_S CALE_5 (WC SC-5) | None | Iwona Zarych 10/24/2024 |

FROM 500.00000ml of W3112 + 510.00000gram of W3001 = Final Quantity: 1000.000 ml

Wet Chemistry STANDARD PREPARATION LOG

| <u>Recipe ID</u> | <u>NAME</u> | <u>NO.</u> | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|--------------------------|--------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------------|
| 1714 | Sulfuric Acid, 50% (v/v) | WP110391 | 10/24/2024 | 04/24/2025 | Niha Farheen Shaik | None | None | Iwona Zarych 10/24/2024 |

FROM 1000.00000ml of M5673 + 1000.00000ml of W3112 = Final Quantity: 2000.000 ml

| <u>Recipe ID</u> | <u>NAME</u> | <u>NO.</u> | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|-------------------------------|--------------------------|------------------|------------------------|--------------------|----------------------------------|------------------|--------------------------|
| 1582 | Chloramine T solution, 0.014M | WP110645 | 11/11/2024 | 11/12/2024 | Niha Farheen Shaik | WETCHEM_S CALE_5 (WC SC-5) | None | Mohan Bera 11/12/2024 |

FROM 0.08000gram of W3139 + 20.00000ml of W3112 = Final Quantity: 20.000 ml

Wet Chemistry STANDARD PREPARATION LOG

| <u>Recipe ID</u> | <u>NAME</u> | <u>NO.</u> | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|--|--------------------------|------------------|------------------------|--------------------|----------------|---------------------------|--------------------------|
| 3456 | Cyanide Intermediate Working Std, 5PPM | WP110646 | 11/11/2024 | 11/12/2024 | Niha Farheen Shaik | None | WETCHEM_FIPETTE_3 (WC) | Mohan Bera 11/12/2024 |

FROM 0.25000ml of W3142 + 49.75000ml of WP108640 = Final Quantity: 50.000 ml

| <u>Recipe ID</u> | <u>NAME</u> | <u>NO.</u> | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|------------------------------|--------------------------|------------------|------------------------|--------------------|----------------|------------------|--------------------------|
| 4 | Calibration standard 500 ppb | WP110647 | 11/11/2024 | 11/12/2024 | Niha Farheen Shaik | None | None | Mohan Bera 11/12/2024 |

FROM 45.00000ml of WP108640 + 5.00000ml of WP110646 = Final Quantity: 50.000 ml

Wet Chemistry STANDARD PREPARATION LOG

| <u>Recipe ID</u> | <u>NAME</u> | <u>NO.</u> | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|-------------------------------------|--------------------------|------------------|------------------------|--------------------|----------------|------------------|--------------------------|
| 3761 | Calibration-CCV CN Standard 250 ppb | WP110648 | 11/11/2024 | 11/12/2024 | Niha Farheen Shaik | None | None | Mohan Bera 11/12/2024 |

FROM 2.50000ml of WP110646 + 47.50000ml of WP108640 = Final Quantity: 50.000 ml

| <u>Recipe ID</u> | <u>NAME</u> | <u>NO.</u> | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|------------------------------|--------------------------|------------------|------------------------|--------------------|----------------|------------------|--------------------------|
| 6 | Calibration Standard 100 ppb | WP110649 | 11/11/2024 | 11/12/2024 | Niha Farheen Shaik | None | None | Mohan Bera 11/12/2024 |

FROM 1.00000ml of WP110646 + 49.00000ml of WP108640 = Final Quantity: 50.000 ml

Wet Chemistry STANDARD PREPARATION LOG

| <u>Recipe ID</u> | <u>NAME</u> | <u>NO.</u> | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|-----------------------------|--------------------------|------------------|------------------------|--------------------|----------------|---------------------------|--------------------------|
| 7 | Calibration Standard 50 ppb | WP110650 | 11/11/2024 | 11/12/2024 | Niha Farheen Shaik | None | WETCHEM_FIPETTE_3 (WC) | Mohan Bera 11/12/2024 |

FROM 0.50000ml of WP110646 + 49.50000ml of WP108640 = Final Quantity: 50.000 ml

| <u>Recipe ID</u> | <u>NAME</u> | <u>NO.</u> | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|-----------------------------|--------------------------|------------------|------------------------|--------------------|----------------|---------------------------|--------------------------|
| 8 | Calibration Standard 10 ppb | WP110651 | 11/11/2024 | 11/12/2024 | Niha Farheen Shaik | None | WETCHEM_FIPETTE_3 (WC) | Mohan Bera 11/12/2024 |

FROM 1.00000ml of WP110647 + 49.00000ml of WP108640 = Final Quantity: 50.000 ml

Wet Chemistry STANDARD PREPARATION LOG

| <u>Recipe ID</u> | <u>NAME</u> | <u>NO.</u> | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|----------------------------|--------------------------|------------------|------------------------|--------------------|----------------|---------------------------|--------------------------|
| 9 | Calibration Standard 5 ppb | WP110652 | 11/11/2024 | 11/12/2024 | Niha Farheen Shaik | None | WETCHEM_FIPETTE_3 (WC) | Mohan Bera 11/12/2024 |

FROM 0.50000ml of WP110647 + 49.50000ml of WP108640 = Final Quantity: 50.000 ml

| <u>Recipe ID</u> | <u>NAME</u> | <u>NO.</u> | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|--------------------------|--------------------------|------------------|------------------------|--------------------|----------------|------------------|--------------------------|
| 167 | 0 ppb CN calibration std | WP110653 | 11/11/2024 | 11/12/2024 | Niha Farheen Shaik | None | None | Mohan Bera 11/12/2024 |

FROM 50.00000ml of WP108640 = Final Quantity: 50.000 ml

CHEMICAL RECEIPT LOG BOOK

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|-----------------------------|--|------------|-----------------|-------------------------|-----------------------------|----------------|
| PCI Scientific Supply, Inc. | PC19510-5 / Sodium Hydroxide Pellets 2.5 Kg, Pk of 4 | 23B1556310 | 12/31/2025 | 12/04/2023 / Rajesh | 12/01/2023 / Rajesh | E3657 |

| 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 # |
|------------------|---|------------|-----------------|-------------------------|-----------------------------|----------------|
| Seidler Chemical | BA-9530-33 / Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L) | 22G2862015 | 12/08/2024 | 06/24/2024 / Al-Terek | 06/07/2024 / Al-Terek | M5929 |

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

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|-----------------------------|--|--------------|-----------------|-------------------------|-----------------------------|----------------|
| PCI Scientific Supply, Inc. | EM-BX0035-3 / Barbituric Acid, 100 gms | 1.00132.0100 | 04/30/2025 | 12/07/2021 / | 11/30/2021 / apatel | W2882 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|-----------------------------|--|--------------|-----------------|-------------------------|-----------------------------|----------------|
| PCI Scientific Supply, Inc. | 01237-10KG / Magnesium Chloride Hexahydrate ACS 10KG | 002251-03319 | 06/06/2027 | 01/23/2023 / lwona | 06/06/2022 / lwona | W3001 |

CHEMICAL RECEIPT LOG BOOK

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|---------------------|----------|-----------------|-------------------------|-----------------------------|----------------|
| EPA | / ICV-CN | ICV6-400 | 12/31/2024 | 01/03/2024 / lwona | 02/20/2020 / lwona | W3011 |

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

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|-----------------------------|---|---------|-----------------|-------------------------|-----------------------------|----------------|
| PCI Scientific Supply, Inc. | AL14455-3 / buffer solution pH 7 yellow | 4308H30 | 07/31/2025 | 01/02/2024 / JIGNESH | 12/06/2023 / lwona | W3071 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|-----------------------------|---|----------|-----------------|-------------------------|-----------------------------|----------------|
| PCI Scientific Supply, Inc. | 566002 / BUFFER PH 7.00 GREEN 1PINT PK6 | 44001f99 | 12/31/2025 | 04/03/2024 / jignesh | 04/02/2024 / jignesh | W3093 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|-----------------------------|---|---------|-----------------|-------------------------|-----------------------------|----------------|
| PCI Scientific Supply, Inc. | 1601-1 / PH 10.01 BUFFER,COLOR CD 475ML | 4310g83 | 03/31/2025 | 04/03/2024 / jignesh | 04/02/2024 / jignesh | W3094 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|-----------------------------|--|--------|-----------------|-------------------------|-----------------------------|----------------|
| PCI Scientific Supply, Inc. | 470112-662 / TEST STRIPES, NITRATE/NITRITE, PK50 | 402403 | 04/30/2026 | 05/02/2024 / lwona | 04/10/2024 / lwona | W3101 |

CHEMICAL RECEIPT LOG BOOK

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|-----------------------------|------------------------------------|---------|-----------------|-------------------------|-----------------------------|----------------|
| PCI Scientific Supply, Inc. | RC2543-4 / CYANIDE STD 1000PPM 4OZ | 1404G63 | 09/30/2024 | 04/22/2024 / lwona | 04/22/2024 / lwona | W3104 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|------------------|---------------------|---------------------|-----------------|-------------------------|-----------------------------|----------------|
| Seidler Chemical | DIW / DI Water | Daily Lab-Certified | 07/03/2029 | 07/03/2024 / lwona | 07/03/2024 / lwona | W3112 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|-----------------------------|--|----------|-----------------|-------------------------|-----------------------------|----------------|
| PCI Scientific Supply, Inc. | LC135457 / Cyanide Standard, 1000 PPM, Second Source | 44080060 | 01/30/2025 | 09/06/2024 / lwona | 08/28/2024 / lwona | W3138 |

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

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|-----------------------------|------------------------------------|---------|-----------------|-------------------------|-----------------------------|----------------|
| PCI Scientific Supply, Inc. | RC2543-4 / CYANIDE STD 1000PPM 4OZ | 1405J81 | 11/30/2024 | 09/25/2024 / lwona | 09/25/2024 / lwona | W3142 |

W3071
Rec 12/6/23

Certificate of Analysis 12

Buffer, Reference Standard, pH 7.00 ± 0.01 at 25°C (Color Coded Yellow)

Lot Number: 4308H30

Product Number: 1551

Manufacture Date: AUG 09, 2023

Expiration Date: JUL 2025

The certified value for this product is confirmed in independent testing by a second qualified chemist.
The NIST traceable pH value is certified to ±0.01 at 25 °C only. All other pH values at their corresponding temperatures are accurate to ± 0.05.

| °C | 0 | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 |
|----|------|------|------|------|------|------|------|------|------|------|------|
| pH | 7.12 | 7.09 | 7.06 | 7.04 | 7.02 | 7.00 | 6.99 | 6.98 | 6.98 | 6.97 | 6.97 |

| Name | CAS# | Grade |
|--------------------------------|-------------|-----------------|
| Water | 7732-18-5 | ACS/ASTM/USP/EP |
| Sodium Phosphate Dibasic | 7558-79-4 | ACS |
| Potassium Dihydrogen Phosphate | 7778-77-0 | ACS |
| Preservative | Proprietary | |
| Yellow Dye | Proprietary | |
| Sodium Hydroxide | 1310-73-2 | Reagent |

| Test | Specification | Result |
|------------|---------------|---|
| Appearance | Yellow liquid | Passed *Not a certified value. |

| Test | Certified Value | Uncertainty | NIST SRM# |
|---------------------------------------|-----------------|-------------|-------------------------|
| pH at 25°C (Method: SQCP027, SQCP033) | 7.002 | 0.02 | 186-I-g, 186-II-g, 191d |

| Specification | Reference |
|-----------------------------|-----------------|
| Commercial Buffer Solutions | ASTM (D 1293 B) |
| Buffer A | ASTM (D 5464) |
| Buffer A | ASTM (D 5128) |

pH measurements were performed in our Batesville, IN laboratory under ISO/IEC 17025 accreditation (ANAB Certificate L2387.02) and are certified traceable to National Institute of Standards and Technology (NIST) Standard Reference Material as indicated above via an unbroken chain of comparisons. The uncertainty is calculated from the uncertainty of the measurement variation from sample to sample, the uncertainty in the NIST Standard Reference Material, and the uncertainty of the measurement process. The uncertainty is multiplied by k=2, corresponding to 95% coverage in a normal distribution. 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) |
|-------------|---------------------|---------------------------------|
| 1551-2.5 | 10 L Cubitainer® | 24 months |
| 1551-5 | 20 L Cubitainer® | 24 months |

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



Paul Brandon (08/09/2023)

Production Manager

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

This product was tested in an ISO 17025 Accredited Laboratory

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

~~W2918~~
W3001

rec. 06/06/22
exp. 06/06/27

Chem-Impex International, Inc.

Tel: (630) 766-2112
E-mail: sales@chemimpex.com
Shipping and Correspondence:
935 Dillon Drive
Wood Dale, IL 60191

Fax: (630) 766-2218
Web site: www.chemimpex.com
Manufacturing site:
825 Dillon Drive
Wood Dale, IL 60191

Certificate of Analysis

| | |
|--------------------------|--|
| Catalogue Number | 01237 |
| Product | Magnesium chloride hexahydrate |
| Lot Number | 002251-03319 Magnesium chloride•6H ₂ O |
| CAS Number | 7791-18-6 |
| Molecular Formula | MgCl ₂ •6H ₂ O |
| Molecular Weight | 203.3 |

| | |
|---------------------------|--|
| Appearance | Colorless crystals, very deliquescent |
| Heavy Metals | < 5 ppm |
| Anion | Nitrate : < 0.001% Phosphate : < 5 ppm Sulfate : < 0.002% |
| Cation | Ammonium : < 0.002% Barium : < 0.005% Calcium : 0.0006% Iron : < 5 ppm Manganese : 1.8 ppm Potassium : 0.0006% Sodium : 0.0008% Strontium : 0.0015% |
| Insoluble material | 0.0025% |
| Assay by titration | 100.29% |
| Grade | ACS reagent |
| Storage | Store at RT |
| Country of Origin | India |

Certificate of Analysis

Catalog Number: 01237

Lot Number: 002251-03319

Remarks

See material safety data sheet for additional information

For laboratory use only

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



Bala Kumar
Quality Control Manager

W3019
Rec 4/3/23

3050 Spruce Street, Saint Louis, MO 63103, USA

Website: www.sigmaaldrich.comEmail USA: techserv@sial.comOutside USA: eurtechserv@sial.com

Product Name:

Pyridine - anhydrous, 99.8%

Certificate of Analysis

Product Number: 270970
Batch Number: SHBQ2113
Brand: SIAL
CAS Number: 110-86-1
MDL Number: MFCD00011732
Formula: C₅H₅N
Formula Weight: 79.10 g/mol
Quality Release Date: 15 DEC 2022



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



Larry Coers, Director
 Quality Control
 Sheboygan Falls, WI US

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





Certificate of Analysis

Sodium Hydroxide (Pellets)

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

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

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

Storage: Room Temperature

Pellets

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

Internal ID #: 710

Signature

Additional Information

We certify that this batch conforms to the specifications listed.

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

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

Product meets analytical specifications of the grades listed.

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

| | |
|--------|--------|
| E 3657 | E 3659 |
| E 3654 | E 3660 |



R: 02/20/20
 SJ

Instructions for QATS Reference Material: Inorganic ICV Solutions

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

W3011
 W3012
 W3013
 W3014
 W3015

ICV5-0415 For the cold vapor analysis of mercury by AA: dilute the ICV5 concentrate 100-fold with 2% (v/v) nitric acid; pipet 1 mL of the concentrate into a 100 mL volumetric flask and dilute to volume with 2% (v/v) nitric acid. The ICV5 concentrate is prepared in 0.05% (w/v) K₂Cr₂O₇ and 5% (v/v) nitric acid.

ICV6-0400 For the analysis of cyanide: dilute the ICV6 concentrate 100-fold with Type II water; pipet 1 mL of the concentrate into a 100 mL volumetric flask and dilute to volume with Type II water. Distill this solution along with the samples before analysis. The cyanide concentrate is prepared from K₃Fe(CN)₆, Type II water, and 0.1 % sodium hydroxide, and will decompose rapidly if exposed to light.

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

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

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

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

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



M5673- 98
 MB

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 ₂ SO 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 SO ₂) | ≤ 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™**



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


Jamie Ethier
Vice President Global Quality



Certificate of Analysis

1.00132.0000 Barbituric acid for analysis EMSURE®
Batch N020065932

| | Spec. Values | | Batch Values | |
|--|--------------|-----|--------------|-----|
| Assay (acidimetric) | ≥ 99 | % | 99.6 | % |
| Identity (IR-spectrum) | passes test | | passes test | |
| Chloride (Cl) | ≤ 40 | ppm | ≤ 40 | ppm |
| Heavy metals (as Pb) | ≤ 50 | ppm | ≤ 50 | ppm |
| Fe (Iron) | ≤ 10 | ppm | ≤ 10 | ppm |
| Sulfated ash | ≤ 0.1 | % | ≤ 0.1 | % |
| Loss on Drying (105 °C) | ≤ 0.1 | % | ≤ 0.1 | % |
| Suitability as reagent (for cyanide determination) | passes test | | passes test | |

Date of release (DD.MM.YYYY) 17.04.2020
Minimum shelf life (DD.MM.YYYY) 30.04.2025

Ioannis Chartomatsidis
Responsible laboratory manager quality control

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

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

(sodium dihydrogen phosphate, monohydrate)



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

Certificate of Analysis

Meets ACS Reagent Chemical Requirements,

| Test | Specification | Result |
|---|----------------|---------|
| Assay (NaH ₂ PO ₄ · H ₂ O) | 98.0 – 102.0 % | 99.5 |
| pH of 5% Solution at 25°C | 4.1 – 4.5 | 4.3 |
| Insoluble Matter | <= 0.01 % | < 0.01 |
| Chloride (Cl) | <= 5 ppm | < 5 |
| ACS – Sulfate (SO ₄) | <= 0.003 % | < 0.003 |
| Calcium (Ca) | <= 0.005 % | < 0.005 |
| Potassium (K) | <= 0.01 % | < 0.01 |
| Heavy Metals (as Pb) | <= 0.001 % | < 0.001 |
| Trace Impurities – Iron (Fe) | <= 0.001 % | < 0.001 |

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

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

James Ethier
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



W3093
00421
04/03/2024
18

Certificate of Analysis

Buffer, Reference Standard, pH 7.00 ± 0.01 at 25°C (Color Coded Yellow)

Lot Number: 4401F99

Product Number: 1551

Manufacture Date: JAN 08, 2024

Expiration Date: DEC 2025

The certified value for this product is confirmed in independent testing by a second qualified chemist.

The NIST traceable pH value is certified to ±0.01 at 25 °C only. All other pH values at their corresponding temperatures are accurate to ± 0.05.

| | | | | | | | | | | | |
|----|------|------|------|------|------|------|------|------|------|------|------|
| °C | 0 | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 |
| pH | 7.12 | 7.09 | 7.06 | 7.04 | 7.02 | 7.00 | 6.99 | 6.98 | 6.98 | 6.97 | 6.97 |

| Name | CAS# | Grade |
|--------------------------------|-------------|-----------------|
| Water | 7732-18-5 | ACS/ASTM/USP/EP |
| Sodium Phosphate Dibasic | 7558-79-4 | ACS |
| Potassium Dihydrogen Phosphate | 7778-77-0 | ACS |
| Preservative | Proprietary | |
| Yellow Dye | Proprietary | |
| Sodium Hydroxide | 1310-73-2 | |

| Test | Specification | Result |
|------------|---------------|---|
| Appearance | Yellow liquid | Passed *Not a certified value. |

| Test | Certified Value | Uncertainty | NIST SRM# |
|---------------------------------------|-----------------|-------------|-------------------------|
| pH at 25°C (Method: SQCP027, SQCP033) | 7.004 | 0.02 | 186-I-g, 186-II-g, 191d |

| Specification | Reference |
|-----------------------------|-----------------|
| Commercial Buffer Solutions | ASTM (D 1293 B) |
| Buffer A | ASTM (D 5464) |
| Buffer A | ASTM (D 5128) |

pH measurements were performed in our Batesville, IN laboratory under ISO/IEC 17025 accreditation (ANAB Certificate L2387.02) and are certified traceable to National Institute of Standards and Technology (NIST) Standard Reference Material as indicated above via an unbroken chain of comparisons. The uncertainty is calculated from the uncertainty of the measurement variation from sample to sample, the uncertainty in the NIST Standard Reference Material, and the uncertainty of the measurement process. The uncertainty is multiplied by k=2, corresponding to 95% coverage in a normal distribution. 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) |
|-------------|---------------------|---------------------------------|
| 1551-1 | 4 L natural poly | 24 months |
| 1551-1CT | 4 L Cubitainer® | 24 months |
| 1551-2.5 | 10 L Cubitainer® | 24 months |
| 1551-5 | 20 L Cubitainer® | 24 months |

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



Paul Brandon (01/08/2024)

Production Manager

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

This product was tested in an ISO 17025 Accredited Laboratory

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*W3094
ofure 1-38
04/07/2025*

Certificate of Analysis

Buffer, Reference Standard, pH 10.00 ± 0.01 at 25°C (Color Coded Blue)

Lot Number: 4310G83

Product Number: 1601

Manufacture Date: OCT 09, 2023

Expiration Date: MAR 2025

The certified value for this product is confirmed in independent testing by a second qualified chemist.
The NIST traceable pH value is certified to ±0.01 at 25 °C only. All other pH values at their corresponding temperatures are accurate to ± 0.05.

| | | | | | | | | | | |
|----|-------|-------|-------|-------|-------|-------|------|------|------|------|
| °C | 0 | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 50 |
| pH | 10.31 | 10.23 | 10.17 | 10.11 | 10.05 | 10.00 | 9.95 | 9.91 | 9.87 | 9.81 |

| Name | CAS# | Grade |
|--------------------|-------------|-----------------|
| Water | 7732-18-5 | ACS/ASTM/USP/EP |
| Sodium Carbonate | 497-19-8 | ACS |
| Sodium Bicarbonate | 144-55-8 | ACS |
| Sodium Hydroxide | 1310-73-2 | Reagent |
| Preservative | Proprietary | |
| Blue Dye | Proprietary | |

| Test | Specification | Result |
|------------|---------------|---|
| Appearance | Blue liquid | Passed *Not a certified value. |

| Test | Certified Value | Uncertainty | NIST SRM# |
|---------------------------------------|-----------------|-------------|-------------------------|
| pH at 25°C (Method: SQCP027, SQCP033) | 10.003 | 0.02 | 186-I-g, 186-II-g, 191d |

| Specification | Reference |
|-----------------------------|-----------------|
| Commercial Buffer Solutions | ASTM (D 1293 B) |
| Buffer C | ASTM (D 5464) |
| Buffer C | ASTM (D 5128) |

pH measurements were performed in our Batesville, IN laboratory under ISO/IEC 17025 accreditation (ANAB Certificate L2387.02) and are certified traceable to National Institute of Standards and Technology (NIST) Standard Reference Material as indicated above via an unbroken chain of comparisons. The uncertainty is calculated from the uncertainty of the measurement variation from sample to sample, the uncertainty in the NIST Standard Reference Material, and the uncertainty of the measurement process. The uncertainty is multiplied by k=2, corresponding to 95% coverage in a normal distribution. 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) |
|-------------|---------------------|---------------------------------|
| 1601-16 | 500 mL natural poly | 18 months |
| 1601-5 | 20 L Cubitainer® | 18 months |

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



Paul Brandon (10/09/2023)

Production Manager

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

This product was tested in an ISO 17025 Accredited Laboratory

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

Certificate of Analysis

Cyanide Standard, 1000 ppm CN⁻

Lot Number: 1404G63

Product Number: 2543

Manufacture Date: APR 12, 2024

Expiration Date: SEP 2024

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

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

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

| Test | Specification | Result |
|----------------------------|------------------|----------|
| Appearance | Colorless liquid | Passed |
| Cyanide (CN ⁻) | 995-1005 ppm | 1000 ppm |

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

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

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

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



Heidi J Green (04/12/2024)

Operations Manager

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

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Certificate of Analysis

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

 Product Code: **LC13545**

Manufacture Date: August 01, 2024

 Lot Number: **44080060**

Expiration Date: January 30, 2025

| Test | Specification | Result |
|-----------------------|--------------------|----------------|
| Appearance (clarity) | clear solution | clear solution |
| Appearance (color) | colorless | colorless |
| Concentration (CN) | 0.990 - 1.010mg/mL | 1.008mg/mL |
| Concentration (CN) | 990 - 1,010ppm | 1,008ppm |
| Traceable to NIST SRM | Report | 999b |

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

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

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

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

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

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



 Michael Monteleone
 Chemistry Supervisor - Quality Control

ISO9001:2015 Registration #0306-01

W3139 Received on 9/9/24 by IZ

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

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

Order our products online thermofisher.com/chemicals

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

Certificate of Analysis

Cyanide Standard, 1000 ppm CN⁻

Lot Number: 1405J81

Product Number: 2543

Manufacture Date: MAY 20, 2024

Expiration Date: NOV 2024

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

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

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

| Test | Specification | Result |
|----------------------------|------------------|----------|
| Appearance | Colorless liquid | Passed |
| Cyanide (CN ⁻) | 995-1005 ppm | 1000 ppm |

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

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

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

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



Heidi J Green (05/20/2024)
Operations Manager

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



SHIPPING DOCUMENTS

CLIENT INFORMATION

CLIENT PROJECT INFORMATION

CLIENT BILLING INFORMATION

REPORT TO BE SENT TO:

COMPANY: Metem AGE Power Business
 ADDRESS: 700 Parsippany Road,
 CITY: Parsippany STATE: NJ ZIP: 07054
 ATTENTION: Sundas Pervez
 PHONE: 862-289-2531 FAX:

PROJECT NAME: Parsippany Wastewater Quarterly 2024
 PROJECT NO.: LOCATION:
 PROJECT MANAGER:
 e-mail:
 PHONE: FAX:

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

ANALYSIS

DATA TURNAROUND INFORMATION

DATA DELIVERABLE INFORMATION

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

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

*Metals
Cyanide
Field Sampling
Field PH*

PRESERVATIVES

COMMENTS

| ALLIANCE SAMPLE ID | PROJECT SAMPLE IDENTIFICATION | SAMPLE MATRIX | SAMPLE TYPE | | SAMPLE COLLECTION | | # OF BOTTLES | PRESERVATIVES | | | | | | | | | COMMENTS ← Specify Preservatives A-HCl D-NaOH B-HNO3 E-ICE C-H2SO4 F-OTHER | | |
|--------------------|-------------------------------|---------------|-------------|------|-------------------|------|--------------|---------------|---|---|---|---|---|---|---|---|--|--|--------|
| | | | COMP | GRAB | DATE | TIME | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | | | |
| 1. | Q4 Wastewater | W | ✓ | | 11-24 | 1455 | 4 | ✓ | ✓ | ✓ | ✓ | | | | | | | | |
| 2. | | | | | | | | | | | | | | | | | | | PH 7.9 |
| 3. | | | | | | | | | | | | | | | | | | | |
| 4. | | | | | | | | | | | | | | | | | | | |
| 5. | | | | | | | | | | | | | | | | | | | |
| 6. | | | | | | | | | | | | | | | | | | | |
| 7. | | | | | | | | | | | | | | | | | | | |
| 8. | | | | | | | | | | | | | | | | | | | |
| 9. | | | | | | | | | | | | | | | | | | | |
| 10. | | | | | | | | | | | | | | | | | | | |

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

| | | | | |
|---|--------------------------------|---------------------------------------|------------------------------|---|
| RELINQUISHED BY SAMPLER: 1. <u>[Signature]</u> | DATE/TIME: <u>1500 11-24</u> | RECEIVED BY: <u>[Signature]</u> | DATE/TIME: <u>1500 11-24</u> | Conditions of bottles or coolers at receipt: <input type="checkbox"/> COMPLIANT <input type="checkbox"/> NON COMPLIANT <input type="checkbox"/> COOLER TEMP <u>4.0</u> °C |
| RELINQUISHED BY SAMPLER: 2. <u>[Signature]</u> | DATE/TIME: | RECEIVED BY: 2. <u>[Signature]</u> | | Comments: |
| RELINQUISHED BY SAMPLER: 3. <u>[Signature]</u> | DATE/TIME: <u>1615 11-1-24</u> | RECEIVED BY: 3. <u>[Signature]</u> | | Page _____ of _____ CLIENT: <input type="checkbox"/> Hand Delivered <input type="checkbox"/> Other _____ |

Shipment Complete
 YES NO

Client Name: Metem Power Business

Client Address: 700 Pat's Property Rd

Client Rep on Site: Sundas Perez

Sampling Date: 11-1-24

Arrival Time: 1430

Departure Time: _____

FIELD EQUIPMENT CALIBRATION (± 1%) (99%-101%)

pH Calibration (± 1%) (99%-101%) (SM4500-H B/9040C)

| | 7.00 Buffer | 4.00 Buffer | 10.00 Buffer | 7.00 Buffer | ICV (± 0.1 pH unit) |
|---------|-------------|-------------|--------------|-------------|------------------------|
| | W 3071 | W 3107 | W 3094 | W 3093 | |
| Time | 1433 | 1436 | 1438 | 1440 | |
| Temp °C | 17.79°C | 18.17°C | 18.53°C | 18.32°C | |
| pH | 7.00 | 4.00 | 10.00 | 7.00 | |

FIELD EQUIPMENT CALIBRATION (± 1%) (99%-101%)

Specific Conductance (mS/cm) (99%-101%)/(mmho/cm) (SM2510 B/120.1/9050A)

| | Calibration (± 1%) (99%-101%) | ICV (± 1%) (99%-101%) |
|-----------------|-------------------------------|-----------------------|
| | WP | WP |
| Time | | |
| Temp °C | | |
| Reading (mS/cm) | | |

Sampler Signature/Date:

[Signature] 11-1-24

Supervisor Review/Date:

[Signature] 11/1/24



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 |