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:** | Q1820 | **OrderDate:** | 4/16/2025 12:52:00 PM |
| **Client:** | Aramark Uniforms | **Project:** | Monthly 2025 |
| **Contact:** | Jose Liceaga | **Location:** | L41 |

| LabID | ClientID | Matrix | Test | Method | Sample Date | Prep Date | Anal Date | Received |
|---|---|---|---|---|---|---|---|---|
| **Q1820-01** | **GRAB** | **WATER** | | | **04/16/25 11:43** | | | **04/16/25** |
| | | | TPH | 1664A | | | 04/17/25 10:00 | |
| **Q1820-02** | **COMP** | **WATER** | | | **04/16/25 11:45** | | | **04/16/25** |
| | | | BOD5 | SM5210 B | | | 04/16/25 16:00 | |
| | | | TSS | SM2540 D | | | 04/17/25 10:00 | |


# SAMPLE DATA

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | Aramark Uniforms | Date Collected: | 04/16/25 11:43 |
| Project: | Monthly 2025 | Date Received: | 04/16/25 |
| Client Sample ID: | GRAB | SDG No.: | Q1820 |
| Lab Sample ID: | Q1820-01 | Matrix: | WATER |
| | | % Solid: | 0 |

| Parameter | Conc. | Qua. | DF | MDL | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|
| TPH | 7.40 | | 1 | 0.29 | 5.00 | mg/L | | 04/17/25 10:00 | 1664A |

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: | Aramark Uniforms | Date Collected: | 04/16/25 11:45 |
| Project: | Monthly 2025 | Date Received: | 04/16/25 |
| Client Sample ID: | COMP | SDG No.: | Q1820 |
| Lab Sample ID: | Q1820-02 | Matrix: | WATER |
| | | % Solid: | 0 |

| Parameter | Conc. | Qua. | DF | MDL | LOQ / CRQL | Units | Prep Date | Date Ana. | Ana Met. |
|---|---|---|---|---|---|---|---|---|---|
| BOD5 | 965 | | 1 | 0.20 | 2.00 | mg/L | | 04/16/25 16:00 | SM 5210 B-16 |
| TSS | 538 | | 1 | 1.00 | 4.00 | mg/L | | 04/17/25 10:00 | 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

# QC RESULT SUMMARY

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# Preparation Blank Summary

**Client:** Aramark Uniforms **SDG No.:** Q1820

**Project:** Monthly 2025

| Analyte | Units | Result | Acceptance Limits | Conc Qual | MDL | RDL | Analysis Date |
|---|---|---|---|---|---|---|---|
| **Sample ID:** LB135459BL | | | | | | | |
| BOD5 | mg/L | < 0.2000 | 0.2000 | U | 0.20 | 2.0 | 04/16/2025 |
| **Sample ID:** LB135466BL | | | | | | | |
| TPH | mg/L | < 2.5000 | 2.5000 | U | 0.29 | 5.0 | 04/17/2025 |
| **Sample ID:** LB135467BL | | | | | | | |
| TSS | mg/L | 1 | 2.0000 | J | 1 | 4 | 04/17/2025 |

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# Duplicate Sample Summary

**Client:** Aramark Uniforms
**Project:** Monthly 2025
**Client ID:** LB135466BSD
**SDG No.:** Q1820
**Sample ID:** LB135466BS
**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 |
|---|---|---|---|---|---|---|---|---|---|---|
| TPH | mg/L | +/-18 | 16.7 | | 16.9 | | 1 | 1.19 | | 04/17/2025 |

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# Duplicate Sample Summary

**Client:** Aramark Uniforms
**Project:** Monthly 2025
**Client ID:** COMPDUP

**SDG No.:** Q1820
**Sample ID:** Q1820-02
**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 | 965 | | 939 | | 1 | 2.73 | | 04/16/2025 |
| TSS | mg/L | +/-5 | 538 | | 526 | | 1 | 2.26 | | 04/17/2025 |

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# Laboratory Control Sample Summary

| | | | |
|---|---|---|---|
| **Client:** | Aramark Uniforms | **SDG No.:** | Q1820 |
| **Project:** | Monthly 2025 | **Run No.:** | LB135459 |

| Analyte | Units | True Value | Result | Conc. Qualifier | % Recovery | Dilution Factor | Acceptance Limit %R | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| **Sample ID** **LB135459BS** | | | | | | | | |
| **BOD5** | **mg/L** | **198** | **174** | | **88** | **1** | **84.6-115.4** | **04/16/2025** |

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# Laboratory Control Sample Summary

| | | | |
|---|---|---|---|
| **Client:** | Aramark Uniforms | **SDG No.:** | Q1820 |
| **Project:** | Monthly 2025 | **Run No.:** | LB135466 |

| Analyte | Units | True Value | Result | Conc. Qualifier | % Recovery | Dilution Factor | Acceptance Limit %R | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| **Sample ID** **LB135466BS** | | | | | | | | |
| **TPH** | **mg/L** | **20.0** | **16.7** | | **84** | **1** | **78-114** | **04/17/2025** |

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# Laboratory Control Sample Summary

**Client:** Aramark Uniforms **SDG No.:** Q1820

**Project:** Monthly 2025 **Run No.:** LB135466

| Analyte | Units | True Value | Result | Conc. Qualifier | % Recovery | Dilution Factor | Acceptance Limit %R | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| **Sample ID** LB135466BSD | | | | | | | | |
| TPH | mg/L | 20.0 | 16.9 | | 84 | 1 | 78-114 | 04/17/2025 |

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# Laboratory Control Sample Summary

**Client:** Aramark Uniforms **SDG No.:** Q1820

**Project:** Monthly 2025 **Run No.:** LB135467

| Analyte | Units | True Value | Result | Conc. Qualifier | % Recovery | Dilution Factor | Acceptance Limit %R | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| **Sample ID** LB135467BS | | | | | | | | |
| TSS | mg/L | 550 | 532 | | 97 | 1 | 90-110 | 04/17/2025 |

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# RAW DATA

Reviewed By:Iwona
On:4/21/2025 2:14:48 PM
Inst Id :DO METER
LB :LB135459

# BOD5 LOG

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

**QC BATCH ID:** LB135459
**Analysis Date:** 04/16/2025
**BOD Water:** WP112719
**MANGANOUS SULFATE SOLUTION:** W3103
**Starch:** W3149
**Alkaline Iodide Azide:** W3109
**Sulfuric acid, 1N:** WP110386
**Sodium Thiosulfate, 0.025N:** W3105
**POLYSEED:** WP112721
**NaOH, 1N:** WP111323
**GGA:** WP112720
**IncubatorID:** INCUBATOR #3
**Chlorine Strips:** W3155
**GuageID:** 0511062
**pH Strips:** W3140
**Zero DO:** WP112724

| Lab SampleID | Client ID | Bottle No. | VOL. ML | Initial Reading(ML) | Final Reading(ML) | Difference | Average |
|---|---|---|---|---|---|---|---|
| WINKLER 1 | WINKLER 1 | 1 | 300 | 0.0 | 9.4 | 9.4 | 9.4 |
| WINKLER 2 | WINKLER 2 | 2 | 300 | 9.7 | 19.1 | 9.4 | 9.4 |

Meter Calibration1: 9.26 Zero DO Reading1: 0.15 mg/L (<=0.2 Criteria)

Barometric Pressure1: 755 mmHg DO Meter BOD fluid reading for winkler comparison: 9.49

**After Incubation**

Meter Calibration2: 8.37 Zero DO Reading2: 0.15 mg/L (<=0.2 Criteria)

Barometric Pressure2: 771 mmHg

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**QC BATCH ID:** LB135459

**INCUBATOR TEMP IN(C):** 20.1

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

**TIME IN:** 16:00

**TIME OUT:** 12:45

**DATE IN:** 04/16/2025

**DATE OUT:** 04/21/2025

| Lab SampleID | Bottle No. | Check CL | Initial PH | Final PH | Temp ℃ | Sam Vol. (mL) | D.O.1 Initial | D.O.2 Final | Depletion | BOD Result (mg/L) | Avg Result (mg/L) | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LB135459BL | 1 | No | 6.60 | N/A | 20.80 | 300 | 9.49 | 9.47 | 0.02 | 0.02 | 0.02 | |
| POLYSEED | 1 | | | | | 10 | 9.38 | 6.12 | 3.26 | 0.65 | 0.64 | |
| POLYSEED | 2 | | | | | 15 | 9.34 | 4.45 | 4.89 | 0.65 | | |
| POLYSEED | 3 | | | | | 20 | 9.28 | 3.20 | 6.08 | 0.61 | | |
| GGA | 1 | | | | | 6 | 9.39 | 5.39 | 4 | 168 | 173.67 | |
| GGA | 2 | | | | | 6 | 9.39 | 5.28 | 4.11 | 173.5 | | |
| GGA | 3 | | | | | 6 | 9.38 | 5.15 | 4.23 | 179.5 | | |
| Q1804-01 | 1 | No | 6.30 | 6.69 | 20.20 | 5 | 9.26 | 6.62 | 2.64 | 120 | 120 | pH Adjuste |
| Q1804-01 | 2 | | | | | 20 | 8.98 | 0.49 | - | 0 | | |
| Q1804-01 | 3 | | | | | 50 | 8.07 | 0.22 | - | 0 | | |
| Q1804-01 | 4 | | | | | 150 | 4.98 | 0.09 | - | 0 | | |
| Q1804-02 | 1 | No | 6.38 | 6.99 | 20.30 | 5 | 9.32 | 7.29 | 2.03 | 83.4 | 83.4 | pH Adjuste |
| Q1804-02 | 2 | | | | | 20 | 8.95 | 0.75 | - | 0 | | |
| Q1804-02 | 3 | | | | | 50 | 8.07 | 0.35 | - | 0 | | |
| Q1804-02 | 4 | | | | | 150 | 4.98 | 0.15 | - | 0 | | |
| Q1810-02 | 1 | No | 9.55 | 7.39 | 20.70 | 5 | 9.47 | 4.54 | 4.93 | 257.4 | 183.22 | pH Adjuste |
| Q1810-02 | 2 | | | | | 20 | 9.45 | 1.54 | 7.91 | 109.05 | | |
| Q1810-02 | 3 | | | | | 50 | 9.36 | 0.14 | - | 0 | | |
| Q1810-02 | 4 | | | | | 150 | 9.28 | 0.07 | - | 0 | | |
| Q1820-02 | 1 | No | 6.83 | N/A | 20.30 | 0.5 | 9.47 | 7.09 | 2.38 | 1044 | 965 | |
| Q1820-02 | 2 | | | | | 1 | 9.40 | 5.49 | 3.91 | 981 | | |
| Q1820-02 | 3 | | | | | 2 | 9.33 | 2.89 | 6.44 | 870 | | |
| Q1820-02 | 4 | | | | | 3 | 9.22 | 0.07 | - | 0 | | |
| Q1820-02DUP | 1 | No | 6.83 | N/A | 20.30 | 0.5 | 9.47 | 7.21 | 2.26 | 972 | 939 | |
| Q1820-02DUP | 2 | | | | | 1 | 9.40 | 5.60 | 3.8 | 948 | | |
| Q1820-02DUP | 3 | | | | | 2 | 9.33 | 2.71 | 6.62 | 897 | | |
| Q1820-02DUP | 4 | | | | | 3 | 9.20 | 0.07 | - | 0 | | |
| Q1822-01 | 1 | No | 5.95 | 6.82 | 20.20 | 5 | 9.45 | 7.99 | - | 0 | 47.9 | pH Adjuste |
| Q1822-01 | 2 | | | | | 20 | 9.44 | 5.07 | 4.37 | 55.95 | | |
| Q1822-01 | 3 | | | | | 50 | 9.19 | 1.91 | 7.28 | 39.84 | | |
| Q1822-01 | 4 | | | | | 150 | 8.01 | 0.09 | - | 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.**

# WORKLIST(Hardcopy Internal Chain)

LB135459

**WorkList Name :** bod5-4-16 **WorkList ID :** 188953 **Department :** Wet-Chemistry **Date :** 04-16-2025 08:13:57

| Sample | Customer Sample | Matrix | Test | Preservative | Customer | Raw Sample Storage Location | Collect Date | Method |
|---|---|---|---|---|---|---|---|---|
| Q1804-01 | 001-WILLETS-PT-BLVD(APR) | Water | BOD5 | Cool 4 deg C | TULL01 | L31 | 04/10/2025 | SM5210 B |
| Q1804-02 | 002-35TH-AVE(APR) | Water | BOD5 | Cool 4 deg C | TULL01 | L31 | 04/10/2025 | SM5210 B |
| Q1810-02 M | MOO-25-0118 | Water | BOD5 | Cool 4 deg C | PSEG03 | L51 | 04/14/2025 | SM5210 B |

**Date/Time** 04/16/2025 13.50
**Raw Sample Received by:** RM (WC)
**Raw Sample Relinquished by:** JP(COC)



**Date/Time** 04/16/2025 15.40
**Raw Sample Received by:** JP(COC)
**Raw Sample Relinquished by:** RM (WC)

# WORKLIST(Hardcopy Internal Chain)

LB1354459

**WorkList Name :** bod5-04-16 **WorkList ID :** 188971 **Department :** Wet-Chemistry **Date :** 04-16-2025 15:00:33

| Sample | Customer Sample | Matrix | Test | Preservative | Customer | Raw Sample Storage Location | Collect Date | Method |
|---|---|---|---|---|---|---|---|---|
| Q1820-02 | COMP | Water | BOD5 | Cool 4 deg C | ARAM01 | L41 | 04/16/2025 | SM5210 B |
| Q1822-01 | TW-WTS-06 | Water | BOD5 | Cool 4 deg C | ENTA05 | L21 | 04/15/2025 | SM5210 B |

**Date/Time** 04/16/2025 15.10
**Raw Sample Received by:** RM (WC)
**Raw Sample Relinquished by:** JP (COC)



**Date/Time** 04/16/2025 15.40
**Raw Sample Received by:** JP (COC)
**Raw Sample Relinquished by:** RM (WC)

# Extraction and Analytical Summary Report

**Analysis Method:** 1664A
**Test:** TPH
**Run Number:** LB135466
**Analysis Date:** 04/17/2025
**BalanceID:** WC SC-5
**OvenID:** EXT OVEN-3

**ANALYST:** jignesh
**REVIEWED BY:** Iwona
**Extraction Date:** 04/17/2025
**Extration IN Time:** 08:35
**Extration OUT Time:** 09:30
**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 | LB135466BL | LB135466BL | WATER | 1.3 | 1000 | 100 | 2.9306 | 2.9306 | 3.02 | 2.9307 | 2.9307 | 0.0001 | 0.1 |
| 2 | LB135466BS | LB135466BS | WATER | 1.3 | 1000 | 100 | 2.7025 | 2.7025 | 3.01 | 2.7192 | 2.7192 | 0.0167 | 16.7 |
| 3 | LB135466BSD | LB135466BSD | WATER | 1.3 | 1000 | 100 | 3.1405 | 3.1405 | 3.02 | 3.1574 | 3.1574 | 0.0169 | 16.9 |
| 4 | Q1770-01 | GRAB | WATER | 1.3 | 1000 | 100 | 3.0742 | 3.0742 | 3.04 | 3.0830 | 3.0830 | 0.0088 | 8.8 |
| 5 | Q1810-02 | MOO-25-0118 | WATER | 1.3 | 1000 | 100 | 3.0762 | 3.0762 | 3.03 | 3.0776 | 3.0776 | 0.0014 | 1.4 |
| 6 | Q1820-01 | GRAB | WATER | 1.3 | 1000 | 100 | 3.0227 | 3.0227 | 3.04 | 3.0301 | 3.0301 | 0.0074 | 7.4 |

QC Batch# LB135466 Test: TPH Analysis Date: 04/17/2025

**Chemicals Used:**

| Chemical Name | Chemical Lot # |
|---|---|
| HEXANE | W3177 |
| pH Paper 0-14 | M6069 |
| Sodium Sulfate | EP2604 |
| 1:1 HCL | WP110826 |
| Silica Gel | W3079 |
| Sand | NA |

**Standards Used:**

| Standard Name | Amount Used | Standard Lot # |
|---|---|---|
| LCSW | 5.00 ML | WP110827 |
| LCSWD | 5.00 ML | WP110828 |
| MS/MSD | NA | NA |

**BALANCE CALIBRATION / OVEN Dessicator Data**

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

**Before Analysis**

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

**In OVEN TEMP1 :** 70 °C **Dessicator Time In1 :** 10:41
**In Time1:** 10:00
**Out OVEN TEMP1:** 70 °C **Dessicator Time Out1:** 11:25
**Out Time1:** 10:40

**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:** 13:05

**In OVEN TEMP2 :** 71 °C **Dessicator Time In2 :** 12:31
**In Time2:** 12:00
**Out OVEN TEMP2:** 71 °C **Dessicator Time Out2:** 13:00
**Out Time2:** 12:30

# WORKLIST(Hardcopy Internal Chain)

LB 135466

**WorkList Name :** TPH Q1820 **WorkList ID :** 188975 **Department :** Wet-Chemistry **Date :** 04-17-2025 08:17:07

| Sample | Customer Sample | Matrix | Test | Preservative | Customer | Raw Sample Storage Location | Collect Date | Method |
|---|---|---|---|---|---|---|---|---|
| Q1770-01 | GRAB | Water | TPH | Conc H2SO4 to pH < 2 | ARAM01 | F11 | 04/09/2025 | 1664A |
| Q1810-02 | MOO-25-0118 | Water | TPH | Conc H2SO4 to pH < 2 | PSEG03 | L51 | 04/14/2025 | 1664A |
| Q1820-01 | GRAB | Water | TPH | Conc H2SO4 to pH < 2 | ARAM01 | L41 | 04/16/2025 | 1664A |

**Date/Time** 04/17/25 08:25

**Raw Sample Received by:**

**Raw Sample Relinquished by:**

**Date/Time** 04/17/25 14:00

**Raw Sample Received by:**

**Raw Sample Relinquished by:**

# TOTAL SUSPENDED SOLIDS - SM2540D

**SUPERVISOR:** Iwona
**ANALYST:** jignesh
**Date:** 04/16/2025
**Run Number:** LB135467
**BalanceID:** WC SC-6
**OvenID:** WC OVEN-1
**FilterID:** 17416528
**ThermometerID:** WET OVEN#1

| | | | | | |
|---|---|---|---|---|---|
| **TEMP1 IN:** | 104 °C | 04/16/2025 14:00 | **TEMP1 OUT:** | 104 °C | 04/16/2025 15:00 |
| **TEMP2 IN:** | 103 °C | 04/16/2025 15:30 | **TEMP2 OUT:** | 104 °C | 04/16/2025 16:30 |
| **TEMP3 IN:** | 104 °C | 04/17/2025 10:00 | **TEMP3 OUT:** | 103 °C | 04/17/2025 11:30 |
| **TEMP4 IN:** | 104 °C | 04/17/2025 12:00 | **TEMP4 OUT:** | 103 °C | 04/17/2025 13:35 |

| Dish # | Lab ID | Client ID | Empty Dish Weight (g) | Final Empty Dish Weight (g) | Sample Volume (ml) | 1st Empty Dish+Sample weight after 1.5hr drying @103-@105°C (g) | 2nd Empty Dish+Sample weight after 1.5hr drying @103-@105°C (g) | Final Empty Dish+Sample weight after 1.5hr drying @103-@105°C (g) | Weight (g) | Result mg/L |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | LB135467BL | LB135467BL | 1.3568 | 1.3568 | 100 | 1.3569 | 1.3569 | 1.3569 | 0.0001 | 1 |
| 2 | LB135467BS | LB135467BS | 1.5036 | 1.5036 | 100 | 1.5568 | 1.5568 | 1.5568 | 0.0532 | 532 |
| 3 | Q1814-01 | A3729 | 1.4678 | 1.4678 | 1000 | 1.5355 | 1.5355 | 1.5355 | 0.0677 | 67.7 |
| 4 | Q1815-01 | 001-WILLETS-PT-BLVD(MAR) | 1.4927 | 1.4927 | 300 | 1.5106 | 1.5106 | 1.5106 | 0.0179 | 59.7 |
| 5 | Q1815-02 | 002-35TH-AVE(MAR) | 1.4819 | 1.4819 | 300 | 1.4976 | 1.4976 | 1.4976 | 0.0157 | 52.3 |
| 6 | Q1820-02 | COMP | 1.4723 | 1.4723 | 50 | 1.4992 | 1.4992 | 1.4992 | 0.0269 | 538 |
| 7 | Q1820-02DUP | COMPDUP | 1.4724 | 1.4724 | 50 | 1.4987 | 1.4987 | 1.4987 | 0.0263 | 526 |
| 8 | Q1822-01 | TW-WTS-06 | 1.4870 | 1.4870 | 1000 | 1.5869 | 1.5869 | 1.5869 | 0.0999 | 99.9 |

**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)

LB135467

**WorkList Name :** TSS Q1815 **WorkList ID :** 188972 **Department :** Wet-Chemistry **Date :** 04-17-2025 08:15:15

| Sample | Customer Sample | Matrix | Test | Preservative | Customer | Raw Sample Storage Location | Collect Date | Method |
|---|---|---|---|---|---|---|---|---|
| Q1814-01 E | A3729 | Water | TSS | Cool 4 deg C | PSEG03 | | 04/16/2025 | SM2540 D |
| Q1815-01 B | 001-WILLETS-PT-BLVD(MAR) | Water | TSS | Cool 4 deg C | TULL01 | L31 | 04/15/2025 | SM2540 D |
| Q1815-02 B | 002-35TH-AVE(MAR) | Water | TSS | Cool 4 deg C | TULL01 | L31 | 04/15/2025 | SM2540 D |
| Q1820-02 B | COMP | Water | TSS | Cool 4 deg C | ARAM01 | L41 | 04/16/2025 | SM2540 D |
| Q1822-01 D | TW-WTS-06 | Water | TSS | Cool 4 deg C | ENTA05 | L21 | 04/15/2025 | SM2540 D |

**Date/Time** 04-17-25 08:20
**Raw Sample Received by:** WC
**Raw Sample Relinquished by:** SM



**Date/Time** 04-17-25 14:3
**Raw Sample Received by:** SM
**Raw Sample Relinquished by:**

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 # LB135459

| | | | |
|---|---|---|---|
| Review By | rubina | Review On | 4/21/2025 2:14:34 PM |
| Supervise By | Iwona | Supervise On | 4/21/2025 2:14:48 PM |
| SubDirectory | LB135459 | 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 | WP112719,W3149,WP110386,W3103,W3109,W3105,WP112721,WP112720,WP111323 |

| Sr# | SampleId | ClientID | QcType | Date | Comment | Operator | Status |
|---|---|---|---|---|---|---|---|
| 1 | LB135459BL | LB135459BL | MB | 04/16/25 16:00 | | rubina | OK |
| 2 | LB135459BS | LB135459BS | LCS | 04/16/25 16:00 | | rubina | OK |
| 3 | Q1804-01 | 001-WILLETS-PT-BL\ | SAM | 04/16/25 16:00 | | rubina | OK |
| 4 | Q1804-02 | 002-35TH-AVE(APR) | SAM | 04/16/25 16:00 | | rubina | OK |
| 5 | Q1810-02 | MOO-25-0118 | SAM | 04/16/25 16:00 | | rubina | OK |
| 6 | Q1820-02 | COMP | SAM | 04/16/25 16:00 | Intermediate dilution-10X | rubina | OK |
| 7 | Q1820-02DUP | COMPDUP | DUP | 04/16/25 16:00 | Intermediate dilution-10X | rubina | OK |
| 8 | Q1822-01 | TW-WTS-06 | SAM | 04/16/25 16:00 | | rubina | OK |

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Fax : 908 789 8922

**Instrument ID:** WC SC-3

## Daily Analysis Runlog For Sequence/QCBatch ID # LB135466

| | | | |
|---|---|---|---|
| Review By | jignesh | Review On | 4/17/2025 12:46:12 PM |
| Supervise By | Janvi | Supervise On | 4/18/2025 12:01:41 PM |
| SubDirectory | LB135466 | Test | TPH |

| 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,EP2604,WP110826,W3079,NA,WP110827,WP110828,NA |

| Sr# | SampleId | ClientID | QcType | Date | Comment | Operator | Status |
|---|---|---|---|---|---|---|---|
| 1 | LB135466BL | LB135466BL | MB | 04/17/25 10:00 | | jignesh | OK |
| 2 | LB135466BS | LB135466BS | LCS | 04/17/25 10:00 | | jignesh | OK |
| 3 | LB135466BSD | LB135466BSD | LCSD | 04/17/25 10:00 | | jignesh | OK |
| 4 | Q1770-01 | GRAB | SAM | 04/17/25 10:00 | | jignesh | OK |
| 5 | Q1810-02 | MOO-25-0118 | SAM | 04/17/25 10:00 | | jignesh | OK |
| 6 | Q1820-01 | GRAB | SAM | 04/17/25 10:00 | | jignesh | OK |

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Fax : 908 789 8922

**Instrument ID:** WC SC-3

## Daily Analysis Runlog For Sequence/QCBatch ID # LB135467

| | | | |
|---|---|---|---|
| Review By | jignesh | Review On | 4/17/2025 11:22:26 AM |
| Supervise By | Iwona | Supervise On | 4/17/2025 11:57:46 AM |
| SubDirectory | LB135467 | 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 | LB135467BL | LB135467BL | MB | 04/17/25 10:00 | | jignesh | OK |
| 2 | LB135467BS | LB135467BS | LCS | 04/17/25 10:00 | | jignesh | OK |
| 3 | Q1814-01 | A3729 | SAM | 04/17/25 10:00 | | jignesh | OK |
| 4 | Q1815-01 | 001-WILLETS-PT-BL\ | SAM | 04/17/25 10:00 | | jignesh | OK |
| 5 | Q1815-02 | 002-35TH-AVE(MAR) | SAM | 04/17/25 10:00 | | jignesh | OK |
| 6 | Q1820-02 | COMP | SAM | 04/17/25 10:00 | | jignesh | OK |
| 7 | Q1820-02DUP | COMPDUP | DUP | 04/17/25 10:00 | | jignesh | OK |
| 8 | Q1822-01 | TW-WTS-06 | SAM | 04/17/25 10:00 | | jignesh | OK |

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

# Prep Standard - Chemical Standard Summary

**Order ID :** Q1820

**Test :** BOD5,TPH,TSS

**Prepbatch ID :**

**Sequence ID/Qc Batch ID:** LB135459,LB135466,LB135467,

**Standard ID :**
EP2604,WP110386,WP110826,WP110827,WP110828,WP111323,WP112719,WP112720,WP112721,

**Chemical ID :**
E3551,E3788,M5673,M6069,M6121,W2653,W2654,W2817,W2871,W3009,W3059,W3079,W3082,W3103,W3105,W3109,W3112,W3113,W3144,W3149,W3177,

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

# Extractions STANDARD PREPARATION LOG

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 3923 | Baked Sodium Sulfate | EP2604 | 04/16/2025 | 07/01/2025 | RUPESHKUMAR SHAH | Extraction_SCALE_2 (EX-SC-2) | None | Riteshkumar Patel 04/16/2025 |

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

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 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

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# Wet Chemistry STANDARD PREPARATION LOG

| 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

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 2470 | 1664A SPIKING SOLN | WP110827 | 11/22/2024 | 04/23/2025 | Jignesh Parikh | WETCHEM_SCALE_8 (WCSC-7) | None | Iwona Zarych 11/22/2024 |

**FROM** 1000.00000ml of E3788 + 4.00000gram of W2817 + 4.00000gram of W2871 = Final Quantity: 1000.000 ml

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Fax : 908 789 8922

# Wet Chemistry STANDARD PREPARATION LOG

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 3374 | 1664A QCS spiking solution-SS | WP110828 | 11/22/2024 | 04/23/2025 | Jignesh Parikh | WETCHEM_SCALE_8 (WCSC-7) | None | Iwona Zarych 11/22/2024 |

**FROM** 1000.00000ml of E3788 + 4.00000gram of W3009 + 4.00000gram of W3082 = Final Quantity: 1000.000 ml

| 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

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Fax : 908 789 8922

# Wet Chemistry STANDARD PREPARATION LOG

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 127 | BOD Dilution fluid | WP112719 | 04/16/2025 | 04/17/2025 | Rubina Mughal | None | None | Iwona Zarych 04/16/2025 |

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

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 129 | Glutamic acid-glucose mix for BOD | WP112720 | 04/16/2025 | 04/17/2025 | Rubina Mughal | WETCHEM_SCALE_7 (WCSC-6) | None | Iwona Zarych 04/16/2025 |

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

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Fax : 908 789 8922

# Wet Chemistry STANDARD PREPARATION LOG

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 128 | polyseed seed control | WP112721 | 04/16/2025 | 04/17/2025 | Rubina Mughal | None | None | Iwona Zarych 04/16/2025 |

**FROM** 1.00000PILLOW of W3059 + 300.00000ml of WP112719 = Final Quantity: 300.000 ml

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Fax : 908 789 8922

# CHEMICAL RECEIPT LOG BOOK

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| 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-9254-03 / Acetone, Ultra Resi (cs/4x4L) | 23H1462005 | 04/23/2025 | 08/13/2024 / Rajesh | 08/13/2024 / Rajesh | E3788 |

| 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. | AC156212500 / GLUTAMIC ACID BIOCHEM REG, 250G | A0405990 | 01/24/2030 | 01/24/2020 / apatel | 01/24/2020 / apatel | W2653 |

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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. | 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. | A12244 / Stearic acid, 98%, 100 g | U20E006 | 04/02/2026 | 04/02/2021 / apatel | 04/02/2021 / apatel | W2817 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Seidler Chemical | H223-57 / Hexadecane, 99.0% | 0000266903 | 05/04/2027 | 09/07/2021 / apatel | 08/26/2021 / apatel | W2871 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Seidler Chemical | H223-57 / Hexadecane, 99.0% | SHBP8192 | 02/27/2028 | 02/27/2023 / Iwona | 02/27/2023 / Iwona | W3009 |

| 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 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| PCI Scientific Supply, Inc. | 04667-2.5 / Silica Gel (60-200 mesh), 2.5 KG | 072154301 | 01/30/2029 | 05/07/2024 / jignesh | 01/30/2024 / jignesh | W3079 |

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
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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. | A12244 / Stearic acid, 98%, 100 g | U23E020 | 02/26/2029 | 02/26/2024 / Iwona | 02/26/2024 / Iwona | W3082 |

| 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 # |
|---|---|---|---|---|---|---|
| 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 # |
|---|---|---|---|---|---|---|
| Seidler Chemical | BA-9262-03 / Hexane, Ultra-Resi (cs/4x4L) | 24G1962003 | 08/22/2025 | 02/03/2025 / jignesh | 01/31/2025 / jignesh | W3177 |

Hexadecane, 99.0%

Material No.: H223-57
Batch No.: 0000266903
Manufactured Date: 2020/05/05
Retest Date: 2027/05/04
Revision No: 1

# Certificate of Analysis

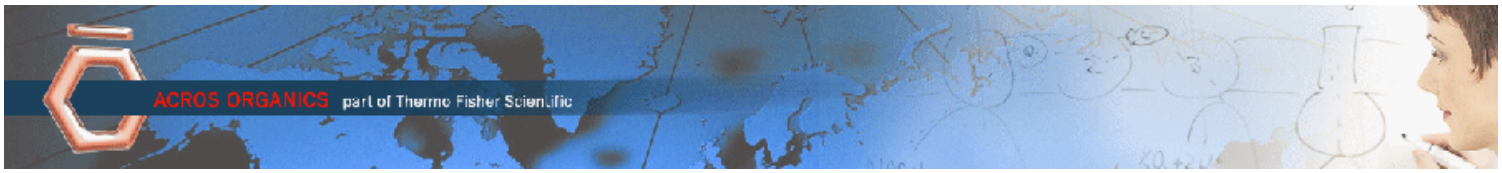
| Test | Specification | Result |
|---|---|---|
| Assay ($CH_3(CH_2)_{14}CH_3$) (by GC) | >= 99.0 % | 99.3 |
| Infrared Spectrum | Passes Test | PT |

For Laboratory, Research or Manufacturing Use

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




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

ThermoFisher SCIENTIFIC

W2817
Rec. 04/02/2021

Product Specification

**Product Name:** Stearic acid, 98%, Thermo Scientific Chemicals
**Catalog Number:** A12244.14

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| | |
|---|---|
| **CAS Number:** | 57-11-4 |
| **Molecular Formula:** | C18H36O2 |
| **Molecular Weight:** | 284.48 |
| **InChI Key:** | QIQXTHQIDYTFRH-UHFFFAOYSA-N |
| **SMILES:** | CCCCCCCCCCCCCCCCCC(O)=O |
| **Synonym:** | stearic acid acide stearique hydrofol acid 1855 hydrofol acid 1655 industrene 5016 stearic acid, ion(1-) (8CI) glycon TP glycon DP acidum stearinicul hydrofol acid 150 |

## Product Specification

| | |
|---|---|
| **Appearance (Color):** | White |
| **Form:** | Crystals or powder or crystalline powder or flakes or waxy solid |
| **Assay (Silylated GC):** | ≥97.5% |
| **Melting Point (clear melt):** | 67.0-74.0?C |

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**Date Of Print:** 11/30/2023

*Product Specifications are subject to amendment and may change over time. Data contained is accurate as of the date printed.*

Sigma-Aldrich

W3009

rec. 2/27/2023 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:
**Hexadecane - ReagentPlus®, 99%**

| | |
|---|---|
| **Product Number:** | **H6703** |
| **Batch Number:** | **SHBP8192** |
| Brand: | SIAL |
| CAS Number: | 544-76-3 |
| MDL Number: | MFCD00008998 |
| Formula: | C16H34 |
| Formula Weight: | 226.44 g/mol |
| Quality Release Date: | 04 AUG 2022 |

$CH_3(CH_2)_{14}CH_3$

| Test | Specification | Result |
|---|---|---|
| Appearance (Color) | Colorless or White | Colorless |
| Appearance (Form) | Liquid or Solid | Liquid |
| Infrared Spectrum | Conforms to Structure | Conforms |
| Refractive index at 20 ° C | 1.432 - 1.436 | 1.435 |
| Purity (GC) | ≥ 98.5 % | 99.3 % |
| Color Test | ≤ 20 APHA | < 5 APHA |

Larry Coers, Director
Quality Control
Sheboygan Falls, 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

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.

RG-02-01, Ed. 3

Recd. by RB on 7/24/23 E3551

Acetone
BAKER RESI-ANALYZED® Reagent
For Organic Residue Analysis

avantor™ | J.T.Baker®

Material No.: 9254-03
Batch No.: 23H1462005
Manufactured Date: 2023-07-26
Expiration Date: 2026-07-25
Revision No.: 0

# 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 | ≤ 1.0 ppm | 0.3 ppm |
| Substances Reducing Permanganate | Passes Test | Passes Test |
| 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 | 1 |

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

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

Recd. by RP on 8/13/24

E 3788

Ken Koehnlein
Sr. Manager, Quality Assurance

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

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*

DE Tel.: +49 24 21 969-0 info@mn-net.com
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 6/21

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 |

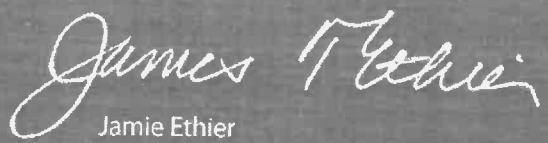
For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

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

# Certificate of Analysis

W 3079
SP

## Product information

| | |
|---|---|
| **Product:** | **Silica 60, 0.063 - 0.200 mm** |
| **REF:** | **815330.25** |
| **LOT:** | **072154301** |

## Technical data

| | |
|---|---|
| **Material:** | **Synthethic amorphus silica (irregular shaped)** |
| **Description:** | **White powder** |

| Parameter | Specifications | Result |
|---|---|---|
| Specific surface ($m^2/g$, N2 adsorption) : | 450 - 550 | 537 |
| Particle size distribution (screen analysis) : | < 63 µm max. 5 % | 0.3 |
| | > 200 µm max. 5 % | 0.1 |
| pH value : | 6.0 - 7.5 | 7 |
| Water content (%) : | < 7 | 3.6 |
| Pore volume (mL/g, N2 adsorption) : | 0.65 - 0.85 | 0.82 |
| Mean pore size (Å, N2 adsorption) : | 50 - 70 | 62 |

## Expiry

This product has no stated expiration date or shelf life.

We recommend to use the product within a time period of 5 years after date of QC release.
This time period is valid only if the product is stored under dry and frost-free conditions.
After 5 years we recommend retesting the adsorbent to make sure that the expected performance is still given.

## 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.

Date of measurement: 16.02.2023 22:00

# Certificate of analysis

W3082 Received on 2/26/2026 by IZ

| | |
|---|---|
| Product No.: | A12244 |
| Product: | Stearic acid, 98% |
| Lot No.: | U23E020 |

| | |
|---|---|
| Appearance | White flakes |
| Assay | 98.7 % |

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

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.

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

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.
QUOTE NO. 01820
COC Number 2046705

## CLIENT INFORMATION

REPORT TO BE SENT TO:
COMPANY: Aramark Uniforms
ADDRESS: 40 Frelinghuysen Ave
CITY Newark STATE: NJ ZIP 07114
ATTENTION: Jarrod Mills
PHONE 973-824-1101 FAX:

## CLIENT PROJECT INFORMATION

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

## CLIENT BILLING INFORMATION

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

## DATA TURNAROUND INFORMATION

FAX (RUSH) _____ 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

IR BUDS 35

| 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | C | E | E | | | | | | | ← Specify Preservatives |
| 1. | Grab | W | | ✓ | 4-16-25 | 1143 | 1 | ✓ | | | | | | | | | A-HCl D-NaOH |
| 2. | Comp | W | ✓ | | 4-16-25 | 1145 | 2 | | ✓ | ✓ | | | | | | | B-HN03 E-ICE |
| 3. | | | | | | | | | | | | | | | | | C-H2SO4 F-OTHER |
| 4. | | | | | | | | | | | | | | | | | |
| 5. | | | | | | | | | | | | | | | | | |
| 6. | | | | | | | | | | | | | | | | | |
| 7. | | | | | | | | | | | | | | | | | |
| 8. | | | | | | | | | | | | | | | | | |
| 9. | | | | | | | | | | | | | | | | | |
| 10. | | | | | | | | | | | | | | | | | |

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

| | DATE/TIME | RECEIVED BY |
|---|---|---|
| RELINQUISHED BY SAMPLER: 1. | 1147 4-16-25 | 1. 1147 4-16-25 |
| RELINQUISHED BY SAMPLER: 2. | DATE/TIME: | RECEIVED BY: 2. |
| RELINQUISHED BY SAMPLER: 3. | DATE/TIME: 1445 4-16-25 | RECEIVED BY: 3. |

Conditions of bottles or coolers at receipt: ❑ COMPLIANT ❑ NON COMPLIANT ❑ COOLER TEMP 3.3 °C
Comments: Temp 3.3° CAdjustment factor (+1) 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