

Prep Standard - Chemical Standard Summary

Order ID : Q1890

Test : BOD5,Flash Point,TSS

Prepbatch ID :

Sequence ID/Qc Batch ID: LB135598,LB135602,LB135617,

Standard ID :

WP111323,WP112832,WP112855,WP112856,WP112857,

Chemical ID :

M6041,W2653,W2654,W3059,W3103,W3105,W3109,W3112,W3113,W3144,W3149,W3193,



| <u>Recipe ID</u> | <u>NAME</u> | <u>NO.</u> | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|--|----------------------|--------------------------|------------------|------------------------|--------------------|----------------------------------|------------------|--------------------------------|
| 1571 | Sodium hydroxide, 1N | WP111323 | 01/09/2025 | 07/09/2025 | Rubina Mughal | WETCHEM_S CALE_8 (WC SC-7) | None | Iwona Zarych 01/09/2025 |
| <u>FROM</u> 4.00000gram of W3113 + 96.00000ml of W3112 = Final Quantity: 100.000 ml | | | | | | | | |

| <u>Recipe ID</u> | <u>NAME</u> | <u>NO.</u> | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|--|-------------------|--------------------------|------------------|------------------------|--------------------|----------------|---------------------------|----------------------------|
| 1841 | Sulfuric Acid, 1N | WP112832 | 04/25/2025 | 10/25/2025 | Rubina Mughal | None | WETCHEM_PIPETTE_3 (WC) | Iwona Zarych 04/25/2025 |
| <u>FROM</u> 2.80000ml of M6041 + 97.20000ml of W3112 = Final Quantity: 100.000 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> |
|------------------|--------------------|--------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 127 | BOD Dilution fluid | WP112855 | 04/25/2025 | 04/26/2025 | Rubina Mughal | None | None | Iwona Zarych |
| | | | | | | | | 04/25/2025 |

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

| <u>Recipe ID</u> | <u>NAME</u> | <u>NO.</u> | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|-----------------------------------|--------------------------|------------------|------------------------|--------------------|----------------------------------|------------------|----------------------|
| 129 | Glutamic acid-glucose mix for BOD | WP112856 | 04/25/2025 | 04/26/2025 | Rubina Mughal | WETCHEM_S CALE_7 (WC SC-6) | None | Iwona Zarych |
| | | | | | | | | 04/25/2025 |

FROM 0.15000gram of W2653 + 0.15000gram of W2654 + 1000.00000ml of W3112 = 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> |
|--|-----------------------|--------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------------|
| 128 | polyseed seed control | WP112857 | 04/25/2025 | 04/26/2025 | Rubina Mughal | None | None | Iwona Zarych 04/25/2025 |
| <p><u>FROM</u> 1.00000PILLOW of W3059 + 300.00000ml of WP112855 = Final Quantity: 300.000 ml</p> | | | | | | | | |

CHEMICAL RECEIPT LOG BOOK

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

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

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

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

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

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

CHEMICAL RECEIPT LOG BOOK

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

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

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

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


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

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|-----------------------------|--------------------------|-------|-----------------|-------------------------|-----------------------------|----------------|
| PCI Scientific Supply, Inc. | TCX0014-500ML / p-xylene | C6PEN | 03/19/2029 | 03/21/2025 / rubina | 03/19/2025 / lwona | W3193 |



ACROS ORGANICS
part of Thermo Fisher Scientific





Version 0

Molecular weight 147.13

Molecular formula C5 H9 N O4

CAS No 56-86-0

Linear formula HO2CCH2CH2CH(NH2)CO2H

Flash point (°C)

Certificate of Analysis

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

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



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

L. Van den Broek, QA Manager

Issued: 24 January 2020

Acros Organics

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

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

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



CERTIFICATE OF ANALYSIS

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

W 3059
REC. 10/18/23 12

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 4.00×10^9 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: _____

Quality Control Department

Date: 05/15/2023

POLYSEED.Ref.1.19

Revised Jan 23

InterLab®
International Laboratory Supply





Certificate of Analysis

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

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

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

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

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

Jerisa Bailey-Wyche

Quality Assurance Specialist - Certificate of Analysis Fair Lawn

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

*Based on suggested storage condition.

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

avantor™



M 6041-4b
MS

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

Certificate of Analysis

| Test | Specification | Result |
|--|---------------|-------------|
| ACS – Assay (H 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

 **avantorsm**



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

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."

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Certificate of Analysis

Sodium Thiosulfate, 0.0250 Normal (N/40)

Lot Number: 4403S13

Product Number: 7900

Manufacture Date: MAR 29, 2024

Expiration Date: SEP 2025

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

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

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

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

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

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

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



Paul Brandon (03/29/2024)

Production Manager

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Contents of Certificates and Labels."

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Certificate of Analysis

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

Lot Number: 1405D67

Product Number: 535

Manufacture Date: APR 05, 2024

Expiration Date: APR 2026

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

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

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

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

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

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



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

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Sodium Hydroxide (Pellets)

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

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

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

Storage: Room Temperature

Pellets

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

Internal ID #: 710

Signature

We certify that this batch conforms to the specifications listed.

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

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

Additional Information

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

Product meets analytical specifications of the grades listed.



Sodium Hydroxide (Pellets)

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

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

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

Storage: Room Temperature

Pellets

Spec Set: 0583ACS

Internal ID #: 710

Signature

We certify that this batch conforms to the specifications listed.

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

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

Additional Information

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

Product meets analytical specifications of the grades listed.



An ISO 9001 Certified Company

Loveland, CO 80539

(970) 669-3050

Certificate of Analysis

This is a Component of 1486266 / LOT A4169

PRODUCT: BOD Nutrient Buffer Pillows

PRODUCT NUMBER: 1486227

LOT NUMBER: A4169

MANUFACTURE DATE: 06/24/2024

DATE OF ANALYSIS: 07/03/2024

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

The expiration date is Jun 2029

Certified by: *Scott Als*

Analytical Services Chemist



Certificate of Analysis

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

Lot Number: 4408P62

Product Number: 8000

Manufacture Date: AUG 28, 2024

Expiration Date: AUG 2026

This product is Mercury-free.

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

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

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

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

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

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

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

Paul Brandon (08/28/2024)
Production Manager

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



W3193, W3194 Received on 03/19/2025 by IZ

Certificate of Analysis

03/19/2025(JST)

TOKYO CHEMICAL INDUSTRY CO.,LTD.

T-PLUS Nihonbashi-Kodemmacho

16-12 Nihonbashi-kodemmacho, Chuo-ku, Tokyo 103-0001, Japan

| | | |
|---|------------|--|
| Chemical Name: <i>p</i> -Xylene | | |
| Product Number: X0014 CAS RN: 106-42-3 | Lot: C6PEN | |

| Tests | Results | Specifications |
|------------|------------------------|--|
| Appearance | Colorless clear liquid | Colorless to Almost colorless clear liquid |
| Purity(GC) | 99.7 % | min. 99.0 % |

TCI Lot numbers are 4-5 characters in length. Characters listed after the first 4-5 characters are control numbers for internal purpose only.

The contents of the specifications are subject to change without advance notice. The specification values displayed here are the most up to date values. There may be cases where the product labels display a different specification, however, the product quality still meets the latest specification.

Customer Service:

TCI AMERICA

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Takuya Nishioka
Quality Assurance Department Manager