

Prep Standard - Chemical Standard Summary

Order ID : Q1777

Test : Percent Solids, TOC

Prepbatch ID :

Sequence ID/Qc Batch ID: LB135427,

Standard ID :

WP111436, WP111437, WP112403, WP112404, WP112405, WP112406, WP112407, WP112408, WP112446, WP112697, WP
112698,

Chemical ID :

W2784, W2860, W3112, W3169,

[illegible]

| <u>Recipe ID</u> | <u>NAME</u> | <u>NO.</u> | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|--------------------|--|--------------------------|------------------|------------------------|--------------------|----------------------|------------------------|----------------------------|
| 2051 | TOC STOCK STD-SS, 4000PPM | WP111437 | 01/15/2025 | 06/30/2025 | Niha Farheen Shaik | WETCHEM_SCALE_5 (WC) | WETCHEM_PIPETTE_3 (WC) | Iwona Zarych 01/16/2025 |
| <u>FROM</u> | 5.00000ml of W2860 + 8.51200gram of W2784 + 990.00000ml 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> |
|------------------|-----------------|--------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------------|
| 304 | TOC CAL 0.00ppm | WP112403 | 03/14/2025 | 03/21/2025 | Niha Farheen Shaik | None | None | Iwona Zarych 03/20/2025 |

FROM 100.00000ml 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> |
|------------------|---------------------|--------------------------|------------------|------------------------|--------------------|----------------|---------------------------|----------------------------|
| 712 | TOC SOIL cal 250ppm | WP112404 | 03/14/2025 | 03/21/2025 | Niha Farheen Shaik | None | WETCHEM_FIPETTE_3 (WC) | Iwona Zarych 03/20/2025 |

FROM 15.00000ml of W3112 + 1.00000ml of WP111436 = Final Quantity: 16.000 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> |
|------------------|---------------------|--------------------------|------------------|------------------------|--------------------|----------------|---------------------------|----------------------------|
| 710 | TOC SOIL cal 500ppm | WP112405 | 03/14/2025 | 03/21/2025 | Niha Farheen Shaik | None | WETCHEM_FIPETTE_3 (WC) | Iwona Zarych 03/20/2025 |

FROM 14.00000ml of W3112 + 2.00000ml of WP111436 = Final Quantity: 16.000 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> |
|------------------|---------------------------|--------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------------|
| 3544 | TOC SOIL Cal- CCV 1000PPM | WP112406 | 03/14/2025 | 03/21/2025 | Niha Farheen Shaik | None | Glass Pipette-A | Iwona Zarych 03/20/2025 |

FROM 15.00000ml of W3112 + 5.00000ml of WP111436 = Final Quantity: 20.000 ml

Wet Chemistry STANDARD PREPARATION LOG

| <u>Recipe ID</u> | <u>NAME</u> | <u>NO.</u> | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|----------------------|--------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------------|
| 713 | TOC SOIL cal 2000ppm | WP112407 | 03/14/2025 | 03/21/2025 | Niha Farheen Shaik | None | Glass Pipette-A | Iwona Zarych 03/20/2025 |

FROM 5.00000ml of W3112 + 5.00000ml of WP111436 = Final Quantity: 10.000 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> |
|------------------|-----------------------|--------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------------|
| 2819 | TOC ICV-LCSS, 1000PPM | WP112408 | 03/14/2025 | 03/21/2025 | Niha Farheen Shaik | None | Glass Pipette-A | Iwona Zarych 03/20/2025 |

FROM 15.00000ml of W3112 + 5.00000ml of WP111437 = Final Quantity: 20.000 ml

Wet Chemistry STANDARD PREPARATION LOG

| <u>Recipe ID</u> | <u>NAME</u> | <u>NO.</u> | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|-------------------------|--------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 613 | Phosphoric acid reagent | WP112446 | 03/25/2025 | 09/25/2025 | Niha Farheen Shaik | None | None | Iwona Zarych |
| | | | | | | | | 03/26/2025 |

FROM 150.00000ml of W3112 + 50.00000ml of W2860 = Final Quantity: 200.000 ml

| <u>Recipe ID</u> | <u>NAME</u> | <u>NO.</u> | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|---------------------------|--------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 3544 | TOC SOIL Cal- CCV 1000PPM | WP112697 | 04/14/2025 | 04/21/2025 | Iwona Zarych | None | Glass Pipette-A | Jignesh Parikh |
| | | | | | | | | 04/16/2025 |

FROM 15.00000ml of W3112 + 5.00000ml of WP111436 = Final Quantity: 20.000 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> |
|--|-----------------------|--------------------------|------------------|------------------------|--------------------|----------------|--------------------|----------------------------------|
| 2819 | TOC ICV-LCSS, 1000PPM | WP112698 | 04/14/2025 | 04/21/2025 | Iwona Zarych | None | Glass Pipette-A | Jignesh Parikh 04/16/2025 |
| <u>FROM</u> 15.00000ml of W3112 + 5.00000ml of WP111437 = Final Quantity: 20.000 ml | | | | | | | | |

CHEMICAL RECEIPT LOG BOOK

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|-----------------------------|--|--------|-----------------|-------------------------|-----------------------------|----------------|
| PCI Scientific Supply, Inc. | P243-500 / Potassium Hydrogen Phthalate, 500 gms | 201089 | 06/30/2025 | 12/23/2020 / apatel | 12/16/2020 / apatel | W2784 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|-----------------------------|----------------------------------|------------|-----------------|-------------------------|-----------------------------|----------------|
| PCI Scientific Supply, Inc. | J0260-3 / Phosphoric Acid, 2.5 L | 0000278313 | 01/31/2026 | 07/12/2021 / apatel | 07/12/2021 / apatel | W2860 |

| 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. | P243-500 / Potassium Hydrogen Phthalate, 500 gms | 24H0956262 | 04/28/2026 | 01/03/2025 / lwona | 01/03/2025 / lwona | W3169 |

Phosphoric Acid
BAKER ANALYZED® A.C.S. Reagent

(orthophosphoric acid)



Material No.: 0260-03
Batch No.: 0000278313
Manufactured Date: 2021/02/01
Retest Date: 2026/01/31
Revision No: 2

Certificate of Analysis

Meets ACS Reagent Chemical Requirements,

| Test | Specification | Result |
|---|----------------|---------|
| Assay (H ₃ PO ₄) (by acidimetry) | 85.0 – 87.0 % | 85.8 |
| Calcium (Ca) | <= 0.002 % | < 0.001 |
| Color (APHA) | <= 10 | 5 |
| Insoluble Matter | <= 0.001 % | < 0.001 |
| ACS – Magnesium (Mg) | <= 0.002 % | < 0.002 |
| Sulfate (SO ₄) | <= 12 ppm | < 4 |
| Volatile Acids (as CH ₃ COOH) | <= 0.001 % | 0.001 |
| Reducing Substances | Passes Test | PT |
| Chloride (Cl) | <= 3 ppm | < 1 |
| Nitrate (NO ₃) | <= 5 ppm | < 2 |
| Trace Impurities – Antimony (Sb) | <= 20.000 ppm | 0.007 |
| Trace Impurities – Arsenic (As) | <= 0.500 ppm | < 0.001 |
| Trace Impurities – Iron (Fe) | <= 10.000 ppm | < 1.000 |
| Heavy Metals (as Pb) | <= 8 ppm | < 3 |
| Trace Impurities – Manganese (Mn) | <= 0.500 ppm | 0.005 |
| Trace Impurities – Potassium (K) | <= 40.000 ppm | < 0.001 |
| Trace Impurities – Sodium (Na) | <= 200.000 ppm | 0.082 |

For Laboratory, Research or Manufacturing Use

Exceeds A.C.S. Specifications

Meets Reagent Specifications for testing USP/NF monographs

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

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 | P243 | Quality Test / Release Date | 06/19/2020 |
| Lot Number | 201089 | | |
| Description | POTASSIUM HYDROGEN PHTHALATE, ACIDIMETRIC STANDARD, A.C.S. | | |
| Country of Origin | Spain | Suggested Retest Date | Jun/2025 |
| Chemical Origin | Organic - non animal | | |
| 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. | | |

| N/A | | | |
|------------------------------------|---------------------|----------------------------------|----------------|
| Result Name | Units | Specifications | Test Value |
| APPEARANCE | | REPORT | WHITE CRYSTALS |
| ASSAY POTASSIUM HYDROGEN PHTHALATE | % | Inclusive Between 99.95 - 100.05 | 100.03 |
| CHLORINE COMPOUNDS | % | <= 0.003 | <0.003 |
| HEAVY METALS (as Pb) | ppm | <= 5 | <5 |
| IDENTIFICATION | PASS/FAIL | = PASS TEST | PASS TEST |
| INSOLUBLE MATTER | % | <= 0.005 | <0.005 |
| IRON (Fe) | ppm | <= 5 | <5 |
| PH OF 0.05M SOLUTION | | Inclusive Between 4.00 - 4.02 | 4.00 |
| SODIUM (Na) | % | <= 0.005 | <0.005 |
| SULFUR COMPOUNDS | % | <= 0.002 | <0.002% |
| TRACEABLE TO NIST | SOD CARBONATE | = LOT 351a | 351a |
| TRACEABLE TO NIST KHP STD | POT. ACID PHTHALATE | = LOT 84L | 84L |



Julian Burton - Quality Control Manager – 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.



| | |
|----------------------|--------------------------------|
| Material | BDH9260-500G |
| Material Description | BDH POTASS HYDRGN PHTHLTE 500G |
| Grade | ACS GRADE |
| Batch | 24H0956262 |
| Reassay Date | 04/28/2026 |
| CAS Number | 877-24-7 |
| Molecular Formula | HOCC6H4COOK |
| Molecular Mass | 204.22 |
| Date of Manufacture | 04/29/2023 |
| Storage | Room Temperature |

| Characteristics | Specifications | Measured Values |
|------------------------|------------------|-----------------|
| Appearance | White crystals. | White crystals. |
| Assay (dried basis) | 99.95 - 100.05 % | 99.98 % |
| Chlorine Compounds | <= 0.003 % | <0.003 % |
| Heavy Metals (as Pb) | <= 5 ppm | <5 ppm |
| Insoluble Matter | <= 0.005 % | 0.003 % |
| Iron | <= 5 ppm | <5 ppm |
| pH (0.05M, Water) @25C | 4.00 - 4.02 | 4.00 |
| Sodium | <= 0.005 % | <0.005 % |
| Sulfur Compounds | <= 0.002 % | <0.002 % |

Internal ID #: 322

| Signature | Additional Information |
|---|--|
| <p>We certify that this batch conforms to the specifications listed above.</p> <p>This document has been electronically produced and is valid without a signature.</p> <p>Leona Edwardson, Quality Control Sr. Manager - Solon VWR Chemicals, LLC. 28600 Fountain Parkway, Solon OH 44139 USA</p> | <p>Analysis may have been rounded to significant digits in specification limits</p> <p>Product meets analytical specifications of the grades listed.</p> |