

### Prep Standard - Chemical Standard Summary

**Order ID :** P5113

**Test :** Percent Solids, TOC

**Prepbatch ID :**

**Sequence ID/Qc Batch ID:** LB133779,

**Standard ID :**

WP109217, WP109218, WP109225, WP110662, WP110663, WP110664, WP110665, WP110666, WP110667, WP111002, W  
P111003,

**Chemical ID :**

W2784, W2860, W3111, W3112,

### 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>
2050	TOC STOCK STD, 4000PPM	<a href="#">WP109217</a>	08/07/2024	01/18/2025	Iwona Zarych	WETCHEM_S CALE_5 (WC SC-5)	WETCHEM_F IPETTE_3 (WC)	Mohan Bera  08/16/2024
<b>FROM</b> 5.00000ml of W2860 + 8.51200gram of W3111 + 990.00000ml of W3112 = Final Quantity: 1000.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
2051	TOC STOCK STD-SS, 4000PPM	<a href="#">WP109218</a>	08/07/2024	02/07/2025	Iwona Zarych	WETCHEM_S CALE_5 (WC SC-5)	WETCHEM_F IPETTE_3 (WC)	Mohan Bera  08/16/2024
<b>FROM</b> 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>
2435	1:1 PHOSPHORIC ACID FOR TOC SOILS	<a href="#">WP109225</a>	08/07/2024	02/07/2025	Iwona Zarych	None	WETCHEM_FIPETTE_3 (WC)	Mohan Bera 08/16/2024

**FROM** 50.00000ml of W2860 + 50.00000ml 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	<a href="#">WP110662</a>	11/12/2024	11/19/2024	Niha Farheen Shaik	None	None	Iwona Zarych 11/14/2024

**FROM** 15.00000ml of W3112 + 1.00000ml of WP109217 = 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	<a href="#">WP110663</a>	11/12/2024	11/19/2024	Niha Farheen Shaik	None	None	Iwona Zarych 11/14/2024

**FROM** 14.00000ml of W3112 + 2.00000ml of WP109217 = 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	<a href="#">WP110664</a>	11/12/2024	11/19/2024	Niha Farheen Shaik	None	None	Iwona Zarych 11/14/2024

**FROM** 15.00000ml of W3112 + 5.00000ml of WP109217 = 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	<a href="#">WP110665</a>	11/12/2024	11/19/2024	Niha Farheen Shaik	None	None	Iwona Zarych 11/14/2024

**FROM** 5.00000ml of W3112 + 5.00000ml of WP109217 = 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	<a href="#">WP110666</a>	11/12/2024	11/19/2024	Niha Farheen Shaik	None	None	Iwona Zarych 11/14/2024

**FROM** 15.00000ml of W3112 + 5.00000ml of WP109218 = 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>
304	TOC CAL 0.00ppm	<a href="#">WP110667</a>	11/12/2024	11/19/2024	Niha Farheen Shaik	None	None	Iwona Zarych 11/14/2024

**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>
3544	TOC SOIL Cal- CCV 1000PPM	<a href="#">WP111002</a>	12/06/2024	12/13/2024	Niha Farheen Shaik	None	None	Iwona Zarych 12/09/2024

**FROM** 15.00000ml of W3112 + 5.00000ml of WP109217 = 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>
2819	TOC ICV-LCSS, 1000PPM	<a href="#">WP111003</a>	12/06/2024	12/13/2024	Niha Farheen Shaik	None	None	Iwona Zarych  12/09/2024

**FROM** 15.00000ml of W3112 + 5.00000ml of WP109218 = 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 #
PCI Scientific Supply, Inc.	P243-500 / Potassium Hydrogen Phthalate, 500 gms	24A1956910	01/18/2025	06/26/2024 / lwona	06/26/2024 / lwona	W3111

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

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 <sub>3</sub> PO <sub>4</sub> ) (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 <sub>4</sub> )	<= 12 ppm	< 4
Volatile Acids (as CH <sub>3</sub> COOH)	<= 0.001 %	0.001
Reducing Substances	Passes Test	PT
Chloride (Cl)	<= 3 ppm	< 1
Nitrate (NO <sub>3</sub> )	<= 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**  
 S C I E N T I F I C

## 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.



# POTASSIUM HYDROGEN PHTHALATE

**Material:** N983  
**Grade:** ACS GRADE  
**Batch Number:** 24A1956910

Chemical Formula: HOCC6H4COOK      Manufacture Date: 01/19/2022  
Molecular Weight: 204.22      Reassay Date: 01/18/2025  
CAS #: 877-24-7  
Appearance:      Storage: Room Temperature

White crystals.

TEST	SPECIFICATION	ANALYSIS	DISPOSITION
Assay (dried basis)	99.95 - 100.05 %	99.97 %	PASS
Chlorine Compounds	<= 0.003 %	<0.003 %	PASS
Heavy Metals (as Pb)	<= 5 ppm	<5 ppm	PASS
Insoluble Matter	<= 0.005 %	0.003 %	PASS
Iron	<= 5 ppm	<5 ppm	PASS
pH (0.05M, Water) @25C	4.00 - 4.02	4.00	PASS
Sodium	<= 0.005 %	<0.005 %	PASS
Sulfur Compounds	<= 0.002 %	<0.002 %	PASS

Spec Set: N983ACS

Internal ID #: 710

Signature	Additional Information
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We certify that this batch conforms to the specifications listed.

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

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

Product meets analytical specifications of the grades listed.

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