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Prep Standard - Chemical Standard Summary

Order ID : P3390

Test : Phenolics

Prepbatch ID : PB162736,PB162737,PB162738,PB162893,PB162894,PB162895,

Sequence ID/Qc Batch ID: LB132029,

Standard ID :
WP107255,WP107256,WP109046,WP109047,WP109048,WP109049,WP109238,WP109239,WP109240,WP109241,WP109242,WP109336,

Chemical ID :
W1992,W2211,W2606,W2663,W2676,W2858,W2965,W3004,W3112,W3121,W5211,

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
672	ammonia buffer for phenol	WP107255	04/02/2024	10/02/2024	Rubina Mughal	WETCHEM_SCALE_5 (WCSC-5)	None	Iwona Zarych 04/09/2024

FROM 143.00000ml of W2676 + 16.90000gram of W1992 + 90.10000ml of W2606 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1935	Potassium ferricyanide solution-phenol	WP107256	04/02/2024	10/02/2024	Rubina Mughal	WETCHEM_SCALE_5 (WCSC-5)	None	Iwona Zarych 04/09/2024

FROM 8.00000gram of W2211 + 92.00000ml of W2606 = 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
1903	Phenol stock std, 1000PPM	WP109046	08/06/2024	02/06/2025	Rubina Mughal	WETCHEM_SCALE_5 (WCSC-5)	None	Iwona Zarych 08/06/2024

FROM 1.00000gram of W2663 + 999.00000ml of W3112 = Final Quantity: 1000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1904	Phenol stock std, 1000PPM-SS	WP109047	08/06/2024	02/06/2025	Rubina Mughal	WETCHEM_SCALE_5 (WCSC-5)	None	Iwona Zarych 08/06/2024

FROM 1.00000gram of W2858 + 999.00000ml of W3112 = Final Quantity: 1000.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1478	Phenol Intermediate Std - 50PPM	WP109048	08/06/2024	09/06/2024	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 08/06/2024

FROM 47.50000ml of W3112 + 2.50000ml of WP109046 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1635	Phenol Intermediate Std Second Source-50PPM	WP109049	08/06/2024	09/06/2024	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 08/06/2024

FROM 47.50000ml of W3112 + 2.50000ml of WP109047 = Final Quantity: 50.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1633	Phenol Calibration Std, 2PPM	WP109238	08/15/2024	08/16/2024	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Mohan Bera 08/16/2024

FROM 48.00000ml of W3112 + 2.00000ml of WP109048 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1634	Phenol CCV Std, 1PPM	WP109239	08/15/2024	08/16/2024	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Mohan Bera 08/16/2024

FROM 49.00000ml of W3112 + 1.00000ml of WP109048 = Final Quantity: 50.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1636	Phenol ICV Std, 1PPM	WP109240	08/15/2024	08/16/2024	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Mohan Bera 08/16/2024

FROM 49.00000ml of W3112 + 1.00000ml of WP109049 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1962	PHENOL LOD LOQ INTERMEDIATE STD, 5PPM	WP109241	08/15/2024	08/16/2024	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Mohan Bera 08/16/2024

FROM 90.00000ml of W3112 + 10.00000ml of WP109049 = 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
506	4-AMINOANTIPYRINE	WP109242	08/15/2024	08/16/2024	Rubina Mughal	WETCHEM_SCALE_5 (WCSC-5)	Glass Pipette-A	Mohan Bera 08/16/2024

FROM 0.40000gram of W3004 + 20.00000ml of W3112 = Final Quantity: 20.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1962	PHENOL LOD LOQ INTERMEDIATE STD, 5PPM	WP109336	08/21/2024	08/22/2024	Rubina Mughal	None	None	Iwona Zarych 08/23/2024

FROM 90.00000ml of W3112 + 10.00000ml of WP109049 = Final Quantity: 100.000 ml

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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.	J0660-1 / AMMONIUM CHLORIDE, ACS, 500G	WL13B	04/08/2025	04/08/2015 / apatel	04/08/2015 / apatel	W1992

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	97062-260 / POTASSIUM FERRICYANIDE ACS GRADE 500G	1136C335	03/01/2027	03/01/2017 / apatel	02/28/2017 / apatel	W2211

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	DIW / DI Water	Daily Lab-Certified	10/24/2024	10/24/2019 / apatel	10/24/2019 / apatel	W2606

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	P1060-10 / PHENOL, ACS, 500G	2HD0179	01/27/2030	01/27/2020 / apatel	01/27/2020 / apatel	W2663

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	J9721-3 / Ammonium Hydroxide, 2.5 L	0000246506	10/14/2024	02/18/2020 / apatel	02/18/2020 / apatel	W2676

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	P1060-10 / PHENOL, ACS, 500G	M13H048	01/07/2026	07/07/2021 / apatel	07/07/2021 / apatel	W2858

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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.	140730 / TEST PAPER,POT.IOD-STRCH,PK100,CS12	60799-008,260	09/19/2027	09/19/2022 / jignesh	09/19/2022 / jignesh	W2965

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	JA630-5 / 4-aminoantipyrine, 100 gm	50001601	01/31/2025	01/24/2023 / Iwona	01/24/2023 / Iwona	W3004

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.	140444 / TEST PAPERS,PH 0-14,.5 SENSI,100PK	HC446507	07/25/2029	07/25/2024 / Iwona	07/25/2024 / Iwona	W3121

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ISO 13485 CERTIFIED

AMRESCO LLC
28600 Fountain Parkway
Solon, Ohio USA 44139
440/349-1199 FAX: 440/349-1182
www.amresco-inc.com
Email: info@amresco-inc.com

CERTIFICATE OF QUALITY / CERTIFICATE OF ANALYSIS

Potassium Ferricyanide

Code: **0713**

Chemical Formula:	K3Fe(CN)6	Manufacture Date:	(batch specific)
Molecular Weight:	329.25	Expiration/Reassay Date:	(batch specific)
CAS #:	13746-66-2		
Appearance:		Storage:	
Dark orange crystals		Grade:	ACS GRADE

Additional Information

TEST	SPECIFICATION	DISPOSITION
Chloride	<= 0.01 %	PASS
Ferro Compounds	<= 0.05 %	PASS
Insolubles	<= 0.005 %	PASS
Purity	>= 99.0 %	PASS
Sulfate	<= 0.01 %	PASS

Spec Set: 0713ACS

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

Product meets analytical specifications of the grades listed.

Internal ID #: 269

Signature: _____ **Date Printed:** 03/09/2016

Title:

Certificate of Analysis

Date of Release: ***12/18/2013***

Product: ***Ammonium Chloride GR ACS*** ***Catalog No.:*** ***AX1270 all size codes***

Grade: ***Meets ACS Specifications*** ***CAS #:*** ***12125-02-9***

Country of Origin: ***India*** ***FW:*** ***53.49***

Lot No.: ***WL13B*** ClH_4N

Characteristic	Requirement Minimum	Maximum	Results	UOM
Assay (argentometric)	99.5		99.9	%
Calcium (Ca)		0.001	0.0001	%
Form	White crystals		White crystals	
Heavy metals (as Pb)		5	5	ppm
Identification	To pass test		Passes	
Insoluble matter		0.005	0.002	%
Iron (Fe)		2	2	ppm
Loss on drying (105 C)		0.5	0.21	%
Magnesium (Mg)		5	0.6	ppm
pH of a 5% solution at 25 C	4.5	5.5	4.76	
Phosphate (PO4)		2	2	ppm
Residue after ignition		0.01	0.002	%
Sulfate (SO4)		0.002	0.002	%

Joe Schoellkopff

Quality Control Manager

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

EMD Millipore Corporation
290 Concord Road
Billerica, MA 01821

spectrum® CHEMICAL MFG CORP

Certificate Of Analysis

Item Number	P1060	Lot Number	2HD0179
Item	Phenol, Loose Crystal, Reagent, ACS		
CAS Number	108-95-2		
Molecular Formula	C_6H_6O	Molecular Weight	94.11

Test	Specification		Result
	min	max	
ASSAY (C_6H_5OH)	99.0 %		100.02 %
FREEZING POINT (DRY)	40.5 C		40.5°C
CLARITY OF SOLUTION	TO PASS TEST		PASSES TEST
RESIDUE AFTER EVAPORATION		0.05 %	<0.05 %
WATER		0.5 %	0.0087 %
DATE OF MANUFACTURE			06-MAR-2018

Spectrum Chemical Mfg Corp
755 Jersey Avenue
New Brunswick 08901 NJ

Certificate Of Analysis Results Certified by

Ibad Tirmizi
Director of Quality
Spectrum Chemical Mfg. Corp.

All pharmaceutical ingredients are tested using current edition of applicable pharmacopeia.

Read and understand label and SDS before handling any chemicals. All Spectrum's chemicals are for manufacturing, processing, repacking or research purposes by experienced personnel only. It is the customer's responsibility to provide adequate hazardous material training and ensure that appropriate Personal Protective Equipment (PPE) is used before handling any chemical.

ThermoFisher SCIENTIFIC

Certificate of Analysis

W2858 Received by AP on 07/07/2021

Product No.: 33213

Product: Phenol, ACS, 99+%, stab.

Lot No.: M13H048

Test	Limits	Results
Assay	99.0 % min	99.8 %
Freezing point	40.5ºC min	40.5 ºC
Clarity of solution	To pass test	Passes
Residue after evaporation	0.05 % max	< 0.05 %
Water	0.5 % max	0.2 %

Retest date: January 7, 2026

Ammonium Hydroxide, 28.0-30.0%
BAKER ANALYZED® A.C.S. Reagent

Material No.: 9721-03
Batch No.: 0000246506
Manufactured Date: 2019/10/16
Retest Date: 2024/10/14
Revision No: 1

Certificate of Analysis

Meets ACS Reagent Chemical Requirements,

Test	Specification	Result
Appearance (Colorless and free from suspended matter or sediment)	Passes Test	PT
Assay (as NH_3)	28.0 - 30.0 %	28.4
Color (APHA)	<= 5	5
Specific Gravity at 60°/60°F	0.896 - 0.902	0.902
Residue after Ignition	<= 0.0020 %	< 0.0003
Carbon Dioxide (CO_2)	<= 0.002 %	< 0.001
Substances Reducing Permanganate	Passes Test	PT
Chloride (Cl)	<= 0.5 ppm	< 0.2
Nitrate (NO_3)	<= 2 ppm	< 1
Phosphate (PO_4)	<= 2 ppm	< 1
Sulfate (SO_4)	<= 2 ppm	< 1
Trace Impurities - Aluminum (Al)	<= 200.0 ppb	< 5.0
Arsenic and Antimony (as As)	<= 3000 ppb	< 5
Trace Impurities - Barium (Ba)	<= 300.0 ppb	< 1.0
Trace Impurities - Boron (B)	<= 50.0 ppb	< 5.0
Trace Impurities - Chromium (Cr)	<= 100.0 ppb	< 1.0
Trace Impurities - Copper (Cu)	<= 100.0 ppb	< 1.0
Trace Impurities - Gold (Au)	<= 200.0 ppb	< 5.0
Heavy Metals (as Pb)	<= 500 ppb	< 100
Trace Impurities - Iron (Fe)	<= 100.0 ppb	< 1.0
Trace Impurities - Lead (Pb)	<= 200.0 ppb	< 10.0
Trace Impurities - Magnesium (Mg)	<= 200.0 ppb	< 1.0
Trace Impurities - Manganese (Mn)	<= 100.0 ppb	< 1.0

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.: 9721-03
Batch No.: 0000246506

Test	Specification	Result
Trace Impurities - Nickel (Ni)	<= 100.0 ppb	< 5.0
Trace Impurities - Tin (Sn)	<= 100.0 ppb	< 10.0
Trace Impurities - Titanium (Ti)	<= 100.0 ppb	< 1.0
Trace Impurities - Zinc (Zn)	<= 100.0 ppb	< 1.0

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

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

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

BEANTOWN CHEMICAL

W3004
Rec. 01/24/23
12

Certificate of Analysis

Catalog Number	212760
Product Description	4-Aminoantipyrine, 97%
CAS Number	83-07-8
Lot Number	50001601

Test Results

	Specifications	Results
Assay	≥97.0% min	98.2%
Identification	To pass test	Passes test
Melting Point	107-109°C	109°C
Sensitivity to phenol	To pass test	Passes test
Residue after Ignition	≤0.10%	0.03%
Loss on drying	≤0.5%	0.13%
Clarity of solution (1g/20ml water)	Clear solution	Clear solution
Clarity of solution (1g/20ml EtOH)	Clear solution	Clear solution
Description	Light yellow to tan fine crystals	Light yellow crystalline powder

Suggested retest date January 2025

This certificate of analysis has been electronically generated and is valid without a signature.

BEANTOWN CHEMICAL CORPORATION, 9 SAGAMORE PARK ROAD, HUDSON NH 03051

WWW.BEANTOWNCHEM.COM TOLL FREE: 1-844-891-6306 EMAIL: TECHNICAL@BEANTOWNCHEM.COM