

# Certificate of Analysis

## Cupric Sulfate CS, USP / EP Blue Primary Solution

1 mL = 62.4 mg CuSO<sub>4</sub> · 5H<sub>2</sub>O

Lot Number: 4312G37

Product Number: 2495

Manufacture Date: DEC 18, 2023

Expiration Date: JUN 2025

Cobaltous Chloride Colorimetric Solution (CS), 1.00 mL = 59.5 mg CoCl<sub>2</sub> · 6H<sub>2</sub>O (RICCA CHEMICAL COMPANY Cat. No. 2210), Ferric Chloride Colorimetric Solution (CS), 1.00 mL = 45.0 mg FeCl<sub>3</sub> · 6H<sub>2</sub>O (RICCA CHEMICAL COMPANY Cat. No. 3110), and high purity, ACS Reagent Grade Water (RICCA CHEMICAL COMPANY Cat. No. 9150) are used with this solution to prepare "Matching Fluids" (for use as liquid color standards) by the instructions given in the USP procedure for "Color and Achromicity."

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Copper Sulfate Pentahydrate	7758-99-8	ACS
Hydrochloric Acid	7647-01-0	ACS

Test	Specification	Result	NIST SRM#
Appearance	Blue liquid	Passed	
Assay (vs. Sodium Thiosulfate/Starch)	62.36-62.44 mg/mL	62.38 mg/mL	136

Specification	Reference
Cupric Sulfate Solution (0.5 N0)	ASTM (D 565)
Cupric Sulfate Solution (0.5 N)	ASTM (D 612)
Blue primary solution	EP (2.2.2)
Cupric Sulfate CS	USP (N/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)
2495-16	500 mL amber glass	18 months
2495-32	1 L amber glass	18 months
2495-4	120 mL amber glass	18 months

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



Paul Brandon (12/18/2023)

Production Manager

This document is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."

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