

Certificate of Analysis

Ferric Chloride CS, USP / EP Yellow Primary Solution
1 mL = 45.0 mg FeCl₃ · 6H₂O

Lot Number: 4402R86

Product Number: 3110

Manufacture Date: FEB 29, 2024

Expiration Date: AUG 2025

Cobaltous Chloride Colorimetric Solution (CS), 1.00 mL = 59.5 mg CoCl₂ · 6H₂O (RICCA CHEMICAL COMPANY Cat. No. 2210), Cupric Sulfate Colorimetric Solution (CS), 1.00 mL = 62.4 mg CuSO₄ · 5H₂O (RICCA CHEMICAL COMPANY Cat. No. 2495), 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
Ferric Chloride Hexahydrate	10025-77-1	ACS
Hydrochloric Acid	7647-01-0	ACS

Test	Specification	Result	NIST SRM#
Appearance	Amber liquid	Passed	
Assay (vs. Sodium Thiosulfate/Starch)	44.97-45.03 mg/mL	45.02 mg/mL	136

Specification	Reference
Ferric Chloride Solution (0.5 N)	ASTM (D 565)
Ferric Chloride Solution (0.5 N)	ASTM (D 612)
Yellow primary solution	EP (2.2.2)
Ferric Chloride 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)
3110-16	500 mL amber glass	18 months
3110-32	1 L amber glass	18 months
3110-4	120 mL amber glass	18 months

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



Paul Brandon (02/29/2024)

Production Manager

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

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