

Certificate of Analysis

Light's Solution, Oxidation-Reduction Potential (ORP) Standard

Lot Number: 1311D23

Product Number: 4330

Manufacture Date: NOV 08, 2023

Expiration Date: OCT 2024

Using this ORP Standard Solution, the potentials at 25°C of a properly functioning Platinum (Pt) Electrode vs. a Silver/Silver Chloride Reference Electrode should be as follows when using the corresponding ORP Electrode Filling Solution saturated with Silver Chloride: +439 millivolts (Potassium Chloride, 1.00 Molar); +475 millivolts (Potassium Chloride, 4.00 Molar); +476 millivolts (Potassium Chloride, Saturated). When using this ORP Standard Solution, the potential at 25°C of a properly functioning Platinum (Pt) Electrode vs. a Calomel [Mercury (Hg)/Mercurous Chloride (Hg₂Cl₂)/Potassium Chloride (KCl)] Reference Electrode should be +430 millivolts using a saturated Potassium Chloride filling solution. Also when using this ORP Standard Solution, the potential at 25°C of a properly functioning Platinum (Pt) Electrode vs. a Standard Hydrogen Reference Electrode (NHE) should be +675 millivolts.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Sulfuric Acid	7664-93-9	ACS
Ferric Ammonium Sulfate Dodecahydrate	7783-83-7	ACS
Ferrous Ammonium Sulfate Hexahydrate	7783-85-9	ACS

Test	Specification	Result
Appearance	Light yellow liquid	Passed
Oxidation-Reduction Potential (ORP)	465-485 mV at 25°C	467 mV at 25°C

Specification	Reference
Light's solution	APHA (2580 B)
Redox Standard Solution, Ferrous-Ferric Reference Solution	ASTM (D 1498)

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)
4330-16	500 mL natural poly	12 months

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



Heidi J Green (11/08/2023)

Operations Manager

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

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