

Certificate of Analysis

Calcium Chloride Standard, 1000 ppm CaCO₃ (400 ppm Ca), 0.0100 M Ca²⁺, 0.0200 N Ca²⁺

Lot Number: 1309M56

Product Number: 1780

Manufacture Date: SEP 27, 2023

Expiration Date: MAR 2025

| Name | CAS# | Grade |
|-------------------|-----------|-----------------|
| Water | 7732-18-5 | ACS/ASTM/USP/EP |
| Calcium Carbonate | 471-34-1 | ACS Chelometric |
| Hydrochloric Acid | 7647-01-0 | ACS |

| Test | Specification | Result | NIST SRM# |
|-------------------------------------|-----------------------|---------------|-----------|
| Appearance | Colorless liquid | Passed | |
| Assay (vs. EDTA/Eriochrome Black T) | 0.00999-0.01001 Molar | 0.01000 Molar | 915 |

| Specification | Reference |
|---------------------------------------------------------|---------------------|
| Calcium Solution, Standard (1.00 mL = 0.400 mg calcium) | ASTM (D 511 A) |
| Standard calcium solution | APHA (2340 C) |
| Standard calcium solution, 0.01 M | TAPPI (T 247 cm-83) |
| Standard Calcium Solution, 0.02 N | EPA (215.2) |
| Stock Solution, 1.0 mL = 1.0 mg CaCO ₃ | EPA (130.1) |
| Standard Calcium Solution, 0.02 N | EPA (130.2) |

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) |
|-------------|---------------------|---------------------------------|
| 1780-16 | 500 mL natural poly | 18 months |
| 1780-32 | 1 L natural poly | 18 months |
| 1780-4 | 120 mL natural poly | 18 months |

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



Heidi J Green (09/27/2023)

Operations Manager

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

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