

Certificate of Analysis

Hydrochloric Acid, 0.100 Normal (N/10)

Lot Number: 4402M68

Product Number: 3600

Manufacture Date: FEB 22, 2024

Expiration Date: FEB 2026

The certified value for this product is confirmed in independent testing by a second qualified chemist.

| Name | CAS# | Grade |
|-------------------|-----------|-----------------|
| Water | 7732-18-5 | ACS/ASTM/USP/EP |
| Hydrochloric Acid | 7647-01-0 | ACS |

| Test | Specification | Result | NIST SRM# |
|--------------------------------------------------------|-------------------------|------------------|-----------|
| Appearance | Colorless liquid | Passed | |
| Assay (vs. Tris(hydroxymethyl)aminomethane/Methyl Red) | 0.0999-0.1001 N at 20°C | 0.1001 N at 20°C | 723 |

| Specification | Reference |
|-------------------------------------------------------------|----------------------|
| Hydrochloric acid, 0.1 N | TAPPI (T 625 cm-85) |
| Hydrochloric acid, 0.1 N | TAPPI (T 504 cm-97) |
| Standard hydrochloric acid, 0.1 N | APHA (2320 B) |
| Hydrochloric Acid, 0.1 N | APHA (3500-Se C) |
| Standardized 0.1 N HCl | TAPPI (T 611 cm-97) |
| Hydrochloric Acid Standard Solution (0.10 N) | ASTM (D 2187 F) |
| Standard Hydrochloric Acid, 0.1 N | EPA (310.1) |
| Hydrochloric acid, 0.1 N | TAPPI (T 607 cm-84) |
| Hydrochloric Acid (0.1 M) | EPA (SW-846) (7472) |
| Hydrochloric Acid (0.1 M) | EPA (SW-846) (7063) |
| Hydrochloric acid, 0.1 N | TAPPI (T 418 cm-97) |
| Hydrochloric Acid, 0.1 N | EPA (SW-846) (8315A) |
| Hydrochloric acid, 0.1 N | TAPPI (T 254 cm-85) |
| Hydrochloric Acid, Standard Solution (0.10 N) | ASTM (D 2187 G) |
| Hydrochloric acid, 0.1 N | TAPPI (T 237 om-93) |
| Hydrochloric acid, 0.1 N | TAPPI (T 610 sp-97) |
| Hydrochloric Acid, Standard (0.1 N) | ASTM (D 2187 H) |
| Standardized 0.1 N hydrochloric acid | TAPPI (T 553 pm-92) |
| Hydrochloric Acid, Standard Solution (0.10 N) | ASTM (D 2187 I) |
| Hydrochloric Acid, Standard Solution (0.10 N) | ASTM (D 2187 K) |
| 0.1 M Hydrochloric acid Volumetric Solution | EP (3002100) |
| Hydrochloric Acid, Tenth-Normal (0.1 N) Volumetric Solution | 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) |
|-------------|---------------------|---------------------------------|
| 3600-1 | 4 L natural poly | 24 months |
| 3600-1CT | 4 L Cubitainer® | 24 months |
| 3600-2.5 | 10 L Cubitainer® | 24 months |
| 3600-32 | 1 L natural poly | 24 months |
| 3600-5 | 20 L Cubitainer® | 24 months |

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



Paul Brandon (02/22/2024)

Production Manager

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

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