

Certificate of Analysis

Hydrochloric Acid, 1.00 Normal

Lot Number: 2107B63

Product Number: 3700

Manufacture Date: JUL 14, 2021

Expiration Date: JUN 2023

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) | 0.999-1.001 N at 20°C | 1.001 N at 20°C | 723 |

| Specification | Reference |
|-----------------------------------------------------|---------------------|
| Hydrochloric Acid, 1 N | APHA (3500-Se E) |
| Hydrochloric Acid Solution, 1 N | APHA (4500-NO3- B) |
| Hydrochloric acid, 1N HCl | TAPPI (T 613 cm-83) |
| Hydrochloric Acid (1 N) | EPA (SW-846) (1311) |
| Hydrochloric acid, approximately 1 N | TAPPI (T 255 cm-97) |
| Hydrochloric acid, 1 M | TAPPI (T 408 cm-97) |
| Hydrochloric acid, 1 N | TAPPI (T 610 sp-97) |
| Hydrochloric Acid, 1 N | ASTM (D 4047) |
| 1 N hydrochloric acid | TAPPI (T 553 pm-92) |
| Hydrochloric Acid, Standard Solution (1.0 N) | ASTM (D 2187 I) |
| Hydrochloric Acid, 1 Normal Volumetric Solution | ACS (N/A) |
| 1 M Hydrochloric acid Volumetric Solution | EP (3001800) |
| Hydrochloric Acid, Normal (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) |
|-------------|---------------------|---------------------------------|
| 3700-1 | 4 L natural poly | 24 months |
| 3700-16 | 500 mL natural poly | 24 months |
| 3700-32 | 1 L natural poly | 24 months |
| 3700-4 | 120 mL natural poly | 24 months |
| 3700-5 | 20 L Cubitainer® | 24 months |

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



Kerry Kingsbury (07/14/2021)

Quality Control Supervisor

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

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