

# Certificate of Analysis

## Hydrochloric Acid, 0.500 Normal (N/2)

**Lot Number:** 1201731

**Product Number:** 3650

**Manufacture Date:** JAN 03, 2022

**Expiration Date:** DEC 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)	0.4998-0.5002 N at 20°C	0.5002 N at 20°C	723

Specification	Reference
Aqueous Hydrochloric Acid Standard Solution (0.5 M)	ASTM (D 94 B)
Hydrochloric acid, 0.5 N	TAPPI (T 625 cm-85)
Hydrochloric acid, 0.5 N	TAPPI (T 632 cm-84)
Standard hydrochloric acid, 0.5 N	TAPPI (T 621 cm-71)
Hydrochloric Acid, Standard Solution (0.5 N)	ASTM (D 128)
Hydrochloric acid, 0.5 N	TAPPI (T 635 om-93)
Hydrochloric acid, 0.5 N	TAPPI (T 610 sp-97)
Aqueous Hydrochloric Acid Standard Solution (0.5 M)	ASTM (D 94 A)
Hydrochloric Acid (1+23)	ASTM (D 4922)
Hydrochloric Acid, Half-Normal (0.5 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)
3650-1	4 L natural poly	24 months
3650-1CS	4 x 4 L natural poly	24 months
3650-2.5	10 L Cubitainer®	24 months
3650-32	1 L natural poly	24 months
3650-5	20 L Cubitainer®	24 months

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



Israel Alamudun (01/03/2022)

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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