

## **Product Specification**

## Hydrochloric Acid, 50% v/v, Trace metals grade

## Lot Number: SAMPLE

Product Number: R3580030

Trace metal values are calculated from the raw materials.

Manufacture Date: N/A

Recommended Retest Date: N/A

Name	CAS#	Grade	
Water	7732-18-5	ACS/ASTM/USP/EP Trace Metals	
Hydrochloric Acid	7647-01-0		
Test	Specification	Result	NIST SRM#
Aluminum (Al)	max 10.0 ppm	N/A	3101
Antimony (Sb)	max 0.005 ppm	N/A	3102
Arsenic (As)	max 0.005 ppm	N/A	3103
Assay	49.6-50.4 %	N/A	
Boron (B)	max 0.1 ppm	N/A	3107
Bromide (Br)	max 0.005 %	N/A	
Calcium (Ca)	max 0.3 ppm	N/A	3109
Chromium (Cr)	max 0.2 ppm	N/A	3112
Color (APHA)	max 10	N/A	
Copper (Cu)	max 0.1 ppm	N/A	3114
Free Chlorine (Cl)	To Pass Test	N/A	
Gold (Au)	max 0.3 ppm	N/A	3121
Iron (Fe)	max 0.1 ppm	N/A	3126
Lead (Pb)	max 0.1 ppm	N/A	3128
Magnesium (Mg)	max 0.3 ppm	N/A	3131
Manganese (Mn)	max 0.3 ppm	N/A	3132
Mercury (Hg)	max 5.0 ppb	N/A	3133
Nickel (Ni)	max 0.1 ppm	N/A	3136
Phosphate $(PO_4)$	max 0.5 ppm	N/A	
Potassium (K)	max 0.3 ppm	N/A	3141
Sodium (Na)	max 0.3 ppm	N/A	3152
Tin (Sn)	max 0.3 ppm	N/A	3161
Zinc (Zn)	max 0.3 ppm	N/A	3168

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)		
R3580030-2.5D	2.5 L safety-coated glass	18 months		
Recommended Storage: 15°C - 30°C (59°F - 86°F)				

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