

CERTIFICATE OF ANALYSIS

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by INTERTEK SAI Global
Certificate Number. QMS42099

Catalogue Number	H/1196
Lot Number	2538065
Description	Hydrochloric acid 1.18 ~37% PrimarPlus Trace metal analysis
CAS Number	7647-01-0
Quality Test/Release Date	02/Jun/2025
Expiry Phrase	Use within 3 years of packing date
Country of Origin	Taiwan

Result Name	Units	Specifications	Test Value
Aluminium (Al)	ppm	<= 0.02	<0.02
Antimony (Sb)	ppm	<= 0.005	<0.005
Arsenic (As)	ppm	<= 0.01	<0.005
Assay	%	>= 35 and <= 38	37.44
Barium (Ba)	ppm	<= 0.02	<0.005
Beryllium (Be)	ppm	<= 0.005	<0.005
Bismuth (Bi)	ppm	<= 0.005	<0.005
Boron (B)	ppm	<= 0.005	<0.005
Cadmium (Cd)	ppm	<= 0.002	<0.002
Calcium (Ca)	ppm	<= 0.1	<0.05
Chemical form		Mobile liquid	Mobile liquid
Chromium (Cr)	ppm	<= 0.005	<0.005
Cobalt (Co)	ppm	<= 0.002	<0.002
Copper (Cu)	ppm	<= 0.005	<0.005
Free chlorine (ppm)	ppm	<= 1	<1
Gallium (Ga)	ppm	<= 0.005	<0.005
Germanium (Ge)	ppm	<= 0.005	<0.005
Indium (In)	ppm	<= 0.005	<0.005
Iron (Fe)	ppm	<= 0.1	<0.05
Lead (Pb)	ppm	<= 0.002	<0.002
Lithium (Li)	ppm	<= 0.002	<0.002
Magnesium (Mg)	ppm	<= 0.02	<0.01
Manganese (Mn)	ppm	<= 0.002	<0.002
Mercury (Hg)	ppm	<= 0.005	<0.005
Molybdenum (Mo)	ppm	<= 0.002	<0.002
Nickel (Ni)	ppm	<= 0.005	<0.002
Potassium (K)	ppm	<= 0.05	<0.02
Residue after ignition	%	<= 0.0002	<0.0001
Silver (Ag)	ppm	<= 0.002	<0.002
Sodium (Na)	ppm	<= 0.2	<0.05
Strontium (Sr)	ppm	<= 0.002	<0.002
Sulfate (SO4) (ppm)	ppm	<= 1	<1
Thallium (Tl)	ppm	<= 0.005	<0.005
Tin (Sn)	ppm	<= 0.005	<0.002
Titanium (Ti)	ppm	<= 0.005	<0.002
Total nitrogen (N)	ppm	<= 5	0.6
Total phosphorus (P)	ppm	<= 0.2	<0.05
Vanadium (V)	ppm	<= 0.002	<0.002
Visual colour		Clear colourless	Clear colourless
Zinc (Zn)	ppm	<= 0.01	<0.01

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of the catalogue number listed above.

A. Ganatra

Ashok Ganatra
Supervisor, QC

Products are processed under ISO 9001:2015 quality management systems and samples are tested for conformance to the noted specifications. Certain data may have been supplied by third parties. We disclaim the implied warranties of merchantability and fitness for a particular purpose, and the accuracy of third-party data or information associated with the product. Products are for research use or further manufacturing. Products are not for direct administration to humans or animals. It is the responsibility of the final formulator or end user to determine suitability, and to qualify and/or validate each product for its intended use.

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