

This is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Thermo Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Products are for research use or further manufacturing. Not for direct administration to humans or animals. It is the responsibility of the purchaser, formulator or those performing further manufacturing to determine suitability based upon the intended use of the end product. Products are tested to meet the analytical requirements of the noted grade. The following information is the actual analytical results obtained.

Catalogue Number:	A508	Quality Test / Release Date:	29-JAN-2025
Lot Number:	AO25000435	Expiry Date:	31-JAN-2027
Product of:	Belgium		

Description:	Hydrochloric acid Trace Metal Grade		
Grade:	For laboratory use, ICP-MS trace analysis	Application:	

Appearance:	colourless
-------------	------------

Result Name	Test Value	Units	Specification
Assay	34.5	%	: 34-37
Aluminium (Al)	<1	ppb	<1
Antimony (Sb)	<0.5	ppb	<0.5
Arsenic (As)	<0,5	ppb	<0,5
Barium (Ba)	<0.1	ppb	<0.1
Beryllium (Be)	<0.1	ppb	<0.1
Bismuth (Bi)	<0.1	ppb	<0.1
Boron (B)	<1	ppb	<1
Cadmium (Cd)	<0.1	ppb	<0.1
Calcium (Ca)	<1	ppb	<1
Cerium (Ce)	<0.1	ppb	<0.1
Caesium (Cs)	<0.1	ppb	<0.1
Chromium (Cr)	<0.5	ppb	<0.5
Cobalt (Co)	<0.1	ppb	<0.1
Copper (Cu)	<0.5	ppb	<0.5
Dysprosium (Dy)	<0.1	ppb	<0.1
Erbium (Er)	<0.1	ppb	<0.1
Europium (Eu)	<0.1	ppb	<0.1
Gadolinium (Gd)	<0.1	ppb	<0.1
Gallium (Ga)	<0.1	ppb	<0.1
Gold (Au)	<0.5	ppb	<0.5
Hafnium (Hf)	<0.1	ppb	<0.1
Holmium (Ho)	<0.1	ppb	<0.1
Indium (In)	<0.1	ppb	<0.1
Iron (Fe)	<1	ppb	<1
Lanthanum (La)	<0.1	ppb	<0.1
Lead (Pb)	<0.1	ppb	<0.1
Lithium (Li)	<0.1	ppb	<0.1
Lutetium (Lu)	<0.1	ppb	<0.1
Magnesium (Mg)	<0.5	ppb	<0.5
Manganese (Mn)	<0.1	ppb	<0.1
Mercury (Hg)	<0.1	ppb	<0.1
Molybdenum (Mo)	<0.1	ppb	<0.1
Neodymium (Nd)	<0.1	ppb	<0.1
Nickel (Ni)	<0.5	ppb	<0.5
Niobium (Nb)	<0.1	ppb	<0.1
Palladium (Pd)	<0.1	ppb	<0.1
Platinum (Pt)	<0.1	ppb	<0.1
Potassium (K)	<1	ppb	<1

Praseodymium (Pr)	<0.1	ppb	<0.1
Rhenium (Re)	<0.1	ppb	<0.1
Rhodium (Rh)	<0.1	ppb	<0.1
Rubidium (Rb)	<0.1	ppb	<0.1
Ruthenium (Ru)	<0.1	ppb	<0.1
Samarium (Sm)	<0.1	ppb	<0.1
Scandium (Sc)	<0.1	ppb	<0.1
Selenium (Se)	<1	ppb	<1
Silver (Ag)	<1	ppb	<1
Sodium (Na)	<1	ppb	<1
Strontium (Sr)	<0.1	ppb	<0.1
Tantalum (Ta)	<0.1	ppb	<0.1
Tellurium (Te)	<0.1	ppb	<0.1
Terbium (Tb)	<0.1	ppb	<0.1
Thallium (Tl)	<0.1	ppb	<0.1
Thorium (Th)	<0.1	ppb	<0.1
Thulium (Tm)	<0.1	ppb	<0.1
Tin (Sn)	<0.5	ppb	<0.5
Titanium (Ti)	<0.5	ppb	<0.5
Tungsten (W)	<0.1	ppb	<0.1
Uranium (U)	<0.1	ppb	<0.1
Vanadium (V)	<0.5	ppb	<0.5
Ytterbium (Yb)	<0.1	ppb	<0.1
Yttrium (Y)	<0.1	ppb	<0.1
Zinc (Zn)	<0.5	ppb	<0.5
Zirconium (Zr)	<0.1	ppb	<0.1
Colour	<10	APHA	<10
Bromide (Br)	<10	ppm	<10
Free Chlorine	<0.5	ppm	<0.5
Phosphorus (P)	<0.01	ppm	<0.01
Sulfur (S)	<0.3	ppm	<0.3

Additional Information:	
-------------------------	--



Nathalie Sabbe
Chemist

Thursday 6th of March 2025

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. If there are any questions with this certificate, please call Customer Services on +44(0)1509 555500