

## CERTIFICATE OF ANALYSIS

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by Intertek Global  
 Certificate Number: CERT-0120633

Catalogue Number	A144
Lot Number	256934
Description	HYDROCHLORIC ACID, CERTIFIED A.C.S. PLUS
CAS Number	7647-01-0,7732-18-5
Quality Test/Release Date	22/May/2026
Suggested retest date	21/May/2031
Country of Origin	Canada
Declaration of Origin	Inorganic-non animal
BSE/TSE	No animal products are used as starting raw material ingredients, or used in processing, including lubricants, processing aids, or any other material that might migrate to the finished product.

Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	Clear, colorless free from suspended matter
ALUMINUM	ppm	<= 0.3	<0.3
AMMONIUM (NH4)	ppm	<= 3	<3
ARSENIC AND ANTIMONY	ppm	<= 0.005	<0.005
ASSAY	w/w %	Inclusive Between 36.5 - 38.0	36.9
BORON (B)	ppm	<= 0.1	<0.1
BROMIDE	%	<= 0.005	<0.005
CALCIUM (Ca)	ppm	<= 0.3	<0.3
CHROMIUM (Cr)	ppm	<= 0.2	<0.2
COLOR	APHA	<= 10	<10
COPPER (Cu)	ppm	<= 0.1	<0.1
EXTRACTABLE ORGANIC SUBSTANCES	ppm	<= 5	<5
FREE CHLORINE (Cl2)	ppm	<= 0.4	<0.4
GOLD (Au)	ppm	<= 0.3	<0.3
HEAVY METALS (as Pb)	ppm	<= 0.1	<0.1
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
IRON (Fe)	ppm	<= 0.1	<0.1
LEAD (Pb)	ppm	<= 0.1	<0.1
MAGNESIUM (Mg)	ppm	<= 0.3	<0.3
MANGANESE (Mn)	ppm	<= 0.3	<0.3
MERCURY (Hg)	ppb	<= 5	<5
NICKEL (Ni)	ppm	<= 0.1	<0.1
PHOSPHATE (PO4)	ppm	<= 0.05	<0.05
POTASSIUM (K)	ppm	<= 0.3	<0.3
RESIDUE AFTER IGNITION	ppm	<= 4	<4
SODIUM (Na)	ppm	<= 0.3	<0.3
SULFATE (SO4)	ppm	<= 0.5	<0.5
SULFITE	ppm	<= 0.8	<0.8
TIN (Sn)	ppm	<= 0.3	<0.3

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.

TITANIUM (Ti)	ppm	$\leq 0.3$	<0.3
ZINC (Zn)	ppm	$\leq 0.3$	<0.3

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Additional Information No Bisphenol-A or any other organic compound is used in the manufacture of this product. No melamine is used in the production or packaging of this product. It is not manufactured using genetically modified organisms or genetically engineered additives or raw materials.



Ash Frey  
Supervisor, Quality Control

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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