

## 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	A465
Lot Number	24007385
Description	Acetic Acid (Optima)
CAS Number	64-19-7
Quality Test/Release Date	05/May/2025
Suggested retest date	18/May/2027
Country of Origin	United States
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	N/A
ALUMINUM	ppt	<= 50	<50
ANTIMONY (Sb)	ppt	<= 50	<50
ARSENIC (As)	ppt	<= 50	<50
ASSAY	%	>= 99	100
BARIUM (Ba)	ppt	<= 10	<10
BERYLLIUM (Be)	ppt	<= 10	<10
BISMUTH (Bi)	ppt	<= 10	<10
CADMIUM (Cd)	ppt	<= 10	<10
CALCIUM (Ca)	ppt	<= 50	<50
CERIUM (Ce)	ppt	<= 10	<10
CESIUM (Cs)	ppt	<= 10	<10
CHROMIUM (Cr)	ppt	<= 10	<10
COBALT (Co)	ppt	<= 10	<10
COPPER (Cu)	ppt	<= 10	<10
DYSPROSIUM (Dy)	ppt	<= 1	<1
ERBIUM (Er)	ppt	<= 1	<1
EUROPIUM (Eu)	ppt	<= 1	<1
GADOLINIUM (Gd)	ppt	<= 1	<1
GALLIUM (Ga)	ppt	<= 10	<10
GERMANIUM (Ge)	ppt	<= 10	<10
HAFNIUM (Hf)	ppt	<= 10	<10
HOLMIUM (Ho)	ppt	<= 1	<1
INDIUM (In)	ppt	<= 1	<1
IRON (Fe)	ppt	<= 50	<50
LANTHANUM (La)	ppt	<= 1	<1
LEAD (Pb)	ppt	<= 10	<10
LITHIUM (Li)	ppt	<= 10	<10
LUTETIUM (Lu)	ppt	<= 10	<10
MAGNESIUM (Mg)	ppt	<= 50	<50
MANGANESE (Mn)	ppt	<= 10	<10
MOLYBDENUM (Mo)	ppt	<= 10	<10
NEODYMIUM (Nd)	ppt	<= 1	<1
NICKEL (Ni)	ppt	<= 50	<50
PLATINUM (Pt)	ppt	<= 50	<50
POTASSIUM (K)	ppt	<= 50	<50
PRASEODYMIUM (Pr)	ppt	<= 1	<1

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.

RHENIUM (Re)	ppt	<= 10	<10
RHODIUM (Rh)	ppt	<= 50	<50
RUBIDIUM (Rb)	ppt	<= 10	<10
RUTHENIUM (Ru)	ppt	<= 50	<50
SAMARIUM (Sm)	ppt	<= 1	<1
SCANDIUM (Sc)	ppt	<= 10	<10
SELENIUM (Se)	ppt		<100
SILVER (Ag)	ppt	<= 50	<50
SODIUM (Na)	ppt	<= 100	<100
STRONTIUM (Sr)	ppt	<= 10	<10
TELLURIUM (Te)	ppt	<= 1	<1
TERBIUM (Tb)	ppt	<= 1	<1
THALLIUM (Tl)	ppt	<= 10	<10
THORIUM (Th)	ppt	<= 1	<1
THULIUM (Tm)	ppt	<= 1	<1
TIN (Sn)	ppt	<= 50	<50
TITANIUM (Ti)	ppt	<= 10	<10
TUNGSTEN (W)	ppt	<= 10	<10
URANIUM (U)	ppt	<= 1	<1
VANADIUM (V)	ppt	<= 10	<10
YTTERBIUM (Yb)	ppt	<= 1	<1
YTTRIUM (Y)	ppt	<= 1	<1
ZINC (Zn)	ppt	<= 50	<50
ZIRCONIUM (Zr)	ppt	<= 10	<10



Matthew Micek  
QC Supervisor

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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