

## Certificate of Analysis

1 Reagent Lane  
 Fair Lawn, NJ 07410  
 201.796.7100 tel  
 201.796.1329 fax

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

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 final formulator and end user 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.

Catalog Number	W9	Quality Test / Release Date	08/03/2023
Lot Number	24004112	Expiration Date	Jul/2026
Description	Water (Ultra Trace Elemental Analysis Grade)		
Country of Origin	United States		
Chemical Origin	Inorganic		
BSE/TSE Comment	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.		

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	N/A
ALUMINUM	ppt	<= 20	<20
ANTIMONY (Sb)	ppt	<= 10	<10
ARSENIC (As)	ppt	<= 10	<10
BARIUM (Ba)	ppt	<= 10	<10
BERYLLIUM (Be)	ppt	<= 10	<10
BISMUTH (Bi)	ppt	<= 10	<10
BORON (B)	ppb	<= 20	<20
CADMIUM (Cd)	ppt	<= 10	<10
CALCIUM (Ca)	ppt	<= 10	<10
CERIUM (Ce)	ppt	<= 10	<10.00
CESIUM (Cs)	ppt	<= 10	<10
CHROMIUM (Cr)	ppt	<= 10	<10
COBALT (Co)	ppt	<= 10	<10
COLOR	APHA	<= 10	<10
COPPER (Cu)	ppt	<= 10	<10
DYSPROSIUM (Dy)	ppt	<= 1	<1
ERBIUM (Er)	ppt	<= 1	<1
EUROPIUM (Eu)	ppt	<= 1	<1
FREE CHLORIDE			<1
GADOLINIUM (Gd)	ppt	<= 1	<1
GALLIUM (Ga)	ppt	<= 10	<10
GERMANIUM (Ge)	ppt	<= 10	<10
GOLD (Au)	ppt	<= 10	<10
HAFNIUM (Hf)	ppt	<= 1	<1

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

If there are any questions with this certificate, please call at (800) 227-6701.

\*Based on suggested storage condition.

## Certificate of Analysis

1 Reagent Lane  
 Fair Lawn, NJ 07410  
 201.796.7100 tel  
 201.796.1329 fax

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

HOLMIUM (Ho)	ppt	<= 1	<1
INDIUM (In)	ppt	<= 1	<1
IRON (Fe)	ppt	<= 10	<10
LANTHANUM (La)	ppt	<= 1	<1
LEAD (Pb)	ppt	<= 10	<10
LITHIUM (Li)	ppt	<= 10	<10
LUTETIUM (Lu)	ppt	<= 1	<1
MAGNESIUM (Mg)	ppt	<= 10	<10
MANGANESE (Mn)	ppt	<= 10	<10.00
MERCURY (Hg)	ppt	<= 20	<20
MOLYBDENUM (Mo)	ppt	<= 10	<10
NEODYMIUM (Nd)	ppt	<= 1	<1
NICKEL (Ni)	ppt	<= 10	<10
NIOBIUM (Nb)	ppt	<= 10	<10
PALLADIUM (Pd)	ppt	<= 10	<10
PLATINUM (Pt)	ppt	<= 10	<10
POTASSIUM (K)	ppt	<= 10	<10
PRASEODYMIUM (Pr)	ppt	<= 10	<10
RHENIUM (Re)	ppt	<= 10	<10
RHODIUM (Rh)	ppt	<= 10	<10
RUBIDIUM (Rb)	ppt	<= 10	<10
RUTHENIUM (Ru)	ppt	<= 10	<10
SAMARIUM (Sm)	ppt	<= 10	<10
SCANDIUM (Sc)	ppt	<= 100.1	<10
SELENIUM (Se)	ppt	<= 50	<50
SILVER (Ag)	ppt	<= 10	<10
SODIUM (Na)	ppt	<= 10	<10
STRONTIUM (Sr)	ppt	<= 10	<10
TANTALUM (Ta)	ppt	<= 10	<10
TELLURIUM (Te)	ppt	<= 1	<1
TERBIUM (Tb)	ppt	<= 10	<10
THALLIUM (Tl)	ppt	<= 10	<10
THORIUM (Th)	ppt	<= 1	<1
THULIUM (Tm)	ppt	<= 10	<10
TIN (Sn)	ppt	<= 10	<10
TITANIUM (Ti)	ppt	<= 10	<10
TOTAL PHOSPHOROUS (P)	ppb	<= 1	<1
TOTAL SULFUR	ppb	<= 1	<1
TUNGSTEN (W)	ppt	<= 10	<10
URANIUM (U)	ppt	<= 1	<1

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.  
 If there are any questions with this certificate, please call at (800) 227-6701.

\*Based on suggested storage condition.

## Certificate of Analysis

1 Reagent Lane

Fair Lawn, NJ 07410

201.796.7100 tel

201.796.1329 fax

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

VANADIUM (V)	ppt	<= 10	<10
YTTERBIUM (Yb)	ppt	<= 10	<10
YTTRIUM (Y)	ppt	<= 1	<1
ZINC (Zn)	ppt	<= 10	<10
ZIRCONIUM (Zr)	ppt	<= 10	<10



Chetan Dudhatra - Quality Control Supervisor - Bridgewater

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.  
If there are any questions with this certificate, please call at (800) 227-6701.

\*Based on suggested storage condition.