

Certificate of Analysis

Product Name:

Hydrofluoric acid PurTrace Ultrapure for Ultra Trace Analysis, 47-51%

Product No.: PSR50244
Lot No.: Sample COA
Brand: PureSynth
CAS No.: 7664-39-3
Molecular Formula: HF
Molecular Weight: 20.01 g/mol
Date of Mfg.: NA
Date of Exp.: NA

Test	Specification	Result
Appearance	Colorless liquid	Colorless liquid
Assay	47.0-51.0 %	49.0 %
Total Sulphur (S)	NMT 100 ppb	<50 ppb
Aluminum (Al)	NMT 20 ppt	<2 ppt
Antimony (Sb)	NMT 20 ppt	<0.1 ppt
Arsenic (As)*	NMT 50 ppt	<50 ppt
Barium (Ba)	NMT 10 ppt	<0.05 ppt
Beryllium (Be)	NMT 10 ppt	<0.01 ppt
Bismuth (Bi)	NMT 10 ppt	<0.01 ppt
Boron (B)	NMT 100 ppt	< 5 ppt
Calcium (Ca)	NMT 10 ppt	<10 ppt
Cadmium (Cd)	NMT 10 ppt	<0.02 ppt
Cerium (Ce)	NMT 10 ppt	<0.01 ppt
Cesium (Cs)	NMT 10 ppt	<0.01 ppt
Chromium (Cr)	NMT 10 ppt	<0.5 ppt
Cobalt (Co)	NMT 10 ppt	<0.5 ppt
Copper (Cu)	NMT 10 ppt	<0.1 ppt
Dysprosium (Dy)	NMT 1 ppt	<0.01 ppt
Erbium (Er)	NMT 1 ppt	<0.01 ppt
Europium (Eu)	NMT 1 ppt	<0.01 ppt
Gadolinium (Gd)	NMT 1 ppt	<0.01 ppt
Gallium (Ga)	NMT 10 ppt	<0.05 ppt
Germanium (Ge)	NMT 10 ppt	<0.01 ppt
Gold (Au)	NMT 20 ppt	<1 ppt
Hafnium (Hf)	NMT 10 ppt	<0.01 ppt
Holmium (Ho)	NMT 1 ppt	<0.01 ppt

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Indium (In)	NMT 1 ppt	<0.01 ppt
Iron (Fe)	NMT 10 ppt	<2 ppt
Lanthanum (La)	NMT 10 ppt	<0.01 ppt
Lead (Pb)	NMT 10 ppt	<0.02 ppt
Lithium (Li)	NMT 10 ppt	<0.02 ppt
Lutetium (Lu)	NMT 1 ppt	<0.01 ppt
Magnesium (Mg)	NMT 10 ppt	<10 ppt
Manganese (Mn)	NMT 10 ppt	<0.05 ppt
Mercury (Hg)*	NMT 50 ppt	<20 ppt
Molybdenum (Mo)	NMT 10 ppt	<0.5 ppt
Neodymium (Nd)	NMT 1 ppt	<0.01 ppt
Nickel (Ni)	NMT 20 ppt	<10 ppt
Nobium (Nb)	NMT 10 ppt	<0.02 ppt
Palladium (Pd)	NMT 20 ppt	<1 ppt
Platinum (Pt)	NMT 20 ppt	<1 ppt
Potassium (K)	NMT 10 ppt	<0.5 ppt
Praseodymium (Pr)	NMT 1 ppt	<0.01 ppt
Rhenium (Re)	NMT 10 ppt	<0.01 ppt
Rhodium (Rh)	NMT 20 ppt	<0.01 ppt
Rubidium (Rb)	NMT 20 ppt	<0.01 ppt
Ruthenium (Ru)	NMT 20 ppt	<0.01 ppt
Samarium (Sm)	NMT 1 ppt	<0.01 ppt
Scandium (Sc)	NMT 10 ppt	<0.01 ppt
Selenium (Se)	NMT 10 ppt	<10 ppt
Silver (Ag)	NMT 10 ppt	<0.01 ppt
Sodium (Na)	NMT 10 ppt	<1 ppt
Strontium (Sr)	NMT 10 ppt	<0.01 ppt
Tantalum (Ta)	NMT 20 ppt	<20 ppt
Tellurium (Te)	NMT 1 ppt	<0.05 ppt
Terbium (Tb)	NMT 1 ppt	<0.01 ppt
Thallium (Tl)	NMT 10 ppt	<0.01 ppt
Thorium (Th)	NMT 1 ppt	<0.01 ppt
Thulium (Tm)	NMT 1 ppt	<0.01 ppt
Tin (Sn)	NMT 20 ppt	<0.5 ppt
Titanium (Ti)	NMT 20 ppt	<10 ppt
Tungsten (W)	NMT 20 ppt	<20 ppt
Uranium (U)	NMT 1 ppt	<0.01 ppt
Vanadium (V)	NMT 10 ppt	<0.01 ppt
Ytterbium (Yb)	NMT 1 ppt	<0.01 ppt
Yttrium (Y)	NMT 1 ppt	<0.01 ppt
Zinc (Zn)	NMT 10 ppt	<1 ppt
Zirconium (Zr)	NMT 10 ppt	<0.05 ppt

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Remarks:

This is to certify that the mentioned batch has been analysed at the time of quality release and has been found to be in compliance with prescribed specifications

The current Specification sheet may be available at www.pure-synth.com

Inspect on receipt

*For volatile elements, the acid samples are diluted then directly injected into the ICP-MS.

Storage Condition:

Store at room temperature and keep the container tightly closed

PureSynth Research Chemicals GmbH

This is electronically-generated copy & is valid without a signature

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