

Certificate of Analysis

Product Name:

**Nitric acid *PurTrace* Ultrapure for Ultra Trace Analysis, 67-70%
(Below 10 ppt impurities)**

Product No.: PSR50268
Lot No.: Sample COA
Brand: PureSynth
CAS No.: 7697-37-2
Molecular Formula: HNO₃
Molecular Weight: 63.01 g/mol
Date of Mfg.: NA
Date of Exp.: NA

Test	Specification	Result
Appearance	Light yellow liquid	Light yellow liquid
Assay	67.0 - 70.0 %	68.60 %
Aluminum (Al)	NMT 1 ppt	0.4 ppt
Antimony (Sb)	NMT 0.1 ppt	<0.1 ppt
Arsenic (As)	NMT 0.1 ppt	<0.1 ppt
Barium (Ba)	NMT 1 ppt	<0.1 ppt
Beryllium (Be)	NMT 0.1 ppt	<0.1 ppt
Bismuth (Bi)	NMT 0.1 ppt	<0.1 ppt
Boron (B)	NMT 10 ppt	4.55 ppt
Cadmium (Cd)	NMT 1 ppt	<0.1 ppt
Calcium (Ca)	NMT 10 ppt	8.55 ppt
Cerium (Ce)	NMT 0.1 ppt	<0.1 ppt
Cesium (Cs)	NMT 0.1 ppt	<0.1 ppt
Chromium (Cr)	NMT 1 ppt	0.35 ppt
Cobalt (Co)	NMT 0.1 ppt	<0.1 ppt
Copper (Cu)	NMT 1 ppt	<0.1 ppt
Dysprosium (Dy)	NMT 0.1 ppt	<0.1 ppt
Erbium (Er)	NMT 0.1 ppt	<0.1 ppt
Europium (Eu)	NMT 0.1 ppt	<0.1 ppt
Gadolinium (Gd)	NMT 0.1 ppt	<0.1 ppt
Gallium (Ga)	NMT 1 ppt	<0.1 ppt
Germanium (Ge)	NMT 1 ppt	<0.1 ppt
Gold (Au)	NMT 1 ppt	<0.1 ppt
Hafnium (Hf)	NMT 0.1 ppt	<0.1 ppt
Holmium (Ho)	NMT 0.1 ppt	<0.1 ppt
Indium (In)	NMT 0.1 ppt	<0.1 ppt

The Certificate of Analysis (COA) is valid only for the lot specified and within the product's shelf life. Retesting is recommended after the expiry date or if storage conditions are compromised. We guarantee a proper quality within our General Conditions of Sales. The conditions are subject to change without prior notice.
For queries on this COA, please contact our technical team at technical@pure-synth.com

Test	Specification	Result
Iridium (Ir)	NMT 0.1 ppt	<0.1 ppt
Iron (Fe)	NMT 2 ppt	0.15 ppt
Lanthanum (La)	NMT 0.1 ppt	<0.1 ppt
Lead (Pb)	NMT 0.1 ppt	<0.1 ppt
Lithium (Li)	NMT 0.1 ppt	<0.1 ppt
Lutetium (Lu)	NMT 0.1 ppt	<0.1 ppt
Magnesium (Mg)	NMT 1 ppt	0.4 ppt
Manganese (Mn)	NMT 0.1 ppt	<0.1 ppt
Mercury (Hg)	NMT 10 ppt	2.64 ppt
Molybdenum (Mo)	NMT 1 ppt	0.15 ppt
Neodymium (Nd)	NMT 0.1 ppt	<0.1 ppt
Nickel (Ni)	NMT 10 ppt	<0.1 ppt
Niobium (Nb)	NMT 0.1 ppt	<0.1 ppt
Osmium (Os)	NMT 0.1 ppt	<0.1 ppt
Palladium (Pd)	NMT 0.5 ppt	<0.1 ppt
Platinum (Pt)	NMT 5 ppt	<0.1 ppt
Potassium (K)	NMT 0.5 ppt	<0.5 ppt
Praseodymium (Pr)	NMT 0.1 ppt	<0.1 ppt
Phosphorus (P)	NMT 5 ppt	<5 ppt
Rhenium (Re)	NMT 0.1 ppt	<0.1 ppt
Rhodium (Rh)	NMT 0.1 ppt	<0.1 ppt
Rubidium (Rb)	NMT 0.1 ppt	<0.1 ppt
Ruthenium (Ru)	NMT 0.1 ppt	<0.1 ppt
Samarium (Sm)	NMT 0.1 ppt	<0.1 ppt
Scandium (Sc)	NMT 0.1 ppt	<0.1 ppt
Selenium (Se)	NMT 1 ppt	<0.1 ppt
Silver (Ag)	NMT 0.1 ppt	<0.1 ppt
Sodium (Na)	NMT 0.5 ppt	0.36 ppt
Strontium (Sr)	NMT 0.1 ppt	<0.1 ppt
Tantalum (Ta)	NMT 1 ppt	<0.1 ppt
Tellurium (Te)	NMT 0.1 ppt	<0.1 ppt
Terbium (Tb)	NMT 0.1 ppt	<0.1 ppt
Thallium (Tl)	NMT 0.1 ppt	<0.1 ppt
Thorium (Th)	NMT 0.1 ppt	<0.1 ppt
Thulium (Tm)	NMT 0.1 ppt	<0.1 ppt
Tin (Sn)	NMT 0.1 ppt	<0.1 ppt
Titanium (Ti)	NMT 0.5 ppt	<0.1 ppt
Tungsten (W)	NMT 0.1 ppt	<0.1 ppt
Uranium (U)	NMT 0.1 ppt	<0.1 ppt
Vanadium (V)	NMT 0.1 ppt	<0.1 ppt
Ytterbium (Yb)	NMT 0.1 ppt	<0.1 ppt
Yttrium (Y)	NMT 0.1 ppt	<0.1 ppt
Zinc (Zn)	NMT 1 ppt	0.28 ppt

The Certificate of Analysis (COA) is valid only for the lot specified and within the product's shelf life. Retesting is recommended after the expiry date or if storage conditions are compromised. We guarantee a proper quality within our General Conditions of Sales. The conditions are subject to change without prior notice.
For queries on this COA, please contact our technical team at technical@pure-synth.com

Test	Specification	Result
Zirconium (Zr)	NMT 0.1 ppt	<0.1 ppt
Chloride (Cl)	NMT 50 ppt	<50.0 ppt
Sulphate (SO ₄)	NMT 50 ppt	<50.0 ppt
Phosphate (PO ₄)	NMT 50 ppt	<50.0 ppt

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

*Concentrated Nitric Acid can decompose to nitrogen oxides (NO_x) through action of heat or light resulting in yellowish colouration. However, this does not affect the performance of the acid with respect to trace metals or oxidising power.

Storage Condition:

Store at room temperature and keep the container tightly closed.

Always avoid exposure to Sunlight & UV Light Source.

PureSynth Research Chemicals GmbH

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

The Certificate of Analysis (COA) is valid only for the lot specified and within the product's shelf life. Retesting is recommended after the expiry date or if storage conditions are compromised. We guarantee a proper quality within our General Conditions of Sales. The conditions are subject to change without prior notice.
For queries on this COA, please contact our technical team at technical@pure-synth.com