

## Hydrofluoric acid 48% ARISTAR® for trace analysis

Assay	Min 48.0 %	Colouration	Max 10 HU
Residue on ignition (as sulphates)	Max 2 ppm	Non-volatile matter	Max 5 ppm
Hexafluorosilicates (SiF <sub>6</sub> )	Max 50 ppm	Nitrate (NO <sub>3</sub> <sup>-</sup> )	Max 5 ppm
Phosphate (PO <sub>4</sub> )	Max 0.1 ppm	Sulphite (SO <sub>3</sub> )	Max 0.5 ppm
Sulphates (SO <sub>4</sub> )	Max 0.5 ppm	Chloride (Cl)	Max 0.2 ppm
Ag (Silver)	Max 0.01 ppm	Al (Aluminium)	Max 0.02 ppm
Au (Gold)	Max 0.02 ppm	B (Boron)	Max 0.01 ppm
Ba (Barium)	Max 0.01 ppm	Be (Beryllium)	Max 0.01 ppm
Bi (Bismuth)	Max 0.05 ppm	Ca (Calcium)	Max 0.1 ppm
Cd (Cadmium)	Max 0.01 ppm	Co (Cobalt)	Max 0.01 ppm
Cr (Chromium)	Max 0.01 ppm	Cu (Copper)	Max 0.01 ppm
Fe (Iron)	Max 0.1 ppm	Ga (Gallium)	Max 0.01 ppm
Ge (Germanium)	Max 0.05 ppm	In (Indium)	Max 0.01 ppm
K (Potassium)	Max 0.05 ppm	Li (Lithium)	Max 0.01 ppm
Mg (Magnesium)	Max 0.05 ppm	Mn (Manganese)	Max 0.02 ppm
Mo (Molybdenum)	Max 0.02 ppm	Na (Sodium)	Max 0.05 ppm
Ni (Nickel)	Max 0.01 ppm	Pb (Lead)	Max 0.01 ppm
Pt (Platinum)	Max 0.05 ppm	As + Sb (Arsenic + Antimoine) (as As)	Max 0.01 ppm
Sn (Tin)	Max 0.05 ppm	Sr (Strontium)	Max 0.02 ppm
Ti (Titanium)	Max 0.05 ppm	Tl (Thallium)	Max 0.05 ppm
V (Vanadium)	Max 0.01 ppm	Zn (Zinc)	Max 0.05 ppm
Zr (Zirconium)	Max 0.05 ppm		

Cat. No.	Pk	Pack type
450094C	500 ml	Plastic bottle

## Hydrofluoric acid 48% AnalaR NORMAPUR® analytical reagent

Assay	Min. 48.0 %	Colouration	Max. 10 APHA
SiF <sub>6</sub> (Hexafluorosilicate)	Max. 100 ppm	PO <sub>4</sub> (Phosphate)	Max. 0.5 ppm
SO <sub>4</sub> + SO <sub>3</sub> (as SO <sub>4</sub> )	Max. 5 ppm	Ag (Silver)	Max. 0.02 ppm
Al (Aluminium)	Max. 0.1 ppm	As (Arsenic)	Max. 0.05 ppm
Ba (Barium)	Max. 0.1 ppm	Bi (Bismuth)	Max. 0.1 ppm
Ca (Calcium)	Max. 0.5 ppm	Cd (Cadmium)	Max. 0.01 ppm
Cl (Chloride)	Max. 5 ppm	Co (Cobalt)	Max. 0.02 ppm
Cr (Chromium)	Max. 0.02 ppm	Cu (Copper)	Max. 0.02 ppm
Fe (Iron)	Max. 0.3 ppm	K (Potassium)	Max. 0.1 ppm
Li (Lithium)	Max. 0.02 ppm	Mg (Magnesium)	Max. 0.2 ppm
Mn (Manganese)	Max. 0.05 ppm	Mo (Molybdenum)	Max. 0.05 ppm
Na (Sodium)	Max. 0.2 ppm	Ni (Nickel)	Max. 0.02 ppm
Pb (Lead)	Max. 0.05 ppm	Sr (Strontium)	Max. 0.02 ppm
Ti (Titanium)	Max. 0.1 ppm	V (Vanadium)	Max. 0.05 ppm
Zn (Zinc)	Max. 0.1 ppm		

Cat. No.	Pk	Pack type
20319.291	1 l	Plastic bottle

## Hydrofluoric acid 47% NORMATOM® for trace metal analysis

Assay	4.7 to 51 %	Colouration	Max. 10 APHA
Cl (Chloride)	Max. 4 ppm	SiF <sub>6</sub> (Hexafluorosilicate)	Max. 20 ppm
Total P (Phosphorus)	Max. 0.05 ppm	Total S (Sulphur)	Max. 0.1 ppm
Ag (Silver)	Max. 0.5 ppb	Al (Aluminium)	Max. 1 ppb
As (Arsenic)	Max. 0.5 ppb	Au (Gold)	Max. 0.2 ppb
B (Boron)	Max. 1 ppb	Ba (Barium)	Max. 0.1 ppb
Be (Beryllium)	Max. 0.1 ppb	Bi (Bismuth)	Max. 0.1 ppb
Ca (Calcium)	Max. 1 ppb	Cd (Cadmium)	Max. 0.1 ppb
Ce (Cerium)	Max. 0.1 ppb	Co (Cobalt)	Max. 0.1 ppb
Cr (Chromium)	Max. 1 ppb	Cs (Cesium)	Max. 0.1 ppb
Cu (Copper)	Max. 0.5 ppb	Dy (Dysprosium)	Max. 0.1 ppb
Er (Erbium)	Max. 0.1 ppb	Eu (Europium)	Max. 0.1 ppb
Fe (Iron)	Max. 1 ppb	Ga (Gallium)	Max. 0.1 ppb
Gd (Gadolinium)	Max. 0.1 ppb	Ge (Germanium)	Max. 0.1 ppb
Hf (Hafnium)	Max. 0.1 ppb	Hg (Mercury)	Max. 1 ppb
Ho (Holmium)	Max. 0.1 ppb	In (Indium)	Max. 0.1 ppb
K (Potassium)	Max. 1 ppb	La (Lanthanum)	Max. 0.1 ppb
Li (Lithium)	Max. 0.1 ppb	Lu (Lutetium)	Max. 0.1 ppb
Mg (Magnesium)	Max. 1 ppb	Mn (Manganese)	Max. 0.1 ppb
Mo (Molybdenum)	Max. 0.1 ppb	Na (Sodium)	Max. 1 ppb
Nb (Niobium)	Max. 0.1 ppb	Nd (Neodymium)	Max. 0.1 ppb
Ni (Nickel)	Max. 0.5 ppb	Pb (Lead)	Max. 0.1 ppb
Pd (Palladium)	Max. 0.2 ppb	Pr (Praseodymium)	Max. 0.1 ppb
Pt (Platinum)	Max. 0.2 ppb	Rb (Rubidium)	Max. 0.1 ppb
Re (Rhenium)	Max. 0.1 ppb	Rh (Rhodium)	Max. 0.1 ppb
Ru (Ruthenium)	Max. 0.1 ppb	Sb (Antimony)	Min. 0.2 ppb
Sc (Scandium)	Max. 0.1 ppb	Se (Selenium)	Max. 1 ppb
Sm (Samarium)	Max. 0.1 ppb	Sn (Tin)	Max. 0.5 ppb
Sr (Strontium)	Max. 0.1 ppb	Tb (Terbium)	Max. 0.1 ppb
Te (Tellurium)	Max. 0.1 ppb	Tb (Thorium)	Max. 0.1 ppb
Ti (Titanium)	Max. 1 ppb	Tl (Thallium)	Max. 0.1 ppb
Tm (Thulium)	Max. 0.1 ppb	U (Uranium)	Max. 0.1 ppb
V (Vanadium)	Max. 0.1 ppb	W (Tungsten)	Max. 0.5 ppb

Cat. No.	Pk	Pack type
83873.260	500 ml	Plastic bottle

## Hydrofluoric acid (30 - < 45%)

### Danger

H300+H310+H330 H314  
P280 P284 P301+P330+P331 P302+P350 P304+P340  
P309+P310



CAS 7664-39-3

Index 009-003-00-1

EINECS: 231-634-8

UN: 1790

ADR 8,II

HF

Storage Temperature: Ambient temperature

## Hydrofluoric acid 40% ARISTAR® for trace analysis

Assay	Min 40.0 %	Colouration	Max 10 HU
Non-volatile matter	Max 2 ppm	Hexafluorosilicates (SiF <sub>6</sub> )	Max 20 ppm
Phosphate (PO <sub>4</sub> )	Max 0.1 ppm	Sulphite (SO <sub>3</sub> )	Max 2 ppm
Sulphates (SO <sub>4</sub> )	Max 0.5 ppm	Chloride (Cl)	Max 0.5 ppm
Ag (Silver)	Max 0.001 ppm	Al (Aluminium)	Max 0.005 ppm
As (Arsenic)	Max 0.002 ppm	Au (Gold)	Max 0.002 ppm
Ba (Barium)	Max 0.01 ppm	Be (Beryllium)	Max 0.001 ppm
Bi (Bismuth)	Max 0.001 ppm	Ca (Calcium)	Max 0.01 ppm
Cd (Cadmium)	Max 0.002 ppm	Co (Cobalt)	Max 0.002 ppm
Cr (Chromium)	Max 0.001 ppm	Cu (Copper)	Max 0.001 ppm
Fe (Iron)	Max 0.01 ppm	Ga (Gallium)	Max 0.005 ppm
Ge (Germanium)	Max 0.002 ppm	Hg (Mercury)	Max 0.005 ppm
In (Indium)	Max 0.002 ppm	K (Potassium)	Max 0.01 ppm
Li (Lithium)	Max 0.001 ppm	Mg (Magnesium)	Max 0.005 ppm
Mn (Manganese)	Max 0.001 ppm	Mo (Molybdenum)	Max 0.001 ppm
Na (Sodium)	Max 0.01 ppm	Ni (Nickel)	Max 0.001 ppm
Pb (Lead)	Max 0.002 ppm	Sn (Tin)	Max 0.001 ppm
Sr (Strontium)	Max 0.001 ppm	Ti (Titanium)	Max 0.01 ppm
Tl (Thallium)	Max 0.001 ppm	V (Vanadium)	Max 0.001 ppm
Zn (Zinc)	Max 0.005 ppm	Zr (Zirconium)	Max 0.001 ppm

Cat. No.	Pk	Pack type
450034N	500 ml	Plastic bottle

## Hydrofluoric acid 40% AnalaR NORMAPUR® analytical reagent

Assay	40.0 to 42.0 %	Heavy metals (as Pb)	Max. 0.5 ppm
Ignition residue (SO <sub>4</sub> )	Max. 5 ppm	SiF <sub>6</sub> (Hexafluorosilicate)	Max. 50 ppm
Cl (Chloride)	Max. 5 ppm	PO <sub>4</sub> (Phosphate)	Max. 1 ppm
SO <sub>4</sub> + SO <sub>3</sub> (as SO <sub>4</sub> )	Max. 5 ppm	Ag (Silver)	Max. 0.02 ppm
Al (Aluminium)	Max. 0.05 ppm	As (Arsenic)	Max. 0.05 ppm
Ba (Barium)	Max. 0.1 ppm	Be (Beryllium)	Max. 0.02 ppm
Bi (Bismuth)	Max. 0.1 ppm	Ca (Calcium)	Max. 0.5 ppm
Cd (Cadmium)	Max. 0.01 ppm	Co (Cobalt)	Max. 0.02 ppm
Cr (Chromium)	Max. 0.02 ppm	Cu (Copper)	Max. 0.02 ppm
Fe (Iron)	Max. 0.2 ppm	Ge (Germanium)	Max. 0.05 ppm
Li (Lithium)	Max. 0.02 ppm	Mg (Magnesium)	Max. 0.2 ppm
Mn (Manganese)	Max. 0.05 ppm	Mo (Molybdenum)	Max. 0.05 ppm
K (Potassium)	Max. 0.1 ppm	Na (Sodium)	Max. 0.2 ppm
Ni (Nickel)	Max. 0.02 ppm	Pb (Lead)	Max. 0.05 ppm
Sr (Strontium)	Max. 0.02 ppm	Ti (Titanium)	Max. 0.1 ppm
Tl (Thallium)	Max. 0.05 ppm	V (Vanadium)	Max. 0.05 ppm
Zn (Zinc)	Max. 0.05 ppm	Conforms to BDH 10126	Passes test

Cat. No.	Pk	Pack type
20307.290	1 l	Plastic bottle

## Hydrofluoric acid 40% GPR RECTAPUR®

Assay	40 to 42 %
Heavy metals (as Pb)	Max. 10 ppm
Ignition residue (SO <sub>4</sub> )	Max. 100 ppm
Cl (Chloride)	Max. 50 ppm
SO <sub>4</sub> (Sulphate)	Max. 100 ppm
Fe (Iron)	Max. 10 ppm

Cat. No.	Pk	Pack type
20306.296	1 l	Plastic bottle