

ACIPUR

High Purity Acids Developed for Trace Metal Analysis

- Hydrochloric Acid 37%
- Hydrofluoric Acid 48%
- Nitric Acid 69.50%
- Sulphuric Acid 96%
- Perchloric Acid 70%



ACIPUR

REAGENTS FOR TRACE METAL ANALYSIS

Instrumental analysis, using ICP or AA, generally involves a preliminary treatment of the sample. This operation, known as acid mineralization, consists in a digestion process with hot concentrated acid in order to extract the elements of interest. Loba Chemie offers specific complete series of products (acids -ACIPUR & Water -ULTRAPUR) for sample and blank preparation. The purity of these products guarantees maximum reliability of the result.

Our reagents are characterized by:

- Production using the most advanced distillation techniques.
- Our reagents are produced using SUB-BOILING or DOUBLE SUB-BOILING distillation, in special equipment made of quartz or Teflon.
- Packaged in a controlled environment.
- In order to minimize the possibility for contamination of the resultant distillate, the packaging is performed in a CLEAN ROOM.
- Available in a wide variety of molecules and sizes.
- Selection of the best preconditioned packaging materials.
- Glass or polyethylene bottles are the packages selected to preserve the high product quality achieved.
- Quality assurance and certification using the most advanced analytical techniques.
- The impurity levels are rigorously controlled using ICP and AAS techniques for more than 60 elements including metals, non-metals and ions.



0224A

NITRIC ACID 69.5% ACIPUR

HNO_3 , M.W. : 63.01 CAS No. : 7697-37-2

Description	A clear liquid
Assay	69.1 – 69.9%
Density at 20°C	1.408 -1.416 g/ml
Heavy metals (Pb)	Max 0.2 ppm
Sulphate	Max 2.0 ppm
Arsenic(As)	Max 0.005 ppm
Bismuth(Bi)	Max 0.1 ppm
Cobalt(Co)	Max 0.01 ppm
Iron(Fe)	Max 0.2 ppm
Magnesium (Mg)	Max 0.1 ppm
Sodium(Na)	Max 0.5 ppm
Strontium(Sr)	Max 0.02 ppm
Vanadium(V)	Max 0.05 ppm
Chloride	Max 0.1 ppm
Sulphated Ash	Max 4 ppm
Silver(Ag)	Max 0.02 ppm
Barium(Ba)	Max 0.1 ppm

Calcium(Ca)	Max 5 ppm
Chromium(Cr)	Max 0.1 ppm
Potassium(K)	Max 0.1 ppm
Manganese (Mn)	Max 0.01 ppm
Nickel(Ni)	Max 0.05 ppm
Titanium(Ti)	Max 0.1 ppm
Zinc(Zn)	Max 0.01 ppm
Colour (APHA)	Max 10
Phosphate	Max 0.5 ppm
Silicate	Max 1 ppm
Aluminium (Al)	Max 0.05 ppm
Beryllium(Be)	Max 0.02 ppm
Cadmium(Cd)	Max 0.005 ppm
Copper(Cu)	Max 0.01 ppm
Lithium (Li)	Max 0.02 ppm
Molybdenum(Mo)	Max 0.05 ppm
Lead (Pb)	Max 0.02 ppm

0173A

HYDROCHLORIC ACID 37% ACIPUR

HCl, M.W. : 36.46 CAS No. : 7647-01-0

Description	Clear liquid
Assay	Min 36.5%
Density at 20°C	1.183 – 1.189 g/ml
Free chloride	Max 0.5 ppm
Residue on ignition	Max 5 ppm
Colour (APHA)	Max 10
Aluminium (Al)	Max 0.2ppm
Beryllium (Be)	Max 0.02 ppm
Cadmium (Cd)	Max 0.005 ppm
Copper (Cu)	Max 0.01 ppm
Potassium (K)	Max 0.2 ppm
Manganese (Mn)	Max 0.2 ppm
Titanium (Ti)	Max 0.05 ppm
Zinc (Zn)	Max 0.05 ppm
Ammonium	Max 1 ppm
Phosphate	Max 0.5 ppm
Sulphate	Max 1 ppm
Arsenic (As)	Max 0.01 ppm
Bismuth (Bi)	Max 0.05 ppm

Cobalt (Co)	Max 0.01 ppm
Iron (Fe)	Max 0.2 ppm
Lithium (Li)	Max 0.02 ppm
Molybdenum (Mo)	Max 0.05 ppm
Lead (Pb)	Max 0.05 ppm
Thallium (Tl)	Max 0.05 ppm
Zirconium (Zr)	Max 0.05 ppm
Bromide	Max 50 ppm
Heavy metals (Pb)	Max 0.1 ppm
Sulphite	Max 0.5 ppm
Barium (Ba)	Max 0.1 ppm
Calcium (Ca)	Max 1.0 ppm
Chromium (Cr)	Max 0.2 ppm
Mercury (Hg)	Max 0.1 ppm
Magnesium (Mg)	Max 0.3 ppm
Sodium (Na)	Max 0.5 ppm
Strontium (Sr)	Max 0.02 ppm
Vanadium (V)	Max 0.02 ppm
Residue on evaporation	Max 100 ppm

0175A

HYDROFLUORIC ACID 48% ACIPUR

HF, M.W. : 20.01 CAS No : 7664-39-3

Description	Clear liquid
Assay	Min 48.0%
Density at 20°C	1.152 - 1.158 g/mL
Residue on ignition	Max 5 ppm
Substance Reducing KMnO ₄	Max 4 ppm
Silver (Ag)	Max 0.02ppm
Barium (Ba)	Max 0.1 ppm
Calcium (Ca)	Max 0.5 ppm
Chromium (Cr)	Max 0.05 ppm
Potassium (K)	Max 0.1 ppm
Manganese (Mn)	Max 0.05 ppm
Nickel (Ni)	Max 0.05 ppm
Titanium (Ti)	Max 0.1 ppm
Zinc (Zn)	Max 0.05 ppm
Hydrofluosilicic acid	Max 20 ppm
Heavy metals (Pb)	Max 0.5 ppm
Sulphate (SO ₄)	Max 2 ppm
Aluminium (Al)	Max 0.05 ppm

Beryllium (Be)	Max 0.02 ppm
Cadmium (Cd)	Max 0.01 ppm
Copper (Cu)	Max 0.02 ppm
Lithium (Li)	Max 0.02 ppm
Molybdenum (Mo)	Max 0.05 ppm
Lead (Pb)	Max 0.2 ppm
Thallium (Tl)	Max 0.05 ppm
Zirconium (Zr)	Max 0.1 ppm
Chloride	Max 1ppm
Phosphate (PO ₄)	Max 0.5 ppm
Sulphite	Max 2 ppm
Arsenic (As)	Max 0.05 ppm
Bismuth (Bi)	Max 0.1 ppm
Cobalt (Co)	Max 0.02 ppm
Iron (Fe)	Max 0.2 ppm
Magnesium (Mg)	Max 0.2 ppm
Sodium (Na)	Max 0.5 ppm
Strontium (Sr)	Max 0.02 ppm
Vanadium (V)	Max 0.05 ppm

0290C

SULPHURIC ACID 96% ACIPUR

H₂SO₄, M.W. : 100.46 CAS No. 7664-93-9

Description	A clear oily liquid, not more than 10 hazen unit color
Assay	95.0 – 97.0%
Heavy metals (As Pb)	Max. 0.02 ppm
KMnO ₄ Reducing matter (as O)	Max. 2 ppm
Residue on ignition	Max. 5 ppm
Boiling point	~290°C (lit)
Density at 25°C	1.840 g/ml
Ammonium (NH ₄)	Max. 2 ppm
Chloride (Cl)	Max. 0.1 ppm
Nitrate (NO ₃)	Max. 0.2 ppm
Phosphate (PO ₄)	Max. 0.5 ppm
Silver (Ag)	Max. 0.02 ppm
Aluminium (Al)	Max. 0.05 ppm
Arsenic (As)	Max. 0.01 ppm
Barium (Ba)	Max. 0.05 ppm
Beryllium (Be)	Max. 0.01 ppm
Bismuth (Bi)	Max. 0.05 ppm
Calcium (Ca)	Max. 0.2 ppm

Cadmium (Cd)	Max. 0.02 ppm
Cobalt (Co)	Max. 0.01 ppm
Chromium (Cr)	Max. 0.05 ppm
Copper (Cu)	Max. 0.01 ppm
Iron (Fe)	Max. 0.1 ppm
Germanium (Ge)	Max. 0.05 ppm
Mercury (Hg)	Max. 5 ppb
Potassium (K)	Max. 0.1 ppm
Lithium (Li)	Max. 0.01 ppm
Magnesium (Mg)	Max. 0.05 ppm
Manganese (Mn)	Max. 0.01 ppm
Molybdenum (Mo)	Max. 0.02 ppm
Sodium (Na)	Max. 0.5 ppm
Nickel (Ni)	Max. 0.02 ppm
Strontium (Sr)	Max. 0.02 ppm
Titanium (Ti)	Max. 0.1 ppm
Thallium (Tl)	Max. 0.05 ppm
Vanadium (V)	Max. 0.01 ppm
Zinc (Zn)	Max. 0.05 ppm
Zirconium (Zr)	Max. 0.1 ppm

0241E

PERCHLORIC ACID 70% ACIPUR

HClO₄, M.W. : 100.46 CAS NO 7601-90-3

Description	Clear colorless liquid
Identity	Passes
Assay (HClO ₄)	Min 70%
Substances insoluble in ethanol	Max 0.0010%
Residue on Ignition (as SO ₄)	Max 0.003%
Chlorate (ClO ₃)	Max 0.0010%
Chloride (Cl)	Max 0.0003%
Free chlorine (Cl)	Max 0.00005%
Phosphate & Silicate (as SiO ₂)	Max 0.0005%
Sulphate (SO ₄)	Max 0.0010%
Total Nitrogen (N)	Max 0.0010%
Aluminium (Al)	Max 0.00005%
Arsenic (As)	Max 0.000005%
Barium (Ba)	Max 0.000002%
Beryllium (Be)	Max 0.000002%
Bismuth (Bi)	Max 0.000010%
Cadmium (Cd)	Max 0.000005%

Calcium (Ca)	Max 0.00005%
Cobalt (Co)	Max 0.000005%
Copper (Cu)	Max 0.000010%
Germanium (Ge)	Max 0.000005%
Iron (Fe)	Max 0.0001%
Lead (Pb)	Max 0.000005%
Lithium (Li)	Max 0.000002%
Magnesium (Mg)	Max 0.00005%
Manganese (Mn)	Max 0.000002%
Molybdenum (Mo)	Max 0.000005%
Nickel (Ni)	Max 0.000010%
Potassium (K)	Max 0.000010%
Silver (Ag)	Max 0.000010%
Sodium (Na)	Max 0.00005%
Strontium (Sr)	Max 0.000002%
Thallium (Tl)	Max 0.000005%
Titanium (Ti)	Max 0.000010%
Vanadium (V)	Max 0.000005%
Zinc (Zn)	Max 0.000010%
Zirconium (Zr)	Max 0.000010%