

ACIPUR

High Purity Acids Developed for
Trace Metal Analysis

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



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LOBA
Chemie

LABORATORY REAGENTS
& FINE CHEMICALS

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

HNO₃, 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

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

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|---|------------------------|
| 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% |