



**ChemPure\* Brand  
Chemicals**

Product Code: CP-A1778S  
Lot #: 2018062050

## Certificate Of Analysis

Chemical Name: **Nitric Acid 70%**  
ACS/Trace Metal

Chemical Formula: HNO<sub>3</sub>

...Pure Quality

F.W.: 63.0100  
CAS: 7697-37-2  
Density: 1.4200 kg/L

| Analytical Results           |                         |             |
|------------------------------|-------------------------|-------------|
| Item                         | Specifications          | Analysis    |
| Chloride (Cl)                | 0.05 ppm max.           | <0.04 ppm   |
| Chromium (Cr)                | 10 ppb max.             | 0.05 ppb    |
| Cobalt (Co)                  | 1 ppb max.              | <0.05 ppb   |
| Color (APHA)                 | 10 max.                 | 0           |
| Copper (Cu)                  | 1 ppb max.              | <0.05 ppb   |
| Gallium (Ga)                 | 20 ppb max.             | <0.02 ppb   |
| Germanium (Ge)               | 4 ppb max.              | <0.07 ppb   |
| Gold (Au)                    | 4 ppb max.              | <0.2 ppb    |
| Heavy Metals (as Pb)         | 100 ppb max.            | <2 ppb      |
| Aluminum (Al)                | 30 ppb max.             | <0.3 ppb    |
| Iron (Fe)                    | 20 ppb max.             | 0.4 ppb     |
| Lead (Pb)                    | 0.5 ppb max.            | <0.05 ppb   |
| Lithium (Li)                 | 1 ppb max.              | <0.05 ppb   |
| Magnesium (Mg)               | 7 ppb max.              | <0.05 ppb   |
| Antimony (Sb)                | 5 ppb max.              | <0.05 ppb   |
| Manganese (Mn)               | 1 ppb max.              | <0.05 ppb   |
| Appearance                   | Clear, colorless liquid | Passes Test |
| Mercury (Hg)                 | 1 ppb max.              | <1 ppb      |
| Molybdenum (Mo)              | 5 ppb max.              | <0.05 ppb   |
| Nickel (Ni)                  | 2 ppb max.              | <0.1 ppb    |
| Niobium (Nb)                 | 1 ppb max.              | <0.02 ppb   |
| Arsenic (As)                 | 5 ppb max.              | <0.1 ppb    |
| Phosphate (PO <sub>4</sub> ) | 0.1 ppm max.            | <0.03 ppm   |
| Potassium (K)                | 5 ppb max.              | <0.6 ppb    |
| Residue After Ignition       | 5 ppm max.              | <1 ppm      |
| Silicon (Si)                 | 20 ppb max.             | <3 ppb      |
| Silver (Ag)                  | 1 ppb max.              | <0.05 ppb   |
| Sodium (Na)                  | 200 ppb max.            | <1 ppb      |

Remarks:

It is certified that the above copy is a true copy of the actual lot analysis.

Eddy Santiago  
Quality Assurance Manager

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| Analytical Results           |                |           |
|------------------------------|----------------|-----------|
| Item                         | Specifications | Analysis  |
| Specific Gravity (60°F/60°F) | 1.416 - 1.420  | 1.416     |
| Strontium (Sr)               | 1 ppb max.     | <0.02 ppb |
| Sulfate (SO <sub>4</sub> )   | 0.4 ppm max.   | <0.03 ppm |
| Tantalum (Ta)                | 2 ppb max.     | <0.02 ppb |
| Thallium (Tl)                | 5 ppb max.     | <0.02 ppb |
| Tin (Sn)                     | 5 ppb max.     | <0.05 ppb |
| Titanium (Ti)                | 300 ppb max.   | <0.3 ppb  |
| Vanadium (V)                 | 1 ppb max.     | <0.02 ppb |
| Zinc (Zn)                    | 5 ppb max.     | <2 ppb    |
| Zirconium (Zr)               | 1 ppb max.     | <0.02 ppb |
| Assay (HNO <sub>3</sub> )    | 69.0 - 70.0%   | 69.7%     |
| Barium (Ba)                  | 1 ppb max.     | <0.05 ppb |
| Beryllium (Be)               | 1 ppb max.     | <0.06 ppb |
| Bismuth (Bi)                 | 1 ppb max.     | <0.02 ppb |
| Boron (B)                    | 4 ppb max.     | <0.3 ppb  |
| Cadmium (Cd)                 | 1 ppb max.     | <0.05 ppb |
| Calcium (Ca)                 | 100 ppb max.   | <2 ppb    |

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