



**ChemPure\* Brand  
Chemicals**

Cust-Product Code: CP-M1778P  
Lot #: 2020012360

...Pure Quality

## CERTIFICATE OF ANALYSIS

PRODUCT NAME: **Nitric Acid 70%**  
ACS/Trace Metal

F.W.: 63.0100

CHEMICAL FORMULA: HNO<sub>3</sub>

CAS No: 7697-37-2

Density: 1.4200

| ANALYTICAL RESULTS           |                         |             |
|------------------------------|-------------------------|-------------|
| ITEM                         | SPECIFICATIONS          | ANALYSIS    |
| Assay (HNO <sub>3</sub> )    | 69.0 - 70.0%            | 69.7%       |
| Appearance                   | Clear, colorless liquid | Passes Test |
| Color (APHA)                 | 10 max.                 | 0           |
| Residue After Ignition       | 5 ppm max.              | <1 ppm      |
| Specific Gravity (60°F/60°F) | 1.416 - 1.420           | 1.417       |
| Chloride (Cl)                | 0.05 ppm max.           | <0.04 ppm   |
| Phosphate (PO <sub>4</sub> ) | 0.1 ppm max.            | <0.025 ppm  |
| Sulfate (SO <sub>4</sub> )   | 0.4 ppm max.            | <0.025 ppm  |
| Heavy Metals (as Pb)         | 100 ppb max.            | 2 ppb       |
| Aluminum (Al)                | 30 ppb max.             | <0.3 ppb    |
| Antimony (Sb)                | 5 ppb max.              | <0.05 ppb   |
| Arsenic (As)                 | 5 ppb max.              | <0.1 ppb    |
| Barium (Ba)                  | 1 ppb max.              | <0.05 ppb   |
| Beryllium (Be)               | 1 ppb max.              |             |
| Bismuth (Bi)                 | 1 ppb max.              |             |
| Boron (B)                    | 4 ppb max.              | <0.3 ppb    |
| Cadmium (Cd)                 | 1 ppb max.              | <0.05 ppb   |
| Calcium (Ca)                 | 100 ppb max.            | <2 ppb      |
| Chromium (Cr)                | 10 ppb max.             | <0.05 ppb   |
| Cobalt (Co)                  | 1 ppb max.              | <0.05 ppb   |
| Copper (Cu)                  | 1 ppb max.              | 0.2 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    |
| Iron (Fe)                    | 20 ppb max.             | <0.08 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   |

Important: It is certified that the above is a true copy of the actual lot analysis. To the best of our knowledge, the information contained herein is accurate and reliable as of the date of publication. However, nothing herein shall constitute any express or implied warranty of merchantability or fitness for a particular purpose. The minimum shelf life is based on current knowledge and holds only for proper storage conditions in the original containers. We herewith confirm that the delivery is effected according to the technical conditions agreed. Particular properties of the products or the suitability for a particular area of application is not assured. It is the customer's responsibility to inspect and test the products in order to satisfy itself as to the suitability for the customer's particular purpose. This information is not intended to be all inclusive as to the manner and conditions of use, handling, storage, disposal, and other factors that may involve other or additional legal, environmental, safety or performance considerations, and CHEMPURE BRAND CHEMICALS assumes no liability whatsoever for the use of or reliance upon this information. Our technical personnel will be happy to respond to questions. Safe handling and use of the product remains the responsibility of the customer. No suggestions for use are intended as, and nothing herein shall be construed as, recommendations to infringe any existing patents or to violate any Federal, State, Local or foreign laws. This document was produced electronically and is valid without a signature. ChemPure Quality Management.

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| ANALYTICAL RESULTS   |                |           |
|--|----------------|-----------|
| ITEM   | SPECIFICATIONS | ANALYSIS  |
| Manganese (Mn)   | 1 ppb max.     | <0.05 ppb |
| 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 |
| Potassium (K)  | 5 ppb max.     | <0.6 ppb  |
| Silicon (Si)   | 20 ppb max.    | <3 ppb    |
| Silver (Ag)  | 1 ppb max.     | <0.05 ppb |
| Sodium (Na)  | 200 ppb max.   | <1 ppb    |
| Strontium (Sr)   | 1 ppb max.     | <0.02 ppb |
| 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 |
| REMARKS  |                |           |
| This product meets the specifications of the American Chemical Society (ACS) |                |           |

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