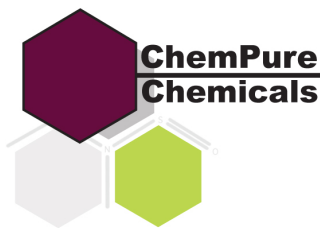


Certificate of Analysis

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

CHEMICAL FORMULA: HNO₃



Cust-Product Code: CP-M1778S
Product Code: 370800-80601
Lot #: 2014072124
F.W.: 63.0100
CAS No: 7697-37-2
Density: 1.4200

ANALYTICAL RESULTS		
ITEM	SPECIFICATIONS	ANALYSIS
Assay (HNO ₃)	69.0 - 70.0%	69.4%
Appearance	Clear, colorless liquid	Passes Test
Color (APHA)	10 max.	4
Residue After Ignition	5 ppm max.	1 ppm
Specific Gravity (60°F/60°F)	1.416 - 1.420	1.418
Chloride (Cl)	0.05 ppm max.	<0.04 ppm
Phosphate (PO ₄)	0.1 ppm max.	<0.025 ppm
Sulfate (SO ₄)	0.4 ppm max.	<0.025 ppm
Heavy Metals (as Pb)	100 ppb max.	<2 ppb
Aluminum (Al)	30 ppb max.	2 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.	<1.0 ppb
Bismuth (Bi)	1 ppb max.	<1.0 ppb
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.	0.3 ppb
Cobalt (Co)	1 ppb max.	<0.05 ppb
Copper (Cu)	1 ppb max.	0.08 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.	1 ppb
Lead (Pb)	0.5 ppb max.	<0.05 ppb
Lithium (Li)	1 ppb max.	<0.05 ppb
Magnesium (Mg)	7 ppb max.	0.4 ppb
Manganese (Mn)	1 ppb max.	<0.05 ppb
Mercury (Hg)	1 ppb max.	<1 ppb

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

CERTIFIED CORRECT BY:

Kevin Hansen
Quality Assurance Manager

Disclaimer: 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. It is the customer's responsibility to inspect and test our products in order to satisfy itself as to the suitability of the products for the customer's particular purpose.

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CHEMICAL PROCESSORS AND PACKAGERS OF ELECTRONIC GRADE HIGH PURITY
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39103 WARREN ROAD * PLYMOUTH, MICHIGAN * 48170 * INFO@CHEMPUREBRAND.COM

Certificate of Analysis

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

CHEMICAL FORMULA: **HNO₃**



Cust-Product Code: CP-M1778S
Product Code: 370800-80601
Lot #: 2014072124
F.W.: 63.0100
CAS No: 7697-37-2
Density: 1.4200

ANALYTICAL RESULTS		
ITEM	SPECIFICATIONS	ANALYSIS
Molybdenum (Mo)	5 ppb max.	<0.05 ppb
Nickel (Ni)	2 ppb max.	0.2 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.	0.06 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)		

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

CERTIFIED CORRECT BY:

Kevin Hansen
Quality Assurance Manager

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