

Certificate of Analysis

Acid Blank, 5% (v/v) Nitric Acid

Lot Number: 4303D15

Product Number: PNACID5

Manufacture Date: MAR 07, 2023

Expiration Date: FEB 2025

This product is intended for use in ICP, AA, or ICP-MS analyses for sample preparation, standard dilution, and as a reference blank. This product may also be suitable for other applications.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Nitric Acid	7697-37-2	Trace Metals

Test	Specification	Result	NIST SRM#
Aluminum (Al)	Actual Value Reported	0.0108 ppm	3101
Antimony (Sb)	Actual Value Reported	< 0.0001 ppm	3102
Arsenic (As)	Actual Value Reported	0.0255 ppm	3103
Barium (Ba)	Actual Value Reported	0.0066 ppm	3104
Beryllium (Be)	Actual Value Reported	< 0.0001 ppm	3105
Bismuth (Bi)	Actual Value Reported	< 0.00002 ppm	3106
Boron (B)	Actual Value Reported	< 0.00005 ppm	3107
Cadmium (Cd)	Actual Value Reported	< 0.00007 ppm	3108
Calcium (Ca)	Actual Value Reported	N	3109
Cerium (Ce)	Actual Value Reported	0.0493 ppm	3110
Cesium (Cs)	Actual Value Reported	0.0029 ppm	3111
Chromium (Cr)	Actual Value Reported	< 0.00006 ppm	3112
Cobalt (Co)	Actual Value Reported	< 0.00002 ppm	3113
Copper (Cu)	Actual Value Reported	< 0.00005 ppm	3114
Dysprosium (Dy)	Actual Value Reported	< 0.0001 ppm	3115
Erbium (Er)	Actual Value Reported	< 0.00007 ppm	3116
Europium (Eu)	Actual Value Reported	< 0.00008 ppm	3117
Gadolinium (Gd)	Actual Value Reported	< 0.0002 ppm	3118
Gallium (Ga)	Actual Value Reported	< 0.0006 ppm	3119
Germanium (Ge)	Actual Value Reported	0.0032 ppm	3120
Gold (Au)	Actual Value Reported	< 0.0005 ppm	3121
Hafnium (Hf)	Actual Value Reported	0.0029 ppm	3122
Holmium (Ho)	Actual Value Reported	< 0.0001 ppm	3123
Indium (In)	Actual Value Reported	< 0.00003 ppm	3124
Iridium (Ir)	Actual Value Reported	0.0015 ppm	
Iron (Fe)	Actual Value Reported	N	3126
Lanthanum (La)	Actual Value Reported	0.0262 ppm	3127
Lead (Pb)	Actual Value Reported	< 0.00003 ppm	3128
Lithium (Li)	Actual Value Reported	< 0.03 ppm	3129
Lutetium (Lu)	Actual Value Reported	< 0.0003 ppm	3130
Magnesium (Mg)	Actual Value Reported	< 0.0007 ppm	3131

Manganese (Mn)	Actual Value Reported	0.0072 ppm	3132
Mercury (Hg)	Actual Value Reported	< 0.03 ppm	3133
Molybdenum (Mo)	Actual Value Reported	0.0306 ppm	3134
Neodymium (Nd)	Actual Value Reported	< 0.0002 ppm	3135
Nickel (Ni)	Actual Value Reported	< 0.0001 ppm	3136
Niobium (Nb)	Actual Value Reported	0.0008 ppm	3137
Osmium (Os)	Actual Value Reported	< 0.003 ppm	
Palladium (Pd)	Actual Value Reported	0.0029 ppm	3138
Phosphorus (P)	Actual Value Reported	I	3139
Platinum (Pt)	Actual Value Reported	< 0.00003 ppm	3140
Potassium (K)	Actual Value Reported	< 0.00002 ppm	3141
Praseodymium (Pr)	Actual Value Reported	< 0.00003 ppm	3142
Rhenium (Re)	Actual Value Reported	< 0.00003 ppm	3143
Rhodium (Rh)	Actual Value Reported	< 0.00003 ppm	3144
Rubidium (Rb)	Actual Value Reported	< 0.00004 ppm	3145
Ruthenium (Ru)	Actual Value Reported	0.0006 ppm	
Samarium (Sm)	Actual Value Reported	< 0.002 ppm	3147
Scandium (Sc)	Actual Value Reported	< 0.00008 ppm	3148
Selenium (Se)	Actual Value Reported	I	3149
Silicon (Si)	Actual Value Reported	I	3150
Silver (Ag)	Actual Value Reported	0.0633 ppm	3151
Sodium (Na)	Actual Value Reported	0.1236 ppm	3152
Strontium (Sr)	Actual Value Reported	0.0014 ppm	3153
Sulfur (S)	Actual Value Reported	0.9393 ppm	3154
Tantalum (Ta)	Actual Value Reported	0.1439 ppm	3155
Tellurium (Te)	Actual Value Reported	I	3156
Terbium (Tb)	Actual Value Reported	< 0.00003 ppm	3157
Thallium (Tl)	Actual Value Reported	0.0740 ppm	3158
Thorium (Th)	Actual Value Reported	0.0017 ppm	3159
Thulium (Tm)	Actual Value Reported	N	3160
Tin (Sn)	Actual Value Reported	< 0.0002 ppm	3161
Titanium (Ti)	Actual Value Reported	< 0.001 ppm	3162
Tungsten (W)	Actual Value Reported	0.0520 ppm	3163
Uranium (U)	Actual Value Reported	< 0.00007 ppm	3164
Vanadium (V)	Actual Value Reported	< 0.00004 ppm	3165
Ytterbium (Yb)	Actual Value Reported	< 0.001 ppm	3166
Yttrium (Y)	Actual Value Reported	0.0062 ppm	3167
Zinc (Zn)	Actual Value Reported	< 0.0003 ppm	3168
Zirconium (Zr)	Actual Value Reported	< 0.002 ppm	3169

This standard is guaranteed to be stable and accurate provided the product is kept tightly capped and stored under normal laboratory conditions. Balances are calibrated using NIST traceable weights whose verification of maintenance and recalibration is documented per in-house Standard Operating Procedures. Class A glassware is also calibrated and routinely rechecked per in-house Standard Operating Procedures. Trace metal analyzed acids and Trace Metals Analyzed Water are used in the manufacture of this product. Triple cleaned containers are used in the manufacture of this product.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
PNACID5-500	500 mL natural poly	24 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)



Paul Brandon (03/07/2023)

Production Manager

This document is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."

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