RICCA CHEMICAL COMPANY®

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Certificate of Analysis

Gold ICP Standard, 1000 ppm Au in 3% HCl

Lot Number: 4403N98 **Product Number:** PAU1KH

Manufacture Date: MAR 26, 2024
Expiration Date: SEP 2025

This is a single element solution that was prepared volumetrically to contain the certified value reported. The uncertainty associated with the certifiec value is the sum of the estimated errors due to the purity of the raw material, the volumetric preparation of the solution, and transpiration of the solution through the container wall.
The final solution concentration is confirmed by AA, ICP, or ICP-MS, and is traceable to NIST Standard Reference Material 3121. All trace level elements were determined by ICP or ICP-MS.

Name	CAS#	Grade
Water	7732-18-5	
Hydrochloric Acid	7647-01-0	
Nitric Acid	7697-37-2	
Gold	7440-57-5	

Test	Specification	Result	NIST SRM#
Appearance	Golden yellow liquid	Passed	
Gold (Au)	995-1005 ppm	1000 ppm	3121

I=Spectral Interference N=Not Tested

Trace Elements by ICP or ICP - MS

All values reported in mg/L (ppm)

Aluminum (Al)	0.5990 ppm	Lanthanum (La)	0.0002 ppm	Silver (Ag)	0.3690 ppm
Antimony (Sb)	0.0072 ppm	Lead (Pb)	0.0389 ppm	Sodium (Na)	I
Arsenic (As)	< 0.0007 ppm	Lithium (Li)	< 0.03 ppm	Strontium (Sr)	< 0.00006 ppn
Barium (Ba)	< 0.0001 ppm	Lutetium (Lu)	< 0.0003 ppm	Sulfur (S)	I
Beryllium (Be)	< 0.0001 ppm	Magnesium (Mg)	I	Tantalum (Ta)	0.0880 ppm
Bismuth (Bi)	0.0142 ppm	Manganese (Mn)	< 0.00002 ppn	Tellurium (Te)	I
Boron (B)	< 0.00005 ppn	Mercury (Hg)	< 0.03 ppm	Terbium (Tb)	N
Cadmium (Cd)	0.0269 ppm	Molybdenum (Mo)	0.0494 ppm	Thallium (Tl)	< 0.00002 ppn
Calcium (Ca)	N	Neodymium (Nd)	< 0.0002 ppm	Thorium (Th)	0.0063 ppm
Cerium (Ce)	0.0004 ppm	Nickel (Ni)	< 0.0001 ppm	Thulium (Tm)	N
Cesium (Cs)	0.0551 ppm	Niobium (Nb)	0.0072 ppm	Tin (Sn)	0.1209 ppm
Chromium (Cr)	0.1509 ppm	Osmium (Os)	< 0.003 ppm	Titanium (Ti)	I
Cobalt (Co)	< 0.00002 ppn	Palladium (Pd)	N	Tungsten (W)	0.0401 ppm
Copper (Cu)	0.5507 ppm	Phosphorus (P)	0.1154 ppm	Uranium (U)	I
Dysprosium (Dy)	< 0.0001 ppm	Platinum (Pt)	N	Vanadium (V)	< 0.00004 ppn
Erbium (Er)	0.0001 ppm	Potassium (K)	< 0.00002 ppn	Ytterbium (Yb)	< 0.001 ppm
Europium (Eu)	< 0.00008 ppn	Praseodymium (Pr)	< 0.00003 ppn	Yttrium (Y)	< 0.00009 ppn
Gadolinium (Gd)	< 0.0002 ppm	Rhenium (Re)	N	Zinc (Zn)	< 0.0003 ppm
Gallium (Ga)	< 0.0006 ppm	Rhodium (Rh)	0.1609 ppm	Zirconium (Zr)	0.1801 ppm
Germanium (Ge)	< 0.0003 ppm	Rubidium (Rb)	0.0004 ppm		
Hafnium (Hf)	0.0152 ppm	Ruthenium (Ru)	0.1666 ppm		
Holmium (Ho)	< 0.0001 ppm	Samarium (Sm)	< 0.002 ppm		
Indium (In)	0.0010 ppm	Scandium (Sc)	0.0012 ppm		
Iridium (Ir)	0.0314 ppm	Selenium (Se)	0.2369 ppm		
Iron (Fe)	N	Silicon (Si)	I		

Specification	Reference
Gold ICP, 1000 ppm in HCl	EPA (200.7)

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)
PAU1KH-100	100 mL amber glass	18 months

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

Paul Brandon (03/26/2024)
Production Manager
This document is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."