

Product Specification

ICP-MS Instrument Calibration Standard #2

Lot Number: SAMPLE

Product Number: RICPMS22

Manufacture Date: N/A

Expiration Date: N/A

This is a multielement solution that was prepared volumetrically to contain the elements and concentrations stated below. The uncertainty associated with the certified values is $\pm 0.5\%$ relative. The concentrations are confirmed by ICP or ICP-MS.

Matrix: 5% Nitric Acid

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Nitric Acid	7697-37-2	Trace Metals
Hydrofluoric Acid	7664-39-3	Trace Metals
Ammonium Hydroxide	1336-21-6	Trace Metals

Test	Specification	Result
Appearance	Slightly colored liquid	N/A

Analyte	Analysis (ppm)	Solute	CAS#	Grade	NIST SRM#
Aluminum (Al)	99.5-100.5 ppm	Aluminum Nitrate Nonahydrate	7784-27-2	High Purity	3101
Chromium (Cr)	99.5-100.5 ppm	Chromium Nitrate Nonahydrate	7789-02-8	High Purity	3112
Manganese (Mn)	99.5-100.5 ppm	Manganous Nitrate Tetrahydrate	15710-66-4	High Purity	3132
Strontium (Sr)	99.5-100.5 ppm	Strontium Nitrate	10042-76-9	High Purity	3153
Sodium (Na)	99.5-100.5 ppm	Sodium Carbonate	497-19-8	High Purity	3152
Molybdenum (Mo)	99.5-100.5 ppm	Ammonium Molybdate	13106-76-8	High Purity	3134
Barium (Ba)	99.5-100.5 ppm	Barium Nitrate	10022-31-8	High Purity	3104
Potassium (K)	99.5-100.5 ppm	Potassium Carbonate	584-08-7	High Purity	3141
Antimony (Sb)	99.5-100.5 ppm	Antimony Trioxide	1309-64-4	High Purity	3102
Selenium (Se)	99.5-100.5 ppm	Selenium	7782-49-2	High Purity	3149
Zinc (Zn)	99.5-100.5 ppm	Zinc	7440-66-6	High Purity	3168
Vanadium (V)	99.5-100.5 ppm	Vanadium	7440-62-2	High Purity	3165
Copper (Cu)	99.5-100.5 ppm	Copper	7440-50-8	High Purity	3114
Cobalt (Co)	99.5-100.5 ppm	Cobalt	7440-48-4	High Purity	3113
Cadmium (Cd)	99.5-100.5 ppm	Cadmium	7440-43-9	High Purity	3108
Beryllium (Be)	99.5-100.5 ppm	Beryllium	7440-41-7	High Purity	3105
Arsenic (As)	99.5-100.5 ppm	Arsenic	7440-38-2	High Purity	3103
Titanium (Ti)	99.5-100.5 ppm	Titanium	7440-32-6	High Purity	3162
Tin (Sn)	99.5-100.5 ppm	Tin	7440-31-5	High Purity	3161
Thallium (Tl)	99.5-100.5 ppm	Thallium	7440-28-0	High Purity	3158
Silver (Ag)	99.5-100.5 ppm Ag	Silver	7440-22-4	High Purity	3151
Nickel (Ni)	99.5-100.5 ppm	Nickel	7440-02-0	High Purity	3136

Magnesium (Mg)	99.5-100.5 ppm	Magnesium	7439-95-4	High Purity	3131
Lead (Pb)	99.5-100.5 ppm	Lead	7439-92-1	High Purity	3128
Iron (Fe)	99.5-100.5 ppm	Iron	7439-89-6	High Purity	3126

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)
RICPMS22-100B	100 mL amber poly	12 months

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

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

This test report shall not be reproduced, except in full, without the written approval of Ricca Chemical Company.