

# Product Specification

## Primary Metals Standard, for GFAA/ICP/ICP-MS

**Lot Number:** SAMPLE

**Product Number:** RPRIMET

**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:** 2% Nitric Acid

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Nitric Acid	7697-37-2	Trace Metals
Tartaric Acid	87-69-4	ACS
Hydrofluoric Acid	7664-39-3	Trace Metals
Hydrochloric Acid	7647-01-0	Trace Metals

Test	Specification	Result
Appearance	Colorless liquid	N/A

Analyte	Analysis (ppm)	Solute	CAS#	Grade	NIST SRM#
Calcium (Ca)	99.5-100.5 ppm	Calcium Carbonate	471-34-1	High Purity	3109
Sodium (Na)	99.5-100.5 ppm	Sodium Carbonate	497-19-8	High Purity	3152
Silicon (Si)	99.5-100.5 ppm	Silicon	7440-21-3	High Purity	3150
Arsenic (As)	99.5-100.5 ppm	Arsenic	7440-38-2	High Purity	3103
Antimony (Sb)	99.5-100.5 ppm	Antimony	7440-36-0	High Purity	3102
Chromium (Cr)	9.95-10.05 ppm	Chromium Nitrate Nonahydrate	7789-02-8	High Purity	3112
Barium (Ba)	9.95-10.05 ppm	Barium Nitrate	10022-31-8	High Purity	3104
Selenium (Se)	9.95-10.05 ppm	Selenium	7782-49-2	High Purity	3149
Copper (Cu)	9.95-10.05 ppm	Copper	7440-50-8	High Purity	3114
Cadmium (Cd)	9.95-10.05 ppm	Cadmium	7440-43-9	High Purity	3108
Beryllium (Be)	9.95-10.05 ppm	Beryllium	7440-41-7	High Purity	3105
Thallium (Tl)	9.95-10.05 ppm	Thallium	7440-28-0	High Purity	3158
Nickel (Ni)	9.95-10.05 ppm	Nickel	7440-02-0	High Purity	3136
Lead (Pb)	9.95-10.05 ppm	Lead	7439-92-1	High Purity	3128

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)
RPRIMET-100	100 mL natural LDPE	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."

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