

Product Specification

ICP-MS Calibration Standard 1

Lot Number: SAMPLE

Product Number: RICPMS1

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 $\pm 1\%$ 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

Test	Specification	Result
Appearance	Colorless to slightly colored liquid	N/A

Analyte	Analysis (ppm)	Solute	CAS#	Grade	NIST SRM#
Cerium (Ce)	9.9-10.1 ppm	Cerium (III) Nitrate Hexahydrate	10294-41-4	High Purity	3110
Thorium (Th)	9.9-10.1 ppm	Thorium Nitrate	13823-29-5	High Purity	3159
Scandium (Sc)	9.9-10.1 ppm	Scandium Oxide	12060-08-1	High Purity	3148
Yttrium (Y)	9.9-10.1 ppm	Yttrium Oxide	1314-36-9	High Purity	3167
Lanthanum (La)	9.9-10.1 ppm	Lanthanum Oxide	1312-81-8	High Purity	3127
Praseodymium (Pr)	9.9-10.1 ppm	Praseodymium Oxide	12037-29-5	High Purity	3142
Terbium (Tb)	9.9-10.1 ppm	Terbium Oxide	12037-01-3	High Purity	3157
Ytterbium (Yb)	9.9-10.1 ppm	Ytterbium (III) Oxide	1314-37-0	High Purity	3166
Neodymium (Nd)	9.9-10.1 ppm	Neodymium Oxide	1313-97-9	High Purity	3135
Europium (Eu)	9.9-10.1 ppm	Europium Oxide	1308-96-9	High Purity	3117
Dysprosium (Dy)	9.9-10.1 ppm	Dysprosium Oxide	1308-87-8	High Purity	3115
Gadolinium (Gd)	9.9-10.1 ppm	Gadolinium Oxide	12064-62-9	High Purity	3118
Erbium (Er)	9.9-10.1 ppm	Erbium Oxide	12061-16-4	High Purity	3116
Samarium (Sm)	9.9-10.1 ppm	Samarium Oxide	12060-58-1	High Purity	3147
Holmium (Ho)	9.9-10.1 ppm	Holmium Oxide	12055-62-8	High Purity	3123
Thulium (Tm)	9.9-10.1 ppm	Thulium Oxide	12036-44-1	High Purity	3160
Lutetium (Lu)	9.9-10.1 ppm	Lutetium Oxide	12032-20-1	High Purity	3130

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)
RICPMS1-100	100 mL natural LDPE	12 months
RICPMS10-1000	1 L natural 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."

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