

Product Specification

Initial Calibration Verification Standard 7, CLP

Lot Number: SAMPLE

Product Number: RICVSTD7

Manufacture Date: N/A

Expiration Date: N/A

This is a multielement blend solution that was prepared volumetrically to contain the certified values reported. The uncertainty associated with the certified values 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 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

Test	Specification	Result
Appearance	Light colored liquid	N/A

Analyte	Analysis (ppm)	Solute	CAS#	Grade	NIST SRM#
Calcium (Ca)	4975-5025 ppm	Calcium Carbonate	471-34-1	High Purity	3109
Sodium (Na)	4975-5025 ppm	Sodium Carbonate	497-19-8	High Purity	3152
Potassium (K)	4975-5025 ppm	Potassium Carbonate	584-08-7	High Purity	3141
Magnesium (Mg)	4975-5025 ppm	Magnesium	7439-95-4	High Purity	3131
Aluminum (Al)	199-201 ppm	Aluminum Nitrate Nonahydrate	7784-27-2	High Purity	3101
Barium (Ba)	199-201 ppm	Barium Nitrate	10022-31-8	High Purity	3104
Iron (Fe)	99.5-100.5 ppm	Iron	7439-89-6	High Purity	3126
Chromium (Cr)	9.95-10.05 ppm	Chromium Nitrate Nonahydrate	7789-02-8	High Purity	3112
Antimony (Sb)	59.7-60.3 ppm	Antimony Trioxide	1309-64-4	High Purity	3102
Manganese (Mn)	14.9-15.1 ppm	Manganous Nitrate Tetrahydrate	15710-66-4	High Purity	3132
Vanadium (V)	49.7-50.3 ppm	Vanadium	7440-62-2	High Purity	3165
Cobalt (Co)	49.7-50.3 ppm	Cobalt	7440-48-4	High Purity	3113
Nickel (Ni)	39.8-40.2 ppm	Nickel	7440-02-0	High Purity	3136
Copper (Cu)	24.8-25.2 ppm	Copper	7440-50-8	High Purity	3114
Zinc (Zn)	19.9-20.1 ppm	Zinc	7440-66-6	High Purity	3168
Arsenic (As)	9.95-10.05 ppm	Arsenic Trioxide	1327-53-3	High Purity	3103
Thallium (Tl)	9.95-10.05 ppm	Thallium	7440-28-0	High Purity	3158
Silver (Ag)	9.95-10.05 ppm	Silver	7440-22-4	High Purity	3151
Selenium (Se)	4.97-5.03 ppm	Selenium	7782-49-2	High Purity	3149
Cadmium (Cd)	4.97-5.03 ppm	Cadmium	7440-43-9	High Purity	3108
Beryllium (Be)	4.97-5.03 ppm	Beryllium	7440-41-7	High Purity	3105
Lead (Pb)	4.97-5.03 ppm	Lead	7439-92-1	High Purity	3128

Specification	Reference
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Init Cal Ver Std 7, CLP

EPA (200.7)

Init Cal Ver Std 7, CLP

EPA (SW-846) (6010)

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
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RICVSTD7-500

500 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."

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