

# Product Specification

## Primary Analytes Standard, CLP

**Lot Number:** SAMPLE

**Product Number:** RANALTB

**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 AA, 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#
Chromium (Cr)	47.5-52.5 ppm	Chromium Nitrate Nonahydrate	7789-02-8	High Purity	3112
Zinc (Zn)	95-105 ppm	Zinc	7440-66-6	High Purity	3168
Cadmium (Cd)	95-105 ppm	Cadmium	7440-43-9	High Purity	3108
Silver (Ag)	95-105 ppm	Silver	7440-22-4	High Purity	3151
Nickel (Ni)	95-105 ppm	Nickel	7440-02-0	High Purity	3136
Lead (Pb)	95-105 ppm	Lead	7439-92-1	High Purity	3128
Barium (Ba)	47.5-52.5 ppm	Barium Nitrate	10022-31-8	High Purity	3104
Vanadium (V)	47.5-52.5 ppm	Vanadium	7440-62-2	High Purity	3165
Copper (Cu)	47.5-52.5 ppm	Copper	7440-50-8	High Purity	3114
Cobalt (Co)	47.5-52.5 ppm	Cobalt	7440-48-4	High Purity	3113
Beryllium (Be)	47.5-52.5 ppm	Beryllium	7440-41-7	High Purity	3105
Manganese (Mn)	47.5-52.5 ppm	Manganese	7439-96-5	High Purity	3132

Specification	Reference
Primary Analytes Standard, CLP	EPA (200.7)
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)
RANALTB-100	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."

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