Arlington, TX 76012
Pocomoke City, MD 21851
Batesville, IN 47006
http://www.riccachemical.com
1-888-GO-RICCA
customerservice@riccachemical.com

## **Product Specification**

TCLP Standard

Lot Number: SAMPLE Product Number: RTCLP

Manufacture Date: N/A

Expiration Date: N/A

This solution is intended for use as a calibration standard for plasma emission spectroscopy (ICP or DCP). It is a multielement solution that was prepared gravimetrically to contain the elements and concentrations stated below. The certified concentrations are based upon gravimetric procedures, i.e., weight per volume composition of High Purity raw material in High Purity acid and diluted with filtered (0.2  $\mu$ m) 18 megohm High Purity Deionized water. The uncertainty associated with the certified values is  $\pm 0.5\%$  relative which is the sum of the estimated errors due to the purity of the raw material, the gravimetric preparation of the solution, and transpiration of the solution through the container wall.

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	Light colored liquid	N/A

Analyte	Analysis (ppm)	Solute	CAS#	Grade	NIST SRM#
Barium (Ba)	495-505 ppm	Barium Nitrate	10022-31-8	High Purity	3104
Chromium (Cr)	22-28 ppm	Chromium Nitrate Nonahydrate	7789-02-8	High Purity	3112
Arsenic (As)	22-28 ppm	Arsenic Trioxide	1327-53-3	High Purity	3103
Silver (Ag)	22-28 ppm	Silver	7440-22-4	High Purity	3151
Lead (Pb)	22-28 ppm	Lead	7439-92-1	High Purity	3128
Selenium (Se)	4.5-5.5 ppm	Selenium	7782-49-2	High Purity	3149
Cadmium (Cd)	4.5-5.5 ppm	Cadmium	7440-43-9	High Purity	3108

Specification	Reference
TCLP Standard	EPA (1311)

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)	
RTCLP-100	100 mL amber poly	12 months	
RTCLP-500	500 mL amber poly	12 months	

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

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