

Certificate of Analysis

CLP ICP Graphite Furnace Standard #4

Catalog Number: ICM-464

Lot Number: CP-1312

Lot Issue Date: 03/23/2016

Expiration Date: 04/30/2020

This Reference Material (RM) was manufactured and verified in accordance with ULTRA's ISO 9001 registered quality system. The analyte concentration(s) were prepared and verified by an ISO Guide 34 / ISO 17025 accredited laboratory, and compared to calibration standards independently prepared using NIST SRM(s). The certified value and uncertainty value at the 95% confidence level for each analyte is determined gravimetrically.

Analyte	True Value			Analytical Method	NIST SRM	
antimony	120.0	±	0.6	µg/mL	ICP / ICP-MS	3102a
arsenic	20.0	±	0.1	µg/mL	ICP / ICP-MS	3103a
cadmium	10.0	±	0.1	µg/mL	ICP / ICP-MS	3108
lead	20.0	±	0.1	µg/mL	ICP / ICP-MS	3128
selenium	10.0	±	0.1	µg/mL	ICP / ICP-MS	3149
thallium	20.0	±	0.1	µg/mL	ICP / ICP-MS	3158

Matrix: 5% nitric acid with trace tartaric acid in low TOC water (< 50 ppb)

ULTRA uses purified acids, 18 megaohm double deionized water, calibrated Class A glassware, and meticulously cleaned bottles in the manufacturing of ULTRAgrade standards. Balances used in the manufacturing of this standard are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001.