

Certificate of Analysis

**Lanthanum
AA Standard**

Catalog Number: IAA-257

Lot Number: CL-3020

Lot Issue Date: 08/01/2014

Expiration Date: 08/31/2021

This Certified Reference Material (CRM) was manufactured and verified in accordance with ULTRA's ISO 9001 registered quality system. The analyte concentrations were verified by our ISO 17025 accredited laboratory to be within $\pm 2.5\%$, when 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
lanthanum	1001	$\pm$	5	$\mu\text{g/mL}$	ICP / ICP-MS	3127a

Matrix: 1% hydrochloric acid and trace hydrofluoric acid in low TOC water (< 50 ppb)

ULTRA uses purified acids, 18 megohm double deionized water, calibrated Class A glassware & 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.

-Density of Solution (measured at $20.00^{\circ}\text{C} \pm 0.05^{\circ}\text{C}$): 1.0049 g/mL