



Certificate of Analysis

**ICP/MS Internal Standard
Bismuth Standard at 100 µg/mL**

**Catalog Number: IMS-111
Lot Number: R00013
Job Number: J00015719
Lot Issue Date: 01/11/2013
Expiration Date: 02/28/2017**

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
bismuth	100.0 \pm 0.5 µg/mL	ICP / ICP-MS	3106

Matrix: 2% nitric 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°C \pm 0.05°C): 1.0095 g/mL



ISO 9001 Registered Quality System – TUV USA


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