Certificate of Analysis

ICP/MS Calibration Standard #4

Catalog Number: IMS-104
Lot Number: T00344
Job Number: J00017854
Lot Issue Date: 03/28/2014
Expiration Date: 04/30/2017

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 ± 5.0%, 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
boron	10.00	±	0.05	µg/mL	ICP / ICP-MS	3107
germanium	10.00	±	0.05	µg/mL	ICP / ICP-MS	3120a
molybdenum	10.00	±	0.05	µg/mL	ICP / ICP-MS	3134
niobium	10.00	±	0.05	µg/mL	ICP / ICP-MS	3137
phosphorus	10.00	±	0.05	µg/mL	ICP / ICP-MS	3139a
rhenium	10.00	±	0.05	µg/mL	ICP / ICP-MS	3143
silicon	10.00	±	0.05	µg/mL	ICP / ICP-MS	3150
sulfur	10.00	±	0.05	µg/mL	ICP / ICP-MS	3154
tantalum	10.00	±	0.05	µg/mL	ICP / ICP-MS	3155
titanium	10.00	±	0.05	µg/mL	ICP / ICP-MS	3162a
tungsten	10.00	±	0.05	µg/mL	ICP / ICP-MS	3163
zirconium	10.00	±	0.05	µg/mL	ICP / ICP-MS	3169

Matrix: trace nitric acid, trace hydrofluoric acid 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.

ACCREDITED

ISO 17025:2005
Accredited
A2LA
Cert. No. 0851.01

ISO 9001:2000
Registered
TUV USA, Inc.
Cert. No. 06-1004

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