



Certificate of Analysis

ULTRAGrade™ Solution
Iridium ICP Standard
1000 µg/mL

Catalog Number: ICP-077
Lot Number: J00505
Job Number: J00008353
Lot Issue Date: 06/16/2008
Expiration Date: 08/31/2015

Starting Material: iridium trichloride
Starting Material Purity: 99.95%
Starting Material Lot No.: BH00690
Matrix: 5% hydrochloric acid
Atomic Weight Ir: 192.2

Certified Value: 1000 ± 2 µg/mL

This Certified Reference Material (CRM) was manufactured and verified in accordance with ULTRA's ISO 9001:2000 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The certified value and uncertainty value, at the 95% confidence level, for each analyte determined gravimetrically.

Classical Wet Assay Method: Theoretical, based on gravimetric measurements

Confirmation by Inductively Coupled Plasma Spectroscopy (ICP / ICP-MS)

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

Trace Metallic Impurities in Solution Standard in µg/mL:

* Al <0.006 D	* Ga <0.005 ND	n Nb	n S
* Sb <0.005 ND	n Ge	n Os	n Ta
* As <0.005 ND	n Au	* Pd <0.007 D	n Te
* Ba <0.005 ND	n Hf	* P <0.005 ND	n Tb
* Be <0.005 ND	n Ho	* Pt <0.050 D	* Tl <0.005 ND
* Bi <0.090 D	* In <0.005 ND	* K <0.005 ND	n Th
* B <0.005 ND	s Ir	n Pr	n Tm
* Cd <0.005 ND	* Fe <0.100 D	n Re	* Sn <0.005 D
* Ca <0.020 D	* La <0.005 ND	* Rh <0.070 D	* Ti <0.005 ND
n Ce	* Pb <0.005 D	n Rb	* W <0.008 D
n Cs	* Li <0.005 ND	* Ru <0.010 D	n U
* Cr <0.005 ND	n Lu	n Sm	* V <0.005 ND
* Co <0.005 ND	* Mg <0.005 D	n Sc	n Yb
* Cu <0.005 ND	* Mn <0.005 ND	* Se <0.005 ND	n Y
n Dy	* Hg <0.005 ND	* Si <0.005 ND	* Zn <0.005 ND
* Er <0.005 ND	* Mo <0.005 ND	* Ag <0.080 D	n Zr
* Eu <0.005 ND	n Nd	* Na <0.040 D	
* Gd <0.005 ND	* Ni <0.005 D	* Sr <0.005 ND	

* - element checked for
 ND - not detected

i - spectral interference
 D - detected

n - not checked for
 s - solution standard element

Density of Solution (measured at 22.0 °C ± 0.5 °C): 1.008 g/mL




 William J. Leary
 Quality Assurance Manager

ISO 9001 Registered Quality System – TUV USA