Agilent Technologies

Certificate of Analysis

ICP-MS Internal Std Mix

Agilent Part Number: 5188-6525 **Lot Number:** 14-182VY

Analyte	CAS#	Labeled Conc.	Measured Conc.	SRM	Start Mat'l Formula	Start Mat'l Purity	Analyte	CAS#	Labeled Conc.	Measured Conc.	SRM	Start Mat'l Formula	Start Mat'l Purity
Bi	7440-69-9	100 mg/L	100 mg/L	3106*	Bi	99.99+	Lu	7439-94-3	100 mg/L	99.8 mg/L	3130a*	Lu2O3	99.99+
Ge	7440-56-4	100 mg/L	99.9 mg/L	3120*	GeO2	99.99+	Rh	7440-16-6	100 mg/L	99.7 mg/L	3144*	Rh	99.99+
In	7440-74-6	100 mg/L	99.8 mg/L	3124a*	In	99.99+	Sc	7440-20-2	100 mg/L	99.8 mg/L	3148a*	Sc2O3	99.99+
Li^6	7439-93-2	100 mg/L	100 mg/L	3129a*	$^6Li_2CO_3$	99.99+	Tb	7440-27-9	100 mg/L	99.6 mg/L	3157a*	Tb4O7	99.99+

* - indicates NIST SRM † - indicates CRM (when NIST SRM is not available)

Purity grades:

Starting Materials: Shown above

Matrix:

10% HNO_3: HNO_3 (CAS No. 7697-37-2) high purity grade

Traceability:

This standard has been produced gravimetrically and volumetrically using ISO 9001 quality procedures. ICP / ICP-MS Spectrometer was used to determine the concentration of the main elements via NIST SRMs shown above, as well as the impurities. Other reference standards used: 13-5VY,12-82VY.

Trace Metallic Impurities in the Actual Solution, in µg/L, via ICP-MS Analysis, results are accurate to ±10%:

Element	Conc.	Element	Conc.	Element	Conc.	Element	Conc.	Element	Conc.	Element	Conc.
Ag	<5	Co	<5	Hf	<1	Nb	<2	Ru	<8	Ti	<20
Al	60	Cr	<30	Hg	<6	Nd	<0.7	Sb	<3	Tl	<6
As	<6	Cs	<0.2	Ho	<0.7	Ni	<30	Se	<30	Tm	0.6
Au	<3	Cu	<8	Ir	<20	P	<1000	Si	<200	U	0.07
B	<50	Dy	<0.01	K	<20	Pb	3	Sm	<1	V	<0.9
Ba	100	Er	<0.3	La	<0.8	Pd	1	Sn	<6	W	<90
Be	<8	Eu	<1	Mg	<30	Pr	<1	Sr	<6	Y	1
Ca	100	Fe	<70	Mn	<10	Pt	<2	Ta	<0.4	Yb	<0.7
Cd	<2	Ga	<2	Mo	<4	Rb	<1	Te	<10	Zn	<20
Ce	<0.7	Gd	<0.8	Na	1500	Re	<1	Th	8	Zr	<10

Balances are calibrated regularly with weight sets traceable to NIST.

Agilent reference standards are guaranteed stable and accurate to ±0.5% of measured analyte concentration. For these solutions we use the highest purity acids applicable, 18 megohm double deionized water and acid-leached, triple rinsed bottles. All glassware used is class A.

Brijender S Tonk

QC Coordinator
CertiPrep, Inc.

Date of release: August 31, 2009

Date of expiration: February 28, 2011

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