Agilent Technologies

Certificate of Analysis

ICP-MS Internal Std Mix

Agilent Part Number: 5188-6525 **Lot Number:** 16-160VY

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	98.9 mg/L	3106*	Bi	99.99+	Lu	7439-94-3	100 mg/L	99.4 mg/L	3130a*	Lu_2O_3	99.99+
Ge	7440-56-4	100 mg/L	99.1 mg/L	3120a*	GeO_2	99.99+	Rh	7440-16-6	100 mg/L	101 mg/L	3144*	Rh	99.99+
In	7440-74-6	100 mg/L	99.0 mg/L	3124a*	In	99.99+	Sc	7440-20-2	100 mg/L	100 mg/L	3148a*	Sc_2O_3	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	98.2 mg/L	3157a*	Tb_4O_7	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: 15-124VY,13-71VY,14-182VY.

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	<1	Co	<6	Hf	<0.01	Nb	<2	Ru	<4	Ti	<2
Al	<40	Cr	<0.7	Hg	<4	Nd	<0.5	Sb	10	Tl	<7
As	<20	Cs	<0.4	Ho	<0.6	Ni	<4	Se	<100	Tm	<0.6
Au	<1	Cu	0.5	Ir	5	P	<400	Si	<200	U	<0.6
B	<30	Dy	<0.2	K	<30	Pb	1	Sm	<0.2	V	<0.01
Ba	5	Er	<0.1	La	<0.5	Pd	<0.3	Sn	<2	W	<7
Be	4	Eu	<0.4	Mg	<4	Pr	<0.8	Sr	4	Y	<5
Ca	<10	Fe	6	Mn	<3	Pt	<4	Ta	<1	Yb	<0.2
Cd	<0.7	Ga	<2	Mo	<3	Rb	<0.2	Te	<10	Zn	3
Ce	<5	Gd	<0.4	Na	700	Re	<0.5	Th	10	Zr	7

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.

Date of release: September 30, 2010

Date of expiration: March 31, 2012

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