Agilent Technologies

Certificate of Analysis

ICP-MS Internal Std Mix

Agilent Part Number: 5188-6525 **Lot Number:** 19-71VYY2

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	98.5 mg/L	3106*	Bi	99.99+	Lu	7439-94-3	100 mg/L	99.6 mg/L	3130a*	Lu_2O_3	99.99+
Ge	7440-56-4	100 mg/L	99.0 mg/L	3120a	GeO_2	99.99+	Rh	7440-16-6	100 mg/L	98.5 mg/L	3144*	Rh	99.99+
In	7440-74-6	100 mg/L	99.7 mg/L	3124a*	In	99.99+	Sc	7440-20-2	100 mg/L	98.5 mg/L	3148a*	Sc_2O_3	99.99+
Li †	7439-93-2	100 mg/L	99.5 mg/L	3129a*	$^6Li_2CO_3$	99.99+	Tb	7440-27-9	100 mg/L	99.3 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: 11-4VY,17-211VY,18-74VY,18-75VY.

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	<6	Co	<5	Hf	<0.4	Nb	<2	Ru	<1	Tl	<5
Al	60	Cr	<10	Hg	<0.8	Nd	<0.6	Sb	<1	Ti	<100
As	<200	Cs	<0.8	Ho	<0.7	Ni	<50	Se	<50	Tm	<0.6
Au	<3	Cu	<20	Ir	20	P	<200	Si	<300	U	<0.08
B	<2	Dy	<0.4	K	<300	Pb	<3	Sm	<0.3	V	<3
Ba	90	Er	<0.3	La	<0.9	Pd	<0.9	Sn	<0.7	W	<5
Be	<1	Eu	<0.3	Mg	<10	Pr	<0.5	Sr	<8	Y	0.8
Ca	60	Fe	5	Mn	<3	Pt	<3	Ta	<3	Yb	<0.8
Cd	<1	Ga	<1	Mo	<5	Rb	<2	Te	<2	Zn	10
Ce	<0.8	Gd	<0.6	Na	1500	Re	<0.4	Th	7	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.

Date of release: July 31, 2012

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