Agilent Technologies

Certificate of Analysis

ICP-MS Internal Std Mix

Agilent Part Number: 5188-6525 **Lot Number:** 22-52VYY2

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 µg/mL	98.9 µg/mL	3106*	Bi	99.99+	Lu	7439-94-3	100 µg/mL	99.2 µg/mL	3130a*	Lu_2O_3	99.99+
Ge	7440-56-4	100 µg/mL	100 µg/mL	3120a	GeO_2	99.99+	Rh	7440-16-6	100 µg/mL	101 µg/mL	3144*	$Rh(NO_3)_3 \cdot H_2O$	99.99+
In	7440-74-6	100 µg/mL	99.6 µg/mL	3124a*	In	99.99+	Sc	7440-20-2	100 µg/mL	100 µg/mL	3148a*	$Sc(NO_3)_3 \cdot 4H_2O$	99.99+
Li†	7439-93-2	100 µg/mL	99.0 µg/mL	3129a*	$^6Li_2CO_3$	99.99+	Tb	7440-27-9	100 µg/mL	99.6 µg/mL	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. Agilent 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: 21-25VY,21-166VY.

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

Element	Conc.	Element	Conc.	Element	Conc.	Element	Conc.	Element	Conc.	Element	Conc.
Ag	<0.4	Co	<0.05	Hf	<0.5	Nb	<0.08	Ru	<1	Ti	<1
Al	5	Cr	<2	Hg	<0.6	Nd	<0.01	Sb	<2	Tl	<0.6
As	4	Cs	<0.2	Ho	0.05	Ni	<10	Se	<10	Tm	0.3
Au	<0.8	Cu	<0.5	Ir	1	P	<100	Si	<200	U	<0.03
B	8	Dy	0.1	K	10	Pb	2	Sm	<0.08	V	<0.2
Ba	3	Er	<0.5	La	0.4	Pd	<1	Sn	<0.06	W	<1
Be	<0.8	Eu	<0.01	Mg	2	Pr	0.2	Sr	<0.5	Y	1
Ca	100	Fe	20	Mn	2	Pt	<0.4	Ta	<0.4	Yb	<0.3
Cd	<0.5	Ga	<0.6	Mo	<3	Rb	<5	Te	<0.2	Zn	<3
Ce	<0.04	Gd	<0.1	Na	200	Re	<0.09	Th	<1	Zr	<0.3

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.

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QC Coordinator

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