Agilent Technologies

Certificate of Analysis

ICP-MS Internal Std Mix

Agilent Part Number: 5188-6525 **Lot Number:** 23-78VYY2

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	99.4 µg/mL	3106*	Bi	99.99+	Lu	7439-94-3	100 µg/mL	98.8 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*	$Rh(NO_3)_3$-H_2O	99.99+
In	7440-74-6	100 µg/mL	99.4 µg/mL	3124a*	In	99.99+	Sc	7440-20-2	100 µg/mL	99.9 µg/mL	3148a*	$Sc(NO_3)_3$-$4H_2O$	99.99+
Li †	7439-93-2	100 µg/mL	99.7 µg/mL	3129a*	$^6Li_2CO_3$	99.99+	Tb	7440-27-9	100 µg/mL	101 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: 21-24VY, 21-167VY.

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	<1	Co	<3	Hf	<0.2	Nb	<2	Ru	<2	Ti	<2
Al	4	Cr	3	Hg	<1	Nd	<0.5	Sb	<2	Tl	<5
As	<20	Cs	<0.1	Ho	<0.2	Ni	<9	Se	<100	Tm	<0.2
Au	<0.9	Cu	2	Ir	<2	P	<200	Si	<400	U	<0.05
B	<4	Dy	<0.2	K	15	Pb	2	Sm	<0.1	V	<0.6
Ba	3	Er	0.8	La	0.4	Pd	<2	Sn	<0.4	W	<10
Be	<1	Eu	<0.1	Mg	<0.9	Pr	0.2	Sr	<1	Y	1
Ca	40	Fe	6	Mn	<5	Pt	<1	Ta	<0.5	Yb	3
Cd	<0.3	Ga	<1	Mo	<4	Rb	<0.3	Te	<4	Zn	6
Ce	0.3	Gd	<0.2	Na	170	Re	<0.6	Th	<0.8	Zr	<2

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. This uncertainty is at 95% confidence interval, a coverage factor of 2. 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. This standard was manufactured following the guidelines set forth under ISO 17025 and ISO Guide 34 regulations.

Date of release: April 30, 2016

Date of expiration: October 31, 2017

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QC Coordinator

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