

Certificate of Analysis

ICP-MS Internal Std Mix

Agilent Part Number: 5188-6525
Lot Number: 5-66MKBY2

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	7440-89-9	100 µg/mL	100 µg/mL	3106*	Bi	99.99+	Lu	7439-94-3	100 µg/mL	99.9 µg/mL	3130a*	Lu ₂ O ₃	99.99+
Ge	7440-58-4	100 µg/mL	99.7 µg/mL	3120a*	GeO ₂	99.99+	Rh	7440-16-6	100 µg/mL	101 µg/mL	3144*	Rh(NO ₃) ₃ ·H ₂ O	99.99+
In	7440-74-6	100 µg/mL	98.5 µg/mL	3124a*	In	99.99+	Sc	7440-20-2	100 µg/mL	100 µg/mL	3148a*	Sc ₂ O ₃	99.99+
Li*	7439-93-2	100 µg/mL	101 µg/mL	3129a*	⁶ Li ₂ CO ₃	99.99+	Tb	7440-27-9	100 µg/mL	98.5 µg/mL	3157a*	Tb ₂ O ₃	99.99+

* - indicates NIST SRM

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

Purity grades:

Starting Materials: Shown above

Matrix:

 10% HNO₃: HNO₃ (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: 4-25MKB, CL5-67MKB.

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

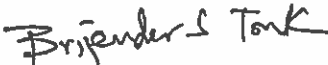
Element	Conc.	Element	Conc.	Element	Conc.	Element	Conc.	Element	Conc.	Element	Conc.
Ag	2	Co	2	Hf	<0.5	Nb	<0.3	Ru	<0.8	Tl	6
Al	30	Cr	<3	Hg	<1	Nd	<0.07	Sb	<2	Tl	2
As	<3	Cs	<0.1	Ho	<0.03	Ni	6	Se	<100	Tm	<0.04
Au	<4	Cu	<0.8	Ir	20	P	<200	Si	130	U	<0.2
B	20	Dy	0.9	K	<500	Pb	<2	Sm	<0.2	V	<1
Ba	50	Er	<0.2	La	0.3	Pd	2	Sn	0.4	W	<5
Be	<0.8	Eu	<0.05	Mg	5	Pr	<0.03	Sr	10	Y	2
Ca	90	Fe	4	Mn	<1	Pt	0.8	Te	<0.5	Yb	0.5
Cd	<0.01	Ge	<0.01	Mo	<1	Rb	<0.3	Ta	<6	Zn	6
Ce	<0.2	Gd	<0.1	Na	160	Re	<0.08	Th	2	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. 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: January 31, 2018

Date of expiration: July 31, 2019



 QC Coordinator