

Certificate of Analysis

ICP-MS Internal Std Mix

Agilent Part Number: 5188-6525
Lot Number: 4-75MKBY2

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	101 µg/mL	3130a*	Lu ₂ O 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	99.5 µg/mL	3144*	Rh(NO ₃) ₃ ·H ₂ O	99.99+
In	7440-74-6	100 µg/mL	100 µg/mL	3124a*	In	99.99+	Sc	7440-20-2	100 µg/mL	100 µg/mL	3148a*	Sc ₂ O ₃	99.99+
U*	7439-93-2	100 µg/mL	101 µg/mL	3129a*	U ₂ CO ₃	99.99+	Tb	7440-27-8	100 µg/mL	99.9 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: 4-24MKB, 3-63MKB, 3-198MKB, 3-189MKB.

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

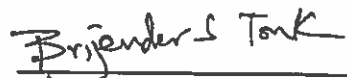
Element	Conc.	Element	Conc.	Element	Conc.	Element	Conc.	Element	Conc.	Element	Conc.
Ag	<0.7	Co	1	Hf	<0.2	Nb	<0.1	Ru	<0.3	Ti	<8
Al	30	Cr	<10	Hg	<1	Nd	<0.1	Sb	<0.7	Tl	<1
As	<7	Cs	<0.2	Ho	<0.07	Ni	8	Se	<10	Tm	<0.05
Au	<3	Cu	<2	Ir	10	P	<400	Si	<300	U	<0.2
B	<20	Dy	0.9	K	50	Pb	2	Sm	<0.2	V	<2
Ba	40	Er	0.1	La	<0.3	Pd	<0.8	Sn	<1	W	<5
Be	<0.8	Eu	<0.08	Mg	<20	Pr	<0.1	Sr	4	Y	<0.7
Ca	70	Fe	10	Mn	<4	Pt	0.7	Ta	<0.5	Yb	<0.4
Cd	<0.5	Ga	<0.01	Mo	<4	Rb	<0.8	Te	<2	Zn	3
Ce	<0.05	Gd	<0.4	Na	30	Re	<0.2	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: August 15, 2017

Date of expiration: February 28, 2019



 QC Coordinator