

Certificate of Analysis

ICP-MS Internal Std Mix

Agilent Part Number: 5188-6525
Lot Number: 1-153YJ2

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	100 µg/mL	3106*	Bi	99.99+	Lu	7439-94-3	100 µg/mL	99.4 µg/mL	3130a*	Lu ₂ O ₃	99.99+
Ge	7440-56-4	100 µg/mL	99.9 µg/mL	3120a*	GeO ₂	99.99+	Rh	7440-16-6	100 µg/mL	99.6 µg/mL	3144*	Rh(NO ₃) ₃ ·H ₂ O	99.99+
In	7440-74-6	100 µg/mL	99.4 µg/mL	3124a*	In	99.99+	Sc	7440-20-2	100 µg/mL	99.4 µg/mL	3148a*	Sc ₂ O ₃	99.99+
Li*	7439-93-2	100 µg/mL	99.2 µg/mL	3129a*	⁶ Li ₂ CO ₃	99.99+	Tb	7440-27-9	100 µg/mL	99.3 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: 5-220MKB, 1-152YJ.

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

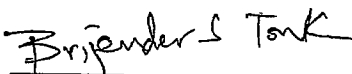
Element	Conc.	Element	Conc.	Element	Conc.	Element	Conc.	Element	Conc.	Element	Conc.
Ag	<0.1	Co	<0.08	Hf	<0.03	Nb	<0.3	Ru	0.5	Ti	<0.8
Al	<3	Cr	<0.4	Hg	<0.2	Nd	<0.06	Sb	0.3	Tl	0.3
As	<0.9	Cs	0.05	Ho	<0.08	Ni	0.5	Se	<0.9	Tm	<0.07
Au	<0.2	Cu	1	Ir	20	P	<100	Si	<100	U	<0.04
B	10	Dy	<0.03	K	100	Pb	5	Sm	<0.04	V	<0.2
Ba	1	Er	0.2	La	0.08	Pd	0.2	Sn	0.8	W	<0.04
Be	<0.3	Eu	<0.05	Mg	3	Pr	<0.06	Sr	6	Y	0.1
Ca	40	Fe	0.9	Mn	<0.3	Pt	0.2	Ta	<0.06	Yb	0.6
Cd	0.4	Ga	0.05	Mo	<0.7	Rb	<0.02	Te	0.3	Zn	2
Ce	<0.08	Gd	0.1	Na	<10	Re	<0.06	Th	2	Zr	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. 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: September 30, 2018

Date of expiration: March 31, 2020



 QC Coordinator