

Certificate of Analysis

ICP-MS Stock Tuning Solution (100mL)

Agilent Part Number: 5188-6564
Lot Number: 21-218VYY2

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
Ce	7440-45-1	10.0 µg/mL	10.0 µg/mL	3110*	Ce(NO ₃) ₂ ·6H ₂ O	99.99+	Tl	7440-28-0	10.0 µg/mL	10.0 µg/mL	3158*	TlNO ₃	99.99+
Co	7440-48-4	10.0 µg/mL	10.1 µg/mL	3113*	Co	99.99+	Y	7440-65-5	10.0 µg/mL	10.1 µg/mL	3167a*	Y ₂ O ₃	99.99+
Li	7439-93-2	10.0 µg/mL	9.91 µg/mL	3129a*	Li ₂ CO ₃	99.99+							

* - indicates NIST SRM

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

Purity grades:

Starting Materials: Shown above

Matrix:

 2% 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: 21-112VY, 21-113VY.

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

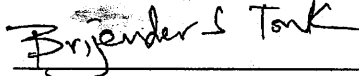
Element	Conc.	Element	Conc.	Element	Conc.	Element	Conc.	Element	Conc.	Element	Conc.
Ag	<1	Cs	<0.02	Ho	<0.01	Nd	<0.05	Ru	<0.1	Te	<0.7
Al	1	Cu	0.4	In	<0.08	Ni	<2	Sb	<0.06	Th	<0.2
As	<2	Dy	<0.01	Ir	<0.1	P	<100	Sc	<0.5	Ti	<0.7
Au	<0.5	Er	<0.01	K	20	Pb	<0.1	Se	<1	Tm	<0.01
B	<1	Eu	<0.01	La	<0.01	Pd	<0.2	Si	<100	U	<0.01
Ba	<0.04	Fe	5	Lu	<0.01	Pr	0.09	Sm	<0.07	V	<0.4
Be	0.5	Ga	<1	Mg	<0.4	Pt	<0.1	Sn	<0.3	W	<1
Bi	<0.1	Gd	<0.1	Mn	<0.4	Rb	<0.3	Sr	<0.1	Yb	<0.01
Ca	10	Ge	<6	Mo	<1	Re	<0.05	Ta	<0.06	Zn	0.5
Cd	<0.4	Hf	<0.01	Na	<3	Rh	<0.2	Tb	<0.1	Zr	<0.2
Cr	0.5	Hg	<1	Nb	<0.2						

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. 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.

Date of release: April 15, 2015

Date of expiration: October 31, 2016



 QC Coordinator