

Certificate of Analysis

Cobalt Internal Standard Stock Solution

Agilent Part Number: 8500-6947

Lot Number: 3-39MKBY2

Analyte	CAS#	Labeled Conc.	Measured Conc.	SRM	Start Mat'l Formula	Start Mat'l Purity
Co	7440-48-4	10.0 µg/mL	9.97 µg/mL	3113*	Co	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.

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	<0.03	Cs	<0.02	Ho	<0.01	Nb	<0.1	Ru	<0.2	Th	<0.02
Al	0.4	Cu	0.1	In	<0.04	Nd	<0.03	Sb	<0.07	Ti	<0.4
As	4	Dy	<0.03	Ir	<0.1	Ni	<0.4	Se	<0.2	Tl	<0.1
Au	0.07	Er	<0.03	K	2	P	<100	Sn	<5	Tm	<0.01
B	<0.5	Eu	<0.01	La	0.05	Pb	<0.08	Si	<100	U	<0.02
Ba	<0.06	Fe	2	Li	<0.1	Pd	<0.3	Sm	<0.02	V	0.7
Be	<0.09	Ga	<0.03	Lu	<0.01	Pr	<0.01	Sr	<0.04	W	<0.2
Bi	<0.02	Gd	<0.05	Mg	<0.8	Pt	<0.3	Ta	<0.04	Y	<0.06
Ce	2	Ge	<0.8	Mn	<0.5	Rb	<0.02	Tb	<0.03	Yb	<0.03
Cd	0.1	Hf	<0.04	Mo	<0.2	Re	<0.01	Tc	<0.01	Zn	0.1
Co	<0.02	Hg	<0.2	Na	0.2	Rh	<0.09	Te	<0.4	Zr	<0.4
Cr	0.9										

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. This standard was manufactured following the guidelines set forth under ISO 17025 and ISO Guide 34 regulations.

Date of release: December 31, 2016

Date of expiration: June 30, 2018

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QC Coordinator