Agilent Product Name: Cesium Nitrate Ionization Buffer: 1% Cs in 5% HNO_3
Agilent Part No: 5190-8343
Lot No: 0000991833

Product Specifications

Analyte	Starting Material	CAS #	Matrix	Certified Concentration
Cs	Cs_2CO_3	534-17-8	5% HNO_3	10,000 ± 50 µg/mL (w/v)
				9787 ± 50 µg/g (w/w)

Intended Use: This solution is intended for use as an ionization buffer for atomic absorption spectroscopy (flame AAS or GFAAS).

Certification & Traceability: This CRM was manufactured under a quality management system that is accredited to **ISO Guide 34**, **ISO/IEC 17025**, and registered to **ISO 9001**. This CRM was prepared to a nominal concentration of 10000 µg/mL by gravimetric methods using 99.999% pure cesium carbonate (Cs_2CO_3) dissolved in high purity nitric acid (HNO_3) and diluted with ASTM Type I Water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration was determined based upon gravimetric procedures. Secondary verification of the certified concentration was performed using ICP-OES that was calibrated and/or referenced against NIST SRM 3111a, lot #792210. The uncertainty associated with the certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Uncertified Values: ICP-OES was used to determine trace metal concentrations for this product (nd = not determined).

Trace Concentrations (µg/L)

Ag	<5	Ce	<2	Gd	<2	Lu	<2	Pb	<10	Se	<20	Tl	<5
Al	<20	Co	<10	Ge	<5	Mg	<50	Pd	<5	Si	<1000	Tm	<2
As	<20	Cs	MAJOR	Hf	<2	Mn	<10	Pr	<2	Sm	<2	U	<5
Au	<5	Cr	<5	Hg	<5	Mo	<5	Pt	<5	Sn	<5	V	<10
B	<50	Cu	12	Ho	<2	Na	<250	Rb	30	Sr	13	W	<5
Ba	154	Dy	<2	In	nd	Nb	<5	Re	<2	Ta	<5	Y	<5
Be	<5	Er	<2	Ir	<2	Nd	<2	Rh	<5	Tb	<5	Yb	<2
Bi	<2	Eu	<2	K	<250	Ni	<20	Ru	<5	Te	<10	Zn	<20
Ca	<250	Fe	<100	La	<5	Os	<5	Sb	<5	Th	<5	Zr	<5
Cd	<5	Ga	<5	Li	<20	P	<1000	Sc	<50	Ti	<20		

Instructions for Use: Agilent Technologies recommends that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy the analyst should: (1) use only pre-cleaned containers and transferware, (2) avoid pipetting directly from the CRM's original container, (3) use a minimum sub-sample size of 500 µL, (4) make dilutions using calibrated balances or certified volumetric class A flasks and pipettes, (5) dilute to volume using the same matrix as the original CRM, and (6) never pour used product back into the original container. The solution should be kept tightly capped. Store at controlled room temperature per USP 35 (10.30.60). Do not freeze, heat, or expose to direct sunlight. Minimize exposure to moisture or high humidity.

Period of Validity: Agilent Technologies ensures the accuracy of this solution until the expiration date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Sample lot approver:

Julie M. MacIntosh

QA Manager

Date of release: 27 July 2015
Date of expiration: 07 October 2017