



National Institute of Standards & Technology

Certificate of Analysis

Standard Reference Material 3185

Anion Standard Solution Nitrate

Batch Code 290402

This Standard Reference Material (SRM) is intended for use in anion ion chromatography, or any other analytical technique that requires aqueous standard solutions for calibration or as control samples. SRM 3185 is a single component solution prepared gravimetrically to contain 1000 μg nitrate per gram of solution. The certified value is based on gravimetric procedures, i.e., weight per weight composition of a high-purity sodium nitrate salt dissolved in filtered (0.22 μm) 18 megohm water. The calculated concentration of nitrate, based on the weights of KNO_3 corrected for impurities and the solution, and on the atomic weights of potassium, nitrogen, and oxygen (39.0983, 14.01 and 16.00, respectively) is 1000.0 $\mu\text{g/g}$. To confirm the gravimetric value, samples were analyzed by ion chromatography.

<u>Constituent</u>	<u>Concentration ($\mu\text{g/g}$)</u>	<u>Source</u>
Nitrate	1000 \pm 4	NaNO_3 (99.873 % Purity)

The uncertainty associated with the certified value is approximated by summing the estimated errors due to the gravimetric preparation of the SRM, transpiration of the solution through the container wall within one year of bottling, and purity of the sodium nitrate.

Stability and Storage

This certificate is valid for six months from the date of shipment provided the solutions are kept tightly capped and stored under normal conditions in an area known to be free of acid fumes and sulfur dioxide. NIST will monitor the stability of this SRM and will notify purchasers of any changes that invalidate this certification.

SRM 3185 was prepared by T.A. Butler, and ion chromatographic measurements were made by W.F. Koch, of the NIST Inorganic Analytical Research Division.

The technical and support aspects involved in the preparation, certification, and issuance of this Standard Reference Material were coordinated through the Standard Reference Materials Program by J.S. Kane.

April 2, 1992
Gaithersburg, MD 20899
(Revision of certificate dated 1-28-91)

William P. Reed, Chief
Standard Reference Materials Program