



National Institute of Standards & Technology

Certificate of Analysis

Standard Reference Material 3182

Anion Standard Solution Chloride

Batch Code 291701

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 3182 is a single component solution prepared gravimetrically to contain 1000 μg chloride per gram of solution. The certified value is based on gravimetric procedures, i.e., weight per weight composition of a high-purity salt dissolved in filtered (0.22 μm) 18 megohm water. The calculated concentration of chloride, based on the weights of KCl and the solution, and on the atomic weights of potassium and chlorine (39.0983 and 35.453, respectively) is 1000.0 $\mu\text{g/g}$. To confirm the gravimetric value, samples were analyzed by ion chromatography. The density of the solution was measured to be 0.997 g/mL at 25 °C.

<u>Component</u>	<u>Concentration ($\mu\text{g/g}$)</u>	<u>Source</u>
Chloride	1000 \pm 5	KCl (SRM 999)

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

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.

SRM 3182 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.

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Gaithersburg, MD 20899
(Revision of certificate dated 4-15-87)

William P. Reed, Chief
Standard Reference Materials Program