



# National Institute of Standards & Technology

## Certificate of Analysis

### Standard Reference Material 3183

Anion Standard Solution

Fluoride

Batch Code 392201

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 3183 is a single component solution prepared gravimetrically by dissolving high purity sodium fluoride in filtered (0.22  $\mu\text{m}$ ) 18 megohm water to contain 1000  $\mu\text{g}$  fluoride per g of solution. The certified value is based on titrimetric fluoride assay using a lanthanum nitrate titrant, standardized against SRM 3127a. The density of the solution was measured to be 1.0016 g/mL at 22 °C.

<u>Component</u>	<u>Concentration<sup>a</sup></u> <u><math>\mu\text{g/g}</math></u>	<u>Source</u>
Fluoride	1000 $\pm$ 5	NaF <sup>b</sup>

<sup>a</sup>The uncertainty listed is based on the propagation of the uncertainty associated with the titrimetric assay and the transpiration of the solution through the container walls for six months after shipment.

<sup>b</sup>The sodium fluoride was taken from a lot of material reserved for ion chromatographic use, which had been previously intercompared with coulometrically standardized hydrofluoric acid and found to be as least 99.5 % pure.

**Stability:** This certificate is valid for six months from the shipping date provided the solutions are kept tightly capped and stored under normal conditions in an area known to be free of acid fumes. NIST will monitor the stability of these solutions; if any changes occur that invalidate this certification, NIST will notify purchasers.

SRM 3183 was prepared by T.A. Butler and analyzed by C.M. Beck II of the NIST Inorganic Analytical Research Division.

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

Gaithersburg, MD 20899  
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William P. Reed, Chief  
Standard Reference Materials Program