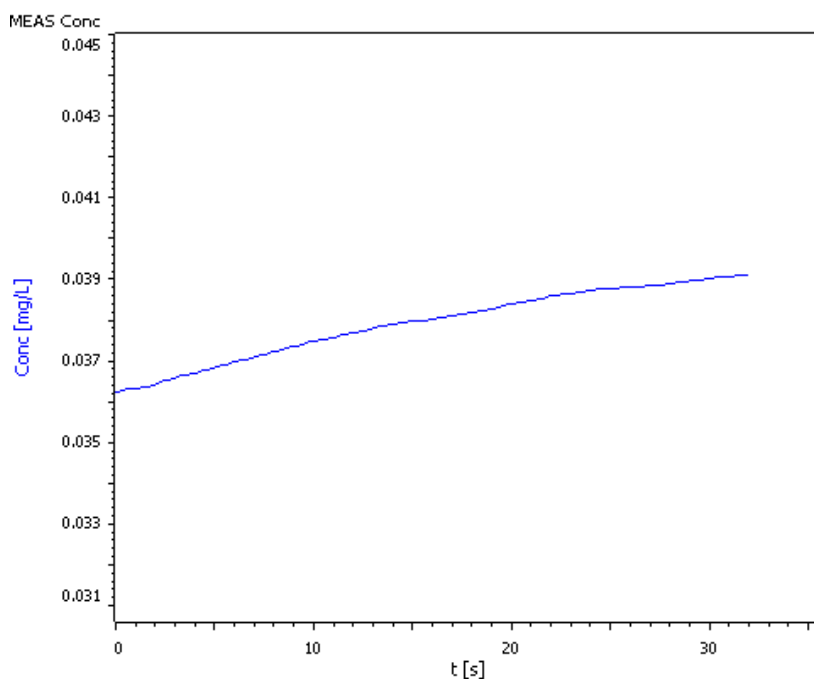


Fluoride content of drinking water



Fluoride in drinking water can be rapidly determined by direct potentiometric measurement using the ion-selective Fluoride ISE as sensor. The Fluoride ISE is previously calibrated using appropriate standards.

Method description

Sample

Drinking water

Sample preparation

No sample preparation is required.

Electrode preparation

The electrode is calibrated using calibration standards of appropriate concentration. The concentration of the standard should be chosen in such a way, that the concentration of the sample lies within the calibration range. At least three calibration standards should be used.

Configuration

907 Titrand	2.907.0010
801 Magnetic stirrer	2.801.0040
800 Dosino	2.800.0010
50 mL Dosing unit	6.3032.250
F ISE	6.0502.150
LL ISE Reference	6.0750.100

Solutions

TISAB IV	58 g NaCl are dissolved in approx. 500 mL deion. H ₂ O. 5 g complexon IV is added and dissolved by dropwise addition of c(NaOH) = 8 mol/L. Then, 57 mL glacial acetic acid is added and the pH of the mixture is adjusted to 5.5 with the above-mentioned NaOH solution. Finally, it is made up to 1 L with deion. H ₂ O.
Diluted TISAB	500 mL TISAB IV is mixed with 500 mL deion. H ₂ O.

Analysis

25 mL sample and 25 mL diluted TISAB are pipetted into a plastic beaker and the concentration is measured with the calibrated Fluoride ISE. In between each measurement, the electrode is conditioned in TISAB IV for 5 min.

Parameters

Mode	MEAS Conc
Stirring rate	8
Signal drift	1 mV/min
Min. waiting time	0 s
Max. waiting time	215 s
Measuring interval	0.5 s

Results

Mean result (n = 10)

F / (mg/L)	s(rel) / %
0.0395	0.91