

Wallace & Tiernan® Analyzers/Controllers

Fluoride measurement

General

The Wallace & Tiernan® fluoride sensor measuring module is composed of the sensor card for the measuring systems MFC or SFC and the fluoride electrode.

Applications range from simple measuring tasks to complex control processes for treating potable and process water. For example, different fluoride compounds such as sodium fluoride (NaF) and sodium silicofluoride (Na_2SiF_6) in an aqueous solution as well as hydrofluosilicic acid (H_2SiF_6) are used for drinking-water fluoridation. The SFC/MFC systems make it possible to measure fluoride in combination with all of the relevant hygiene compliance parameters.

Typical applications

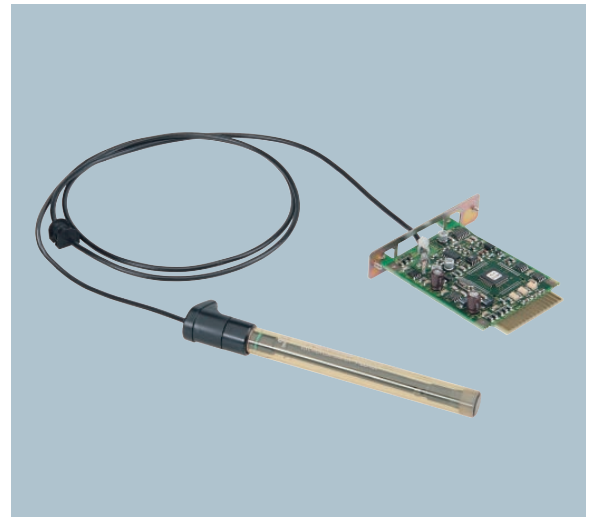
- Measurement and control tasks within the scope of adding fluoride by potable waterworks and public utilities
- Periodic sampling of natural and mineral waters
- Processes where fluoride are metered to liquid substances, e.g. to produce toothpaste, porcelain and artificial fertilizer

Features

The fluoride electrode can be used to determine fluoride in aqueous solutions easily and quickly, accurately and economically across a broad concentration range. The fluoride electrode is only installed in non-pressurized flow modules. The standard fluoride electrode is equipped with a 0.9 m-long (3.0 ft.) coaxial cable. Longer cables are available as an optional accessory.

Benefits:

- Accurate, reproducible measurement resistant to interference
- Short activation and running-in times
- Suitable for use in water from pH 5 to pH 8.5
- Compatible with all measurements of the MFC and SFC unit series



Fluoride sensor with cable and plug-in card






Product Sheet

Water Technologies

SIEMENS

Measuring Cell	Fluoride Sensor
Measuring principle	Combined electrode
Measuring range	0.2 – 20 mg/l
Working temperature	0 to +80 °C (32 – 176 °F)
pH range, sample water	pH 5 – pH 8.5
Conductivity, sample water	200 µS/cm – 200 mS/cm
Max. operating pressure	Non-pressurized
Installation length	135 mm (5.3 ")

Electronics	Sensor Card for MFC and SFC
Measurement input	Fluoride electrode
Input data	-1000 to +1000 mV, input impedance 10 ¹³ Ohm
Meas. accuracy/drift	Linearity 0.1 % FS/max. 0.2 %/10K
Measuring cable	Customized cable-plug combo

Flow Module	View	Slots (Non-Pressurized)	Technical Data
DEPOLOX® 5 Flow-through adapter with integrated, open sensor for oxidation and disinfection chemicals, compatible with additional measurements of the MFC/SFC series		 1 slot for fluoride sensor	Sample water flow: Controlled to 33 l/h (0.15 US gpm) with max. 4 bar (58 psi) inlet pressure* Integrated multi-sensor with flow monitor and compatible with temperature sensor max. sample water temperature: +50 °C (122 °F)
VariaSens™ Flow-through adapter in combination with membrane sensors and additional measurements of the MFC/SFC series		 1 slot for fluoride sensor	Sample water flow: Controlled to 33 l/h (0.15 US gpm) with max. 4 bar (58 psi) inlet pressure* Integrated multi-sensor with flow monitor and compatible with temperature sensor max. sample water temperature: +50 °C (122 °F)
Flow-through adapter for separate fluoride measurement		1 x fluoride sensor	Sample water feed line in bypass or directly in process water flow possible max. sample water temperature: +50 °C (122 °F)

● Membrane sensor
● pH/redox sensor
● Sensor for fluoride or conductivity

*: Sample water pressures of up to 40 bar (580 psi) can be adapted with special equipment.

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