

Reliable On-line Monitoring of Fluoride in Drinking Water



Water meant for human consumption, whether for drinking or cooking, is termed as drinking water. It covers all water, whether treated or untreated, supplied by any means for human consumption.

Quality of drinking water is detrimental to human health. Consistent and accurate online monitoring of relevant parameters is therefore necessary to ensure the quality is compliant with stringent regulations. Fluoride is one of the important parameters to be measured. Permissible level of flouride in drinking water is between 1 to 1.5 ppm as per BIS standard IS 10500 (2012).

Forbes Marshall offers a state of the art fluoride analyser system with real time accurate online monitoring of fluoride in drinking water.

Excess flouride intake can cause several health problems, including skeletal and dental fluorosis.

Common treatment processes to remove excess fluoride from water are reverse osmosis, activated alumin fluoride treatment and distillation. However, before treatment it is important to understand the level of fluoride in the water.

Regions of India having high likelihood of fluoride in groundwater (>1.5 mg/litre)



This image is for illustration, review and information purpose only and has been taken from the below source as an approximate indication of likelihood of fluoride in groundwater.

Reference : https://www.dora.lib4ri.ch/eawag/islandora/object/eawag%3A17318/datastream/PDF/Podgorski-2018-Prediction_modeling_and_mapping_of-%28published_version%29.pdf This image was created in part using QGIS version 2.14.1-Essen, available under CC BY-SA 3.0 from https://www.qois.org/en/site/

Process and Energy Efficiency | Environment

Features

Proven, on line fluoride analysis with a 10 ppb detection limit Continuous fluoride monitoring in a variety of sample types Precise measurement for protection against over-fluoridation Quick, stable, drift-free measurements minimise unnecessary calibration cycles Reduced maintenance costs with simplified operation and design Easy to install Recognised EPA method for fluoride Based on standard test method for Fluoride Ion ASTM D 1179-04 Analyser range 10 ppb – 200 ppm Eliminates problems with turbidity and suspended solids in samples, provides true accuracy in measuring total fluoride Holds calibration for long cycles between reagent changes Correlates to online IC for QA/QC validation Long life sensor technology offers stability and high performance

Other Parameters and Solutions Offered

Parameters	Available Limits as per Drinking Water Norms
pH value	6.5-8.5
Turbidity	1 NTU Max 5 NTU
Free residual chlorine	Min 0.2 ppm – 1 ppm max
Total dissolved solids	500 - Max 2000 mg/L
Colour, Hazen units	5-15 Max
Iron	0.3 mg/L
Hardness	200-500 mg/L

* Reference : IS 10500 : 2012 (Amended 2015) and WHO guidelines



Forbes Marshall Krohne Marshall Forbes Marshall Arca Codel International Forbes Vyncke Forbes Marshall Steam Systems Opp. 106th Milestone, CTS No. 2220, Mumbai-Pune Road, Kasarwadi, Pune – 411034 INDIA Tel : +91(0)20-68138555 Fax : +91(0)20-68138402

Email : mvyas@forbesmarshall.com, ccmidc@forbesmarshall.com

www.forbesmarshall.com

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