

Method Number: TM 104

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**Method Summary****Determination of Fluoride by Discrete Analyser****Scope and Range**

This method determines fluoride in aqueous samples by colourimetry, using the discrete analyser. This method is accredited to ISO17025 and applicable to natural waters including ground water, industrial effluents, CEN leachates, crude and final sewages.

Limit of Detection: 0.5mg/l

Method range: 0.5 - 3.00 mg/l.

ReferencesMethod 4500-F E. AWWA / APHA 20th Ed., 1995.

Method 340.3, Fluoride, EPA, 1971.

Principle

A portion of sample is filtered prior to analysis.

Samples are analysed using a photometric analyser. Alizarin forms a red complex with either lanthanum (III) or cerium (III), which turns blue upon the addition of fluoride due to the formation of a mixed ligand complex containing both fluoride and alizarin. Additional reagents are added to enhance reagent stability and provide optimum pH for the colour forming reaction. This method uses the cerium alizarin complex, which is measured at 620 nm.

Interferences

High aluminium (>1000 µg/l) and highly coloured samples can cause interference.