# ANALYSIS OF FLUORIDE IN WATER

A rapid and simple method for the measurement of fluoride concentration in water in the range of 0.1 - 100 ppm.

## Equipment Required

1. EDT Model DR359TX Ion Meter or pH meter with millivoly Scale
2. EDT directION Fluoride Combination ion selective electrode(3221)

## Reagents

1. 100 ppm fluoride standard
2. Total ionic strength adjustment buffer (TISAB)
3. 1 mol/1 $KNO_3$ reference electrode filling solution

## Sample Preparation

To a volume of sample add an equal volume of TISAB.

## Standard Preparation

Make up standards of 100, 10, 1 and 0.1 ppm by serial dilution of the 100 ppm standard with deionised water.

Dilute each standard with an equal volume of TISAB.

## Method

Immerse the electrode tipin each of the standards, least concentrated first and most concentrated last, rinsing the electrodes with distilled water between standards.

Plot a graph on lin/log graph paper of mV response against standard concentration.

Immerse the electrode tip **in** the sample and plot sample concentration from the graph.

**This determination may be carried out directly in concentration units by use of the "concentration" modes on EDT directION ION Meters**

## Calculations

As both standards and samples have been diluted by the same amount the result obtained from the graph is the concentration of the original sample.