

# Fluoride Sensing In Potable Water

## Introduction

Fluoride is abundant in nature: Natural sources such as minerals, volcanoes, marine aerosols and industrial processes such as coal combustion, toothpaste making, steel manufacturing, etc. being the main contributor. Thus, different sources of drinking water are always likely to contain Fluoride in the range from 0.7



to 1.2 mgL<sup>-1</sup>. However, at high concentrations it poses serious health threat such as acute gastric and kidney disorders, dental and skeletal fluorosis, DNA damage, etc. Therefore, the World Health Organization has set the maximum permissible limit in drinking water at 1.5mgL<sup>-1</sup>.

## Features

- Environmentally friendly carbon-dots for low cost sensor
- No-reagents required
- Rapid analysis in less than 20 seconds
- Portable design

## Specifications

Technique	:	Fluorescence
Mode	:	Off-line/Test Kit
Range	:	1 ppm-200 ppm
Resolution	:	1ppm
Temperature	:	20-40°C

## Applications

To measure Fluoride level in potable water, municipal drinking water plants, industrial effluent release plants, and sewage treatment plants.

## Status

Lab prototype ready and limited field trials done.

