

## ABSTRACT

Fluoride levels in drinking water is of important public concern. A fluoride concentration of around 1.0 mg/l effectively prevents dental caries without harmful effects on health. The disease Fluorosis may occur when the fluoride levels exceed the recommended limits. People drinking water containing very high amounts of fluorides are afflicted with discoloured or mottled teeth.

In most rural areas of Sri Lanka where public water supplies are not available, well water is used for drinking purposes. In the present study, water samples from drinking water wells in several districts in the island were analysed for their fluoride levels.

The Sri Lanka Standards Institute (SLSI) recommends a maximum desirable level of 0.6 mg/l and maximum permissible level of 1.5 mg/l of fluoride in drinking water. Accordingly, the study revealed three categories of districts i.e. ;

- Category I - Regions where the fluoride concentration is less than 0.6 mg/l.
- Category II - Regions where the fluoride concentration is between 0.6 mg/l and 1.5 mg/l.
- Category III - Regions where the fluoride concentration is greater than 1.5 mg/l.

In view of the caries reducing properties of fluorides , it is important to consider fluoridation of water supplies in areas with a very low concentration of fluoride in the water supply. Water supplies in which fluoride levels exceed the maximum permissible concentration of 1.5 mg/l may result in dental fluorosis of people drinking such water. Defluoridation of water supplies in which the fluoride levels exceed the recommended levels is therefore important.