Abstract

Fluoride is a highly toxic substance, ingestion of excess fluoride, most commonly in drinking-water, can cause fluorosis which affects the teeth and bones. Moderate amounts lead to dental effects, but long-term ingestion of large amounts can lead to potentially severe skeletal problems. Paradoxically, low levels of fluoride intake help to prevent dental caries. The control of drinking-water quality is therefore critical in preventing fluorosis. To examine the suitability of water for drinking and irrigation purposes in context to fluoride concentration, a physico-chemical study of the ground water of Osian region of Jodhpur district of Rajasthan state has been carried out. For this, Fluoride concentration of forty water samples were collected from the region, during pre-monsoon and post-monsoon seasons in the month of June and November 2013 respectively, to assess the quality of water in the study area.
Concentration of fluoride was recorded 0.3 mg/L to 8.3 mg/L in pre-monsoon and 0.2 mg/L to 8.1 mg/L in post-monsoon season. The results were compared with standards prescribed by Indian government IS: 10500 and the relative distribution of fluoride in the region is shown through a pie chart. This analysis can be useful for carrying out remedial measures for high fluoride concentration, region.

References

- Indian Standard Specifications For Drinking Water IS: 10500.
- Voice of America News, October 29, 2009

Index Terms

Computer Science
Applied Sciences

Keywords
Fluoride Osian Region Physico-chemical Analysis Water Quality.