



Fluorides in Some Groundwater Samples of Ghansawangi Tehsil

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ABSTRACT

Determination of fluoride concentration of twenty groundwater samples and surface water samples from sites in Ghansawangi Tehsil of Jalna district was carried out using ion selective electrode and out come of the results were discussed in the light of pollution status of study area.

Key words: fluoride ion concentration ground water samples Ghansawangi Tehsil.

Introduction

Ghansawangi is considered to be oldest and religious town in Jalna district of marathwada region. A famous "temple of Narsimha" is situated at Ghansawangi town. The resident of Ghansawangi tehsil usually use water from dug well and bore well for drinking and domestic purposes there is a huge variation in the concentration of different species due to factors like depth, different land, underground water conditions etc. The present work attempts to evaluate the groundwater quality in GhanSawangi Tehsil of Jalna district for potability.

Material used

In the present study 20 ground water natural (borewell) samples where collected from different sites of Ghansawangi Tehsil in brown glass bottles with necessary precautions and preserved as per the recommended procedures.

All the chemicals used wear of A.R.grade. Glassware used were A grade. Double distilled (DD) water was used throughout the work to prepare standard solutions



TABLE 1 . Fluoride concentration n ground water and surface water samples .

Sample	Fluoride [F-]
1	0.60
2	0.30
3	0.40
4	0.80
5	0.50
6	0.70
7	0.70
8	0.10
9	0.20
10	0.80
11	0.50
12	0.60
13	0.40
14	0.30
15	0.70
16	0.10
17	0.90
18	0.20
19	0.50
20	0.40

METHOD

Fluoride concentration in aqueous samples where determined with fluoride ion electrode (IRON) and ORION 407 A Ion Meter. A 25 ml of Aliquot was taken in polythene breaker and 25 ml of TISAB-III(Total ionic strength adjuster ,buffer, ORION Application solution) was added on Meter was standardized against solution of known fluoride concentration in the standard samples and read directly on the meter scale. The was calibrated in ppm of fluoride concentration in water

RESULTS AND DISCUSSION

Fluoride has little significance in industrial waters, but in amounts of 1 to 1.5 ppm it is an effective preventive of dental curies. Above the amount chloride may



cause dental fluoresciscis and skeletal fluorosis such water should be defluoridated to reduce the fluoride concentration to the acceptable levels. In the present work fluoride concentration varied from 0.10 ppm to 0.90 ppm. The values obtained are will below permissible limit 1ppm, prescribed by ICMR3.

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