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PHYSICO-CHEMICAL PARAMETER OF GROUND WATER IN SONAI IN AHMEDNAGAR DIST, MAHARASTRA

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Abstract:
The present community deals with the study of Physico-Chemical parameters of Groundwater in Sonai in Ahmednagar Dist. Maharastra. The work was carried out during year 2015. This study was done for the sake of understanding of various natural and anthropogenic processes influencing the groundwater and to develop affective management strategies for the future. The parameter like Temp., electric conductivity , P^H , Dissolved Oxygen, Chlorides, Salinity and Total hardness was studied.
Keywords: Physico-chemical parameter-Groundwater-Sonai.

Introduction

The ability of water to dissolve minerals determines the chemical nature of the groundwater. Groundwater is most abundant and readily available source of freshwater followed by lakes, Reservoirs, rivers and Wetlands; groundwater represents over 90% of the world's readily available freshwater resources (Boswinkel, 2000.). Ground water contains salts in solution that are derived from the location and movement. All ground water contains salts in solution. Soluble salts in ground water originate from solution of rock material. Ground water pollution is the artificially induced degradation of natural ground water quality consumption of the water creates hazards to public health through toxicity throughout the India many workers worked on the ground water quality in relation to drinking water (Venkata1992.). There is no back record is found about the ground water quality of Sonai. (M.S.). India hence this investigation was undertaken.

Materials and Methods

The samples was collected in acid wash five litre plastic container in the morning hours. The sample were brought to the laboratory for analysis. The analysis was done by standard literature gioven by APHA and Trivedy (1987).

Results and Discussion

The ground water parameter were studied and recorded throughout the year (2015). The profile of physio-cochemical parameters of sonai (M.S.) India recorded in table No.I the physicochemical parameter were studied recorded as follows

Temperature : - a) Air – the was range between 23 to 42 ^{0}C the maximum air temprture and minimum during winter months b) Water- The water temp. was varied between 21 to 34 ^{0}C the water temperature was recorded highest in summer months and lowest in winter months the water temperature was consistently lower atmospheric temperature

Electric Conductivity: – Varies between 1.0081 to 1.5123 micro ohms /cm^3 E.C. was maximum during winter and minimum during summer similar finding was recorded by satyanarayana et al (2008).

P^H :- The P^H values was recorded highest in winter season and lowest in summer (6.5 to 8.1) . . . The P^H value was recorded highest in winter

Dissolved Oxygen (D.O):- It was recorded maximum (4 mg/lit) in summer and minimum during monsoon months (1mg/lit)

Chlorides:- It was recorded between 102.65 to 534.81 mg/lit. The higher values of chlorides were recorded in monsoon and lower in winter. According to karnath (1989). The high values of chlorides are due to pollution of ground water samples from chloride rich effluents.

Salinity:- Salinity were ranged between 245.2 to 1280.52 mg/lit. The maximum values of salinity was recorded in mansoon months and minimum values in the winter months.

Total Hardness:-The total Hardness ranged between 571.43 to 2019.10 mg/lit. the total hardness values was recorded highest during mansoon and lowest during winter.

Table No: I Physico-Chemical parameter of groundwater in Sonai (M.S.) India.

Sr.No.	Parameter	Range
1	Temperature a) Air b) Water	23^0 to 42^0 C 21^0 to 34^0 C
2	Electrical Conductivity	1.0081 to 1.5123 micro ohms /cm^3
3	P^H	6.5 to 8.1
4	Dissolved Oxygen	1 mg/lit-4 mg/lit
5	Chlorides	102.65 to 534.81 mg/lit
6	Salinity	245.2 to 1280.52 mg/lit
7	Total Hardness	571.43 to 2019.10 mg/lit

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