



TEMPERATURE PRESENT IN TUBE WELL WATER SAMPLE OF NIPANI TOWN

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Abstract

The Tube well water samples were taken from the vicinity of Halsiddhnath sugar factory from Nipani town and analysed every month throughout the year. We have studied the temperature in tube well water sample. Temperature content was found higher than the desirable limit of (18.4 °C to 30.2 °C). The seasonal analysis indicated that the temperature were generally higher in summer and winter than their levels in rainy season.

Key words: Tube well water sample , pollutant , Temperature (°C)

I. INTRODUCTION

Due to rapidly increased in population the demand for water resources also increased & water pollution problem arises. In the present context of emerging water supply problems, the water supply situation, nature of problems and alternative options to meet the present and future needs require critical evaluation. The analysis of availability of water, quality of water, technological options for safe water supply and people's participation is essential for the development of sustainable water supply systems, their uses, is very important for polluted free, fresh n safe water sources.

In the present study, the temperatures were studied in tube well water samples at Nipani. The tube well water samples were taken from twelve tube wells in the glass bottles by following standard procedure. Samples were taken from twelve tube well water samples, which are located at 1. Bhim Nagar, 2. Nagoba lane, 3. Kharade lane, 4. Niamar mal, 5. Shivaji Nagar, 6. Andolan Nagar, 7. Kamgar Chowk, 8. Ambale polt, 9. Mestri Nagar, 10. Ramling Temple, 11. Mestri Nagar, 12. Bhise lane. The samples were collected every month throughout the year and analyzed in laboratory and determined temperature °C.

II. MATERIALS AND METHODS

Temperature of water is an important parameter in determining PH , Electrical Conductivity , and dissolved ions present in water . Temperature also affects forms of alkalinity , kinetics of chemical reaction as well as pattern of micro flora , influencing biological reactions and there by chemical equilibrium of water. Due to increase in temperature, there is a decrease in dissolved oxygen content which is less at the surface and more at the bottom, so it is true with other gases in water. This is turn affects biological processes such as decomposition of organic waste and gaseous exchange in water . Thermal pollution of ambient water seriously affects the aquatic biota and may lead to reduction in aquatic flora and formation of algal bloom in water.

III. RESULTS AND DISCUSSION

Water temperature recorded a minimum in tube well water is 18.4 °C in November as well as February and maximum of tube well water is 30.2 °C in June (Table No 11) Average maximum temperature of water was recorded at sampling site No. 4(Fig No – 10).But at some stations, there was no significant change in tube well water temperature due to no discharge of industrial effluents.

On the basis of three seasons , an average water temperature was 20.75 °C , 25.26 °C , 28.16°C , during winter , rainy and summer season in tube well water temperature was 15.60°C, 16.25OC and 25.26OC during winter , rainy and summer seasons respectively. (Fig NO. 1)
 Sumitra (1969), Kannan & Jog (1980)recorded their observations in tropical impoundment's.

Table 1: Temperature (°C) of Tube-well water sample

Stations	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	10.4	19.3	20.0	21.2	20.4	15.4	20.3	25.7	23.1	17.5	18.7	22.3
2	17.3	18.7	23.2	25.4	25.1	30.1	27.5	20.3	21.4	8.4	8.5	16.0
3	17.2	18.3	23.4	23.8	27.2	30.3	25.8	21.5	20.9	20.2	20.8	20.3
4	16.3	16.3	20.3	24.4	26.0	28.4	26.0	21.6	20.5	21.4	23.5	16.2
5	16.3	15.5	21.4	23.8	24.5	29.1	24.1	22.5	19.3	21.5	22.8	16.2
6	16.5	20.1	27.3	27.2	26.3	30.3	30.2	20.7	20.2	23.0	25.3	16.5
7	19.6	26.3	27.0	26.3	29.4	30.8	29.4	24.8	24.7	21.0	25.1	17.1
8	16.4	20.4	26.0	30.4	26.4	31.3	30.1	29.3	23.2	21.0	22.4	16.2
9	16.0	20.8	25.6	26.7	30.5	32.5	29.5	24.7	21.8	22.8	24.5	17.5
10	16.2	19.4	26.3	28.7	27.6	30.4	29.3	24.5	22.8	20.3	20.4	17.8
11	16.4	21.3	27.0	24.3	26.3	29.3	27.4	23.7	21.9	21.9	20.3	17.9
12	16.8	20.4	23.0	22.3	25.4	30.6	30.1	20.5	21.7	19.4	18.3	15.0

Stations	Average	SD
1	20.3	2.7
2	21.8	4.4
3	22.5	3.8
4	21.7	4.1
5	21.4	4.0
6	23.6	4.8
7	25.1	4.1
8	24.4	5.3
9	24.4	5.0
10	23.6	4.8
11	23.1	3.9
12	22.0	4.8

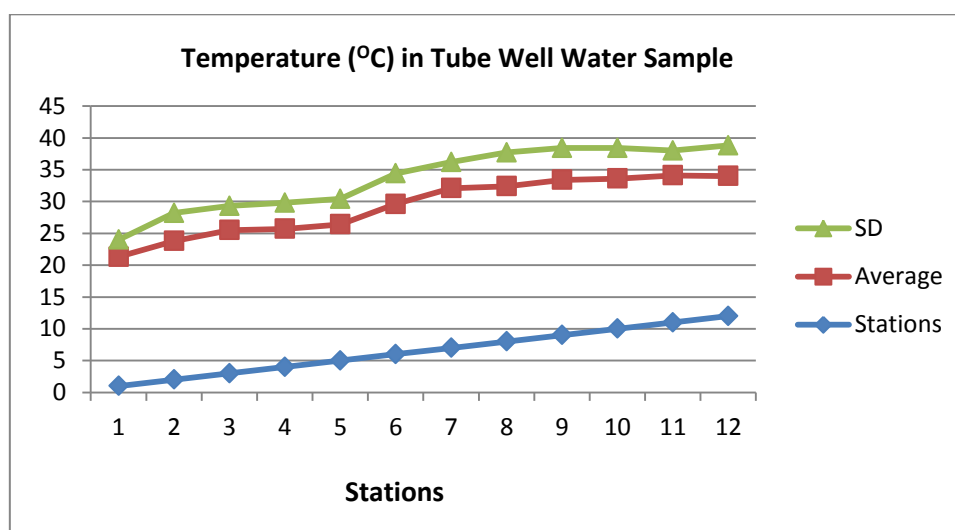


Figure. 1: Temperature (°C) of Tube-well water sample

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