

Study of dissolved oxygen present in the underground water of Nipani town

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ABSTRACT

The ground water samples were taken from twelve tube wells from nipani town and analysed every month throughout the year. So, we have studied levels of dissolved oxygen in underground water. DO content was always above 5 mg/litre and went up to 12.56 mg/litre.

Key words: Underground water, Pollutants, Dissolved oxygen (DO).

INTRODUCTION

Industrialization and urbanization created serious problems of water pollution of surface water i.e. ponds, underground water tube-wells. In developing countries like India, this problem has become acute day by day.

In the present study, the levels of DO were studied in the vicinity of Halsiddhanath sugar factory located at Nipani. The underground water sample were taken from twelve underground tube wells in the glass bottles by following standard procedure. Sample were taken from twelve underground tube wells which are located at 1. Bhim Nagar, 2. Nagoba lane, 3. Kharade lane, 4. Namar mal, 5. Shivaji Nagar, 6. Andolan Nagar, 7. Kmgar Chowk, 8. Ambale polt, 9. Mestri Nagar, 10. Ramling Temple, 11. Mestri Nagar, 12. Bhise lane. The samples were collected every month throughout the every year and analyzed in laboratory for the levels of DO.

RESULTS AND DISCUSSION

Dissolved Oxygen

The average concentration of oxygen is 20.90 %. DO content was always above 5mg/litre

and went up to 12.56 mg/lit. DO values were extremely low at Ashray Nagar and Pratibha Nagar and confluence of Andolan Nagar and Azad Nagar (Sample sites 3, 4 and 5) because of high loads of organic matter in the present study.

Layout Do observed during rainy season and further reduction in summer at various sampling stations is due to more of waste and clean natural fear of surface waters. (Table 1 & 2).

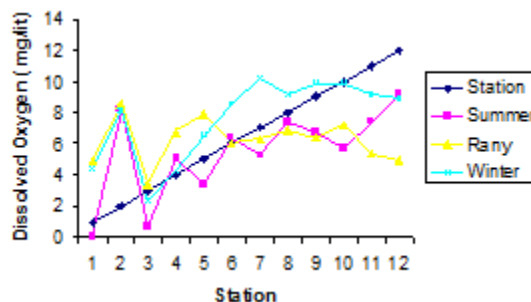


Fig. 1: Average seasonal level of Dissolved oxygen (mg/lit) of pond water samples

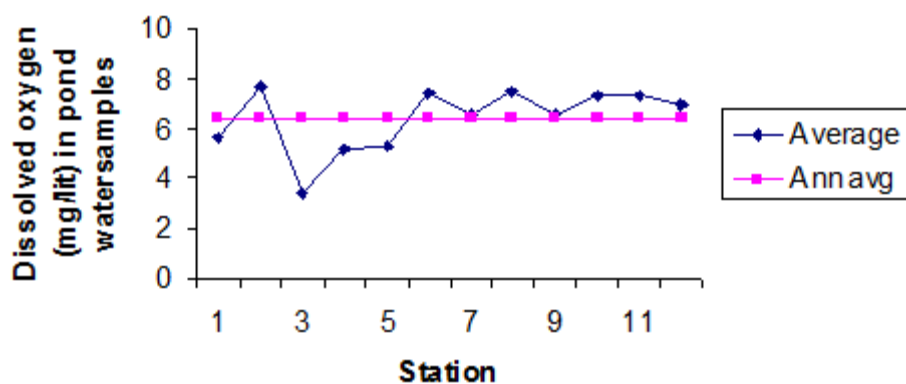
Table 1 : Dissolved Oxygen (mg/lit) in pond water samples during the monitoring period (January 1999 to December 1999)

Stations	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	5.70	4.70	6.80	3.20	5.44	5.48	2.73	9.10	8.15	7.60	5.60	3.40
2	12.60	8.50	10.20	7.55	6.60	6.70	2.30	7.55	7.60	8.00	6.60	8.30
3	2.78	2.16	0.91	0.91	0.81	0.47	6.87	6.70	7.55	7.20	2.60	2.40
4	2.40	4.25	4.48	4.65	4.76	5.36	6.32	7.41	6.47	5.57	4.65	5.20
5	8.44	2.20	0.81	2.30	2.71	3.78	6.75	7.52	7.45	6.36	6.20	9.15
6	10.80	9.36	9.40	12.46	6.28	6.19	4.22	7.43	4.20	5.25	4.75	8.60
7	7.41	7.44	7.47	8.50	4.60	6.60	6.33	7.25	4.83	4.74	4.81	8.44
8	11.07	11.08	10.05	8.20	7.26	4.47	4.47	8.51	5.80	5.23	6.30	7.45
9	7.20	6.81	6.02	7.56	6.67	5.25	8.50	5.94	5.68	5.40	6.50	7.40
10	10.81	10.74	8.43	6.85	5.57	6.36	8.74	5.10	5.17	6.12	8.40	10.37
11	5.76	10.50	8.87	10.37	10.51	8.45	6.72	5.26	5.45	5.80	8.03	7.77
12	5.30	4.80	6.41	8.80	8.36	7.69	6.81	7.10	7.23	8.19	7.56	5.30

Stations	Average	Ann Avg
1	5.66	6.43
2	7.71	6.43
3	3.45	6.43
4	5.13	6.43
5	5.31	6.43
6	7.41	6.43
7	6.54	6.43
8	7.49	6.43
9	6.58	6.43
10	7.31	6.43
11	7.33	6.43
12	6.96	6.43

Table 2: Average seasonal level of dissolved oxygen (mg/lit) of pond water samples at various sampling stations

Station	Summer	Rany	Winter
1	0.00	4.91	4.41
2	8.20	8.53	8.21
3	0.67	3.41	2.33
4	5.03	6.80	4.26
5	3.38	7.89	6.53
6	6.40	6.02	8.54
7	5.32	6.36	10.19
8	7.36	6.83	9.17
9	6.68	6.40	9.89
10	5.71	7.20	9.87
11	7.44	5.35	9.16
12	9.17	4.90	8.90

**Fig. 2: Dissolved oxygen (mg/lit) in pond water samples during January 1999 to December 1999**

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