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STUDIES ON EFFECT OF DOMESTIC ACTIVITIES IMPACTS ON WATER QUALITY OF RIVER BORI NEAR NALDURG OSMANABADDISTRICT MAHARASHTRA

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ABSTRACT

The present investigation reveals that, the effect of various human activities impact on the water quality of Bori River near to the District Osmanabad. The investigation is important to the health, hygiene; agricultural as well as industrial problems of the inhabitant are co-related to the surrounding water resources. In this investigation the monthly testing of physic-chemical parameters of surrounding water resources monthly. In this we analyzed the temperature,pH, and turbidity,T.D.S., D.O, Free CO_2, Alkalinity and Hardness. The work was carried throughoutyear 2017.

KEYWORDS: *domestic activities – Bori river water quality.*

INTRODUCTION

Ecosystem is a complex mixture of living and non-living co-ordinate unite by which the it is nothing but mixture of biotic as well as abiotic substances in an systematic way thus it balances the healthy population, healthy communities, in Ecosystem Due to the some way the changing trend of biotic factors the balancing ecosystem will be changing day by in both ecological factors due to these activities and this change co-relate to quantitative as well as qualitative composition, its distribution of aquatic life of the Ecosystem.This ecological imbalance disturbs the Ecological diversity of that area. Beside this there are many places this problem arises and many workers does the work on this changing nature of water resources such as Ruttner (1953), Walia (1983), and Kumar (1983).

The present investigation selected for throughout year of 2017 and there is no authentic record was found, hence the Bori RiverSelected for work.

MATERIAL AND METHOD

For the investigation the samples were collected from before, after various sampling station around the NaldurgofOsmanabad, through the year of 2017 on regular period of the every months. The collected samples only temperature and pH, DO analyzed at station and other are brought to the laboratory to analyzed for all the samples are collected in plastic can of the 2 liter capacity at morning period and analyzed according to standard method which are suggested by the Mohanta and Patra (2000) as well as APHA (1985), and some parameters are analyzed by according to Turbidity by Sharma and Pandey (1998),Conductivity by

Jaffer, Javed S. (1991), DO byShivnikar et.al (1999),Temp – Arvinda et.al, TDS by Mohanta B.O. and Patra A.K. (2000).

Average monthly variations in Water quality parameters of River Bori During Jan. to Dec. 2017.

	Temperature		pH	Turbidity	TDS	DO	Free CO_2	Alkalinity mg/lit.	Hardness mg/li
	Air	Water							
Maximum	41.20 **(May)**	36.00 (May)	8.18 (Aug)	27.8 (Aug)	276 (Aug)	10.40 (Jan)	0.7 (July)	192 (May)	131 (Jan)
Minimum	19.70 **(Jan)**	17.40 (Jan)	7.1 (March)	8.30 (Jan)	128 (Jan)	5.1 (Jun)	1.3 (Feb.)	110 (Oct.)	81 (May)

RESULT AND DISCUSSIONS

The collected samples were analyzed with the help of above standard methods which are suggested by various worker and co-workers. The various results ecological parameters as follows –

1. **Temperature: -** It is analyzed at the sampling spot with help of thermometer. The temperature value is highest at station B because of domestic waste from locality Bio-degradation of organic wastes are increases the water temperature.
2. **pH**: -It is valuable a biotic factor which affects the reaction of carbon dioxide when the PH of any reservoir water shows alkaline in nature.
   It is observed at the sampling spot at the time of sample collection period. The pH value is highest at sampling station-B because of domestic as well as human activities than sampling station – A.This is due to the alkaline salts effluents and decomposition of organic matter resulted in to highest value of pH.
3. **Turbidity: -** Due to domestic activities and industrial as well as agricultural waste the turbidity value is more in both samples.
4. **T.D.S.:-** The value of TDS is increased in sampling station – B. This is because of the domestic activity of the locality.
5. **D.O. :-** Presence of dissolved oxygen in water may be due to direct diffusion from air or photosynthetic activity of autotrophs.The value of D.O. is highest at sampling station.
6. **Free CO_2:**Free CO_2 was determined by titration method. The maximum values were recorded in the month of Feb. and minimum in the month of July.
7. **Alkalinity:** - It plays a vital role in controlling enzyme activity and the capacity of water to neutralize a strong acid. The presence of alkalinity in water due to the salts of carbonates and bicarbonates nitrates, silicates etc.It was recorded minimum in the month of October (110 mg/lit) and maximum in the month of May. It was recorded in the monsoon months due to the dilution effect.
8. **Total Hardness –** Total hardness values was recorded highest during January and lowest during May.

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