iJRASET
International Journal For Research in Applied Science and Engineering Technology

INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 6 **Issue:** III **Month of publication:** March 2018

DOI: http://doi.org/10.22214/ijraset.2018.3259

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International Journal for Research in Applied Science & Engineering Technology (IJRASET)
ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 6.887
Volume 6 Issue III, March 2018- Available at www.ijraset.com

Water Analysis from Bori River around the Amalner City in Maharashtra.

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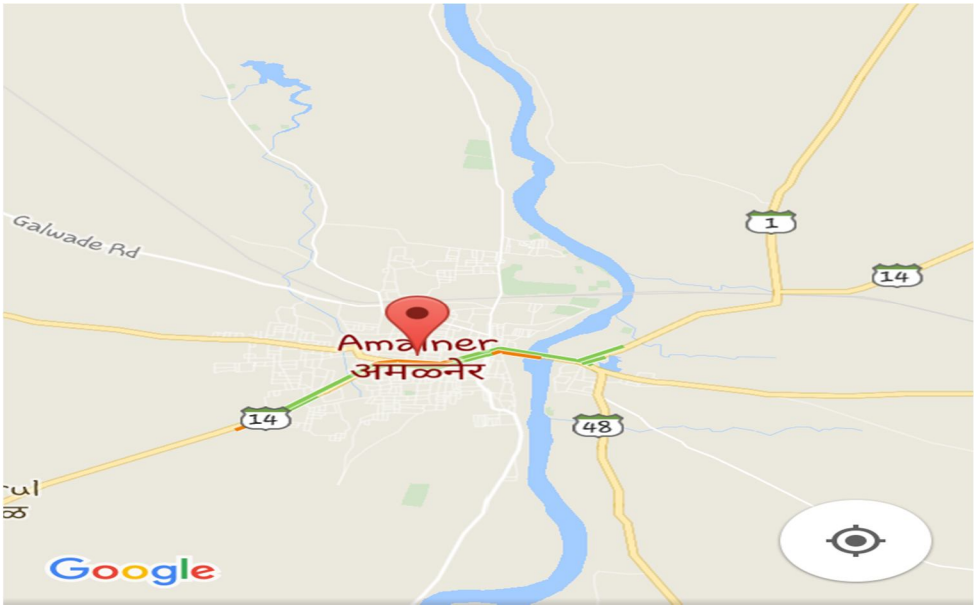
Abstract: ***The Bori river is the tributary of the Tapi river, Amalner is situated on the Bori river. Amalner is city and Municipal council Dit. Jalgaon, Maharashtra. This paper is micro level case to study and analysis of Bori river water, in this paper made report on analysis of Bori river water, the quality of the water is described according to physical, chemical characteristics like pH, Chloride and Fluoride .This study based on secondary source of data Government Report (Maharashta Pollution Control Board), research articles from journals, Books and Internet sources.***
Keywords- Chloride, Fluoride, pH, Water Pollution

I. NTRODUCTION

Now a day water pollution is one of the major environmental problem and its occurs due to minor or major rivers, so we need to take care of an every Indian rivers because the rivers is the sources of the drinking water. Therefore we should analysis of river water and taking care accordingly. Water used for domestic use and agricultural cultivation, agricultural activity are carried out at very large scale on the Bori river.

The pesticide and chemical fertilizer this is used for agricultural fields are usually washed away into the river. These activity are responsible for may changes the quality of river water. Most of the people take a bath and wash the cloth in the river and also here placed in between the river temple of The Saint Sakharam Maharaj Temple is one of popular religious places in the region and is named as the copy of Pandharpur(called as Mini Pandharpur). The temple has a fair is also held annually. Therefore the river water also may change quality of water. The water quality at this location is analyzed.



II. MATERIAL AND PARAMETER

A. Sample Collection

All water samples were collected from five locations along the river. During the present study some of the physical and chemical parameters were determined. The measurement of Temperature, pH, Fluoride, Chloride were taken in the field, immediately after the collection of samples using portable water quality analyzer Chloride, fluoride, Total Hardness Locations of sampling stations are given in Table 1.

TABLE I: SAMPLE STATION

Sr.No	CATEGEORY	SAMPLE STATION	LOCATION	DISTANCE (Km)
I	River Point	S_1	Shri Ram Mandir	1
II	River Point	S_2	Sane Nagar	3.5
III	River Point	S_3	Ambare	7.5
IV	River Point	S_4	Nimbora	14
V	River Point	S_5	Nandgaon	4

B. Water quality parameter included in revier assessment

The river water requires many different parameters to be sampled. The parameters analyzed in this assessment include

1) *pH :* pH parameter is used for the measure of the acidic and basic character of a water sample. The pH means potential of Hydrogen the range of this scale is from 0 to 14.the pure water pH range is 7, it consider as neutral. The pH less than 7 sample is considered acidic and the sample greater than 7 consider as basic. For example, a solution pH 3 is more acidic than pH 6 solution.
2) *Potentiometric Methods (Fluoride detection):* Fluoride in drinking water can be easily estimated by direct potentiometric analysis using fluoride ion selective electrodes (Jacobson et al. 1977).In this instrument use single crystal lanthanum electrode. The single crystal lanthanum electrode was introduced by Frant and Ross (1968), and it has provided a reliable method for measuring the fluoride activity (Snell and Ettre, 1971).
3) *Chloride detection:* Chloride detection method is very easy to use in laboratory. In these method take water sample with add nitric acid and silver nitrate. Exercise the caution while using chemicals such as nitric acid and silver nitrate, and wear personal protective equipment such as gloves, goggles and protective clothing while handling them. Silver nitrate can turn skin and clothing black.

III. EXPERIMENTAL ANALYSIS

Table Ii: Water Quality Parameter Of Sample

Sr. No.	SAMPLING STATION	TEMP	pH	CHLORIDE (mg/Lit)	FLUORIDE (mg/lit)
1	S_1	26.80	7.41	90.4	1.25
2	S_2	27.68	8.20	115.2	2.10
3	S_3	28.12	7.33	75.8	0.62
4	S_4	27.15	8.10	86.20	1.05
5	S_5	26.90	7.24	55.9	0.55

IV. CONCLUSION

In human life drinking water safety fluoride range is 0.03 to 0.68 mg/lit. But result of the study shows that, some stations observed variable fluoride range. The Bori river getting hard water at some stations due to the chemical discharge and variation of fluoride range. It is responsible for some health problems to human. The analysis of the water quality parameters of River Bori water from Five (05) different stations in Amalner city shows that the pH, Chloride ion, Fluoride ion, Total Hardness, are not well within the permissible limits. In conclusion from the analysis of the present study it may be said that the river water is not apposite domestic and drinking purpose need to treatment.

V. ACKNOWLEDGEMENT

Author thankful to Pratap College, Amalner and Amalner community for giving the permission to present analysis and providing necessary laboratory facility. Author also thankful to Mr. Prakash Pawar, Mrs. Manisha More, Ms. Pratiksha Shirode for inspiration and valuable suggestion during research work.

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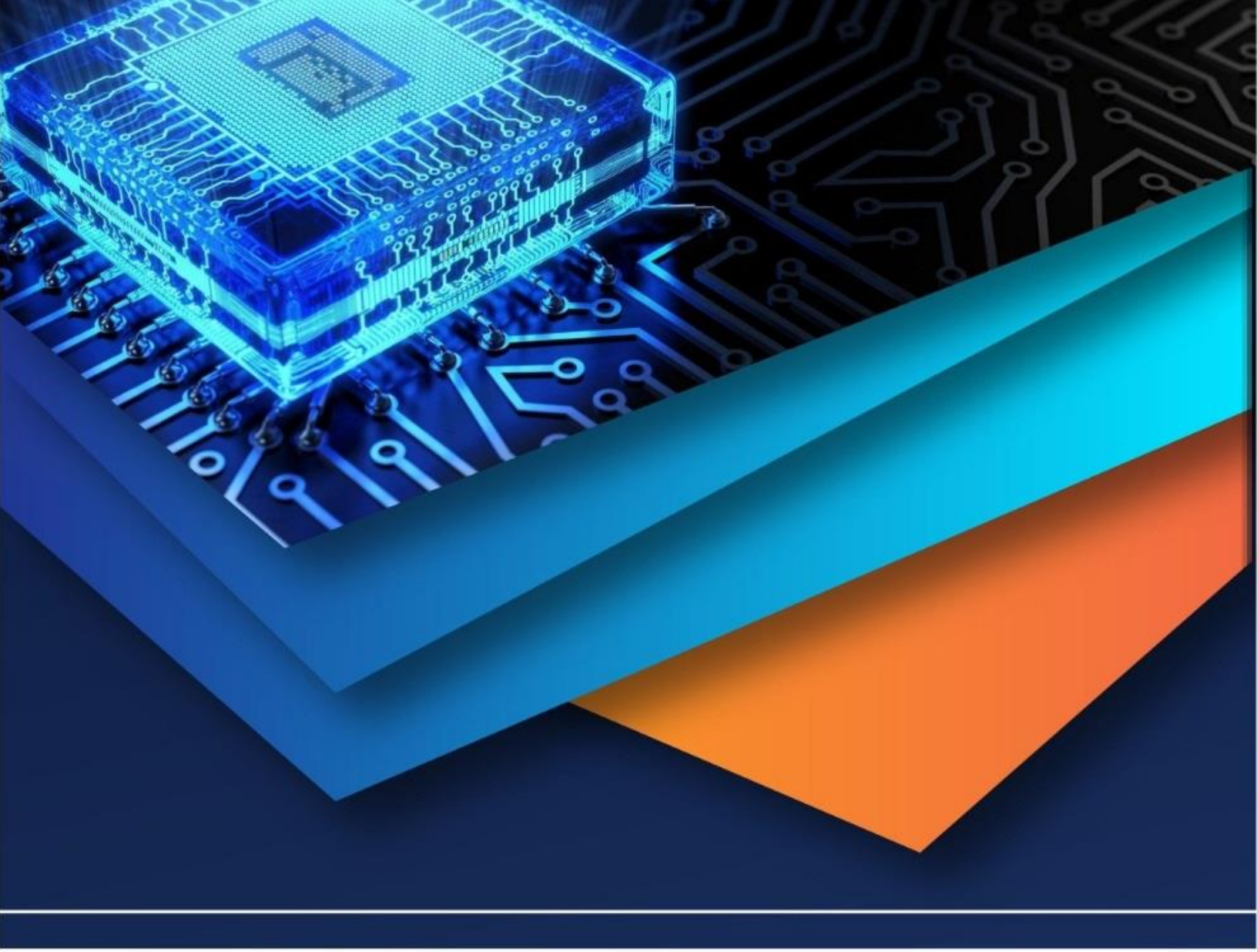

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