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GRT IMPACT OF RELIGIOUS ACTIVITIES LIKE GANESH FESTIVAL ON THE WATER QUALITY OF MULA RIVER IN PUNE, INDIA.



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Abstract: In this paper we focus on study of impact of religious activities like Ganesh festival on the quality of water of Mula river in Pune, for this purpose water sample were collected from pune immersion point at evening hours 7.00 to 8.00pm during pre immersion periods of Ganesh idols. Analysis of water sample was carried out significant changes observed during study period. Water of river get polluted, there is a need to aware nesses to use eco friendly material for idol.

Key words: Religions Activities, Ganesh idol immersion, Water analysis.

INTRODUCTION:

Ganesh festival is called as Pune Festival. Ganesh festival was spearheaded by Lokmanya Tilak during the British rule to create social awareness in our society. Pune city works hard for pretty decoration, music and dance, food items to celebrate the Ganesh festival for ten days and reflect current social problems like AIDS, Population, and Sports events.

Various families celebrate this festival by bringing small idols at their homes and worshipping it.¹

These Ganesh idols are constructed from degradable and non degradable material like plaster of paris, clay, lime, cement be sides these cloths, small iron rods, bamboo are used to decorate the idols using different types of paints and varnishes that may be toxic for aquatic ecosystem.² In Pune festival number of Ganesh idols in different sizes are immersed in river after 10 days worship. Due to immersion of Ganesh idols water of river (Mula) leads to significant change in water quality.

MATERIALS AND METHODS-

Mula, Mudha, Pavana rivers are located in pune. Water samples were collected from Pune immersion point during Pune festival 2013.

Samples were collected in polythene bottles which were pre-cleaned with distilled water at different intervals namely pre- immersion, immersion and post immersion in evening hours (7.00 to 8.00 pm.) Immediately these samples are transferred to research laboratory to carried out analysis of water sample, pH is measured using pH meter. EC is measured using EC meter. Sodium and potassium were analyzed using a flame photometer. Calcium and magnesium were analyzed by using EDTA titration methods chloride content was determined volumetrically by AgNo₃ titration method. Carbonate, bicarbonate were determined by volumetric method.

RESULT TABLE-

	Temp.	pH	EC	Na ⁺	Ca ²⁺	Mg ²⁺	K ⁺	Co ₃ ²⁻	HCo ₃ ⁻	Cl ⁻
Pre-immersion	27 ^o c	6.77	0.19	0.17	5.80	5.20	0.02	0.00	3.60	0.40
Immersion	27.5 ^o c	5.89	0.74	0.78	6.40	6.00	0.14	0.00	4.80	0.80
Post-immersion	30 ^o c	6.30	2.26	1.91	6.40	7.40	0.28	0.00	5.40	5.60

Unit- EC [mS/cm] & Na⁺, ca²⁺, mg²⁺, k⁺, co₃²⁻, Hco₃⁻, c l-[mg/l]

Temp ranged from 27^oc to 30^oc during study period. Due to immersion of Ganesh idols number of chemical and biological reactions increases in water and reduces solubility of gases which shows continuous rise in temperature from pre immersion to post immersion period. pH= - log[H⁺] pH of water is important because it governs solubility of nutrients. The pH ranged from 5.89 to 6.77. Acidic pH was observed during study period. EC of water continuously increasing from pre-immersion to immersion Ganesh idols and immersion to post immersion period. The EC ranged from 0.19 to 2.26(mS/cm) shows that low conductivity of water at the time of pre-immersion. The conductivity becomes medium at the time of immersion and it becomes very high at the time of post immersion period. The concentration of Na⁺, k⁺, Ca²⁺, Mg²⁺, Hco₃⁻, cl⁻ are increases from pre-immersion to post immersion. Due to presence of basic salts of sodium, potassium, calcium and magnesium total alkalinity increases.

CONCLUSION-

Ganesh idols are constructed from degradable and

non degradable materials. Immersion of Ganesh idols in water of river create pollution such polluted water damage to eco-system and not suitable for drinking and agriculture purpose. Quality of water of Mula River during study period Pre-immersion is high class, immersion is medium class, and post immersion polluted water improper to be used for agriculture purpose.

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