

PHYSICO-CHEMICAL WATER ANALYSIS OF SINDPHANA DAM MAJALGAON, TQ. MAJALGAON DISTRICT BEED

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Abstract: Sindphana Dam is constructed near the Majalgaon city by Maharashtra Government. The Dam present in Balaghat region in centre of Marathwada. Water is an important role in living things like animals, plants and human being. Study of Physicochemical analysis of water is done for the status and quality of water pollution in the span of the June 2019 to December 2019 at Sindphana Dam fulfilled the drinking water and irrigation facilities. The present study deals with analyses of some physicochemical parameters of Sindphana Dam water, physico-chemical parameters such as Dam water, temperature, odor, color, Taste, P^H , COD, BOD, Total Hardness, TDS etc.

Keywords: Physicochemical parameters, Sindphana, Majalgaon.

Introduction:

Water play essential role in human life. The WHO reports the almost 45 % of urban and 55% of rural community were without access of safe drinking water. Water fulfills the requirement for drinking purpose for human beings as well as animals and also for the irrigation of crops and plants. Near about 910 million societies around the world live without improved drinking water. The world health organization projected that 90% of cholera; diarrheal diseases are caused by unavailability of safe drinking water. Day by day the increase in population, industrialization, urbanization, agricultural activities and numerous human activities has increases the pollution of surface and ground water. [1,5]

Study area:

The present study comprises the analyses of water quality in terms of physicochemical parameters of Sindphana Dam water from Majalgaon, District Beed. The Dam water is mainly used for drinking, domestic and agriculture purpose.

Material and Methods:

The water samples were analyzed by Physicochemical method for study the position of water pollution of Sindphana Dam water in the span of Jun. 2019 to Dec. 2019. The samples were collected in the morning hours between 10:30 to 11:30 am in plastic container. Valuation of various physicochemical parameters like P^H of water by digital P^H meter Syntonic, water temperature was measured by using thermometer and. While other parameters

such as Total hardness, Total Dissolved Solid, BOD, COD, were valued in the laboratory by using standard methods, as prescribed Lamb[4,6].

Table: Month Wise Dissimilarity in Physicochemical parameters in Sindphana Dam.

Sr. No.	Parameters	June	July	August	September	October	November	December
01	P ^H	8.1	7.9	7.4	7.3	7.6	7.3	7.7
02	Temperature °c	25	23	24	22	22	21	22
03	TDS	210	221	214	252	266	242	232
04	Total hardness ppm	114	116	123	140	147	134	136
05	COD	15	17	14	13	16	14	15
06	BOD	1.70	1.50	2.10	1.60	2.10	1.30	1.80

Result and Discussion:

The P^H is a term used to designate the alkalinity or acidity of a substance as ranked on lateral from 1.0 to 14.0. In the present investigation P^H diverges from 7.3 to 8.1 which are in desirable limits. The temperature of water samples range from 21°C to 25°C. Water temperatures play an important factor which impacts the chemical, biochemical and biological characteristics of water body. The total dissolved solid is in range of 210mg/l to 266mg/l in month of September and October, it shows high due to heavy rainfall. The hardness of water is due to the presence of Calcium and Magnesium salts of sulphates, carbonates, and chlorides. Total hardness was determined by titrating against EDTA. The total hardness definite present is more than desirable limits due to enter water flow in the Dam with rain water and waste water from domestic waste.

Conclusion:

The present results of water analysis shows that greater total dissolved solid, more the total hardness as compared to quality control of water prescribed by Indian standard and WHO. In case of the parameter P^H, the observed values of given water samples are slightly alkaline and below the desirable limits. The potability of water should be increased by filtration and aeration.

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