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ANALYSIS OF WATER QUALITY USING PHYSICOCHEMICAL AND ICROBIOLOGICAL PARAMETERS IN VERJESHWARI RESERVOIR OF MUMBAI, INDIA

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ABSTRACT

A water sample was collected from hot spring of Vergeshwari for microbial and physiochemical study. Water sample is subjected to physiochemical analysis like pH, TDS, Acidity, salinity, dissolved oxygen (DO), biological oxygen demand (BOD) and chemical oxygen demand (COD). The BOD and COD were found in lower amount. Four bacterial strains were isolated from the water sample and all they are spore former, gram positive and gram negative, motile and non motile in nature. Among them one bacterial species was identified to Bacillus cereus and other as Acinetobacter sp. The performed MPN method showed the absence of coliform bacteria in the water sample. The Bacterial isolates were having potential to produce the hydrolytic enzymes such as protease, amylase, lipase, cellulose, invertase were analyzed respectively.

KEYWORDS: Acinetobacter, Amylase, Bacillus, Cellulase, Microbial and Physiochemical Analysis, Protease, Thermophiles