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Seasonal Variation in Physico-Chemical and Microbiological Analysis of Sewage Water in Gwalior City, India

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Abstract: The present studies were undertaken to assess the pollution level in sewage water in different season such as summer (April), monsoon (July) and winter (December). Sewage water samples were analyzed for various physico-chemical parameters like colour, temperature, taste, pH, turbidity, acidity, hardness, TDS, TSS, TS, chloride, alkalinity, free CO₂, carbonate, bicarbonate, sulphate, DO, BOD, COD. The bacteriological study of these samples included bacteriological parameters like Total plate count (TPC), Most Probable Number (MPN), Total Faecal Coliform (TFC) and Total Streptococcal Count (TSC) has given the information regarding the bacterial load and contamination limit. The present findings reveal that sewage water was highly polluted in summer as a result of contamination with industrial, agricultural and domestic wastes.

Key Words: Dissolved oxygen, Physicochemical parameters, Seasonal variation, Waste water