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Physicochemical and Microbiological Analysis of Drinking Water Collected from Gulshan-Ravi, Lahore

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Abstract:

The increasing pollution of drinking water sources in Pakistan and the consequent effects on human health and the environment is an issue of great concern. This study aimed to analyze the microbiological and physicochemical quality of drinking water samples (n=50) collected from Gulshan-Ravi Lahore, Pakistan. All water samples were subjected to conventional cultural, biochemical, and chemical methods for microbial enumeration and determination of physicochemical properties. A total of 50 bacterial isolates were isolated which include *E.coli* 30(60%), *Salmonella* spp. 9(18%), *Pseudomonas* spp. 6(12%), *Staphylococcus aureus* 4(8%), and *Vibrio cholera* 1(2%). The presence of fecal coliform organisms made the water unfit for drinking. However, the levels of the major physical and chemical parameters including heavy metals accessed were within the permissible limits of drinking water. The present study indicates that water testing would ensure the supply and availability of contamination-free drinking water and awareness among the people towards sanitation and hygienic condition for the storage of drinking water is needed to keep away the use of contaminated water.

Keywords: Water pollution, microbial enumeration, heavy metals, drinking water in Gulshan-Ravi Lahore.