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DETERMINATION OF TOXIC METALS IN WATER OF LAHORE CANAL BY ATOMIC ABSORPTION SPECTROSCOPY

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Present study describes the atomic absorption spectro-photometric determination of metals (Ni, Cr, Zn, Fe, As and Cu) in the surface water of Lahore canal passing through the center of Lahore (city) Pakistan. Analysis showed that month wise average Ni, Zn and As concentrations lies within the National Environmental Quality Standards limits for these metals as designed by Environmental Protection Agency Pakistan, while Cr, Fe and Cu showed marked rise in their month wise average concentrations from their limiting values.

Key words: Lahore canal, water quality, toxic metals, atomic absorption spectrophotometric

Introduction

Water is one of the essentials that supports all forms of plant and animal life [1] and it is generally obtained from two principal natural sources. Surface water such as fresh water lakes, rivers, streams, etc. and Ground water such as borehole water and well water [2, 3]. Water has unique chemical properties due to its polarity and hydrogen bonds which means it is able to dissolve, absorb, adsorb or suspend many different compounds [4], thus, in nature, water is not pure as it acquires contaminants from its surrounding and those arising from humans and animals as well as other biological activities [3]. One of the most important environmental issues today is ground water contamination [5] and between the wide diversity of contaminants affecting water resources, heavy metals receive particular concern considering their strong toxicity

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