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Accumulation of Heavy Metals in Water and Soil through Industrialization by ICP-AES technique

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ABSTRACT

The accumulation of heavy metals (Viz. Cu, Zn, Mn, Fe, Co, Ni, Pb, Cd, Hg, As) have been studied in industrial wastewater, ground water and amended soil. This work describes the detection of concentration of these metals in industrial wastewater, ground water and amended soil by ICP-AES (Inductively Coupled Plasma Atomic Emission Spectroscopy) technique. In industrial wastewater samples Cu, Zn, Mn, Fe were detected. In drinking (ground) water Cu, Zn, Mn, Fe, Ni and Pb were detected whereas in amended soil samples Pb, Cd, Mg and As were not detected. For the accumulation of metals by the wastewater were collected and analyzed. This concentration of metals is due to the industrialization. The wastewater sample, drinking water samples and soil samples were collected from MIDC Taloja (Navi Mumbai). At this point the soil is getting polluted by the disposal of different industrial waste water. Detected some of the metals are toxic.

Keywords: Accumulation, Heavy metals, ICP-AES, wastewater, drinking water and soil samples.