

A STUDY OF HEAVY METALS CONTAMINATION IN SURFACE AND GROUND WATER OF RURAL AND URBAN AREAS OF KAKINADA, EAST GODAVARI DISTRICT, A.P

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ABSTRACT

The present study was aimed to assess the water quality of Heavy Metals in Surface and Ground Water of rural and urban areas of Kakinada, East Godavari District (A.P.). Kakinada city is governed by Municipal Corporation and is situated in Kakinada Urban Region. A total number of 29 water samples (9 surface and 20 ground water samples) were collected from different locations of study area at a particular distance during the year of 2012-2013 and analysed for various heavy metals such as As, Cr, Cd, Cu, Fe, Mn, Hg, Pb, Zn and Ni.

The results showed that in surface water varied from the ranges of As, Cr, Cd, Cu, Fe, Mn, Hg, Pb, Zn and Ni – BDL, BDL, 0.0012 to 0.0013, 0.018 to 0.020, 0.51 to 0.52, 0.120 to 0.124, BDL, 0.002 to 0.008, BDL, and 0.009 to 0.018 mg/l, respectively. In ground water the concentration of these metals were found in the ranges of As, Cr, Cd, Cu, Fe, Mn, Hg, Pb, Zn and Ni, - BDL, BDL 0.0011 to 0.0020, 0.008 to 0.042, 0.22 to 02.16, 0.016 to 0.081, BDL, 0.011 to 0.032, BDL, and 0.006 to 0.019 mg/l, respectively.

KEYWORDS: Ground Water, Heavy Metal, Kakinada, Sampling Stations, Surface Water