



Short Communication

**Heavy metal analysis and WQI studies of the ground water
of champavathi river basin, India**

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ABSTRACT

The present study is the analysis of some selected heavy metals and assessment of water quality based on Water Quality Index (WQI) method in chosen villages of champavathi river basin in Vizianagaram district of Andhra Pradesh, India. Ten different villages were chosen for the study. Different ground water and well water samples were collected and analyzed for physico-chemical parameters such as pH, EC, TDS, THW, Ca, Mg, Na, K, Fe, Cl, nitrite, phosphate, fluoride, total alkalinity for calculating WQI and heavy metals such as, Mn, Cr, Ti, Ba, Pb, As, Hg, Cd, Cu and elements Si and Al by using ICP-OES. Except silicon, all the other metals were found in undetectable range. From the WQI reports it was found that the water samples analyzed, collected from the chosen villages are not suitable for human consumption as they possess high WQI values. From our reports it was found that all the ground water samples collected from the chosen villages and analyzed are free from heavy metal contamination and not potable with respect to the WQI data.

Keywords: ICP-OES, heavy metals, ground water, WHO.
