

## EFFECT OF DUMPSITES ON GROUND WATER QUALITY IN ZARIA METROPOLIS, KADUNA STATE, NIGERIA

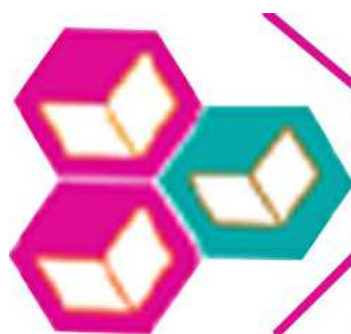
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### ABSTRACT

This study was aimed at determining water quality parameters in deep and shallow wells water from Zaria, Nigeria. In order to assess the quality of the water from the wells, water samples were collected from forty shallow and twenty deep wells close to waste dumpsites. Parameters for quality check include; pH, biological oxygen demand, dissolved oxygen, colour, turbidity, dissolved sediments, suspended sediment, and chemical oxygen demand. The physicochemical characteristics were determined using their respective standard methods of analysis. The overall results from this study showed that both deep and shallow wells water sampled have colour, TSS and TDS that fall within the WHO acceptable standard. Only 32.5% of the shallow wells have turbidity values within the WHO standard, 20% of the deep wells have the turbidity values that fall above the WHO standard. All the deep and shallow wells have pH and BOD values that meet the WHO standard. 37.5% of the sampled shallow wells have COD that fall within the WHO standard, while 75% of the deep wells meet the WHO standard. 10% of the shallow wells and 20% of the deep wells have CO values that meet the WHO standard. The correlation values show a negative relationship between the parameter assessed and the distance of the wells from the dumpsites. The concentration reduce with increase in distance away from the dumpsites. The twenty deep wells sampled appear to be safer in quality than the shallow wells. It is recommended that other parameters such as heavy metals cation and anion should be measured.

**KEYWORDS:** Shallow Wells, Water Bodies, Humans and Livestock



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