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Assessment of Groundwater Quality and Saline Intrusions in Coastal Aquifers of Lagos Metropolis, Nigeria

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ABSTRACT

As a result of immense industrialisation and high population growth, groundwater is heavily relied on in Lagos metropolis to serve as an alternative source of water where surface water is seriously polluted. The continued reliance on ground water has resulted in its decline in quantity and quality. In this study, the coastal aquifers of Lagos metropolis were selected for an assessment of its groundwater quality and impact of saline intrusion. Water samples collected along the coastal region were subjected to various physicochemical analyses. Results obtained were compared with permissible values for drinking water stated by Federal Environmental Protection Agency (FEPA) and World Health Organization (WHO). The results revealed that all the water samples were significantly hard (range 522.14 – 1233.34mg/L). The salinity was delineated by conductivity measurements. Three samples had specific conductance above the stated limits for fresh water. The samples however met the stipulated limits for drinking water for the other tested parameters.

KEYWORDS

Industrialisation, Groundwater, Physiochemical Analysis, Salinity, Conductivity

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