

◆ Research paper

DOI: [10.5281/zenodo.10791173](https://doi.org/10.5281/zenodo.10791173)

Ground Water Quality Assessment of Landhi Industrial Area, Karachi, Pakistan

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Abstract: Landhi Industrial Area (LIA) is an industrial zone in Karachi city. It is situated near Landhi Town and Malir River. Groundwater samples (n = 16) were collected from boring wells at various depths (30-150 feet) that have been analyzed for quality assessment. Data revealed that the pH of groundwater is circum-neutral (6.98 to 7.44) and temperature varied between 25 to 28 °C. The turbidity of the groundwater samples varies from 0.08 to 8.12 NTU which is within the permissible limit (< 5 NTU) of WHO. On the other hand, a wide range of hardness (250-1650 mg/L) and TDS content (166-5600 mg/L) is observed. Where about half and a quarter of the total samples show objectionable TDS (> 500 mg/L) and hardness (> 500 mg/L) respectively. Major cations varied in the order of Na⁺ > Ca⁺² > Mg⁺² > K⁺ while anions show declining trend of Cl⁻ > SO₄⁻² > HCO₃⁻ > NO₃⁻. It is concluded that the groundwater of the study area is generally fit for drinking purposes and only two sites are found highly polluted.

Keywords: Groundwater, quality, industrial zone, Landhi, Karachi.



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