

## Consideration of phthalates distribution in underground water in some selected regions in Delta State, Southern Nigeria

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**Abstract.** The choice of phthalates as plasticizers have been on the increase especially in household products. They are ubiquitous environmental pollutants due to their physical attribute. This study was carried out to determine the occurrence and level of phthalates in the groundwater in some regions of Delta State. Groundwater samples were collected from fourteen sampling points and analyzed using standard procedures. The obtained results showed that the concentration ( $\mu\text{g/l}$ ) of six phthalate ester compounds present in the water samples was of the order:  $< 0.05 - 0.05$  BBP,  $< 0.05 - 3.71$  BEHP,  $< 0.05 - 0.54$  DBP,  $< 0.05 - 0.55$  DEP,  $< 0.05 - 0.13$  DMP, and  $< 0.05 - 0.48$  DnOP. BEHP was observed to be the major compound of the phthalate acid esters present in most sampling stations, whilst others, especially BBP, were found to be in low concentration and does not pose any immediate threat to human health. The presence of BEHP in most samples from different locations suggests an inflow of the phthalate to underground water, hence it becomes imperative for continuous monitoring and a call to various governments and environmental regulatory agencies to establish standards for phthalate esters in order to monitor its presence in the environment.

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