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Estimation of lead levels in soil for some areas at East Gezira regions and khartoum-Sudan (A comparative study between the rural areas and urban areas)

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Lead is a chemical element with an atomic number 82 and symbol Pb, and nowadays recognized as a heavy-metal poisonous, it affects every system of the body. Acute exposure to high level of Lead can result in death or significant damage to the brain or other organs. The study aimed to determine the concentration of Lead in Soil of some areas in Khartoum and East of Gezira (Baanat, Rufa'a, and Tamboul) Specifically. Also, to make a comparison between the rural areas and the urban areas. Eighteen samples of soil were collected from the bus stations, batteries repairing Market in Souk Sha'bi and specific distances away from them. The analysis work was done by Atomic Absorption Spectrometer method. Lead concentration in samples of soil in this study was ranged 0.78 ppm (Baanaat) – 10.58 ppm (Batteries Market Souk Sha'bi). A positive correlation was found between Urbanization and lead mean concentration 1.22 ppm in Khartoum and 0.40 ppm in East of Gezira. A positive correlation was also found between the concentrations of lead as being nearer to the centre of each of the bus station and Batteries repairing market and the Main road. So, this study recommended that all Lead-related industries and markets should be far enough from human living to avoid environmental lead pollution.

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