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Assessment of Toxic Levels for Lead in Soil of Al-Waziriya Region, Baghdad

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ABSTRACT

Lead (Pb) concentration in urban soils was measured in AL-Waziriya District in Baghdad city for both; an industrial area of batteries industry and the residential area around it which may be affected by the emissions caused by production processes of the industrial activities.

A hundred samples were collected from the top soil and analyzed for Pb concentration using Adsorption Spectrometry method.

Geostatistical methods were used to study spatial structure distribution of Pb in this area besides using environmental indices (Geoaccumulation index I*geo* and single potential ecological risk factor Ei) to evaluate contamination degree in the region. Results showed that the examined sites are quite large in which Pb concentration values higher than the world regulatory values regarding soil pollution with it and identifying hot-spot areas. These polluted areas could create a significant health risk for human beings and vegetation in the near future.

Keywords: Lead, Geo-Accumulation Index, Single Ecological Risk Factor.