

Lead in The Soil-Plant System Following Aged Contamination from Ceramic Wastes

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Abstract : Lead contamination of agricultural land mainly vegetated with perennial ryegrass (*Lolium perenne*) has been investigated. The metal derived from the discharge of sludge from a ceramic industry in the past had used lead paints. The results showed very high values of lead concentration in many soil samples. In order to assess the lead soil contamination, a sequential extraction with H₂O, KNO₃, EDTA was performed, and the chemical forms of lead in the soil were evaluated. More than 70% of lead was in a potentially bioavailable form. Analysis of *Lolium perenne* showed elevated lead concentration. A Freundlich-like model was used to describe the transferability of the metal from the soil to the plant.

Keywords : bioavailability, Freundlich-like equation, sequential extraction, soil lead contamination

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