ADSORPTION AND DESORPTION BEHAVIOUR OF ZINC IN SOME SELECTED SOILS OF UNITED KINGDOM IN WATER BACKGROUND

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ABSTRACT

Zinc adsorption has been a serious concern in many soils in terms of its deficiency or toxicity occurs to plants. We investigated the adsorption behaviour of this element in soils using low solution concentration i.e. 5 mg l^{-1} zinc upto as high 100 mg l^{-1} as zinc sulphate solution. Desorption study was carried out using the highest zinc solution concentration of 100 mg l^{-1} zinc. The results revealed that zinc was adsorbed more by soils having higher amount of clay compared to coarse soils. Moreover, the higher the pH of the soils, the higher was the adsorption of zinc. Furthermore zinc adsorption increased with increase in time of contact with the soils. The data according to Lungmuir and Freundlich equation indicated that Freundlich equation well fitted compared to Langmuir equation. Soil higher in clay content indicated higher adsorption of zinc compared to low clay content soils. The desorption data suggested that zinc could not be removed from the adsorbing surfaces of the soils with simple demonized water.