

## **Zinc Sorption by Some Torrfluvents Soil of Sub-Saharan Region South of Libya**

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### **ABSTRACT**

Zinc sorption by four Torrfluvents soils from Sub-Saharan region, south of Libya was evaluated by equilibrating soil samples with concentrations of Zn cover a range of 0 to 320 ug/ml. Effect of zinc carriers were also examined by using two carriers i.e. sulphate and EDTA.

Results obtained showed that all soils have high affinity for Zn sorption. Sorption isotherm of L (high affinity) type was noticed with zinc sulphate whereas S (low affinity) type was noticed with EDTA. Curviline relation between sorped zinc and zinc concentration in solution was proved by excellent fit of sorption to Frundlich equation. High mean values for sorption coefficient were noticed with sulphate (2.658) compared to EDTA carriers (0.350), while low mean value for regression coefficient (1/n) for mineral carrier (0.354) was found compared to organic carrier (1.376). Sorption coefficient was significantly correlated with clay, silt, carbonate and organic matter contents in case of sulphate carrier only, while negatively correlated with carbonate and organic matter contents when EDTA was used.