PEDO -CHEMICAL CHARACTERISTICS OF SOME SALT - AFFECTED SOILS

BY

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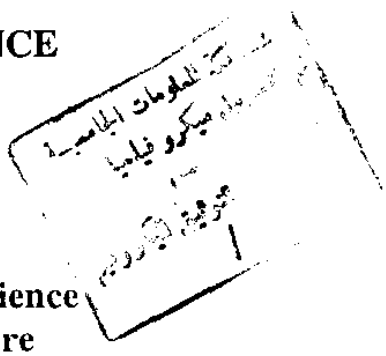

Department of Soils Science
Faculty of Agriculture
Ain Shams Universtiy

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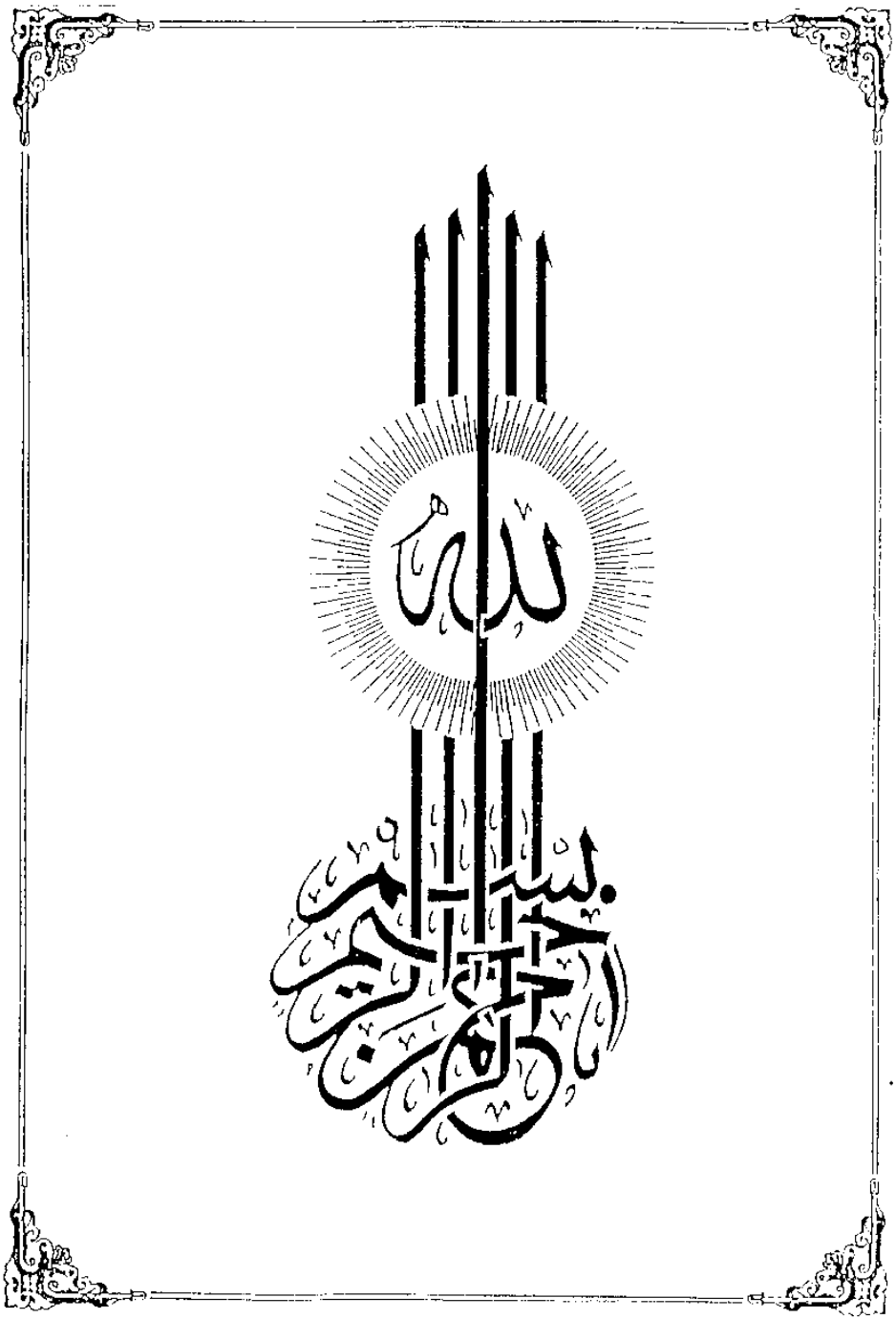

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ABSTRACT

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The aim of this investigation is to study the pedological (chemical, physical and mineralogical) characteristics of some salt - affected soils in two different regions of Egypt .

Sampling locations were selected from El - Fayoum governorate and Maryut area to represent the common saline and saline calcreous soils in Egypt.

After studding the morphological characteristics in the field, some selected soil samples were subjected to chemical, physical and mineralogical analyses. The mineralogical composition of clay fraction of the studied samples was identified and discussed in relation to their physical , chemical and morphological characteristics .

Mineralogical analysis was conducted using x- ray diffraction to illustrate mineralogical composition of clay fraction (> 2.0 μm) after following treatments , Mg- saturated air dried , Mg- saturated + glycerol solvated, k- saturated air dried and k-saturated and heated to 550°C for 2 hours. Results revealed that montmorillonite, kaolinite are the dominant clay minerals in El-Fayoum soils, while calcite, palygorskite, kaolinite and quartz are the dominant minerals in Maryut soils.

Differences in the mineralogy composition of the clay fractions of the two locations are attributed to their parent materials and soil forming factors.

Key words :Salt-affected soils , The soils adjacent to Qarun lake , saline calcareous soils, mineralogical studies on El-Fayoum area, X- ray difraction analysis .

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