

MINERALOGICAL AND GEOCHEMICAL ASPECTS OF RECENT SEDIMENTS AROUND BASRAH, SOUTHER IRAQ

Abdul-Mutalib H. Al-Marsoumi

Mohammed A. Abbas*

College of Science, Basrah University, Basrah-Iraq

- **Marine Science Centre**

abdmars@yahoo.com

Abstract

Mineralogical and geochemical study of Basrah recent sediments revealed the presence of the following clay minerals ; Illite-palygoreskite (32%), montmorillonite (27%), kaolinite (26%), and chlorite (10%). The majority of minerals are detrital in origin, a diagenetic origin is suggested partly for the montmorillonite and palygoreskite.

Distribution of these clay minerals shows wide variation. Illite-palygoreskite are associated with the coarse fraction (sand), montmorillonite and chlorite are associated with fine fraction (silt and clay). Whereas kaolinite is randomly distributed. This variation in distribution is attributed to different source areas and the type of transporting agents (river and wind). The available recent sediments are characterized by their high contents of Ca, Mg, Na, Cl and SO₄ and low contents of K and CO₃. This is due to high carbonate and halite contents, adsorption of K by clay minerals and low dissolution of carbonate minerals under alkaline condition.