

CLAY MINERALOGY OF MID-CHANNEL BOTTOM SEDIMENTS FROM SOUTHERN PART OF SHATT AL- ARAB

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Abstract

Clay minerals separated from 40 recent sediments core samples of Shatt Al-Arab mid channel (up to 50 cm in depth) were x-rayed. They were identified and semiquantitatively determined. The percentages of these minerals are: Kaolinite 24%, chlorite 23%, illite 20%, mixed-layer illite-smectite 23% and mixed layer illite-chlorite 10%. The distribution of these minerals showed wide variation which could be attributed to different clay sources. Owing to the diagenetic processes, illite-chlorite and to a lesser extent illite-smectite mixed-layer exhibit a trend of increasing values toward Arabian Gulf, whereas, the variation in distribution of kaolinite, chlorite, and illite reflects their detrital origin.