# GEOCHEMISTRY AND MINERALOGY OF NORTH WEST ARABIAN GULF BOTTOM SEDIMENTS

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**Abstract**

Twenty one samples collected from bottom sediments of northwest Arabian Gulf were analysed for: $SiO_2$, $Al_2O_3$, $Fe_2O_3$, MgO, CaO, $Na_2O$, $K_2O$, MnO, $TiO_2$, $P_2O_5$, Sr, Zr, Ba in addition to total organic carbon. Mineralogical analyses of these sediments reveals that the presence of low-Mg calcite, dolomite, high Mg calcite, Aragonite, quartz and feldspar as the main constituents of non-clay minerals. Biogenic source were suggested for carbonate minerals except dolomite, whereas detrital source were suggest for other minerals. R-mode factor analysis demonstrates three factors affecting the distribution of the analysed components, they are clay minerals of both river borne sediments and wind-borne dust, the salinity changes from fresh water (Shatt Al-Arab) to saline water (Arabian Gulf), and biogenic activity besides the decomposition of organic matter.

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