

**GEOCHEMISTRY OF MIDDLE AND UPPER OLIGOCENE REEF
CONTROLLED SEDIMENTS, ANAH AREA WESTERN Iraq**

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Abstract

Fifty carbonate rock samples gathered from Baba and Anha Formations were analysed for CaO, MgO, Fe₂O₃, Al₂O₃, SiO₂, K₂O, Na₂O, SrO, and MnO. The results show that the variation in the chemical data is directly related to the variation in paleosalinity, dolomitization, mineralogical composition of fossil skeletons, and clay mineral contents. Furthermore, the reef-back reef can be differentiated from fore reef facies by the relative enrichment of clay minerals, calcite, and strontium contents. R-mode factor analysis shows that the clay minerals contents, dolomitization, and the terrigenous supply account for 79% of the total variability for Anah Formation, whereas, clay mineral contents, paleoclimate and dolomitization processes account for 77% of the total variability for Baba Formation.