



Clay Mineralogy of Shallow Core Sediments of Lake Acıgöl, Denizli, Turkey

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Lake Acıgöl is a hypersaline and active industrial salt production lake located in Denizli, Turkey. Lake Acıgöl has been investigated to elucidate the distribution clay minerals under the saline conditions of the lake and carbonate and ophiolitic rocks controlled lake basin. The lake is very shallow and generally characterized by an un-stratified and whole oxygenated water table. Determination clay minerals in the bulk samples via XRD method was not possible due to the their small amount. Therefore, the sequential clay enrichment procedure applied to the bulk samples such as sample dispersion, removal of soluble salts and ions, and particle-size fractionation. The XRD analyses of normal, glycolated and heat-treated shallow core samples show that the dominant clay minerals in the samples to be illite, including the swelling montmorillonite and kaolinite minerals are encountered less frequently. Glauberite, Blodite, Dansite and Nickelblodite have been also identified as soda minerals by XRD studies.