

# **Sedimentary and Geochemical Characterization of the Sediments of the Coast and Bed of Govatr Gulf, Southeastern Iran**

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## **Abstract**

Sedimentary and geochemical characteristics of the coast and bed of Govatr Gulf (Southeastern Iran) have been investigated by taking 14 sediment samples in the 2009 summer. The study indicated that the sediments of the coast and bed of Govatr Gulf have sand and grain size clay, respectively. In this research, seven sedimentary types were identified. Rock forming minerals of sediments contained igneous, sedimentary and metamorphic rocks, allochthone and autochthone fragments, and mineral assemblages of quartz, calcite, feldspar, iron oxides and clay minerals. Geochemical maps of the heavy metals showed that the highest concentrations of heavy metals are related to the Pasabandar coastal sediments in which the element concentrations of Fe, Mn, Pb, Zn and Cr, were 15.3, 53.2, 35.1, 24.4 and 100 times more than the normal concentration in the study area, respectively. Correlation coefficients indicated that the colloids such as iron and manganese hydroxides and clay minerals had a great role in the mobility of heavy metals in the study area. High correlation of the chromium, magnesium, nickel, and iron elements showed that one of the resources of these elements is weathering of ophiolitic rocks by Bahokalal River and transferring these elements to the sea.

*Keywords: Govatr Gulf, Sedimentology, Geochemistry, Coast, Bed.*

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