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Distribution of major and trace elements in surface sediments of the western Gulf of Thailand: Implications to modern sedimentation

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Abstract

In this study, we analyze major and trace elements (SiO_2, Al_2O_3, Fe_2O_3, CaO, K_2O, MgO, Na_2O, TiO_2, P_2O_5, MnO, Cu, Pb, Ba, Sr, V, Zn, Co, Ni, Cr, and Zr) and grain size of 157 surface sediment samples from the western Gulf of Thailand (GoT). On the basis of the space distribution characteristics, the study area can be classified into three geochemical provinces. Province I covers the northern and northwestern coastal zones of the GoT, including the whole upper GoT and thus the sediments from the rivers in the area. It contains high contents of SiO_2. Province II is located in the middle of the GoT and has similar geochemistry composition as the South China Sea (SCS). It contains

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