

Determination of Concentration and Source of *n*-alkanes in Surface Sediments from Southern Coast of the Caspian Sea (Anzali Port)

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Abstract

Surficial sediments from the South-Western coast of the Caspian Sea (Anzali Port) were studied to determine the concentration and probable source of normal alkanes. In this regard, nine surface samples were collected and analyzed by gas chromatography–mass spectrometry (GC–MS). Concentrations of these compounds ranged from 743 to 6146 $\mu\text{g g}^{-1}$ dw (average $2700 \pm 1612 \mu\text{g g}^{-1}$ dw). Normal alkenes with long chain length were dominant in all studied stations. Based on used indices in this study, it was concluded that *n*-alkanes in sediments mainly come from petrogenic source, that was included the old oil spills (significant amount of UCM in all chromatograms) and recent inputs (high values for the ratios of *n*-C17/Pr and *n*-C18/Phy at some sampling sites). However, a contribution of hydrocarbons from higher and aquatic plants in the study area was observed.

Keywords: *Normal alkane, Sediment, Anzali city, Caspian Sea.*
