

Oil and grease and total petroleum hydrocarbons in the waters of Ramsar gazetted mangrove area, Johor

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Deskripsi Lengkap: <https://lib.ui.ac.id/detail?id=20464794&lokasi=lokal>

Abstrak

A study was carried out to evaluate the extent of total petroleum hydrocarbon (TPH) and oil and grease (O&G) pollution in the waters of Ramsar Gazetted mangrove area Johor, during monsoon (February) and post-monsoon (May), 2013. The concentrations of TPH obtained using UV-fluorescence spectroscopy ranged between 6.50-80.3 (mean 20.2 ± 15.7) $\mu\text{g L}^{-1}$ Tapis crude oil equivalent and O&G using gravimetric analysis ranged from 0.06-1.50 (mean 0.37 ± 0.28) mg L^{-1} . Higher TPH in area surrounding the Kukup Island is probably due to illegal desludging and active shipping activities. The O&G was found higher in the Strait of Kukup Island and Pulau River; high surface run-off of lipophilic matters from terrestrial and anthropogenic activities could have enriched the waterways. In general, anthropogenic activities, tidal influence and dynamic of mixing affected the distribution of O&G and TPH in the study area. Values obtained were comparable to reported data elsewhere in Malaysian waters.