

PETROLEUM HYDROCARBONS IN THE
TERENGGANU RIVER ESTUARY

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RIVER ESTUARY**

BY

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"Live to love"

Khushwant Singh..... @ *The Marine Sikh*

Abstract

The concentration of hydrocarbons in water and sediment in the Terengganu River estuary were studied in the months of July, September and November 1997. 3 sampling trips (9 July 1997, 3 September 1997 and 26 November 1997) were conducted to all the 5 sampling stations established in this study.

The overall range of hydrocarbon contents in water (surface, mid and bottom) were 16.53 – 217.8 ppb. Statistical analysis revealed that there were no significant difference ($p>0.05$) in hydrocarbon contents in water among all the stations and within the depths of the sampling stations in July, September and November (surface and bottom). However, another statistical analysis indicated that there was a significant difference ($p<0.05$) in the total hydrocarbon contents in mid water among the stations in November.

The overall range of total hydrocarbon contents in sediment were 0.003 – 27.2 mg/kg dry sediment. Statistical analysis indicated that there was a significant difference ($p<0.05$) of hydrocarbon contents in the sediment among the stations in July and November. However, there was no significant difference ($p>0.05$) of hydrocarbon contents in the sediment among the stations in November. The results in this study indicated that the sediment was unpolluted with hydrocarbons.

Abstrak

Jumlah kepekatan hidrokarbon di dalam air dan sedimen di muara Sungai Terengganu telah dikaji dalam bulan Julai, September dan November. Sejumlah tiga lawatan kajian (9 Julai 1997, 3 September 1997 dan 26 November 1997) telah dijalankan di kesemua 5 stesyen kajian yang telah dipilih.

Keseluruhan julat kandungan hidrokarbon di dalam air (permukaan, tengah dan bawah) adalah di antara 16.53 – 217.8 ppb. Analisa statistik menunjukkan bahawa tiada perbezaan yang bererti ($p > 0.05$) untuk kandungan hidrokarbon dalam ketiga-tiga lapisan air di antara stesyen untuk bulan Julai, September dan November (permukaan dan bawah). Walau bagaimanapun, satu lagi ujian statistik menunjukkan bahawa terdapat perbezaan bererti ($p < 0.05$) di dalam jumlah kandungan hidrokarbon di lapisan tengah air di antara stesyen pada bulan November.

Keseluruhan julat kandungan hidrokarbon dalam sedimen adalah 0.003 – 27.2 mg/kg sedimen kering. Analisa statistik menunjukkan bahawa terdapat perbezaan bererti ($p < 0.05$) untuk kandungan hidrokarbon dalam sedimen di antara stesyen kajian dalam bulan Julai dan September. Walaupun begitu, ujian statistik yang satu lagi menunjukkan bahawa tiada perbezaan bererti ($p > 0.05$) untuk kandungan hidrokarbon dalam sedimen di antara stesyen bagi bulan November. Keputusan dari kajian ini menunjukkan bahawa sedimen dalam kawasan kajian ini adalah tidak dicemari oleh hidrokarbon.