

Distribution of petroleum hydrocarbons in surface sediments from selected locations in Kuala Selangor River, Malaysia

ABSTRACT

A study has been conducted at selected locations along the Kuala Selangor River, Malaysia on seven surface sediment samples to determine the level of hydrocarbon pollution in the sediments. The homogenized sediments were extracted using soxhlet, fractionated and analyzed by using GCMS. PAHs were detected and were found in the range of 56361,037 ng/g (dryweight). Ratio MP/P was used to determine the anthropogenic PAHs sources where seven stations were found to be polluted by petrogenic sources. Furthermore, MP/P ratios for sediment samples had values ranging from 1.752 to 18.6, while L/H ratios for the same samples ranged from 0.2978 to 1.393. There were 26 compounds of PAHs detected in the samples. Further analysis and more data is needed in order to identify the sources of oil pollution in seven sediment samples with unidentified oil sources.

Keyword: PAHs; Petrogenic; Pyrogenic sources; MP/P ratio; Marine pollution