

Surface sediment analysis on petroleum hydrocarbon and total organic carbon from coastal area of Papar to Tuaran, Sabah

Abstract

Total petroleum hydrocarbons (TPH) and total organic carbon (TOC) were investigated in surface sediments along coastal area of Papar to Tuaran, Sabah. Surface sediment samples were collected in 24 different stations in each area by using Ponar grab sampler. Samples were extracted for TPH using standard method sediment/sludge APHA 5520E and analyzed using UV/VIS spectrophotometer while for TOC method analysis using United Nations Environment Programme (UNEP)/MAP Athens (2006). The range of TPH concentrations in surface sediments were recorded at 0.24 – 20.65 mg/kg dw Miri crude oil equivalents, meanwhile the TOC percentage ranged from 0.03 – 4.02%. In the mean time, the statistical analysis by Pearson correlation showed a positive correlation with coefficient, $r = 0.790$ which showing the TPH concentrations significantly have influence on the TOC accumulations in the surface sediment.