

Comparative Toxicity of Crude Oil, Dispersant and Oil-Dispersant  
Mixture to Prawn, *Palaemon elegans*

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Comparative toxicities of the water-soluble fractions (WSF) of crude oil, dispersant (Spillwash L.T.) obtained from a local refinery and of oil-dispersant mixture of 10 part oil to 1 part dispersant (v/v) were studied using static bioassay procedure. A rockpool prawn, *Palaemon elegans* was used as the test organism to determine the LC<sub>50</sub> values following 24 hours of exposure. The values ranged from 0.0113 % to 83.5 % of the WSFs of these individual substances implying significant differences in their toxicities.

Among these substances, dispersant was found to be the most toxic with a LC<sub>50</sub> value of 0.0113 % (0.0113 ml/l) and this is followed by oil-dispersant mixture (10:1) with a LC<sub>50</sub> value of 1.10 % (1.10 ml/l) obtained after 24 hours test period. However, the crude oil was found to be the least toxic having a 24 h LC<sub>50</sub> value of 83.5 % (83.5 ml/l).

The goodness of fit of the lines (best fit) was tested by chi-square test and the 95 % confidence limits as well as the slope functions were calculated for each substance tested.