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ABSTRACTS

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Effect of Naphthalene in Marine Microalgae *Dunaliella tertiolecta*, in Sea Urchin *Lytechinus variegatus* and Estuarine Microcrustaceans *Nitokra* sp and *Leptocheirus plumulosus*

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In recent decades there has been a significant increase of contaminants in aquatic ecosystems. Part of this issue is directly related to increased population density that enhances the entry of these pollutants and threatens the marine community, estuarine and consequently the whole biosphere. Oil is the main fuel source of humanity, and exploration operations, transportation, refining and distribution, represent potential sources of environmental pollution. Naphthalene is a major constituent of the oil soluble in water and this class of pollutants is framed in the priority list of persistent organic pollutants. The present study provides information on the effect of naphthalene in ecotoxicological tests with four different groups of aquatic organisms. Chronic tests with the marine microalgae *Dunaliella tertiolecta* and sea-urchin *Lytechinus variegatus*, acute and chronic tests with the estuarine benthic copepod *Nitokra* sp and acute tests with the estuarine amphipod *Leptocheirus plumulosus*. In the assessment of chronic effect, the average value of $IC(I)_{50-96h}$ to marine microalgae was 29.01 mg.L^{-1} and the mean $EC(I)_{50-24h}$ for sea urchin 0.30 mg.L^{-1} . In chronic tests for estuarine copepod the obtained values of NOEC and OEC was ranged from 0.19 mg L^{-1} to 0.40 mg L^{-1} . In acute tests the same organism has shown an average of $LC(I)_{50-96h}$ in 13.4 mg.L^{-1} and for the estuarine amphipod the mean $LC(I)_{50-96h}$ was 2.38 mg.L^{-1} . These results demonstrate the potential effect of naphthalene on different classes of aquatic organisms. This may assist in environmental assessments in Brazil, when limits and guidelines are available and allows establishing conditions and standards of effluent discharge into water bodies.

Keywords: Naphthalene, *Dunaliella tertiolecta*, *Lytechinus variegatus*, *Nitokra* sp, *Leptocheirus plumulosus*