

INVESTIGATIONS ON TOXIC EFFECTS OF CATIONIC DETERGENTS ON SOME MARINE INVERTEBRATES

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Summary

The aim of the present investigation is to establish the toxic effects of a cationic detergent (cetiltrimetilamonium bromid) on *Sphaeroma serratum*, *Mytilus galloprovincialis* and *Paracentrotus lividus*, which inhabit different biotopes and which have different sensitivities to pollution.

Experiments of 96-hour duration are carried-out by means of continuous-flow system in constant temperature room. Temperature adjustment for pollution indicating species was $17 \pm 1^{\circ}\text{C}$, and for *P. lividus*, $15 \pm 1^{\circ}\text{C}$.

The experimental data obtained after 48 and 96 hour periods are computed statistically according to the BLISS (1935) method.

By this method, deviation types and variation limits of the lethal concentration (LC_{10} , LC_{50} , LC_{90}) are established. To obtain some idea on the homogeneity of the tried populations, chi-square testing is utilized.

A study of the lethal concentrations has shown that, against the used surfactant, *P. lividus* is the most sensitive, while *S. serratum* and *M. galloprovincialis* are relatively more resistant.

Περίληψη

Ο σκοπός της μελέτης αυτής είναι να καθοριστούν οι τοξικές επιδράσεις ενός κατιοντικού απορρυπαντικού (βρωμιούχο κετυλτριμεθυλαμμώνιο) πάνω στα *Sphaeroma serratum*, *Mytilus galloprovincialis* και *Paracentrotus lividus* που κατοικούν διαφορετικούς βιοτόπους και που έχουν διαφορετική ευαισθησία σε ρύπους.

Η μελέτη των θανατηφόρων δόσεων έδειξε ότι το *P. lividus* είναι το πιο

εδαίσητο ἐνῶ τὰ *S. serratum* καὶ *M. galloprovincialis* εἶναι σχετικὰ πῖο ἀνθεκτικὰ.

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