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### Toxicity of methyl-*tert*-butyl ether (MTBE) to California marine life

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#### ABSTRACT

The sublethal effects of methyl-*tert*-butyl ether (MTBE) on three southern California marine species was examined by conducting the purple sea urchin (*Strongylocentrotus purpuratus*) 3-d embryo development test, the giant kelp (*Macrocystis pyrifera*) 2-d germination and growth test, and the 7-d mysid (*Holmesimysis costata*) growth test. In addition, the effects of MTBE on the survival of mysids and amphipods (*Grandidierella japonica*) were measured. These two species of crustaceans were found to be most sensitive, with a 50% rate of mortality at an MTBE concentration of approximately 150 mg/L. The threshold for toxic effects in the most sensitive species (amphipod) was 37 mg/L. The least sensitive species was the giant kelp, with a 50% reduction in growth at 2,236 mg/L. The highest concentration of MTBE measured in receiving water was less than 0.1% of the threshold effects level for the amphipod, the most sensitive California species tested.

#### Full Text

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