

Effect of Diesel Fuel Pollution on the Lipid Composition of Some Wide-Spread Black Sea Algae and Invertebrates

Jordan T. Nechev^a, Svetlana V. Khotimchenko^b, Albena P. Ivanova^c,
Kamen L. Stefanov^{a,*}, Stefka D. Dimitrova-Konaklieva^d, Stoitse Andreev^e
and Simeon S. Popov^a

^a Institute of Organic Chemistry with Centre of Phytochemistry, Bulgarian Academy of Sciences, Sofia 1113, Bulgaria. E-mail:kamen@orgchem.bas.bg

^b Institute of Marine Biology, Russian Academy of Sciences, Far East Branch, Vladivostok 690041, Russia

^c Institute of Plant Physiology, Bulgarian Academy of Sciences, Sofia 1113, Bulgaria

^d Faculty of Pharmacy, Higher Medical School, Sofia 1000, Bulgaria

^e Museum of Natural History, Bulgarian Academy of Sciences, Sofia 1000, Bulgaria

* Author for correspondence and reprints requested

Z. Naturforsch. **57c**, 339–343 (2002); received September 24/November 27, 2001

Diesel Fuel, Lipids, Marine Organisms

Two green algae (*Ulva rigida* and *Cladophora coelothrix*), the mussel *Mytilus galloprovincialis* and the snail *Rapana thomasiana* from the Bulgarian Black Sea shore have been treated with diesel fuel (100 mg l⁻¹) in an aquarium with sea-water for three days. The lipids and their fatty acid changes have been examined. Significant changes have been observed mainly in the polar lipids and in the saturation of the fatty acids. These changes appeared to be bigger in the evolutionary less advanced species from both groups of marine organisms – algae and invertebrates (*Ulva rigida* and *Mytilus galloprovincialis* respectively). The data obtained could be used for a biomonitoring of the pollution.