

Foreword

Scientific technical progress changes our life. It becomes more dynamic and modern. Yet rapid development of industry changes natural environment as well. Society not only needs material and cultural boon but also healthy natural environment for itself and generations to come.

There are no technologies on an international scale which would prevent natural environment pollution in the process of production. Especially environment is polluted with thoughtlessly used chemicals: abstergents, pesticides, surface-active substances, mineral fertilizers and so on.

Soil and groundwater pollution with oil products is an object of great concern. Environment is polluted during oil transportation and use. This is hazardous for natural environment and humans.

In Lithuania, much has already been done to prevent emission of pollutants into the atmosphere, water basins and soil. The introduction of the system of integrated prevention and control of pollution is in progress. A rapid advance of environmental sciences and technologies designed for restoration and preservation of healthy natural environment play an important role.

The Agency *Soil Remediation Technologies* in cooperation with scientific, educational and related production organizations has accumulated experience of polluted soil and water cleaning from toxic substances. The publication contains data about physiological-biochemical properties of oil oxidizing organisms and application methods of these organisms for remediation of oil-polluted environment. Some vascular plants are also used for this purpose. The rhizosphere of these plants makes physiological symbiosis with the oil oxidizing microorganisms. This combination effectively cleans polluted soils and restores its natural microbiocoenoses.

Eutrophication of water bodies and "algae bloom" entailed by microalgae are the problems which occur more and more often. Some species of microalgae exude toxic products of metabolism deteriorating the water quality of natural basins. A biological sorbent was created and used for mitigation of the adverse effect of "algae bloom". It helps to control the concentration of phytoplankton in the water.

The present publication contains compressed information designed for foreign readership introducing some trends of bioremediation in Lithuania. It will contribute to affiliation with specialists of bioremediation technologies from other countries.