



“Gh. Asachi” Technical University of Iasi, Romania

PSYCHROTOLERANT OIL-DEGRADING MICROORGANISMS FOR BIOREMEDIATION

**Elena Emelyanova^{1*}, Irina Andreeva¹, Stanislav Zagrebelny²,
Vladimir Repin¹**

*¹State Research Center of Virology and Biotechnology “Vector” Koltsovo, Novosibirsk region,
630599, Russia; ²Novosibirsk State University, Novosibirsk, 630090, Russia*

Abstract

Associations of cultures possessing high bio-emulsifying and oil-oxidizing activity, psychro- and halotolerance were created on the basis of screening of carbon-utilizing microorganisms isolated in different regions of Siberia. The evaluation of the utilization rate of hydrocarbons by the studied associations (64-92 % within 6 days of cultivation) was performed; the absence of phytopathogenic properties and antagonism towards the native soil microflora was shown in destructing strains; the suitability of oil-polluted soil purified with a biodestructor for plant growth was evaluated.

Keywords: biodegradation, microorganisms, oil-degraders, n-alkanes, psychrotolerant

* Author to whom all correspondence should be addressed: Phone: +7-383-336-63-56, Fax: +7-383-336-65-01, e-mail: emelen1@yandex.ru