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Screening of petroleum degrading *Bacillus* spp. strains isolated from different non-contaminated soil samples**Tuba Sevgi, Behice Zeren, Baran Enes Güler and Elif Demirkan**
Uludag University, Turkey

Oil spill has become a global problem in industrialized and developing countries. Oil spills that occur during discharge from the refineries, accidents of ships/tankers, their grounding, rupture on seabed and on shore pipelines, offshore oil production and exploration platforms do affect these habitats causing irreversible damage to the biodiversity. The toxic effects of crude oil and refined petroleum oils on plants, animals, humans and the environment are devastating. The aim of this study was to evaluate the potential of petroleum hydrocarbon (PHC)-degrading 105 *Bacillus* spp. strains isolated from different non-contaminated soil samples. These *Bacillus* spp. strains were screened for bacterial oil degradation using 3.5% petrol and 7 % diesel as sole carbon sources in Bushnell-Haas agar medium. The plates were incubated at 37°C for 7-17 days. After the incubation, only petroleum degrading bacteria remained on the surface of the plates. Among the 105 *Bacillus* spp. strains, 22 *Bacillus* spp. strains were determined as potential petroleum degrading strains. Most of these strains showed more degradation in diesel medium than petrol medium. Out of the preselected 22 isolates, 18 isolates showed relatively high growth, while 4 others showed moderate to low cell counts after 7 or 17 days of incubation period. This is the first study on *Bacillus* sp. strains isolated from Turkish soils. These isolates seemed to have potential for bioremediation of oil contaminated soil and water.

Biography

Tuba Sevgi has completed her MSc from Technical University of Kaiserslautern in Molecular Biotechnology and Systems Biology, Germany. Currently, she is doing her PhD in the Department of Biology, Faculty of Arts and Sciences, Uludag University. She is a Research Assistant in the Department of Biology, Faculty of Arts and Sciences, Uludag University.

tubaavci@uludag.edu.tr

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