

## **Purification of soil from oil pollutants with the use of denitrifying hydrocarbon-oxidizing microorganisms**

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### **Abstract**

The efficiency of an oil-oxidizing microbial community in the bioremediation of oil-polluted soil was studied under laboratory conditions. A specific feature of the community was its ability to oxidize oil hydrocarbons under both aerobic and anoxic conditions. The degree of oil-hydrocarbon degradation in various bioremediation modes increased as follows: self-remediation (40%) < nitrate application (42%) < introduction of the denitrifying oil-oxidizing community (50%) < introduction of the denitrifying oil-oxidizing community plus nitrate application (60%). The intensification of bioremediation is related to the increase in the population of the hydrocarbon-oxidizing microorganisms, first of all, denitrifying ones, resulting from the introduction of the community.

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