

## عنوان مقاله:

Biodegradation of Aromatic Compounds in Crude Oil by Isolated Microorganisms from Environment

## محل انتشار:

مجله علمی پژوهشی دانشگاه علوم پزشکی زنجان، دوره 18، شماره 70 (سال: 1388)

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## خلاصه مقاله:

**Background and Objective:** Oil pollutions are one of the most important environmental problems worldwide that researchers have tried different methods for its degradation. In this regards biological methods attracted the attention of the researchers more than other methods. The main objective of this study was to find microorganisms that could degrade aromatic components in the floating crude oil. **Materials and Methods:** In order to find such microorganisms, some samples were taken from areas contaminated by petroleum compounds. Microorganisms that could live with crude oil as sole carbon source were isolated. From these samples 14 microorganisms isolated which all were bacteria. The variations of aromatic compounds concentration were measured by gas chromatography method. **Results:** Among 14 microorganisms two microorganisms that called A-3 and A-14 had more ability and degraded the aromatic components 89% and 86% respectively. By microbiological techniques it was found that A-14 is pseudomonas aerogenusa. **Conclusion:** The results of this study showed that biodegradation of aromatic compounds that are one of the most toxic materials in crude oil are possible. Also indicated that some oil-degrading microorganisms exist in the nature that do not need to adaptation for biodegradation of oily compounds.

## کلمات کلیدی:

.Key words: Aromatic Compounds, Crude Oil, Biodegradation, Pseudomonas Aerogenusa, Pure Culture

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