

**BIODEGRADATION OF HYDROCARBONS BY MICROBIAL COMMUNITY  
IN MINERAL OILS CONTAMINATED SOIL**

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There are a lot of contaminated sites by the mineral oils all over Japan. Recently, technology of monitored natural attenuation (MNA) has been developed to clean up those chemicals. To understand the degradation mechanism of mineral oils in the geo-environment, biodegradation experiments of gasoline by microbial community obtained from a lot of mineral oil contaminated sites were carried out. The degradation rates of hydrocarbon (n-paraffin, iso-paraffin, aromatic hydrocarbon) with large carbon number were higher than that with small carbon number. Especially, aromatic hydrocarbons with C7-C10 were easily degraded by microbial community because more than 90% of hydrocarbons decreased within a week. As the hydrocarbons of n-paraffin and iso-paraffin with small carbon number have the possibility of by-products of the gasoline degradation, apparent degradation rates of them were low. These results indicate that the bacteria living in the soil play an important role to the natural attenuation of the gasoline. The risk level of gasoline containing in the soil was reduced by the microbial community.

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