

عنوان مقاله:

Degradation of Oily Sludge Using Bioremediation in Slurry Phase

محل انتشار:

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خلاصه مقاله:

Oily sludge is one of the major oil pollutants that bioremediation is considered the most efficient way of treating and removing harmful hydrocarbons from these pollutants. In this study, the biodegradation of oil sludge from the Sirjan Gasoil storage reservoir in the slurry phase was investigated. In this research, the effect of sewage (wastewater) and surfactant and their interactions on biodegradation in the slurry phase has been investigated. The oil sludge was mixed with a ۲۵% (w/v) combined ratio with different liquids and the slurry phase was applied for ۲۱ days by incubator shaker at ۱۳۰, ۱۵۰, and ۱۹۰ rpm. The temperature of the specimens was set in the appropriate range for the activity of degrading bacteria (۳۰°C). Determination of the amount of hydrocarbons by dichloromethane extraction was carried out every week and an incremental removal of hydrocarbon was observed during this period. Among the samples, the highest removal of hydrocarbons was attributed to a rotational speed of ۱۹۰ rpm with a removal rate of approximately ۵۵%.

کلمات کلیدی:

Bioremediation, Slurry phase, Oily sludge, Hydrocarbon, Wastewater, Tween ۸۰

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