

## عنوان مقاله:

Evaluatoin of the efficiency of isolated microorganisms from crude oil for removing floating crude oil

## محل انتشار:

دوازدهمین کنگره ملی مهندسی شیمی ایران (سال: 1387)

تعداد صفحات اصل مقاله: 8

## نویسندگان:

A Talaie - Science and Research Center , Islamic Azad University , Ahvaz Branch , Ahvaz , Iran

.M Beheshti - Chemical Engineering Department , Isfahan University , Isfahan Iran

N Jaafarzadeh - Environmental Health Department , Ahvaz , Faculty of public Health , Jondishapour Medical Sciences University , Ahvaz . Iran

.M.R Talaie - Chemical Engineering Department , Isfahan University , Isfahan Iran

## خلاصه مقاله:

In this study, two strains of bacteria were isolated from the crude oil feed of Isfahan oil refinery in Iran These bacteria which caled A-1 and A-2 , were gram negatives and cocci . The mixture of A-2 were inoculated to a semi - batch bioreactor to decrease the concentration of floating crude oil water . The removal efficiency was reached to 89% after a 7.5 days operation of bioreactor in the best conditions .Durig 91 days mixed liquid suspended solid (MLSS) in the bioreactor and sludge volume index (SVI) evaluated . Three concentration of crude oil applied for this study and the effect were investigated . During of study , SVI in reactor was very low and was between 20 to 90 mg/l . Microbial flocks in bioreactor were scarce and microorganisms had dispersed growth. These low SVI and disperse growth were due to toxic components that exist in crude oil. Maximum MLSS was about 8000 mg/l and in the first addition of crude oil (17150mg/l), it decreased to about 4000 mg/l . but in second increase of substrate , the changer of MLSS was low . A-1 and A-2 could produce biosurfactant and the emulsification index of A-1 , A-2 and mixed them were 20% , 25% and 21% respectively . Our data showed that isolated microorganisms dont need to any synthetic surfactants for .startup of crude oil biodegradation

## کلمات کلیدی:

crude oil , biodegradation , microorganisms. Removing,bioreactor

## لینک ثابت مقاله در پایگاه سیویلیکا:

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