

## عنوان مقاله:

Attenuation of Polycyclic Aromatic Hydrocarbon- Phenanthrene With High Concentration in Aqueous Phase by Mixed Culture

## محل انتشار:

چهارمین همایش ملی بیوتکنولوژی ایران (سال: 1384)

تعداد صفحات اصل مقاله: 4

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## خلاصه مقاله:

One of the major environmental pollutant has been stated frequently by many researchers is PAH. Currently, potential interest for biodegradation was vastly developed. Therefore, acute toxic responses may cause liver damage or dermatitis was reported. The derivatives of PAH compounds, which are more water soluble and reactive, may easily bind to protein, DNA, and other macromolecules, leading to cell damage, mutagenesis, or possible of the stomach, lung, and skin cancers. In points of view of human being, the goal of biodegradation is the protection of global environment and preservation of biodiversity. Also, in eyes of environmental scientist, biodegradation prescribes medicine for healthy environment. The purpose of this study is to demonstrate a potential mixed culture to degrade on high concentration of phenanthrene as sole carbon and energy source. Batch culture by induction of mineral salt medium, the seeding contained phenanthrene, and the biodegradation was monitored for the incubation period of 7 days. Throughout the experiments, samples for determination of phenanthrene were analyzed using GC-FID with capillary column. Kinetic model related to biodegradation of PAH were obtained for microbial growth and utilization of phenanthrene was defined based on modified Monod rate model.

## کلمات کلیدی:

Batch culture, Biodegradation, PAH, Phenanthrene, Kinetic models

## لینک ثابت مقاله در پایگاه سیویلیکا:

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