Current Issue
Browse Issues
Search
About this Journal
Instruction to Authors
Online Submission
Subscription
Contact Us
RSS Feed

Acta Medica Iranica
2009;47(4) : 85-90

"Effect of organic loading on the performance of aerated submerged fixed-film 85 reactor (ASFFR) for crude oil-containing wastewater treatment"

H. Izanloo, A. R. Mesdaghinia, R. Nabizadeh, S. Nasseri, K. Naddafi, A. H. Mahvi, Sh. Nazmara

Abstract:

An aerated submerged fixed-film (ASFF) bioreactor was developed to treat an artificial wastewater based on crude oil. Bee-Cell 2000 was used as support media having porosity of 87% and a specific surface area of 650 m2/m3. The system was able to achieve 83.14–97.05 percentage removal efficiencies of soluble chemical oxygen demand (SCOD) in the organic loading rate range of 0.84 to 9.41 g SCOD/m2.day. Results showed that the effluent SCOD concentration ranged between 18.93 and 100.93 mg/L at organic loadings experienced. Therefore, an ASFF process showed that it was feasible to treat high oily wastewater in order to meet the discharge standards.

Keywords:

Aerated submerged fixed-film (ASFFR) bioreactor ، SCOD removal ، attached growth ، organic loading rate ، oily wastewater ، discharge standards

TUMS ID: 3270

Full Text HTML Full Text PDF 144 KB

top