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The Effects of Oil Spill Eater II on Oil Degradation

Author(s): [Mahdieh Yaghoubi](#) , [Ali Haghmoradkhani](#) , [Mohammad Rafiee](#) , [Mahsa Jahangiri Rad](#) *

Message: 

Article Type: Brief Report (with valid rating)

Abstract:

Background:

Hydrocarbon contamination is considered to be a crucial environmental pollutant, which threatens the marine ecosystem and indirectly affects human health. Petrochemical industries are among the major sources of oil release into the environment. Several approaches are used to remove hydrocarbons from contaminated water, including biological, mechanical, and chemical methods. Oil Spill Eater II (OSE II) is an EPA-listed liquid nutrient with enzymes for the removal of hydrocarbons or other organic contaminants, which has also been proposed for the elimination of oil contaminants worldwide.

Objectives:

The present study aimed to evaluate the effects of OSE II on hydrocarbon degradation from contaminated seawater.

Methods:

In accordance with the instructions of the manufacturer, a combination of seawater and crude oil of various regions was prepared with a specific proportion. The amount of total petroleum hydrocarbon (TPH) before the addition of OSE II and after the treatment with OSE II was analyzed via gas chromatography-mass spectrometry (GC-MS).

Results:

The maximum removal rate of TPH from seawater was within the range of 59-75.5% after the OSE II treatment and 7-15 days of aeration. In addition, GC-MS indicated that the initial sharp peaks declined substantially due to the impact of OSE II on the destruction of hydrocarbon chains.

Conclusions:

According to the results, OSE II exhibited a high potential for the degradation of petroleum hydrocarbons.

Keywords: [Hydrocarbons](#) , [Marine](#) , [Oil Spill Eater II](#)

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