

## عنوان مقاله:

Application of natural surfactants for enhanced oil recovery – Critical review

## محل انتشار:

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## خلاصه مقاله:

The huge energy demand, wide need for more crude oil production and the low-efficiency of the conventional methods are the reasons of increasing interests to Enhanced Oil Recovery (EOR) techniques for recovering more oil from the existing reservoirs. One of the most common methods for enhanced oil recovery is the utilization of different types of surfactants (synthetic or natural) in order to decrease the oil-water interfacial tension. However, the surfactants being used today are usually synthetic chemicals and polymers, which are expensive, linked to fossil fuels, and detrimental to the environment. In this review natural surfactants produced from the leaves of Olive, Spistan, Prosopis, mulberry, zizyphus spina Christi, soapnut and chamomilla are investigated. Surfactants were extracted from the leaves of the addressed plants and the effect of these surfactants on the interfacial tension between water or brine and oil are investigated. Pendant drop and ring methods were employed in those researches to measure the IFT between the surfactant solution and oil. Results of this study could help researchers in the future studies about application of natural surfactants in the Enhanced Oil Recovery targets in petroleum reservoirs.

## کلمات کلیدی:

Enhanced Oil Recovery, Chemical flooding, Natural surfactant, Interfacial tension

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