

## عنوان مقاله:

New non-Ionic Surfactant for Enhanced Oil Recovery Implication

## محل انتشار:

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## خلاصه مقاله:

When the primary oil production stage becomes very weak in an oil field, enhanced oil recovery (EOR) methods such as water injection or/and surfactant flooding should be considered in order to produce the oil remaining in the porous medium. The surfactant flooding aims at lowering the interfacial tensions between the oil and water phases, improving the displacement efficiency. This paper present, effect of new non-ionic surfactant named Zizyphus spina Christ on interfacial tension (IFT)between oil and water. This surfactant can be implemented for chemical flooding in Iranian oil fields due to its low cost and availability. Pendant Drop experiments were carried out to figure out the impact of new surfactant on interfacial tension. The algorithms carried out to infer interfacial tension from the geometrical profile of the pendant drop are described in detail, in particular, a new method for evaluation of the value of the radius at the apex of the drop, necessary for calculation of interfacial tension, is presente. Zyziphus Spina Christi caused a reduction in interfacial tension from 32.456 to 9.7812 mN/m, which can be decreased to ultralow IFT by the addition of salt and alcohol. Results from this study are instructive for appropriate selection of surfactants in design of EOR .processes and reservoir stimulation plans for oil reservoirs

## کلمات کلیدی:

Nonionic, Enhanced Oil Recovery, Interfacial Tension, Surfactant

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