

**KARAKTERISASI SISTEM MIKROEMULSI TIPE W/O DENGAN BAHAN OBAT
NATRIUM DIKLOFENAK (Perbandingan Konsentrasi Surfaktan (Span 80-Tween 80) :
Kosurfaktan (Isopropanol) 4:1, 5:1, dan 6:1)**

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ABSTRACT

The aim of the present study was to make a comparison of characterization water/oil microemulsions containing diclofenac sodium with different concentration surfactants (Span 80-Tween 80) : cosurfactant (isopropanol) 4:1, 5:1, and 6:1. Three microemulsion formulations were examined for organoleptic, conductivity, droplet size distributions, and maximal solubility of diclofenac sodium. Three microemulsion formulations showed similarity organoleptic (yellow pale colour, transparent, and high fluidity solution). Three microemulsion formulations showed that diclofenac sodium-loaded make more transparent solution than unloaded diclofenac sodium formulations. The conductivity results in three microemulsion formulations showed that diclofenac sodium-loaded microemulsions have higher conductivity values than unloaded diclofenac sodium formulations. According to maximal solubility of diclofenac sodium, in three microemulsion showed similarity value. According to droplet size measurement microemulsion prepared with surfactants (Span 80-Tween 80) : cosurfactant (isopropanol) 4:1 showed the significantly smallest droplet size value (11.6 ± 2.8 nm) among all formulations. In conclusion, microemulsion prepared with 4:1 surfactants (Span 80-Tween 80) : cosurfactant (isopropanol) may be a more appropriate formulation than the other two formulations.

Keyword (s) Diclofenac sodium, microemulsion, characterization, Span80, Tween80, Isopropanol