

ABSTRACT

**CHARACTERIZATION OF WATER /OIL MICROEMULSIONS
CONTAINING OVALBUMIN**

(Comparison of Surfactant (Span 80-Tween 80) : Cosurfactant (Ethanol) =
4:1, 5:1 and 6:1)

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The aim of this study was to make characterization water/oil microemulsions containing ovalbumin with different comparison of surfactants (Span 80-Tween 80) : cosurfactant (ethanol) = 4:1, 5:1 and 6:1. Three of microemulsion formulations were examined for organoleptic, conductivity, and droplet size measurements. Those three microemulsion formulations showed similarity organoleptic (yellow color, transparent and high fluidity solution). According to droplet size measurement microemulsion prepared with surfactants (Span 80-Tween 80) : cosurfactant (ethanol) = 4:1 showed the significantly smallest droplet size value ($978,6 \pm 54,79$ nm) among all formulations. This microemulsion was chosen to loaded by ovalbumin. Results showed that ovalbumin-loaded make more transparent solution and have bigger droplet size value ($2070,97 \pm 240,39$ nm) than unloaded ovalbumin formulations. The conductivity results in three microemulsion formulations showed that ovalbumin-loaded microemulsion have lower conductivity values than unloaded ovalbumin formulations. While the solubility of ovalbumin showed 0,33% . In conclusion, microemulsion prepared with 4:1 surfactants (Span 80-Tween 80) : cosurfactant (ethanol) might be more appropriate formulation than the others.

Keyword (s) : Ovalbumin, microemulsion, characterization, Span 80, Tween 80, ethanol