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Formulation & Characterisation of Microemulsion with Nonionic Surfactants

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Pseudoternary phase diagram was investigated which reveals the influence of hydrophobic chain lengths of surfactant, cosurfactant, oil & their(S/Co) different ratios on the phase behaviour of surfactant/ cosurfactant/ oil/ H2O. The total area of microemlsion (ME) regions were determined 2:1(w/w) ratio of S/Co was found to show largest ME region. Formulation of MEs increased with an increase of hydrophobic chain length of non ionic surfactant, which was antagonistic to the trend for oil. Among the alcohol co surfactant chosen, n-butanol formed largest ME region. Various physical parameters give idea about ME region formed. Sub ME regions were identified by conductivity measurements. o/w MEs were observed when water content was higher than 62-68 %. The o/w sub phase region had significantly shown lower viscosities than w/o or bicontinuous sub phases.

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