

Solubility of Betulinic Acid in Microemulsion System:(Part 2).

ABSTRACT

Microemulsion has been reported to be an alternative carrier for poor solubility of the compounds in aqueous media. Microemulsion is a stable isotropic liquid mixture of oil, water, surfactant, with or without the combination of a co-surfactant. In this work, the microemulsion was designed by constructing a ternary phase diagram using sodium dodecyl sulphate (SDS) as the surfactant, water as the aqueous media and the carboxylic acids and esters as the co-surfactant. After designing the microemulsion, and constructing the phase diagram, the known isotropic regions were reformulated. Betulinic acid was then solubilized in the isotropic region. For the system containing carboxylic acid, the acetic acid system offered the largest isotropic region and it was found that the microemulsion system obtained was suitable for dissolving betulinic acid. The concentration of betulinic acid dissolved in this system was directly proportional to the percentage of surfactant but inversely proportional to the water percentage.

Keyword: Betulinic acid; Microemulsion system.