

## In vitro skin permeation study of cubosome containing hinokitiol

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Hinokitiol(2-hydroxy-4-isopropyl-2,4,6-cyclohepta-2,4-triene-1-one, HKL) is obtained from the essential oils of several kinds of trees and it has been studied as an anti-microbial agents. Since water-soluble, it needs to be entrapped in lipidic carriers for the dermal delivery. In this study, cubosomes was adopted as the lipidic carriers. Cubosomes with the internal structure of bicontinuous cubic phases are novel lipid-based dispersions with an average particle size in nanometers. Cubosomes were prepared from monoolein (MO)-water mixture by rotary evaporator using Pluronic F127 as the dispersing agent .In vitro skin permeation of hinokitiol entrapped in the carriers was investigated using a diffusion cell drive. As a control, HKL dissolved in distilled water and propylene glycol(PG) were used. According to the results, cubosomes enhanced the skin permeation. In addition, the physical characteristics such as size distribution and apparent shape were observed by differential scanning calorimetry(DSC) and dynamic light scattering (DLS) and cryo-transmittance electron microscopy (cryo-TEM).