

ABSTRACT

**CHARACTERIZATION OF PRONIOSOME IBUPROFEN-SPAN 60-
CHOLESTEROL PREPARED USING ETHANOL 96% AS
SOLVENT AND GLYCEROL 0,1% AS AQUEOUS PHASE**

Reri Idora Puspa Fortuna

The aim of this study was design to determine the characteristic of proniosome ibuprofen which consist of various ratios of cholesterol. The formulation of proniosome gel was composed of ibuprofen-Span 60-cholesterol with molar ratio 2:1:0.75 (formula I); 2:1:1 (formula II); and 2:1:1.25 (formula III). Proniosomes of Ibuprofen were prepared by coacervation phase separation method using ethanol 96% as solvent and 0.1% glycerol solution as aqueous phase. The characterization of proniosomes were include by organoleptics, morphology of proniosome, entrapment efficiency, vesicle size of niosome, and vesicle shape of niosome.

The result showed that all of the formulations were white in color, odorless, soft in texture and semisolid. The morphology of proniosomes were observed under optical microscopy, the result showed all of proniosomes had structure of proniosome gel's polimer. Entrapment efficiency analysis showed that all of proniosoms had high entrapment efficiencies. The entrapment efficiency were analyzed statistically using one way ANOVA with degree of confident 95% ($\alpha = 0,05$), the result showed no significant changes were detected in EP of all formula proniosomes. The vesicel shape of niosome were spherical and homogenous in structure when observed under optical microscopy and SEM. Vesicle size analysis showed that the vesicles size from formulation I, II, and III were 730,4 nm, 459,2 nm, dan 415,0 nm.

Keywords : proniosomes, ibuprofen, coacervation phase separation method, characterization