ABSTRACT

CHARACTERIZATION AND RELEASE OF IBUPROFEN PRONIOSOM SYSTEM USING ETHANOL 96% AS SOLVENT AND GLYCEROL 0,1% AS AQUEOUS PHASE FROM HPMC GEL BASE

Corry Silvia

The aim of this study was to determine release of ibuprofen from HPMC 4000 gel base in the proniosome system consist of ibuprofen - Span 60 - cholesterol with molar ratio 2:1:0,75 using ethanol 96% as solvent and glicerol 0,1% as aqueous phase. There were two formulas in this study. First was HPMC 4000 gel without proniosome system and second was HPMC 4000 gel with proniosome system. Evaluations of formulas were included organoleptic, pH, spread diameter, and release test. pH of formula I was 4,74 ± 0,20 and formula II was 4,98 ± 0,02. Spread diameter at zero load formula I was 6,1 ± 0,4 cm and formula II was 5,5 ± 0,4 cm. Drug release was determined in phosphate buffer pH 6,0 ± 0,05 at 32 ± 0,5°C for 7 hours. The drug release (flux) of ibuprofen from HPMC 4000 gel without and with proniosome system were 93,1381 ± 2,8618 $\mu g/cm^2/min^{1/2}$ and 66,9779 ± 9,1962 $\mu g/cm^2/min^{1/2}$. Result were statistically using Independent sample T-test with degree of confident 95% (α = 0,05). Research result revealed that ibuprofen release proniosome system from HPMC 4000 gel was lower than release of ibuprofen from formula without proniosome system.

Keywords : Proniosome, ibuprofen, drug release