PENGARUH KADAR HPMC K100LV TERHADAP MUTU FISIK, KARAKTERISTIK FLOATING DAN PELEPASAN TABLET FLOATING LEPAS LAMBAT RANITIDIN HCl

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ABSTRACT
The rationale of this research was to prepare a gastroretentive drug delivery system of Ranitidine HCl. Floating Drug delivery system used to target drug release in the stomach or to the upper part of the intestine. Currently, floating tablets are one of the important categories of drug delivery systems with gastric retentive behavior. Ranitidine is a H2 blocker and absorbed from the upper part of gastrointestinal track and hence there is need to develop a dosage form that release the drug in stomach so that it can be absorbed from upper part of gastrointestinal track leading to improved bioavailability.

Four different formulas of ranitidine HCl were prepared by wet granulation using different concentration of hydroxypropyl methylcellulose K100LV, which first formula (F1) without hydroxypropyl methylcellulose. The FII, FIII, and FIV used hydroxypropyl methylcellulose 30%, 40% and 50% respectively. The prepared tablets were evaluated on their physical, floating and drug release characteristics. The dissolution test was performed using 900 ml of 0,1 N hydrochloric acid, at 37 ± 0,5°C and 50 rpm.

The result showed that the kinetic release of FII followed first order model, FIII followed Higuchi’s model, and FIV followed both first order and Higuchi’s model. The release mechanism dominated by matrix porous diffusion.

Key word : ranitidine HCl, floating tablet, hydroxypropyl methylcellulose K100LV.