

ABSTRACT

The Effect of Concentration Carbopol 934P towards Physical Characteristics, and Mucoadhesive Characteristics from Ranitidine HCl Tablets.

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The aim of this research was to prepare a gastroretentive drug delivery system of Ranitidine HCl. Mucoadhesive drug delivery system used to target drug release in the stomach or to the upper part of the intestine. Currently, mucoadhesive tablets are one of the important categories of drug delivery systems with gastric retentive behavior. Ranitidine HCl is a H₂ blocker, absorbed from the upper part of gastrointestinal track, and metabolized in the colon that can degrade the drug. 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.

Three different formulas of ranitidine HCl were prepared by dry granulation using different concentration of carbopol 934P, which the ratio of carbopol 934P in F1, F2, and F3 is 30%, 40%, and 50%. The prepared tablets were evaluated on their physical, and mucoadhesive characteristics.

The result showed that the hardness of tablets is improving as the increasing concentration of carbopol 934P. Swelling index also extended as the increasing concentration of carbopol 934P.

Keyword : ranitidine HCl, mucoadhesive tablet, carbopol 934P.