INTISARI

Famotidin adalah obat antihistamin H_2 yang digunakan dalam pengobatan penyakit tukak lambung (*peptic ulcer*), tukak duodenal, atau keadaan hipersekresi yang patologis. Tablet *floating* famotidin dapat meningkatkan GRT sehingga obat akan bertahan di lambung dan mendekatkan famotidin pada tempat absorpsinya pada sel parietal lambung bagian atas sehingga dapat meningkatkan bioavailabilitas dari famotidin. Penelitian ini bertujuan untuk mengetahui komposisi optimum HPMC K100M serta gum xanthan dan pengaruh variasi keduanya terhadap sifat fisik granul dan sifat fisik tablet *floating* famotidin.

Pembuatan delapan formula tablet *floating*famotidin menggunakan metode granulasi basah. Respon formula optimum didapat dengan evaluasi granul dan sifat fisik tablet. Evaluasi granul meliputi uji sifat alir dengan metode kecepatan alir dan uji daya serap granul. Evaluasi tablet meliputi keragaman bobot, kekerasan, kerapuhan, *swelling index*, *floating lag* time, *total floating time*, disolusi obat, dan penetapan kadar. Penentuan formula optimum menggunakan *Design Expert* versi 10.0.1.

Peningkatan HPMC K100M meningkatkan daya serap granul dan *swelling index* secara signifikan. Peningkatan gum xanthan meningkatkan kecepatan alir granul, kekerasan tablet, kerapuhan tablet, dan *floating lag time* secara signifikan. Kombinasi keduanya menurunkan persentase obat terdisolusi secara signifikan. Formula optimum tablet *floating* famotidin merupakan formula dengan kombinasi HPMC K100M sebesar 30% dan gum xanthan sebesar 5%.

Kata kunci : tablet *floating*, famotidin, HPMC K100M, gum xanthan.

ABSTRACT

Famotidine is histamine H_2-receptor antagonist used in treatment of peptic ulcer disease, duodenal ulcer, or pathological hypersecretory disease. Famotidin floating tablets may increase GRT so that the drug will survive in the stomach longer and bring famotidine closer to the absorption site in parietal cells located in upper side of stomach to improve the bioavailability of famotidine. The aims of this study is to determine the optimum composition HPMC K100M and gum xanthan and to know the influence of both variations on physical properties of granule and physical properties of floating famotidin tablets.

Eight run of famotidin floating tablets was made by wet granulation method. The optimum formula response is obtained by granule evaluation and physical properties of tablets evaluation. The granule evaluation includes flow characteristic test with flow velocity method and granule absorption test. Tablet evaluation includes weight diversity, hardness, brittleness, swelling index, floating lag time, total floating time, drug dissolution, and assay. Determination of optimum formula using Design Expert version 10.0.1.

Increasing HPMC K100M significantly improves granule absorption and swelling index. Increasing gum xanthan significantly improves granular flow rate, hardness, brittleness, and floating lag time significantly. The combination of both decreased significantly the percentage of the drug which dissolves. The optimum formula of tablet floating famotidine is a formula with combination of HPMC K100M 30% and xanthan gum 5%.

Keywords: floating tablet, famotidin, HPMC K100M, xanthan gum.