

## THE INFLUENCE OF HPMC TO CO-PROCESSED CHITOSAN-SODIUM STARCH GLYCOLAT AS MATRIX TABLET FLOTING FORMULATION

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### ABSTRACT

Co-processing is one of physical combination methods to improve the functional characteristics of excipients. Development of co-processed excipient for controlled released dosage form is an environmentally advantageous alternative to synthetic polymers in some applications. In fact co-processed chitosan-sodium starch glycolate (SSG) could not use as matrix floating tablet, because the capability to retard drug release from the tablets is limited. The aim of this research is to investigate the retardation of drug release by influence of HPMC to the co-processed excipient from the matrix tablets. The co-processed excipient was made by mixing chitosan 5% w/v in acetic acid 0.5 N with SSG 5% w/v in 70°C distilled water. Then, the mixture was dried by double drum dryer at  $\pm 80^{\circ}\text{C}$ . The floating tablet matrix was processed by physical mixture that consists of co-processed excipient and HPMC in ratio 1:1, 2:1, and 3:1. The result showed the tablets that used co-processed excipients: HPMC in ratio of 1:1 could retard the rate of drug for 10 hours and could float for 12 hours long. Floating tablet which only uses HPMC could retard drug release for 20 and the float for 24 hours long. It indicates HPMC can increase the capability of chitosan-SSG matrix as co-processed excipients in retarding the rate of drug release.

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