ABSTRACT

(Prepared by Orifice-ionic gelation method)
Microparticles of ketoprofen could be developed to avoid gastrointestinal irritation. The aim of this research was to investigate the effect of ketoprofen on drug content and drug release profile of chitosan microparticles of ketoprofen. Microparticles was prepared by orifice-ionic gelation method with ketoprofen-chitosan ratio of 2:10; 3:10; and 4:10. The mixture of the dispersion system consist of ketoprofen-chitosan dropped with syringe 21G onto cross-linker. The obtained microparticles was evaluated for its morphology and particle size, drug content, and drug release profile. The result showed that chitosan microparticles of ketoprofen have irregular shape. The particle size of microparticles increased by increasing initial drug concentration. Drug content and efficiency encapsulation also increased by increasing initial drug concentration. In vitro-release of microparticles in phosphate buffer media was slower than ketoprofen powder. Microparticles with the highest intial drug concentration have the fastest release.

Keyword : ketoprofen, microparticles, chitosan, sodium tripolyphosphate, orifice-ionic gelation.