ABSTRACT

Effect of Chitosan 19 cPs Concentration on Physical Characteristic and Release Profile of Ketoprofen-Chitosan Microparticles
(prepared by spray drying methods with inlet temperature 100°C)

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Microparticles is particles that have size between 1-1000 µm. The aim of this research was to investigate the effect of chitosan concentration (F1 = 0,125%, F2 = 0,25%, and F3 = 0,5%) on physical characteristic and drug release of microparticles ketoprofen-chitosan. Microparticle was prepared by ionic gelation using sodium tripolyphosphate as cross linker, then dried by spray drying method. The result showed that microparticles have spherical shape and as the chitosan concentration increased, the mean particle size microparticles increased. The result also showed that as the increased of chitosan concentration, the entrapment efficiency of the drugs increased. In simulated intestinal fluid, the release ketoprofen of F1, F2, and F3 was slower than ketoprofen control, which could be seen by the slope. F1, F2, F3, and control each has slope as 10,1791 ± 0,7127 (%/minute^{1/2}), 10,3641 ± 0,0678 (%/minute^{1/2}), 10,1151 ± 1,0778 (%/minute^{1/2}), dan 12,83021 ± 0,2410 (%/minute^{1/2}).

Keywords: ketoprofen, chitosan, microparticle, spray drying, cross linker