Effect of Drug Properties on Formulation Properties of Eudragit Non Effervescent Floating Microparticulates

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SUMMARY. The objective of the present investigation was to investigate the effects of selected drugs (captopril and celecoxib) properties on different parameters drug entrapment, in vitro drug release, release pattern, in vitro drug permeation and buoyancy in the formulation of Eudragit S100 non effervescent floating microparticulates. Microparticles were in size ranges 268.36-352.27 μm (captopril) and 271.36-365.54 μm (celecoxib). Encapsulation efficiency of celecoxib was good as compare to captopril. In vitro permeation studies showed in range (ES6) 74.83 μg – (ES1) 79.84 μg (celecoxib), (EU6) 57.01 μg - (EU1) 67.38 μg (captopril). In vitro release followed Non-Fickian diffusion mechanism while in vitro permeation kinetics revealed the super case II transport mechanism. Taken together, water insoluble (celecoxib) drug showed suitable combination with Eudragit S100. This study concluded that the effect of various parameter on the characteristics of Eudragit gastroretentive drug delivery system by non effervescent technique using celecoxib and captopril having different physicochemical characterization.

KEY WORDS: Captopril, Celecoxib, Eudragit S100, Microparticulates, Non effervescent, Non-Fickian.

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