

ABSTRACT

Solubility and Dissolution Study of Ketoprofen – Hidroxypropyl- β -Cyclodextrin Inclusion Complex

(Prepared by Kneading Method)

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Ketoprofen is a non-steroid anti inflammatory drug (NSAID) that have antiinflammation, analgesic and antipyretic effect. It has been classified as Biopharmaceutical Class II (BCS II) which has poor solubility and high permeability through membrane. The aim of this study is to enhance solubility and dissolution rate of ketoprofen using ketoprofen – hydroxypropyl- β -cyclodextrin inclusion complex prepared by kneading method. Solubility and dissolution test were carried out to determine ketoprofen – hydroxypropyl- β -cyclodextrin inclusion complex properties. Solubility test was performed using buffer pH 1.2 until 5 hours. Solubility test resulted in increase of ketoprofen – hydroxypropyl- β -cyclodextrin inclusion complex solubility. Dissolution test was performed using apparatus II and buffer pH 7.4. The results showed also increase in ketoprofen – hydroxypropyl- β -cyclodextrin inclusion complex dissolution. The study can be concluded that the solubility and dissolution rate of ketoprofen was increased with ketoprofen – hydroxypropyl- β -cyclodextrin inclusion complex prepared by kneading method.

Keywords : ketoprofen, hydroxypropyl- β -cyclodextrin, inclusion complex, solubility, dissolution, kneading.