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Development and Release Kinetics of a Novel Formulation of Nimesulide Prepared by Microencapsulation using Synthetic Polymers

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***SUMMARY*. The synthetic polymers and their combinations were employed to retard the release of nimesulide from microcapsules. Microcapsules were prepared in different ratios of Eudragit RL 100 and hydroxy propyl methyl cellulose (HPMC) separately and in combination. All formulations of microcapsules were compressed to tablets. Dissolution of microcapsules and their tablets was performed by USP-apparatus-II in 900 mL borate buffer of pH 8.4 at 37.0 ± 0.5 ºC, at 50 rpm. *In vitro* kinetics was determined by various models including Zero order, First Order, Higuchi, Korsmeyer-Peppas and Hixson-Crowell. Eudragit showed higher retarding effect over extended period of time on release of drug than HPMC alone or its combination with Eudragit.**

KEY WORDS: Eudragit, HPMC, Microencapsulation, Nimesulide, Release kinetics.

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