



Influence of Cellulose Derivatives and Natural Polymers on *In Vitro* Release Kinetics of Metoprolol Succinate from Extended Release Matrix Tablets

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SUMMARY. In the present investigation, extended release tablets of metoprolol succinate were developed using cellulose derivatives and natural gums as matrix formers and were evaluated for its extended release characteristics. The optimized formulation (F7) was obtained using cellulose derivatives in the ratio of 1:0.5:1drug, HPMC K 100M and Na CMC, respectively. Prepared tablets were subjected to all the Pharmacopeial quality tests and found to be in the limits. The *in vitro* release studies of prepared matrix tablets with both the polymers were also studied. The kinetic treatment illustrate that the optimized formulation (F7) followed zero order kinetics with release exponent (n) 0.82 and showed good stability as per ICH guidelines. FT-IR and DSC studies indicated no chemical interaction between the drug and excipients. Oral extended release tablets of metoprolol succinate could be successfully prepared using an appropriate combination of cellulose polymers when compared with natural gums.

KEY WORDS: Hydroxypropyl methylcellulose, Metoprolol succinate, Sodium CMC, Sustained release matrix tablets.

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