

ABSTRACT

Effect of Carboxymethyl Chitosan and Hidroxypropyl Methyl Cellulose (HPMC) 606 to Physical Characterization and Release of Meloxicam from Transdermal Patch Reservoir Type

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In the present study an attempt was made to optimize formula in the reservoir type transdermal patch of meloxicam with combination of two polymers (CmC as drug reservoir and HPMC as rate controlling membrane). The aimed of this research were designed to input drugs at appropriate rates to maintain suitable plasma levels for therapeutic efficacy and solve the problems that often occur in the use of oral routes. The transdermal patches were evaluated for physical characteristic such as visual appearance, surface test with SEM, weight, thickness, moisture content, drug content, drug homogeneity and release studies. The result showed there were significant difference among formulas (F1,F2,F3,F4,F5,F6,F7,F8 and F9) in weight, moisture content, and drug homogeneity but not significant difference in thickness and drug content. In physical characteristics visually found that all of the formula (F1,F2,F3,F4,F5,F6,F7,F8 and F9) were smooth in texture, no smell and flexible. In vitro characterization revealed that the release was sustained up to 480 minutes and it followed Higuchi kinetics ($r= 0.9428$). Finally, the formula F9 containing HPMC 606 (7%) and CmC (20%) selected through our physical characterization and release as the best combination (based to highest flux values and constant physical characteristic) for meloxicam transdermal patch and can be continued for further research.

Keyword (s) : Patch, meloxicam, HPMC, carboxymethyl chitosan.