**Abstract:**

The study was to formulate and evaluate buccal patches containing an antihypertensive agent (Timolol maleate), using different ratio of HPMC K100M and Eudragit RL100, in order to obtain new formulation. Nine different formulations of buccal mucoadhesive patches of Timolol maleate were prepared, which contain polymers HPMC K100M and Eudragit RL100, in various combinations. The patches were prepared by solvent casting method and characterized by folding endurance, patch thickness, drug content, surface pH, bioadhesive time, tensile strength, swelling study, in vitro drug release and ex vivo diffusion profile. All the formulations gave the satisfactory results in terms of physical and mechanical properties and surface pH. Drug release and drug diffusion from the patches

were depended on the ratio and type of the polymer used in the formulation. The best mucoadhesive performance and best in vitro drug release profile were achieved in formulation F9 contain drug: HPMC K100M: Eudragit RL100 (1:4:5).

**Key words**: HPMC K100M, Eudragit RL100, Glycerol, Tween 80, Timolol maleate.