ABSTRACT

The present investigation was made to combat low oral bioavailability of ramipril due to its first pass hepatic metabolism in liver for the treatment of hypertension. by formulation and evaluation matrix-type of transdermal film containing Eudragit RS 100 and HPMC K-15M as polymers at different proportions. Propylene glycol (20% of dry polymer weight) is used as plasticizer and different concentrations of DMSO used as an permeation enhancers. The physicochemical compatibility of drug and polymers was studied by FTIR spectroscopy. The results suggested no physicochemical incompatibility between the drug and polymers. Transdermal film containing modal drug ramipril was formulated by solvent casting method. Stability studies of two most satisfactory formulations (F9 and F8) were carried out at room temperature as per ICH Q1C guidelines. The stability studies showed that there was no significant changes found in physico-chemical properties, *in vitro* release and *ex-vivo* permeation studies. Finally skin irritation studies were carried out for most satisfactory formulations and identified no skin irritation.

KEYWORDS: Ramipril, transdermal film, Eudragit RS100, HPMC K-15M, Propylene glycol, DMSO.