PREFACE

Therapeutically these dosage forms provide constant plasma drug levels constantly duplicating the benefits of I.V. infusion, avoid first pass metabolism, degradation in GIT and for the delayed action.

Azelnidipine and Nebivolol hydrochloride are the drugs which are used in the treatment of hypertension. These are undergoes extensive first pass metabolism, short half life and low dose make them to suitable candidates for Transdermal drug delivery. In this study the drugs are formulated as Transdermal Patches to improve their bioavailability and efficacy.

The Transdermal drug delivery patches were prepared by solvent evaporation technique using Hydroxypropyl Methylcellulose, Ethylcellulose, Eudragit RL100 and RS100 as polymers and the solvent mixture (dichloromethane: methanol) used as solvent, Dibutylpthalate, Polyethylene Glycol are used as plasticizers.

The drug and polymers interactions were examined by Fourier infrared spectroscopy (FTIR) and the results were showed there was no interaction. The prepared Transdermal Patches were evaluated for ex vivo and in vivo drug release using male albino rats. The patches were showed an extended release of drug up to a period of 24 hours.

The stability of the optimized formulations was investigated as per International conference on harmonization (ICH) guidelines and was found to be with respect to drug content.