



Preparation and Evaluation of Transdermal Drug Delivery of Ondansetron Hydrochloride: Effect of Vegetable Oils as Permeation Enhancer

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SUMMARY. The objectives of this study were to develop and characterize the matrix type transdermal drug delivery system (TDDS) of ondansetron hydrochloride (ODH). The matrix patch contains different ratios of Eudragit RS 100 and polyvinyl pyrrolidone (PVP) with different concentrations of plasticizer like triethyl citrate (TEC) and dibutyl sebacate (DBS) as well as vegetable oils such as linseed oil, castor oil and eugenol were added and prepared by solvent casting method. Thickness, tensile strength, drug content, moisture content and water absorption studies of the matrix patches were measured. The *in vitro* drug release and permeation studies were carried out in Franz diffusion cell. The percentage of drug release increased with increasing amounts of PVP and plasticizer, whereas DBS containing patches exhibited higher than TEC containing patches. It may conclude that transdermal patches which use Eudragit RS 100 as the base polymer with higher amount of PVP and plasticizer DBS and additions of linseed oil were suitable for the development of ODH transdermal patches.

KEY WORDS: Ondansetron hydrochloride, Plasticizers, Transdermal, Vegetable oils.

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