**ABSTRACT**

Granisetron hydrochloride is an anti-emetic drug which is used in the treatment of cancer induced nausea and vomiting. It has a low oral bioavailability (60%). The purpose of this research work was to develop matrix-type transdermal film of Granisetron hydrochloride by solvent casting method. In the present studyHPMC K4M, HPMC K15M, eudragit RL100 and eudragit RS100 were used in different concentration and investigated for the development of transdermal drug delivery system. Propylene glycol (30% w/w) was used as plasticizer and Span 20 (20%w/w) was used as permeation enhancer in different concentrations. The prepared formulations were evaluated for weight variation, thickness, folding endurance, drug content, tensile strength, moisture uptake, moisture content, *in-vitro* diffusion studies. For adhesive tape, tensile strength, tack test, peel adhesion, elongation, parameters were evaluated. The physicochemical compatibility of the drug with the polymers was found to be compatible when studied by FT-IR. Formulations F3 & F7 showed the highest folding endurance. Formulation F2 showed highest tensile strength of 8.69 N. Formulation F3 showed 97.89% of drug content. Formulation F3 & F6 showedmaximum drug release of 98.63% and 98.22% at the end of 24 h. The best formulation F3 was subjected for stability studies as per ICH guidelines. The stability studies showed that there was no significant change in physico-chemical properties and *in vitro* diffusion studies, hence F3 was concluded as the best formulation.

**KEYWORDS:** Granisetron, Transdermal films, tensile strength, *in-vitro* diffusion

studies.