

FORMULATION AND EVALUATION OF MEDICATED NAIL PATCHES CONTAINING KETOCONAZOLE

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ABSTRACT

The present investigation aims to formulate and evaluate a medicated nail patch for the treatment of diseases like Onychomycosis (fungal infection of nail) and psoriasis, Yellow nail syndrome, Paronychia and many others. The objective of this study is to explore the difficulties in penetration of drug across nail plate & to enhance bioavailability of antifungal drugs. Nail drug delivery system is used to reduce such a hazardous systemic effects and provides longer contact time at a site of action. Many formulations of Ketoconazole were prepared by using optimized formula using HPMC100, Eudragit RS100, DCM : methanol, diethyl phthalate, propylene glycol which shows better diffusion & permeation. These are evaluated for various parameters including thickness, folding endurance, weight variation, % moisture uptake, and % moisture loss and in-vitro release (Diffusion) studies in 7.4 pH phosphate buffers. Effects of varying concentration of various polymer and penetration enhancer were studied. The evaluation of these patches is carried out by drug-excipient interactions subjected to FTIR Spectral analysis, in-vitro diffusion studies, drug content analysis, NDDS is used to achieve maximum therapeutic effect along with improve patient's compliance.

KEYWORDS: *Ketokonazol, HPMC100, Propylene Glycol, Nail Patches, In-Vitro Release*