

Formulation and Characterization of Oxiconazole-Loaded Emulgel for Topical Drug Delivery

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Abstract: This study aimed to develop an Emulgel formulation of Oxiconazole nitrate, a hydrophobic, broad-spectrum antifungal agent used to treat superficial fungal infections. Emulgel, with its dual release control systems of emulsion and gel, was employed to enhance the drug's bioavailability. The Emulgel formulations were characterized for various parameters, including pH, viscosity, spreadability, extrudability, in vitro drug release, skin irritation on Wistar rats, and in vitro antifungal activity against *Candida albicans*. The optimized formulation (F5) exhibited 92.06% drug release over 12 hours, showed no skin irritation, and demonstrated superior antifungal activity compared to a marketed cream containing Oxiconazole nitrate.

Keywords: Emulgel, Oxiconazole, imidazole.

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