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(57) Abstract :

Transdermal drug delivery systems (TDDS) offer a promising alternative to conventional drug administration methods by providing controlled and sustained release of therapeutic agents through the skin. Bilosomes, a novel class of vesicular carriers composed of bile salts and phospholipids, enhance the transdermal permeation and stability of encapsulated drugs. This study focuses on the development and characterization of bilosomal transdermal films designed for improved drug delivery efficacy. The bilosomal transdermal films were formulated using a solvent casting method, incorporating bile salts and phospholipids to form bilosomes, which were then embedded in a polymeric matrix. polymer such as polyvinyl alcohol (PVA), were evaluated for their film-forming properties. In-vitro skin permeation studies were conducted using Franz diffusion cells, comparing the permeation rates of drugs from bilosomal films to those from conventional transdermal films. The results demonstrated that bilosomal transdermal films significantly enhanced the permeation of hydrophilic and lipophilic drugs due to the penetration-enhancing properties of bile salts and the vesicular nature of bilosomes. In conclusion, bilosomal transdermal films represent a promising advancement in TDDS, offering enhanced drug permeation, and controlled release. Further clinical investigations are warranted to validate the efficacy and safety of these films in a clinical setting.

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