

FORMULATION AND EVALUATION OF TOPICAL ANTIMICROBIAL EMBELIN NIOSOMAL CREAM

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ABSTRACT

Embelin, isolated from *Embelia ribes* berries is a major constituent isolated by the Soxhlet process and possesses antimicrobial activity. In this report, we develop and evaluate the topical antimicrobial embelin niosomal cream formulation. Niosomal formulation of embelin was formulated using a thin-film hydration method using Tween™ 60, chloroform and phosphate buffer with a rotary evaporator. This niosomal formulation was incorporated into the cream base, where both oil and water phase ingredients were prepared separately at 70 °C by constant stirring to form w/o (water-in-oil) cream formulation. This niosomal cream was evaluated for particle size, entrapment efficacy, spreadability, centrifugation, viscosity, dye test, homogeneity, *in vitro* antifungal and antibacterial activity against *C. albicans* and *S. aureus*, respectively. The zone of inhibition was calculated and further compared with the market formulations. The study proposed that niosomal formulations delivered sustained and prolonged delivery of drug with increase in bioavailability.