

Formulation and Evaluation of Herbal Gel

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Abstract: *The objective of the study was to develop a topical poly herbal gel for the treatment of mild acne vulgaris. Aqueous extracts of Garcinia mangostana and Aloe vera were formulated in an aqueous based carbopol-934(1%w/w) gel system. Preformulation studies on solubility, partition co-efficient, MIC, MBC were determined along with compatibility studies using a validated HPLC method. Six formulations of the gel were prepared by varying the proportions of polymers and evaluated for their physicochemical properties like pH, spreadability, viscosity and microbial assay. Based on these tests, formulation F-6 containing 1% carbopol-934 was selected as best formulation and carried over to in-vitro drug diffusion studies wherein it showed Cumulative Drug Release of 81.03% at the end of 8 hours with a flux of 0.0879 mg/cm²/hr. The microbial assay of all the formulations demonstrated better inhibitory activity against Propionibacterium acne and Staphylococcus epidermidis compared to the marketed clindamycin phosphate gel in equivalent amounts of application.*

The preliminary in vitro antimicrobial activity of the extracts at various concentrations and those of their creams were determined against some microorganisms using the agar cup plate method. The growth inhibition zones of the extracts on the microorganisms were noted. The minimum inhibitory concentration (MIC) was also determined by agar dilution method. The physical properties of the creams formulated with these extracts were evaluated using standard procedures.

Acne a common skin disease in adolescence is a bacterial skin disorder found in many teenagers. Herbal remedies are used in ancient system of medicine they have natural healing properties, they are used in various acute and chronic skin diseases, which include eczema, contact dermatitis, psoriasis, leprosy, and other major skin diseases.

Keywords: Polyherbal Gel, Anti-acne formulation, Acne vulgaris, Citrus sinensis, Curcuma longa

