

Development and Evaluation of a Topical Herbal Formulation for the Treatment of Eczema

Ms. Shalini Rajeshwar Yelguwar, Priti P. Giradkar, Onkar Sanjay Muppidwar,

Dr. Pankaj M Pimpalshende, Ms. Snehal Sudhakar Soor

Hi-Tech College of Pharmacy, Morwa, Chandrapur

Abstract: *The present study aimed to develop and evaluate a topical herbal gel incorporating the ethanolic extract of Karivepallai leaves for the treatment of eczema. The leaves were collected, authenticated, dried, powdered, and subjected to successive defatting and extraction using petroleum ether and ethanol. Physicochemical parameters such as moisture content, ash values, and extractive values were determined to ensure quality and purity. Preliminary phytochemical screening revealed the presence of proteins, carbohydrates, fats, alkaloids, steroids, diterpenes, and saponins, supporting the therapeutic potential of the extract. Herbal gels were formulated using Carbopol-934 as a gelling agent with varying concentrations of extract and excipients. The prepared gels were evaluated for organoleptic properties, pH, spreadability, consistency, homogeneity, extrudability, viscosity, and stability over 90 days, all of which indicated favorable characteristics suitable for topical use. Antimicrobial studies performed by agar diffusion demonstrated significant zones of inhibition against Escherichia coli, Staphylococcus aureus, Salmonella sp., and Candida albicans, highlighting the formulation's broad-spectrum activity. Among the formulations, F5 showed optimal pH, spreadability, extrudability, and viscosity along with strong antimicrobial efficacy. Stability studies confirmed that the gel maintained its physical, chemical, and microbiological integrity over 90 days. This research underscores the potential of Karivepallai-based herbal gel as a promising alternative therapy for managing eczema, combining traditional plant-based remedies with modern pharmaceutical technology.*

Keywords: Karivepallai, herbal gel, eczema, antimicrobial activity, phytochemical screening, topical formulation, stability studies

