

Harnessing Bael Fruit's Medicinal Properties in Soap Formulation and Evaluation

Prof Nitin Neharkar, Ms. Shravani Yeshwant Dalvi, Ms. Mayuri Anil Choudhari

Ms. Gaurav Dattatray Choudhari, Ms. Jeetendra Mohanlal Choudhary

PDEA Shankarrao Ursal College of Pharmaceutical Sciences and Research Centre, Kharadi, Pune

Abstract: *This research focuses on the formulation and comprehensive evaluation of a medicated herbal soap incorporating Bael (Aegle marmelos) fruit and Orange (Citrus sinensis) peel powders, both known for their extensive traditional medicinal and dermatological applications. The aim is to develop a safe, effective, and eco-friendly alternative to commercial soaps that often contain harsh chemicals. The selected herbs offer a combination of therapeutic properties including antioxidant, anti-inflammatory, antimicrobial, wound-healing, exfoliating, and skin-brightening effects. A glycerin-based soap base was utilized due to its moisturizing properties, and the formulation process involved the integration of standardized herbal powders and essential oils. Evaluation parameters included physical properties (pH, foam retention, moisture content, appearance), chemical stability, and biological assays such as antioxidant activity. Results revealed that the soap maintains skin-compatible pH, provides satisfactory lather and cleansing action, and exhibits high antioxidant potential with minimal skin irritation risk. The findings highlight the potential of integrating traditional herbal ingredients into modern cosmetic formulations, supporting a growing consumer demand for natural, sustainable, and functionally superior skincare products. This study also lays the foundation for the future development of customized herbal cosmetic lines targeting specific skin conditions.*

Keywords: Herbal Soap, Aegle marmelos, Orange Peel, Skincare, Antioxidant, Antimicrobial, Natural Ingredients, Glycerin Base, Ayurvedic Formulation, Soap Evaluation, Skin Health, Sustainable Cosmetics, Traditional Medicine, Bael Fruit

