

# Formulation and Development of Herbal Soap

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**Abstract:** *This study aims to formulate and evaluate the efficacy of a herbal soap enriched with natural botanical extracts for skincare.*

**Object:** *The primary objective is to assess the antimicrobial activity and sensory attributes of the herbal soap compared to commercially available synthetic soaps.*

**Materials:** *The soap formulation included botanical extracts of lavender (*Lavandula angustifolia*), chamomile (*Matricaria chamomilla*), and calendula (*Calendula officinalis*), sourced locally. Other materials included base oils, sodium hydroxide, and distilled water.*

**Methods:** *The soap was produced using the cold-process method, wherein oils were mixed with lye solution, followed by the addition of herbal extracts at appropriate stages. Antimicrobial efficacy was evaluated against *Staphylococcus aureus* and *Escherichia coli* using agar well diffusion method. Sensory evaluations were conducted through a panel of volunteers for attributes such as fragrance, lather quality, and skin feel.*

**Keywords:** herbal soap, antimicrobial activity, botanical extracts, cold-process method, sensory evaluation