

# Formulation and Evaluation of Pharmaceutical Gel Using Piper Betle (Betel Leaf) Powder for Mouth Ulcer Treatment

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**Abstract:** *The study focuses on developing an herbal gel formulation using Piper betle (betel leaf) powder for the treatment of mouth ulcers. Gels are widely used due to their semi-solid consistency and localized drug delivery capability. The use of herbal ingredients such as betel leaf, curcumin, and peppermint oil aims to enhance safety, reduce side effects, and improve patient compliance compared to synthetic formulations. The formulation was evaluated based on physical appearance, pH, spreadability, homogeneity, and extrudability. Results indicated a stable, greenish gel with good physical properties and antimicrobial potential. The study supports the viability of herbal gels as effective, economical alternatives for mouth ulcer treatment*

**Keywords:** Betel leaves, Herbal gel, Mouth ulcer

