

# Development and Efficacy Evaluation of a Natural Mouth Ulcer Gel

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**Abstract:** *This study focuses on the development and efficacy evaluation of a natural mouth ulcer gel formulated with honey, coconut oil, vitamin B12, zinc, and folic acid. The aim is to create a safe, effective, and natural alternative for the treatment of aphthous stomatitis. Honey and coconut oil are incorporated for their antimicrobial and anti-inflammatory properties, while vitamin B12, zinc, and folic acid are included for their roles in promoting tissue repair and immune function. The formulation process involved optimizing the concentration and combination of these ingredients to achieve a stable gel with desirable physicochemical properties. Stability testing ensured the product's longevity under various conditions. Efficacy was assessed through in vitro antimicrobial assays and in vivo healing studies using animal models, followed by preliminary clinical trials to compare the new gel with existing commercial treatments. Results demonstrated significant reduction in ulcer size and pain, suggesting that this natural gel is a promising candidate for treating mouth ulcers. Further research will focus on large-scale clinical trials and commercialization strategies.*

**Keywords:** aphthous stomatitis