

Formulation and Evaluation of Herbal Toothpaste Containing Aloe vera, Clove, Neem Bark

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Abstract: Herbal toothpaste formulations have gained significant attention as natural alternatives to conventional oral care products. This study focuses on the formulation and evaluation of a toothpaste containing Aloe Vera, Clove, and Neem Bark, three well-known medicinal ingredients with proven oral health benefits. Aloe Vera possesses anti-inflammatory and healing properties, Clove provides analgesic and antibacterial effects, and Neem Bark acts as a natural antimicrobial agent to prevent plaque and gum infections.

The toothpaste was formulated using calcium carbonate as an abrasive, glycerin and sorbitol as humectants, xanthan gum as a thickening agent, and menthol for freshness. The formulation was evaluated for organoleptic properties (color, taste, odor, and consistency), pH, spreadability, abrasiveness, foaming ability, microbial contamination, and stability. The results demonstrated that the herbal toothpaste had an acceptable pH (6.5–7.5), moderate foaming, effective plaque removal properties, and was free from microbial contamination, making it a safe and effective alternative for oral care.

The study concludes that a herbal toothpaste containing Aloe Vera, Clove, and Neem Bark provides a natural, chemical-free solution for maintaining healthy teeth and gums, offering antibacterial protection, cavity prevention, and fresh breath. Future studies can focus on optimizing the formulation for large-scale production and consumer acceptability.

Keywords: Herbal toothpaste

