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Development and Assessment of a Natural Teeth Whitening Powder Using Herbal Ingredients

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Abstract: *The increasing demand for natural oral care products has led to the development of alternative formulations for teeth whitening that are safe, effective, and free from synthetic chemicals. This study focuses on the formulation and evaluation of a herbal-based teeth whitening powder using ingredients such as activated charcoal, neem powder, clove powder, baking soda, calcium carbonate, and peppermint oil. The formulation was assessed for its physicochemical properties, whitening efficacy, antimicrobial activity, and user acceptability. Whitening performance was evaluated using shade guides on stained teeth samples, while antimicrobial tests were conducted against Streptococcus mutans and Lactobacillus species using the disc diffusion method. The formulated powder demonstrated a notable whitening effect within 7–14 days of use and exhibited moderate antibacterial activity. pH analysis and abrasiveness tests confirmed its safety for enamel. The product was found to be stable over three months and was well accepted by volunteers, with minimal reported side effects. These findings support the potential of herbal ingredients in developing a safe and effective teeth whitening powder suitable for routine oral care.*

Keywords: Herbal teeth whitening, natural oral care, activated charcoal, neem, clove, baking soda, antimicrobial activity, tooth discoloration, enamel safety, dental aesthetics, teeth whitening powder, herbal formulation

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