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# Evaluation of the Antibacterial Activity of *Muntingia calabura* L. Leaf Extract in Anti-Acne Serum and Gel Moisturizer

## Formulations

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## Abstract

The cherry tree (*Muntingia calabura* L.) is known to contain bioactive compounds such as flavonoids, tannins, and saponins, which exhibit potential as natural antibacterial agents against acne-causing bacteria. This study aimed to evaluate and compare the antibacterial efficacy of serum and moisturizer gel formulations containing ethanol extract of *M. calabura* leaves against *Propionibacterium acnes*. Serum was selected due to its high concentration of active ingredients and superior skin penetration, while the gel moisturizer provides a light, non-greasy texture that is comfortable and easily absorbed. The results demonstrated that the serum formulation containing 18% extract (F3) exhibited the highest antibacterial activity against *P. acnes*, with a strong inhibition zone. Similarly, the gel formulation with 6% extract (F3) also showed a strong inhibitory effect. These findings highlight the potential of *M. calabura* leaf extract as an effective natural agent for the development of topical anti-acne skincare products.