# Potential Combination of Bidara Leaves and Starfruit Leaves as Antibacterial Ointment to Prevent Bacterial Infections in Burns

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## ABSTRACT

A burn is a trauma caused by heat, chemicals and electric currents that hit the skin, mucosa and deeper tissues. One of the negative impacts of burns is that it can damage skin tissue, making it easier for bacteria to enter and multiply to cause other impacts such as blisters, redness and pus. Ointment is one of the products that is safe to use for damaged skin cells caused by burns. Bidara leaves and star fruit leaves contain antibakery compounds such as alkaloids, flavonoids, saponins, tannins and phenols that act as antibacterial substances. So, the purpose of this study is to determine the antibacterial effectiveness and organoleptic characteristics of antibacterial ointment combined with bidara leaf extract and star fruit leaf to prevent infection in burns. This research method involves testing homogeneity, adhesion, dispersibility, pH, resistance, bacterial organoleptic and antibacterial activity which will be analyzed qualitatively descriptively and measurement of bacterial inhibition zones. The results of the study on 3 ointment formulations based on bidara leaf extract and star fruit have met several physical stability test standards such as adhesion, dispersion, pH, and durability tests. The results of the homogeneity test show that F2 and F3 have a homogeneous formulation. Then, the antibacterial activity test on the three formulations showed the diameter of the bacterial inhibition zone which ranged from 0.9-1.3 cm. The F2 formulation has the best antibacterial activity test compared to other formulations. The value of the inhibitory zone has been included in the 'strong' category in the calculation of bacterial inhibitory zones.

Keywords: Burns, bidara leaves, star fruit leaves, antibacterial ointment