

ABSTRAK

Jerawat (*Acne vulgaris*) merupakan masalah kulit dengan prevalensi tinggi di Indonesia yang dipicu oleh bakteri *Cutibacterium acnes* dan *Staphylococcus aureus*. Penggunaan antibiotik jangka panjang berisiko menimbulkan resistensi maupun iritasi, sehingga diperlukan alternatif bahan alami seperti pelepah pisang (*Musa paradisiaca* L.) yang mengandung senyawa aktif berupa saponin, tanin, dan flavonoid. Penelitian ini bertujuan untuk memformulasi, mengevaluasi karakteristik fisik, serta menguji aktivitas antibakteri sediaan masker gel peel off ekstrak etanol pelepah pisang terhadap *Cutibacterium acnes* dan *Staphylococcus aureus*. Penelitian eksperimen laboratorium secara in vitro ini menggunakan metode maserasi dengan pelarut etanol 96%. Sediaan masker dibuat dalam tiga variasi konsentrasi ekstrak yaitu 2% (F1), 4% (F2), dan 8% (F3), kontrol positif (*Clindamycin* 1%), serta kontrol negatif (basis tanpa ekstrak). Evaluasi fisik meliputi uji organoleptis, homogenitas, pH, daya sebar, viskositas, daya lekat, dan stabilitas (*cycling test*), sedangkan uji aktivitas antibakteri menggunakan metode sumuran. Hasil penelitian menunjukkan ekstraksi memperoleh rendemen sebesar 12%. Ketiga formula memenuhi kriteria mutu sediaan topikal yang baik, yaitu berbentuk gel homogen, pH kisaran 6,6-6,7, daya sebar 5–7 cm, viskositas 485,33-485,60 mPa·s, daya lekat 8–19 detik, dan stabil secara fisik selama 6 siklus penyimpanan. Pada uji aktivitas antibakteri rata-rata zona hambat terhadap *Cutibacterium acnes* berturut-turut adalah 8,93 mm (2%), 13,20 mm (4%), dan 18,24 mm (8%). Sementara pada *Staphylococcus aureus* diperoleh rata-rata zona hambat sebesar 9,33 mm (2%), 13,66 mm (4%), dan 18,09 mm (8%). Disimpulkan bahwa sediaan masker gel *peel-off* ekstrak etanol pelepah pisang memiliki aktivitas antibakteri, dengan konsentrasi 8% memberikan efektivitas daya hambat paling optimal.

Kata Kunci: *Acne vulgaris*, *Musa paradisiaca* L, *Cutibacterium acnes*, *Staphylococcus aureus*, Pelepah Pisang, Masker Gel Peel Off

ABSTRACT

Acne (Acne vulgaris) is a highly prevalent skin condition in Indonesia caused by the bacteria Cutibacterium acnes and Staphylococcus aureus. Long-term use of antibiotics carries the risk of resistance and irritation; therefore, natural alternatives such as banana petiole (Musa paradisiaca L.), which contain active compounds including saponins, tannins, and flavonoids, are needed. This study aims to formulate, evaluate the physical characteristics of, and test the antibacterial activity of a peel-off gel mask preparation made from ethanol extract of banana peel against Staphylococcus aureus and Cutibacterium acnes. This in-vitro laboratory experiment used the maceration method with 96% ethanol as the solvent. The mask formulations were prepared in three extract concentration variations: 2% (F1), 4% (F2), and 8% (F3), along with a positive control (1% clindamycin) and a negative control (base without extract). Physical evaluation included organoleptic testing, homogeneity, pH, spreadability, viscosity, adhesion, and stability (cycling test), while antibacterial activity was assessed using the well diffusion method. The results of the study showed that the extraction yielded a 12% yield. All three formulations met the quality criteria for good topical preparations, namely: a homogeneous gel consistency, a pH range of 6.6-6.7, a spreadability of 5-7 cm, a viscosity of 485.33-485.60 mPa·s, an adhesion time of 8-19 seconds, and physical stability over 6 storage cycles. In the antibacterial activity test, the average inhibition zone diameter increased with increasing extract concentration. The average inhibition zones against C. acnes were 8.93 mm (2%), 13.20 mm (4%), and 18.24 mm (8%), respectively. Meanwhile, for S. aureus, the average inhibition zones were 9.33 mm (2%), 13.66 mm (4%), and 18.09 mm (8%). It was concluded that the peel-off gel mask formulation containing banana petiole ethanol extract exhibits antibacterial activity, with an 8% concentration providing the most optimal inhibitory efficacy.

Keywords: *Acne vulgaris, Musa paradisiaca L, Cutibacterium acnes, Staphylococcus aureus, Banana petiole, Peel Off Gel Mask.*