

ABSTRAK

Latar belakang. Jerawat merupakan gangguan kulit akibat penyumbatan pori dan infeksi bakteri seperti *Staphylococcus epidermidis*. Salah satu solusi potensial adalah penggunaan ekstrak daun gambir (*Uncaria gambir* Roxb.) yang diketahui memiliki aktivitas antibakteri karena kandungan katekin. Penelitian ini bertujuan mengembangkan sediaan patch topikal antibakteri berbasis ekstrak daun gambir.

Metode. Ekstrak daun gambir diperoleh melalui maserasi menggunakan etanol 96%. Patch diformulasikan dalam tiga kombinasi PVP dan PVA: F1 (2,5%:7,5%), F2 (5%:5%), dan F3 (7,5%:2,5%) dengan tambahan 10% ekstrak gambir. Evaluasi dilakukan terhadap parameter organoleptik, pH, ketebalan, ketahanan lipat, stabilitas, dan uji antibakteri metode difusi cakram terhadap *Staphylococcus epidermidis*.

Hasil. Ketiga formula menunjukkan karakteristik fisik yang baik dengan nilai pH dalam rentang aman (4,5–6,5). Formula F2 menunjukkan diameter zona hambat terbesar ($5,35 \pm 1,21$ mm), diikuti F1 ($5,18 \pm 2,78$ mm) dan F3 ($4,84 \pm 1,27$ mm). Kontrol positif menghasilkan zona hambat $10,92 \pm 0,23$ mm, sedangkan kontrol negatif tidak menunjukkan zona hambat. Hasil ini menunjukkan Formula F2 memiliki potensi antibakteri terbaik dibandingkan formula lainnya.

Kesimpulan. Patch antibakteri ekstrak daun gambir menunjukkan aktivitas terhadap *Staphylococcus epidermidis* yang bervariasi tergantung komposisi polimernya. Formula F2 menunjukkan hasil paling optimal dalam uji antibakteri dan mutu fisik patch sehingga berpotensi sebagai produk anti-jerawat berbasis bahan alam.

Kata kunci. Daun gambir, Patch antibakteri, *Staphylococcus epidermidis*, PVA, PVP, Jerawat.

ABSTRACT

Background. Acne is a skin disorder caused by clogged pores and bacterial infections such as *Staphylococcus epidermidis*. One potential natural solution is the use of gambir leaf extract (*Uncaria gambir* Roxb.), which has antibacterial activity due to its catechin content. This study aimed to develop an antibacterial topical patch based on gambir leaf extract.

Methods. Gambir leaf extract was obtained through maceration using 96% ethanol. The patch was formulated in three combinations of PVP and PVA: F1 (2.5%:7.5%), F2 (5%:5%), and F3 (7.5%:2.5%) with 10% gambir extract. Evaluation included organoleptic properties, pH, thickness, folding endurance, stability, and antibacterial activity using the disc diffusion method against *Staphylococcus epidermidis*.

Results. All formulas showed good physical characteristics with pH values within the safe range (4.5–6.5). Formula F2 showed the largest inhibition zone (5.35 ± 1.21 mm), followed by F1 (5.18 ± 2.78 mm) and F3 (4.84 ± 1.27 mm). The positive control produced an inhibition zone of 10.92 ± 0.23 mm, while the negative control showed no inhibition zone. These results indicate that Formula F2 has the best antibacterial potential among the three.

Conclusion. The antibacterial patch formulated with gambir leaf extract demonstrated activity against *Staphylococcus epidermidis*, which varied depending on the polymer composition. Formula F2 provided optimal results in both antibacterial activity and physical quality, making it a promising natural-based anti-acne product.

Keywords. Gambir Leaf, Antibacterial Patch, *Staphylococcus epidermidis*, PVA, PVP, Acne.