

ABSTRAK

Tujuan penelitian ini untuk mengetahui aktivitas ekstrak etanol daun sirih merah (*Piper crocatum*) terhadap bakteri *Propionibacterium acnes*. Daun sirih merah dipilih karena diduga mempunyai zat aktif sebagai antibakteri seperti flavonoid, alkaloid, tanin, dan minyak atsiri.

Penelitian dilakukan secara eksperimental menggunakan metode *non randomized control group design* dengan periode prospektif. Ekstrak di maserasi menggunakan pelarut etanol 96% dan diuapkan hingga diperoleh ekstrak kental. Ekstrak dibuat 3 konsentrasi berbeda yaitu 30%, 60%, dan 90%. Kontrol positif berupa klindamisin dan kontrol negatif berupa DMSO. Teknik difusi sumuran dipilih untuk mengukur diameter hambat yang terbentuk.

Hasil pengujian memperlihatkan bahwa rata-rata diameter daya hambat yang terbentuk setiap sampel yaitu pada konsentrasi 30% sebesar 7,40 mm, konsentrasi 60% sebesar 8,90 mm, dan konsentrasi 90% sebesar 11,20 mm. Sedangkan hasil analisis data menggunakan metode *Mann-Whitney* diperoleh nilai signifikan $p < 0,05$ yang menunjukkan bahwa terdapat perbedaan yang bermakna diantara kelompok-kelompok percobaan. Kesimpulan dari penelitian ini yaitu ekstrak etanol daun sirih merah memiliki aktivitas terhadap bakteri *Propionibacterium acnes* dengan konsentrasi yang paling efektif yaitu 90%.

Kata Kunci: Daun sirih merah (*Piper crocatum*), Ekstrak Etanol, Difusi Sumuran, Antibakteri, *Propionibacterium acnes*.

ABSTRACT

The purpose of this study is to identify the extract of red betel leaf ethanol (*Piper crocatum*) against *Propionibacterium acnes* bacteria. Red betel leaf was chosen because it is suspected to have active substances as antibacterial agents such as flavonoids, alkaloids, tannins, and essential oil.

The study was conducted experimentally using a non-randomized control group design method with a prospective period. The extract was macerated using 96% ethanol solvent and evaporated until a thick extract was obtained. The extract was made in 3 different concentrations, namely 30%, 60%, and 90%. The positive control was clindamycin and the negative control was DMSO. The agar diffusion technique method was chosen to measure the diameter of the formed inhibition.

The test results show that the average diameter of the inhibition zone formed by each sample is at a concentration of 30% of 7.40 mm, a concentration of 60% of 8.90 mm, and a concentration of 90% of 11.20 mm. Meanwhile, the results of data analysis using the Mann-Whitney method obtained a significant value of $p < 0.05$, which indicates that there were significant differences between the experimental groups. The conclusion of this study is that the red betel leaf ethanol extract has activity against *Propionibacterium acnes* with the most effective concentration of 90%.

Keywords: Red betel leaf (*Piper crocatum*), Ethanol Extract, Agar diffusion technique, Antibacterial, *Propionibacterium acnes*.