

ABSTRAK

Jerawat (*acne vulgaris*) merupakan kondisi peradangan kulit kronis pada folikel pilosebacea yang disebabkan oleh banyak bakteri komensal, salah satunya adalah *Staphylococcus epidermidis*. Penggunaan antibiotik dalam jangka panjang berpotensi meningkatkan resistensi antibiotik, sehingga diperlukan alternatif antibakteri yang lebih efektif yaitu dengan memanfaatkan bahan alam seperti kemangi. Daun kemangi (*Ocimum basilicum* L.) diketahui mengandung senyawa metabolit sekunder yang berpotensi sebagai antibakteri. Penelitian ini bertujuan untuk mengetahui aktivitas antibakteri fraksi etil asetat daun kemangi terhadap bakteri *Staphylococcus epidermidis*. Fraksi etil asetat daun kemangi diperoleh dengan cara memfraksinasi ekstrak etanol hasil maserasi menggunakan metode ekstraksi cair-cair. Fraksi etil asetat kemudian dilakukan uji kromatografi lapis tipis (KLT). Hasil identifikasi KLT menunjukkan adanya senyawa golongan flavonoid dan steroid pada fraksi etil asetat daun kemangi. Pengujian aktivitas antibakteri dilakukan menggunakan metode difusi sumuran dengan kontrol positif yaitu gentamisin dan kontrol negatif yaitu DMSO 10%. Hasil uji antibakteri menunjukkan bahwa zona hambat fraksi etil asetat daun kemangi terhadap bakteri *Staphylococcus epidermidis* pada konsentrasi 20%, 40%, 60%, 80%, dan 100% dengan rata-rata zona hambat berturut-turut sebesar $4,52 \pm 1,00$ mm, $8,50 \pm 1,17$ mm, $9,48 \pm 0,49$ mm, $10,12 \pm 0,18$ mm, $11,18 \pm 0,90$ mm. Rata-rata diameter zona hambat kontrol positif sebesar $36,23 \pm 0,32$ mm, sedangkan kontrol negatif tidak menunjukkan zona hambat (0 ± 0 mm). Hasil uji statistik dengan uji *Shapiro-Wilk*, uji *Kruskal-Wallis* dan Uji *post hoc Mann-Whitney* menyatakan bahwa diameter zona hambat berbeda bermakna dengan kontrol positif dan kontrol negatif ($p < 0,05$).

Kata kunci: Jerawat, *Ocimum basilicum* L., *Staphylococcus epidermidis*, difusi sumuran, Kromatografi lapis tipis (KLT)

ABSTRACT

Acne vulgaris is a chronic inflammatory skin condition of the pilosebaceous follicle caused by various commensal bacteria, including *Staphylococcus epidermidis*. Long-term use of antibiotics potentially increases antibiotic resistance. Therefore, more effective antibacterial alternatives are required, particularly from natural sources such as basil. Basil leaves (*Ocimum basilicum* L.) are known to contain secondary metabolites with potential antibacterial properties. This study aimed to determine the antibacterial activity of the ethyl acetate fraction of basil leaves against *Staphylococcus epidermidis*. The ethyl acetate fraction of basil leaves was obtained by fractionating the ethanolic extract from maceration using the liquid-liquid extraction method. The ethyl acetate fraction was then subjected to thin-layer chromatography (TLC) analysis. TLC identified flavonoid and steroid compounds in the ethyl acetate fraction of basil leaves. Antibacterial activity was tested using the well diffusion method, with gentamicin as the positive control and DMSO 10% as the negative control. The antibacterial assay showed that the ethyl acetate fraction of basil leaves produced inhibition zones against *Staphylococcus epidermidis* at concentrations of 20%, 40%, 60%, 80%, and 100%, with mean inhibition zones of $4,52 \pm 1,00$ mm, $8,50 \pm 1,17$ mm, $9,48 \pm 0,49$ mm, $10,12 \pm 0,18$ mm, $11,18 \pm 0,90$ mm, respectively. The positive control exhibited a mean inhibition zone diameter of $36,23 \pm 0,32$ mm, whereas the negative control showed no inhibition zone (0 ± 0 mm). Statistical analysis using the Shapiro-Wilk test, Kruskal-Wallis test, and post hoc Mann-Whitney test showed that the inhibition zone diameters differed significantly from those of the positive and negative controls ($p < 0,05$).

Keywords: acne vulgaris, *Ocimum basilicum* L., *Staphylococcus epidermidis*, Agar well diffusion method, thin-layer chromatography (TLC)