

## INTISARI

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*Acne vulgaris* (jerawat) adalah penyakit kulit akibat peradangan kronis dengan patogenesis kompleks. Antibiotik topikal dan oral secara rutin digunakan untuk mengobati jerawat. Penggunaan antibiotik dapat menimbulkan berbagai masalah antara lain resistensi. Terapi obat tradisional relatif lebih aman dibandingkan dengan obat yang berasal dari bahan kimia. Salah satunya adalah daun jeruk purut (*Citrus hystrix* D.C). Daun jeruk purut (*Citrus hystrix* D.C) merupakan salah satu dari berbagai jenis tanaman yang mempunyai manfaat sebagai antibakteri, karena kandungan senyawa bioaktifnya seperti minyak atsiri, alkaloid, flavonoid, saponin, tanin dan terpenoid. Penelitian ini bertujuan untuk mengetahui aktivitas antibakteri fraksi n-Heksana, etil asetat, air ekstrak etanol daun jeruk purut (*Citrus hystrix* D.C) yang mana dalam fraksinasinya menggunakan metode Kromatografi cair vakum (KCV). Pengujian aktivitas antibakteri menggunakan difusi cakram, kemudian, data diolah menggunakan uji *oneway* ANOVA. Hasil uji aktivitas antibakteri fraksi n-Heksana, etil asetat dan air ekstrak etanol daun jeruk purut (*Citrus hystrix* D.C) menunjukkan adanya Aktivitas antibakteri terhadap bakteri *Staphylococcus epidermidis*. Daya hambat yang diperoleh fraksi n-Heksana konsentrasi 2,5%,5%,10% secara berurutan yaitu ( $4,6 \pm 0,41$ mm), ( $8,6 \pm 0,72$ mm), ( $12,1 \pm 0,23$ mm), untuk fraksi etil asetat konsentrasi 2,5%,5%,10% ( $9,6 \pm 0,2$ mm), ( $13,03 \pm 0,15$ mm), ( $19,8 \pm 0,26$ mm), pada fraksi air konsentrasi 2,5%,5%,10% diperoleh ( $2,9 \pm 0,05$ mm), ( $4,2 \pm 0,3$ mm), ( $10,2 \pm 0,3$ mm), sedangkan klindamisin 0,2% sebagai kontrol positif memiliki zona hambat sebesar ( $28,5 \pm 0,5$ mm) dan tidak terbentuknya zona hambat pada DMSO sebagai kontrol negatif. Berdasarkan hasil penelitian disimpulkan bahwa fraksi n-Heksana, etil asetat, dan air ekstrak etanol daun jeruk purut mempunyai aktivitas antibakteri terhadap *Staphylococcus epidermidis* yang berbeda secara signifikan ( $p \text{ value} = 0,000 < 0,05$ ).

Kata kunci : Antibakteri, daun jeruk purut, metode difusi, fraksinasi, kromatografi cair vakum (KCV)

## ABSTRAK

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*Acne vulgaris* (acne) is a chronic inflammatory skin disease with a complex pathogenesis. Topical and oral antibiotics are routinely used to treat acne. The use of antibiotics can cause various problems, including resistance. Traditional drug therapy is relatively safer than drugs derived from chemicals. One of them is kaffir lime leaves (*Citrus hystrix* DC). Kaffir lime leaf (*Citrus hystrix* DC) is one of the various types of plants that have antibacterial properties, due to their bioactive compounds such as essential oils, alkaloids, flavonoids, saponins, tannins and terpenoids. This study aimed to determine the antibacterial activity of the n-hexane, ethyl acetate, water ethanol extract of kaffir lime leaves (*Citrus hystrix* DC) which was fractionated using vacuum liquid chromatography (KCV). The antibacterial activity was tested using disc diffusion, then the data was processed using the way ANOVA. The results of the antibacterial activity of hexane, ethyl acetate and water fractions of ethanol extract of kaffir lime leaves (*Citrus hystrix* DC) showed antibacterial activity against *Staphylococcus epidermidis* bacteria. The inhibitory power obtained by the n-hexane fraction with a concentration of 2,5%, 5%, 10% respectively, namely (4,6 ± 0,4)mm), (8,6 ± 0,72mm), ( 12,1 ± 0,23mm), for the ethyl acetate fraction with a concentration of 2,5%, 5%, 10% (9,6 ± 0,2mm), (13,03 ± 0,15mm ), (19,8 ± 0,26mm), in the water fraction a concentration of 2,5%, 5%, 10% was obtained (2,9 ± 0,05mm), (4,2 ± 0,3mm), (10.2 ± 0,3mm), while clindamycin 0,2% as a positive control had an inhibition zone of (28,5 ± 0.5mm) and no inhibition zone was formed in DMSO as a control negative. Based on the results of the study, it was concluded that the n-hexane, ethyl acetate, and water ethanol extract of kaffir lime leaves had significantly different antibacterial activity against *Staphylococcus epidermidis* (p value = 0,000 < 0,05).

Keywords : Antibacterial, kaffir lime leaf, diffusion method, fractionation, vacuum liquid chromatography (KCV)