

## INTISARI

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Jerawat disebabkan karena adanya penyumbatan folikel oleh sel mati, sebum, dan infeksi yang disebabkan oleh bakteri *Propionibacterium acnes*. Tanaman daun jeruk purut (*Citrus Hystrix* D.C) digunakan dalam pencegahan infeksi jerawat karena memiliki kandungan senyawa bioaktif seperti minyak atsiri, alkaloid, flavonoid, saponin, tanin, dan terpenoid. Penelitian ini bertujuan untuk mengetahui fraksi n-Heksana, etil asetat, air, dan ekstrak etanol daun jeruk purut (*Citrus Hystrix* D.C) dengan metode partisi terhadap bakteri *Propionibacterium acnes*. Hasil rendemen fraksi dengan uji *One Sample T-Test* ( $0,004 < 0,05$ ) ada perbedaan data yang signifikan. Aktivitas antibakteri dilihat dari uji aktivitas antibakteri dengan metode difusi. Hasil uji aktivitas antibakteri menunjukkan bahwa fraksi dan ekstrak etanol daun jeruk purut memiliki aktivitas antibakteri pada ekstrak 50% ( $22,70 \pm 0,61$ ) mm, ekstrak 25% ( $14,82 \pm 0,18$ ) mm, ekstrak 10% ( $6,86 \pm 0,58$ ) mm, fraksi n-Heksana 50% ( $23,76 \pm 0,25$ ) mm, fraksi n-Heksana 25% ( $15,45 \pm 0,85$ ) mm, fraksi n-Heksana 10% ( $7,72 \pm 0,24$ ) mm, fraksi etil asetat 50% ( $26,90 \pm 0,36$ ) mm, fraksi etil asetat 25% ( $16,86 \pm 0,33$ ) mm, fraksi etil asetat 10% ( $9,15 \pm 0,18$ ) mm, fraksi air 50% ( $18,46 \pm 0,20$ ) mm, fraksi air 25% ( $11,86 \pm 0,32$ ) mm, fraksi air 10% ( $5,93 \pm 0,30$ ) mm, klindamisin 0,2% ( $18,43 \pm 0,40$ ) mm, dan dimetilsulfoksida 10% (0 mm). Berdasarkan hasil penelitian dapat disimpulkan bahwa fraksi dan ekstrak etanol daun jeruk purut mempunyai aktivitas antibakteri terhadap *Propionibacterium acnes* dengan uji normalitas (*Shapiro-Wilk*) berdistribusi normal ( $0,190 > 0,05$ ), uji homogenitas (*Levene Test*) berdistribusi homogen ( $0,087 > 0,05$ ), uji *One Way ANOVA* berbeda secara signifikan ( $0,000 < 0,05$ ) dan dilanjutkan uji *Tukey HSD* (*p value*  $< 0,05$ ) tidak terdapat perbedaan yang signifikan antara ekstrak 10% dengan n-Heksana 10% (0,210), ekstrak 10% dengan air 10% (0,120), ekstrak 25% dengan n-Heksana 25% (0,627), dan air 50% dengan kontrol positif 0,2% (1,000).

**Kata kunci** : Antibakteri; Daun Jeruk Purut; Difusi; Fraksi; *Propionibacterium Acnes*

## ABSTRACT

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Acne is caused by blockage of the follicle by dead cells, sebum, and infection caused by the bacteria *Propionibacterium acnes*. Leaf of *Citrus Hystrix* D.C is used in the prevention of acne infections because it contains bioactive compounds such as essential oils, alkaloids, flavonoids, saponins, tannins, and terpenoids. This study aims to determine the fraction of n-Hexane, ethyl acetate, water, and ethanol extract of *Citrus Hystrix* D.C leaves by partition method toward *Propionibacterium acnes* bacteria. The results of the fraction yield with the One Sample T-Test ( $0.004 < 0.05$ ) showed a significant difference in data. Antibacterial activity was seen from the antibacterial activity test by diffusion method. The antibacterial activity test results showed that the ethanolic fraction and extract of *Citrus Hystrix* D.C leaves had antibacterial activity at 50% extract ( $22.70 \pm 0.61$ ) mm, 25% extract ( $14.82 \pm 0.18$ ) mm, 10% extract ( $6.86 \pm 0.58$ ) mm, 50% n-Hexane fraction ( $23.76 \pm 0.25$ ) mm, 25% n-Hexane fraction ( $15.45 \pm 0.85$ ) mm, 10% n-Hexane fraction ( $7.72 \pm 0.24$ ) mm, 50% ethyl acetate fraction ( $26.90 \pm 0.36$ ) mm, 25% ethyl acetate fraction ( $16.86 \pm 0.33$ ) mm, 10% ethyl acetate fraction ( $9.15 \pm 0.18$ ) mm, 50% water fraction ( $18.46 \pm 0.20$ ) mm, 25% water fraction ( $11.86 \pm 0.32$ ) mm, 10% water fraction ( $5.93 \pm 0.30$ ) mm, 0.2% clindamycin ( $18.43 \pm 0.40$ ) mm, and 10% dimethylsulfoxide (0 mm). Based on the results of the study, it can be concluded that the ethanolic fraction and extract of *Citrus Hystrix* D.C leaves have antibacterial activity against *Propionibacterium acnes* with normality test (Shapiro-Wilk) with normal distribution ( $0.190 > 0.05$ ), homogeneity test (Levene Test) with homogeneous distribution ( $0.087 > 0.05$ ), the One Way ANOVA test was significantly different ( $0.000 < 0.05$ ) and continued with the Tukey HSD test (p value  $< 0.05$ ) there was no significant difference between the 10% extract with 10% n-Hexane (0.210), 10% extract with 10% water (0.120), 25% extract with 25% n-Hexane (0.627), and 50% water with 0.2% positive control (1,000).

**Keywords:** Antibacterial; *Citrus Hystrix* D.C Leaves; Diffusion; Fraction; *Propionibacterium Acnes*

