

UJI AKTIVITAS ANTIBAKTERI FRAKSI POLAR EKSTRAK ETANOL DAUN PEPAYA (*Carica papaya* Linn.) TERHADAP BAKTERI *Escherichia coli* DAN *Staphylococcus aureus*

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INTISARI

Latar Belakang: Daun pepaya banyak digunakan masyarakat sebagai obat tradisional. Daun pepaya mengandung senyawa saponin, alkaloid, terpenoid, flavonoid dan tanin yang diyakini sebagai senyawa antibakteri.

Tujuan Penelitian: Untuk mengetahui aktivitas antibakteri fraksi polar ekstrak etanol daun pepaya (*Carica papaya* L.) terhadap bakteri *Staphylococcus aureus* dan *Escherichia coli*.

Metode Penelitian: Proses ekstraksi dilakukan menggunakan metode maserasi dengan pelarut etanol 70%. Ekstrak etanol selanjutnya difraksinasi menggunakan pelarut etanol-air. Uji aktivitas antibakteri yang digunakan adalah metode difusi agar cara *Kirby Bauer*. Variabel penelitian yaitu konsentrasi fraksi etanol-air ekstrak etanol daun pepaya 10%, 15%, 20%, 25%, 30%, 100% dan zona hambat pertumbuhan bakteri *Staphylococcus aureus* dan *Escherichia coli*. Data yang diperoleh dianalisis menggunakan metode uji statistik *One Way ANOVA*.

Hasil Penelitian: Analisis data menggunakan uji statistik *One Way ANOVA* menunjukkan perbedaan signifikan pada kelompok perlakuan terhadap zona hambat bakteri *Staphylococcus aureus* dan *Escherichia coli* ($\text{sig}=0,000$). Zona hambat fraksi etanol-air terhadap bakteri *Staphylococcus aureus* yang paling optimum yaitu pada konsentrasi 100% sebesar 14,75 mm, sedangkan pada bakteri *Escherichia coli* yang paling optimum yaitu pada konsentrasi 100% sebesar 11,53 mm, namun tidak efektif jika dibandingkan dengan zona hambat kontrol positif kloramfenikol.

Kesimpulan: Fraksi etanol-air ekstrak etanol daun pepaya (*Carica papaya* L.) dapat menghambat pertumbuhan bakteri *Staphylococcus aureus* dan *Escherichia coli*.

Kata kunci: Antibakteri, *Carica papaya* L., *Escherichia coli*, Fraksi polar, *Staphylococcus aureus*.

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TEST ANTIBACTERIAL ACTIVITIES POLAR FRACTION OF PAPAYA LEAF ETHANOL EXTRACT (*Carica papaya* Linn.) AGAINST *Escherichia coli* AND *Staphylococcus aureus*

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ABSTRACT

Background: *Carica papaya* is widely used as a traditional medicine society. Papaya leaves contain saponins, alkaloids, terpenoids, flavonoids, and tannins which are believed to be antibacterial compounds.

Objective: To determine the antibacterial activities polar fraction of papaya leaf ethanol extract (*Carica papaya* Linn.) against *Escherichia coli* and *Staphylococcus aureus*.

Method: Simplicia was extracted by ethanol 70% with the maceration method. Ethanolic extract was fractionated with ethanol water. Kirby Bauer diffusion method agar was used for antibacterial activities. The variable of this study was the concentration of the ethanol-water fraction of papaya leaf ethanolic extract (*Carica papaya* Linn.) 10%, 15%, 20%, 25%, 30%, 100% and the growth inhibition zone of *Escherichia coli* and *Staphylococcus aureus*. The data obtained were analyzed using the *One Way* ANOVA statistical method.

Result: Data analysis using the *One Way* ANOVA statistical test showed a significant difference in the treatment group to the zone of inhibition of *Staphylococcus aureus* and *Escherichia coli* bacteria (sig=0.000). The zone of inhibition of the ethanol-water fraction against *Staphylococcus aureus* was the most optimum at a concentration of 100% at 14.75 mm, while the most optimum for *Escherichia coli* was at a concentration of 100% at 11.53 mm, but did not effective than positive control Chloramphenicol.

Conclusion: The ethanol-water fraction of papaya leaf ethanol extract (*Carica papaya* L.) could inhibit the growth of *Staphylococcus aureus* and *Escherichia coli* bacteria.

Keywords: *Antibacterial*, *Carica papaya* L., *Escherichia coli*, *Polar Fraction*, *Staphylococcus aureus*.

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