UJI AKTIVITAS ANTIBAKTERI EKSTRAK ETANOL DAUN KUCAI (*Allium tuberosum* Rottler ex Spreng) TERHADAP BAKTERI *Streptococcus pyogenes* dan *Pseudomonas aeruginosa*

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ABSTRAK

Penelitian ini bertujuan untuk mengetahui pengaruh konsentrasi ekstrak etanol daun Kucai terhadap aktivitas antibakteri pada *Streptococcus pyogenes* dan *Pseudomonas aeruginosa.* Uji aktivitas dilakukan dengan metode difusi cakram menggunakan ekstrak etanol daun Kucai pada konsentrasi 20%, 40%, dan 60%, dengan kloramfenikol sebagai kontrol positif dan DMSO 10% sebagai kontrol negatif. Zona hambat diukur dalam satuan milimeter dan setiap perlakuan dilakukan tiga kali replikasi. Data dianalisis menggunakan One-way ANOVA untuk masing-masing bakteri, dilanjutkan dengan uji Tukey. Hasil penelitian menunjukkan bahwa ekstrak etanol daun Kucai mampu menghambat pertumbuhan kedua bakteri uji. Rata-rata diameter zona hambat meningkat seiring dengan kenaikan konsentrasi ekstrak, dengan konsentrasi 60% menghasilkan daya hambat terbesar meskipun masih lebih rendah daripada kontrol positif. Kontrol negatif tidak menunjukkan aktivitas antibakteri. Hasil analisis statistik menunjukkan adanya perbedaan yang signifikan antar konsentrasi ($p<0,05$) pada masing-masing bakteri. Kesimpulannya, ekstrak etanol daun Kucai berpotensi sebagai antibakteri terhadap *Streptococcus pyogenes* dan *Pseudomonas aeruginosa*, dengan efektivitas yang meningkat seiring peningkatan konsentrasi.

Kata kunci: *Allium tuberosum* Rottler ex Spreng., ekstrak etanol, antibakteri, *Streptococcus pyogenes, Pseudomonas aeruginosa*.

ANTIBACTERIAL ACTIVITY OF ETHANOL EXTRACT OF KUCAI LEAVES (*Allium tuberosum* Rottler Ex Spreng.) AGAINST *Streptococcus Pyogenes* AND *Pseudomonas Aeruginosa*

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ABSTRACT

This study aimed to determine the effect of ethanol extract concentrations of Kucai leaves (Allium tuberosum Rottler ex Spreng.) on antibacterial activity against Streptococcus pyogenes and Pseudomonas aeruginosa. The antibacterial assay was carried out using the disk diffusion method with ethanol extracts of Kucai leaves at concentrations of 20%, 40%, and 60%. Chloramphenicol was used as the positive control, while ten percent dimethyl sulfoxide served as the negative control. The inhibition zones were measured in millimeters, and each treatment was replicated three times to ensure accuracy and reliability of the data. The data obtained were analyzed using one-way analysis of variance separately for each bacterial species, followed by Tukey's post hoc test to identify differences among treatments. The results demonstrated that the ethanol extract of Kucai leaves was capable of inhibiting the growth of both test bacteria. The mean diameter of the inhibition zone increased in line with the rise in extract concentration, with the 60% concentration producing the strongest inhibition, although still lower compared with the positive control. The negative control did not exhibit any antibacterial activity. Statistical analysis confirmed significant differences among the concentrations tested ($p < 0.05$) for both bacterial species. In conclusion, the ethanol extract of Kucai leaves has potential as a natural antibacterial agent against Streptococcus pyogenes and Pseudomonas aeruginosa, with effectiveness increasing proportionally to the concentration of the extract.

***Keywords**: Allium tuberosum Rottler ex Spreng., ethanol extract, antibacterial, Streptococcus pyogenes, Pseudomonas aeruginosa*

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