

UNIVERSITAS AISYIYAH PALEMBANG
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PROGRAM STUDI S1 FARMASI

Skripsi, 29 Agustus 2025

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Uji Aktivitas Kombinasi Daun Pegagan (*Centella asiatica*) dan Daun Sirih Hijau (*Piper Bettle L.*) Terhadap Pertumbuhan Bakteri *Streptococcus Pyogenes*

76 Halaman, 6 Tabel, 7 Daftar Gambar, 3 Daftar Singkatan, 12 Lampiran

ABSTRAK

Latar Belakang : *Streptococcus pyogenes* merupakan bakteri Gram positif penyebab berbagai infeksi. Penggunaan antibiotik sintetis secara berlebihan dapat menimbulkan resistensi, sehingga diperlukan alternatif pengobatan berbasis bahan alam. **Tujuan :** Mengetahui aktivitas antibakteri kombinasi ekstrak etanol daun pegagan (*Centella asiatica*) dan daun sirih hijau (*Piper betle L.*) terhadap pertumbuhan *S. pyogenes* serta menentukan konsentrasi yang paling efektif. **Metode :** Menggunakan metode difusi cakram dengan variasi konsentrasi 50%, 75%, dan 100%, serta kontrol positif (amoksisilin) dan kontrol negatif (akuades). **Hasil :** Penelitian menunjukkan bahwa kombinasi ekstrak kedua tanaman memberikan aktivitas antibakteri yang ditandai dengan terbentuknya zona hambat pada semua konsentrasi uji. Konsentrasi 75% menghasilkan zona hambat terbesar yaitu 14,4 mm, sedangkan konsentrasi 50% dan 100% masing-masing sebesar 13,65 mm. **Kesimpulan:** kombinasi ekstrak daun pegagan dan daun sirih hijau berpotensi dikembangkan sebagai agen antibakteri alami terhadap *Streptococcus pyogenes*.

Kata kunci: *Streptococcus pyogenes*, *Centella asiatica*, *Piper betle L.*, antibakteri, kombinasi ekstrak

Daftar Pustaka : 31 (2018-2024)

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Thesis, August 29 2025

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Testing the Combined Activity of Gotu Kola Leaves (*Centella asiatica*) and Green Betel Leaves (*Piper Bettle L.*) on the Growth of *Streptococcus Pyogenes* Bacteria

76 Pages, 6 Tables, 7 List of Figures, 3 List of Abbreviations, 12 Appendices

ABSTRACT

Background: *Streptococcus pyogenes* is a Gram-positive bacterium that causes various infections, ranging from pharyngitis to impetigo. Excessive use of synthetic antibiotics can lead to resistance, thus requiring alternative treatments based on natural ingredients. **Objective:** To determine the antibacterial activity of the combination of ethanol extracts of *Centella asiatica* leaves and *Piper betle L.* leaves against the growth of *S. pyogenes* and to determine the most effective concentration. **Methods:** This study used the disk diffusion method with concentrations of 50%, 75%, and 100%, as well as a positive control (amoxicillin) and a negative control (distilled water). **Results:** The study showed that the combination of extracts from both plants exhibited antibacterial activity, as indicated by the formation of inhibition zones at all test concentrations. The 75% concentration produced the largest inhibition zone of 14.4 mm, while the 50% and 100% concentrations produced inhibition zones of 13.65 mm, respectively. **Conclusion:** The combination of gotu kola leaf and green betel leaf extracts has the potential to be developed as a natural antibacterial agent against *Streptococcus pyogenes*.

Keywords : *Streptococcus pyogenes, Centella asiatica, Piper betle L., antibacterial, extract combination*

Bibliography :31 (2018-2024)