

**POTENSI EKSTRAK DAUN PARIJOTO (*Medinilla speciosa* Blume)
SEBAGAI ANTIBAKTERI TERHADAP *Streptococcus mutans*
PADA KARIES GIGI SECARA *IN VITRO***

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Abstrak

Karies gigi merupakan salah satu penyakit infeksi yang disebabkan oleh aktivitas bakteri *Streptococcus mutans* dalam rongga mulut. Upaya pencarian agen antibakteri berbasis bahan alam terus dikembangkan, salah satunya melalui pemanfaatan tanaman parijoto (*Medinilla speciosa* Blume) yang diketahui mengandung senyawa metabolit sekunder berpotensi bioaktif. Penelitian ini bertujuan untuk mengevaluasi aktivitas antibakteri ekstrak metanol daun parijoto terhadap *Streptococcus mutans* secara *in vitro*. Penelitian dilakukan menggunakan metode eksperimental laboratorium dengan pendekatan difusi cakram serta metode dilusi cair dan padat. Parameter pengujian meliputi pengukuran diameter zona hambat, penentuan Konsentrasi Hambat Minimum (KHM), dan Konsentrasi Bunuh Minimum (KBM) dengan ampicilin digunakan sebagai kontrol positif. Hasil penelitian menunjukkan bahwa ekstrak metanol daun parijoto mampu menghambat pertumbuhan *Streptococcus mutans* dengan diameter zona hambat maksimum sebesar 19,6 mm pada konsentrasi 6,25 mg/mL. Nilai KHM diperoleh pada konsentrasi 4,17 mg/mL, sementara KBM tidak tercapai yang menunjukkan bahwa ekstrak bersifat bakteristatik. Aktivitas antibakteri tersebut diduga berkaitan dengan kandungan flavonoid, tanin, dan saponin. Berdasarkan temuan ini, ekstrak metanol daun parijoto memiliki potensi sebagai agen antibakteri alami untuk mendukung pencegahan karies gigi.

Kata kunci: aktivitas antibakteri, ekstrak daun parijoto, karies gigi, *Medinilla speciosa* Blume, *Streptococcus mutans*

THE POTENTIAL OF PARIJOTO LEAF EXTRACT (*Medinilla speciosa* Blume) AS AN ANTIBACTERIAL AGENT AGAINST *Streptococcus mutans* IN DENTAL CARIES IN VITRO

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Abstract

Dental caries is an infectious disease caused by the activity of *Streptococcus mutans* bacteria in the oral cavity. Efforts to find natural-based antibacterial agents continue to be developed, one of which is through the use of parijoto (*Medinilla speciosa* Blume), a plant known to contain potentially bioactive secondary metabolites. This study aims to evaluate the antibacterial activity of parijoto leaf methanol extract against *Streptococcus mutans in vitro*. The study was conducted using laboratory experimental methods with a disc diffusion approach and liquid and solid dilution methods. The test parameters included measuring the inhibition zone diameter, determining the Minimum Inhibitory Concentration (MIC), and Minimum Bactericidal Concentration (MBC) with ampicillin used as a positive control. The results showed that the methanol extract of parijoto leaves was able to inhibit the growth of *Streptococcus mutans* with a maximum inhibition zone diameter of 19.6 mm at a concentration of 6.25 mg/mL. The MIC value was obtained at a concentration of 4.17 mg/mL, while the MBC was not achieved, indicating that the extract is bacteriostatic. This antibacterial activity is thought to be related to the flavonoid, tannin, and saponin content. Based on these findings, parijoto leaf methanol extract has the potential as a natural antibacterial agent to support dental caries prevention.

Keywords: antibacterial activity, dental caries, *Medinilla speciosa* Blume, parijoto leaf extract, *Streptococcus mutans*