

INTISARI

Penyakit periodontal adalah proses inflamasi pada jaringan pendukung di dalam rongga mulut yang disebabkan oleh mikroorganisme patogen salah satunya *Prevotella intermedia*. Perawatan periodontal dilakukan dengan menghambat pertumbuhan bakteri penyebab penyakit periodontal. Propolis mengandung terpenoid, fenol, dan flavonoid yang bersifat antibakteri. Tujuan dari penelitian ini adalah untuk mengetahui potensi *propolis active gel* (propagel) dalam menghambat pertumbuhan bakteri *Prevotella intermedia* ATCC 25611.

Objek penelitian terdiri dari 5 kelompok, yaitu kelompok perlakuan propagel dengan konsentrasi 2,5%, 5%, dan 10%, kelompok kontrol positif gel Alocclair, dan kelompok kontrol negatif gel Na-CMC 2%. Suspensi bakteri diinokulasikan pada setiap tabung reaksi yang diberi bahan uji kemudian diinkubasi pada suhu 37°C selama 24 jam dengan kondisi anaerob. Setelah inkubasi, tabung reaksi diukur menggunakan spektrofotometer dan didapatkan nilai *Optical Density* (OD) yang dimasukkan dalam rumus untuk mengetahui persentase penghambatan *Prevotella intermedia*.

Hasil uji *One Way* ANOVA menunjukkan perbedaan signifikan ($p < 0,05$) nilai *Optical Density* (OD) antar kelompok. Hasil uji *Post-Hoc* LSD menunjukkan adanya perbedaan bermakna ($p < 0,05$) antar seluruh kelompok. Kesimpulan penelitian ini adalah propagel memiliki potensi antibakteri terhadap pertumbuhan bakteri *Prevotella intermedia*.

Kata Kunci: propolis, propagel, antibakteri, *Prevotella intermedia*, nilai *Optical Density*

ABSTRACT

Periodontal disease is the inflammation of the supporting tissue in the oral cavity caused by pathogenic microorganisms, one of which is *Prevotella intermedia*. Periodontal treatment is carried out by inhibiting the growth of bacteria that cause periodontal disease. Propolis contains terpenoids, phenols, and flavonoids which have antibacterial properties. The purpose of this study was to determine the potential of propolis active gel (propagel) in inhibiting the growth of *Prevotella intermedia* ATCC 25611 bacteria.

The study object consisted of five groups, the propagel treatment group with concentrations of 2,5%, 5%, and 10%, Alocclair gel as positive control group, and 2% Na-CMC gel as negative control group. The bacterial suspension was inoculated in each test tube containing the test material and then incubated at 37°C for 24 hours under anaerobic conditions. After incubation, the test tube was measured using a spectrophotometer and the Optical Density (OD) Value was obtained which was included in the formula to determine the percentage of *Prevotella intermedia* inhibition.

The result of the One Way ANOVA test showed a significant difference ($p < 0.05$) in Optical Density (OD) values between groups. The Post-Hoc LSD test results showed that there were significant differences ($p < 0.05$) between all groups. The conclusion of this research was that propagel has antibacterial potential against the growth of *Prevotella intermedia*.

Keywords: propolis, propagel, antibacterial, *Prevotella intermedia*, Optical Density value