

INTISARI

Plak adalah lapisan tipis yang melekat pada permukaan gigi dan struktur keras lain di rongga mulut. Plak terdiri dari 70% bakteri, seperti *Streptococcus mutans*, *Actinomyces naeslundii*, *Streptococcus sanguinis*, *Niesseria sp.* dan lain-lain. Daun salam (*Syzygium polianthum* (Wight) Walp.) mengandung flavonoid, tanin, dan minyak atsiri yang memiliki aktifitas antibakteri. Penelitian ini bertujuan untuk mengetahui efek rebusan daun salam terhadap pertumbuhan bakteri plak.

Sampel plak diambil dari permukaan bukal gigi molar pertama atas. Sampel kemudian diinokulasi pada media BHI dan diinkubasi selama 37°C selama 24 jam. Rebusan daun salam konsentrasi 50% (uji) dan akuades (kontrol) ditambahkan kedalam suspensi bakteri $1,5 \times 10^8$ CFU/ml. Tabung reaksi diinkubasi selama 24 jam pada suhu 37°C. Pengukuran densitas optik menggunakan spektrofotometer pada panjang gelombang 600 nm. Analisis data menggunakan *t-test*.

Hasil menunjukkan densitas optik kelompok uji lebih rendah dari kelompok kontrol. *T-test* menunjukkan perbedaan bermakna densitas optik antar kelompok ($p < 0,05$). Kesimpulan penelitian ini yaitu rebusan daun salam efektif dalam menurunkan pertumbuhan bakteri plak ditandai penurunan densitas optik.

Kata Kunci : Bakteri plak, rebusan daun salam, densitas optik.

ABSTRACT

*Plaque is a thin layer attached to the tooth surface and other hard structures in the oral cavity. It consists of 70% bacteria such as *Streptococcus mutans*, *Actinomyces naeslundii*, *Streptococcus sanguinis*, *Niesseria sp.*, etc. Bay leaf (*Syzygium polyanthum* (Wight) Walp.) contains flavonoids, tannins, and essential oils which has antibacterial activity. This study aimed to determine the effect of bay leaf decoction on growth of plaque bacteria.*

Plaque samples was taken from the buccal surface of upper first molar. The sample was then inoculated in BHI media and incubated at 37°C for 24 hours. Fifty percent bay leaf decoction (treatment) and distilled water (control) was added into 1.5×10^8 CFU/ml bacterial suspension. The tube was incubated for 24 hours at 37°C. The optical density was measured using a spectrophotometer at 600 nm wavelength. Data were analyzed using T-test.

Result showed optical density of the treatment group was lower than the control group. T-test showed significant differences of the optical density between the groups ($p < 0,05$). In conclusion, 50% bay leaf decoction reduces bacterial plaque growth which characterized by a decrease in the optical density.

Keyword: Plaque bacteria, bay leaf decoction, optical density.