

## INTISARI

Karies gigi merupakan penyakit gigi dan mulut yang umum di masyarakat. Karies gigi dapat dicegah dengan kontrol plak. Kontrol plak dapat dilakukan secara mekanis dan kimiawi. Klorheksidin merupakan agen kimiawi yang dapat mengontrol plak, namun memiliki efek samping seperti pewarnaan gigi dan iritasi mukosa. Daun belimbing wuluh memiliki kandungan zat aktif tanin dan flavonoid secara *in vitro* mempunyai daya antibakterial terhadap *oral streptococci*. Tujuan penelitian ini adalah untuk mengetahui pengaruh air rebusan daun belimbing wuluh terhadap pertumbuhan bakteri *Streptococcus mutans*.

Kelompok perlakuan air rebusan daun belimbing wuluh dengan berat 50, 100, dan 150 gram, klorheksidin 0,12% sebagai kontrol positif, dan aquades steril sebagai kontrol negatif. Semua kelompok perlakuan diukur nilai OD (*Optical Density*) awal dan akhir dengan menggunakan spektrofotometer. Nilai OD awal diukur sebelum diinkubasi sedangkan nilai OD akhir diukur setelah diinkubasi selama 24 jam dengan suhu 37°C. Data yang diperoleh berupa data rasio, kemudian dianalisis menggunakan Anava Satu Jalur.

Hasil penelitian menunjukkan bahwa antara kelompok air rebusan daun belimbing wuluh berat 50, 100, dan 150 gram dengan aquades steril tidak terdapat perbedaan yang bermakna dengan nilai signifikansi  $p > 0,05$ . Kesimpulan dari penelitian ini adalah air rebusan daun belimbing wuluh tidak berpengaruh terhadap pertumbuhan bakteri *Streptococcus mutans*.

Kata kunci: daun belimbing wuluh, tanin, flavonoid, *Streptococcus mutans*

## ABSTRACT

Dental caries is dental and oral disease which is common in community life. Dental caries can be prevented by doing plaque control. It can be done both mechanically and chemically. *Chlorhexidine* is chemical agents that can control plaque, but it has a side effect such as staining of teeth and mucosal irritation. *Averhoea balimbi* Linn. leaf has active substance content of tannins and flavonoids *in vitro* which has antibacterial power against oral streptococci. The objective of this research is to determine the effect of *Averhoea balimbi* Linn. leaf's water decoction on bacterial growth of *Streptococcus mutans*.

The treatment group of *Averhoea balimbi* Linn. leaf's water decoction with the weight of 50, 100, and 150 grams, 0,12% of *chlorhexidine* as positive control and sterile distilled water as negative control. All of the categories are measured its beginning and end OD (*Optical Density*) by using spectrophotometer. The OD's beginning value is measured before incubated where as the OD's end value is measured after incubated for 24 hours at 37°C temperature. The data were analyzed by one way Anova.

The result shows that among the group of *Averhoea balimbi* Linn leaf's water decoction with the weight of 50, 100, and 150 grams with sterile distilled water have no significant difference with a significance value of  $p > 0,05$ . The conclusion of this research is that the *Averhoea balimbi* Linn. leaf's water decoction has no effect on bacterial growth of *Streptococcus mutans*.

Keywords: *Averhoea balimbi* Linn, tannins, flavonoids, *Streptococcus mutans*