

INTISARI

Pemanfaatan bahan alami sebagai bahan aktif bersifat antibakteri dalam larutan kumur telah banyak dilakukan. Bunga jambu mete (*Anacardium occidentale*) mengandung senyawa-senyawa fenolik seperti asam anakardat, asam galat, triterpena, flavonoid, dan *xanthones* yang memiliki aktivitas antibakteri terhadap bakteri kariogenik *Streptococcus mutans*. Penelitian ini bertujuan untuk mengetahui pengaruh konsentrasi ekstrak bunga jambu mete sebagai bahan antibakteri larutan kumur terhadap pertumbuhan bakteri *Streptococcus mutans*.

Penelitian dilakukan dengan membuat 5 kelompok konsentrasi ekstrak bunga jambu mete dalam larutan kumur yaitu 10%, 15%, 20%, 25%, dan 30%. Larutan kumur dibuat masing-masing 10 mL dengan melarutkan ekstrak bunga jambu mete konsentrasi 10%-30%, 0,1 mL sorbitol, dan 0,15 mL *peppermint* dalam akuades. Bakteri *S. mutans* ditanam dalam media MHA, kemudian larutan kumur konsentrasi 10%-30% (50 μ L) dimasukkan dalam sumuran pada media agar dan diinkubasi selama 24 jam pada suhu 37°C (n= 4). Diameter zona hambat diukur dengan jangka sorong ketelitian 0,05 mm. Data yang diperoleh dianalisis dengan ANAVA satu jalur dengan ketelitian 95%.

Hasil penelitian menunjukkan rerata diameter zona hambat adalah 18,44 \pm 0,49 mm (kelompok 10%), 18,80 \pm 0,78 mm (15%), 21,80 \pm 0,28 mm (20%), 23,72 \pm 0,77 mm (25%), dan 24,47 \pm 0,40 mm (30%). Uji ANAVA menunjukkan konsentrasi ekstrak bunga jambu mete 10%-30% dalam larutan kumur berpengaruh secara bermakna terhadap diameter zona hambat *S. mutans* (p<0,05). Kesimpulan penelitian ini adalah konsentrasi ekstrak bunga jambu mete sebagai bahan antibakteri larutan kumur berpengaruh meningkatkan daya hambat terhadap pertumbuhan bakteri *S. mutans*.

Kata kunci: Bunga jambu mete, konsentrasi, larutan kumur, antibakteri, *Streptococcus mutans*

ABSTRACT

The utilization of natural ingredients as active components with antibacterial property in mouthwash have been widely known and used. Cashew tree flower (*Anacardium occidentale*) contains phenolic substances like anacardic acid, gallic acid, triterpenes, flavonoids, and xanthenes that possess antibacterial activities on cariogenic bacteria, *Streptococcus mutans*. The objective of the research was to study the effects of cashew tree flowers' extract concentration as active components in mouthwash on growth of *Streptococcus mutans*.

This research was conducted by making 5 groups of cashew tree flower extract in mouthwash which are 10%, 15%, 20%, 25%, and 30%. Mouthwashes were made 10 mL each by dissolving 10%-30% cashew tree flower extract, 0.1 mL sorbitol, and 0.15 mL peppermint in aquadest. *S. mutans* bacteria were grown in solid media MHA, then mouthwashes with 10%-30% extract concentration (50 μ L) were applied to the wells within MHA and incubated for 24 hours at 37°C temperature (n= 4). Inhibition zone diameter were measured using vernier caliper with 0.05 mm scale. The accuired data were analyzed using one-way ANOVA with 95% confidence interval.

The result of this research showed the mean inhibition zone diameter within 5 groups which are 18.44 ± 0.49 mm (10% group), 18.80 ± 0.78 mm (15%), 21.80 ± 0.28 mm (20%), 23.72 ± 0.77 mm (25%), and 24.47 ± 0.40 mm (30%). ANOVA result shows that cashew tree flower extract in mouthwash with concentration of 10%-30% significantly affects the inhibition zone diameter on *S. mutans* ($p < 0.05$). Conclusion of this research was that concentrations of cashew tree flower as antibacterial components in mouthwash increases inhibition strength on growth of *S. mutans*.

Keywords: Cashew tree flower, concentration, mouthwash, antibacteria, *Streptococcus mutans*