

ABSTRAK

Nathania Astria, Sherly. 2015. **Uji Efektivitas Antibakteri Ekstrak Metanol Daun Ketepeng Cina (*Cassia alata*) terhadap Pertumbuhan *Streptococcus mutans* secara *In Vitro***. Tugas Akhir, Program Studi Pendidikan Dokter Gigi Fakultas Kedokteran Universitas Brawijaya. Pembimbing:(1) Prof. Dr. dr. Noorhamdani A.S, DMM., Sp.MK(K). (2) Drg. Faidah, Sp.KG.

Karies merupakan penyakit gigi dan mulut yang paling sering ditemukan dalam praktek kedokteran gigi. *Streptococcus mutans* merupakan bakteri penyebab utama timbulnya karies gigi. Daun ketepeng cina mempunyai kandungan zat aktif antibakteri yaitu flavonoid, alkaloid, tannin, saponin, antrakuinon dan fenol. Penelitian ini bertujuan untuk mengetahui efek antibakteri ekstrak metanol daun ketepeng cina terhadap pertumbuhan *Streptococcus mutans* secara *In Vitro*. Penelitian ini merupakan eksperimental laboratorik dengan metode dilusi agar untuk mendapatkan Kadar Hambat Minimal (KHM). Konsentrasi ekstrak daun ketepeng cina yang digunakan adalah 0%, 2%, 3%, 4%, 5% dan 6%. Dari hasil penelitian, didapatkan KHM ekstrak daun ketepeng cina sebagai antibakteri terhadap *Streptococcus mutans* adalah pada konsentrasi 6%. Analisis data menggunakan *Kruskall Wallis* menunjukkan terdapat perbedaan efek antibakteri dari setiap konsentrasi ekstrak daun ketepeng cina terhadap pertumbuhan bakteri *Streptococcus mutans*. Uji korelasi *Spearman* menunjukkan bahwa semakin tinggi konsentrasi ekstrak daun ketepeng cina maka semakin menurun pertumbuhan bakteri *Streptococcus mutans*. Berdasarkan penelitian ini, dapat disimpulkan bahwa ekstrak metanol daun ketepeng cina mempunyai efek sebagai antibakteri terhadap *Streptococcus mutans*.

Kata kunci: ekstrak metanol daun ketepeng cina, *Streptococcus mutans*, karies, antibakteri.

ABSTRACT

Nathania Astria, Sherly. 2015. **Antibacterial Effectiveness Test Methanol Extracts of *Cassia alata* leaves against *Streptococcus mutans* Growth In Vitro**. Final Assignment, Dentistry Program Medical Faculty of Brawijaya University. Supervisors: (1) Prof. Dr. dr. Noorhamdani A.S, DMM., Sp.MK(K). (2) Drg. Faidah, Sp.KG.

Caries is dental and oral diseases which most commonly found in the practice of dentistry. *Streptococcus mutans* is the main bacteria that cause dental caries. The *Cassia alata* leaves has antibacterial substances which are flavonoids, alkaloids, tannins, saponins, anthraquinones and phenols. The purpose of this study was to know the antibacterial effect of methanol extract *Cassia alata* leaves againts *Streptococcus mutans In Vitro*. This was a laboratory experimental study using agar dilution method to find Minimal Inhibitory Concentration (MIC). The used concentration of the methanol extract of *Cassia alata* leaves were 0%, 2%, 3%, 4%, 5% and 6%. The result of this study showed that the MIC of *Cassia alata* leaves extract as antibacterial against *Streptococcus mutans* was found at 6%. Data analysed using *Kruskal Wallis* showed that there were differences in the antibacterial effect of each *Cassia alata* leaves extract concentration against the growth of *Streptococcus mutans*. *Spearman* correlation test showed that the higher the concentration of *Cassia alata* leaves extract, the growth of *Streptococcus mutans* decreased. Based on this study, it can be concluded that the methanol extract of *Cassia alata* leaves has antibacterial effect against *Streptococcus mutans*.

Keywords: Methanol extract of *Cassia alata* leaves, *Streptococcus mutans*, caries, antibacterial.

