

SKRIPSI

**UJI DAYA HAMBAT EKSTRAK DAUN CEREMAI (*Phyllanthus acidus*
(L.) Skeels) TERHADAP PERTUMBUHAN BAKTERI
Streptococcus mutans SECARA *IN VITRO***



drg. Kosno Suprianto, MDS, Sp.Perio

FAKULTAS KEDOKTERAN GIGI

UNIVERSITAS ANDALAS

PADANG

2019

Uji Daya Hambat Ekstrak Daun Ceremai (*Phyllanthus acidus* (L.) Skeels) terhadap Pertumbuhan Bakteri *Streptococcus mutans* secara *In Vitro*

Sofie Bosoma Syamra

ABSTRAK

Bakteri *Streptococcus mutans* merupakan mikroorganisme pada plak gigi yang berperan penting dalam etiologi karies gigi. Pencegahan karies dapat dilakukan dengan cara mengendalikan plak salah satunya melalui pemanfaatan senyawa antibakteri yang terkandung di dalam daun ceremai. Tujuan penelitian ini adalah untuk mengetahui daya hambat ekstrak daun ceremai terhadap pertumbuhan bakteri *Streptococcus mutans* secara *in vitro*.

Jenis penelitian ini adalah *true experimental* berupa *posttest only control group design*. Ekstrak daun ceremai dibuat dengan teknik maserasi dengan hasil ekstrak daun ceremai konsentrasi 100% dan diencerkan dengan *aquadest* agar didapatkan konsentrasi 80%, 60%, 40%, dan 20%. Uji daya hambat dilakukan dengan metode difusi cakram Kirby-Bauer pada media agar Mueller Hinton. Analisis data yang digunakan adalah uji *Kruskal-Wallis* dan uji *Post Hoc Mann-Whitney*.

Hasil penelitian menunjukkan bahwa ekstrak daun ceremai konsentrasi 80% dan 100% memiliki daya hambat dan konsentrasi 20%, 40%, 60% tidak memiliki daya hambat. Hasil uji *Kruskal-Wallis* menunjukkan nilai $p < 0,05$ yang berarti terdapat perbedaan bermakna antara kelompok konsentrasi 80% dan 100% dan kelompok kontrol dalam menghambat pertumbuhan bakteri *Streptococcus mutans*. Kesimpulan penelitian ini adalah ekstrak daun ceremai (*Phyllanthus acidus* (L.) Skeels) dapat menghambat pertumbuhan bakteri *Streptococcus mutans* secara *in vitro* pada konsentrasi 80% dan 100% dengan tingkat kriteria kekuatan daya hambat yang lemah.

Kata Kunci : daya hambat, ekstrak daun ceremai, *Streptococcus mutans*.

Bacteriostatic Test of Ceremai Leaf (Phyllanthus acidus (L.) Skeels) to Streptococcus mutans Bacteria Growth as In Vitro ways.

Sofie Bosoma Syamra

ABSTRACT

Streptococcus mutans are microorganisms on dental plaques that play an important role in the etiology of dental caries. Caries prevention can be done by controlling the plaque, one of them through is the use of antibacterial compounds contained in the ceremai leaves.. The purpose of this study was to determine the inhibition of ceremai leaf extract in the growth of *Streptococcus mutans* bacteria as in vitro ways.

This type of research is true experimental in the form of posttest only control group design. The ceremai leaf extract was made by maceration technique with the concentration of ceremai leaf extract concentration of 100% and diluted with aquadest to obtain a concentration of 80%, 60%, 40%, and 20%.. The inhibitory test was done by Kirby-Bauer disk diffusion on Mueller Hinton Agar. The data was analyzed by using Kruskal-Wallis and Post-Hoc Mann-Whitney.

The results showed that the concentration of ceremai leaf extract of 80% and 100% had a inhibitory effect and a concentration of 20%, 40%, 60% did not have inhibitory effect. The Kruskal-Wallis test results showed a value of $p < 0.05$, which means that there were significant differences between the groups of 80% and 100% concentration and the control group in inhibiting the growth of *Streptococcus mutans* bacteria. The conclusion of this study is that ceremai leaf extract (*Phyllanthus acidus* (L.) Skeels) can inhibit the growth of *Streptococcus mutans* bacteria in vitro at concentrations of 80% and 100% with a weak level of inhibitory strength.

Keywords : *ceremai leaf extract, inhibitory effect, Streptococcus mutans.*