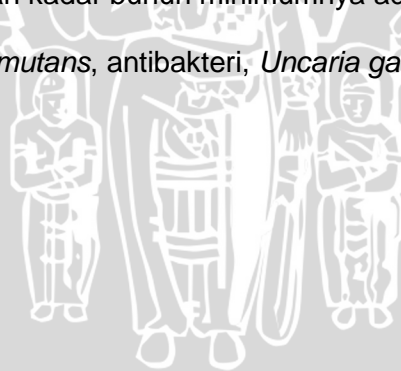


## ABSTRAK

Susanto, Lusiana. 2014. **Uji Efektivitas Antibakteri Ekstrak Etanol Gambir (*Uncaria gambir Roxb*) Terhadap Pertumbuhan Bakteri *Streptococcus mutans* Secara *In Vitro***. Tugas Akhir, Fakultas Kedokteran Universitas Brawijaya. Pembimbing: (1) Prof. DR. dr. Noorhamdani AS., DMM., SpMK. (2) drg. Citra Insany I., M.Med.Ed.

*Streptococcus mutans* merupakan agen penyebab karies yang paling sering ditemukan. Berdasarkan Survei Kesehatan Rumah Tangga tahun 2004 ditemukan bahwa kurang lebih 90.05% penduduk Indonesia menderita karies. Pencegahan yang efektif terus dicari dalam kaitannya dengan penemuan senyawa antibakteri. Katekin dan tanin merupakan kandungan utama yang terdapat dalam gambir (*Uncaria gambir Roxb*) dan telah diketahui sebagai senyawa antibakteri yang efektif. Penelitian ini bertujuan untuk mengetahui efektivitas antibakteri ekstrak etanol Gambir terhadap pertumbuhan bakteri *Streptococcus mutans* secara *in vitro*. Sampel diperoleh dari isolat bakteri di Laboratorium Mikrobiologi FKUB. Konsentrasi ekstrak yang dipakai yaitu 0%, 6.25%, 7.5%, 8.75%, 10%, dan 11.25%. Metode yang digunakan adalah metode dilusi tabung. Hasil statistik *one way ANOVA* menunjukkan terdapat perbedaan yang signifikan pada perubahan konsentrasi ekstrak gambir terhadap jumlah koloni *Streptococcus mutans* ( $p < 0.05$ ). Uji korelasi menunjukkan adanya hubungan yang erat antara konsentrasi ekstrak dengan jumlah koloni (Korelasi,  $r = -0.900$ ). Kesimpulan pada penelitian ini yaitu ekstrak gambir (*Uncaria gambir Roxb*) mempunyai efek antibakteri terhadap *Streptococcus mutans* dengan kadar hambat minimum 8.75% dan kadar bunuh minimumnya adalah 11.25%.

Kata kunci: *Streptococcus mutans*, antibakteri, *Uncaria gambir Roxb*.



## ABSTRACT

Susanto, Lusiana. 2014. **The Antibacterial Effectiveness of Ethanol Extract of Gambier (*Uncaria gambir Roxb*) Against the Growth of *Streptococcus mutans* Secara *In Vitro***. Final assignment, Medical Faculty of Brawijaya University. Supervisors: (1) Prof. DR. dr. Noorhamdani AS., DMM., SpMK. (2) drg. Citra Insany I., M.Med.Ed.

*Streptococcus mutans* is the agent caused caries that mostly found. According to Family Health Survey in 2004, approximately 90.05% of Indonesia's citizen are caries infected. The most effective prevention is constantly in the research. Gambier (*Uncaria gambir Roxb*) is widely planted and cultivated. Active agents contained in gambier are tannin and cathechin which have been known to have antibacterial power. The purpose of this experiment is to determine the effectiveness of ethanol extract of gambier to inhibit the growth of *Streptococcus mutans in vitro* by looking at the MIC (Minimum Inhibitory Concentration) and MBC (Minimum Bactericidal Concentration). The samples were obtained from bacterial isolates provided by microbiology laboratory of Medical Faculty of Brawijaya University. The concentrations used were 0%, 6.25%, 7.5%, 8.75%, 10%, and 11.25%. Tube dilution method was used to determine the MIC value while diffusion agar method was used to determine the MBC value. The statistical test *one way ANOVA* showed significant differences in the changes of gambier extract concentrations on the *Streptococcus mutans* colony number ( $p < 0.05$ ). The correlation test showed a close relationship between the concentration of the extract with the number of colonies (correlation,  $r = -0.900$ ). The conclusion of this experiment is gambier (*Uncaria gambir Roxb*) has an antibacterial effect against *Streptococcus mutans* with 8.75% as the Minimum Inhibitory Concentration and 11.25% as Minimum Bactericidal Concentration.

Keywords: *Streptococcus mutans*, antibacterial, *Uncaria gambir Roxb*.