

ABSTRAK

Astuti, Ari. 2014. **Perbedaan Daya Antibakteri antara Ekstrak Teh hijau dan Teh hitam terhadap *Streptococcus mutans* secara In Vitro**. Tugas Akhir, Fakultas Kedokteran Universitas Brawijaya. Pembimbing: (1) dr.Roekistiningsih, MS, Sp. Mk. (2) drg. Citra Insany Irgananda, M.Med.Ed.

Streptococcus mutans adalah spesies bakteri yang dominan menyebabkan terjadinya karies gigi. Karies merupakan masalah kesehatan gigi yang umum terjadi di Indonesia. Teh hijau dan teh hitam sama-sama mempunyai daya antibakteri terhadap *Streptococcus mutans* secara in vitro. Penelitian ini adalah penelitian eksperimental laboratoris dengan rancangan *true eksperimental posttest only control group design*. Penelitian ini bertujuan untuk mengetahui perbedaan daya antibakteri antara ekstrak teh hijau dan teh hitam terhadap *Streptococcus mutans* pada konsentrasi 0%, 3,125%, 6,25%, 12,5%, 25%, 50%, dan 100%. Metode yang digunakan adalah metode difusi sumuran. Analisa statistik one-way ANOVA dari hasil penelitian menunjukkan perbedaan yang signifikan antara ketujuh kelompok perlakuan yaitu antara ekstrak teh hijau dan teh hitam konsentrasi 0%, 3,125%, 6,25%, 12,5%, 25%, 50%, dan 100% terhadap rerata diameter zona hambatan *Streptococcus mutans*. Pada uji *Korelasi Pearson* menunjukkan bahwa konsentrasi ekstrak teh hijau dan teh hitam berbanding lurus dengan rerata diameter zona hambatan *Streptococcus mutans*, selanjutnya hasil uji t tidak berpasangan menyimpulkan bahwa terdapat perbedaan rerata diameter zona hambatan yang signifikan antara ekstrak teh hijau dengan teh hitam dimana jumlah diameter zona hambatan *Streptococcus mutans* pada ekstrak teh hijau pada konsentrasi-konsentrasi tersebut selalu lebih besar daripada ekstrak teh hitam. Dapat disimpulkan bahwa ekstrak teh hijau lebih kuat dalam menghambat pertumbuhan *Streptococcus mutans* daripada ekstrak teh hitam.

Kata kunci: *Streptococcus mutans*, Ekstrak teh hijau, Ekstrak teh hitam, Difusi sumuran

ABSTRACT

Astuti, Ari 2013. **The difference between Antibacterial Power of Extract Green Tea and Black Tea against *Streptococcus mutans* In Vitro**. Final Assignment, Faculty of Medicine, Brawijaya University. Supervisors : (1) dr. Roekistiningsih, MS, Sp. Mk. (2) drg. Citra Insany Irgananda, M. Med.Ed.

Streptococcus mutans is the dominant species of bacteria that cause dental caries. Dental caries is a common health problem in Indonesia. Both green tea and black tea have antibacterial power against *Streptococcus mutans* in vitro. This study is an experimental research laboratory is a true experimental design with posttest only control group design. This study aimed to determine the difference of antibacterial power between green tea extract and black tea extract against *Streptococcus mutans* in vitro at concentrations 0%, 3.125%, 6.25%, 12.5%, 25%, 50%, and 100%. The method using well diffusion method. The inhibition zone towards *Streptococcus mutans* was measured. Statistical analysis of one- way ANOVA results showed significant differences between the seven treatment groups ,between green tea extract and black tea extract concentrations of 0%, 6,25%, 12,5%, 25%, 50%, and 100% of the mean inhibition zone diameter of *Streptococcus mutans*. Pearson correlation test showed that the concentration of green tea extract and black tea extract is directly proportional to the mean inhibition zone diameter of *Streptococcus mutans*, furthermore, the results of the unpaired t test concluded that there are significant differences in the mean diameter of the inhibition zone between green tea extract to black tea extract where the amount of inhibition zone diameter of *Streptococcus mutans* in the green tea extract at each concentrations are always larger than the black tea extract. It can be concluded that green tea extract is more powerful in inhibiting the growth of *Streptococcus mutans* than black tea extracts.

Keywords : *Streptococcus mutans*, Green tea extract, Black tea extract, Well Diffusion