

## ABSTRAK

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Program Studi : Pendidikan Dokter Gigi

Judul : Perbandingan Daya Hambat Ekstrak Biji Kopi Arabika (*Coffea arabica L*) Sangrai dan Non Sangrai Terhadap Bakteri *Enterococcus faecalis*.

*Enterococcus faecalis* adalah spesies bakteri patogen yang paling resisten dijumpai di saluran akar terinfeksi dalam rongga mulut. Dalam penelitian ini dimanfaatkan efek antibakteri dari bahan alami ekstrak biji kopi Arabika. Tujuan penelitian ini untuk mengetahui perbedaan daya hambat biji kopi Arabika (*Coffea arabica L*) sangrai dan non sangrai terhadap bakteri *Enterococcus faecalis*. Metode penelitian ini ialah *experimental laboratory* memakai *randomized post test only with control group design*. Penentuan besar sampel dihitung menggunakan rumus Federer dengan jumlah sampel keseluruhan sebanyak 30 sampel. Analisis data penelitian ini menggunakan *oneway ANOVA* dan *Post Hoc LSD*. Hasil penelitian menunjukkan rata-rata diameter zona hambat pada ekstrak biji kopi Arabika sangrai konsentrasi 25%, 50%, 75%, 100% terhadap bakteri *Enterococcus faecalis* adalah  $9,07 \pm 0,32$  mm,  $9,47 \pm 0,21$  mm,  $10,47 \pm 0,67$  mm, dan  $11,90 \pm 0,92$  mm sedangkan rata-rata diameter zona hambat ekstrak biji kopi Arabika non sangrai terhadap bakteri *Enterococcus faecalis* adalah  $13,39 \pm 0,72$  mm,  $14,17 \pm 0,35$  mm,  $15,47 \pm 0,76$  mm, dan  $17,53 \pm 0,87$  mm. Penelitian ini menunjukkan bahwa ada perbedaan daya hambat ekstrak biji kopi Arabika sangrai dan non sangrai terhadap bakteri *Enterococcus faecalis*. Selain itu, ekstrak biji kopi arabika non sangrai konsentrasi 100% mempunyai kemampuan yang tidak jauh berbeda dengan *chlorhexidine glukonat* 2% dalam menghambat perkembangan bakteri *Enterococcus faecalis*.

**Kata Kunci :** *Enterococcus faecalis*, Biji Kopi Arabika, Daya Hambat

## **ABSTRACT**

*Name* : Verawati Sinaga  
*Study Program* : Dentistry  
*Title* : *Comparison of the Inhibitory Power of Roasted and Non-Roasted Arabica Coffee Bean Extract (Coffea arabica L) Against Enterococcus faecalis Bacteria.*

*Enterococcus faecalis is the most resistant species of pathogenic bacteria found in infected root canals in the oral cavity. In this study, the antibacterial effect of natural ingredients from Arabica coffee bean extract was utilized. The purpose of this study was to determine the differences in the inhibition power of roasted and non-roasted Arabica coffee beans (Coffea arabica L) against Enterococcus faecalis bacteria. This research method is an experimental laboratory using a randomized post test only with a control group design. Determination of sample size was calculated using the Federer formula with a total sample of 30 samples. Data analysis in this study used one way ANOVA and Post Hoc LSD. The results showed that the average diameter of the inhibition zone in roasted Arabica coffee bean extract concentrations of 25%, 50%, 75%, 100% against Enterococcus faecalis bacteria was  $9.07 \pm 0.32$  mm,  $9.47 \pm 0.21$  mm,  $10.47 \pm 0.67$  mm, and  $11.90 \pm 0.92$  mm while the average diameter of the inhibition zone of non-roasted Arabica coffee bean extract against Enterococcus faecalis bacteria was  $13.39 \pm 0.72$  mm,  $14.17 \pm 0.35$  mm,  $15.47 \pm 0.76$  mm, and  $17.53 \pm 0.87$  mm. This study showed that there were differences in the inhibition of roasted and non-roasted Arabica coffee bean extracts against Enterococcus faecalis bacteria. In addition, non-roasted Arabica coffee bean extract with a concentration of 100% has an ability that is not much different from 2% chlorhexidine gluconate in inhibiting the development of Enterococcus faecalis bacteria.*

**Keywords** : *Enterococcus faecalis, Arabica Coffee Beans, Inhibitory Power*