

## INTISARI

*Enterococcus faecalis* (*E. faecalis*) termasuk bakteri kokus gram positif pada saluran akar gigi. Bakteri ini dapat menjadi patogen sehingga dapat menyebabkan kegagalan perawatan saluran akar. Bahan irigasi saluran akar yang biasa digunakan untuk mengeliminir *E. faecalis* seperti sodium hipoklorit, EDTA, klorheksidin dan MTAD berisiko menimbulkan efek samping sehingga perlu dicari alternatif penggantinya menggunakan bahan herbal seperti kemangi (*Ocimum sanctum L*). Tujuan penelitian mengetahui daya antibakteri infusum daun kemangi terhadap bakteri *E. faecalis*.

Penelitian eksperimental dengan rancangan *post test only control group design*. Penelitian dilakukan pada 25 media padat *paper disc* yang dibagi 5 kelompok: kelompok klorheksidin 2%; kelompok infusum daun kemangi 12,5%; 25%, 50%, dan 100%. Metode difusi digunakan untuk mengkultur bakteri yang kemudian diinkubasi selama 24 jam pada suhu 37<sup>0</sup>C. Daya antibakteri diketahui dari diameter zona hambat pertumbuhan bakteri yang selanjutnya dianalisis dengan uji *Kruskal Wallis* dan *Mann Whitney*.

Hasil penelitian menunjukkan rata-rata daya hambat pertumbuhan *E. faecalis* kelompok klorheksidin 2% adalah 12,3±0,4mm; sedangkan pada infusum daun kemangi 100%, 50%, 25%, dan 12,5% adalah 11,2±0,2; 9,5±0,5; 8,8±0,2; dan 8,1±0,1 mm. Uji *kruskal wallis* menghasilkan nilai p=0,000; menunjukkan ada perbedaan rata-rata diameter zona hambat antar kelima kelompok uji. Perbedaan rata-rata diameter zona hambat antar dua kelompok ditunjukkan pada semua pasangan dua kelompok, menunjukkan bahwa peningkatan zona hambat dependent dose terhadap kenaikan konsentrasi infusum.

Kesimpulan: Konsentrasi infusum daun kemangi yang paling efektif menghambat pertumbuhan bakteri *E. faecalis* adalah konsentrasi 100%, namun kemampuannya masih dibawah daya hambat klorheksidin 2%.

**Kata kunci:** Infusum daun kemangi, *Enterococcus faecalis*.

## ABSTRACT

*Enterococcus faecalis (E. faecalis) including gram-positive cocci bacteria in the root canals. These bacteria can be a pathogen that can cause failure of root canal treatment. Root canal irrigation materials commonly used to eliminate E. faecalis such as sodium hypochlorite, EDTA, chlorhexidine and MTAD risk of side effects so it is necessary to find a replacement alternative uses of herbs such as basil (Ocimum sanctum L). This study aimed to antibacterial infusum basil against bacteria E. faecalis.*

*Experimental research with post test only control group design. The study was conducted on solid media 25 paper discs are divided 5 groups: 2% chlorhexidine; infusum group basil leaves 12.5%; 25%, 50% and 100%. Diffusion method used for culturing the bacteria were then incubated for 24 hours at a temperature of 37°C. Known antibacterial power of bacterial growth inhibition zone diameters were then analyzed by Kruskal Wallis and Mann Whitney.*

*The results showed an average growth inhibition E. faecalis 2% chlorhexidine group was  $12.3 \pm 0.4$  mm; whereas in infusum basil 100%, 50%, 25%, and 12.5% was  $11.2 \pm 0.2$ ;  $9.5 \pm 0.5$ ;  $8.8 \pm 0.2$ ; and  $8.1 \pm 0.1$  mm. Kruskal Wallis test produces a value  $p = 0.000$ ; showed there were difference in the average of inhibitory zone diameter within the five test groups. The average difference of inhibition zone diameter between two groups are presented in all pairs of two groups, suggesting that the increase in inhibition zone was dependent dose.*

*Conclusion: The concentration of basil leaves infusum is effective in inhibits the growth of bacteria E. faecalis in 100% concentration, but its ability is lower than chlorhexidine 2%.*

**Keywords:** *Ocimum sanctum L. Infusum, Enterococcus faecalis.*