

**Kemampuan Ekstrak Jahe Merah (*Zingiber Officinale Rosc Var Rubrum*) Sebagai
Antibakteri *Enterococcus faecalis* In Vitro**
(Perbandingan Dengan Bahan Sterilisasi Saluran Akar Gigi *Endoseptone*)

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ABSTRAK

Latar belakang: Karies menyebabkan kavitas yang dapat berkembang ke dentin dan masuk ke dalam ruang pulpa hingga menyebabkan nekrosis dan abses periapikal. Proses penyakit periapikal dan peradangan pulpa dimulai dari invasi bakteri melalui tubulus dentin yang terbuka akibat luka trauma maupun akibat karies yang meluas. Penanganan penyakit pulpa dimulai dengan membuang jaringan karies pada gigi dan perawatan saluran akar gigi. *Enterococcus faecalis* sering ditemukan pada saluran akar gigi dengan prevalensi antara 30% sampai 90% dan mengalami resistensi terhadap obat *intracanal* serta antibiotik lainnya yang menyebabkan terjadinya kegagalan perawatan saluran akar. Jahe adalah sumber fenolat bioaktif yang sangat baik digunakan dalam pengobatan cina dan memiliki antibakteri, antiviral, analgesik, dan antipiretik. **Tujuan:** Untuk mengetahui kemampuan ekstrak jahe merah sebagai antibakteri saluran akar gigi. **Metode:** Penelitian eksperimental laboratorium dengan rancangan penelitian *Post test only group design*. Diuji antibakteri ekstrak jahe merah menggunakan metode difusi sumuran. Pembuatan ekstrak dengan metode maserasi dengan konsentrasi 5%, 10 % dan 15% dan *endoseptone* sebagai kontrol positif. Pengulangan dilakukan 6 kali setiap konsentrasi dilanjutkan pengamatan zona hambat bakteri. **Hasil:** Nilai rerata masing-masing zona hambat ekstrak jahe merah terhadap pertumbuhan bakteri *Enterococcus faecalis* dengan Konsentrasi 5% sebesar 1.90 ± 0.15 , Konsentrasi 10% sebesar 4.90 ± 0.89 , Konsentrasi 15% sebesar 9.48 ± 0.28 , Kontrol positif sebesar 15.51 ± 0.13 . **Kesimpulan:** Ekstrak jahe merah (*Zingiber Officinale Rosc Var Rubrum*) konsentrasi 15% terbukti efektif mempunyai kemampuan antibakteri terhadap bakteri *Enterococcus faecalis*.

Kata kunci : Jahe merah, *Enterococcus faecalis*, *endoseptone*

Ability of Red Ginger Extract (*Zingiber Officinale Rosc Var Rubrum*) as Antibacterial of
Enterococcus faecalis In Vitro
(In Comparison With Endoseptone Root Canal Sterilize Material)

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ABSTRACT

Background: Caries causes cavitation which can spread into dentin and go into pulp chamber which eventually causes necrosis and periapical abscess. The process of periapical disease and pulp inflammation begins with bacterial invasion through opened dentinal tubules because of either traumatic injury or widespread caries. The treatment of the pulp disease begins with removing caries tissue in the teeth and using root canal treatment. *Enterococcus faecalis* is often found in teeth roots with prevalence between 30% up to 90% and it is resistant to *intracanal* medication and other antibiotics which cause failure in root canal treatment. Ginger is a very good source of bioactive phenolics. It is often used in traditional Chinese medicine since it contains of antibacterial, antiviral, analgesic and antipyretic. **Objective:** To comprehend the ability of red ginger extract as an antibacterial in root canal. **Method:** Laboratory experimental research with *Posttest only group design* research design. The Antibacterial ability of red ginger extract testing used well diffusion method. Maceration method was used in making the extract, it used 5%, 10%, and 15% concentrations and the *endoseptone* as a positive control. The repetition was done 6 times; each concentration was followed by bacterial inhibition zone observation. **Result:** The mean value of each inhibition zone of red ginger extract on the growth of *Enterococcus faecalis* bacteria with 5% concentration was 1.90 ± 0.15 , 10% concentration was 4.90 ± 0.89 , 15% concentration was 9.48 ± 0.28 . The positive control was 15.51 ± 0.13 . **Conclusion:** Red ginger extract (*Zingiber Officinale Rosc Var Rubrum*) 15% concentration had been proven to have effective antibacterial ability against the *Enterococcus faecalis* bacteria.

Keywords: red ginger, *Enterococcus faecalis*, *endoseptone*

