

ABSTRAK

Nama : Christine

Program Studi : S-1 Pendidikan Kedokteran Gigi

Judul : UJI EFEKTIVITAS DAYA ANTIBAKTERI CAMPURAN EKSTRAK BAWANG PUTIH (*Allium Sativum*) 50% DAN EKSTRAK KULIT BUAH NAGA MERAH (*Hylocereus Polyrhizus*) 50% TERHADAP BAKTERI *Enterococcus faecalis*.

Latar Belakang: Kegagalan endodontik disebabkan oleh *Enterococcus faecalis* karena kemampuannya menginfiltrasi tubulus dentin yang tersebar luas di sementum dan dentin akar. Irigasi merupakan langkah penting dalam perawatan saluran akar. NaOCl merupakan irigasi yang efektif karena konsentrasinya meningkat, namun toksisitasnya juga meningkatkan kemungkinan kerusakan jaringan periapikal. Bawang putih dan kulit buah naga merah mempunyai kemampuan antibakteri dalam menghambat pertumbuhan *Enterococcus faecalis*. **Tujuan:** Mengetahui efektivitas antibakteri campuran ekstrak bawang putih (*Allium Sativum*) dan ekstrak kulit buah naga merah (*Hylocereus Polyrhizus*) konsentrasi 50% terhadap bakteri *Enterococcus faecalis*. **Metode:** Desain penelitian ini adalah eksperimental laboratorium in vitro dengan desain *post-test only control-group design*. Campuran 50% ekstrak bawang putih (*Allium Sativum*) dan ekstrak kulit buah naga merah (*Hylocereus Polyrhizus*) dianalisis dibandingkan dengan NaOCl 2,5% terhadap *Enterococcus faecalis*. **Hasil:** Hasil uji ANOVA menunjukkan terdapat perbedaan yang bermakna ($p < 0,05$) antara ekstrak bawang putih (*Allium Sativum*), ekstrak kulit buah naga merah (*Hylocereus Polyrhizus*), campuran ekstrak bawang putih dan ekstrak kulit buah naga merah serta NaOCl yaitu $9,30 \pm 0,89$ mm; $15,88 \pm 2,65$ mm; $12,30 \pm 2,53$ mm; dan $20,39 \pm 2,41$ mm dalam menghambat *Enterococcus faecalis*. **Kesimpulan:** Ekstrak kulit buah naga merah (*Hylocereus Polyrhizus*) lebih efektif melawan *Enterococcus faecalis* dibandingkan bawang putih (*Allium Sativum*) dan campuran bawang putih dan kulit buah naga merah.

Kata Kunci: Antibakteri; *Allium Sativum*; *Hylocereus Polyrhizus*; *Enterococcus faecalis*; Irigasi Saluran Akar.

ABSTRACT

Name : Christine
Study Program : Dentistry
Title : Mixture of Garlic (*Allium Sativum*) Extract 50% and Red Dragon Fruit (*Hylocereus Polyrhizus*) peel 50% Effectiveness Against *Enterococcus faecalis* Bacteria

Background: Endodontic failure has been attributed to *Enterococcus faecalis* due to its ability to infiltrate dentinal tubules which is widely distributed in the cementum and dentin of the root. Irrigation is an important step in root canal treatment. NaOCl is an effective irrigation as its concentration increases, but its toxicity also increases the possibility of periapical tissue damage. Garlic and red dragon fruit peel has antibacterial ability to inhibit the growth of *Enterococcus faecalis*. **Purpose:** to determine the antibacterial effectiveness of mixture of garlic (*Allium Sativum*) extract and red dragon fruit (*Hylocereus Polyrhizus*) peel extract at 50% concentration against *Enterococcus faecalis* bacteria. **Methods:** This research design was an in vitro experimental laboratory with a post-test only control-group design. 50% mixture of garlic (*Allium Sativum*) extract and red dragon fruit (*Hylocereus Polyrhizus*) peel extract were analyzed in comparison to 2,5% NaOCl against *Enterococcus faecalis*. **Results:** ANOVA test results showed that there was a significant difference ($p < 0.05$) between garlic extract (*Allium Sativum*), red dragon fruit (*Hylocereus Polyrhizus*) peel extract, a mixture of garlic extract and red dragon fruit peel extract and NaOCl, namely 9.30 ± 0.89 mm; 15.88 ± 2.65 mm; 12.30 ± 2.53 mm; and 20.39 ± 2.41 mm in inhibiting *Enterococcus faecalis*. **Conclusion:** red dragon fruit (*Hylocereus Polyrhizus*) peel extract was more effective against *Enterococcus faecalis* than garlic (*Allium Sativum*) and mixture of garlic and red dragon fruit peel.

Keywords: Antibacterial; *Allium Sativum*; *Hylocereus Polyrhizus*; *Enterococcus faecalis*; Root Canal Irrigation.