

ABSTRAK

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Judul : ANALISIS EFEKTIVITAS ANTIBAKTERI EKSTRAK DAUN KENIKIR (*Cosmos caudatus*) TERHADAP BAKTERI *STAPHYLOCOCCUS AUREUS* DIBANDINGKAN DENGAN BAKTERI *ENTEROCOCCUS FAECALIS* PADA KONSENTRASI 10% DAN 40%

Latar belakang: *Staphylococcus aureus* dan *Enterococcus faecalis* dikenal sebagai bakteri dominan pada kasus infeksi saluran akar. Latar Belakang: NaOCl digunakan sebagai irigasi saluran akar untuk menghilangkan bakteri tersebut, namun bahan ini memiliki sifat sitotoksik. Daun kenikir memiliki potensi antimikroba terhadap bakteri mulut tersebut. **Tujuan:** Mengetahui efektivitas antibakteri ekstrak daun kenikir (*Cosmos caudatus*) terhadap *Staphylococcus aureus* dibandingkan dengan *Enterococcus faecalis* pada konsentrasi 10% dan 40%. **Metode:** Penelitian merupakan eksperimen laboratories secara *in vitro*, menggunakan desain *post-test only control group*. Ekstrak daun kenikir (*Cosmos caudatus*) 10% dan 40% dianalisis perbandingannya dengan DMSO (kontrol negatif) dan NaOCl 2,5% (kontrol positif) terhadap *Staphylococcus aureus* dan *Enterococcus faecalis* menggunakan metode difusi cakram dengan enam kali pengulangan. **Hasil:** Hasil Uji ANOVA menunjukkan terdapat perbedaan yang signifikan ($p < 0.05$) antara diameter zona hambat ekstrak daun kenikir (*Cosmos caudatus*) 10%, 40% dan NaOCl 2,5% yaitu $8,38 \pm 1,29$ mm; $11,05 \pm 0,92$ mm dan $23,28 \pm 4,12$ mm dalam menghambat bakteri *Staphylococcus aureus*, dan $7,55 \pm 0,39$ mm; $8,93 \pm 0,43$ mm dan $21,2 \pm 4,65$ mm dalam menghambat bakteri *Enterococcus faecalis*. **Kesimpulan:** Ekstrak daun kenikir (*Cosmos caudatus*) lebih efektif melawan *Staphylococcus aureus* dibandingkan *Enterococcus faecalis* pada kedua konsentrasi.

Kata kunci: Antibakteri, Daun Kenikir (*Cosmos caudatus*), *Staphylococcus aureus*, *Enterococcus faecalis*

ABSTRACT

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Title : ANALYSIS OF ANTIBACTERIAL EFFECTIVENESS OF KENIKIR LEAF EXTRACT (*Cosmos caudatus*) AGAINST *STAPHYLOCOCCUS AUREUS* BACTERIA COMPARED WITH *ENTEROCOCCUS FAECALIS* BACTERIA AT CONCENTRATIONS OF 10% AND 40%

Background: *Staphylococcus aureus* and *Enterococcus faecalis* were known as the predominant bacteria in root canal infection cases. NaOCl was used as root canal irrigation to eliminate those bacteria, but it contains cytotoxic properties. Kenikir leaves have antimicrobial potential against those oral bacteria. **Purpose:** To determine the antibacterial effectiveness of kenikir (*Cosmos caudatus*) leaf extract against *Staphylococcus aureus* compared to *Enterococcus faecalis* at 10% and 40% concentrations. **Methods:** This research is an in vitro laboratory experiment using a post-test-only control group design. A 10% and 40% Kenikir (*Cosmos caudatus*) leaf extract were analyzed in comparison to DMSO (negative control) and NaOCl 2.5% (positive control) against *Staphylococcus aureus* and *Enterococcus faecalis* using the disc diffusion method with six repetitions. **Results:** ANOVA test results showed that there was a significant difference ($p < 0.05$) between the diameters of the inhibition zones of 10%, 40% kenikir (*Cosmos caudatus*) leaf extract, and 2.5% NaOCl, namely 8.38 ± 1.29 mm; 11.05 ± 0.92 mm and 23.28 ± 4.12 mm in inhibiting *Staphylococcus aureus*, and 7.55 ± 0.39 mm; 8.93 ± 0.43 mm and 21.2 ± 4.65 mm in inhibiting *Enterococcus faecalis*. **Conclusion:** Kenikir (*Cosmos caudatus*) leaf extract was more effective against *Staphylococcus aureus* than *Enterococcus faecalis* at both concentrations.

Keywords: Antibacterial, Kenikir Leaf (*Cosmos caudatus*), *Staphylococcus aureus*, *Enterococcus faecalis*