

## **PENGARUH MINYAK ATSIRI SEREH DAPUR (*Cymbopogon citratus*) BERBAGAI KONSENTRASI TERHADAP PERTUMBUHAN BAKTERI ISOLASI DARI SALURAN AKAR GIGI DESIDUI NEKROSIS**

### **INTISARI**

Pengobatan gigi desidui nekrosis menggunakan antibakteri berbahan dasar kimia mempunyai efek samping terhadap gigi permanen penggantinya. Minyak atsiri sereh dapur (*Cymbopogon citratus*) yang mengandung bahan aktif *citral* dapat dijadikan pilihan sebagai antibakteri alami untuk saluran akar gigi desidui nekrosis. Penelitian ini bertujuan untuk mengetahui pengaruh minyak atsiri sereh dapur (*Cymbopogon citratus*) berbagai konsentrasi terhadap pertumbuhan bakteri isolasi dari saluran akar gigi desidui nekrosis.

Jenis penelitian adalah penelitian eksperimental. Obyek penelitian adalah bakteri isolasi dari gigi desidui nekrosis tiga pasien anak yang datang ke Klinik Kedokteran Gigi Anak, RSGM Prof Soedomo, Universitas Gadjah Mada. Dilakukan uji antibakteri dengan metode difusi agar minyak atsiri sereh dapur (*Cymbopogon citratus*) berbagai konsentrasi terhadap bakteri isolasi dari saluran akar gigi desidui nekrosis, kontrol negatif PEG BM 400 2.5% dan kontrol positif *NaOCl* 2.5%. Data dianalisis menggunakan ANAVA satu jalur dilanjutkan dengan uji *post-hoc LSD*.

Hasil ANAVA satu jalur menunjukkan terdapat perbedaan signifikan pertumbuhan bakteri isolasi dari saluran akar gigi desidui nekrosis antar konsentrasi minyak atsiri sereh dapur (*Cymbopogon citratus*), kontrol positif dan kontrol negatif.

Kesimpulan penelitian ini minyak atsiri sereh dapur (*Cymbopogon citratus*) konsentrasi tinggi lebih menghambat pertumbuhan bakteri isolasi dari saluran akar gigi desidui nekrosis dibanding konsentrasi lebih rendah, konsentrasi hambat minimum minyak atsiri sereh dapur (*Cymbopogon citratus*) terhadap bakteri isolasi saluran akar gigi desidui nekrosis adalah 1,56%, konsentrasi minyak atsiri sereh dapur (*Cymbopogon citratus*) yang mempunyai hambatan pertumbuhan setara dengan kontrol positif *NaOCl* 2,5% adalah konsentrasi 1,56%.

Kata kunci : Minyak atsiri sereh dapur, bakteri isolasi saluran akar gigi desidui nekrosis

## **EFFECT OF LEMONGRASS ESSENTIAL OIL (*Cymbopogon citratus*) AT VARIOUS CONCENTRATIONS AGAINST THE GROWTH OF BACTERIAL ISOLATION IN ROOT CANAL OF NECROTIC PRIMARY TEETH.**

### **ABSTRACT**

Root canal treatment in necrotic primary teeth using chemical-based antibacterial resulted in several side effects to its permanent teeth. Lemongrass essential oil which contain citral as active component is one of the natural-based antibacterial treatment for root canal necrotic primary teeth. This study aims to determine the effect of lemongrass essential oils at various concentrations against the growth of bacterial isolation in root canal necrotic primary teeth.

This study was an experimental study. The object of this study was bacterial isolation from root canal necrotic primary teeth of three pediatric patients came to Pediatric Dentistry Clinic, Prof. Soedomo Dental Hospital, Universitas Gadjah Mada. Antibacterial test with agar diffusion was performed against the growth of bacterial isolation in root canal necrotic primary teeth using lemongrass oil at various concentrations, negative control PEG 400 2.5% and positive control NaOCl 2.5%. Result was analyzed with two-way ANOVA and post-hoc LSD test.

Based on two way ANOVA concluded that there was a significant effect on the growth of bacterial isolation in root canal necrotic primary teeth to lemongrass oil among concentrations, negative control and positive control.

Conclusions of this study were lemongrass oil with higher concentration were more inhibited bacterial isolation from necrotic primary teeth compared to lower concentration, the minimum inhibitory concentration of lemongrass oil against bacterial isolation in root canal necrotic primary teeth is 1.56%, lemongrass oil concentration that had similar inhibitory with positive control NaOCl 2.5% is 1.56%.

Keywords : lemongrass essential oil, bacterial isolation in root canal of necrotic primary teeth.