

Abstrak

Daun jambu biji memiliki beragam senyawa aktif, antara lain tanin, triterpenoid, flavonoid, dan saponin sehingga daun jambu biji memiliki khasiat seperti antidiare, antibakteri, efek kuratif, dan berpengaruh terhadap penyakit periodontal. Minyak atsiri dan zat antibakteri yang terkandung pada daun sirih antara lain eugenol, kavikol, cavibetol, tanin, karvakol, karyophyllene, hydroxykavikol, dan vitamin C. Penggunaan antibiotik Ciprofloxacin memiliki efek samping seperti muntah, mual, diare, sulit tidur, dan sakit kepala. *Staphylococcus aureus* menjadi salah satu bakteri penyebab abses periodontal. Abses periodontal merupakan penyakit infeksi yang merusak jaringan pendukung gigi. Tujuan penelitian ini untuk melihat keefektifan dari ekstrak daun sirih dan daun jambu biji dalam menghambat pertumbuhan *Staphylococcus aureus* penyebab abses periodontal pada manusia. Penelitian ini merupakan eksperimen semu dengan desain *posttest only with control group*. Sampel penelitian merupakan biakan *Staphylococcus aureus*. Efektivitas ekstrak daun sirih dan ekstrak daun jambu biji diuji menggunakan teknik difusi cakram. Ekstrak daun sirih dan ekstrak daun jambu biji dibuat menggunakan teknik maserasi dengan konsentrasi 25%, 50%, 75%, dan 100% dan diulang sampai empat kali. Hasil *One Way Anova* memperlihatkan ekstrak daun sirih memiliki nilai $p < 0,001$ dan ekstrak daun jambu biji memiliki nilai $p < 0,001$. Hal ini memperlihatkan bahwa terdapat perbedaan luas zona hambat yang signifikan ekstrak daun sirih dan ekstrak daun jambu biji pada konsentrasi 25%, konsentrasi 50%, konsentrasi 75%, konsentrasi 100%, kontrol positif, dan kontrol negatif. Menurut temuan penelitian ini, konsentrasi 100% merupakan konsentrasi hambat optimal pada daun sirih dan daun jambu biji. Dan masing-masing ekstrak memiliki efektivitas terhadap pertumbuhan *Staphylococcus aureus*.

Kata kunci: Daun sirih, Daun jambu biji, *Staphylococcus aureus*, Abses periodontal.

Abstract

Guava leaves have a variety of active compounds, including tannins, triterpenoids, flavonoids, and saponins so that guava leaves have properties such as antidiarrheal, antibacterial, curative effect, and have an effect on periodontal disease. The essential oil and antibacterial substances contained in betel leaf include eugenol, kavikol, cavibetol, tannin, karvakol, karyophyllene, hydroxykavikol, and vitamin C. Ciprofloxacin antibiotic use has side effects such as vomiting, nausea, diarrhea, sleeplessness, and headaches. *Staphylococcus aureus* is one of the bacteria that causes periodontal abscess. Periodontal abscess is an infectious disease that damages the supporting tissues of the teeth. The purpose of this study was to determine the effectiveness of betel leaf and guava leaf extract in inhibiting the growth of *Staphylococcus aureus* which causes periodontal abscess in humans. This research is a quasi-experimental design with *posttest only with control group*. The research sample is a culture of *Staphylococcus aureus*. The effectiveness of betel leaf extract and guava leaf extract was tested using disc diffusion technique. Were Betel leaf extract and guava leaf extract prepared using maceration technique with concentrations of 25%, 50%, 75%, and 100% and repeated four times. The results of showed *One Way Anova* that the betel leaf extract had a p value <0.001 and the guava leaf extract had a p value <0.001 . This shows that there is a significant difference in the area of inhibition zone of betel leaf extract and guava leaf extract at a concentration of 25%, 50% concentration, 75% concentration, 100% concentration, positive control, and negative control. According to the findings of this study, a concentration of 100% was the optimal inhibitory concentration in betel leaves and guava leaves. And each extract has effectiveness against the growth of *Staphylococcus aureus*.

Keywords: Betel leaf, Guava leaf, *Staphylococcus aureus*, Periodontal abscess.