INTISARI

Plak gigi umumnya dikenal sebagai penyebab utama karies dan penyakit periodontal. Plak gigi adalah suatu lapisan lunak yang terdiri atas kumpulan mikroorganisme yang berkembang biak dan melekat erat pada permukaan gigi. Buah stroberi (*Fragaria x ananassa*) terbukti mengandung senyawa aktif yaitu flavonoid, tanin, dan terpenoid yang berfungsi sebagai agen antibakteri. Penelitian ini bertujuan untuk mengetahui potensi antibakteri infusa buah stroberi (*Fragaria x ananassa*) terhadap pertumbuhan bakteri plak gigi.

Penelitian ini menggunakan infusa buah stroberi (*Fragaria x ananassa*) konsentrasi 30%, 45%, dan 60%, serta kontrol negatif (akuades). Metode dilusi digunakan pada penelitian ini dengan cara memasukkan setiap larutan uji ke dalam tabung yang berisi media BHI dan bakteri. Setiap larutan uji dilakukan pengulangan sebanyak 3 kali. Larutan uji kemudian diinkubasi selama 24 jam pada suhu 37°C, lalu dilakukan pengukuran densitas optik menggunakan spektrofotometer dengan panjang gelombang 600 nm. Analisis data dilakukan menggunakan *one way ANOVA* dilanjutkan uji LSD.

Hasil uji *ANOVA* menunjukkan bahwa infusa buah stroberi signifikan dalam menghambat pertumbuhan bakteri plak gigi ($p<0,05$). Hasil uji LSD menunjukkan bahwa kelompok perlakuan infusa buah stroberi konsentrasi 60% memiliki perbedaan yang signifikan dibandingkan dengan kelompok perlakuan yang lain. Kesimpulan penelitian ini adalah infusa buah stroberi dengan konsentrasi 30%, 45%, dan 60% memiliki daya antibakteri terhadap pertumbuhan bakteri plak. Infusa buah stroberi konsentrasi 30% dan 45% memiliki daya antibakteri yang setara. Infusa buah stroberi dengan konsentrasi 60% memiliki daya antibakteri paling tinggi, diikuti dengan konsentrasi 45% dan 30%.

Kata kunci : plak gigi, stroberi, infusa, antibakteri

ABSTRACT

Dental plaque is commonly known as the primary cause of dental caries and periodontal disease. Dental plaque is defined as soft deposits that formed by microorganism that multiply and attached to the tooth surface. Strawberry (*Fragaria x ananassa*) was contained by active compounds such as flavonoid, tannin, and terpenoid which have function as an antibacterial. The objective of this research was determining the antibacterial infusion of strawberry (*Fragaria x ananassa*) toward bacterial growth on the dental plaque.

This study used strawberry (*Fragaria x ananassa*) infusion concentration 30%, 45%, and 60%. The negative control was sterile aquades. Dilution method was used in this study by diluting each test solution into the tube that contained BHI media and bacteria. Each test solution was done in 3 times repetition. The homogenized solution was then incubated for 24 hours at 37°C. After that, the optical density was measured by using spectrophotometer 600 nm wavelength. The data were analyzed and followed by using the one way *ANOVA* and LSD test.

The results of the one way *ANOVA* test showed that strawberry infusion was significant to inhibit the growth of bacteria on dental plaque ($p<0.05$). The result of LSD test showed that strawberry infusion concentration of 60% had significant difference compared to the other treatment groups. The conclusion of this study is that 30%, 45%, and 60% of strawberry infusion have antibacterial activity against dental plaque bacteria. Concentration of 30% and 45% has the same antibacterial activity. Concentration of 60% has the highest antibacterial activity, followed by a concentration of 45% and 30%.

Keywords : dental plaque, strawberry, infusion, antibacterial