

ABSTRAK

AKTIVITAS ANTIBAKTERI GRANUL *EFFERVESCENT* EKSTRAK ETANOL DAUN PEPAYA (*Carica papaya* L.) SEBAGAI PEMBERSIH GIGI TIRUAN RESIN AKRILIK YANG DIKONTAMINASI *Streptococcus mutans*

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Denture stomatitis adalah kondisi peradangan rongga mulut dan gigi tiruan akibat infeksi flora normal, yaitu *Streptococcus mutans* yang dapat membentuk *biofilm* pada gigi tiruan. Daun pepaya (*Carica papaya* L.) mengandung terpenoid, alkaloid, flavonoid, tanin, dan saponin yang memiliki sifat antibakteri sehingga dapat dikembangkan sebagai alternatif bahan pembersih gigi tiruan. Tujuan dari penelitian ini adalah untuk mengetahui pengaruh granul *effervescent* ekstrak etanol daun pepaya dapat menghambat pertumbuhan *Streptococcus mutans* pada resin akrilik polimerisasi panas. Penelitian berupa eksperimental laboratoris *in vitro* menggunakan granul *effervescent* ekstrak etanol daun pepaya 3,125%, 6,25%, dan 12,5%, dengan kontrol positif alkalik peroksida dan kontrol negatif akuades. Metode penelitian berupa eksperimental laboratoris secara *in vitro*. Data jumlah koloni dihitung secara *total plate count* selanjutnya dianalisis menggunakan uji *One-way ANOVA* dan *Post hoc LSD*. Hasil perhitungan koloni pada kelompok granul *effervescent* ekstrak etanol daun pepaya berturut-turut $8,14 \pm 1,62 \times 10^4$, $5,32 \pm 0,51 \times 10^4$, $3,84 \pm 0,90 \times 10^4$, $3,46 \pm 0,64 \times 10^4$, $13,4 \pm 2,57 \times 10^4$. Hasil analisis menunjukkan terdapat perbedaan signifikan seluruh kelompok penelitian dengan kelompok kontrol negatif maupun kontrol positif selain kelompok granul *effervescent* ekstrak etanol daun pepaya konsentrasi 12,5% dengan kelompok kontrol positif. Simpulan dari penelitian ini adalah terdapat pengaruh granul *effervescent* ekstrak etanol daun pepaya (*Carica papaya* L.) terhadap pertumbuhan *Streptococcus mutans* pada basis gigi tiruan resin akrilik polimerisasi panas.

Kata kunci: *Carica papaya* L., Granul *Effervescent*, Resin Akrilik, *Streptococcus mutans*

ABSTRACT

ANTIBACTERIAL ACTIVITY OF PEPAYA (*Carica papaya* L.) LEAF ETANOL EXTRACT GRANUL EFFERVESCENT AS AN ACRYLIC RESINUE DENTAL CLEANER AGAINST *Streptococcus mutans*

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*Denture stomatitis is an inflammatory condition of the oral cavity and dentures due to infection by normal flora, namely *Streptococcus mutans* which can form a biofilm on dentures. Papaya leaves (*Carica papaya* L.) contain terpenoids, alkaloids, flavonoids, tannins and saponins which have antibacterial properties so they can be developed as an alternative denture cleaning agent. The aim of this research is to determine the effect of papaya leaf ethanol extract effervescent granules on inhibiting the growth of *Streptococcus mutans* on hot polymerized acrylic resin. The research was an in vitro laboratory experiment using effervescent granules of 3.125%, 6.25% and 12.5% papaya leaf ethanol extract, with a positive control of alkaline peroxide and a negative control of distilled water. The research method is in the form of laboratory experiments in vitro. Data on the number of colonies counted in total plate count was then analyzed using One-way ANOVA and Post hoc LSD tests. The results of colony counting in the papaya leaf ethanol extract effervescent granule group were respectively $8.14 \pm 1.62 \times 10^4$, $5.32 \pm 0.51 \times 10^4$, $3.84 \pm 0.90 \times 10^4$, $3.46 \pm 0.64 \times 10^4$, $13.4 \pm 2.57 \times 10^4$. The results of the analysis showed that there were significant differences in all research groups with the negative control and positive control groups apart from the 12.5% papaya leaf ethanol extract effervescent granule group with the positive control group. The conclusion of this research is that there is an effect of effervescent granules of ethanol extract of papaya leaves (*Carica papaya* L.) on the growth of *Streptococcus mutans* on hot polymerized acrylic resin denture bases.*

Keywords: *Acrylic resin, Carica papaya L., Effervescent Granules, Streptococcus mutans*