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Skripsi, 12 Februari 2014**

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**Uji Efektivitas Antibakteri Infusum Daun Jambu Biji (*Psidium guajava* Linn.) Terhadap Pertumbuhan Bakteri Penyebab Karies *Streptococcus mutans* Secara In Vitro**

vii + 39 Halaman + 2 Gambar + 4 Tabel + 4 Lampiran

### **ABSTRAK**

Penyakit gigi dan mulut yang paling banyak dijumpai adalah karies gigi. Karies adalah penyakit yang disebabkan berbagai faktor, antara lain gigi sebagai *host*, mikroorganisme, substrat(makanan), serta waktu. Berbagai penelitian membuktikan bahwa *Streptococcus mutans* merupakan bakteri yang paling berperan dalam terjadinya karies gigi.

Tanaman jambu biji (*Psidium guajava* Linn.) merupakan salah satu tanaman obat yang mudah ditemukan dan dapat tumbuh hampir di berbagai wilayah. Kandungan senyawa aktif dalam daun jambu biji antara lain adalah flavonoid dan tanin. Tujuan dari penelitian adalah untuk mengetahui infusum daun jambu biji (*Psidium guajava* Linn.) sebagai antibakteri terhadap bakteri penyebab karies yaitu *Streptococcus mutans*. Penelitian ini menggunakan 5 konsentrasi yaitu 100%, 50%, 25%, 12,5%, dan 6,25% dengan masing-masing pengulangan 4 kali. Pengujian efektivitas antibakteri menggunakan metode difusi disk.

Hasil penelitian menggunakan uji statistik Kruskal Wallis menunjukkan terdapat perbedaan yang signifikan pada berbagai konsentrasi terhadap pertumbuhan *Streptococcus mutans*. Kesimpulan penelitian ini adalah infusum daun jambu biji memiliki efek antibakteri terhadap *Streptococcus mutans* secara In Vitro dengan konsentrasi yang efektif adalah 100%. Peningkatan konsentrasi infusum daun jambu biji menunjukkan semakin besar diameter zona hambat pertumbuhan *Streptococcus mutans*.

Kata kunci : karies, *Streptococcus mutans*, infusum daun jambu biji.

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Script, 12 February 2014**

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**Study of Antibacterial Effect of Guava (*Psidium guajava* Linn.) Leaves Infusum on The Growth of *Streptococcus mutans* In Vitro**

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**ABSTRACT**

The most prevalent gum disease is dental caries. Caries is a disease caused by a variety of factors, including the teeth as the host, microorganisms, substrate (food), as well as time. Various studies have shown that *Streptococcus mutans* was bacterium that most responsible for the occurrence of dental caries.

*Psidium guajava* Linn. is one of the medicinal plants that easy to find and can be grown almost in a variety of areas. The active substances in the leaves of guava include flavonoids and tannins. The objective of the study was to determine the effectiveness of guava (*Psidium guajava* Linn.) leaves infusum as antibacterial agent against *Streptococcus mutans* that cause dental caries. In this study, five concentration of infusum were used : 100%, 50%, 25%, 12.5%, and 6.25%, with repetition 4 times, for each concentration. The antibacterial effect of guava leaves infusum studied by using the disc diffusion method.

Results of studies using Kruskall Wallis test showed that there was a statistically significant difference between various concentrations on the inhibition of *Streptococcus mutans*' growth. From this study we concluded that guava leaves infusum has antibacterial effects against *Streptococcus mutans* in vitro with the most effective concentration were 100%. The increased concentration of guava leaves infusum showed the greater diameter inhibition zone on *Streptococcus mutans*' growth.

Keywords : caries, *Streptococcus mutans*, guava leaves infusum