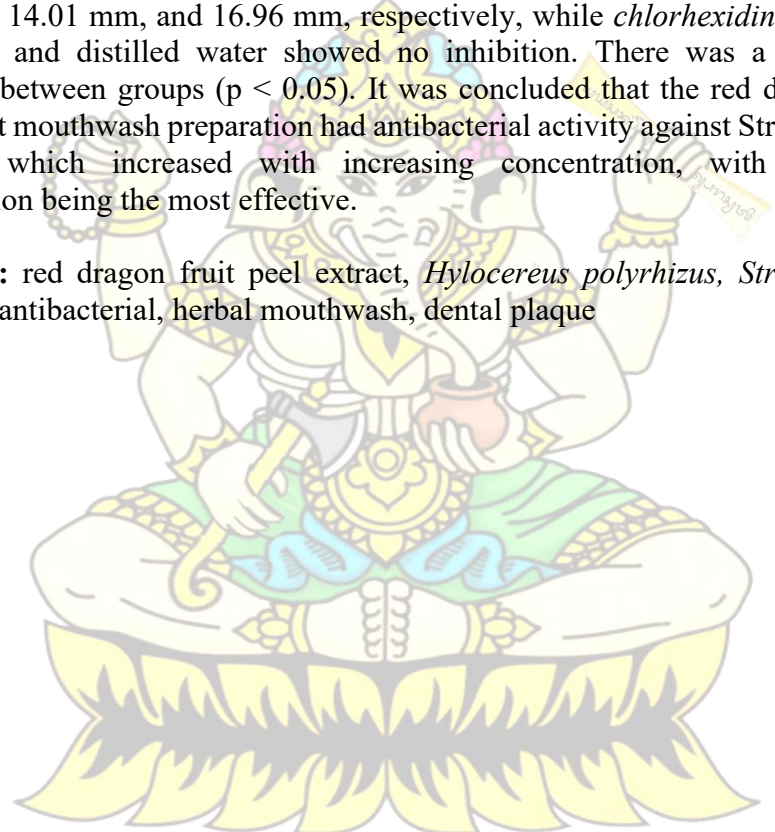


ABSTRACT

Dental plaque is a biofilm resulting from the accumulation of bacteria on the tooth surface, with *Streptococcus sanguinis* as the initial colonizer. *Chlorhexidine 0.2%* is effective as an antibacterial mouthwash, but has side effects, so natural alternatives are needed. Red dragon fruit peel (*Hylocereus polyrhizus*) contains bioactive compounds that have antibacterial potential. This study aims to determine the antibacterial activity of a red dragon fruit peel extract mouthwash preparation against *Streptococcus sanguinis*. Laboratory experimental research used the disc diffusion method with extract concentrations of 25%, 50%, and 75%, 0.2% *chlorhexidine* as a positive control, and distilled water as a negative control. The results showed that all extract concentrations produced inhibition zones of 10.72 mm, 14.01 mm, and 16.96 mm, respectively, while *chlorhexidine* produced 20.78 mm and distilled water showed no inhibition. There was a significant difference between groups ($p < 0.05$). It was concluded that the red dragon fruit peel extract mouthwash preparation had antibacterial activity against *Streptococcus sanguinis* which increased with increasing concentration, with the 75% concentration being the most effective.

Keywords: red dragon fruit peel extract, *Hylocereus polyrhizus*, *Streptococcus sanguinis*, antibacterial, herbal mouthwash, dental plaque

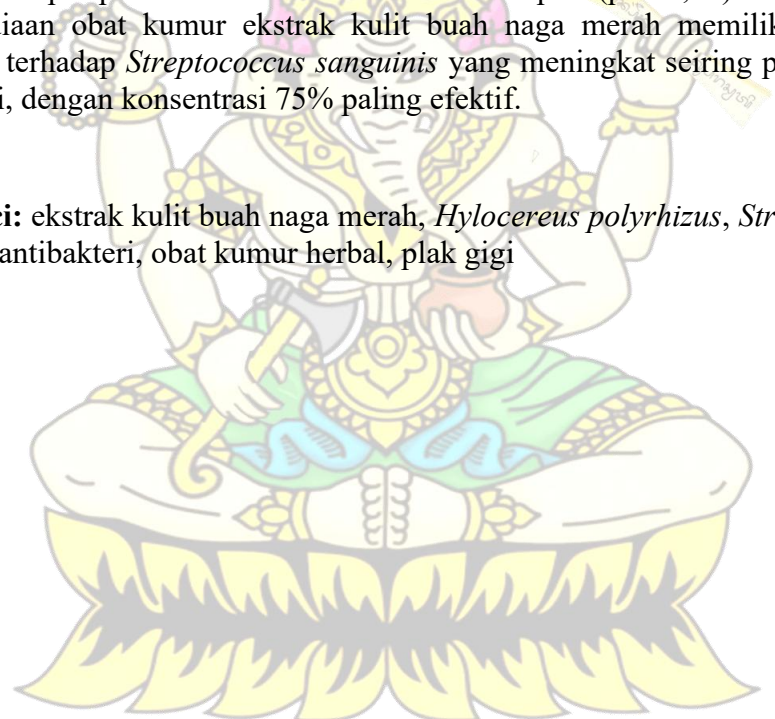


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ABSTRAK

Plak gigi merupakan biofilm akibat akumulasi bakteri pada permukaan gigi, dengan *Streptococcus sanguinis* sebagai kolonisator awal. *Chlorhexidine* 0,2% efektif sebagai obat kumur antibakteri, namun memiliki efek samping sehingga diperlukan alternatif alami. Kulit buah naga merah (*Hylocereus polyrhizus*) mengandung senyawa bioaktif yang berpotensi sebagai antibakteri. Penelitian ini bertujuan mengetahui aktivitas antibakteri sediaan obat kumur ekstrak kulit buah naga merah terhadap *Streptococcus sanguinis*. Penelitian eksperimental laboratorium menggunakan metode difusi cakram dengan konsentrasi ekstrak 25%, 50%, dan 75%, *chlorhexidine* 0,2% sebagai kontrol positif, dan aquadest sebagai kontrol negatif. Hasil menunjukkan seluruh konsentrasi ekstrak menghasilkan zona hambat berturut-turut sebesar 10,72 mm, 14,01 mm, dan 16,96 mm, sedangkan *chlorhexidine* 0,2% menghasilkan 20,78 mm dan aquadest tidak menunjukkan daya hambat. Terdapat perbedaan bermakna antar kelompok ($p < 0,05$). Disimpulkan bahwa sediaan obat kumur ekstrak kulit buah naga merah memiliki aktivitas antibakteri terhadap *Streptococcus sanguinis* yang meningkat seiring peningkatan konsentrasi, dengan konsentrasi 75% paling efektif.

Kata kunci: ekstrak kulit buah naga merah, *Hylocereus polyrhizus*, *Streptococcus sanguinis*, antibakteri, obat kumur herbal, plak gigi



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