

**PERBEDAAN EFEKTIVITAS MENYIKAT GIGI DISERTAI  
BERKUMUR MINUMAN PROBIOTIK DAN MINUMAN  
YOGHURT TERHADAP AKUMULASI PLAK**

**SKRIPSI**



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# Perbedaan Efektivitas Menyikat Gigi disertai Berkumur Minuman Probiotik dan Minuman Yoghurt terhadap Akumulasi Plak

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## ABSTRAK

Pembentukan plak merupakan awal dari kerusakan gigi dan penyakit gusi. Sehingga upaya pengendalian plak merupakan langkah yang paling utama untuk mencegah terjadinya karies dan penyakit periodontal. Upaya pengendalian plak dapat dilakukan secara mekanis maupun kimiawi. Pencegahan pembentukan plak gigi juga dapat dilakukan dengan bakteri alami seperti probiotik. Tujuan dari penelitian ini adalah untuk mengetahui perbedaan efektivitas menyikat gigi disertai berkumur minuman probiotik dan minuman yoghurt terhadap akumulasi plak.

Penelitian ini adalah eksperimental klinis dengan metode *pretest and posttest control group design*. Penelitian dilakukan pada 16 subjek yang akan diberikan 3 perlakuan. Hari pertama perlakuan berkumur dengan minuman probiotik, hari kedua perlakuan berkumur dengan minuman yoghurt dan hari ketiga berkumur dengan *chlorhexidine* 0,2 %. Pengukuran indeks plak *pretest* dilakukan pagi sebelum sarapan dan menyikat gigi dan *posttest* dilakukan 4 jam setelah berkumur menggunakan indeks plak modifikasi Turesky-Gilmore-Glickman dari Quigley-Hein.

Hasil uji statistik *Paired t-test* menunjukkan nilai  $p < 0,05$  yang berarti terdapat perbedaan bermakna antara *pretest* dan *posttest* perlakuan. Hasil uji statistik *One way Anova* menunjukkan terdapat perbedaan yang bermakna selisih rata-rata indeks plak pada semua perlakuan ( $p < 0,05$ ). Hasil uji *LSD* menunjukkan perbedaan bermakna ( $p < 0,05$ ) antara perlakuan berkumur minuman probiotik dengan minuman yoghurt dan perlakuan berkumur minuman probiotik dengan *chlorhexidine* 0,2%. Pada perlakuan berkumur minuman yoghurt dan berkumur *chlorhexidine* 0,2% tidak terdapat perbedaan bermakna ( $p > 0,05$ ). Berdasarkan hasil penelitian dapat disimpulkan bahwa minuman probiotik, minuman yoghurt dan *chlorhexidine* 0,2% dapat menurunkan akumulasi plak dan minuman probiotik lebih efektif dalam menurunkan akumulasi plak.

Kata Kunci: Indeks Plak, Probiotik, Minuman Yoghurt

## **The Differences Effectivity of Brushing Teeth with Gargling Probiotic and Yoghurt Drinks Toward Dental Plaque Accumulation**

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### **ABSTRACT**

Since the formation of dental plaque was a beginning of tooth decay and gum disease, so that controlling dental plaque efforts would be the first step to prevent dental caries and periodontitis. Those efforts could be done mechanically and chemically. Dental plaque prevention also could be done by using natural bacteria such as probiotic. The purpose of this research was to showed the differences effectivity of brushing teeth with gargling probiotic and yoghurt drinks toward dental plaque accumulation.

This research was clinical experiment using pretest and posttest control group design method toward 16 subjects with three different treatments ; (day 1) gargling used probiotic drinks, (day 2) gargling used yoghurt drinks, and (day 3) gargling used chlorhexidine 0,2 %. Pretest method of plaque index measurement was done in the morning before having breakfast and tooth brushing, whereas posttest method was done four hours after gargling using Turesky-Gilmore-Glickman plaque index modification from Quigley-Hein.

The result of paired t-test showed that there was significant differences between pretest method and post test method treatments ( $p < 0,05$ ). Results of One way Anova statistical test showed that there was significant difference average gap plaque index among all treatments ( $p < 0,05$ ). LSD test result showed the differences ( $p < 0,05$ ) between probiotic drinks gargling treatment and yoghurt drinks gargling treatment, as well as probiotic drinks gargling treatment and chlorhexidine 0,2% gargling treatments. Whereas, there was no differences ( $p > 0,05$ ) between yoghurt drinks gargling treatments and chlorhexidine 0,2% gargling treatments. Based on the research, it can be concluded that probiotic, yoghurt and chlorhexidine 0,2% could decrease dental plaque accumulation, in which probiotic was more effective to decrease dental plaque than others.

Keywords : Plaque Index, Probiotic, Yoghurt drinks

