

**ABSTRACT**  
**THE EFFECTS OF PROPOLIS (*Apis Mellifera*) HARD CANDY  
CONSUMPTION TOWARD THE DECREASE OF DENTAL PLAQUE  
SCORES**

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**Background** : Dental plaque is a soft layer consist of the accumulation of bacteria, formed and attached to the tooth surface. Propolis (*Apis mellifera*) contain flavonoid which is known as an antibacterial compound. The content of *tt*-farnesol and apigenin in flavonoids have a high potential as an anti-*Streptococcus mutans* and inhibit glucosyltransferase activity.

**Research objective** : To find the influence of propolis (*Apis mellifera*) hard candy consumption toward the decrease of dental plaque scores.

**Research methodology** : This research is a clinical experimental research using a pretest-posttest design. Subjects were recorded their initial dental plaque scores, then consume propolis (*Apis mellifera*) hard candy and subjects dental plaque were re-scored. The statistical analysis test applies paired t-test.

**Research findings** : The research finding shows the mean scores of dental plaque before is 0.47 and after is 0.36 which has 0.10 differences plaque scores with SD (Standar Deviation)  $\pm 0,15$  and  $\pm 0,17$  respectively.

**Conclusion** : Propolis (*Apis mellifera*) hard candy consumption has the influence toward the decrease of dental plaque scores.

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**Keywords:** *Propolis (Apis mellifera), Hard Candy, Dental Plaque*

## INTISARI

### **PENGARUH KONSUMSI PERMEN HISAP PROPOLIS (*Apis Mellifera*) TERHADAP PENURUNAN SKOR PLAK GIGI**

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**Latar Belakang** : Plak gigi merupakan lapisan lunak yang terdiri dari akumulasi bakteri, terbentuk dan melekat pada permukaan gigi. Propolis (*Apis mellifera*) mengandung flavonoid yang dikenal sebagai senyawa antibakteri. Kandungan tt-farnesol dan apigenin di dalam flavonoid memiliki potensi tinggi sebagai anti-*Streptococcus mutans* dan menghambat aktivitas glukosiltransferase.

**Tujuan Penelitian** : untuk mengetahui pengaruh konsumsi permen hisap propolis (*Apis mellifera*) terhadap penurunan skor plak gigi.

**Metode Penelitian** : Penelitian ini merupakan jenis penelitian eksperimental klinis menggunakan pretest-posttest desain. Subjek dicatat skor plak gigi awal, kemudian mengkonsumsi permen hisap propolis (*Apis mellifera*) dan dicatat kembali skor plak gigi akhir. Uji analisis statistik menggunakan uji t berpasangan.

**Hasil Penelitian** : hasil penelitian menunjukkan rata-rata skor plak gigi sebelum 0,47 dan sesudah 0,36, memiliki perbedaan skor plak 0,10 dengan SD (Standar Deviasi) masing-masing  $\pm 0,15$  dan  $\pm 0,17$ .

**Kesimpulan** : Konsumsi permen hisap propolis (*Apis mellifera*) memiliki pengaruh terhadap penurunan skor plak gigi.

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Kata Kunci: Propolis (*Apis mellifera*), Permen Hisap, Plak Gigi