

**PERBEDAAN EFEKTIFITAS SAPONIN, ANTRAQUINON, DAN
FLAVONOID DALAM PASTA GIGI TERHADAP PENURUNAN JUMLAH
STREPTOCOCCUS MUTANS**

**EFFECTIVITY DIFFERENCED OF SAPONIN, ANTRAQUINON, AND
FLAVONOID IN TOOTHPASTE FOR DECREASE OF
STREPTOCOCCUS MUTANS**

ABSTRACT

Background. High prevalence of dental caries in children was an important issue. The main factor that cause dental caries were host, environment, substrate, microorganisms (mainly is *Streptococcus mutans*), and time. Caries is started with the growth of dental plaque in tooth surface. Brushing teeth is the most effective and easy way to control dental plaque and reduce *Streptococcus mutans* colony growth. Flavonoid addition in propolis toothpaste could decrease *Streptococcus mutans* and helps inhibit caries activity. **Objective.** The aim of this study was to determine the most effective way to reduce caries activity by computing and comparing the number of *Streptococcus mutans* colony in children aged turning 10 years old after brushing teeth without toothpaste, brushing teeth with aloe toothpaste, and brushing teeth with propolis toothpaste. **Method.** The type of this research was experimental research. The samples of this research were 10 children turning 10 years old who have been fitted with the criteria of sample using random sampling techniques. There were 3 group in this study. Each group had 7 days and must applied on the same child. The first group had to brushing teeth without toothpaste. The second group had to brushing teeth with aloe vera toothpaste. The third group had to brushing teeth with propolis toothpaste. There was interlude about 3 days between the second and the third group. **Result.** The result of this research shows that saponin, Antraquinon is contained in aloe toothpaste and flavonoids in propolis toothpaste caused significantly decrease some number of *Streptococcus mutans* colony. **Conclusion.** Brushing teeth with propolis toothpaste could reduce number of *Streptococcus mutans* colony more effectively than brushing teeth with aloe toothpaste.

Keywords: *Streptococcus mutans*, saponin, antraquinon, flavonoid, toothpaste