

**PENGGUNAAN PASTA GIGI HERBAL TERHADAP JUMLAH
Streptococcus mutans PADA ANAK-ANAK**

(THE USE OF HERBAL TOOTHPASTES ON NUMBER OF *Streptococcus mutans* IN CHILDREN)

ABSTRACT

Background. *Plaque control is now facilitated by an increasing variety of active agents based on either natural ingredients or synthetic product. Alternative materials based on essential oil and plant extracts are therefore of particular interest.* **Purpose.** *The aim of the study was to investigate effects of herbal toothpastes toward *Streptococcus mutans*.* **Method.** *This study was done in children between ages 8-12 years. First, each child collected his / her saliva to sterile tube. Group 1, seven children were instructed to brush their teeth by using fluoride toothpastes. After they brushed their teeth, they collected their saliva as much as ± 2 ml. Group 2, seven children had the same instruction but they used herbal toothpaste containing *Citrus aurantifolia* extract, *Piper betle* leaf oil, and fluoride, and group 3 used herbal toothpaste containing *Melaleuca alternifolia*, *Rhodophyta*, *Chrysanthemum indicum* extract, and fluoride examined by microbiology to count amount of *Streptococcus mutans*. Saliva samples were collected before and a serial dilution was made in Brain Heart Infusion (BHIB) solution, followed by pouring on the Trypton Yeast Cystine (TYC). Those *Streptococcus mutans* were incubated in anaerobic jar at 37° Celsius for 3 X 24 hours, then they were count manually.* **Results.** *The result of the study indicated a statistical significance different on a numbers of *Streptococcus mutans* among the three toothpastes. It resulted in a significant ($p < 0.05$) reduction in the number of *Streptococcus mutans* colonies.* **Conclusion.** *Herbal toothpaste containing *Melaleuca alternifolia*, *Rhodophyta*, *Chrysanthemum indicum* extract, and fluoride was the most effective to decrease *Streptococcus mutans*.*

Key words : *Streptococcus mutans, fluoride toothpaste, herbal toothpastes*