

**THE EFFECTIVENESS OF HERBAL AND NON-HERBAL
TOOTHPASTES IN INHIBITING PLAQUE GROWTH
ON FIXED BRIDGES
(IN VITRO)**

ABSTRACT

Background. Herbal extract is usually used as an antibacterial ingredient in toothpaste. Herbal toothpaste is toothpaste containing ingredients derived from plants which are expected to suppress the growth of plaque. **Purpose.** This laboratory experimental research is aimed to measure the effectiveness of herbal and non-herbal toothpastes in inhibiting plaque growth on fixed bridges. **Method.** First, the effectiveness test was conducted by using agar diffusion technique with herbal toothpaste containing betel leaves and myrrh as well as with non-herbal toothpaste containing triclosan available on markets. In addition, toothpaste without containing antibacterial active ingredient was used as control group. After 24 hours of incubation, the results then were measured by using calipers. **Results.** By using Oneway Anova statistical analysis, it is known that there was significant difference between the mean of the inhibition zone of the control group and those of the herbal and non-herbal toothpaste ones with $P < 0.05$. And, by using Tukey HSD, it is then known that there was no significant difference between the herbal toothpaste group and non-herbal one. **Conclusion.** Herbal toothpaste that contains myrrh is a toothpaste that has the most optimal effectiveness compared with toothpaste containing betel leaf and control.

Keywords: herbal toothpaste and non-herbal toothpaste, plaque growth, fixed bridges.