ABSTRACT

**Background.** One of the content of tooth paste is detergent whose function is foaming agent. Detergent that commonly use in tooth paste is sodium lauryl sulphate (SLS). If the concentration of SLS more than tolerance range, this substance will easily destroy saliva by dissolving its natural defense system. Some studies find that SLS is a dangerous denaturant for oral tissue and it can irritate epidermal tissue. Rice straw contains saponin that has a potential possibility to replace the SLS function as foaming agent.

**Purpose.** The aim of this study was to know whether rice straw can be applied as foaming agent in tooth paste. **Method.** This study was an experimental laboratory research. Tooth paste without foaming agent substance, tooth paste with rice straw and tooth paste with SLS were experimented on horizontal brushing machine to know the difference of each other in releasing foam. The research was analyzed by Chi-Square test. **Result.** There were significant differences between three tooth pastes. Tooth paste with no foaming agent did not release foam, with rice straw release foam in a little amount and with SLS release much foam. **Conclusion.** Rice straw can be applied as foaming agent in tooth paste.

**Keywords :** tooth paste, foaming agent, SLS, rice straw