



## *The Efficacy of Propolis Fluoride in Inhibiting Dental Caries Activity on Primary Teeth*

Risqa Rina DARWITA<sup>1\*</sup>, Iwany AMALLIAH<sup>1</sup>, Sri Angky SOEKANTO<sup>2</sup>, Muhamad SAHLAN<sup>3</sup>

<sup>1</sup>Department of Dental Public Health and Prevention, Faculty of Dentistry, Universitas Indonesia, Jakarta 10430 Indonesia

<sup>2</sup>Department of Oral Biology, Faculty of Dentistry, Universitas Indonesia, Jakarta 10430 Indonesia

<sup>3</sup>Department of Chemical Engineering, Faculty of Engineering, Universitas Indonesia, Depok Indonesia

\*risqarina2008@gmail.com

Received/Geliş Tarihi: 08/10/2018, Accepted/ Kabul Tarihi: 19/10/2018

\*Corresponding author /Yazışılan yazar

### Abstract

Early childhood caries which is a public health problem is quite large in Indonesia. Therefore, it is necessary to take care of early childhood caries. The Propolis Fluoride is an option to inhibit email or dentinal caries activity. **Objective.** To determine the efficacy of propolis fluoride in inhibiting email or dentinal caries activity. **Method.** The respondents were 246 children aged 36-71 month were applied Propolis Fluoride on dental caries surface that has active email or dentinal caries. The respondents were divided into two groups, consists of 149 children were intervention group, they have been treated by propolis fluoride, toothbrushing program and they got a routine Dental Health Education. While, 97 children were as a control group have been treated by propolis fluoride, they had been given Dental Health Education only on the baseline. The evaluation and examination were conducted after 3 months to measure the percentage of arrested email and dentinal caries, and the correlation with plaque index. **Result.** After 3 months evaluation, the percentage of arrested dental caries for intervention and control groups were 62,44% and 46,18% respectively. There was a significant difference in mean plaque index and the number of active dental caries between two groups. There was a significant correlation between the plaque index and the percentage of arrested dental caries. There was a significant correlation between the behavior score and the percentage of arrested caries. Both correlation has negative and positive value respectively. **Conclusion.** The efficacy of Propolis fluoride in inhibiting dental caries activity.

**Acknowledgements:** *This study was granted from Ministry of Research & Education Republic of Indonesia*

### References:

1. Darwita, R. R., Maharani, D. A., Rahardjo, A., Puspa, D. P., Amalia, R., & Sandy, D. P. (2011). Is joint tooth brushing an effective program for improving dental health among elementary students?: a study from Jakarta, Indonesia. *Int J Clin Prev Dent*, 7, 149-53.  
Available from: <https://www.researchgate.net/publication/291334634>
2. Elham B, Abolghasem H, Tayeb M. Oral Health Behavior of Parents as a Predictor of Oral Health Status of Their Children. *ISRN Dent*. 2013;2013.
3. Monse B, Benzian H, Holmgren C, Van Palenstein, Helderman W H-WR. A Silent Public Health Crisis: Untreated Caries and Dental Infections Among 6 and 12 years old Children in Philippine National Oral Health Survey. *Asian Pasific J Public Heal*. 2016;
4. Sahlan M, Ramadhan. Permen Hard Candy Propolis untuk Kesehatan Gigi Manusia. Depok Univ Indones. 2011;(Teknik Kimia)