

# **NILAI KEKERASAN EMAIL SETELAH PEMBERIAN KARBAMID PEROKSIDA 30% DAN EFEK APLIKASI FLUOR PADA KEKERASAN EMAIL YANG TELAH DIBERI APLIKASI KARBAMID PEROKSIDA 30%**

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## **Abstract**

### **Enamel Microhardness after Application of 30% Carbamide Peroxide and Subsequently after Application of Fluoride**

Thirty percent carbamide peroxide is widely used as in extra-coronal bleaching method. Its current effect on enamel (e.g. enamel microhardness) is still uncertain. In dentistry, fluoride is recommended to be applicated in 60 seconds. The aim of this study is to observe the effect of 30% carbamide peroxide on enamel microhardness and also the effect of fluoride application on enamel microhardness that changed upon bleaching activity within shorter period than time of application recommended (30 seconds), in recommended period of application (60 seconds); and in a longer period of 90 seconds. Thirty extracted teeth were bleached with 30% carbamide peroxide for 1 hour, and the enamel microhardness was measured by Knoop method. The microhardness of enamel was also evaluated soon after application of fluor to the bleached tooth and after fluor application and immersion in artificial saliva for one hour. It was revealed that the microhardness of normal enamel was 360,46 KHN and decreased significantly to 170,33 KHN (57%) after application of 30% carbamide peroxide. Soon after application of fluoride there was an increase in enamel microhardness although not significant on all duration of application. After application of fluoride and one hour immersion in saliva, the enamel microhardness increase significantly, especially in duration of fluor application longer than recommended (90 seconds). Based on data above, it can be concluded that there was a 57% decrease in enamel hardness after application of 30% carbamide peroxide and this enamel microhardness increased after application of fluoride and after immersion in artificial saliva.; *Indonesian Dental Journal 2006; Edisi Khusus KPPIKG XIV: 303-307*

Key words: bleaching, carbamide peroxide, fluoride, saliva, enamel microhardness

## **Pendahuluan**

Kesadaran masyarakat Indonesia akan kesehatan rongga mulut dan estetika gigi geliginya

semakin meningkat, termasuk pemutihan gigi pada gigi yang telah mengalami perubahan warna. Pada saat ini, dikenal dua macam pemutihan kembali gigi yakni pemutihan interna dan pemutihan eksterna.