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### Effect of a 16% Carbamide Peroxide Bleaching Gel on Enamel Staining Susceptibility

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#### Abstract:

Statement of Problem: Due to the growing popularity of vital bleaching by Carbamide Peroxide it is imperative to understand the effect of such agents on enamel and dentine. Purpose: The purpose of this study was to evaluate the effect of a 16% carbamide peroxide bleaching gel; Vivastyle on enamel staining susceptibility. Materials and Methods: Thirty bovine specimens were selected and randomly divided into two groups of fifteen. The experimental group was subjected to Vivastyle gel and then was immersed in coffee, for half an hour daily for three weeks. The control group was only immersed in coffee. The teeth were evaluated by colorimeter readings to measure L\*, a\*, b\* of each tooth. Total color differences between two colors ( $\Delta E$ ) were calculated using the following formula:  $\Delta E = [(\Delta L^*)^2 + (\Delta a^*)^2 + (\Delta b^*)^2]$ .  $\Delta E1$  represent color difference after bleaching;  $\Delta E2$ : bleached and immersed in coffee, and  $\Delta E3$  immersed in coffee. Results: Mean color difference were: 9.478, 13.808, and 7.230 for  $\Delta E1$ ,  $\Delta E2$ , and  $\Delta E3$  respectively. Paired comparison by Duncan test showed that there was a significant difference between  $\Delta E1$  and  $\Delta E2$  (P0.000). t-test showed that there was no significant difference between  $\Delta E3$  and  $\Delta E1$ . (P=0.08), however,  $\Delta E3$  had significant difference with  $\Delta E2$  (P0.000). Conclusion: After vital bleaching, the enamel staining susceptibility is significantly increased.

#### Keywords:

[Staining susceptibility](#) , [Enamel](#) , [Carbamide peroxide](#) , [Vital bleaching](#)

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