

## Effect of Bleaching on Color Change of Stained Resin Composites

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**Objective:** To evaluate the effects of bleaching on color change of stained resin composites. **Methods:** Ninety disk-shaped specimens were prepared with 3 different composite materials (Estelite  $\Sigma$  Quick, Premise<sup>TM</sup>, and Filtek Z350 XT). After stored in artificial saliva at 37°C for 24 hours in an incubator, the 30 specimens of each material were divided into 3 groups and immersed in either coffee, red wine, or artificial saliva (control) at 37°C. After 24 days, spectrophotometric measurement was performed. After the staining process, the bleaching agent (Opalescence, 10% carbamide peroxide) was applied to the surface of the specimens 8 hours per day for 14 days. After the bleaching process, spectrophotometric measurement was then re-evaluated. The color differences ( $\Delta E^*_{ab}$ ) between the measurements were calculated. The value  $\Delta E^*_{ab} = 3.3$  was used as an acceptable value in subjective visual evaluations. Simple T-test and analysis of variance were used to analyse the data. **Results:** The color differences between specimens before and after bleaching were more than the acceptable value ( $\Delta E^*_{ab} = 3.3$ ) for all composites in the red wine staining and Filtek Z350 XT in the coffee staining. The highest level color change after bleaching was observed for Filtek Z350 XT in red wine staining ( $\Delta E^*_{ab} = 29.63$ ), while the least value was found in Estelite  $\Sigma$  Quick in coffee staining ( $\Delta E^*_{ab} = 2.46$ ). **Conclusion:** Color changes of all red wine-stained composites after bleaching were noticeable.