

Abstract

Effect of Different Beverages on Color Stability of Bleach Shade and Extra Bleach Shade Composite Resins: A Spectrophotometric Evaluation

Introduction: Considering the expansion of requests for cosmetic restorations from patients, the results of this study can help in choosing the right restoration material in terms of color stability and attention of dentists to patients to prevent rapid color change.

Methods: This experimental study was conducted on 72 composite discs in 6 subgroups of 4 each in three investigated composites. The composite materials used to prepare the samples were placed in Teflon generators with a thickness of 2 mm and a central diameter of 5 mm on a polyester strip on a glass slab. The composite is placed in one piece inside the generator and covered with a second polyester tape and a glass slab on the generator, and the composite is cured on both sides by the LED (Demi, Kerr) source for 40 seconds. To complete the polymerization of the samples for 24 hours kept in the incubator at a temperature of 37 degrees Celsius in distilled water and then the initial colorimetric is measured by a spectrophotometer and then it is placed into the tested solutions. The color measurement by the spectrophotometer was done on days 1, 2, 4 and 6 weeks respectively. After the data collection, the data were analyzed using relevant statistical methods using SPSS software version 22. Statistical analysis was performed using one-way analysis of variance, analysis of variance with repeated measurements, and mixed method Anova. A significance level of less than 0.05 was considered.

Results: Among the three drinks, each of them applied a significant color change on one of the composites. Black tea changed the color of Gaenial composite shades, black soda changed the color of Diamond composite shades, and orange juice significantly changed the color of Gradia composite shades.

Conclusion: Among the evaluated composites, Diamond and Gradia had the most resistance in terms of color change.

Keywords: Bleach shade, Composite, Color stability