

## **Abstract**

**Introduction:** In recent years, the use of bleach shade composite resin has increased due to high aesthetic requirements, This study was conducted with the aim of investigating herbal teas on the color change of bleach shade composites.

**Methods and Material:** In this laboratory study, in vitro, two types of bleach shade composite including sigma Estelite Quick (Tokoyama, Japan) BW color and Charisma Diamond (Kulzer,Germany)BL color were used. A number of 120 composite discs (60 of each) with dimensions of 5 mm in diameter and 1 mm in thickness were prepared. Then measuring The primary color was done with a spectrophotometer (China/3nh). In this study,the tea bags (Golestan, Iran) were used. The disks were randomly divided into 6 groups (black tea, green tea, sour tea, borassus flabellifer, chamomile tea and distilled water). Each group of discs in tea solution at a temperature of 55 degrees Celsius and in distilled water at a temperature of 37 degree Celsius were kept in an incubator for 24 hours. Then a secondary measurement of color was made,The samples color parameters were measured in a CIE laboratory system using a spectrophotometer.To analyze the data Two-way analysis of variance and Tukey's test were used in SPSS version 25.

**Results:** The results showed that the color change occurred in both bleach shade composites, and this color change in the Charisma Diamond was more than Tokoyama. In Tokoyama composite, the most color change was in black tea and sour tea, but in Charisma Diamond, sour tea caused the most color change. Color change in Charisma Diamond composite in chamomile tea and green tea and sour tea was more than Tokoyama composite( $P < 0.05$ ),But there was no significant difference in the color change of black tea and borassus flabellifer in Charisma Diamond and Tokoyama composites( $P > 0.05$ ).

**Conclusion:** Bleach shade composites showed a significant color change after being immersed in sour tea and black tea Solutions.

**Keywords:** Herbal tea, color change, bleach shade composite.