



Comparative Analysis of the Fluorescence of Enamel Shade Resin Composites

Batsheva Kornfeld

Department of Biomaterials and Biomimetics, New York University College of Dentistry, New York, NY USA



INTRODUCTION

The objective of the present study was to evaluate the fluorescence of different enamel shade resin composites.

MATERIALS



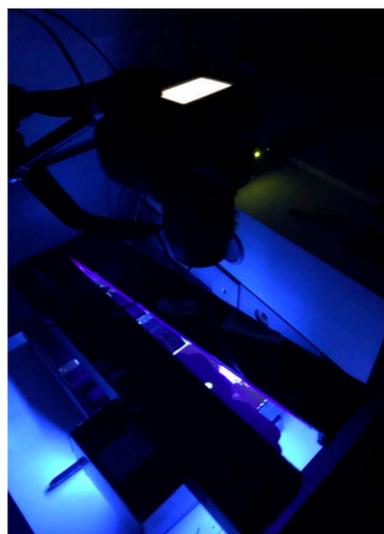
Disc-shaped specimens of each composite were prepared using a rubber mold (7 mm diameter x 2 mm thick). Slight pressure was applied on both sides of the samples to eliminate the filling excess.



All specimens were light cured for 40 seconds with a high intensity light curing unit and stored for 1 week in distilled water at 37°C.

METHODS

Each specimen was placed in a black box in a dark room with UV light as the only light source. Afterward, a picture was taken without flash using predetermined settings in the camera for all specimens.



A digital photo editing program was used to analyze and record the highest B Value of each specimen.



A mixed model analysis was performed to evaluate differences between groups in a 95% level of confidence.

RESULTS

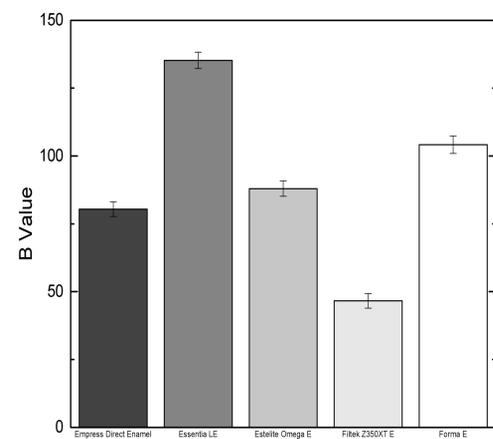


Figure 1: Mean B Values of the specimen of each resin composite.

The mean B Values \pm SD of the resin composite were statistically different for all groups ($p=0.000$). The highest values were recorded for ES (135.25 ± 6.08), followed by FO (104.14 ± 3.45), EO (88.00 ± 4.15), ED (80.4 ± 4.03), and FZ (46.60 ± 2.91).

CONCLUSION

It can be concluded that all the composites tested in this study showed different values of fluorescence. Essentia LE showed to be the most fluorescent composite and Filtek Z350XT, the least fluorescent.