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Effect of alcohol, pH, and anthocyanin on color stability of a dental composite

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Once placed in tooth surface, dental composites are susceptible to discoloration due to various food intake. Anthocyanin is the most well-known flavonoid in foods, wines and flowers which is main red colorant in red wine and also the main causative for composite discoloration. The purpose of this study was to evaluate the discoloration of dental composites to different degree of alcohol, acidity and colorant. Disc shaped samples were fabricated with a nanohybrid composite (Z350, 3M ESPE). The colors were measured with spectrophotometer before and after the each storage condition. Data were analyzed by SPSS. Among the conditions, water showed the lowest ΔE value, whereas higher concentration of alcohol and anthocyanine showed increased ΔE value. From the limitations of this study, higher alcohol and food colorant caused more discoloration of the dental composite.

Biography

Chung, Shin Hye has completed her PhD from Seoul National University and trained as a DDS at the department of conservative dentistry in Seoul National University Dental Hospital. She is an assistant professor at the department of dental biomaterials science in Seoul National University. She has been serving as an editorial board member of The Journal of Korean Society for Dental Materials.

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