

## The progressive effect of sport drinks on the color change and the surface properties of different types of resin composite

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**Objectives:** The aim of this study is to evaluate the color changes and surface roughness (Ra) of different types of composite after their immersion in different sport drink types for 7days, 1 month, 3 months as well as 6 months.

**Materials and methods:** Sixty specimens were made from different composites (Filtek Z250, Vertis Flow and Spectrum). Each specimen was cured for 20 sec. Color measurements of each specimen were performed with Color Eye system at baseline and at 7days, 1, 3 and 6 months of immersion in the sport energy drinks (Code Red, Red Bull and Bison). Another Thirty six disc-shaped specimens for surface roughness (Ra) determination using a noncontact 3D-optical-profilometer. Baseline and after immersion in the sport drinks for 6 months were determined. Surface topography (Ra) and color changes (DE values) of the groups were recorded and statistically analyzed.

**Results:** Variations in the composition of different sport drinks media did not affect the color changes of composite groups. The effect of time showed that the color changes of all composite tested are directly proportional to the increase in time. Surface roughness (Ra) showed insignificant difference between the groups except for the Spectrum when immersed in code red the Ra increased.

**Conclusion:** 1. All resin composite tested showed color changes when immersed in sport drinks solutions. 2. The color changes is directly proportional to the time of immersion of resin composite. 3. Vertise Flow showed the least color changes by time followed by the Filtek Z250 while the Spectrum showed the highest color changes.

### Biography:

Ihab Moussa was graduated from Cairo University with a very good grade, assigned as a demonstrator in 1987. He had his Master's Degree in Biomaterials by 1992, and his Ph.D. in Biomaterial Sciences by 1999. He was assigned as lecturer in Menia, Suez Canal and 6<sup>th</sup> October Universities. He was assigned as Head of Biomaterial Division in 6<sup>th</sup> October University. At 2005, he had his Associate Prof. Degree then affiliated to work at King Saud University till present.