Effects of materials thickness and length of light exposure on the surface hardness light-cured composite resins

Abstrak:

Light-cured resin composite is one of the most commonly used molding materials due to its easy-to-mold characteristic. Nevertheless, care must be taken while treating this material, especially with respect to material thickness and how long it is exposed to light. Failure to treat the material with these optimal parameters will result in undesired hardness. To determine the most favorable value of these two parameters, an experiment was done with 3 different material thicknesses, and 3 different exposure times. After the sample of the resin composite was removed from its molding, it was stored under humid condition for 24 hours. Afterwards hardness test was done on the sample using Micro Vickers Hardness tester from this experiment, the significant difference in hardness was obtained and the maximum hardness was evaluated from the resin composite sample with 2 mm thickness and 60 seconds light exposure.

Keyword:

light cured, resin composite, treatments, hardness