

Veneering composites - a thermoanalytical examination.

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Differential thermal analysis and thermal gravimetric analysis were used to characterize veneering composites. Samples weighing 4-20 mg, made from the composite materials Visio-Gem (Espe, Germany), Sinfony (Espe, Germany), Artglass (Kulzer, Germany), Dentacolor (Kulzer, Germany) and Targis (Ivoclar, Liechtenstein), were examined. The samples were subjected to various thermal curing times of between 4 s and 25 min, using the relevant devices of the manufacturers. As a control group, samples of all materials were examined unreacted. In order to avoid post-curing during storage, all samples were subjected, immediately after manufacture, to the appropriate dynamic temperature programme of the thermoanalytical unit at a heating rate of 10 degrees C min⁻¹. The materials showed specific material characteristics which can, for instance, be used to analyse the curing behaviour of the materials. The position of the glass transition, polymerization and post-polymerization peaks at temperatures between 30 and 100 degrees C, as well as 150 and 300 degrees C, and the filler and matrix content, allow the classification of the veneering composites. Copyright 1999 Kluwer Academic Publishers

PMID: 15347930 [PubMed]