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ONLINE ISSN : 1881-1361

PRINT ISSN : 0287-4547

**Dental Materials Journal**

Vol. 26 (2007) , No. 3 p.316-322

[\[PDF \(398K\)\]](#) [\[References\]](#)**Effects of Thermal Cycling on Surface Texture of Restorative Composite Materials**[Hiroyuki MINAMI](#)<sup>1)</sup>, [Sayaka HORI](#)<sup>1)</sup>, [Hisanori KURASHIGE](#)<sup>1)</sup>, [Sadaaki MURAHARA](#)<sup>1)</sup>, [Koichi MURAGUCHI](#)<sup>1)</sup>, [Yoshito MINESAKI](#)<sup>1)</sup> and [Takuo TANAKA](#)<sup>1)</sup>

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(Received September 13, 2006)

(Accepted December 21, 2006)

**Abstract:**

The purpose of this study was to evaluate the effect of thermal cycling on the surface texture of restorative materials. Disk-shaped specimens made of seven resin composites (Beautiful: BF; Esthet-X: EX; Filtek Supreme: FS; Inten-S: IS; Point 4: PT; Solare: SR; and Venus: VS) were finished with 1- $\mu$ m alumina suspension, and then thermocycled between 4 and 60°C in distilled water for 20,000 or 50,000 cycles with a dwell time of 60 seconds. Staining susceptibility and mean surface roughness, Ra, were examined, and surface texture was observed by scanning electron microscopy. Dye penetration test showed that the surfaces of all resin composites were more stained after thermal cycling. Mean Ra of all resin composites, except PT, significantly increased after 50,000 thermal cycles. Dislodgement of filler particles was observed for all resin composites after thermal cycling, except FS. It was concluded that thermal cycling significantly affected the surface texture of the seven examined resin composites.

**Key words:**[Thermal cycling](#), [Resin composite](#), [Surface texture](#)[\[PDF \(398K\)\]](#) [\[References\]](#)Download Meta of Article [\[Help\]](#)

To cite this article:

Hiroyuki MINAMI, Sayaka HORI, Hisanori KURASHIGE, Sadaaki MURAHARA, Koichi MURAGUCHI, Yoshito MINESAKI and Takuo TANAKA. Effects of Thermal Cycling on Surface Texture of Restorative Composite Materials . Dent. Mater. J. 2007; 26: 316-322 .

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doi:10.4012/dmj.26.316

JOI JST.JSTAGE/dmj/26.316

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