J-STAGE

My J-STAGE Sign in

DENTAL MATERIALS JOURNAL

The Japanese Society for Dental Materials and Devices

Available Issues | Japanese >> Publisher Site

Author: ADVANCED Volume Page

Keyword: Search Go

Add to Favorite / Citation Articles Alerts | Add to Favorite Publications | Register Alerts | My J-STAGE HELP

TOP > Available Issues > Table of Contents > Abstract

ONLINE ISSN : 1881-1361
PRINT ISSN : 0287-4547

Dental Materials Journal
Vol. 25 (2006) , No. 2 p.399-404

[PDF (95K)] [References]

Effect of Mica and Glass on Acrylic Teeth Material's Color

Idil DIKBAS[1)], Temel KOKSAL[1)], Fatma UNALAN[2)], Ozlem GURBUZ[3)], Fuat NOYUN[1)] and Ender KAZAZOGLU[1)]

1) Department of Prosthodontics, Faculty of Dentistry, Yeditepe University
2) Department of Prosthodontics, Faculty of Dentistry, Istanbul University
3) Department of Dentistry, Bakirkoy Mental Hospital

(Received February 22, 2006)
(Accepted April 6, 2006)

Abstract:
The purpose of this study was to evaluate the effect of two different ratios of silanized mica filler and milled glass fiber reinforcement on the color of acrylic denture teeth materials. Ten acrylic resin discs made of acrylic denture teeth material (PMMA) obtained from the manufacturer were used as the control group. Four experimental groups were modified from the control group's PMMA material by adding a ratio of 5% or 10% by weight of silane-treated mica filler or milled glass fibers. Each group consisted of 10 specimens. Measurements were performed using a spectrophotometer CM-2600d, and the color changes were characterized in the Commission Internationale d'Eclairage $L^*a^*b^*$ color space. ΔE^* values of 5% mica-, 10% mica-, 5% glass-, and 10% glass-containing sample groups were 2.46, 3.03, 2.16, and 2.59 respectively. There were statistically significant differences in L^*, a^*, and b^* values between the control group and each test group. It was shown that when PMMA denture teeth material was modified with silane-treated mica filler or silane-treated milled glass fibers for the purpose of reinforcement, it would also cause significant changes to the original color of the material.

Key words:
Color, Spectrophotometer, Acrylic denture teeth

[PDF (95K)] [References]

Download Meta of Article[Help]

RIS

BibTeX

To cite this article:

Idil DIKBAS, Temel KOKSAL, Fatma UNALAN, Ozlem GURBUZ, Fuat NOYUN and Ender KAZAZOGLU. Effect of Mica and Glass on Acrylic Teeth Material's Color . Dent. Mater. J. 2006; 25: 399-404 .

doi:10.4012/dmj.25.399

JOI JST.JSTAGE/dmj/25.399

Copyright (c) 2009 The Japanese Society for Dental Materials and Devices

Japan Science and Technology Information Aggregator, Electronic