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

**Dental Materials Journal**
Vol. 27 (2008) , No. 1 p.69-74

[PDF (414K)] [References]

# Effects of Primers Containing Thiouracil and Phosphate Monomers on Bonding of Resin to Ag-Pd-Au Alloy

Yohsuke TAIRA[1)], Kohji KAMADA[1)] and Mitsuru ATSUTA[1)]

1) Division of Applied Prosthodontics, Graduate School of Biomedical Sciences, Nagasaki University

(Received May 31, 2007)
(Accepted August 14, 2007)

**Abstract:**
The purpose of the present study was to evaluate the effects of four experimental primers on bond strength between a self-curing luting agent and silver-palladium-gold alloy. The experimental primers were in mixed solutions of a thiouracil primer (Metaltite) and a phosphate primer (Epricord, PM, PE, or PP), which were designated as Metaltite/Epricord, Metaltite/PM, Metaltite/PE, and Metaltite/PP respectively. Three primers (Metal Primer II, V-Primer, and Alloy Primer) were also prepared as controls. Alumina-blasted metal alloys were bonded with acrylic rods. After 5,000 thermocycles, the maximum shear bond strength was obtained with Metaltite/PE (27.8±2.4 MPa) and Metaltite/Epricord (27.6±5.9 MPa), followed by Metaltite/PP, Alloy Primer, Metaltite, Metaltite/PM, Metal Primer II, V-Primer, and Epricord. PE, PM, and PP showed the lowest bond strength. Results of this study revealed that the combined use of a thiouracil monomer and a phosphate monomer improved adhesive bonding. In this light, clinicians should pay attention to the types of functional monomers dissolved in a primer when fabricating resin-bonded prostheses.

**Key words:**
Metal alloy, Adhesive bonding, Surface treatment

To cite this article:

Yohsuke TAIRA, Kohji KAMADA and Mitsuru ATSUTA. Effects of Primers Containing Thiouracil and Phosphate Monomers on Bonding of Resin to Ag-Pd-Au Alloy . Dent. Mater. J. 2008; 27: 69-74 .

---

doi:10.4012/dmj.27.69

JOI JST.JSTAGE/dmj/27.69