

Ufi Gel Hard – Long-term adhesion

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The adhesive values of diverse relining materials were analysed at the University of Sao Paulo (Brazil).^[1] Special attention was given to the effect of water on the durability of the adhesive bond in this study.

A significant degeneration of the alveolar bone especially occurs in the first 6 months after the loss of teeth. Due to this bone deterioration and the concomitant changes, relining the dentures is required in many cases. The dentist basically has two alternatives from which to choose: a relining with PMMA materials from a dental laboratory or a direct relining on the patient using dimethacrylate-based systems.

Examination of adhesion on denture bases

4 relining materials were examined in the study presented here: Ufi Gel hard (VOCO), Tokusa Rebase Fast (Tokuyama), Kooliner (GC) and New Truliner (Bosworth). Lucitone 550 (Dentsply) was selected as the material for the denture bases. The denture bases were fabricated according the manufacturer's instructions and roughened with silicon carbide sandpaper (240-grit) before the adhesion tests. The relining materials were applied after applying the system-specific adhesive systems. The fabricated test specimens were then divided into four groups. The initial adhesive value was determined in the first group. The specimens in groups two through four were stored in warm (37°C), distilled water for 7, 90 or 180 days before the test. The results of the shear bond strength measurement are displayed in Figure

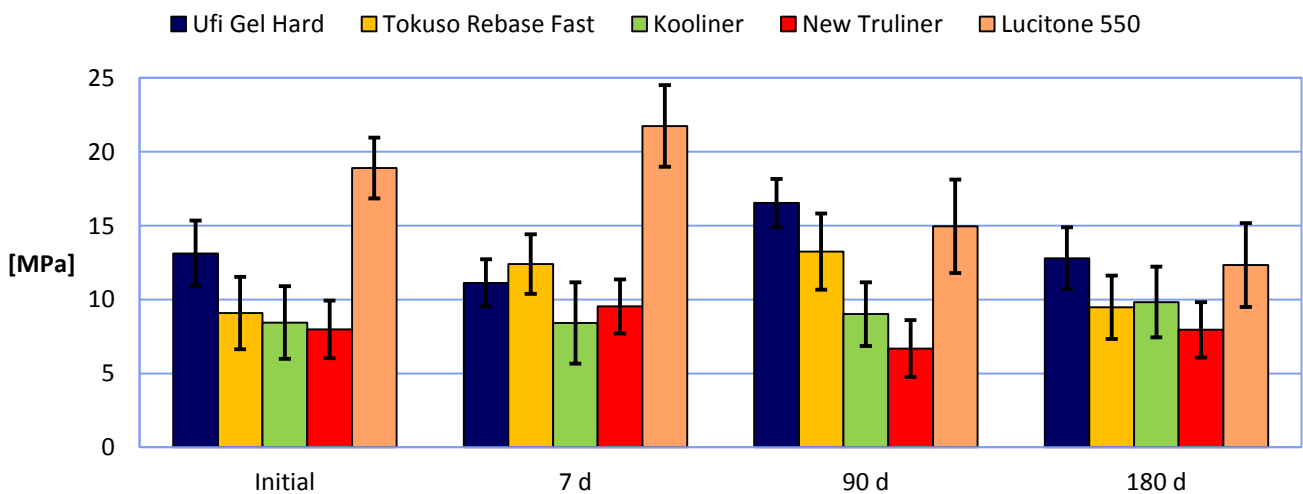


Figure 1: Shear bond strength on denture materials [MPa], initial and after storage in water

Ufi Gel Hard exhibited the highest adhesive value with 12.79 MPa after storage in water for 180 days. The adhesive value of Lucitone 550 was already exceeded after 90 days. The chairside treatment with Ufi Gel Hard thus represents a long-term adhesive bond without the need for a compromise.

Conclusion: The direct relining with Ufi Gel Hard exhibits excellent adhesive values on the denture base in this study. The adhesion of Lucitone 550, a PMMA-based material, was already exceeded after 90 days. Ufi Gel Hard thus combines quick and easy treatment procedures with a long-term intact adhesive bond.

[1] A. Azevedo, A. L. Machado, E. T. Giampaolo, A. C. Pavarina, C. E. Vergani, *J. Prosthodont.* **2007**, *16*, 255-262.