SCIENTIFIC REPORT

Meron Plus – Tensile strength

VOCO GmbH, Knowledge Communication Department

Anton-Flettner-Str. 1-3
27472 Cuxhaven, Germany

Tel.: +49 (0)4721-719-1111
Fax: +49 (0)4721-719-109

info@voco.de
www.voco.com

Full ceramic crowns based on zirconium oxide and other similar materials are often used in prosthetic treatment, due to their excellent mechanical properties and aesthetic appearance. A study at the University of Mainz examined the tensile strength of diverse luting materials (composite, glass ionomer cements, resin-reinforced glass ionomer cements, etc.) after cementation of Lava zirconium oxide crowns.

University of Mainz study[1]

Human molars and premolars with the final preparation entirely in dentine were used in this study. The application of the luting materials was always carried out in self-curing mode. Figure 1 shows the results of the tensile tests.

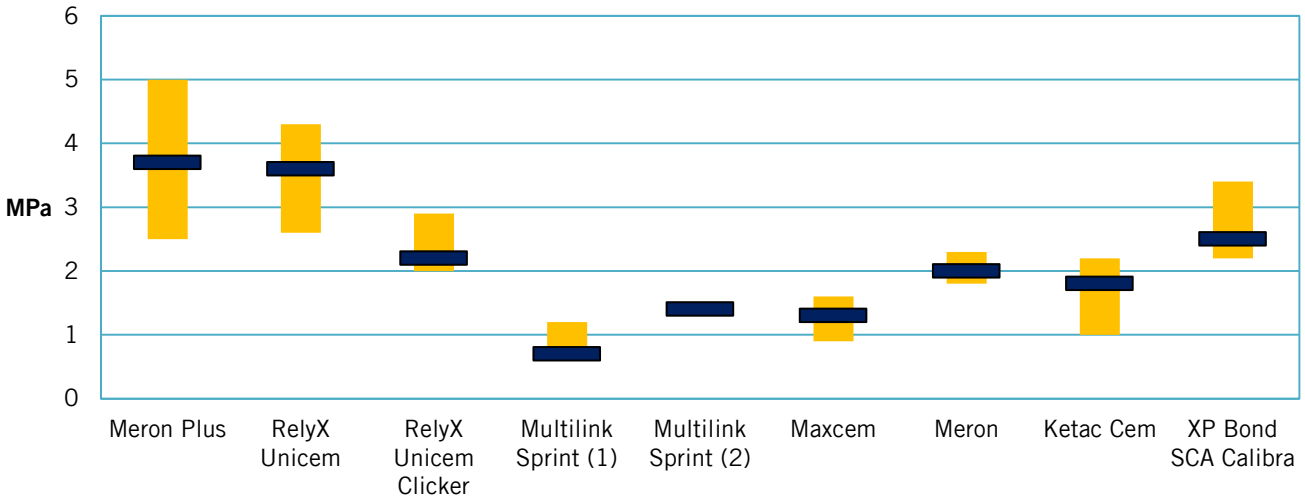

Figure 1: Surface-related tensile strength [MPa] as box plot (75% quartile, median, 25% quartile)

Meron Plus delivered the best values in this study. The study came to the conclusion that just the resin-reinforced glass ionomer cements have an excellent potential for luting zirconium oxide crowns.

Conclusion: Meron Plus, the resin-reinforced luting cement, is well-suited for luting high-strength ceramic crowns and delivers adhesion values that are superior to those of paste/paste systems.

[1] C.-P. Ernst, C. Blum, A. Schattenberg, E. Stender, B. Willershausen, *DZZ* **2008**, *63*, 623-631.