

Bifix QM - Toothbrush abrasion

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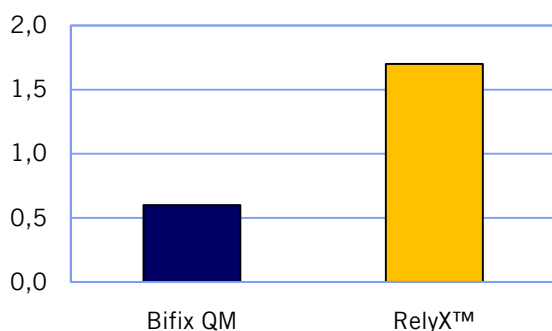
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In addition to adhesion to enamel and dentine, the wear behaviour is an important criterion for the evaluation of the quality of dental luting cements. Bifix has already set standards for the bond strength on both sides of the heterogeneous bonding site.^[1] A higher amount of abrasion of the luting cement than with inlays or onlays, however, is often observed in the dental surgery, which can result in the formation of marginal leakage and secondary caries. In addition to excellent adhesion, the luting composite's resistance to abrasion is also of elementary importance for the longevity of a restoration.

Abrasion study at the University of Dresden



The abrasion resistance of Bifix QM and RelyX Unicem (both self-cured) was evaluated in a tooth-cleaning simulator under the most surgery-relevant conditions possible, in a study at the University Hospital Dresden by Prof. Reitemeyer. Figure 1 shows a significantly increased amount of material abrasion after loading for RelyX in comparison to Bifix. Bifix QM shows a low amount of abrasion equivalent to Arabesk Top, the posterior range composite.

Figure 1: Material abrasion on test specimens (cylinder 12×8mm) in mg after 12,000 brush cycles

In addition to the material abrasion, the condition of the remaining surface was also profilometrically evaluated in the study.

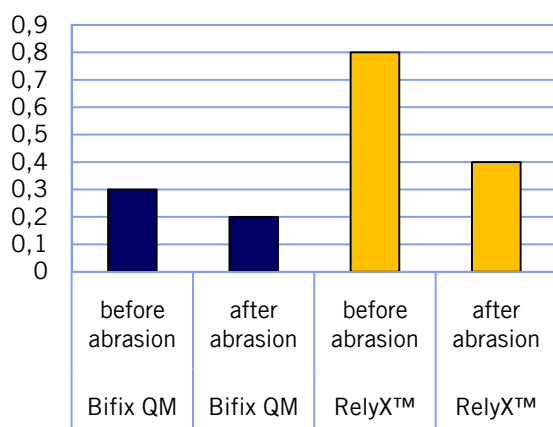


Figure 2: Average depth of roughness after abrasion

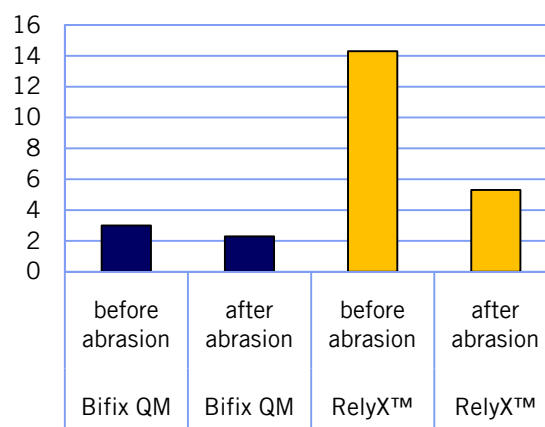


Figure 3: Maximum depth of roughness after abrasion