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Abstract

The purpose of this study was to search for the best surface treatment material for the power-bleaching of teeth to retard the initial color relapse from further development. Four evaluated materials, self-etching light-cured resin bond (S-E bond), the bonding agent in S-E bond (bonding agent), light-activated resin composite surface protector (Brightener), and S-E applied first then Brightener (S-E bond + Brightener), were respectively applied to laser power- bleached teeth samples, In order to select the best surface treatment material, colorimetry and scanning electron microscopy were respectively performed to investigate color differences (E) and microstructural variations. The results, demonstrated that 1 layer of Brightener not only produced no clinically significant color differences, but also created a smooth surface when applied to power-bleached teeth. It was concluded that the 3rd generation light-activated resin composite surface protector (Brightener) was the best surface treatment material for power-bleached teeth.