

**Bacterial adhesion of *Streptococcus mutans* to esthetic bracket materials.**

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**INTRODUCTION:** The formation of white spot lesions and enamel demineralization might be intensified by enhanced bacterial adhesion and formation of dental plaque on brackets. Our aim in this in-vitro study was to investigate the susceptibility of various plastic bracket materials to the adherence of *Streptococcus mutans*. **METHODS:** The esthetic bracket raw materials included in this study were polyoxymethylene, polycarbonate, high-density polyethylene, and an experimental polymer (90% polyethylene). Surface roughness was assessed by perthometer. *S mutans* suspension was incubated with test specimens and examined with fluorescence dye and an automated multi-detection reader. The oxidation-reduction fluorescence dye Alamar Blue/resazurin (0.007536 g per 10 mL distilled water) was used to determine the quantity of bacterial adhesion. **RESULTS:** The median values of fluorescence intensity varied between approximately 600 and 1600. The lowest fluorescence with median values below 700, indicating low bacterial adhesion, was found for polyoxymethylene (median of relative fluorescence intensity, 635). The highest relative fluorescence intensity, with median values of more than 1500, was for high-density polyethylene (1565). No statistical alteration of fluorescence intensity was measured between the polymeric bracket materials. **CONCLUSIONS:** The investigated polymeric bracket materials had no significant differences in the quantities of *S mutans* adhering to them. Regardless of the polymer, plastic bracket materials have similar bacterial colonization and plaque accumulation properties.

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