

## Kebocoran mikro pada restorasi komposit resin dengan sistem total-etch dan self-etch pada berbagai jarak penyinaran (Microleakage of resin composite restoration with total-etch and self-etch systems at various curing distances)

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### Abstrak

Microleakage still occurs between cavity wall and resin composite restoration, although bonding agent such as Total-etch (TE) and Selfetch (SE) systems had been used. One of the causes of microleakage was associated to improper polymerization affected by curing distance.<sup>1,2</sup> The objective of this study was to evaluate the microleakage of resin composite restoration using TE and SE adhesive systems that were polymerized at various curing distances. A total of 120 human molars were prepared for class V cavity and were divided into 4 groups with bonded resin composite restoration: Group A (TE): Filtek Z350 + Adper Single Bond 2; Group B (TE): Tetric N Ceram + Tetric N Bond; Group C (SE): Clearfil APX + SE Bond; and Group D (SE): Ceram X + Xeno III. Each group were divided into 3 parts (10 teeth each) which were restored at 0; 2 and 4 mm of curing distance respectively. After stored in aquadest at 37°C (24 hours), all specimens were immersed in 1% methylene blue solution (24 hours). Dye penetration at coronal site were observed under a stereomicroscope (Nikon SM 2800). The results showed that microleakage between 3 various curing distances of each group were not significantly different (Kruskall-Wallis test,  $p > 0,05$ ). Mann-Whitney U test ( $p < 0,05$ ) showed that microleakage between Group A-C; Group A-D and Group B-D were significantly different at 2 mm curing distance. Conclusion: microleakage of resin composite restoration with TE adhesive system were lower than SE at all curing distances.