

Pengaruh ketebalan komposit resin serat pendek dan jarak penyinaran terhadap kekuatan tarik diametral = Effect of short fibre reinforced resin composite thickness and light curing distance on diametral tensile strength

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Abstrak

Penelitian ini bertujuan untuk mengetahui pengaruh ketebalan komposit resin dan jarak penyinaran terhadap kekuatan tarik diametral komposit resin serat pendek KRSP . Empat puluh spesimen KRSP EverX PosteriorTM berbentuk lempengan dengan ketebalan 3 dan 4 mm, diameter 6 mm n=20 dibagi menjadi dua kelompok dengan jarak penyinaran 2 dan 4 mm n=10 . Spesimen dipolimerisasi menggunakan LED curing unit, iradiansi 800 mW/cm² selama 20 detik. Spesimen diuji menggunakan Universal Testing Machine 250 kgf, 0,5 mm/menit untuk mendapatkan nilai kekuatan tarik diametral. Hasil uji statistik One-Way ANOVA dan post-hoc LSD, kekuatan tarik diametral menurun signifikan pada kelompok dengan ketebalan KRSP 4 mm dan jarak penyinaran 4 mm. Disimpulkan bahwa ketebalan KRSP dan jarak penyinaran dapat mempengaruhi nilai kekuatan tarik diametral.

.....The aim of this study is to analyze the effect of short fiber reinforced resin composite SFRC thickness and light curing distance on diametral tensile strength. Forty disc shaped specimens of SFRC EverX PosteriorTM with 3 and 4 mm of resin composite thickness, 6 mm of diameter n 20 were divided into two different light curing distance groups 2 and 4 mm n 10 . All Specimens were polymerized using LED curing unit, irradiance 800 mW cm² for 20 s. Specimens were tested using Universal Testing Machine 250 kgf, 0,5 mm menit to determine its diametral tensile strength. The result from One Way ANOVA and post hoc LSD statistical test, diametral tensile strength of 4 mm SFRC thickness with 4 mm light curing distance group has significantly decrease. It was concluded that both SFRC thickness and light curing distance has significant effect on the diametral tensile strength.