

## Pengaruh intensitas cahaya terhadap derajat konversi komposit nano partikel

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### Abstrak

One of factors that could influence the degree of degree of conversion of composite restorative material is light intensity. Many researchers have done investigation on the degree of conversion of hybrid, microfiller and microhybrid composite. However, there are still minimum researches on the influence of light intensity on the degree of conversion of nano particle composite which is one of the universal composite that has been developed in dentistry. The used material was Supreme XT nano particle composite (3M ESPE German). Cylindrical specimens with 33 mm in diameter, 2 and 3 mm thickness were prepared. Specimens were cured by Light Emitting Diode (LED) with light intensity variation of 1120, 1040, 800, 560 and 480 mW/cm<sup>2</sup>, and then incubated for 24 hours at 37°C. Fourier Transform Infra Red (FTIR) was used to determine the degree of conversion. The data were analyzed statistically by using two-way anova and tukey post hoc test. Based on statistic result at  $\alpha = 0.05$  light intensity variation gave significant difference on the degree of conversion of nano particle composite. The highest degree of conversion was achieved with 800 mW/cm<sup>2</sup> light intensity, which is 89.67%. The 2 and 3 mm thickness gave no significant difference on the degree of conversion. This research shows that the variation of light intensity has significant influence towards the degree of conversion of nano particle composite.