

# Kekerasan permukaan komposit resin dipolimerisasi dengan Light Curing Unit berbeda iradiansi = Hardness of resin composite polymerized by light curing unit different light irradiance / Sarah Azkianisa

Sarah Azkianisa, author

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Abstrak

**ABSTRAK**

Latar Belakang: LCU prototip dengan metode PWM-kombinasi dengan iradiansi sinar 800, 900, dan 1.000 mW/cm<sup>2</sup> telah dibuat untuk mencegah kenaikan suhu pulpa akibat polimerisasi.

Tujuan: Menganalisis kekerasan komposit resin yang dipolimerisasi dengan LCU berbeda iradiansi sinar.

Metode: Spesimen merupakan komposit resin yang dipolimerisasi dengan LCU prototip (PWMkombinasi) beriradiansi sinar 800, 900, atau 1.000 mW/cm<sup>2</sup> atau dengan LCU pembanding (900 mW/cm<sup>2</sup>). Kekerasan komposit resin diukur menggunakan sistem Knoop.

Hasil: Kekerasan komposit resin antar kelompok berbeda bermakna ( $p < 0,05$ ) kecuali yang diberi iradiansi sinar 900 mW/cm<sup>2</sup> dari LCU prototip dan LCU pembanding.

Kesimpulan: Kekerasan komposit resin dipengaruhi oleh iradiansi sinar dari LCU prototip. LCU prototip atau LCU pembanding dengan iradiansi 900 mW/cm<sup>2</sup> menghasilkan kekerasan komposit resin yang sama.

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**ABSTRACT**

Background: Prototype light curing unit (LCU) with PWM-combined light irradiance of 800, 900, and 1.000 mW/cm<sup>2</sup> was made to prevent the pulp temperature rise due to the polymerization. Objective: To analyze the hardness of resin composites polymerized by LCU different light irradiation.

Methods: The specimen is resin composites polymerized by prototype LCU light irradiance 800, 900, or 1.000 mW/cm<sup>2</sup> or with comparison LCU (900 mW/cm<sup>2</sup>). Hardness of resin composite test performed by Knoop system.

Result: There is significant differences ( $p < 0.05$ ) among the groups except those between using the prototype LCU and comparison LCU that have irradiance of 900 mW/cm<sup>2</sup>.

Conclusions: The hardness of resin composite was influenced by the irradiance of prototype LCU. The hardness of resin composite from prototype LCU is equal to those from comparison LCU irradiance of 900 mW/cm<sup>2</sup>.