

# DEGREE OF CONVERSION, AND COMPRESSIVE STRENGTH OF RECENTLY INTRODUCED DENTAL COMPOSITES AS A CORE BUILD-UP MATERIALS

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## **ABSTRACT**

This study was conducted to determine the degree of conversion (DC) and compressive strength of new dental composites used as a core build-up materials in comparison to hybrid types. Fourier transform infrared Analysis (FTIR) method was utilized in this study as a documented method to measure the degree of conversion. DC was calculated by comparing the absorbarice ratio of aliphatic C=C peak at 1638 cm<sup>-1</sup> to aromatic C=C peak at 1608 cm<sup>-1</sup> between cured and uncured specimens. The DC % was calculated by subtractirrg the residual percentage of uncured methacrylate from 100%. Also compressive strength test was conducted for selected materials.

Results of this study indicated that DC ranged from 43.7 (For Herculite) to 74.1 (for Admira).

The compressive strength ranged from 264 MPa (for Admira)to 442 MPa (for ZI00). No positive correlation was noticed between both results which may be attributed to "many factors such as material composition (organic & inorganic) and light irradiation conditions.

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