EFFECT OF CURING CONDITIONS ON FLEXURAL STRENGTH OF HEAT-CURING ACRYLIC RESIN

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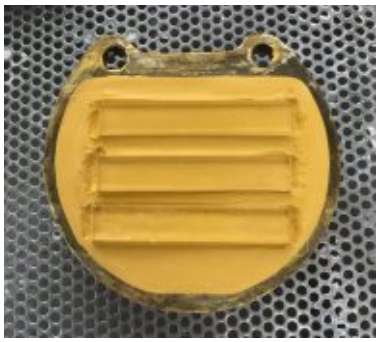

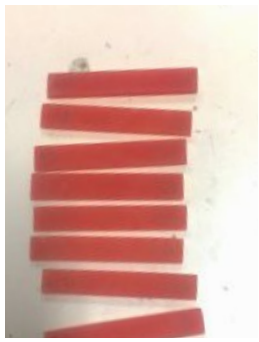

Results: The analysis of variance and the T-test were used to identify significant differences ($p < 0.05$) between short and long curing conditions of the heat-cured acrylic resin. Short and long curing groups have shown the flexural strengths of 86.1641± 17.2704 MPa and 93.4139 ± 12.3413 MPa, respectively. The result has shown statistically significant difference between the two groups.

Conclusions: The long curing cycle proved to be better flexural strength as compared to short curing cycle in producing denture bases.

ABSTRACT

Objectives: This study sought to find and compare the flexural strength of heat-cured acrylic resin in both short and long curing conditions.

Methods: In this study, 70 specimens measuring 64mm long x 10 mm wide x 3 mm thickness were obtained and divided into 2 groups: 35 long-cured acrylic resin and 35 short-cured acrylic resin. Use three-point bending test was conducted to measure the Flexural strength using universal testing machine conducted at room temperature and the crosshead speed was 0.05-1000 mm/min. The specimens were placed in the center and perpendicular to the impact force. Measure flexural strength, statistical analysis, and compare the result between long and short curing conditions.

Keywords: acrylic resin; curing condition; heat-cured; three-point bending; flexural strength

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