

**UJI KEKUATAN TRANSVERSA RESIN AKRILIK HEAT CURED
HASIL REPARASI DENGAN PENAMBAHAN FIBER GLASS**

**(TRANSVERSE STRENGTH TEST OF REPAIRED HEAT CURED
ACRYLIC RESIN REINFORCED WITH GLASS FIBER)**

ABSTRACT

Background. Acrylic denture base might be fracture due to fatigue or occlusal forces in the oral cavity. This problem can be solved by repositioning and repairing the two pieces of broken part. Reparations of acrylic generally be done by using cold cured acrylic resin, but the repaired denture base can be refracture that tend to occur at the meeting point of the old materials and new materials. This occurs due to the lack of adhesion between the material and the surface of fracture area. Glass fiber reinforcement material have a good adhesion with acrylic resin. **Purpose.** To get an increase of the transverse strength of repaired heat cured acrylic resin reinforced with glass fiber. **Methods.** The study was conducted on 28 samples of heat cured acrylic plate with the size of 65 mm x 10 mm x 2.5 mm. The samples were divided into 2 groups, 14 pieces repaired with cold cured acrylic resin and 14 pieces repaired with cold cured acrylic resins with addition of 5 mm length of glass fiber. **Results.** Repaired heat cured acrylic resin reinforced with glass fiber have a greater value of transverse strength than the other group that repaired without glass fiber. **Conclusion.** The addition of glass fiber on acrylic repair materials can increase the transverse strength of repaired heat cured acrylic resin significantly ($p < 0.05$).

Keywords: Transverse strength, repaired heat cured acrylic resin, glass fiber