PENGARUH LAMA PERENDAMAN RESIN AKRILIK HEAT CURED DALAM EUGENOL MINYAK KAYU MANIS TERHADAP KEKUATAN TRANSVERSA

THE EFFECT OF IMMERSION DURATION OF HEAT CURED ACRYLIC RESIN IN EUGENOL OF CINNAMON OIL TOWARD THE TRANSVERSE STRENGTH

ABSTRACT

Background: The porous of acrylic resin denture can make food debris and microorganisms accumulated. This can damage the oral health then cause some problems, for example denture stomatitis. To prevent these problems, acrylic resin denture should be cleaned by tooth brush and immersing in denture cleanser. The previous research by Sudarmawan (2009) showed that cinnamon oil can inhibit the growth of C. Albicans in acrylic resin denture. Other researches showed that the immersion of acrylic resin denture in denture cleanser can affect its mechanical properties.

Purpose: The purpose of this laboratory research is to study the effect of immersion duration of heat cured acrylic resin in eugenol of cinnamon oil toward the transverse strength.

Materials and Method: The samples are heat cured acrylic resin plate (65 x 10 x 2.5 mm) that divided into six groups, each group consists of 14 samples. The control samples were immersed in aquades for 4 days, 12 days, and 19 days. The treatment samples were immersed in 0.4% eugenol of cinnamon oil for 4 days, 12 days, and 19 days. After the immersion, samples were measured their transverse strength using autograph merk Shimadzu AG 10 TE made in Japan. Data were statistically analyzed using One Way Anova Test.

Result: There was no significant difference (p < 0.05) in the transverse strength of heat cured acrylic resin plate after being immersed in 0.4% eugenol of cinnamon oil for 4 days, 12 days, and 19 days.

Conclusion: 0.4% eugenol of cinnamon oil can be used as denture cleanser because it doesn’t affect the the transverse strength of heat cured acrylic resin denture.

Keywords: heat cured acrylic resin, eugenol of cinnamon oil, transverse strength