

ABSTRAK

PENGARUH BERBAGAI KONSENTRASI EKSTRAK ETANOL DAUN PEPAYA (*Carica papaya L*) TERHADAP KEKUATAN IMPAK BASIS GIGI TIRUAN RESIN AKRILIK POLIMERISASI PANAS

Bintan Nahya

Resin akrilik polimerisasi panas sebagai basis gigi tiruan memiliki kelemahan yakni mudah patah dan menyerap air sehingga dapat menurunkan kekuatan impak basis gigi tiruan. Daun pepaya (*Carica papaya L*) merupakan alternatif bahan *denture cleanser* yang mengandung senyawa fenol sehingga dapat mempengaruhi kekuatan impak basis gigi tiruan. Tujuan penelitian ini adalah mengetahui pengaruh berbagai konsentrasi ekstrak daun pepaya terhadap kekuatan impak basis gigi tiruan resin akrilik polimerisasi panas. Rancangan penelitian ini berupa *post test only group design*. Sebanyak 32 sampel resin akrilik dibagi dalam 4 kelompok yaitu kelompok perlakuan perendaman ekstrak daun pepaya konsentrasi 5%, 10%, dan 20%, serta kelompok kontrol negatif perendaman akuades. Uji kekuatan impak dilakukan dengan alat *Charpy Impact Tester*. Analisis data pada penelitian ini menggunakan uji *One Way ANOVA* lalu diteruskan uji *Post Hoc LSD*. Hasil penelitian menunjukkan bahwa terdapat perbedaan nilai rerata kekuatan impak yang signifikan antara kelompok perlakuan konsentrasi 10% dan 20% dengan kelompok kontrol, sedangkan konsentrasi 5% dengan kelompok kontrol tidak terdapat perbedaan yang signifikan. Simpulan penelitian ini adalah terdapat pengaruh berbagai konsentrasi ekstrak daun pepaya (*C. papaya L*) terhadap kekuatan impak basis gigi tiruan resin akrilik polimerisasi panas.

Kata kunci : Basis gigi tiruan, resin akrilik polimerisasi panas, ekstrak daun pepaya, kekuatan impak

ABSTRACT

THE EFFECT OF VARIOUS PAPAYA LEAF ETHANOL EXTRACT CONCENTRATIONS (*Carica papaya L*) ON THE IMPACT STRENGTH OF HEAT POLYMERIZATION ACRYLIC RESIN DENTURE BASE

Bintan Nahya

*Heat-cured acrylic resin as a denture base has the disadvantage of being easily broken and absorbs water so that it can reduce the impact strength of the denture base. Papaya leaf (*Carica papaya L*) is an alternative denture cleanser which contains phenolic compounds that can affect the impact strength of denture base. The aim of this study was to determine the effect of various concentrations of papaya leaf extract on the impact strength of heat-cured acrylic resin. The research design was in the form of a post test only group design. A total of 32 samples of acrylic resin were divided into 4 groups: the papaya leaf extract immersion treatment group with concentrations of 5%, 10%, and 20%, and the negative control group in aquadest immersion. The impact strength test was carried out using Charpy Impact Tester. The data was analyzed using One Way ANOVA and continued with Post Hoc LSD test. The results indicated that there was significant differences in the average impact strength between 10% and 20% concentrations with the control group while there was no significant difference between the 5% concentration and the control group. The conclusion of this study was that there was an effect of various concentrations of papaya leaf extract (*C. papaya L*) on the impact strength of heat-cured acrylic resin denture bases.*

Keywords : *Denture base, heat cured acrylic resin, papaya leaf extract, impact strength*