

INTISARI

Plat dasar gigi tiruan sering dibuat menggunakan resin akrilik polimerisasi panas sebagai pengganti jaringan pendukung. Kulit pisang kepok mentah memiliki kandungan senyawa aktif yang terbukti berfungsi sebagai pembersih gigi tiruan. Kekuatan transversal yang tinggi dibutuhkan plat dasar gigi tiruan agar tahan terhadap beban, tekanan dan gaya dorong sewaktu mulut berfungsi. Penelitian ini bertujuan untuk mengkaji pengaruh ekstrak kulit pisang kepok mentah (*Musa acuminata* × *balbisiana*) konsentrasi 20%, 22,5%, 25% terhadap kekuatan transversal resin akrilik.

Penelitian dilakukan menggunakan sampel berupa plat resin akrilik polimerisasi panas berukuran 65 x 10 x 2,5 mm yang dibagi menjadi empat kelompok: kelompok pertama direndam dalam aquades, kelompok kedua direndam dalam ekstrak kulit pisang kepok mentah konsentrasi 20%, kelompok ketiga direndam dalam konsentrasi 22,5%, kelompok keempat direndam dalam konsentrasi 25% selama 5 hari. Kekuatan transversal plat gigi tiruan resin akrilik polimerisasi panas diuji menggunakan *universal testing machine*. Kemudian data dianalisis menggunakan uji ANAVA satu jalur.

Hasil penelitian menunjukkan rerata tertinggi pada kelompok konsentrasi 20% yaitu 60,18 dan rerata terendah pada kelompok konsentrasi 25% yaitu 56,72. Hasil uji ANAVA satu jalur menunjukkan bahwa terdapat perbedaan yang tidak signifikan antara kekuatan transversal kelompok kontrol dan perlakuan ($p < 0,05$). Kesimpulan dari penelitian ini, bahwa perendaman plat gigi tiruan resin akrilik dengan ekstrak kulit pisang kepok mentah (*Musa acuminata* × *balbisiana*) konsentrasi 20%, 22,5%, 25% tidak berpengaruh terhadap kekuatan transversal.

Kata kunci : Ekstrak kulit pisang kepok mentah, Kekuatan transversal, Resin akrilik polimerisasi panas.

ABSTRACT

*Denture base plate is often made using a material named heat-cured acrylic resin, which function is to mimic the supporting tissue within the oral cavity. Raw kepok banana peel has been proven to have active components that are effective in denture cleansing. A higher transverse strength is needed for denture base plate to load, pressure and push force in a functioning mouth. This research aims to determine the influence of raw kepok banana peel extract (*Musa acuminata x balbisiana*) at concentrations of 20%, 22,5%, 25% towards the transverse strength of an acrylic resin.*

The experiment was conducted by using samples in the form of acrylic resin specimens measuring at 65x10x2.5 mm which was divided into four groups: the first group was soaked in distilled water, the second group was soaked in raw kepok banana peel extract at 20% concentration, the third group was soaked in 22.5% concentration, the fourth group was soaked in 25% concentration and each group was left for five days respectively. The transverse strength of the acrylic resin denture plate was tested using the universal testing machine. The data was then analyzed using the one-way ANOVA test.

*The results showed that the highest average was found at 20% concentration which is 60,18 while the lowest average was found at 25% concentration which is 56,72. one-way ANOVA result showed there was no significant difference in the transverse strength of the controlled group when it was compared with the treatment group ($p>0,05$). The conclusion of this research is that soaking acrylic resin denture plate with raw kepok banana peel extract (*Musa acuminata x balbisiana*) at concentrations of 20%, 22,5%, 25% has no impact on the transverse strength.*

Keywords : *Raw kepok banana peel extract, Transverse strength, Heat-Cured Acrylic resin.*