

## ABSTRAK

Nama Mahasiswa : Aneira Fitri Kaulika  
Program Studi : Kedokteran Gigi  
Judul KTI : Pengaruh Durasi Perendaman Ekstrak Bunga Sepatu (*Hibiscus rosa-sinensis L.*) terhadap Kekerasan Resin Akrilik *Heat Cured* pada Basis Gigi Tiruan  
Pembimbing : drg. Tyas Prihatiningsih, M.D.Sc  
Arlita Leniseptaria Antari, S.Si, M.Si

**Latar Belakang:** Basis merupakan komponen penting pada gigi tiruan. Perendaman basis gigi tiruan berbahan *heat cured* menggunakan bahan pembersih kimia dapat menurunkan kekerasan. Ekstrak bunga Sepatu dapat digunakan sebagai bahan alternatif pembersih gigi tiruan karena mengandung fenol yang efektif sebagai antibakterial dan antifungal. **Tujuan:** Untuk mengidentifikasi pengaruh durasi perendaman ekstrak bunga sepatu (*Hibiscus rosa-sinensis L.*) terhadap kekerasan resin akrilik *heat cured* pada basis gigi tiruan. **Metode:** Jenis penelitian eksperimental laboratorium dengan rancangan *post test only with control group design*. Sampel terdiri dari 27 sampel resin akrilik *heat cured* yang berbentuk silindris dengan diameter 30 mm dan ketebalan 5 mm. Sampel dibagi menjadi 3 kelompok yaitu kelompok perlakuan yang direndam dalam ekstrak Bunga Sepatu 75%, kelompok kontrol positif yang direndam dalam larutan klorheksidin 0,2%, dan kelompok kontrol negatif yang direndam dalam aquadest steril. Uji kekerasan menggunakan Vickers Hardness Tester. Data dianalisis menggunakan Uji Two Way ANOVA. **Hasil:** Uji Two Way Anova didapatkan nilai  $p < 0.05$  yang menunjukkan terdapat perbedaan signifikan dari nilai kekerasan resin akrilik *heat cured* yang dipengaruhi oleh jenis larutan perendaman dan variasi durasi perendaman. Rerata kekerasan resin akrilik *heat cured* setelah direndam selama 5 hari dalam klorheksidin, ekstrak bunga Sepatu 75%, dan akuades berturut-turut sebesar 20.5 VHN, 20.2 VHN, dan 20.1 VHN. **Kesimpulan:** Terdapat pengaruh durasi perendaman ekstrak bunga Sepatu terhadap kekerasan resin akrilik *heat cured*, dengan durasi perendaman yang paling baik yaitu 5 hari.

**Kata Kunci:** *Hibiscus rosa-sinensis L.*, Kekerasan, Resin Akrilik *Heat Cured*, Basis Gigi Tiruan

## ABSTRACT

Name : Aneira Fitri Kaulika  
Study Program : Kedokteran Gigi  
Title : The Effect of Duration *Hibiscus rosa-sinensis* L.  
Flower Extract Immersion on The Hardness of Heat  
Cured Acrylic Resin Denture Base  
Counsellor : drg. Tyas Prihatiningsih, M.D.Sc  
Arlita Leniseptaria Antari, S.Si, M.Si

**Background:** Denture base is one of the important components of denture manufacture. Soaking the heat cured denture base using chemical cleaning agents has disadvantages such as reducing the hardness of the heat cured acrylic resin. *Hibiscus rosa-sinensis* L. extract can be used as an alternative material for cleaning dentures because it contains fenol which is effective as antibacterial and antifungal. **Objective:** To identify the effect of duration of *Hibiscus* extract immersion on the hardness of heat cured acrylic resin on denture bases. **Methods:** This type of research is an experimental laboratory with post test only control group design. Sample consisted of 27 samples of heat cured acrylic resin which were cylindrical in a shape with a diameter of 30 mm and a thickness of 5 mm. Samples divided into 3 group, the treatment group soaked in 75% hibiscus flower extract, the positive control group soaked in 0.2% chlorhexidine solution, and the negative control group soaked in sterile distilled water. The hardness of acrylic resin was tested by Vickers Hardness Tester. Data were analyzed using the Two Way ANOVA Test. **Result:** Two Way Anova test results obtained value  $p < 0.05$  which showed there was a significant difference in the hardness value of heat cured acrylic resin that influenced by the type of immersion solution and duration. The average value of heat cured acrylic hardness change after immersion in the small chlorhexidine, Hibiscus extract 75%, and aquadest were 20.5 VHN, 20.2 VHN, and 20.1 VHN. **Conclusion:** There is an effect of the duration of Hibiscus extract immersion on the hardness of heat cured acrylic resin, with the best duration immersion 5 days.

**Keywords :** *Hibiscus rosa-sinensis* L., Hardness, Heat Cured Acrylic Resin, Denture Base