

## INTISARI

Gigi tiruan lepasan tersusun atas basis resin akrilik polimerisasi panas yang mampu menyerap air dan menyebabkan halitosis atau bau mulut. Ekstrak daun belimbing wuluh (*Averrhoa bilimbi* L.) memiliki sifat antibakteri dan antijamur karena kandungan flavonoid, saponin, dan tanin. Tujuan penelitian ini adalah untuk mengkaji pengaruh waktu perendaman gigi tiruan lepasan resin akrilik polimerisasi panas dalam ekstrak daun belimbing wuluh terhadap kadar halitosis.

Jenis penelitian yang dilakukan adalah eksperimental klinis dengan subjek penelitian berjumlah 27 orang yang sudah memenuhi kriteria inklusi. Penelitian dilakukan menggunakan alat *breath checker* dengan skala 0-5. Subjek dibagi menjadi 3 kelompok yaitu perendaman selama 5 menit, 10 menit dan 15 menit. Penurunan kadar halitosis merupakan angka selisih sebelum dan sesudah perendaman. Data dianalisis secara statistik menggunakan uji Anava satu jalur dan *post hoc* LSD.

Hasil penelitian menunjukkan penurunan kadar halitosis terendah pada waktu perendaman 15 menit (1,11) dan penurunan kadar halitosis tertinggi pada waktu perendaman 5 menit (2,33). Hasil uji Anava satu jalur menunjukkan adanya perbedaan bermakna ( $p < 0,05$ ). Uji *post hoc* LSD menunjukkan terdapat perbedaan nilai penurunan kadar halitosis yang signifikan antara kelompok perendaman 5 menit dengan kelompok perendaman 10 menit dan 15 menit, akan tetapi, tidak terdapat perbedaan yang signifikan antara kelompok perendaman 10 menit dan 15 menit. Kesimpulan penelitian ini, yaitu waktu perendaman gigi tiruan lepasan resin akrilik polimerisasi panas dalam ekstrak daun belimbing wuluh berpengaruh terhadap penurunan kadar halitosis dan waktu perendaman 5 menit telah efektif untuk mengurangi kadar halitosis.

Kata kunci: gigi tiruan lepasan, resin akrilik polimerisasi panas, halitosis, ekstrak daun belimbing wuluh/*Averrhoa bilimbi* L.

## ABSTRACT

Removable dentures are composed of a heat-cured acrylic resin that can absorb water and cause halitosis or bad breath. The leaf extract of *Averrhoa bilimbi* L. has many benefits such as antibacterial and antifungal due to the content of flavonoids, saponins, and tannins. The purpose of this research is to determine the effect of soaking time of heat-cured acrylic resin removable denture on *Averrhoa bilimbi* L. extract concentration on halitosis levels.

This research is a clinical experimental with 27 subjects who had criteria for inclusion. Twenty-seven subjects had divided into 3 groups. Each group was given treatment to soak their removable denture in *bilimbi* leaf extract for 5 minutes, 10 minutes or 15 minutes. The decrease level of halitosis is the amount of difference before and after soaking in *bilimbi* leaf extract. Data were analyzed with One-Way ANOVA test and post hoc LSD.

The result showed that the lowest decrease of halitosis levels was in heat-cured acrylic resin removable denture which was soaked for 15 minutes (1.11) and the highest was in 5 minutes soaking (2.33). One-Way ANOVA showed that there were significant differences ( $p < 0.05$ ) from the decrease of halitosis levels. The post hoc LSD test showed that there were significant differences in the value of halitosis levels between the 5 minutes soaking group and the 10 minutes and 15 minutes groups, however, there was no significant difference between the 10 minutes and 15 minutes soaking groups. The conclusion is the soaking time of heat-cured acrylic resin removable denture on *Averrhoa bilimbi* L. extract has an effect in decreasing halitosis levels and 5 minutes soaking time is an effective time to reduce halitosis levels.

**Keywords:** removable denture, heat-cured acrylic resin, halitosis, belimbing wuluh leaf extract/*Averrhoa bilimbi* L.