

INTISARI

Resin akrilik merupakan bahan yang digunakan dalam pembuatan plat dasar gigi tiruan. Kekurangan resin akrilik adalah bersifat porus yang menjadi tempat akumulasi plak dan memicu *denture stomatitis* yang disebabkan *Candida albicans*, sehingga gigi tiruan perlu dibersihkan dengan bahan pembersih gigi tiruan yang bersifat antijamur. Blueberry mengandung flavonoid yang berfungsi sebagai antijamur dengan mendenaturasi ikatan protein membran sel. Tujuan penelitian ini adalah untuk mengetahui pengaruh konsentrasi ekstrak blueberry terhadap pertumbuhan *Candida albicans* pada plat gigi tiruan resin akrilik.

Sebanyak 24 buah sampel resin akrilik dengan diameter 10 mm dan tebal 2 mm dibagi menjadi 4 kelompok, masing-masing 6 buah sampel. Ketiga kelompok direndam dalam 10 ml ekstrak blueberry selama 8 jam. Kelompok I direndam dalam ekstrak blueberry 10%, kelompok II dan III masing-masing direndam dalam ekstrak blueberry 50% dan 90%, serta kelompok IV direndam dalam akuades steril sebagai kontrol. Keempat kelompok kemudian dilakukan pengenceran seri hingga konsentrasi 10^{-3} CFU/ml lalu diinkubasi dalam *Sabouraud's agar* selama 48 jam pada suhu 37° C. Hasil perhitungan jumlah koloni *Candida albicans* dianalisis menggunakan Anava satu jalur dan uji LSD.

Hasil penelitian menunjukkan ekstrak blueberry 90% memiliki rata-rata jumlah *Candida albicans* terendah pada plat gigi tiruan resin akrilik, sedangkan rata-rata jumlah *Candida albicans* tertinggi terdapat pada kelompok kontrol. Hasil Anava satu jalur menunjukkan terdapat perbedaan bermakna antara ekstrak blueberry 10%, 50%, dan 90% terhadap pertumbuhan *Candida albicans* ($p < 0,05$). Hasil uji LSD menunjukkan terdapat perbedaan bermakna antar rerata kelompok perlakuan ($p < 0,05$). Kesimpulan penelitian adalah konsentrasi ekstrak buah blueberry (*Vaccinium L.*) berpengaruh dalam menghambat pertumbuhan *Candida albicans* plat gigi tiruan resin akrilik.

Kata kunci : ekstrak blueberry, *Candida albicans*, plat gigi tiruan resin akrilik, flavonoid

ABSTRACT

Acrylic resin is a material used in the manufacture of denture base. The acrylic resin disadvantage of porosity could be a place of plaque accumulation and lead denture stomatitis caused by *Candida albicans*, so it needs to be cleaned by denture cleanser with antifungal. Blueberry contain flavonoids as antifungal to denature the binding protein of cell membranes. The purpose of this study was to determine the effect of concentration of blueberry extract to the growth of *Candida albicans* on acrylic resin denture base.

Twenty four acrylic resin samples with 10 mm diameter and 2 mm thick, divided into 4 groups with 6 samples in each group. Three groups was soaked into 10 ml of blueberry extract for 8 hours. First group was soaked into 10% of blueberry extract, 2nd and 3rd group was each soaked into 50% and 90% of blueberry extract, and 4th group was soaked into aquadest as a control. All of the groups then involved in serial dilution until 10^{-3} CFU/ml concentration has been reached and were incubated in Sabourauds agar for 48 hours at 37°C temperature. The data were analyzed by one way Anova and LSD.

The results showed that 90% blueberry extract had the lowest average number of *Candida albicans* on acrylic resin denture base, while the highest average number of *Candida albicans* is in the control group. The results from one way Anova showed there were significant difference between blueberry extract with 10%, 50%, and 90% concentrations on the growth of *Candida Albicans* ($p < 0.05$). The results from LSD showed a significant difference among the average number from each treatment group ($p < 0.05$). The conclusion of this study is the concentration of blueberry extract take effect in inhibiting the growth of *Candida albicans* on acrylic resin denture base.

Keywords: blueberry extract, *Candida albicans*, acrylic resin denture base, flavonoid