ABSTRAK

Latar Belakang: Resin akrilik *heat cured* merupakan material yang sering dipakai untuk membuat basis gigi tiruan. Adanya rongga mikro pada resin akrilik menjadi tempat perlekatan sisa makanan yang dapat meningkatkan jumlah *C. albicans*. Salah satu bahan yang dapat dijadikan alternatif perendam gigi tiruan adalah umbi wortel (*Daucus carota L.*) yang memiliki sifat antifungi.

Tujuan: Untuk mengetahui pengaruh perendaman ekstrak umbi wortel (*Daucus carota L.*) terhadap pertumbuhan *C. albicans* pada plat resin akrilik *heat cured.*

Metode: Resin akrilik direndam dalam suspensi *C. albicans,* terdapat 4 kelompok perlakuan yaitu ekstrak umbi wortel konsentrasi 20%, 50%, 75%, dan kontrol positif (sodium hipoklorit). Resin akrilik dikultur dan diinkubasi pada media SDA selama 24 jam, kemudian jumlah koloni *C. albicans* dihitung.

Hasil: Penelitian ini menunjukkan jumlah koloni *C. albicans* kelompok pelakuan I, II, III, dan kontrol positif sebanyak 22.175 CFU/ml, 18.020 CFU/ml, 8.960 CFU/ml, dan 0.00 CFU/ml. Uji *Kruskal-Wallis* menunjukkan perbedaan jumlah koloni *C. albicans* yang signifikan (p<0,05) antar kelompok. Uji *Mann Whitney* menunjukkan perbedaan yang signifikan antara kelompok kontrol terhadap P1, P2, P3 terdapat perbedaan bermakna.

Kesimpulan: Terdapat pengaruh ekstrak umbi wortel (*Daucus carota L.*) terhadap pertumbuhan *C. albicans* pada plat resin akrilik *heat cured.*

Kata kunci: umbi wortel; *Daucus carota L.; Candida albicans;* resin akrilik *heat cured*

ABSTRACT

Introduction: Heat cured acrylc resin is a material that is often used to make denture bases. The existence of micro cavities in acrylic resin becomes a place for attachment of food debris which can increase the number of *C. albicans.* One material that can be used as an alternative denture soak is carrot tuber (*Daucus carota L.*) which has antifungal properties.

Objectives: To determine the effect of immersion of carrot tuber extract (*Daucus carota L.*) on the growth of *C. albicans* on heat cured acrylic resin plates.

Methods: Acrylic resin was immersed in *C. albicans* suspension, there was 4 treatment groups namely carrot tuber extract concentrations of 20%, 50%, 75%, and positive control (sodium hypochlorite). Acrylic resin was cultured and incubated on SDA media for 24 hours, then the number of *C. albicans* colonies was counted.

Results: This study showed the number of *C. albicans* colonies in treatment groups I, II, III, and positive control were 22.175 CFU/ml, 18.020 CFU/ml, 8,960 CFU/ml, and 0.00 CFU/ml. *Kruskal-Wallis* test showed a significant difference in the number of *C. albicans* colonies (p<0,05) between groups. Mann Whitney test showed a significant difference between the control group to P1, P2, P3 there is a significant difference.

Conclusion: There is an effect of carrot tuber extract (*Daucus carota L.*) on the growth of *C. albicans* on heat cured acrylic resin plates.

Keywords: carrot tuber, *Daucus carota L, Candida albicans,* heat cured acrylic resin.