

INTISARI

Latar belakang: Resin akrilik (*polymethyl methacrylate*) merupakan salah satu bahan basis gigi tiruan yang sering digunakan di kedokteran gigi. Pembersihan gigi tiruan yang kurang dapat memicu akumulasi pertumbuhan *Candida albicans* pada plak yang terdapat pada plat resin akrilik. *Candida albicans* merupakan penyebab *denture stomatitis* pada pengguna gigi tiruan. Hasil uji fitokimia ekstrak buah salak pondoh (*Salacca zalacca*) mengandung senyawa aktif flavonoid, tanin, saponin dan alkaloid yang dapat menghambat pertumbuhan mikroorganisme.

Tujuan penelitian: Untuk mengetahui pengaruh berbagai konsentrasi ekstrak buah salak pondoh (*Salacca zalacca*) terhadap pertumbuhan *Candida albicans* pada plat resin akrilik.

Metode penelitian: Metode yang digunakan pada penelitian ini adalah eksperimental laboratoris. Dua puluh lima sampel cakram resin akrilik diameter 10 mm dan tebal 2 mm direndam dalam saliva buatan selama 1 jam kemudian direndam dalam suspensi *Candida albicans* selama 24 jam. Sampel dibagi dalam 5 kelompok perlakuan lalu direndam dengan konsentrasi berbeda yaitu konsentrasi 25%, 50%, 75%, 100% dan aquades steril sebagai kontrol selama 8 jam. Sampel diambil dan dilakukan pengenceran seri. Jumlah koloni *Candida albicans* dihitung pada media Saboraud setelah diinkubasi selama 48 jam. Data yang diperoleh dianalisis dengan *one-way* ANOVA dan dilanjutkan dengan uji *Post hoc*.

Hasil penelitian: Hasil penelitian menunjukkan terdapat perbedaan bermakna pada setiap konsentrasi ekstrak buah salak pondoh (*Salacca zalacca*) terhadap pertumbuhan jamur *Candida albicans* dengan $p = 0,000$ atau ($p < 0,005$). Rerata angka jamur *Candida albicans* tertinggi pada aquades dan angka jamur *Candida albicans* terendah pada konsentrasi 100%.

Kesimpulan: Terdapat pengaruh ekstrak salak (*Salacca zalacca*) konsentrasi 25%, 50%, 75% dan 100% terhadap pertumbuhan *Candida albicans* pada plat resin akrilik. Penurunan jumlah jamur *Candida albicans* tertinggi pada konsentrasi 100%.

Kata kunci : Salak pondoh (*Salacca zalacca*), *Candida albicans*, Plat resin akrilik

ABSTRACT

Background: Acrylic resin (polymethyl methacrylate) was one of the material based on denture which frequently used in dentistry. The less cleaning of dentures may accumulated the growth of *Candida albicans* of plaque that contained in acrylic resin plate. *Candida albicans* was the cause of denture stomatitis on denture user. The phytochemical test showed *Salacca zalacca* extracts contained various active compounds such as flavonoids, tannins, saponins and alkaloids that could inhibit the growth of microorganisms.

Aim: The purpose of the study was to determine the effect of various concentrations of *Salacca zalacca* extracts on the growth of *Candida albicans* on acrylic resin plate.

Methods: The laboratory experiment used as the method of this study. There were twenty five acrylic resin samples were made with 10 mm diameter and 2 mm thick soaked in sterilized saliva for 1 hour and put into *Candida albicans* suspension for 24 hours. Samples divided into 5 treatments, then soaked with different concentration of 25%, 50%, 75%, 100% and sterile distilled water as control for 8 hours. Serial dilutions are needed after samples were taken. The colony of *Candida albicans* was counted after planted into saboraaud agar and 48 hours of incubation.

Result: The result showed the significant differences of various concentrations of *Salacca zalacca* extracts on the growth of *Candida albicans* $P=0,000$ ($p<0,05$). The highest number of *Candida albicans* was in aquades and the lowest number of *Candida albicans* was in 100% concentration.

Conclusion: As the conclusion in results of this study there were effect of *Salacca zalacca* extracts concentrations of 25%, 50%, 75% and 100% on the growth of *Candida albicans* on acrylic resin plate. The lowest number of *Candida albicans* was in 100% concentration.

Keyword: *Salacca zalacca*, *Candida albicans*, acrylic resin.