

## ABSTRAK

Fardiaz, Dedi. 2014, **Efektivitas *Whey* Kefir Susu Kambing Terhadap Adhesi *Candida albicans* pada Lempeng Akrilik *Heat Cured* secara *in vitro***. Tugas Akhir, Fakultas Kedokteran Universitas Brawijaya.  
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*Candida albicans* (*C. albicans*) merupakan jamur penyebab kandidiasis oral pada rongga mulut dan *denture stomatitis* pada pengguna gigi tiruan sebagian lepasan atau gigi tiruan penuh. Kemampuan *C. albicans* beradhesi pada permukaan gigi tiruan menginisiasi proses invasi pada mukosa rongga mulut yang berdekatan. Salah satu metode pencegahan adalah dengan menghambat proses adhesi sehingga proses invasi tidak terjadi. *Whey* kefir susu kambing mengandung peptida, laktoferin, asam organik dan enzim protease yang memiliki aktivitas antimikroba. Salah satu mekanisme *whey* kefir susu kambing adalah menurunkan hidrofobisitas *C. albicans*. Penelitian ini bertujuan untuk membuktikan bahwa *whey* kefir susu kambing memiliki pengaruh terhadap adhesi *C. albicans* pada lempeng akrilik *heat cured* secara *in vitro*. Penelitian diawali dengan pembuatan *whey* kefir menjadi beberapa konsentrasi yaitu 5%, 10%, 15%, 20% dan 25%. Kemudian lempeng akrilik *heat cured* dimasukkan kedalam sediaan *whey* kefir dan dicampur dengan *C. albicans*  $10^5$ CFU/ml. Pengamatan dilakukan segera setelah menginkubasi sediaan selama 2 jam pada suhu 37°C. Parameter yang diukur adalah jumlah *C. albicans* yang melekat pada lempeng akrilik *heat cured*. Analisis data menggunakan uji *Kruskal Wallis*, uji *Mann Whitney*, uji *Korelasi Spearman* dengan  $\alpha = 0,05$ . Hasil menunjukkan bahwa semakin tinggi konsentrasi *whey* kefir semakin sedikit pelekatan *C. albicans* pada akrilik *heat cured*. Kesimpulan pada penelitian ini yaitu *whey* kefir susu kambing mempunyai efek menghambat adhesi *C. albicans* pada lempeng akrilik *heat cured* secara *in vitro*.

Kata kunci: *C. albicans*, *Whey* kefir susu kambing, antiadhesi, akrilik *heat cured*.

## ABSTRACT

Fardiaz, Dedi. 2014. **The Effectivity Of Goat Milk's *Whey* Kefir Towards *Candida Albicans* Adhesion on Acrylic Heat Cured Plate *In Vitro*.** Final Assignment. Medical Faculty of Brawijaya University. Supervisors: (1) Dr. drh. Sri Murwani , MP (2) drg. Miftakhul Cahyati, Sp.PM

*Candida albicans* (*C. albicans*) is a fungus that causing oral candidiasis in the oral cavity and denture stomatitis among the removable partial dentures or full dentures wearer. The adhesive ability of *C. albicans* on the surface of the denture initiate the process of invasion in oral mucosa adjacent. One method of prevention is by blocking the adhesion process so that the process of invasion does not occur. *Whey* kefir goat milk contain peptides, lactoferrin, organic acids, and enzymes protease that has antimicrobial activity. The mechanism of *whey* kefir goat milk is lowering hydrophobicity of *C. albicans*. This study aims to prove that *whey* kefir goat milk in addition to having antimicrobial effects, also has an influence on the adhesion of *C. albicans* on acrylic plates *in vitro*. this study divided *whey* kefir goat milk into several concentrations of 5%, 10%, 15%, 20%, and 25%. Acrylic *heat cured* plate immersed in the *whey* kefir goat milk solution then mixed with  $10^5$  CFU/ml of *C. albicans*. Observations were conducted immediately after 2 hours incubation at a temperature of 37°C. The parameters measured were the number of *C. albicans* attached to the acrylic plate. Data analysis used in this study are *Kruskal-Wallis* test, *Mann Whitney* test, *Spearman correlation* test with  $\alpha = 0.05$ . The results showed the higher concentration of *whey* kefir, the less adhesion of *C. albicans* on acrylic plate. The conclusion of this research is goat milk's *whey* kefir has the effect of inhibiting the adhesion of *C. albicans* on resin acrylic *heat cured* in vitro.

Keywords: *Candida albicans*, Goat milk *whey* kefir, Antiadhesion, Resin acrylic *heat cured*.