UJI AKTIVITAS BAKTERI ASAM LAKTAT
(*Lactobacillus bulgaricus* DAN *Streptococcus thermophilus*)
YOGHURT DALAM MENGHAMBAT PERTUMBUHAN
Aspergillus fumigatus

ABSTRAK

Aspergillus fumigatus merupakan jamur oportunistik yang banyak ditemukan di udara, makanan, serta tanah dan dapat menyebabkan infeksi seperti infeksi paru dan kulit. Terapi yang sering digunakan salah satunya yaitu vorikonazol namun memiliki beberapa efek samping serta terjadi peningkatan kejadian resistensi antifungal, sehingga diperlukan alternatif pencegahan. infeksi *A. fumigatus* salah satunya dengan bakteri asam laktat pada yoghurt. Penelitian ini bertujuan untuk menguji aktivitas bakteri asam laktat *Lactobacillus bulgaricus* dan *Streptococcus thermophilus* yoghurt dalam menghambat pertumbuhan *A. fumigatus*. Penelitian ini merupakan penelitian eksperimental dengan metode *Post test-only with Control Group Design*. Rancangan percobaan pada penelitian ini menggunakan Rancangan Acak Lengkap (RAL). Sampel terbagi dalam 11 kelompok konsentrasi 0%, 55%, 60%, 65%, 70%, 75%, 80%, 85%, 90%, 95%, dan 100%. Sampel diuji menggunakan metode difusi sumuran dan diinokulasikan secara *spread plate*. Hasil zona hambat yang terbentuk hanya sebatas sumuran saja sehingga yoghurt perlu digunakan secara berangsur. Dari hasil penelitian disimpulkan bakteri asam laktat *L. bulgaricus* dan *S. thermophilus* pada yoghurt dapat menghambat pertumbuhan *A. fumigatus*.

Kata kunci: *Aspergillus fumigatus,* BAL, efek antijamur yoghurt.

ACTIVITY TEST OF LACTIC ACID BACTERIA (*Lactobacillus bulgaricus* AND *Streptococcus thermophilus*) YOGURT IN INHIBITING GROWTH *Aspergillus fumigatus*

ABSTRACT

Aspergillus fumigatus is opportunistic molds that commonly found in the air, foods, and soils. *A. fumigatus* can cause lung and skin infections. The recommended treatment for *A. fumigatus* infections is vorikonazol, but it may have some side effects and a risk of promoting more antifungal resistance, so it is better to find an alternative prevention for a. fumigatus infections such as utilizing lactic acid bacteria in yoghurt. This research aims at testing the activity of lactic acid bacteria (*Lactobacillus bulgaricus* and *Streprococcus thermophilus*) on yoghurt to inhibit the growth of *A. fumigatus*. The research applies Posttest-only with Control Group Design method in an experimental research. The experimental design in this study uses a completely randomized design (CRD). Samples are divided into 11 concentration groups of 0%, 55%, 60%, 65%, 70%, 75%, 80%, 85%, 90%, 95%, and 100%. They are tested using the well difusion and spread plate inoculated. The inhibition zone that formed is only limited to the well diameter, so the yoghurt needs to be applied gradually. Therefore, the research concludes that yogurt contains *L. bulgaricus* and *S. thermophilus* is able to prevent the growth of *A. fumigatus*.

Keywords: *Aspergillus fumigatus,* yoghurt's antifungal effect, LAB.