

PERBANDINGAN UJI EFEKTIVITAS ANTARA YOGHURT *SINGLE STRAIN* DAN *DOUBLE STRAIN* DALAM MENGHAMBAT PERTUMBUHAN *Staphylococcus epidermidis*

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ABSTRAK

Latar belakang : Akne vulgaris merupakan suatu penyakit peradangan pada kelenjar pilosebaceus yang dapat disebabkan oleh kolonisasi bakteri *Staphylococcus epidermidis*. Salah satu upaya pencegahan akne vulgaris adalah penggunaan probiotik untuk kosmetik. Yoghurt merupakan salah satu probiotik yang mengandung bakteri asam laktat (BAL) *single strain Lactobacillus bulgaricus*, *Streptococcus thermophilus*, dan double strain *L. bulgaricus* dan *S. thermophilus*. **Tujuan :** Tujuan penelitian ini adalah untuk mengetahui perbandingan uji efektivitas yoghurt double strain (*L. bulgaricus* dan *S. thermophilus*) dengan single strain (*L. bulgaricus*) dan (*S. thermophilus*) dalam menghambat pertumbuhan *Staphylococcus epidermidis*. **Metode :** Metode penelitian ini adalah *experimental design* dengan *post-test only with control group design*. Sampel yang digunakan terbagi menjadi 9 konsentrasi tiap yoghurt (kelompok perlakuan) yaitu 5%, 7,5%, 10%, 12,5%, 15%, 17,5%, 20%, 22,5%, 25%, dan 0% sebagai kontrol. Sampel diuji dengan metode difusi sumuran dan dihitung rerata diameter zona hambat yang terbentuk. Analisis data menggunakan uji *Kruskall Wallis* dan dilanjutkan *Post-Hoc Mann Whitney*. **Hasil :** Hasil penelitian ini didapatkan rerata diameter zona hambat yoghurt double strain Lebih besar (Ds25 $13,33 \pm 1,15$ mm) dibandingkan single strain *S. thermophilus* (St25 $10,67 \pm 1,15$ mm) dan single strain *L. bulgaricus* (Lb25 $9,33 \pm 4,62$ mm). **Kesimpulan :** Yoghurt double strain (*L. bulgaricus* dan *S. thermophilus*) lebih efektif dibandingkan dengan yoghurt single strain (*L. bulgaricus*) dan (*S. thermophilus*) dalam menghambat *Staphylococcus epidermidis*.

Kata Kunci: *Staphylococcus epidermidis*, yoghurt, bakteri asam laktat, single strain, double strain

COMPARISON OF EFFECTIVENESS TEST BETWEEN SINGLE STRAIN AND DOUBLE STRAIN YOGHURT IN INHIBITING GROWTH OF *Staphylococcus epidermidis*

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ABSTRACT

Background : *Acne vulgaris* is an inflammatory disease of the pilosebaceous gland that can be caused by colonization of the *staphylococcus epidermidis* bacteria. One of the prevention efforts of *akne vulgaris* is the use of probiotics for cosmetics. Yogurt is one of the probiotics containing lactic acid bacteria (LAB) single strain *Lactobacillus bulgaricus*, *Streptococcus thermophilus*, and double strains *L. bulgaricus* and *S. thermophilus*. **Purpose :** The purpose of this study was to find out the comparison of double strain yogurt effectiveness test (*L. bulgaricus* and *S. thermophilus*) with single strain (*L. bulgaricus*) and (*S. thermophilus*) in inhibiting the growth of *Staphylococcus epidermidis*. **Method :** This research method was experimental design with post-test only with control group design. The samples used were divided into 9 concentrations of each yogurt (treatment group) namely 5%, 7.5%, 10%, 12.5%, 15%, 17.5%, 20%, 22.5%, 25%, and 0% as control. The sample was tested by well diffusion method and calculated the average diameter of the formed bland zone. Data analysis using the Kruskal Wallis test and continued Post-Hoc Mann Whitney. **Result:** The results of this study obtained an average diameter of the bland zone of yogurt double strain Greater (Ds25 $13,33 \pm 1,15$ mm) than single strain *S. thermophilus* (St25 $10,67 \pm 1,15$ mm) and single strain *L. bulgaricus* (Lb25 $9,33 \pm 4,62$ mm). **Conclusion :** Double strain yogurt (*L. bulgaricus* and *S. thermophilus*) is more effective compared to single strain yogurt (*L. bulgaricus*) and (*S. thermophilus*) in inhibiting *Staphylococcus epidermidis*.

Keywords: *Staphylococcus epidermidis*, yoghurt, lactic acid bacteria, single strain, double strain