

ABSTRAK

TOTAL ASAM, KEASAMAN, DAN VISKOSITAS YOGHURT SUSU SAPI DENGAN MENGGUNAKAN KOMBINASI STARTER YANG BERBEDA

Oleh

FINA ARZAKIYAH

Penelitian ini bertujuan untuk mengetahui pengaruh kombinasi starter bakteri terhadap kualitas fisik yoghurt susu sapi yang meliputi total asam, keasaman, dan viskositas. Penelitian ini dilaksanakan pada Januari 2023 di Laboratorium Produksi Ternak, Jurusan Peternakan Fakultas Pertanian Universitas Lampung dan pengujian sampel dilakukan di Laboratorium Teknologi Hasil Pertanian Politeknik Negeri Lampung. Penelitian ini dilakukan menggunakan Rancangan Acak Lengkap (RAL) dengan 4 perlakuan yaitu P1 (*Streptococcus thermophilus* + *Lactobacillus bulgaricus*); P2 (*Streptococcus thermophilus* + *Lactobacillus acidophilus* + *Bifidobacterium*); P3 (*Streptococcus thermophilus* + *Lactobacillus acidophilus* + *Bifidobacterium* + *Lactobacillus bulgaricus*); dan P4 (*Streptococcus thermophilus* + *Lactobacillus acidophilus* + *Bifidobacterium* + *Lactobacillus casei*) dan diulang sebanyak 4 kali. Peubah yang diamati meliputi viskositas, pH, dan total asam. Data yang diperoleh dianalisis menggunakan analisis ragam pada taraf nyata 5%. Hasil penelitian menunjukkan bahwa kombinasi starter bakteri berpengaruh nyata ($P < 0,05$) terhadap viskositas dengan nilai tertinggi 2.918,00 cP dan total asam dengan nilai tertinggi 0,94% pada kombinasi starter bakteri *Streptococcus thermophilus*, *Lactobacillus acidophilus*, *Bifidobacterium*, dan *Lactobacillus casei*. Namun tidak berpengaruh nyata terhadap nilai pH.

Kata kunci: *Bifidobacterium*, *Lactobacillus acidophilus*, *Lactobacillus bulgaricus*, *Lactobacillus casei*, pH, *Streptococcus thermophilus*, total asam, viskositas

ABSTRACT

TOTAL ACID, ACIDITY, AND VISCOSITY OF COW'S MILK YOGHURT USING DIFFERENT STARTER COMBINATIONS

By

FINA ARZAKIYAH

This study aims to determine the effect of the bacterial starter combination on the physical quality of cow's milk yogurt which includes total acid, acidity, and viscosity. This research was carried out in January 2023 at the Animal Production Laboratory, Department of Animal Husbandry, Faculty of Agriculture, University of Lampung and sample testing was carried out at the Agricultural Product Technology Laboratory, Lampung State Polytechnic. This research was conducted using a completely randomized design (CRD) with 4 treatments namely P1 (*Streptococcus thermophilus* + *Lactobacillus bulgaricus*); P2 (*Streptococcus thermophilus* + *Lactobacillus acidophilus* + *Bifidobacterium*); P3 (*Streptococcus thermophilus* + *Lactobacillus acidophilus* + *Bifidobacterium* + *Lactobacillus bulgaricus*); and P4 (*Streptococcus thermophilus* + *Lactobacillus acidophilus* + *Bifidobacterium* + *Lactobacillus casei*) and repeated 4 times. The observed variables included viscosity, pH, and total acid. The data obtained were analyzed using analysis of variance at the 5% significance level. The results showed that the bacterial starter combination had a significant effect ($P < 0,05$) on the viscosity with the highest value of 2.918,00 cP and total acid with the highest value of 0,94% in the bacterial starter combination *Streptococcus thermophilus*, *Lactobacillus acidophilus*, *Bifidobacterium*, and *Lactobacillus casei*. However, it does not significantly affect the pH value.

Keywords: *Bifidobacterium*, *Lactobacillus acidophilus*, *Lactobacillus bulgaricus*, *Lactobacillus casei*, pH, *Streptococcus thermophilus*, total acid, viscosity