## ABSTRAK

## SIFAT FISIK DAN TOTAL BAKTERI ASAM LAKTAT (BAL) YOGHURT DENGAN BAHAN BAKU SUSU SAPI YANG BERBEDA

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Tujuan penelitian ini adalah untuk mengetahui pengaruh berbagai bahan baku susu sapi yang berbeda terhadap nilai total asam, pH, dan BAL yoghurt dan mengetahui bahan baku susu sapi olahan terbaik terhadap nilai pH, total asam, dan BAL yoghurt. Penelitian ini dilaksanakan pada Juni 2022 di Laboratorium Produksi Ternak, Jurusan Peternakan, Fakultas Pertanian, Universitas Lampung, dan Laboratorium Teknologi Hasil Pertanian, Politeknik Negeri Lampung. Penelitian ini merupakan penelitian eksperimental dengan menggunakan Rancangan Acak Lengkap (RAL) yang terdiri dari 3 perlakuan yaitu P1: bahan baku susu pasteurisasi *full cream*, P2: bahan baku susu UHT *full cream*, P3: bahan baku susu bubuk *full cream* dengan 5 ulangan. Data yang diperoleh dianalisis dengan analysis of variance (ANOVA) dengan taraf 5% dan 1% dan dilanjutkan uji Beda Nyata Terkecil (BNT). Hasil penelitian terhadap uji total asam yoghurt tidak berpengaruh nyata ($P>0,05$) dengan nilai rata-rata perlakuan yaitu 0,73 % (P1); 0,66 % (P2); 0,63 % (P3). Hasil analisis uji pH yoghurt menunjukkan hasil yang berpengaruh nyata ($P<0,05$) dengan nilai rata-rata perlakuan yaitu 4,20 (P1); 4,36 (P2); 4,46 (P3). Hasil analisis uji bakteri asam laktat (BAL) yoghurt menunjukkan hasil berpengaruh nyata ($P<0,05$) dengan nilai rata-rata pada tiap perlakuan yaitu $13,64x10^9$ CFU/ml (P1); $1,98x10^9$ CFU/ml (P2); $0,282x10^9$ CFU/ml (P3). Kesimpulan berdasarkan hasil penelitian menunjukkan bahwa yoghurt dari bahan baku susu pasteurisasi *full cream* memiliki nilai total asam, pH, dan bakteri asam laktat (BAL) sesuai Standar Nasional Indonesia (SNI)



Kata Kunci : Bakteri Asam Laktat (BAL), pH, Total Asam, Yoghurt

## ABSTRACT

## PHYSICAL AND TOTAL PROPERTIES OF LACTIC ACID BACTERIA (LAB) OF YOGURT WITH DIFFERENT RAW MATERIALS OF COW'S MILK

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The purpose of this study was to determine the effect of various raw materials for cow's milk with different values for the total acid, pH, and LAB of the best yogurt and determine the best processed cow's milk raw materials for pH value, total acid, and BAL of yogurt. This research was implemented in June 2022 at the Laboratory of Livestock Production, Department of Animal Husbandry, Faculty of Agriculture, University of Lampung, and Laboratory of Agricultural Products Technology, State Polytechnic of Lampung. This research is an experimental study using a completely randomized design consisting of 3 treatments, namely P1: full cream pasteurized milk, P2: full cream UHT milk, P3: full cream milk powder with 5 replications. The data obtained were tabulated and then analyzed by analysis of variance (ANOVA) with levels of 5% and 1% and continued with the Least Significant Difference (LSD). The results of the research on the total acid yogurt test had no significant effect ($P>0.05$) with an average treatment value of 0.73% (P1); 0.66% (P2); 0.63% (P3). In the analysis of the yogurt pH test, the results showed a significant effect ($P <0.05$) with an average treatment value of 4.20 (P1); 4.36 (P2); 4.46 (P3). The results of the analysis of the Lactic Acid Bacteria (LAB) yogurt showed a significant effect ($P<0.05$) with the average value for each treatment, namely $13{,}64x10^9$ CFU/ml (P1); $1{,}98x10^9$ CFU/ml (P2); $0{,}282x10^9$ CFU/ml (P3). The conclusion based on the results of the study shows that yogurt made from full cream pasteurized milk has a value of total acid, pH, and lactic acid bacteria (LAB) according to the Indonesian National Standard (SNI)



Keywords : Lactic Acid Bacteria (LAB), pH, Total Acid, Yoghurt