

STUDI PENGGUNAAN SUSU FERMENTASI SEBAGAI AGEN PRESERVASI TERHADAP TOTAL BAKTERI ASAM LAKTAT, KADAR ASAM LAKTAT, DAN pH DAGING AYAM BROILER SELAMA PENYIMPANAN

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INTISARI

Penelitian ini bertujuan untuk mengetahui pengaruh penambahan susu fermentasi yang dikenal umum di masyarakat berupa Yakult dan lama penyimpanan terhadap total bakteri asam laktat, kadar asam laktat, dan pH daging ayam yang dikemas dalam *retort pouch* pada perlakuan suhu *refrigerator* (4°C). Bahan utama yang digunakan adalah daging ayam dan susu fermentasi komersial berupa Yakult. Perlakuan penambahan Yakult yaitu pada penambahan 0, 1, 2, dan 3 botol dengan masing-masing botol sebanyak 65 mL. Lama penyimpanan dilakukan pada hari ke-0, 5, dan 10. Parameter yang akan diuji adalah total bakteri asam laktat, kadar asam laktat, dan pH. Pengujian dilakukan sebanyak 3 kali pengulangan tiap perlakuan, dimana pengujian total bakteri asam laktat dilakukan dengan metode *Duplo*. Data yang diperoleh akan dianalisis menggunakan Rancangan Acak Lengkap (RAL) pola faktorial 3x4. Apabila data signifikan, maka akan dilakukan uji lanjut menggunakan uji *Duncan's Multiple Range Test* (DMRT). Hasil penelitian menunjukkan bahwa penambahan Yakult berpengaruh sangat nyata ($P < 0,01$) terhadap total bakteri asam laktat, kadar asam laktat, dan nilai pH. Lama penyimpanan berpengaruh sangat nyata ($P < 0,01$) terhadap total bakteri asam laktat, kadar asam laktat, dan nilai pH. Interaksi antara penambahan Yakult dengan lama penyimpanan berpengaruh sangat nyata ($P < 0,01$) terhadap total bakteri asam laktat, kadar asam laktat, dan nilai pH. Penelitian ini dapat disimpulkan bahwa penambahan susu fermentasi berupa Yakult sebanyak 3 botol mampu meningkatkan total bakteri asam laktat sampai dengan 10 hari, serta dapat meningkatkan produksi asam laktat yang berimplikasi pada penurunan pH daging pada hari ke-0.

Kata kunci: asam laktat, daging ayam, *Lactobacillus casei*, lama penyimpanan, pH, preservasi, total bakteri asam laktat, Yakult.

STUDY OF THE UTILIZATION OF FERMENTED MILK AS A PRESERVATIVE AGENT ON TOTAL LACTIC ACID BACTERIA, LACTIC ACID LEVELS, AND pH IN BROILER CHICKEN MEAT DURING STORAGE

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ABSTRACT

This study aims to determine the effect of fermented milk utilization that generally known as Yakult and storage time on total lactic acid bacteria, lactic acid levels, and pH values of packaged chicken meat in a retort pouch at refrigerator temperature (4°C) treatment. The main ingredients used were chicken meat and commercial fermented milk in the form of Yakult. Yakult addition treatment consists of 0, 1, 2, and 3 bottles with 65 mL of each bottle. Storage time was carried out on the 0, 5, and 10 days. The parameters tested were total lactic acid bacteria, lactic acid level tests, and pH. The tests were carried out with 3 repetitions, where the total lactic acid bacteria were carried out by Duplo method. Data were analyzed by Completely Randomized Design (CRD) factorial pattern 3x4, followed by Duncan's Multiple Range Test (DMRT). The results showed that the addition of Yakult was very significant ($P < 0,01$) on total lactic acid bacteria, lactic acid levels, and pH value. Storage time was very significant ($P < 0,01$) on total lactic acid bacteria, lactic acid levels, and pH value. Interaction between Yakult addition and storage time was very significant ($P < 0,01$) on total lactic acid bacteria, lactic acid levels, and pH value. This study can be concluded that the addition of fermented milk in the form of Yakult, three bottles in total, was able to increase the total lactic acid bacteria for up to 10 days, and it could enhance lactic acid production, which resulted in a decrease in meat pH on day 0.

Key word: chicken meat, lactic acid, *Lactobacillus casei*, pH, preservation, storage time, total lactic acid bacteria, Yakult