

PENGARUH PENGGUNAAN JENIS STARTER TERHADAP NILAI pH DAN JUMLAH BAKTERI ASAM LAKTAT YOGURT SUSU KUDA

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INTISARI

Penelitian ini bertujuan untuk mengetahui pengaruh penggunaan jenis starter terhadap nilai pH dan jumlah bakteri asam laktat yogurt susu kuda. Yogurt susu kuda dibuat dengan empat macam perlakuan yaitu dengan starter *Streptococcus salivarius* Subsp. *thermophilus* (St), *Lactobacillus delbruechii* Ssp. *bulgaricus* (Lb), kombinasi antara St dan Lb dengan perbandingan 1:1, serta tanpa penambahan starter sebagai kontrol. Yogurt dibuat dengan menginokulasikan 5% (v/v) starter pada susu kuda yang telah dipasteurisasi pada suhu 85°C selama 30 menit, kemudian diinkubasi pada suhu 40°C. Proses inkubasi dihentikan pada pH 5,0 kemudian dianalisis kimia, meliputi pH, keasaman, kadar laktosa dan jumlah bakteri asam laktat. Data hasil penelitian dianalisis variansi menggunakan rancangan acak lengkap/*Completely Randomized Design* (CRD) pola searah. Perbedaan rata-rata diuji lanjut dengan *Duncan's Multiple Range Test* (DMRT). Hasil penelitian menunjukkan bahwa yogurt susu kuda dari starter Lb mempunyai nilai pH yang lebih rendah ($P < 0,05$) daripada St maupun St dan Lb (Lb: 5,12; St: 5,26; St+Lb: 5,23). Jumlah bakteri asam laktat yogurt susu kuda dari starter Lb lebih tinggi ($P < 0,05$) daripada St maupun St dan Lb (Lb: $4,15 \cdot 10^9$ cfu/ml; St: $2,27 \cdot 10^9$ cfu/ml; St+Lb: $2,45 \cdot 10^9$ cfu/ml). Keasaman yogurt susu kuda dari starter Lb lebih tinggi ($P < 0,05$) daripada St dan ($P > 0,05$) daripada St dan Lb (Lb: 0,43%; St: 0,41%; St+Lb: 0,43%). Kadar laktosa yogurt susu kuda dari starter Lb lebih rendah ($P < 0,05$) daripada St maupun St dan Lb (Lb: 5,14%; St: 5,37%; St+Lb: 5,22%). Penelitian ini menunjukkan bahwa penggunaan starter Lb dalam pembuatan yogurt susu kuda dapat menghasilkan nilai pH dan jumlah bakteri asam laktat yang lebih baik daripada St maupun kombinasi antara St dan Lb.

Kata kunci: Susu kuda, Yogurt, Starter, pH, bakteri asam laktat

**EFFECT OF DIFFERENT STARTER ON THE pH AND THE NUMBER OF
LACTIC ACID BACTERIA IN MARE'S MILK YOGURT**

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ABSTRACT

The aim of this study was to investigate the pH and the number of lactic acid bacteria in mare's milk yogurt as affected by different starters. The mare's milk was divided into four groups of experimental starter of *Streptococcus salivarius* Subsp. *thermophilus* (St), *Lactobacillus delbruechii* Ssp. *bulgaricus* (Lb), combination of Lb+St with the ratio of 1:1 and also without starter addition as control. Yogurt was made with inoculation of 5% starter at mare's milk. Mare's milk was pasteurized at 85°C during 30 minutes, then incubated at temperature 40°C. Incubation was discontinued at pH 5, and then tested on pH, number of lactic acid bacteria, acidity and lactose. The data were analyzed of variance with One Way Analyze. Mean differences were tested by *Duncan's Multiple Range Test* (DMRT). This study indicated that pH of mare's milk yogurt from Lb was higher ($P < 0,05$) than the others (Lb: 5,12; St: 5,26; St+Lb: 5,23). The number of lactic acid bacteria from Lb was higher ($P < 0,05$) than the others (Lb: 4,15.10⁹ cfu/ml; St: 2,27.10⁹ cfu/ml; St+Lb: 2,45.10⁹ cfu/ml). The acidity from Lb was higher ($P < 0,05$) than St and ($P > 0,05$) than Lb+St (Lb: 0,43%; St: 0,41%; St+Lb: 0,43%). The lactose of mare's milk yogurt from Lb was lower ($P < 0,05$) than the others (Lb: 5,14%; St: 5,37%; St+Lb: 5,22%). This study indicated that the use of starter Lb in mare's milk yogurt can yield the better pH and the number of lactic acid bacteria than St and Lb+St.

(Key words: Mare's milk, Yogurt, Starter, pH, Lactic acid bacteria)