

PENGARUH PERBEDAAN KULTUR STARTER TERHADAP KUALITAS FISIKO-KIMIA DAN MIKROBIOLOGIS YOGHURT ASAL SUSU KAMBING PERANAKAN ETAWAH

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INTISARI

Tujuan penelitian ini untuk mengetahui pengaruh perbedaan kultur starter terhadap kualitas fisiko-kimia dan mikrobiologis *yoghurt* asal susu kambing Peranakan Etawah (PE). Kontrol yang digunakan adalah susu fermentasi menggunakan kombinasi *Lactobacillus bulgaricus* (Lb.) dan *Streptococcus thermophilus* (St) (P0). Perlakuan yang dilakukan diantaranya adalah kombinasi Lb, St, dan *Lactobacillus paracasei* M104 (Lp) (P1); Lb, St, dan *Pediococcus pentosaceus* M103 (Pp) (P2); kultur tunggal Lp (P3); kultur tunggal Pp (P4); serta kombinasi Lp dan Pp (P5). Pengujian yang dilakukan meliputi laju keasaman, nilai pH, keasaman, *total solid*, kadar laktosa, protein, lemak, viskositas, dan total bakteri asam laktat (BAL). Analisis data menggunakan analisis variansi pola searah, dilanjutkan Duncan Multiple Range Test. Hasil penelitian menunjukkan tidak terdapat perbedaan pada laju keasaman untuk mencapai pH 4,6. Kualitas produk juga tidak menunjukkan perbedaan nilai pH, keasaman, *total solid*, laktosa, lemak, protein, dan total BAL. Viskositas P4 sebesar $796,83 \pm 50,56$ cP dan P5 sebesar $833,53 \pm 14,07$ cP lebih tinggi ($P < 0,05$) dibandingkan kontrol dan perlakuan yang lain. Starter lokal asal susu kambing PE (Lp dan Pp) dapat digunakan sebagai starter dalam pembuatan *yoghurt*, baik secara kultur tunggal maupun kultur campuran.

Kata kunci : Susu kambing, *yoghurt*, *L. paracasei* M104, *P. pentosaceus* M103

THE EFFECT OF DIFFERENT STARTER CULTURES ON PHYSICO-CHEMICAL AND MICROBIOLOGICAL QUALITY OF YOGHURT PRODUCED FROM ETAWAH CROSSBRED GOAT'S MILK

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ABSTRACT

The aim of the experiment was to investigate the effect of different starter cultures on physico-chemical and microbiological quality of yoghurt produced from etawah crossbred goat's milk. Control used was yoghurt fermented with *Lactobacillus bulgaricus* FNCC-0041 (Lb) and *Streptococcus thermophilus* FNCC-0040 (St) (P0). The treatments used were combination of Lb, St, and *Lactobacillus paracasei* M104 (Lp) (P1); Lb, St, and *Pediococcus pentosaceus* M103 (Pp) (P2); single culture Lp (P3); single culture Pp (P4); and combination Lp and Pp (P5). Observed parameters were acidification rate, pH, titratable acidify, total solid, lactose, protein, fat, viscosity, and total of lactic acid bacteria (LAB). The data obtained were analyzed with analysis of variance using one way ANOVA, and followed with Duncan Multiple Range Test. The results showed that there were no significant on acidification rate to achive pH 4,6. Quality of products also showed that were no significant on pH, titratable acidify, total solid, lactose, fat, and protein contents, and total Lactic Acid Bacteria. Viscosity of products of P4 and P5 ($796,83 \pm 50,56$ cP and $833,53 \pm 14,07$ cP) were higher ($P < 0,05$) than control and other treatmeants. Local starters from etawah crossbred goat's milk (Lp and Pp) showed good acidification capability in yoghurt produced from goat's milk, and could be used as *single culture* or *co-culture*.

Keywords : Goat's milk, yoghurt, *L. paracasei* M104, *P. pentosaceus* M103