

ABSTRACT

PHYSICAL QUALITY OF COW'S MILK YOGURT WITH THE ADDITION OF SUKARI DATE JUICE (*Phoenix dactylifera* L. VAR. SUKARI)

By

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This study aimed to determine the effect of adding Sukari date juice (*Phoenix dactylifera* L. var. Sukari) on the physicochemical characteristics of cow's milk yogurt, including pH, total acidity, and viscosity. The study was conducted in January 2026 at the Animal Production Laboratory, Department of Animal Husbandry, Faculty of Agriculture, University of Lampung, and the Agricultural Product Technology Laboratory, Politeknik Negeri Lampung. The research used a Completely Randomized Design (CRD) with five treatments and five replications. The treatments consisted of P0 without Sukari date juice addition, P1 with 5% date juice, P2 with 10% date juice, P3 with 15% date juice, and P4 with 20% date juice (v/v). Data were analyzed using Analysis of Variance (ANOVA) at a 5% significance level followed by the Least Significant Difference (LSD) test. The results showed that the addition of Sukari date juice had a significant effect ($P < 0,05$) on the pH, total acidity, and viscosity of cow's milk yogurt. The pH values ranged from 3,63 to 3,73, with the lowest pH obtained in treatment P4 at $3,63 \pm 0,03$. The total acidity values ranged from 1,01% to 1,17%, with the highest value observed in treatment P0 at $1,17 \pm 0,11\%$, while treatment P4 produced a total acidity value of $1,01 \pm 0,03\%$. Yogurt viscosity ranged from 3,563 to 3,835 cP, with the highest viscosity found in treatment P2 at $3,835 \pm 0,109$ cP. The increase in viscosity was influenced by the fiber and total solids content of date juice, which contributed to the formation of a thicker and more stable yogurt gel structure. The addition of 10% Sukari date juice produced yogurt with a thicker texture and acidity level that still met yogurt quality standards.

Keywords: pH, sukari date juice, total acidity, viscosity, yoghurt.

ABSTRAK

KUALITAS FISIK YOGHURT SUSU SAPI DENGAN PENAMBAHAN SARI KURMA SUKARI (*Phoenix dactylifera* L.VAR. SUKARI)

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Penelitian ini bertujuan untuk mengetahui pengaruh penambahan sari kurma sukari (*Phoenix dactylifera* L. var. Sukari) terhadap karakteristik fisikokimia yoghurt susu sapi meliputi pH, total asam, dan viskositas. Penelitian dilaksanakan pada Januari 2026 di Laboratorium Produksi Ternak Jurusan Peternakan Fakultas Pertanian Universitas Lampung dan Laboratorium Teknologi Hasil Pertanian Politeknik Negeri Lampung. Rancangan penelitian yang digunakan adalah Rancangan Acak Lengkap (RAL) dengan 5 perlakuan dan 5 ulangan. Perlakuan terdiri atas P0 tanpa penambahan sari kurma, P1 penambahan sari kurma 5%, P2 10%, P3 15%, dan P4 20% (v/v). Data dianalisis menggunakan analisis ragam (anara) pada taraf nyata 5% dan dilanjutkan dengan uji Beda Nyata Terkecil (BNT). Hasil penelitian menunjukkan bahwa penambahan sari kurma sukari berpengaruh nyata ($P < 0,05$) terhadap nilai pH, total asam, dan viskositas yoghurt susu sapi. Nilai pH yoghurt berkisar antara 3,63–3,73 dengan nilai pH terendah diperoleh pada perlakuan P4 sebesar $3,63 \pm 0,03$. Nilai total asam yoghurt berkisar antara 1,01–1,17%, dengan nilai tertinggi pada perlakuan P0 sebesar $1,17 \pm 0,11\%$, sedangkan perlakuan P4 menghasilkan total asam sebesar $1,01 \pm 0,03\%$. Nilai viskositas yoghurt berkisar antara 3,563–3,835 cP, dengan viskositas tertinggi pada perlakuan P2 sebesar $3,835 \pm 0,109$ cP. Peningkatan viskositas dipengaruhi oleh kandungan serat dan total padatan sari kurma yang membantu pembentukan struktur gel yoghurt menjadi lebih kental dan stabil. Penambahan sari kurma sukari 10% memberikan karakteristik yoghurt yang lebih kental dengan tingkat keasaman yang masih sesuai standar mutu yoghurt.

Kata kunci: pH, sari kurma sukari, total asam, viskositas, yoghurt.