# PENGARUH PENAMBAHAN AIR KELAPA *(Cocos nucifera*) TERHADAP KUALITAS YOGURT

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## INTISARI

Yogurt adalah produk susu fermentasi menggunakan bakteri *Lactobacillus bulgaricus* dan *Streptococcus thermophilus.* Penelitian ini bertujuan untuk mengetahui kualitas yogurt yang dikombinasikan dengan air kelapa sebagai bahan dasar pembuatan yogurt. Yogurt dibuat dari kombinasi antara susu bubuk dan air kelapa dengan perbandingan 1:0 (K), 3:1 (P1), 1:1 (P2), dan 1:3 (P3), ditambah susu skim hingga total solid mencapai 15%. Yogurt dibuat dengan inokulasi starter bakteri *Lactobacillus bulgaricus* dan *Streptococcus thermophilus* sebanyak 5% (1:1 v/v). Inkubasi dilakukan pada suhu $42^0$C selama 4 sampai 5 jam. Parameter kualitas produk yang diamati adalah kadar keasaman, pH, bahan kering, protein, lemak, laktosa, total bakteri asam laktat (BAL), dan kualitas organoleptik yogurt. Data yang diperoleh dianalisis dengan analisis variansi pola faktorial 2x4 dan dilanjutkan dengan Duncan's New Multiple Range Test (DMRT). Data uji organoleptik, dianalisis non parametrik dengan uji Kruskal-Wallis. Kombinasi susu bubuk dan air kelapa pada pembuatan yogurt dengan perlakuan K, P1, P2, dan P3 menunjukkan pengaruh yang signifikan ($P<0,05$) pada keasaman, berturut-turut yaitu 0,68, 0,73, 0,73, dan 0,72%, pH ($P<0,05$) berturut-turut yaitu 4,38, 4,35, 4,35 dan 4,33, total solid ($P<0,05$) berturut-turut yaitu 15,75, 15,70, 15,58, dan 15,54%, dan kadar lemak ($P<0,05$) berturut-turut yaitu 17,11, 15,00, 13,89, dan 11,67%. Hasil analisis menunjukkan bahwa tidak terdapat perbedaan pada kadar protein, kadar laktosa dan total BAL yogurt. Penilaian terhadap uji organoleptik menunjukkan hasil yang tidak signifikan pada penampilan, warna, aroma, rasa, dan daya terima. Hasil uji kadar asam laurat menunjukkan peningkatan kadar asam laurat dalam yogurt dari 0,1510 mg/100g (K) menjadi 1,3010 mg/100g (P3). Berdasarkan hasil penelitian, dapat disimpulkan bahwa yogurt dengan penambahan air kelapa sampai perbandingan 1:3 (P3), dapat diterima panelis dan sesuai dengan Standar Nasional Indonesia.

Kata kunci: Yogurt, Air kelapa, Kualitas.

# EFFECT OF ADDITION COCONUT WATER *(Cocos nucifera*) ON YOGURT QUALITY

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## *ABSTRACT*

Yogurt is fermented milk product of *Lactobacillus bulgaricus* and *Streptococcus thermophilus* bacteria. The purpose of this study was to determine the quality of yogurt combined with coconut water as a base for the manufacture of yogurt. Yogurt was made of combination of milk powder and coconut water with ratio of 1:0 (K), 3:1 (P1), 1:1 (P2) and 1:3 (P3). It was added with skim milk up to 15% of total solid. Yogurt was inoculated by starter of *Lactobacillus bulgaricus* and *Streptococcus thermophilus*, as much as 5% (1:1 v/v). Incubation was conducted at $42^0$C during 4 until 5 hours. Product quality parameters were acidity, pH, total solid, protein, fat, lactose, total of lactic acid bacteria (LAB), organoleptic quality, and level of lauric acid in the yogurt. Data were analyzed using the variance analysis with factorial 2x4 pattern and it continued with Duncan's New Multiple Range Test (DMRT). Organoleptic test data were analyzed with non parametric Kruskal-Wallis test. Yogurt made of combination of milk powder and coconut water with treatments K, P1, P2, and P3 showed significant result on acidity (P<0,05), respectively 0,68, 0,73, 0,73, and 0,72%, pH (P<0,05), respectively 4,38, 4,35, 4,35 and 4,33, total solid (P<0,05), respectively 15,75, 15,70, 15,58, and 15,54%; and fat content (P<0,05), respectively 17,11, 15,00, 13,89, and 11,67%;. The analysis result showed that there were no significant effect on lactose, LAB total and protein content of yogurt. Assessment of organoleptic test showed that there were no significant effect on the appearance, color, flavour, taste, and acceptance. Levels of lauric acid could increased from 0,1510 mg/100g (K) to 1,3010 mg/100g (P3). Based on the results of the study, it concluded that yogurt with the addition of coconut water up to the ratio of 1 : 3 ( P3 ) could be accepted by panelist and accordance with Standar Nasional Indonesia.

Key words: Yogurt, Coconut water, Quality