

PENGARUH PENGGUNAAN LESITIN SOYA SEBAGAI EMULSIFIER TERHADAP KUALITAS FISIKO-KIMIA DAN ORGANOLEPTIK ES KRIM SUSU KAMBING PERANAKAN ETTAWA

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INTISARI

Penelitian ini bertujuan untuk mengetahui pengaruh penggunaan lesitin soya sebagai *emulsifier* terhadap kualitas fisiko-kimia dan organoleptik es krim susu kambing Peranakan Ettawa (PE). Penelitian dilakukan dengan lima taraf penggunaan lesitin soya yaitu 0; 0,3; 0,6; 0,9 dan 1,2% pada es krim susu kambing. Parameter yang diamati dalam penelitian ini adalah kualitas fisik yaitu *overrun*, viskositas dan kecepatan pelelehan; kimia yaitu kadar air, lemak dan protein; dan organoleptik yaitu warna, rasa, tekstur, aroma dan daya terima. Data hasil penelitian diolah dengan analisis *One Way Anova* dan dilanjutkan dengan uji Duncan's Multiple Range Test (DMRT). Hasil penelitian menunjukkan bahwa penggunaan lesitin sebagai *emulsifier* sampai level 1,2% secara berurutan berpengaruh nyata ($P < 0,05$) meningkatkan viskositas (11.607,67; 13.195,33; 14.018; 15.166,67; 16.221,33 cP) dan memperlambat waktu leleh (9,73; 10,33; 14,60; 15,27; 15,47 menit), sedangkan *overrun* meningkat hanya sampai pada level penggunaan lesitin 0,9% (54,45; 71,11; 86,67; 103,33; 81,11%). Level lesitin semakin tinggi berpengaruh nyata ($P < 0,05$) menyebabkan penurunan kadar air (62,85; 62,83; 62,66; 62,43; 62,25%), peningkatan kadar lemak (10,23; 12,13; 12,33; 13,73; 18,13%) dan peningkatan kadar protein (5,13; 5,42; 5,64; 5,83; 5,89%). Penggunaan lesitin soya berpengaruh nyata ($P < 0,05$) meningkatkan warna es krim mendekati kuning (putih sampai agak putih) dan meningkatkan tekstur es krim (agak lembut sampai sangat lembut), tetapi tidak berpengaruh terhadap rasa, aroma dan daya terima. Penggunaan lesitin soya 1,2% menghasilkan kualitas fisiko-kimia dan organoleptik yang paling baik.

(Kata kunci: Susu kambing, Lesitin soya, *Emulsifier*, Kualitas fisiko-kimia dan organoleptik, Es krim)

THE EFFECT OF USING SOY LECITHIN AS EMULSIFIER ON THE PHYSICO-CHEMICAL AND ORGANOLEPTIC QUALITY OF ICE CREAM PRODUCED FROM ETTAWA CROSSBRED GOAT MILK

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ABSTRACT

The study was aimed to investigate the effect of using soy lecithin as emulsifier on the physico-chemical and organoleptic quality of ice cream from Ettawa Crossbred goat milk. The study was conducted with five level of adding soy lecithin which were 0; 0.3; 0.6; 0.9 and 1.2% in goat milk ice cream. The parameters were observed in this study included the physical quality of overrun, viscosity and melting time; and chemical which were water, fat and protein content; included organoleptic which were color, taste, texture, smell and appetite. The data output was processed using One Way Anova and then continue with the implementation of Duncan's Multiple Range Test (DMRT). The output of the study revealed that lecithin use as emulsifier up to the level of 1.2% increased viscosity (11,607.67; 13,195.33; 14,018; 15,166.67; 16,221.33 cP) and decreased melting time (9.73; 10.33; 14.60; 15.27; 15.47 minutes), while the overrun increased only when lecithin use level up to 0.9% (54.45; 71.11; 86.67; 103.33; 81.11%). The higher level of lecithin had significant effect ($P < 0.05$) of decreased water content (62.85; 62.83; 62.66; 62.43; 62.25%), increased fat content (10.23; 12.13; 12.33; 13.73; 18.13%) and increased protein content (5.13; 5.42; 5.64; 5.83; 5.89%). The use of soy lecithin had the significant effect ($P < 0.05$) of turned the ice cream color into yellowish and increased the ice cream texture (soft to very soft), but had no significant effect to taste, flavor and appetite. The use of soy lecithin at 1.2% resulted the best physico-chemical and organoleptic quality.

(Keywords: Goat milk, Soy Lecithin, Emulsifier, Physico-chemical and organoleptic quality, Ice cream)