

ABSTRACT

THE EFFECT OF DURIAN FRUIT (*Durio zibethinus Murr*) FORMULATION ON THE MAKING OF GOAT MILK ICE CREAM ON PANELIST'S PREFERENCE AND PHYSICOCHEMICAL PROPERTIES

By

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Goat milk had a distinctive goat-like odor, which caused many people or consumers to dislike goat milk because of its smell. The ice cream production process included pasteurization, which could reduce the volatile content, and freezing, which prevented the volatiles in the ice cream from evaporating. The ice cream-making process could reduce the goat-like odor in goat milk. Durian fruit could serve as an alternative to mask the aroma produced by goat milk ice cream. This research was conducted to find the formulation of durian pulp to achieve an ice cream product that met the best commercial ice cream standards. The formulations used durian pulp at 0% (F0), 2.5% (F1), 5% (F2), 7.5% (F3), 10% (F4), 12.5% (F5), 15% (F6), and 17.5% (F7), with a total ingredient amount of 518 grams for each formulation without durian. Observations of the ice cream product were conducted through hedonic tests based on aroma, taste, color, texture, and overall acceptance, as well as physical observations including emulsion stability, overrun, and melting rate of the ice cream, and quality observations based on chemical content. The 15% durian pulp formulation (F6) produced the best ice cream according to emulsion stability. The observations showed overrun (47.70%), melting rate (27 minutes, 11 seconds), emulsion stability (88.51%), color (3.23, liked), aroma (3.12, liked), taste (3.43, liked), texture (3.18, liked), and overall acceptance (3.36, liked), with fat content (5.06%), protein content (4.77%), total solids (30.27%), and total plate count of 6.13×10^6 .

Keywords: Aroma, durian fruit, goat milk, ice cream, and volatile

ABSTRAK

PENGARUH FORMULASI DAGING BUAH DURIAN (*Durio zibethinus* Murr) PADA PEMBUATAN ES KRIM SUSU KAMBING TERHADAP SIFAT SENSORI DAN FISIKOKIMIA

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Susu kambing memiliki aroma prengus khas kambing sehingga membuat masyarakat atau konsumen susu banyak tidak menyukai susu kambing karena aromanya. Proses pembuatan es krim melalui proses pasteurisasi yang dapat mengurangi kandungan volatil dan melalui tahap pembekuan sehingga volatile yang terkandung dalam es krim tidak dapat menguap. Proses pembuatan es krim dapat mengurangi aroma prengus dalam susu kambing. Buah durian dapat menjadi alternatif untuk menutupi kekurangan dari aroma yang dihasilkan es krim susu kambing. Penelitian ini dilaksanakan untuk menemukan formulasi daging buah durian agar didapatkan produk es krim sesuai standar terbaik es krim komersial. Formulasi dari daging buah durian sebesar 0% (F0), 2,5% (F1), 5% (F2), 7,5% (F3), 10% (F4), 12,5% (F5), 15% (F6), 17,5% (F7), dengan total bahan setiap formulasi tanpa buah durian sebesar 518 gram. Pengamatan yang telah dilakukan pada hasil produk es krim yaitu dengan uji hedonik berdasarkan pengamatan aroma, rasa, warna, tekstur, dan penerimaan keseluruhan, untuk pengamatan fisik yaitu stabilitas emulsi, daya kembang dan daya leleh es krim serta pengamatan mutunya berdasarkan kandungan kimia. Formulasi penambahan buah durian 15% (F6) menghasilkan es krim terbaik dari pengamatan stabilitas emulsi. Hasil pengamatan daya kembang (47,70%), kecepatan leleh (27 menit, 11 detik), stabilitas emulsi (88,51%), warna 3,23 (suka), aroma 3,12 (suka) rasa 3,43 (suka), tekstur 3,18 (suka), dan penerimaan keseluruhan 3,36 (suka), kadar lemak (5,06%), kadar protein (4,77%), total padatan sebesar (30,27%), dan total plate count $6,13 \times 10^6$.

Kata kunci: Aroma, buah durian, es krim, susu kambing, dan volatil.