

ABSTRACT

Lily Siti Balqis. B.2110023. Physicochemical and Sensory Characteristics of Ice Cream with Addition of Dayak Onion Extract. Supervised Rosy Hutami and Intan Kusumaningrum.

Dayak onions contain antioxidants that can be utilized in functional foods. Dayak onions also have potential as a natural food coloring. There is a need for research on the addition of dayak onion extract to food products with minimal heat processing such as ice cream to maintain antioxidants and color. The purpose of this study was to determine the effect of the addition of dayak onion extract on the physicochemical and sensory characteristics of ice cream. The method used was Completely Randomized Design 1 factor with 4 treatment levels namely P0 (0%), P1 (0.25%), P2 (0.5%), and P3 (0.75%). Based on the analysis of variance, the addition of dayak onion extract gave a significant effect on lightness, a* value, b* value, pH, antioxidant activity, color, taste, aftertaste, and overall impression of ice cream at a significance level of 0.05 ($p < 0.05$). However, the addition of dayak onion extract did not significantly affect the overrun, melting time, water content, ash content, protein content, fat content, carbohydrate content, aroma, and texture of ice cream. The selected ice cream product with the addition of dayak onion extract is P1 (0.25%) with careys pink color, lightness 75.02, a* value 12.34, b* value 9.40, overrun 46.29%, melting time 17.29 minutes, pH 6.343, and showed very weak antioxidant activity with 481.35 mg/L IC₅₀ value. The total energy of ice cream with the addition of selected dayak onion extract obtained from fat, protein, and carbohydrates amounted to 88.07 kcal from a serving size of 60 g.

Keywords: *Eleutherine palmifolia*, dessert, antioxidant, colorant, functional food, pigment

ABSTRAK

Lily Siti Balqis. B.2110023. Karakteristik Fisikokimia dan Sensori Es Krim dengan Penambahan Ekstrak Bawang Dayak. Di bawah bimbingan Rosy Hutami dan Intan Kusumaningrum.

Bawang dayak mengandung antioksidan yang dapat dimanfaatkan pada pangan fungsional. Bawang dayak juga berpotensi sebagai pewarna makanan alami. Perlu adanya penelitian penambahan ekstrak bawang dayak pada produk pangan dengan pengolahan panas minimal seperti es krim untuk menjaga antioksidan dan warnanya. Penelitian dilakukan untuk mengetahui pengaruh penambahan ekstrak bawang dayak pada karakteristik fisikokimia dan sensorial es krim. Metode yang digunakan adalah RAL (Rancangan Acak Lengkap) 1 faktor dengan 4 taraf perlakuan yaitu P0 (0%), P1 (0,25%), P2 (0,5%), dan P3 (0,75 %). Berdasarkan analisis sidik ragam, penambahan ekstrak bawang dayak memberikan pengaruh nyata terhadap *lightness*, nilai a^* , nilai b^* , pH, aktivitas antioksidan, warna, rasa, *aftertaste*, dan, kesan keseluruhan es krim pada taraf signifikansi 0,05 ($p < 0,05$). Namun, penambahan ekstrak bawang dayak tidak memberikan pengaruh nyata terhadap *overrun*, waktu leleh, kadar abu, kadar air, kadar lemak, kadar protein, kadar karbohidrat, tekstur, dan aroma es krim. Produk es krim dengan penambahan ekstrak bawang dayak terpilih adalah P1 (0,25%) dengan warna *careys pink*, *lightness* 75,02, nilai a^* 12,34, nilai b^* 9,40, *overrun* 46,29%, waktu leleh 17,29 menit, pH 6,343, dan memiliki aktivitas antioksidan sangat lemah dengan nilai IC_{50} 481,35 mg/L. Energi total es krim dengan penambahan ekstrak bawang dayak terpilih yang diperoleh dari lemak, protein, dan karbohidrat sebesar 88,07 kkal dari takaran saji 60 g.

Kata kunci: *Eleutherine palmifolia*, *dessert*, antioksidan, pewarna, pangan fungsional, pigmen