

## **KARAKTERISTIK ES KRIM DENGAN VARIASI LEVEL *RICE BRAN OIL* SEBAGAI SUBSTITUSI *WHIPPED CREAM***

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### **INTISARI**

Es krim merupakan salah satu produk olahan susu yang paling digemari masyarakat secara umum di segala usia dan bernilai ekonomi tinggi. Tujuan penelitian ini untuk mengetahui karakteristik fisiko-kimia, sensoris dan aktivitas antioksidan es krim dengan variasi level *rice bran oil* (RBO) sebagai substitusi *whipped cream*. Penelitian ini terdiri dari variasi level RBO 0; 5 dan 10% (b/b) sebagai substitusi *whipped cream*. Parameter kualitas es krim yang dianalisis meliputi kualitas fisik (*overrun*, viskositas, titik leleh), kimia (kadar lemak dan pH), sensoris (tekstur, rasa, warna, aroma), dan aktivitas antioksidan. Data dianalisis menggunakan analisis variansi dalam rancangan acak lengkap pola searah dan dilanjutkan dengan *Duncan's New Multiple Range Test* (DMRT). Hasil penelitian menunjukkan bahwa variasi level RBO sebagai substitusi *whipped cream* berpengaruh signifikan ( $p < 0,05$ ) pada kualitas fisik yaitu waktu leleh dan tidak berpengaruh terhadap *overrun*, viskositas es krim, kualitas kimia (kadar air, lemak, pH), tetapi berpengaruh terhadap aktivitas antioksidan es krim. Rerata hasil uji es krim dengan substitusi RBO 0%; 5%; 10% berturut-turut mempunyai waktu leleh 55, 50 dan 43 menit, *overrun* 48,12; 52,02 dan 60,35%, viskositas 1.283; 1.614,33 dan 1.924,33cP, pH 6,95; 7,61 dan 7,19, kadar air 63,27; 62,23 dan 63,62%, kadar lemak 10,93; 10,67 dan 10,32%, aktivitas antioksidan 26,53; 35,74 dan 41,93%, nilai sensori 4,23; 4,13 dan 4,27 (4 = suka). Kesimpulannya adalah variasi level RBO sebagai substitusi *whipped cream* tidak mempengaruhi kualitas kimia dan sensoris, menurunkan waktu leleh, tetapi dapat meningkatkan aktivitas antioksidan es krim.

Kata kunci: Es krim, *Rice bran oil*, RBO, Kualitas fisik, Kualitas kimia, Kualitas sensoris, Aktivitas antioksidan

## **THE CHARACTERISTIC OF ICE CREAM WITH VARYING LEVEL OF RICE BRAN OIL AS WHIPPED CREAM SUBSTITUTION**

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### **ABSTRACT**

Ice cream is one of the most popular dairy products by the public at all ages and has high economic value. The aim of this study was to determine the physical, chemical, sensory characteristics and antioxidant activity of ice cream with varying levels of rice bran oil (RBO) as a substitute for whipped cream. This study consisted of variations in the level of RBO 0; 5 and 10% as a substitute for whipped cream. The ice cream quality parameters analyzed included physical quality (overrun, viscosity, melting point), chemical (fat content and pH), sensory (texture, taste, color, flavour), and antioxidant activity. The research data were statistically tested using One Way ANOVA and continued with Duncan's New Multiple Range Test (DMRT). The results showed that variations in the level of RBO as a substitute for whipped cream had a significant effect ( $p < 0.05$ ) on the physical quality, namely melting time and had no effect on the overrun, viscosity of ice cream, chemical quality (moisture content, fat content, pH), but affect the antioxidant activity of ice cream. The average test results of ice cream with 0%; 5%; 10% RBO substitution respectively had melting times of 55, 50 and 43 minutes, overrun 48.12; 52.02 and 60;35%, viscosity 1,283; 1,614.33 and 1,924.33cP, pH 6.95; 7.61 and 7.19, water content 63.27; 62.23% and 63.62%, fat content 10.93%; 10.67% and 10.32%, sensory value 4.23; 4.13 and 4.27, antioxidant activity 26.53; 35.74 and 41.93%. The conclusion was variations in the level of RBO as a substitute for whipped cream did not affect the chemical and sensory quality but decreased melting time and could increase the antioxidant activity of ice cream.

**Keywords:** Ice cream, Rice bran oil, RBO, Physical quality, Chemical quality, Sensory quality, Antioxidant activity