

## **Pengaruh Penambahan bubuk Teh Hijau (*Camellia sinensis*) terhadap Sifat Fisiko-kimia dan Aktivitas Antioksidan Gelato**

oleh

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### **INTISARI**

Pembuatan gelato dengan penambahan bubuk teh hijau dikarenakan teh hijau memiliki aktivitas antioksidan yang relatif tinggi. Penelitian ini bertujuan untuk mengetahui pengaruh penambahan bubuk teh hijau terhadap sifat fisiko-kimia, uji kesukaan, dan aktivitas antioksidan gelato. Penelitian ini menggunakan 3 perlakuan yaitu tanpa penambahan, dengan penambahan 1,5% (w/v), dan 3% (w/v) teh hijau dalam gelato. Analisis sifat fisika yang dilakukan yaitu uji *overrun*, titik leleh, dan total padatan, sedangkan analisis sifat kimia yang dilakukan yaitu nilai pH, kadar lemak, total gula, dan aktivitas antioksidan, serta sifat sensoris gelato. Analisis data menggunakan *one way* ANOVA dengan ulangan sebanyak 3 kali. Hasil penelitian menunjukkan penambahan bubuk teh hijau sebanyak 3% berpengaruh ( $P < 0,05$ ) terhadap peningkatan *overrun*, penurunan nilai pH, dan peningkatan aktivitas antioksidan, namun tidak berpengaruh ( $P > 0,05$ ) terhadap peningkatan titik leleh, total padatan, total gula, kadar lemak, dan sifat sensoris. Rerata *overrun*, nilai pH, dan aktivitas antioksidan gelato dengan penambahan 3% bubuk teh hijau vs 0% berturut turut yaitu  $33,33 \pm 0,75\%$  vs  $31,59 \pm 0,87\%$ ;  $6,13 \pm 0,04$  vs  $6,53 \pm 0,01$ ;  $48,53 \pm 2,94\%$  vs  $20,28 \pm 1,40\%$ . Penambahan bubuk teh hijau terhadap gelato tidak berpengaruh nyata terhadap titik leleh dengan rerata  $2.707,55 \pm 70,89$  detik, total padatan  $34,92 \pm 1,95\%$ , total gula  $13,19 \pm 1,19\%$ , kadar lemak  $4,70 \pm 1,52\%$ . Sifat sensoris memiliki rerata warna yaitu  $6,76 \pm 1,48$ , rerata sensoris rasa yaitu  $6,71 \pm 1,53$ , rerata sensoris aroma yaitu  $6,30 \pm 1,35$ , rerata sensoris tekstur yaitu  $6,51 \pm 1,47$ , rerata sensoris daya terima yaitu  $6,83 \pm 1,37$ . Kesimpulan dari penelitian ini menunjukkan bahwa gelato yang diberi penambahan bubuk teh hijau 3% meningkatkan aktivitas antioksidan, *overrun*, dan menurunkan nilai pH, namun tidak mempengaruhi terhadap titik leleh, total padatan, kadar lemak, kadar total gula, dan sifat sensoris gelato.

(Kata kunci : Gelato, Teh hijau, Sifat fisiko–kimia, Sensoris, Aktivitas antioksidan)

## **The Effect of Addition of Green Tea Powder (*Camellia sinensis*) on The Physicochemical Properties and Antioxidant Activities of Gelato**

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### **ABSTRACT**

Gelato was made with the addition of green tea powder because it has a relatively high antioxidant activity. This study aims to determine the effect of the addition of green tea to the physico-chemical properties, test preferences, and antioxidant activity of gelato. This study used 3 treatments namely without addition, with the addition of 1.5%, and 3% green tea in gelato. Analysis of physical properties performed were overrun, melting point, and total solids tests, while chemical properties were analyzed for pH, fat content, total sugar, and antioxidant activity, and gelato sensory properties. Data analysis used one way ANOVA with 3 replications. The results showed that the addition of green tea powder by 3% had an effect ( $P < 0.05$ ) on an increase in overrun, a decrease in pH value, and an increase in antioxidant activity, but no effect ( $P > 0.05$ ) on an increase in melting point, total solids, total sugar, fat content, and sensory properties. The mean overrun, pH value, and antioxidant activity of gelato with the addition of 3% green tea powder vs 0% respectively were  $33.33 \pm 0.75\%$  vs  $31.59 \pm 0.87\%$ ;  $6.13 \pm 0.04$  vs  $6.53 \pm 0.01$ ;  $48.53 \pm 2.94\%$  vs  $20.28 \pm 1.40\%$ . The addition of green tea powder to gelato had no significant effect on melting points which had an average of  $2,707.55 \pm 70.89$  seconds, total solids of  $34.92 \pm 1.95\%$ , total sugar  $13.19 \pm 1.19\%$ , fat content of  $4.70 \pm 1.52\%$ . Sensory properties have a mean color of  $6.76 \pm 1.48$ , mean sensory taste of  $6.71 \pm 1.53$ , mean sensory aroma of  $6.30 \pm 1.35$ , texture sensory mean of  $6.51 \pm 1.47$ , the sensory average of acceptance was  $6.83 \pm 1.37$ . The conclusion of this study shows that gelato which is added with 3% green tea powder increases antioxidant activity, overrun, and decreases the pH value, but does not affect the melting point, total solids, fat content, total sugar content, and gelato sensory properties.

(Keywords: Gelato, Green tea, Physicochemical properties, Sensory, Antioxidant activity)