

PENGARUH PENAMBAHAN TEPUNG WIJEN HITAM (*Sesamun indicum* L.) TERHADAP KUALITAS FISIKO-KIMIA DAN AKTIVITAS ANTIOKSIDAN ES KRIM SUSU KAMBING

Sanaul Laily
13/349179/PT/06555

INTISARI

Penelitian ini bertujuan untuk mengetahui pengaruh penambahan wijen hitam (*Sesamun indicum* L.) terhadap kualitas fisiko-kimia (*overrun*, titik leleh, viskositas, kadar *total solid*, lemak, protein, *free fatty acid*, gula reduksi), aktivitas antioksidan, dan sifat organoleptik es krim susu kambing. Penelitian ini dilakukan menggunakan penambahan wijen hitam dengan berbagai level yaitu 0%, 3%, dan 6% (w/w) dengan tiga kali pengulangan sampel. Data hasil penelitian dianalisis menggunakan analisis variansi pola searah dan dilanjutkan dengan *Duncan's New Multiple Range Test* (DMRT). Hasil penelitian menunjukkan penambahan wijen hitam berpengaruh ($P < 0,01$) terhadap *overrun*, titik leleh, viskositas, *total solid*, kadar lemak, kadar protein, kadar *free fatty acid*, namun tidak memberikan pengaruh terhadap kadar gula reduksi. Penambahan wijen hitam 0%, 3%, 6% (w/w) dapat meningkatkan viskositas berturut-turut sebesar $120,92 \pm 13,29$; $277,26 \pm 17,72$; dan $661,37 \pm 50,63$ cP. Penambahan wijen hitam 6% pada es krim susu kambing dapat menurunkan *overrun* dari $64,61 \pm 0,98\%$ menjadi $35,46 \pm 2,79\%$, serta dapat meningkatkan aktivitas antioksidan dari $3,38 \pm 0,68\%$ menjadi $14,37 \pm 2,20\%$. Sifat organoleptik es krim terdapat perbedaan ($P < 0,05$) pada warna, rasa, dan daya terima es krim, sedangkan aroma dan tekstur tidak berpengaruh dengan adanya penambahan wijen hitam. Kesimpulan dari penelitian ini adalah es krim susu kambing dengan penambahan wijen hitam sampai 6% dapat meningkatkan kualitas fisiko-kimia, aktivitas antioksidan, dan sifat organoleptik.

Kata kunci: Susu kambing, Es krim, Wijen hitam, Kualitas fisiko-kimia, Aktivitas antioksidan, Sifat organoleptik

THE EFFECT OF BLACK SESAME SEED (*Sesamun indicum*) ON PHYSICO-CHEMICAL CHARACTERISTIC, ANTIOXIDANT ACTIVITY OF GOAT MILK ICE CREAM

Sanaul Laily
13/349179/PT/06555

ABSTRACT

The aim of this study was to determine the effect of black sesame seed addition on the quality of ice cream, including physico-chemical qualities (overrun, melting point, viscosity, *total solid*, fat, protein, free fatty acid, reducing sugar contents), organoleptic properties and antioxidant activity. Goat milk ice cream was made by 0%, 3%, and 6% (w/w) black sesame seed. The data were tested with One Way ANOVA and continued with Duncan's New Multiple Range Test (DMRT). The results showed that the addition of black sesame seed into goat milk ice cream has an effect ($P < 0,01$) on overrun, melting point, viscosity, total solid, fat, protein, free fatty acid, but had no effect on reducing sugar content. The results showed that the addition of 0%, 3%, 6% black sesame seed increased viscosity of $120,92 \pm 13,29$; $277,26 \pm 17,72$; and $641,37 \pm 50,63$ cP. The addition of 6% black sesame seed into goat milk ice cream decreased overrun from $62,61 \pm 0,98\%$ to $33,46 \pm 2,79\%$, and also increased antioxidant activity from $3,38 \pm 0,68\%$ to $14,37 \pm 2,20\%$. Organoleptic properties ice cream had an effect ($P < 0,05$) on color, taste, and acceptability of ice cream, but had no effect on flavor and texture of goat milk ice cream with black sesame addition. In conclusion, goat milk ice cream with the addition of 6% black sesame seed was able to increase physico-chemical quality, antioxidant activity, and organoleptic properties.

Key word: Goat milk, Ice cream, Black sesame seed, Physico-chemical quality, Antioxidant activity, Organoleptic properties