KARAKTERISTIK FISIKO-KIMIA DAN ORGANOLEPTIK MENTEGA BERBASIS SUSU KAMBING PERANAKAN AFRICAN DWARF (PAD) DAN PERANAKAN ETTAWA (PE)

INTISARI

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Komposisi susu dan profil asam lemak susu kambing dipengaruhi oleh bangsa kambing dan berdampak pada sifat fisiko-kimia dan organoleptik mentega. Penelitian ini bertujuan untuk mengetahui profil asam lemak susu kambing Peranakan African Dwarft (PAD) dan kambing Peranakan Etawa (PE) yang dipelihara pada peternakan rakyat dan pengaruhnya terhadap kualitas fisiko-kimia dan organoleptik mentega yang dihasilkan. Analisis dalam penelitian ini menggunakan pola factorial untuk parameter FFA, bilangan peroksida, pH, dan kekerasan. Komposisi susu dan profil asam lemak dianalisis menggunakan T-test. Parameter organoleptic dianalisis secara non-parametrik menggunakan Kruskall-Wallis Test. Hasil analisis menunjukkan profil asam lemak susu kambing PE memiliki kadar asam lemak C4:0, C6:0, C12:0, C14:0 lebih tinggi dari pada susu kambing PAD ($P<0,05$), sedangkan susu kambing PAD memiliki kadar asam lemak C15:0, C20:0 dan C16:1 lebih tinggi ($P<0,05$). Susu kambing PE memiliki globula lemak lebih kecil dari pada susu kambing PAD ($P<0,05$). Rendemen mentega kambing PAD lebih tinggi dibanding mentega kambing PE ($P<0,05$). Titik leleh dan kekerasan mentega susu kambing PAD lebih tinggi dibanding mentega susu kambing PE ($P<0,05$). Terjadi kenaikan nilai FFA, bilangan peroksida dan penurunan nilai pH selama penyimpanan ($P<0,05$). Terjadi kenaikan rasa asam, *goaty flavor*, serta bau tengik, namun tidak ada perubahan terhadap kemudahan mengoles dan tingkat kesukaan terhadap kedua jenis mentega, antara sangat mudah-mudah untuk dioles dan tidak suka-agak suka secara berurutan. Dapat disimpulkan bahwa susu PE dan PAD memiliki komposisi dan menghasilkan karateristik mentega yang berbeda. Mentega susu kambing PE dan PAD masih baik dikonsumsi sampai penyimpanan 40 hari.

Kata Kunci: Kambing Peranakan Nigerian Dwarf (PAD), Kambing Peranakan Ettawa (PE), Komposisi Susu Kambing, Profil Asam Lemak Susu, Mentega.

PHYSICO-CHEMICAL AND ORGANOLEPTIC CHARACTERISTICS OF BUTTER MADE FROM AFRICAN DWARF CROSSBREED (PAD) AND ETTAWA CROSSBREED (PE) MILK

ABSTRACT

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The composition and fatty acid profile of goat milk can be influenced by the breed and has an impact on the physico-chemical and sensory of dairy products, especially butter. This research was conducted on the fatty acid profiles of African Dwarft Crossbreed (PAD) and Etawa Crossbreed (PE) reared by small-scale dairy farmers in Yogyakarta and the physico-chemical quality and sensory that was produced during storage in a refrigerator for 40 days. The analysis used in this study uses a factorial for FFA value, peroxide value, pH, and hardness. The composition and fatty acid profile of milk were analyzed using the T-test. Organoleptic parameters were analyzed non-parametrically using the Kruskall-Wallis Test. The results showed that PE milk has higher C4:0, C6:0, C12:0 and C14:0, while PAD has higher C15:0, C20:0, and C16:1. PE milk had smaller fat globules than PAD milk ($P<0.05$). The yield from cream to butter of PAD was higher than PE ($P<0.05$). The melting point and hardness of PAD butter were higher than PE butter ($P<0.05$). There was an increase in FFA and peroxide values and also a decrease in the pH value of both butters ($P<0.05$). There was an increase in the sourness, goaty flavor, and rancidness, but there was no change in the spreadability and preferences for the two types of butter, which ranged from easy-very easy to spread and dislike – rather like, respectively. It can be concluded that PE and PAD milk have different compositions and produce butter with different characteristics. Both types of butter are still best for consumption for up to 40 days in refrigerator storage, despite decrease in quality.

Key Words: African Dwarf Crosbreed (PAD), Ettawa Crossbreed (PE), Milk Composition, Fatty Acid Profile, Butter.