ABSTRAK

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PERUBAHAN KARAKTERISTIK FISIKOKIMIA BIJI KAKAO (*Theobroma cacao* L.) SELAMA FERMENTASI
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(xii + 38 halaman; 3 gambar; 5 tabel; 2 lampiran)

Biji kakao adalah biji yang berasal dari tanaman kakao (*Theobroma cacao* L.) dengan cara dicuci untuk membantu menghilangkan *pulp* yang melapisi biji kakao dan dikeringkan. Pengolahan biji kakao di Indonesia menghasilkan kualitas rendah, seperti tingkat keasaman tinggi dan terkontaminasi serangga dan kapang. Fermentasi merupakan faktor penting selama pengolahan pascapanen biji kakao untuk meningkatkan prekursor aroma, warna, dan rasa khas kakao. Tujuan dari kajian pustaka ini adalah mengetahui perubahan karakteristik fisikokimia biji kakao selama fermentasi dan pengaruh faktor-faktor dalam fermentasi terhadap kualitas biji kakao yang dihasilkan. Keberhasilan fermentasi biji kakao dipengaruhi oleh berbagai faktor, seperti lama fermentasi, interval pengadukan, wadah, varietas, dan lokasi biji. Varietas biji kakao, seperti Klon Lokal, Klon Sulawesi 2, dan Kakao Lindak menghasilkan kadar air terbaik selama 6 hari fermentasi sesuai dengan SNI. Perlakuan jenis wadah, nilai pH kotak kayu berkisar 5,07-5,8 selama 10 hari fermentasi tidak sesuai dengan teori, keranjang bambu selama 5 hari fermentasi adalah 3,452-7,117, dan karung plastik selama 4 hari fermentasi adalah 4,05-4,18. Lokasi biji kakao di Karossa menghasilkan kadar lemak tertinggi (52,87%) selama 5 hari fermentasi, sedangkan di Tompobulo menghasilkan kadar lemak terendah (45,41%) selama 3 hari fermentasi. Kadar asam lemak bebas biji kakao pada lokasi Tapalang, Tapalang Barat, Kaluku, dan Karossa selama 5 hari fermentasi telah memenuhi standar yang ditetapkan oleh *Codex Alimentarius*. Nilai uji belah biji kakao terbaik diperoleh pada interval pengadukan setiap 24 jam selama 5 dan 6 hari fermentasi menghasilkan kadar biji tidak terfermentasi (*slaty*) (2-5,77%), biji setengah terfermentasi (4-21,15%), biji terfermentasi penuh (70,19-82%), dan biji berjamur (0-2,88%).

Kata kunci: biji kakao, fermentasi, karakteristik, kualitas, waktu

Referensi: 58 (2010-2021)

ABSTRACT

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CHANGES IN PHYSICOCHEMICAL CHARACTERISTICS OF COCOA BEANS (*Theobroma cacao* L.) DURING FERMENTATION
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Cocoa beans are beans derived from the cacao plant (*Theobroma cocoa* L.) by washing and removing the pulp that wraps the cocoa beans and dried. Cocoa beans processing in Indonesia produces low quality, such as high acidity levels and contaminated by insects and fungi. Fermentation is an important factor during post-harvest processing cocoa beans to determine quality of cocoa beans by forming aroma and flavor precursor. The aim of this literature review was to determine changes in the physicochemical properties cocoa beans during fermentation and to determine the effect of factor in fermentation on quality of cocoa beans obtained. The success of fermentation cocoa beans influenced by several factors, such as duration of fermentation, mixing intervals, type of container, variety, and location of beans. Varieties of cocoa beans, such as Local Clone, Clone Sulawesi 2, and Bulk Cocoa obtain the best water content during six days of fermentation according to SNI. Based on container type for fermentation, wooden box obtained pH value range from 5.07-5.8 during 10 days fermentation and was not in accordance with theory, meanwhile pH of fermentation using bamboo basket after 5 days offermentation were 3.452-7.117, and plastic sacks after 4 days of fermentation were 4,05-4,18. The cocoa beans location in Karossa obtain highest fat content (52.87%) during 5 days of fermentation, meanwhile in Tompobulo obtain lowest fat content (45.41%) during 3 days of fermentation. The free fatty acid content of cocoa beans at the locations of Tapalang, West Tapalang, Kaluku, and Karossa during 5 days fermentation already met the standards set by Codex Alimentarius. Best value cut test on cocoa beans was obtained at mixing intervals of 24 hours during 5 and 6 days fermentation resulting unfermented (slaty) beans (2-5.77%), underfermented beans (4-21.15%), fully fermented beans (70.19-82%), and moldy beans (0-2.88%).

Keywords: cocoa beans, fermentation, characteristic, quality, duration

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