PENGARUH PENAMBAHAN RAGI TAPE PADA FERMENTASI BIJI KAKAO (*Theobroma cacao* L.) TERHADAP KARAKTERISTIK FISIK DAN KIMIA BIJI KAKAO KERING

INTISARI

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Indonesia merupakan produsen kakao terbesar ketiga di dunia. Optimasi potensi tersebut memerlukan upaya peningkatan mutu biji kakao kering. Fermentasi merupakan salah satu tahap penting dalam pengolahan pascapanen kakao yang berperan dalam pembentukan flavor biji kakao yang baik. Aktivitas mikrobia penting dalam pembentukan metabolit yang berperan untuk pengembangan flavor kakao. Penambahan ragi tape diperkirakan dapat mengubah aktivitas mikrobia yang mengarah pada pengembangan fermentasi. Penelitian ini bertujuan mengetahui pengaruh penambahan ragi tape pada fermentasi biji kakao terhadap karakteristik fisik dan kimia biji kakao kering. Selanjutnya penambahan ragi tape diharapkan dapat menjadi alternatif untuk mempersingkat waktu fermentasi.

Pada penelitian ini, biji kakao difermentasi dengan 3 cara; (1)fermentasi dengan penambahan ragi tape selama 5 hari; (2)fermentasi dengan penambahan ragi tape selama 6 hari; dan (3)fermentasi spontan selama 6 hari. Suhu dan pH biji kakao diukur secara periodik selama fermentasi. Biji kakao dianalisis setelah pengeringan, meliputi: indeks gula, indeks nitrogen, indeks warna, total polifenol, serta nilai kecerahan.

Hasil penelitian ini menunjukkan adanya pengaruh signifikan pada parameter-parameter tersebut antara biji kakao kering dari fermentasi dengan penambahan ragi tape selama 5 hari dan fermentasi spontan selama 6 hari. Indeks gula berkisar 4,86 - 12,61%; indeks nitrogen berkisar 78,79 - 100,60%; indeks warna berkisar 0,57 - 0,70; total polifenol berkisar 2,72 - 5,17 mgGAE/g; dan nilai kecerahan berkisar 30,46 - 32,40. Oleh karena itu dapat disimpulkan bahwa penambahan ragi tape dapat mempersingkat waktu fermentasi biji kakao.

Kata kunci : biji kakao, fermentasi, ragi tape

EFFECT OF TAPAI RAGI ADDITION IN COCOA BEANS (*Theobroma cacao* L.) FERMENTATION ON PHYSICAL AND CHEMICAL CHARACTERISTICS OF DRIED COCOA BEANS

ABSTRACT

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Indonesia is the third biggest cocoa producer in the world. In order to optimize the potency, the quality of dried cocoa beans need to be improved. The fermentation is one of the important steps in post-harvest processing of cocoa that plays role on producing well-flavored cocoa beans. Microbial activities are essensial for metabolites production that improve cocoa flavour development. The addition of ragi tapai may alter the microbial activities that improve fermentation process. The research is aimed to determine the effect of ragi tapai addition in cocoa beans fermentation to physical and chemical characteristics of dried cocoa beans. Furthermore, this ragi tapai additon may provide good alternative to shorten fermentation duration.

In this research, cocoa beans were fermented in 3 ways: (1) fementation with ragi tapai addition for 5 days; (2) fementation with ragi tapai addition for 6 days; and (3) spontaneous fermentation for 6 days. Temperature and pH of cocoa beans were measured periodically during fermentation. Cocoa beans were analyzed after drying, include sugar index, nitrogen index, colour index, total poliphenols, and brightness value.

This research result showed that there were effects on parameters between dried cocoa beans from 5 days fermentation with ragi tapai addition and 6 days spontaneous fermentation significanly. Sugar index about 4,86 - 12,61%; nitrogen index about 78,79 - 100,60%; colour index about 0,57 - 0,70; total poliphenols about 2,72 - 5,17 mgGAE/g; and brightness value about 30,46 - 32,40. Thus concluded that ragi tapai addition can shorten the duration of cocoa beans fermentation.

Keywords: cocoa beans, fermentation, tapai ragi