

THE EFFECT OF THE ADDITION OF YEAST ISOLATES ON THE COLOUR DIFFERENTIATION IN COCOA BEANS DURING THE FERMENTATION

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Abstract

The concern of cocoa beans process is the fermentation process. In this process, there is a the formation of potential flavor, bitter taste reduction and improved physical appearance, including the colour of cocoa beans and cocoa beans pieces consistency. During the fermentation process of cocoa beans, the microbes which take a role are acid-forming yeasts and bacteria. Generally, the fermentation of cocoa beans only takes advantage of microbial activity derived from spontaneous inoculation, including contamination of the environment, the worker, cocoa fruit, and the tools used in the process of it. The problem is when the pure yeast isolate added to the fermentation, not be known influence on the final product of fermentation, especially for the colour quality of cocoa beans. The purpose of this research was to determine the effect of the addition of yeast isolates and the time of fermentation of color differentiation in cocoa beans during fermentation. The result of this study is expected to improve the fermentation process in order to improve the quality of cocoa beans, especially the colour of them. The analysis method used in this research includes the descriptive methods and the Random Group Design with factorial arrangement consisting of two factors, the pretreatment factors before the fermentation process (A) with two steps, ie, A0 = no addition of yeast isolates (control) and A1 = with the addition of yeast isolates. The second factor is the length of fermentation (B) with 7 steps, namely fermentation day-0 until the 6th day of fermentation (B0-B6). The conclusion from the result of this research indicates that the addition of yeast isolates and long fermentation gives a real different effect of Fermentation Index and the value of *L, a and b Colour Reader*. The interaction of the addition of yeast isolates and long fermentation give a real effect on Fermentation Index and the value of *L, a and b Colour Reader*. With the addition of yeast isolates and the length of time of fermentation, the brown color that appears in the fermented cocoa beans is better. The Fermentation Index of the treatment with the addition of yeast isolates on day-5 is 1.84 with a value b *Colour Reader* reached 17.5.

Keywords : *Cocoa Fermentation, Yeast Isolates, Colour Differentiation.*

Introduction

Cocoa in Pelita IV is one of commodities which is peculiarly paid attention. To push the increase of national foreign exchange acceptance, then government avert their attention seriously to the increase and the development of cocoa commodity. The effort which are done by the government are expansion, rehabilitation, intensification, diversification. According to Statistical data of Plantation of Indonesia, export volume, Indonesian cocoa

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