Development of Specialty Robusta Coffee with Saccharomyces Cerevisiae Fermentation to Improve Coffee Quality

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Abstract	Robusta coffee is one of the plantation commodities that has an important role in economic activities in Indonesia. Coffee is one of Indonesia's export commodities which is quite important as a foreign exchange earner for the country. Indonesia is listed as the fourth largest coffee producer after Brazil, Vietnam and Colombia. However, in the export market, Indonesia's coffee is still in ninth place. Post-harvest handling of coffee at the farm level generally produces low-quality, random coffee. Therefore, it really needs to be improved in quality to increase competitiveness in the international market. One alternative that is seen as effective is the improvement of the processing process to produce robusta coffee into fine robusta coffee. This study aims to determine the best yeast starter concentration and determine the best fermentation time to produce specialty coffee in the form of fine robusta coffee. This study used two factors, namely yeast concentration using Saccharomyces cerevisiae which included three levels (2%; 3%; 4%) and fermentation time with 3 levels namely 8, 10 and 12 hours. Repetition is carried out three times. The response variables observed were pH and temperature during fermentation, percentage of unpeeled beans, physical quality of rice coffee, density of kamba coffee rice, increase in roast volume, and taste quality. Data were analyzed using Analysis of Variance (ANOVA) with a confidence level of 5% if the ANOVA results showed a significant difference, followed by the Duncan Multiple Range Test (DMRT). The best results were in the R3F3 treatment (4% concentration and 12 hours time) which could produce coffee with the specialty/fine robusta flavor category. Yeast concentration has a significant effect on pH and temperature after fermentation. Meanwhile, the duration of fermentation has a significant effect on pH and temperature and the percentage of seeds that are not peeled. The results of the organoleptic test of the concentration of yeast and the duration of fermentation had a significant effect on the brewing of coffee and the panelists liked it.
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Author	ROPIUDIN, S.TP, M.Si