

## ABSTRACT

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### **APPLICATION OF COCOA POWDER SUBSTITUTE MADE FROM ACIDIFIED AND FERMENTED DURIAN (*Durio zibethinus* L.) SEED IN THE PRODUCTION OF BROWNIES**

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Seed of durian fruit is composed by carbohydrates, protein, and fat which is similar to the composition of cocoa beans. Previous research found that the utilization of durian seed resulted in similar flavor and aroma with chocolate. Nevertheless, there are none reported about the application in food product. Several pretreatments such as, acidification and fermentation, with the combination of roasting time (20, 30, and 40 minutes) and temperature (180°C and 200°C) were studied in this research to find the best treatment that enhance the most similar chocolate flavor and aroma. The processed durian seed powder was then applied to baked product which is brownies to obtain the degree of acceptability and was further compared with the commercial classic and dark cocoa powder. The best treatment for acidified durian seed was found at 180°C for 20 minutes and for fermented durian seed was found at 180°C for 40 minutes. The multiple comparison test with commercial classic and dark cocoa powder shown that both fermented durian seed powder and acidified durian seed powder have the closest similarity with dark cocoa powder. In addition, fermented durian seed have higher degree of acceptability and similarity to dark cocoa powder compared to acidified durian seed.

Keywords : durian seed, chocolate, cocoa powder, roasting time and temperature

Reference : 54 (1995 – 2020)