

Research Title : Application of Watermelon Rinds for Bakery Products
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ABSTRACT

The purpose of the application of watermelon rinds for bakery products is to study an appropriate amount of used watermelon rinds in four of bakery products, such as cookie bar, fruit cake, Eclair with vanilla cream and coconut tarte. The research was planned in accordance with “Randomized Complete Block Design, RCBD”. Sense test by tasting method by giving favorite scores of 9 levels (9 – Point Hedonic Scale), quality test of chemical composition and physical composition, including acceptance test of 100 people towards the products were performed.

The use of watermelon rinds in syrup added in cookie bar at 10%, 15% and 20% of all total ingredients weight, was found that the testing persons favored the cookie bar added watermelon rinds in syrup at 15% of all total ingredients weight. There are of favorite score in appearance, color, smell, taste, food texture and overall at 7.70, 7.90, 7.85, 7.90, 7.80 and 7.80 respectively. When analyzed with One-way ANOVA compared the average of favorite score found that color, smell, taste, food texture and overall, the difference in statistical significant at ($p \leq 0.05$). The approximate chemical compositions of cookie bar added watermelon rinds in syrup at 100g. were consisting of energy 436 Kcal, carbohydrate 57.10g., protein 6.10g. fat 20.40g., moisture 15.20g., and ash 1.24g. physical quality of water activity (A_w) as 0.80. The use of watermelon rinds in syrup substitute cherry in fruit cake at 50%, 75% and 100%, the testing persons favored the watermelon rinds in syrup substitute cherry in fruit cake at 100%. There are of favorite score in appearance, color, smell, taste, food texture and overall at 7.40, 7.90, 7.95, 8.00, 7.90 and 7.75 respectively. When analyzed with One-way ANOVA compared the average of favorite score found that color, smell, taste, food texture and overall, the difference in statistical significant at ($p \leq 0.05$). The approximate chemical compositions of watermelon rinds in syrup substitute cherry in fruit cake at 100g. were consisting of energy 330 Kcal, carbohydrate 63g., protein 6.08g. fat 5.93g., moisture 23.70g., and ash 1.31g. physical quality of water activity (A_w) as 0.78. The use of watermelon rinds added in Eclair

with vanilla cream at 20%, 40% and 60% of vanilla cream weight, was found that the testing persons favored the Eclair with vanilla cream added watermelon rinds at 20% of vanilla cream weight. There are of favorite score in color, smell, taste, food texture and overall at 8.50, 8.40, 8.40, 8.00 and 8.10 respectively. When analyzed with One-way ANOVA compared the average of favorite score found that color, smell, taste, food texture and overall, the difference in statistical significant at ($p \leq 0.05$). The approximate chemical compositions of Eclair with vanilla cream added watermelon rinds at 100g. were consisting of energy 190 Kcal, carbohydrate 28.80g., protein 4.24g. fat 6.40g., moisture 59.70g., and ash 0.82g. physical quality of water activity (A_w) as 0.97. The use of watermelon rinds substitute coconut in coconut tarte at 50%, 75% and 100%, the testing persons favored the watermelon rinds substitute coconut in coconut tarte at 75%. There are of favorite score in appearance, color, smell, taste, food texture and overall at 8.05, 7.85, 7.70, 7.65, 7.70 and 7.60 respectively. When analyzed with One-way ANOVA compared the average of favorite score found that appearance, color, taste, food texture and overall, the difference in statistical significant at ($p \leq 0.05$). The approximate chemical compositions of watermelon rinds substitute coconut in coconut tarte at 100g. were consisting of energy 167 Kcal, carbohydrate 27.80g., protein 1.78g. fat 5.38g., moisture 64.30g., and ash 0.69g. physical quality of water activity (A_w) as 0.78. This research was found that the appected consumers in four of bakery products because of this products is add-value and using local ingredient from agriculture in this country. From the technology transfer of bakery products from watermelon rinds to community, the results showed that the majority of participants were female with an average age, ranging from 21 to 30 years old. Overall satisfaction level towards this project was high, and respondent opinions towards trainers were high.