

PENGARUH PENAMBAHAN DAGING KIJING (*Pilsbryoconcha exilis*) DAN WORTEL (*Daucus Carota L*) TERHADAP DAYA TERIMA DAN KANDUNGAN GIZI KERUPUK BERBAHAN DASAR MOCAF (*Modified Cassava Flour*)

A N I S A

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ABSTRACT

Food diversification is essential to fulfill nutrient requirement, especially protein and vitamin A. Barnacles which are high in protein and carrots which are high in vitamin A can be processed into crackers, therefore may become a potential alternative of healthy snacks. This research was aimed to know the effect of adding barnacles and carrots towards the acceptance (color, flavor, taste, texture and shape), water content, protein content and economic value of crackers which is enriched in barnacles and carrots. This research was also aimed to find the best composition of barnacles, carrots and other ingredients of crackers. This research was done using pure experimental study for product development and quasi experimental study (completely randomized design) for organoleptic testing. Four treatment (combination of barnacles and carrots) and six repetitions were applied in this study. Twenty semi-trained panelists were involved in organoleptic test. Product acceptance was tested using statistical analysis Friedman test and Wilcoxon Sign Rank Test test ($\alpha = 0.05$). Organoleptic test showed that the most preferable formula were F1 and F2 with average scor 3.57. Formula F3 had the highest content of protein and vitamin A (4.18 grams of protein and 5556.8 IU of vitamin A per 100 gr crackers). Regarding the economic value, formula F2 had the lowest cost (Rp. 2765.69 per 100 gram crackers, compared to formula F1 and F3 which costed Rp. 2793.02 and Rp.3.045,45 respectively). By considering the acceptance, nutrient content and economic value, formula F2 was tend to be the best formula. Statistical analysis using Friedman test showed that there was significant difference of product acceptance in term of color ($p = 0.001$), taste ($p = 0.000$), and shape ($p = 0.017$) among formulas. This research concludes that there was difference in acceptance of formula F1, F2 and F3, and the best composition of crackers is formula F2 (200 g *mocaf* flour, 70 g barnacles and 70 g carrots). This research suggests producers to consider the thickness of crackers (not too thick) and fry the crackers in proper temperature (150°C - 160°C), as well as in proper time (around 10 seconds).

Keywords: crackers, barnacles, carrots, protein, vitamin A

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Food diversification is essential to fulfill nutrient requirement, especially protein and vitamin A. Barnacles which are high in protein and carrots which are high in vitamin A can be processed into crackers, therefore may become a potential alternative of healthy snacks. This research was aimed to know the effect of adding barnacles and carrots towards the acceptance (color, flavor, taste, texture and shape), water content, protein content and economic value of crackers which is enriched in barnacles and carrots. This research was also aimed to find the best composition of barnacles, carrots and other ingredients of crackers. This research was done using pure experimental study for product development and quasi experimental study (completely randomized design) for organoleptic testing. Four treatment (combination of barnacles and carrots) and six repetitions were applied in this study. Twenty semi-trained panelists were involved in organoleptic test. Product acceptance was tested using statistical analysis Friedman test and Wilcoxon Sign Rank Test test ($\alpha = 0.05$). Organoleptic test showed that the most preferable formula were F1 and F2 with average score 3.57. Formula F3 had the highest content of protein and vitamin A (4.18 grams of protein and 5556.8 IU of vitamin A per 100 gr crackers). Regarding the economic value, formula F2 had the lowest cost (Rp. 2765.69 per 100 gram crackers, compared to formula F1 and F3 which costed Rp. 2793.02 and Rp.3.045,45 respectively). By considering the acceptance, nutrient content and economic value, formula F2 was tend to be the best formula. Statistical analysis using Friedman test showed that there was significant difference of product acceptance in term of color ($p = 0.001$), taste ($p = 0.000$), and shape ($p = 0.017$) among formulas. This research concludes that there was difference in acceptance of formula F1, F2 and F3, and the best composition of crackers is formula F2 (200 g *mocaf* flour, 70 g barnacles and 70 g carrots). This research suggests producers to consider the thickness of crackers (not too thick) and fry the crackers in proper temperature (150°C - 160°C), as well as in proper time (around 10 seconds).

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