ABSTRACT

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FORTIFICATION OF SEAWEED FLOUR (*Kappaphycus alvarezii*) IN THE MAKING OF CRACKERS
(xv + 59 pages: 8 figures, 7 tables and 14 appendices)

Crackers are dry food products made of hard dough through a process of fermentation. Seaweed is a marine plant-like organism that contains a lot of nutrition including water, protein, carbohydrate, fat, ash and fiber. In this study, flour made from seaweed (*Kappaphycus alvarezii*) was added to the production of crackers to identify the physical, sensory, and chemical characteristics of the fortification of crackers with seaweed flour and the baking time. The fortification concentration of the seaweed flour were 0%, 1%, 3%, 5% and 7% and the baking time were 12 minutes, 14 minutes, 16 minutes, and 18 minutes. The seaweed flour was analyzed for its physical and chemical characteristic prior to the production of crackers. Afterwards, organoleptic analysis of hedonic test was done to determine the best formulation of crackers. The result shows that crackers with fortification concentration of 5% and baking time of 14 minutes were the most preferred formula by the panelists with the highest hedonic values in aroma, taste and overall attributes. The most preferred formulation of the crackers was subjected to a comparison test with commercially available crackers based on their sensory and physicochemical characteristic. The result of the comparison based on physical characteristic shows that the crackers with best formulation have a* (redness) of 7.52 and b* (yellowness) of 37.68, where the values are much higher than commercial crackers. Moreover, the L* value of the crackers is 59.94 and the texture value is 177.51 gf. The result of the chemical characteristic analysis shows that the crackers contain moisture of 2.63%, ash content 2.73%, protein content of 8.64%, fat content of 20.20%, carbohydrate content of 65.79% and fiber content of 6.62%.

Keywords: Crackers, seaweed flour, baking time
References: 33 (1992-2016)