

ABSTRACT

The threat of free radicals in the body is increases. The establishment of free radicals and oxidation reactions on biomolecules lasts throughout life. Reactivity of free radicals can be inhibited by the antioxidant system that help the body's immune system. The purpose of this study is to analyze the addition differences of each mocaf flour noodles formula and wheat flour with the addition of bay leaves and lime leaves to acceptance, nutritional value (fiber and flavonoids) and economic value.

The type of preliminary study was pure experimental study, while further study was quasi-experimental study, with a completely randomized design 5 repetitions in 5 formula, 1 control (F0) formula and 4 modifications formula (922,107,342,214). Preliminary study assessed by 3 person limited panelists and further study assessed by 44 person untrained panelists. Analysis technic used descriptive analysis and statistical analysis to determine acceptance differences by Friedman test and Wilcoxon Sign Rank Test with $\alpha = 0.05$.

The results of organoleptic test showed that the most preferred formula noodles was noodles formula 107 with an average value of 3.6 (rather like). The highest flavonoid content per 100 g of noodles based on the results of laboratory analysis was formula 214 (0.16 g / 100 g). the highest fiber content per 100 g of noodles based on the results of laboratory analysis was formula 214 (1.56 g / 100 g). Friedman test results showed no differences between color characteristics ($p = 0.000$), aroma ($p = 0.001$), flavor ($p = 0.008$), texture ($p = 0.000$).

The results effectiveness test showed that formula 214 recommended based on the flavonoids parameter with results value 0,57. Noodles formula 107 (20% of mocaf flour, 75 g of bay leaves and 100 g of lime leaves) has a fairly good acceptance (color, aroma, flavor, and texture), nutritional value (fiber and flavonoids) are sufficient, and the economic value worth as a health staple food for teenagers.

Keywords: noodles, mocaf, bay leaves, lime leaves, flavonoids