ABSTRACT

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EFFECT OF WHEAT FLOUR SUBSTITUTION USING MOCAF AND ADDITION OF MORINGA LEAVES FLOUR (*Moringa oleifera* L.) TOWARDS THE NOODLE QUALITY

Noodle is a wheat-flour based food which is favored by Indonesian people, but have a low calcium content. MOCAF (modified cassava flour) has similar characteristics with wheat-flour, while moringa leaves (*Moringa oleifera* L.) has been known as a high nutrition plant, containing a high amount of calcium. This research was aimed to develop noodles with MOCAF substituting into the wheat-flour with addition of moringa leaf powder. Noodles were made by adding 3 levels moringa concentration (2%, 4%, 6%) and wheat-flour : MOCAF ratio of 65:35, 60:40, 55:45. Each treatment was analyzed for sensory quality (color, flavor, texture, aroma, and overall), physical characteristics (texture, color, cooking loss, water absorption, *a*<sub>w</sub>) and chemical characteristics (moisture content). The results showed that the parameter hardness and adhesiveness were directly proportional with the MOCAF concentration, but gave the opposite result for springiness. In addition, increasing the MOCAF and moringa increased the cooking loss. The best formula based on hedonic test was noodle with the addition of 2% moringa flour and wheat-flour : MOCAF ratio of 65:33. The noodle contained 7.63% protein, 0.89% fat, 1.17% ash, 27.16% carbohydrates, and 63% water. Moreover, the best formula contained calcium 97.28 mg/100g noodle, in which it was much higher compared to control (22.07 mg calcium/100g noodle).

Keywords : MOCAF, Moringa, Noodle, Calcium

References : 72 (1989-2014)