

The Effect of Egg Addition on Gluten-Free Wet Noodle from Composite Flour for Autistic Children

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ABSTRACT

Autism is an abnormal development disorder that occurs in children when interacting or communicating with other person. Children with autistic disorders are very allergic to some foods, one of them is gluten. Gluten is a type of a protein that founds in wheat flour. Some alternative gluten-free foodstuff is modified cassava flour which has similar physical with wheat flour, in addition to that there are also tapioca flour and green bean flour. Making noodles using gluten-free flour causes the dough to be unperfect and easily to be broken, therefore it's necessary to add other ingredients, like egg. This study aims to determine the effect of egg addition on physical and organoleptic of gluten-free wet noodles. The experimental design used was a Randomized Group Design. Determination of the formulation in this study was made by adding the purebred chicken eggs, 240 g, 300 g, 360 g, 420 g, 480 g eggs, and each treatment was repeated 5 times. The analysis used in wet noodle products is physical (elasticity), organoleptic, and proximate for the best treatment. The results showed that wet noodles with the addition of eggs were significantly different ($P < 0,05$) on the level of elasticity, hedonic quality test on color, taste, and texture, as well as hedonic test on taste and texture. However, there was not significantly different ($P > 0,05$) on the hedonic quality test on the typical aroma of mung bean flour and the typical aroma of eggs, as well as the hedonic test on color and aroma. The best treatment is wet noodles with the addition of 6 eggs, with characteristics having an elasticity level of 0,25 N, yellow color intensity and savory taste (tends to be stronger than other treatments and preferably from treatments 1 and 2), typical aroma of green bean flour, typical aroma of eggs and the level of preference of the panelist tended to be the same between treatments, the texture more tends not easily broken than other treatments and was more preferable than treatments 1, 2, and 5. Consuming 1 bowl (250 g) of wet noodles able to fulfill 12% total energy requirements, 28% protein, 12% fat, and 8% carbohydrates based on % AKG.

Keywords : Autism, Gluten, Composite Flour, Eggs, Wet Noodles