

ABSTRACT

THE USE OF FREE AND ENCAPSULATED GLUTEN FOR IMPROVING TAPIOCA NOODLE QUALITIES

By

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Substitution of wheat in noodles with tapioca is a good alternative to reduce utilization of wheat, and to promote or increase the use of locally produced flour. This substitution also has an advantage of increasing or promoting the use of various flour produced from roots and tubers. This research was purposed to obtain proportion of tapioca, free and encapsulated gluten to find the best value of elongation, cooking loss and sensory characteristics tapioca noodle. The experiment was arranged in a Completely Randomized Block Design with 4 replications. The treatments were 7 levels comparison of tapioca, free and encapsulated gluten: G0 (tapioca 100%), G1 (tapioca 95% : gluten extract 5%), G2 (tapioca 90% : gluten extract 10%), G3 (tapioca 87% : gluten extract 13%), G4 (tapioca 97% : encapsulation gluten 3%), G5 (tapioca 96% : encapsulation gluten 4%) dan G6 (tapioca 95% : encapsulation gluten 5%). Data were analyzed using analysis of variance to find out the treatment effects, then the data were

further analyzed using Honestly Significant Difference (HSD) test on level of 5% to find the best treatment. The results showed that the best of “Tapioca noodles” was found on of G4 (Tapioka 97% : Encapsulation gluten 3%). This noodles had colour score at colour 3,90 (somewhat yellow), elongation score at 6,92 (not easily broken), overall acceptance score of 4,86 (like), cooking loss at 6,14% and texture based on TAXT-2 test of 432,80 gf.

Keywords: encapsulated gluten, free gluten, tapioca, noodles.