ABSTRACT

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CHARACTERISTICS RICE NOODLE SUBSTITUTE WITH BROWN RICE
(xvii + 125 pages: 12 tables; 31 figures; 15 appendixes)

Rice noodle is an example of rice based food product. The nutrition in the rice noodle, especially dietary fiber, could be increased by substituting white rice flour with brown rice flour. This research was conducted to study the effect of brown rice flour and tapioca flour substitution on rice noodle characteristics. The first step in this research was used to determine the best variety of white rice flour between C4, IR 42, and IR 64 applied on white rice noodle according to consumer acceptance. White rice flour from IR 64 variety was chosen to be made into brown rice noodle by mixing with brown rice flour and tapioca flour. In the second stage research, the concentration of brown rice flour substitution were 20%, 40%, 60%, and 80%, while the concentration of tapioca flour substitution were 3%, 5%, and 7% from the total flour. The result showed that brown rice noodle with the best characteristics was made by substituting white rice flour IR 64 variety with 60% brown rice flour and 5% tapioca flour. The best brown rice noodle formulation was consisted of 9.44% white rice flour, 14.16% brown rice flour, 5% tapioca flour, and 71.41% water. Furthermore, utilization of brown rice flour in rice noodle production increased insoluble fiber and antioxidant content in the product. Brown rice noodle contained of 1.27% soluble fiber, 4.11% insoluble fiber, 5.38% total dietary fiber, and 68.43 mg/L of IC50 value.

Keywords: Brown rice, dietary fiber, rice noodle, tapioca flour, and white rice varieties