

ABSTRACT

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EFFECT OF CASSAVA FLOUR TO RICE FLOUR RATIO AND CARBOXYMETHYL CELLULOSE (CMC) CONCENTRATION ON CASSAVA-RICE NOODLE CHARACTERISTICS

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Noodle analogue made with cassava flour and rice flour is a non-gluten-based noodle. Noodle analogue made from cassava flour was less preferred due to the adhesiveness of the noodle, while the noodle analogue made with rice flour has less cohesive characteristic. The addition of carboxymethyl cellulose (CMC) as hydrocolloid was done to improve the characteristics of noodle analogue. The objective of this research was to determine the effect of cassava flour to rice flour ratio (100:0, 75:25, 50:50, 25:75, and 0:100) and CMC concentration (2%, 2.5%, and 3%) towards the characteristics of the cassava-rice noodle. Cassava-rice noodle made with 100:0 cassava flour and rice flour ratio and 3% CMC, 75:25 cassava flour and rice flour ratio and 2.5% CMC, and 75:25 cassava flour and rice flour ratio and 3% CMC were the selected formulations which had better characteristics compared to the other formulation. Compared to commercial wheat-based noodle, the selected cassava-rice noodles showed to have higher tensile strength and elongation. In terms of the chemical content, the selected cassava-rice noodles had higher moisture content and carbohydrate content, and similar ash content, except for cassava-rice noodle made with 75:25 cassava flour and rice flour ratio and 2.5% CMC which had lower ash content. The fat content and protein content of the selected cassava-rice noodles was lower compared to fat content and protein content of the commercial noodle. From the selected cassava-rice noodles, the best formulation which had characteristics similar to the commercial wheat-based noodle based on the multiple comparison test was cassava-rice noodle made with 75:25 cassava flour and rice flour ratio and 2.5% CMC.

Keywords :carboxymethyl cellulose (CMC), cassava flour, cassava-rice noodle, non-gluten-based noodle, noodle analogue, rice flour

References :82 (1996-2021)