Effects of Variety and Mixing Ratio of Wheat Flours and Starches on Quality of Instant Fried Noodle

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ABSTRACT

Abstract The instant fried noodles were processed through mixing, rolling, threading and waving, steaming, cutting, seasoning, deep-frying, cooling, and packing. In this study the doughs were prepared by mixing different wheat flours (high gluten-content flour and medium gluten-content flour) with different variety of starches (potato starch and tapioca starch) by various ratios (88:12 and 76:24). The proximate compositions (moisture, crude protein, and ash) of eight different doughs were tested. The physical properties (cooked weight gain, cooked volume gain, tensile strength, and color) and the quality (sensory evaluation scores) of the instant fried noodles also studied to obtain the optimal preparation conditions of instant fried noodles. The results showed that the optimal preparation condition for instant fried noodles was mixing high gluten-content flour with potato starch by the ratio of 76:24. The cooked weight gain of the noodles prepared under this optimal condition was 162%, cooked volume gain 100%, and tensile strength 33.33g/mm2. The noodles prepared under this optimal condition also had the highest sensory evaluation score of total acceptance. The results of the analysis of relationship between the proximate compositions of doughs and the cooking properties (cooked weight gain and cooked volume gain) of instant fried noodles showed that the moisture of dough was significantly and positively correlated with the cooked weight gain, the crude protein content of dough was also significantly and positively correlated with the cooked weight gain. The results of the analysis of relationship between the proximate compositions of doughs and the quality (tensile strength, color, and sensory evaluation scores) showed that the moisture of dough was significantly and positively correlated with the Hunter L value and negatively correlated with the Hunter b value, and the crude protein content of dough was significantly and positively correlated with the Hunter b value.

Keywords : 0

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