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Okara-Chickpea Fettuccine Pasta: Physico-chemical, Sensory Properties, and Cooking Quality Characterization

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Abstract : This study aimed to develop alternative and healthy fettuccine pasta using okara, chickpea flour, and vital wheat gluten blends. The effect of formulations on cooking quality, sensory properties, and physico-chemical characteristics was investigated using a mixture design. The levels of okara flour increase the cooking time, water absorption index, protein content, and dietary fiber while decreasing cooking loss. Dough formation exhibited up to 20% okara flour and peaked at 132 percent. The physico-chemical properties and microbiological results of chickpea-okara pasta were all within the acceptable range of the standards. The results show that the amount of protein and fiber also greatly affected the cooking qualities of pasta. The least okara flour in the mixture blends obtained the highest score in the affective sensory evaluation regarding color, appearance, and texture properties. Results showed that okara flour can be incorporated in the formulation up to 15%. These findings show that okara-chickpea flour and vital wheat gluten have a high nutritional value, making them a viable ingredient in pasta products.

Keywords : okara flour, fettucine pasta, cooking and sensory characteristics, dough yield
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