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Technological, sensory and nutritional characterization of noodles obtained from intermediate flour

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Abstract: The paper presents the technological, sensory and nutritional characterization of noodles obtained from intermediate flour, highlighting the influence of the raw material composition on the properties of the finished product. Intermediate flour, with a higher extraction degree and a balanced content of proteins, fibers and minerals, determines rheological peculiarities of the dough, which require the adjustment of the technological processing parameters. The obtaining process included the stages of kneading, resting, laminating, cutting and controlled drying, optimized to ensure the stability and quality of the product.

The sensory evaluation was carried out by the scoring method, analyzing parameters such as appearance, color, odor, taste and consistency. The results revealed a firm texture, a slightly browned color and a specific taste profile, associated with the use of intermediate flour. The nutritional analysis indicated an increased content of fibers and minerals compared to products obtained from white flour, maintaining an adequate level of proteins.

In conclusion, noodles made from intermediate flour represent a superior nutritional alternative, with good sensory acceptability, conditioned by rigorous control of technological parameters.

Keywords: flour: nutritional value, fiber, functional food, bioactive compound



• Introduction

The technological process of obtaining noodles from intermediate flour involves specific stages, such as dosing of raw materials, kneading, dough maturation, rolling, cutting and controlled drying, each stage influencing the final properties of the product. The technological parameters must be adapted to the characteristics of the flour used to ensure the obtaining of a product with appropriate texture, stability and high sensory quality.

Sensory and nutritional evaluation of noodles obtained from intermediate flour allows the assessment of the acceptability and biological value of the product. Analysis of characteristics such as appearance, color, taste, consistency and aroma provides relevant information regarding the quality of the finished product and the possibility of its use in modern nutrition.

• Material and method

The technological process of obtaining noodles began with the dosing of ingredients and their homogenization by kneading, until a compact and elastic dough was obtained. After kneading, the dough was left to rest to relax the gluten structure, thus facilitating subsequent processing. This was followed by the progressive laminating stage of the dough and its cutting into noodles of uniform size

The noodles obtained were subjected to a natural drying process on special supports, until reaching a humidity suitable for storage and consumption. The image above highlights the drying stage of the noodles, an important stage for ensuring stability and maintaining the sensory properties of the finished product.



• Results and discussions

The sensory characterization of the product was carried out by the scoring method, using a group of evaluators who analyzed the appearance, color, odor, taste and consistency of the product after boiling. The nutritional determinations included the evaluation of the main compositional parameters, namely the moisture content, proteins, carbohydrates, lipids and dietary fiber, in order to establish the nutritional value of the analyzed product.

The results obtained highlight the fact that intermediate flour can be successfully used in the production of noodles, contributing to the improvement of the nutritional value of the product through the increased intake of fiber and mineral substances. Compared to products made exclusively from white flour, noodles made from intermediate flour have a superior nutritional profile and high sensory acceptability, which recommends them for integration into a balanced diet.

• Conclusions

Following the study, it was found that intermediate flour is a suitable raw material for obtaining noodles, contributing both to improving the nutritional value and to maintaining appropriate sensory characteristics of the finished product.

Sensory analysis demonstrated a high degree of acceptability, the product being appreciated for its pleasant appearance, characteristic taste and firm texture. From a nutritional point of view, noodles obtained from intermediate flour have a higher content of fiber and mineral substances compared to products made from white flour, which gives them a superior functional potential.

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