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PRELIMINARY RESEARCES ON NUTRITIONAL COMPOSITION OF BAKED SWEET POTATOES (*Ipomoea batatas* L.) PULP

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Abstract: This experiment aims to determine some nutritional parameters of microwavebaked sweet potato pulp (with orange pulp), with a view to its use in different food formulas. Preliminary results show that the analyzed samples contain significant amounts of nutritional compounds in the following concentration limits (based on dry weight): 6.17 - 7.04% moisture, 3.93 - 4.78% ash, 4.18 - 5.51% protein, 1.02 - 1.58% fat, 4.02 - 5.18% crude fiber, 75.91 - 80.68% carbohydrates. These nutritional values, to which are added the natural sweetness and delightful aroma, recommend the use of sweet potato with orange pulp as an ingredient for obtaining valueadded foods.

• Introduction

The orange-fleshed sweet potato (Ipomoea batatas L.) is a valuable species from a nutritional and functional point of view, appreciated for its high content of complex carbohydrates, dietary fiber, vitamins (especially provitamin A), minerals and bioactive compounds with antioxidant role, such as carotenoids, polyphenols and flavonoids. This potato variety is distinguished from other sweet potato varieties not only by the orange color of the pulp but also by the high content of betacarotene and by pleasant sensory properties (sweet taste, more pleasant and consistent aroma) being a promising candidate for use in functional food products or intended for special nutrition.

• Results and discussions

The results obtained from the analysis of nutritional compounds in baked sweet potato pulp are presented in Table 1.

Table 1. Nutritional values of of baked sweet potatoes pulp

Nutritional	Values, % of dry mater	
factors	Limits	Mean values
Moisture	6,17 - 7,04	6.52±0.37
Ash	3,93 - 4,78	4.45±0.36
Protein	4,18 - 5,51	4.82 ± 0.51
Fat	1,02 - 1,58	1.25 ± 0.24





Material and method

Sweet potato samples with orange-colored pulp sold in local markets were used. Recommended standard laboratory procedures were used to evaluate the concentration of nutritional parameters in the microwave-baked sweet potato pulp taken in the experiment.

Crude fibre	4,02 - 5,18	4.71 ± 050
Carbohydrate	75,91 - 80,68	77.62±2.17

The obtained values (expressed on dry matter): moisture 6.17–7.04%, ash 3.93–4.78%, protein 4.18–5.51%, fat 1.02–1.58%, crude fiber 4.02– 5.18% and carbohydrates 75.91–80.68% show a balanced content of macronutrients and the presence of dietary fiber, supporting the potential of using baked sweet potato pulp as a valuable ingredient in the development of healthy food products.

Conclusions

Due to its rich content, especially of carbohydrates and minerals, moderate in fiber and protein, and low in moisture and fat, the analyzed baked potato pulp can be considered a versatile ingredient, suitable for a wide range of food products, from bakery (bread, biscuits, muffins) to cream soups, purees or spreadable pasta, due to its fine texture, natural sweetness and high nutritional value.