

THE MINERAL SUBSTANCES INTAKE IN THE ALIMENTARY PUMPKIN

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Summary: Pumpkin represents a rich source of nutrients that have health benefits on the human's body. A special significance has the mineral substances contribution of the pumpkin. In this article are presented the results of the determination of mineral substances in the fresh pumpkin pulp, dried pumpkin pulp flour and pumpkin seed flour, *Curcubita moschata* variety, 2017 harvest.

Key words: Pumpkin pulp flour, pumpkin seed flour, mineral substances, atomic absorption.

Introduction

Pumpkin is one of the oldest agricultural crops. This being a valuable crop from the alimentary point of view, it is widely used in human's alimentation, it is at the base of Mediterranean cuisine. (1) Pumpkin is also widely used in the alimentation of Republic of Moldova's population.

The most often pumpkin is used for obtaining semi-finished products from pulp, pumpkin powder, dried pumpkin pieces, pumpkin juice or as an addition together with other fruits that improve the taste and the flavor of the final product.

The consumption of pumpkin has laxative action, diuretic, stimulates kidney's activity, regulates cholesterol, reduces the risk of some types of cancer, slows down the aging process and helps to the regenerating process, thanks to its richness in antioxidants it is useful in cardiovascular disorders, improves circulation, decreases gastric acidity. (2)

Resulting from pumpkin's beneficial properties on the human's body, the composition of mineral substances in native varieties presents interest. (3)

The purpose of this research was to determinate the composition of mineral substances of pumpkin pulp, pumpkin pulp flour and of the flour of pumpkin seeds of the *Curcubita moschata* variety, 2017 harvest.

Materials and research methods

Pumpkin from *Curcubita moschata* variety, 2017 harvest, has undergone complex processing aiming to obtain pumpkin pulp, pumpkin pulp flour and pumpkin seed flour.

Fresh pumpkin pulp was obtained after primary processing and mashing, pumpkin pulp flour - after being dried at the temperature of 70°C in the oven, ground and sieved in powder. Pumpkin seed flour was bought from a commercial network.

The obtained samples were subjected to photo-colorimetric analysis and atomic absorption. (4)

Results and discussions

The effectuated studies showed that the consumption of pumpkin has physiological benefits, diuretics, laxative, anti-inflammatory and contributes to health maintenance. A special interest presents the composition of pumpkin's mineral substances.

The content of mineral substances is presented in the Table 1.

Table 1. The content of mineral substances in the research samples, mg%

Indices names	Values found							
	Phosphates (P ₂ O ₅), mg/g	Calcium (Ca), Mg/g	Magnesium (Mg), Mg/g	Sodium (Na), Mg/kg	Potassium (K), mg/g	Iron (Fe) total, mg/g	Zinc (Zn), Mg/g	Copper (Cu), mg/g
Fresh pumpkin pulp	0,183	31,9	13,27	1,05	263,0	0,295	0,081	0,071
Pumpkin pulp flour	5,02	184,0	134,85	12,50	2780,0	5,53	2,1	0,645
Pumpkin seed flour	12,4	99,2	559,35	23,24	910,0	15,5	14,35	1,67

The biggest part of mineral substances has the potassium (approx. 263mg/g in fresh pumpkin pulp, 2780mg/g in pumpkin pulp flour, 910 mg/g in pumpkin seed flour). Pumpkin pulp contains significant quantities of Ca 31,9 mg/g and Mg 13,27mg/g. Pumpkin pulp flour contains more significant quantities of Ca 184,0mg/g and Mg 138,45mg/g compared to the pumpkin pulp. The most significant quantity of Mg 559,35mg/kg was found in the pumpkin seed flour. These results show that pumpkin can provide a significant quantity of minerals that cover the recommended daily intake of mineral substances, being used in different forms such as fresh pulp, pulp flour or pumpkin seed flour.

Conclusions

In this research was highlighted the mineral composition of fresh pumpkin pulp, pumpkin pulp flour and pumpkin seed flour of the aboriginal variety *C. moschata*, 2017 harvest. It was demonstrated that pumpkin is extremely important source of daily potassium intake (aprox. 263 mg/100g in fresh pumpkin pulp, 278mg/100g in pumpkin pulp flour, 910mg/100g in pumpkin seed flour). It also has significant quantities of calcium and magnesium (numbers). This results show that pumpkin can provide o significant quantity of minerals to cover the recommended daily needs in mineral substances, being used in different forms such as fresh pulp, pulp flour or pumpkin seed flour.

References

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