15. Analysis of children's nutritional status in the educational institutions of Moldova Republic

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Introduction. Nutrition is the basis for the formation of a healthy generation. The harmonious growth and development of the child is influenced by both: endogenous (hereditary) and exogenous factors (environmental). Among the exogenous factors, rational and balanced nutrition has a decisive role, ensuring good health and contributing to the formation of proper eating habits for the rest of life.

According to the National Food and Nutrition Program for 2014-2020, compliance with the principles of rational and balanced nutrition is a simple and effective remedy for enhancing and maintaining health as well as preventing non-communicable diseases related to diet, malnutrition and nutritional deficiencies. The purpose of this paper is to study and analyze the nutritional status of children and to present food recommendations, prohibitions and model regimes for pre-school children in educational institutions in the Republic of Moldova.

Material and methods. For the researches there have been analyzed the daily rations of 5 pre-school institutions from Chisinau municipality. It was determined the energy value and the content of main macro and micronutrients. It has been determined the content of mineral elements, which have a decisive role in ensuring the proper functioning of the children's body. Their daily intake ensures the efficient functioning of all organs. Thus, the biological value of food products has been estimated, which varies according to the heat treatment and the storage conditions and rationally combining food.

Results and discussions. As a result of the carried out researches it has been established that the contribution of the mineral elements to the daily rates for the preschool institutions analyzed in comparison with the physiological norms is unbalanced, the bioavailability of these elements is low and therefore their assimilation by the body is difficult.

The average iron intake calculated from children's ratios is 17.2 mg Fe / day, which is 95.6% of the recommended intake. But the average total iron content is only 9.66 mg Fe / day, which covers only 53.7% of the recommended standard. Similar research for Ca showed that the mean intake is 661.7 mg Ca/day, which represents 55.14% of the recommended standard. The energetic value rates correspond to the recommended requirements, but the protein / carbohydrate / lipid ratio is unbalanced.

Conslusions. As a result of the analysis of menus from the preschool institutions, optimized food rations were proposed, which would meet the daily needs of Fe and Ca for pre-school children. The Protein/Lipid/Carbohydrate ratio was normalized by modifying some menu preparations, thereby obtaining the required amount of Ca per day, which consisted of 924.6 mg.

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16. Potential Functional Properties of *Curcubita Moschata* and *Curcubita Maxima*

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Introduction. Pumpkins belong to the family *Cucurbitaceae*, a medicinally and economically important plant group [1]. Pumpkins are an important source of fiber and pectic substances, carotenoids, mineral salts (especially potassium) and have low energy value [2]. The purpose of the paper is to analyze the physico-chemical, technological and nutritional potential of pumpkins in order to develop a wide range of functional food products.

Materials and methods. Two varieties of pumpkin – *Curcubita Moschata* and *Curcubita Maxima* from the 2018 harvest were used in the research. The international standard methods of analysis (HPLC, atomic absorption spectrometry, UV/Vis spectroscopy) have been applied for the determination of chemical composition, physico-chemical, technological and nutrition properties of study objects.

Results and discussions. As a result of the researches, the content of pectic substances in two varieties of pumpkin pulp was determined. The pectin content is 0,21% for both pumpkin varieties, but the protopectin value differs for *Curcubita Moschata* (0,25%) and *Curcubita Moschata* (0,54%). Within the mineral composition analyzes of pumpkin pulp, it was determined the content of mineral compounds such as potassium (2,63-6,60 g/kg), zinc (0,77-0,81 mg/kg), copper (0,71-1,86 mg/kg), iron (2,95-13,5 mg/kg), sodium (10,5-80,8 mg/kg), magnesium (132,7-146,5 mg/kg), calcium (211,3-319,0 mg/kg), phosphates (0,183-1,03 g/kg). The study of carotenoids fractional composition in the pulp of analyzed pumpkin varieties showed that the content of β-carotene is 7,33-7,92 mg/100g, lycopene – 8,47-8,89 mg/100g, and zeaxantina – 8,55-8,87 mg/100g. The physicochemical, technological and nutritional properties of *Curcubita Moschata* and *Curcubita Maxima* were investigated, too.

Conclusions. These studies show that pumpkins nutritional content considerably variates in dependence of their growing medium, species and component parts. The results offer the scientific data of chemical composition, technological and nutrition properties of two pumpkin varieties cultivated in the Republic of Moldova and demonstrate the high potential and positive view of pumpkin functional food production. Thus, this research line discovers new interesting possibilities for food industry and requires the application of advanced technologies in agreement with the current demand of healthy products.

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