

ХАРЧОВІ ТЕХНОЛОГІЇ

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**TECHNOLOGICAL ASPECTS OF VEGETABLES AND FRUIT
FOR OF FUNCTIONAL PRODUCTS OF BABY NUTRITION,
LONG-TERM STORAGE**

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Formulation of the problem. The level of business cooperation between Ukraine and China is constantly moving. Sino-Ukrainian trade and economic ties are a clear example of this. The main areas of business cooperation are moving from science and technology, trade to comprehensive development in such areas as finance, energy, infrastructure, joint scientific and technical research and production. Business cooperation between the two countries has embarked on the path of healthy and dynamic development. Links in the field of research, medicine, educational process of students, graduate students and doctor students are developing dynamically. Friendly contacts in all spheres, after the establishment of diplomatic relations between China and Ukraine, gave a strong impetus to the joint development and prosperity of both countries and brought real tangible benefits to our people [1]. Cooperation between Ukraine and China in the field of science and technology is one of the priority areas of bilateral relations. Areas of research in the food industry, the creation of food for therapeutic and prophylactic purposes for children are relevant and promising.

Analysis of recent research and publications. American politician Hillary Diane Rodham Clinton, in his reports always notes - "There are no other people's children" [2]. Statistical authorities of Ukraine and China note a high increase in the incidence of infectious diseases of children, adolescents and adults in the kidneys and lungs. The incidence of pyelonephritis and pneumonia has become an acute problem worldwide, especially in children of all ages [3, 4]. Occurrence of kidney disease and infectious diseases of the lungs, the peculiarities of their spread are determined by natural, environmental and socio-economic factors, the

importance of the latter of which is becoming increasingly important due to lifestyle, income, living conditions, diet and a number of other factors.

According to the Center for Medical Statistics of the Ministry of Health of Ukraine, in 2018, 1816683 people aged 18 and older and 196289 children aged 0 to 17, including kidney disease, were registered. In 2019, these figures are higher by about 2% and amount to 1853017 and 199234, respectively [5]. China's special scientific and medical commission notes that the number of people with kidney disease has risen by more than 11 percent in three years. In 2015, this figure was 119.63 million people, in 2017 133.0 million. Examination of children aged 2 to 14 years revealed 2.0 million with kidney disease each year. [6].

Ukraine in 2019, 6976103 persons aged 18 and older and 5541369 children aged 0 to 17 inclusive were registered, with respiratory diseases, including pneumonia, which is approximately 3.9% more than in 2017. China is among the ten countries with the highest mortality rate from pneumonia, where 18 thousand children die each year from the infection. Statistics do not take into account the situation that occurred as a result of the epidemic of COVID-19 [5].

Therapeutic nutrition for various diseases in childhood is multifaceted. In some cases, nutrition is the only treatment. In a number of pathological conditions, especially in diseases of the liver, kidneys, cardiovascular system, respiratory system, therapeutic nutrition ensures the effectiveness of therapy and shows a positive trend in preventive treatment.

In the pathogenesis of pneumonia, the main links are hypoxia, ripoxemia and acid-base state. In the process of disease progression, all types of metabolism (carbohydrate, protein, lipid, water-mineral, energy) are disturbed, and the vitamin security of the organism changes. Enteral and parenteral nutrition should provide at least 251-335 kJ (60-80 kcal) and 2-2.5 g of protein per 1 kg of child weight per day. At restoration of a full enteral food it is necessary to adhere to an age physiological mode of feeding. According to the age of the child in the diet include juices and purees based on vegetables and fruits.

In the comprehensive treatment of kidney disease in children, proper nutrition plays a very important role. According to the pathogenesis of kidney disease, the main principle of therapeutic nutrition is to ensure maximum sparing of the kidney and its impaired functions. Excludes foods that contribute to the sensitization of the body, as well as those nutrients that are important in the development of nephritic, oedematous and hypertensive syndromes. In children with kidney disease, medical nutrition should ensure normal growth. In some cases, medical nutrition has its own significance (in the period of complete or partial clinical and laboratory remission), in others, is one of the leading factors in complex treatment. Therapeutic nutrition is differentiated according to the nature and stage of the disease. In the first days of the disease, the diet includes fruit and

vegetable juices and purees, extracts and decoctions of medicinal plants [7].

The Law of Ukraine "On Baby Nutrition" clearly defines the requirements and concepts for functional products - functional baby food is food that contains as a component drugs and / or is proposed to prevent or mitigate the disease of a child with special dietary needs, including in the case of congenital or acquired disorders of the absorption of certain nutrients, their intolerance and / or certain diseases [8].

Presentation of the main research material. In the process of research we have proposed technologies and assortment of products for therapeutic and prophylactic purposes for children with pyelonephritis and pneumonia. The peculiarity of the proposed products is that the recipe bookmarks use raw materials of plant origin, which are traditionally grown in Ukraine and China. Along with the raw materials, the use of extracts of medicinal plants is planned.

At the same time, the legislation [8], clarifies the use of components - raw materials intended for the production of baby food must meet the mandatory safety parameters and minimum quality specifications approved by the central executive body, which ensures the formation of state policy in the field of health care. In a previous study [9], we conducted a study of the physico-chemical composition and quality of raw materials of plant origin, which is traditionally grown in Ukraine and China and will be used in the production of the proposed products. The production of long-term storage products for children differs from the production of general-purpose products by specific requirements for technology, equipment, sanitary and anti-epidemic regime, chemical-technical and technological control and is in fact a separate industry. One of the stages of our research was to conduct a comparative characteristic of technological requirements for raw materials. At formation of the basic technological operations and parameters of processing of raw materials technological indicators are necessary. In each variety, a pooled spot sample weighing 5 kg was examined. The research was conducted in accordance with the methods and techniques provided in the current regulations of China and Ukraine [10, 11]. For comparative characteristics, three varieties of pumpkins, carrots, apples, pears grown in Ukraine and China, as well as fruits not grown in Ukraine - bananas and mangoes were selected.

Culinary prepared pumpkin puree is allowed to include in the diet of the child in the form of supplementary food from 5 months. Technological characteristics of pumpkin varieties "Zhdana", "Dolya", "Divo", which are traditionally grown in Ukraine and varieties «Miben» (蜜本南瓜), «Big grinding disc» (大磨盘南瓜), «Kangua» (砍瓜), which are traditionally grown in China, listed in table.1.

The use of pumpkin, selection of both countries for the production of puree products allows to establish uniform requirements for technology.

Table 1 – Technological characteristics of the pumpkin

Technological Indexes	Variety name		
	Varieties grown in Ukraine		
	Zhdana	Dolya	Divo
The shape of the fruit	Rounded flat shape	Elongated cylindrical shape	Elongated shape
Fruit size, cm	Diameter in the middle from 30 to 32	Diameter in the middle from 38 to 50	Diameter in the middle from 27 to 30
Fruit weight, kg	from 4,4 to 13	from 4,0 to 6,0	from 8,0 to 9,0
Cortex	Light gray over time during storage changes color partially to red	Immature fruits - green, ripe - yellow	The cortex is thin, leathery, brown with a pink tinge and a waxy coating
Flesh Consistency	Red-orange, dense, tender, juicy, sweet	Bright orange, dense, tender, juicy, sweet	Thick up to 10 cm, crispy, juicy, sweet
Technological Indexes	Varieties grown in China		
	Miben 蜜本南瓜	Big grinding disc 大磨盘南瓜	Kangua 砍瓜
The shape of the fruit	Elongated-cylindrical shape	Rounded shape	Elongated shape
Fruit size, cm	Length from 32 to 36 Horizontal diameter from 12 to 14,5	Length from 13 to 15 Horizontal diameter from 26 to 30	Length from 110 to 120 Horizontal diameter from 12 to 15
Fruit weight, kg	from 5 to 8	from 3,5 to 5	from 6 to 9
Cortex	Orange - yellow	Red-brown	Light green
Flesh Consistency	Orange - red, tender, juicy, sweet	Orange-yellow, tender, juicy, sweet with low humidity	Orange-yellow, delicate, juicy, sweet with minimal moisture content

For research the comparative characteristics of carrots, table. 2, the varieties "Boltex", "Laguna", "Nantes" were selected which are traditionally grown in Ukraine and varieties «Jingbian Carrots (靖边胡萝卜)», «Jinghong five inch Carrots (京红五寸胡萝卜)», «Hongxin No. 6 (红芯六号)», which are grown in China.

Table 2 – Technological characteristics of carrots

Technological Indexes	Variety name		
	Varieties grown in Ukraine		
	Boltex	Laguna	Nantes
1	2	3	4
The shape of the fruit	Conical shape with a blunt tip	Cylindrical shape with a blunt tip, the head is flat	Cylindrical shape, with a blunt rounded head
Fruit size, cm	Length from 12,0 to 15,0 Diameter from 3,5 to 5,0	Length from 17,0 to 20,0 Diameter from 3,5 to 5,0	Length from 13,0 to 15,0 Diameter from 3,5 to 5,0

Continuation of table 2

1	2	3	4
Fruit weight, g	from 100 to 150	from 80 to 130	from 100 to 160
Cortex	Smooth, without cracks	Thin and gentle	Slight scarring of the cortex, which is covered with epidermis, shallow natural cracks with a depth of about 2 mm
Flesh Consistency	Juicy, sweet, dense. Color - deep dark orange with a hint of both inside and outside	Crispy, very juicy, tasty, sweet. The colors of the skin, flesh and core is rich, orange.	Bright orange color, excellent taste, moderately sweet, tender and juicy.
Technological Indexes	Varieties grown in China		
	Jingbian Carrots (靖边胡萝卜)	«Jinghong five inch Carrots (京红五寸胡萝卜)	Hongxin No. 6 (红芯六号)
The shape of the fruit	Cylindrical with a blunt end	Cylindrical with a pointed end	Cylindrical with a blunt end
Fruit size, cm	Length from 20,0 to 24,0 Diameter from 3,5 to 5,0	Length from 18,0 to 22,0 Diameter from 3,0 to 6,0	Length from 18,0 to 22,0 Diameter from 3,0 to 4,0
Fruit weight, g	from 200 to 350	from 200 to 300	from 200 to 250
Cortex	Slight scarring of the cortex, which is covered with epidermis	Thin, natural cracks about deep from 2,5 to 3 mm	Slight scarring of the cortex, which is covered with epidermis
Flesh Consistency	Skin and flesh color orange-red, delicate, crunchy, sweet taste	Juicy, sweet, dense. Color - deep dark orange with a hint of both skin and flesh	Skin and flesh color is orange, tender, crispy, sweet taste

The proposed varieties of carrots can be used in unified flexible technologies. Carrots of the studied varieties can be cleaned by mechanical cleaning, or by using the process of steam cleaning, in which the carrots are subjected to short-term steam treatment under pressure, followed by removal of the skin in a washing and cleaning machine.

For research,, green apples were selected, according to paediatricians, green apples do not cause allergies in children. Varieties that are traditionally grown in Ukraine "Golden Resistant", "Snow Calville", "Scythian Gold" and apple varieties «Gansu Yinchuan city» (甘肃省银川市青苹果), «Shandong Qixia county» (山东省栖霞县青苹果), «Henan Sanmenxia» (河南省三门峡市青苹果), which are traditionally grown in China. The research results are given in table. 3.

Table 3 – Technological characteristics of apples

Technological Indexes	Variety name		
	Varieties grown in Ukraine		
	Golden Resistant	Snow Calville	Scythian Gold
The shape of the fruit	Elongated-conical shape	Round-conical shape	Elongated conical shape with small ribbing
Technological Indexes	Variety name		
	Varieties grown in Ukraine		
Fruit weight, g	from 150 to 250	from 120 to 160	from 175 to 190
Skin	Dry, dense, with a slight roughness, golden-light green of color	Light green or greenish-yellow with small inconspicuous subcutaneous spots	Green during the ripening period with a slight blush on the sunny side, later golden yellow
Flesh Consistency	Light cream, fine-grained, juicy, distinctive sour-sweet taste Density: $10,7 \pm 1.73$ kg/cm ²	White, dense, tender, good sour-sweet taste Density: $9,8 \pm 1.77$ kg/cm ²	Creamy, fine-grained, juicy, sweet and sour taste Density: $10,9 \pm 1.63$ kg/cm ²
Technological Indexes	Varieties grown in China		
	Gansu Yinchuan city (甘肃省银川市青苹果)	Shandong Qixia county (山东省栖霞县青苹果)	Henan Sanmenxia (河南省三门峡市青苹果)
The shape of the fruit	Conical shape	Round-conical shape	Conical shape
Fruit weight, g	from 135 to 230	from 127 to 200	from 108 to 195
Skin	Dark green of color, hard	Light green of color, ribbed with specks	Green of color, hard with an oily tinge
Flesh Consistency	Whitish color with a green tinge, taste sour-sweet Flesh crispy. Density: $10,3 \pm 1.95$ kg/cm ²	White with a cream tint. The taste is sweet and sour, the flesh is crispy, juicy. Density: $10,6 \pm 1.87$ kg/cm ²	White with a yellow-cotton-green tint. The taste is sweet - sour. The flesh is crispy, juicy. Density: $9,8 \pm 1.73$ kg/cm ²

According to the technological characteristics of apple varieties grown in China and Ukraine are similar, which makes it use to the parameters of washing and complex processing, applying the same parameters of heat treatment.

Pear is indispensable in the diet of a child due to its chemical composition. The fruit stimulates the protective forces of the child's body. The fiber contained in the fruit normalizes the intestinal microflora, potassium strengthens the heart muscle and blood vessels, restores cells. Due to its anti-inflammatory properties, pear is useful for children in the

treatment of respiratory organs. Decoctions of pears have heat-reducing antiseptic properties, reduce fever, alleviate fever, improve the general condition of the child's body during the illness.

The antibacterial action of pears gets rid of pathogenic flora, and antimicrobial properties reduce inflammatory processes in the body of the child.

When conducting research of the comparative characteristics of pear fruits, used varieties of the Ukrainian selection "Maria", "Nika", "Cathedral" and pear varieties «Snowflake Pear (雪花梨)», «Jing Bai Pear (京白梨)», «Dongguo Pear (冬果梨)», which are grown in China. The research results are given in table. 4.

Table 4 – Technological characteristics of pears

Technological Indexes	Variety name		
	Varieties grown in Ukraine		
	Maria	Nika	Cathedral
1	2	3	4
The shape of the fruit	Oblong, pear-shaped	conical, smooth shape	asymmetric pear-shaped
The size of the fruit, the largest transverse diameter, mm	from 45,0 to 52,0	from 40,0 to 44,0	from 35,0,0 to 40,0
Fruit weight, g	from 220 to 260	from 140 to 200	from 110 to 120
Skin	The skin is smooth, golden yellow, bright red blush, there are many gray-green dots of veins	The skin is oily, with a plaque of medium thickness. The color is green with a red tinge. Ripe fruits have a shade from light yellow to brown-red	The skin is greenish-yellow with a pink tinge, the surface is smooth, slightly bumpy.
Flesh Consistency	The flesh is creamy, pleasant sweet-sour taste, very juicy	The flesh is cream-colored, the taste is sweet-sour, the graininess of the pear is clearly felt	The flesh is white, dense and fleshy. The taste is sweet - sour, pronounced pleasant aroma
Technological Indexes	Variety name		
	Varieties grown in China		
	Snowflake Pear 雪花梨	Jing Bai Pear 京白梨	Dongguo Pear 冬果梨
The shape of the fruit	Oblong, large shape	Conical-rounded shape	Conical shape
The size of the fruit, the largest transverse diameter, mm	from 85,0 to 90,0	from 50,0 to 60,0	from 85,0 to 90,0
Fruit weight, g	from 330 to 400	from 100 to 160	from 320 to 500

Continuation of table 4

1	2	3	4
Skin	The skin is smooth, thin, golden yellow, with a green tinge	The skin is smooth, yellow	The skin is smooth, dense, yellow with a golden and brown tinge
Flesh Consistency	The flesh is white, with a jade greenish tinge. crispy and tender, juicy and sweet	The flesh is milky white, the fruit is rich in juice, has a sour-sweet taste and high aroma	The flesh is white, tender, juicy, crispy

The fruits of pear varieties grown in Ukraine and China differ slightly in geometric parameters. At the same time at primary operations it is necessary to carry out carefully inspection and calibration that will allow to apply the unified modes of heat treatment.

The introduction of fruits and vegetables of exotic origin in the diet of children causes different opinions among paediatricians, firstly, the products can cause allergies, and secondly, from what age it is possible to include in the diet of exotic fruits and vegetables. All fruits and vegetables are good for the body, they strengthen the immune system, fill the deficiency of vitamins and trace elements, stimulate the gastrointestinal tract, and some have a preventive and therapeutic effect on the child's body. In prescription bookmarks of functional products we plan exotic fruits - mango and banana, which grow in China, and in Ukraine are imported.

Bananas are hypoallergenic products, but at the same time bananas contain the substance serotonin, which can cause an allergic reaction in the body of the child. In terms of taste, banana has a sweet taste, flesh and tender texture, which allows a child to chew it without a full number of teeth, with the help of gums. The chemical composition of bananas improves the construction of bone and muscle tissue, the circulatory system, brain and all nervous tissue, as well as many other vital systems of the growing body of the child. Due to the high fiber content, intestinal motility is stimulated and its work is normalized. Bananas are grown in China all year round, unlike in Ukraine. Given that they are grown for both animal feed and human consumption, the varieties were studied - «Banana Gongjiao»(贡蕉), «Banan"Pei-Chiao"»(北蕉.), «Malaysian Red Banana» (马来西亚红香蕉), which are sold in a retail network for consumers. Technological characteristics of bananas are given in table. 5.

Table 5 – Technological characteristics of bananas

Technological Indexes	Variety name		
	Banana "Gongjiao" 贡蕉,	Malaysian "Red Banana" 马来西亚红香蕉,	Banan"Pei-Chiao" 北蕉.
1	2	3	4

Continuation of table 5

1	2	3	4
The shape of the fruit	Elongated shape	Elongated shape	Elongated shape
Fruit length, cm	from 7 to 10	from 16 to 20	from 20 to 25
Fruit weight, g	from 60 to 70	from 250 to 300	from 150 to 190
Skin	After ripening, the skin becomes golden yellow	After ripening, the skin becomes pink	After ripening, the skin becomes yellow
Flesh Consistency	Orange-yellow, waxy excellent sweet taste, fragrant	Light yellow with a pink tinge, waxy excellent sweet taste, fragrant	Light yellow, waxy excellent sweet taste, fragrant. There is a smell of fruits of Osmanthus fragrant (deciduous bush of family Olive) (Osmanthus fragrans)

Mango is a very useful fruit for a child's health. In Asian countries, it is recommended to include in the diet of children from 4 to 6 months. In countries where mangoes do not grow, such as Ukraine, paediatricians recommend including a child from the age of twelve months in the diet. The fruit is tasty and useful and easily absorbed by the body, effective in the treatment of infectious diseases, as well as in the prophylactic treatment of the visual organs and strengthening the immune system.

Table 6 – Technological characteristics of mango

Technological Indexes	Variety name		
	Tainung No.1 (台农一号)	Mangifera indica Linn (金煌芒)	Mango variety Tianyangxiangmang (田阳香芒)
The shape of the fruit	The fruit is rounded - sharp, elongated, slightly flattened	The fruit is round and oblong	The fruit is oval-rounded
Fruit size, mm	length - 105; thickness, with the largest transverse diameter - 65; width - 72;	length - 199; thickness, on the largest transverse diameter - 101; width - 89;	length - 90; thickness, with the largest transverse diameter - 60; width - 50;
Fruit weight, g	from 220 to 250	from 915 to 1200	from 150 to 200
Skin	Green, when ripe acquires a light yellow color with a red tinge at the base of the fruit	Orange-yellow color, with a wax coated	Golden-yellow color, with a wax coated
Flesh Consistency	The flesh is juicy, fragrant, bright yellow	Orange-yellow color, sweet, very juicy and fragrant, smooth flesh in structure	The flesh is yellow with an orange-orange tinge, very juicy, flavor-smooth in structure.

In research of the mango fruits, table. 6, used the varieties «Tainung No.1 (台农一号)», «Mangifera indica Linn.(金煌芒)», «Mango variety Tianyangxiangmang (田阳香芒)», which are traditionally grown in China.

The results of the research will offer uniform requirements for the quality and safety of raw materials and finished products for functional purposes for children. The parameters of complex processing, especially heat treatment, transportation and storage of raw materials of plant origin are directly dependent on technological indicators. At the same time, the results of the research are planned to be used in the development of national standards of Ukraine for exotic raw materials of plant origin, which are used in the production of products for children food for long-term storage.

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TECHNOLOGICAL ASPECTS OF VEGETABLES AND FRUIT FOR OF FUNCTIONAL PRODUCTS OF BABY NUTRITION, LONG-TERM STORAGE

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Summary

The health of the adult generation and children is a priority in the countries of the world. Statistics Ukraine and China indicate a deterioration in the health of the population, especially children. In recent years, the natural disease rate is high; a large number of adults and children with kidney and respiratory diseases have been registered. In the complex treatment of children, proper nutrition plays a very important role. Therapeutic nutrition is built differentially in accordance with the nature, stage of the disease and the age of the child.

The main stage in the creation of products with specified functions is the selection of raw materials that do not cause allergies by native indicators and contain pharmacological elements that have a positive effect on the body during treatment. The technologies for the production of an assortment of products for therapeutic and prophylactic purposes should maximally ensure the storage of native substances of raw materials in the finished product. When developing processing parameters, it is necessary to investigate the technological parameters of raw materials.

The results of research on the technological characteristics of plant raw materials that are grown in Ukraine and China, as well as the technological characteristics of exotic fruits, which are traditional in Asian countries, will make it possible to create uniform technological requirements for raw materials used in the production of products for children. Uniform technological requirements will be taken into account in fundamental research and applied development of parameters for heat treatment of raw materials. In parallel, the research results are planned to be used in the development of national standards of Ukraine for exotic plant materials that are used in the production of products for children with long-term storage.

Key words: baby food, medicinal food, plant materials, pneumonia, pyelonephritis, technological characteristics.

ТЕХНОЛОГІЧНІ АСПЕКТИ ОВОЧІВ І ФРУКТІВ ДЛЯ ФУНКЦІОНАЛЬНИХ ПРОДУКТІВ ДИТЯЧОГО ХАРЧУВАННЯ, ТРИВАЛОГО ЗБЕРІГАННЯ

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Анотація

Здоров'я дорослого покоління та дітей є пріоритетним у світі. Статистичні данні України та Китаю свідчать про погіршення стану здоров'я населення особисто дітей. За останні роки натуральний коефіцієнт захворювання високий, зареєстрована велика кількість дорослих та дітей з захворюванням нирок та органів дихання. У комплексному лікуванні дітей, правильне харчування відіграє дуже важливу роль. Відповідно до патогенезу захворювання основним принципом лікувального харчування, є забезпечення максимального щадіння органу і порушених його функцій. В одних випадках лікувальне харчування має самостійне значення (в період повної або часткової клініко-лабораторної ремісії), в інших, є одним з провідних факторів в комплексному лікуванні. Лікувальне харчування створюється диференційовано відповідно до характеру, стадії захворювання та віку дитини.

Основним етапом створення продуктів з завданою функцією є підбір сировини, яка за нативними показниками є гіпоалергенною та містить фармакологічні елементи, які позитивно впливають на одужання. Технології виробництва асортименту продуктів лікувально-профілактичного призначення повинні максимально забезпечувати зберігання нативних речовин сировини у готовому продукті. При розробленні параметрів оброблення необхідно досліджувати технологічні параметри сировини.

Наведені результати досліджень технологічних характеристик сировини рослинного походження, яка вирощується в Україні та Китаї, а також технологічні характеристики екзотичних фруктів, які є традиційними в країнах Азії дозволять запропонувати єдині технологічні вимоги щодо сировини яка використовується при виробництві продуктів для дітей. Єдині технологічні вимоги будуть враховані при фундаментальних дослідженнях та прикладних розробленнях параметрів термічного оброблення сировини. Одночасно результати досліджень планується застосувати при розробленні національних стандартів України на екзотичну сировину рослинного походження, яка використовується при виробництві продуктів для дітей тривалого зберігання.

Ключеві слова: дитяче функціональне харчування, сировина рослинного походження, технологічні характеристики, піелонефрит, пневмонія.

ТЕХНОЛОГИЧЕСКИЕ АСПЕКТЫ ОВОЩЕЙ И ФРУКТОВ ДЛЯ ФУНКЦИОНАЛЬНЫХ ПРОДУКТОВ ДЕТСКОГО ПИТАНИЯ ДЛИТЕЛЬНОГО ХРАНЕНИЯ

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Аннотация

Здоровье взрослого поколения и детей является приоритетным в странах мира. Статистические данные Украины и Китая свидетельствуют об ухудшении состояния здоровья населения особенно детей. За последние годы натуральный коэффициент заболеваний высокий, зарегистрировано большое количество взрослых и детей с заболеванием почек и органов дыхания. В комплексном лечении детей, правильное питание играет очень важную роль. Согласно