

NEWS

OF THE NATIONAL ACADEMY OF SCIENCES OF THE REPUBLIC OF KAZAKHSTAN

SERIES OF BIOLOGICAL AND MEDICAL

ISSN 2224-5308

Volume 3, Number 327 (2018), 48 – 52

UDC 582.681.71

Z. A. Talkanbayeva¹, A. M. Kalkabayev², H. Ozden³, S. A. Kalkabayeva⁴

¹Kh. A. Yassawi International Kazakh-Turkish university, Turkestan, Kazakhstan,

²University «Miras», Shymkent, Kazakhstan,

³Eskisehir Osmangazi University, Faculty of Medicine Department of Anatomy Eskisehir, Turkey,

⁴South-Kazakhstan State University named by M. Auezov, Shymkent, Kazakhstan.

E-mail: talkanbaeva_56@mail.ru, zeus-83@mail.ru, hilmiozden@gmail.com, kalkabayeva@list.ru

CHEMICAL COMPOSITION OF DRY MELON, MADE FROM MELON, AND MELON LONG WORM, NUTRITIONAL VALUE

Abstract. In this article, explore the chemical composition of products prepared from melon dried melon and pastille, the nutritional value for the proper functioning of the body was considered. In the dried melon made from melon in comparison with the pastille, the protein is lower, the fat content is higher and carbohydrates are higher. The value of the vitamins of two products from melon basically differs little from each other. Only ascorbic acid was found in the pastil at a high level. It was found that the supply of essential amino acids of leucine, lysine, threonine, compared to the dried melon, is higher in the paste. In the pasta of melon and dried melon, unsaturated fatty acids olein and linol were found in large quantities. From this side, too, the values of these products were seen. These indicators can improve the general state of human health, strengthen the body's resistance to disease, prevent early aging and improve efficiency. It has been established that in the formation of biological and physiological functions of the body dried cantaloupe and pasta from melon provides valuable nutrients and has the property of healing.

Key words: melons, melons, carrots, proteins, fats, carbohydrates, vitamins, color amino acids, metabolic amino acids, strength, value, kilocalorie, unsaturated fatty acids, aspartic acid, glutamic acid.

Introduction. In addition to livestock products, the Kazakh people used various fruits and vegetables as food and medicines. Among them, rhubarb, sorghum, peppermint, blackberries, garden, tulips, garlic, hawthorn, nettle, starfish, hawthorn, opium, hawthorn, jellyfish, herring, fir, mint, hothouse, etc. belongs to [1].

The food composition of the food menu consists of the first, the second group of products, which has an additional effect on the food properties of another group of products. For example, saturated fatty acids, mineral salts and vitamins from meat and milk fat can be completely consumed from meat and dairy products. Even balanced ingredients can provide the recommended nutrient content in the food formula [2]. We can say that this type of food is consistent with the enzyme system in the organisms of our ancestors, which indicates that the continuity of this phenomenon does not allow the traditions of the modern Kazakh nation to be unhealthy. However, in today's world of nutrition, there are many harmful manifestations of human activity. The assortment of national dishes is strong and the flavor of sheep and goat's milk is usually reduced, and the share of flour and sweet foods is growing, and daily consumption of vegetables is still rare. If past eating habits have the same euphoria in their mouth, they are still present. Physical activity (hypodynamia), pollution of the environment (types of food) also affects the body.

Often the use of alcoholic beverages of the population, response, drugs, nasawa, domestic difficulties (high cost) not permitting the weakness of the enzyme system, the various manifestations of the disease is not a guarantee. Absorption of chemical leakage in the external environment, radioactivity "on our fist", as it works [3].

Tropical plants of the family of pumpkin, common in countries, subtropical. They are mainly cultivated plants. Melon (*Cucumis melo*) - a plant annual grassy, subject to pumpkin family Melons grow

in South-West Asia and Africa. More than 2,000 years ago melons were cultivated in small and medium Asian lands as a cultivated crop. Depending on the varieties and varieties of melons, etc. are divided into groups. Cut a melon to prepare a dried melon, drizzle, boil the pasta from melon, jam, marmalade. b. trains.

Food is one of the factors that affect the human body. It is very different from other external factors, because it turns into the body as an internal factor and stimulates the physiological systems and acts as the structural functioning of the human body. That's why nutrition improves, increases efficiency and increases the tendency to resist various dangers. Carbohydrates of vegetables are characterized by mono- and disaccharides, starchy, fibrous, pectinic substances (on average 3-4%). Vegetable fiber is physiologically very valuable, as it reaches a soluble compound when it reaches the intestinal cavity (pectin cellulose). It improves the secretion and motor function of the intestine. There is also evidence that the fever cleanses the body of cholesterol [2].

Vegetables and fruits are a natural source of various vitamins and mineral salts. With this feature they have a special biological value. Compared with other dishes, nutrients are completely covered with vegetables and fruits [2, 121-124].

The ability to organize proper nutrition begins with the ability to detect the chemical composition of foods. Determining the quality of each type of food is the basis of the body's nutritional needs.

The relevance of studying the chemical composition of foods promotes the healing of therapeutic products.

Research Materials. Professions that arose after the settlement of the Kazakh people in the village were melons and other agricultural products. From, dried melon, pastured from a melon, they learn to prepare long-term dishes. These dishes can not be called national dishes, as they can be seen in other countries, especially in the table of the Uzbek people.

Delicate fragments of melon from dried melon and melon pasta are dried and the thickness is about 0,9-10 millimeters. Melon is divided into two parts, cuts each part from 0,9-10 millimeters to the trunk. The length of each group is from 40 to 50 centimeters. They put them in the shaded area individually and apply a thin cloth to the surface (anti-jamming). You must continue to move. Food can be stored for twelve months. The word keel means to dry in the sun.

Dried melon - was divided into two parts of the middle of melon fresh, cut with peel, then baña obtained, extraction of bark. His hair, like a dried braid, drains about one week. It is stored in a cool place. The shape of the melon, made in the laboratory is entrusted from the dried melon. [4, p. 139].

Shepherd from melon – falling inside, crushed melon peeled from the skin and boiled for 1–2 hours (until the color turns brown). After drying in a week, it is stored and remains clean. Pastilla from melon was placed in a laboratory in ready condition [4, p. 139].

Research methods. The above-named biological and chemical values of Kazakh national cuisine were identified in the laboratory of the National Academy of Nutrition of Kazakhstan.

Dried melon and pasta from melon protein were identified by the micro-Kjeldahl method [5]. The total amount of fats was determined by DI Kuznetsov and NG Grishin [6]. The total amount of carbohydrates was calculated from the difference between dry matter and protein, fat and mineral substances. Humidity, dry residue, ash content of the food product was carried out using known physical and chemical methods. The energy value of food was calculated using a heat factor equal to one kilogram of protein and carbohydrates, which was 4.1 kilocalories, and the fat content was 9.3 kcal.

The size of vitamins: B1 (thiamine), B2 (riboflavin) – fluorometry, PP (niacin) –symmetric, C, A, E – are determined by colorimetric methods [7].

The data obtained as a result of the study were processed by standard statistical methods [8].

The results of the research. The chemical composition of dried melon and melon from melon has been studied. Protein, fat, carbohydrate and the effectiveness of the melon and melon wafers, which was created in the main laboratory of the Kazakh Academy of Nutrition (table 1).

Pastilla from melon is much less fat, fat, carbohydrates compared to sugar, dried melon. The nutritional value of any product is evaluated by the ratio of the chemical composition of the product and a balanced diet that determines the basic nutritional requirements for health and human needs.

The values of the vitamin of two melon products basically do not coincide. High levels of ascorbic acid melon were found, and the same amount of vitamin PP was found in both tastes.

Table 1 – Nutritional values of dried melon and melon paste (100 g / mg product)

#	Name of food ingredients	Name of product	
		dried melon	pasty from melon
1	Protein, g	6,91	5,20
2	Fat, g	2,58	3,0
3	Carbohydrates, g	63,14	66,66
4	Strength, kcal	303	327

Table 2 – Parameters of the vitamin tincture of pastilles from melon and dried melon (mg/100 g of product)

#	The name of vitamins	Name of product	
		dried melon	pasty from melon
1	A	–	–
2	β -carotene	2,73	2,89
3	E	0,68	0,71
4	B ₁	0,27	0,29
5	B ₂	0,28	0,31
6	PP	2,76	2,94
7	C	14,0	0,6

Vitamin C. participates in the functional oxidation-reduction reaction of the immune system, adapted to the absorption of iron. The lack of this vitamin is characterized by reddening of the tooth and bleeding from the nose, as the bleeding of the blood vessels is considered high permeability [2, p. 84-86].

Table 3 – Indicators of scale and essential amino acids taste of pastille from melon and dried melon (mg/100 g of product)

#	Irreplaceable amino acids, mg	Amount of amino acids, mg	
		dried melon	pasty from melon
1	Valine	91	68
2	Isoleucine	182	137
3	Leucine	164	124
4	Lysine	582	441
5	Methionine	56	42
6	Threonine	255	193
7	Tryptophan	64	48
8	Phenylalanine	146	111

It was found that amino acids are high in the smoke product compared to melon worms.

Table 4 – Amino acid metabolism of melted butter and melon paste (mg/100 g of product)

#	Amino acids exchanged, mg	Amount of amino acids, mg	
		dried melon	pasty from melon
1	Alanin	234	309
2	Arginine	125	166
3	Asparagine	2358	3112
4	Histidine	55	73
5	Glycine	201	264
6	Glutamine	657	865
7	Proline	139	184
8	Serin	158	209
9	Tyrosine	83	109

As a result, the metabolism of lysine and threonine among the amino acids that we can not detect is the abundance of asparagine and glutamine in the exchange of amino acids.

Analysis of results. Known by the science of biochemistry, the beginning of digestion of glutamine is carried out with the presence of asparagine [9]. Asparagine is separated from asparagine in cells and is associated with toxic ammonia in the body and neutralizes it. Aspartic acid also supports the asparagine reserve and the first stage of its decomposition in metabolic processes. Non-invasive amino acids that go directly to the body's nutrients without being digested in the necessary organisms are detected when methionine, threonine and lysine are formed. And lysine is necessary for the growth of the breed, the regeneration of tissues, the production of hormones, antibodies and enzymes. Lysine is a component of connective tissue, which forms a muscle collagen protein. Lysine is involved in the elastic gluing of blood vessels, as well as in the digestion of calcium. Participates in the prevention of osteoporosis, atherosclerosis, stroke and heart failure in the human body. Regulates breast function. The value of these amino acids was proved for the survival of body cells. Of these amino acids, it is important that the body functions as glutamine. It ensures the release of harmful emissions from protein metabolism. Glutamic acid improves the respiration of brain cells and helps to balance the acid-base reaction, stabilizing the concentration of hydrogen ions in the blood and tissue [10]. It was found a large number of oleic and linoleic oils found in melon wormwood and melon. In this sense, the significance of these dishes is also noticeable. He takes part in the metabolism of the body. Linoleum enhances metabolism in the body, participates in the regulation of cholesterol, and also has the ability to prevent diabetes and can withstand allergic diseases of various products.

The results of studying their own materials are analyzed and the chemical composition of the taste is determined. In fact, it is worth noting that the first study of nutrients, vitamins, amino acids and amino acids, determining their strength [11, 12].

Conclusion. Moisture-proof, light-resistant, resistant to desert, annual plant and nutritional value of proper functioning of the organism, by examining the chemical composition of the taste of pastilles from melon and dried melon. The melon paste is made from a melon paste with slightly reduced protein content, fat content, carbohydrates and vitamins, and high levels of ascorbic acid melon and RR were the same in both products compared to other vitamins. Among the replaceable amino acids is the abundance of asparagine and glutamine. As a result, unsaturated amino acids are rich in lysine and threonine and that the substance in amino acid metabolism contains a large amount of aspirin and glutamine for the survival of body cells. The presence of oleic and linoleum oils melon paste melon shows the nutritional value of taste.

Theoretically, the results of the work performed are of particular importance, since it has been proved that the melanoid and melon provide valuable nutrients in the formation of the biological and physiological functions of the body. Suitable for people of different professions and for people of all ages. Today it is widely used among peoples.

Practically, based on the results of the research, it has the full potential to increase the level of nutrition in the menu. Table data used in sanatoria, public and family meals are used.

REFERENCES

- [1] Kozhabekov M., Kozhabekova G. Medicinal plants. Almaty, 1982.
- [2] Pokrovsky A.A. Tell us about food. Almaty, 1990. P. 276-287.
- [3] Nurmukhanbetova R. History of the development of Kazakh traditional medicine. Almaty, 1996. 129 p.
- [4] Tilemisov H. Kazakh national cuisine. Almaty, 1995. 139 p.
- [5] Cosma V., Armeanu V. Kedell // Ind. Alim. 1970. Vol. 66, N 5. P. 257-259.
- [6] Kuznetsov D.I., Grishina N.P. Universal method for identification and identification of lipid products. M., 1977. 161 p.
- [7] Burshtein A.I. Study of methadone products. Kiev: Gosvami Institute, 1963. 645 p.
- [8] Urbach V.Yu. Statistical analysis of biological and medical research. M.: Medicina, 1975. 255 p.
- [9] Aleynikova TL, Avdeeva L.V. and so on. Biochemistry: manual / sub.credit. Severina E.S. - M.: GEOTAR - the media, 2006.
- [10] Aldashev A.A. Treatment-and-prophylactic nutrition // Labor protection in Kazakhstan. 2007. N 12.
- [11] Erdenova B.E., Almaganbetova A.T. Quality of frozen sausages // Essential and reproductive industry in Kazakhstan. 2008. N 2. P. 33-34.
- [12] Kerimbekov B.K., Talhanbaeva Z.A. Chemical composition and nutritional value of Kazakh national cuisine. Turkestan, 2008. P. 5-12.

З. А. Талханбаева¹, А. М. Калкабаев², Н. Ozden³, С. А. Калкабаева⁴

¹Қ. А. Ясауи атындағы Халықаралық қазақ-түрік университеті, Түркістан, Қазақстан,

²Мирас университеті, Шымкент, Қазақстан,

³Эскишехир Османгазы Университеті, Медицина Факультеті, Анатомия Кафедрасы, Эскишехир, Түркия,

⁴М. Әуезов атындағы Оңтүстік Қазақстан мемлекеттік университеті, Шымкент, Қазақстан

ҚАУЫННАН ДАЙЫНДАЛАТЫН ҚАУЫН ҚАҚ ПЕН ҚАУЫН ҚҰРТТЫҢ ИМИЯЛЫҚ ҚҰРАМЫ, ҚОРЕКТІК МАҢЫЗЫ

Аннотация. Мақалада қауыннан дайындалатын қауын қақ пен қауын құрттың химиялық құрамын зерттей отырып, ағзаның дұрыс жұмыс жасауына қоректік маңызы қарастырылады. Қауыннан дайындалатын қауын құрттың, қауын қақпен салыстырғанда, ақуыздылығы сәл аздау, майлылығы көптеу, көмірсуы молдау. Қауынның екі өнімінің дәрумендік құндылықтары негізінен бір-бірінен айырмашылық танытпайды. Тек қана аскорбин қышқылы қауын қақта жоғары деңгейде анықталды. Алмаспайтын аминқышқылдар қоры лейцин, лизин, треонин қауын қақ өнімінде, қауын құрттағы деңгеймен салыстырғанда жоғары көрсеткіштермен анықталды. Қауын құрт пен қауын қақта қанықпаған олеин және линол майқышқылдары көп мөлшерде анықталды. Бұл жағынан да осы тағамдардың құндылығы байқалады.

Осындай анықталған көрсеткіштер адамның жалпы денсаулығын күшейтіп, кеселге қарсы қасиетін арттырып, ерте қартаюдың алдын алып, жұмыс істеу қабілетін көтереді. Ағзаның биологиялық және физиологиялық қызметін қалыптастыруда қауын қақ пен қауын құрт дәмінің сауықтыру қасиеті бар, бағалы қоректік заттармен қамтамасыз етуде екендігі анықталды.

Түйін сөздер: қауын қақ, қауын құрт, ақуыз, майлар, көмірсулар, дәрумендер, алмаспайтын аминқышқылдар, алмасатын аминқышқылдар, қуаттылық, құндылық, килокалория, қанықпаған май қышқылдары, аспарагин қышқылы, глутамин қышқылы.

З. А. Талханбаева¹, А. М. Калкабаев², Н. Ozden³, С. А. Калкабаева⁴

¹Международный казахско-турецкий университет им. Х. А. Ясави, Туркестан, Казахстан,

²Университет «Мирас», Шымкент, Казахстан,

³Университет Османгазы Эскишехир, Факультет Медицины, Кафедра Анатомии, Эскишехир, Турция,

⁴Южно-Казахстанский государственный университет им. М. Ауэзова, Шымкент, Казахстан

ХИМИЧЕСКИЙ СОСТАВ, ПИЩЕВАЯ ЦЕННОСТЬ ПРИГОТОВЛЕННЫХ ИЗ ДЫНИ ПАСТИЛЫ И СУШЕНОЙ ДЫНИ

Аннотация. В статье изучая химический состав продуктов приготовленных из дыни сушеной дыни и пастилы, была рассмотрена питательная ценность для правильной работы организма. У сушеной дыни изготовленной из дыни в сравнении с пастилой белок ниже, жирность выше и углеводов больше. Ценность витаминов двух продуктов из дыни в основном мало отличается друг от друга. Только аскорбиновая кислота была обнаружена в пастиле на высоком уровне. Было обнаружено, что запас незаменимых аминокислот лейцина, лизина, треонина, по сравнению с сушеной дыней, выше в пастиле. В пастиле из дыни и сушеной дыне были обнаружены в больших количествах ненасыщенные жирные кислоты олеин и линол. С этой стороны тоже была замечены ценности этих продуктов. Эти показатели могут улучшить общее состояние здоровья человека, усилить свойства сопротивляемости организма к болезням, предотвратить раннее старение и повышать работоспособность. Установлено, что в формировании биологических и физиологических функций организма сушеная дыня и пастила из дыни обеспечивает ценными питательными веществами и обладает свойством оздоровления.

Ключевые слова: сушеная дыня, пастила из дыни, белок, жиры, углеводы, витамины, заменимые аминокислоты, незаменимые аминокислоты, сила, ценность, килокалория, ненасыщенные жирные кислоты, аспарагиновая кислота, глутаминовая кислота.