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ZIZIPHUS JUJUBA O‘SIMLIGI MEVASINING KIMYOVIY TARKIBI VA XALQ TABOBATIDA QO‘LLANILISHI

ХИМИЧЕСКИЙ СОСТАВ ПЛОДОВ РАСТЕНИЯ *ZIZIPHUSJUJUBA* И ИХ ПРИМЕНЕНИЕ В НАРОДНОЙ МЕДИЦИНЕ

CHEMICAL COMPOSITION OF THE FRUITS OF THE PLANT *ZIZIPHUS JUJUBA* AND THEIR APPLICATION IN FOLK MEDICINE

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Annotatsiya

Ziziphus jujuba o‘simligi xalq tilida chilonjiyda deb atalib, qadimdan xalq tabobatida ishlatilib kelingan. U ham to‘yimli va ozuqabop, xam shifobaxsh. Maqolada chilonjiyda – unabining kelib chiqish tarixi, dorivor xususiyatlari, tarkibi, tabobatda va tibbiyotda qo‘llanilishi, olib borilgan tadqiqotlar natijalari taxlil etilgan.

Аннотация

Растение Ziziphus jujuba в народе называлось “чилонджийда” или “унаби” и издавна использовалось в народной медицине. Она питательная, калорийная и целебная. В статье излагается история происхождения унаби, его целебные свойства, состав, применение в народной и традиционной медицине, а также приведены результаты проведенных исследований.

Abstract

The plant Ziziphus jujuba was popularly called “chilonjiida” or “unabi” and has long been used in folk medicine. It is nutritious, high-calorie and healing. The article describes the history of the origin of unabi, its healing properties, composition, application in folk and traditional medicine, as well as the results of the research.

Kalit so‘zlar: *chilonjiyda, unabi, Ziziphus, oqsil, uglevod, qand. mikroelementlar, organik kislotalar, vitamin S, onkologiya, o‘sma, antotsianlar, steroidli moddalar.*

Ключевые слова: *унаби, Ziziphus jujuba, белок, углевод, сахар. микроэлементы, органические кислоты, витамин С, онкология, опухоли, антоцианы, стероидные вещества.*

Key words: *unabi, Ziziphus jujuba, protein, carbohydrate, sugar. trace elements, organic acids, vitamin C, oncology, tumors, anthocyanins, steroid substances.*

INTRUDACTION

It is no secret that the human need for food is increasing year by year. In order to fully satisfy this need, it is important to carry out measures such as proper nutrition, growing more caloric, vitamin-rich food products in harmony with landscaping, growing nutritious fruit seedlings, and taking care of them. One such high-calorie, vitamin-rich, and healing natural food source is unabi.

Chilonjiyda is a tree-like plant up to 10 meters tall, resistant to drought, cold and heat, and does not choose the soil for growth. The branches are smooth and thorny, the leaves are long and egg-shaped, and they are arranged individually [1,2]. Chilongjiyda or unabi is a plant belonging to the Ziziphus family of the Rhamnaceae family, which has more than 400 species.

Figure 1. Ziziphus jujuba - plant and its fruits

LITERATURE ANALYSIS

According to the authors, the amount of dry matter, sugar, organic acids and vitamin C in the species of chilongjiyda studied by them differs slightly depending on the type of plant. However, the quantity and quality composition of substances do not deviate from the general law. For example, in the species of chilongjiyda they studied, the amount of sugar is high, up to 30%, organic acids are 0.07%, and the amount of vitamin C is 370 mg per 1 kg of fruit. Chilonjiyda fruit contains from 17% to 76% dry matter depending on the type. The amount of sugar is 15-28%, organic acids are up to 3%, protein is up to 1.6%, and fat is around 0.3%. It is also noted that the amount of Vitamin C is high, while the amount of V1, V2, V5, beta-carotene, and steroids is small, it is one of the factors that ensure the healing of chilongji fruit. Minerals such as Sa, R, K, Fe, Mg, Co and I_2 have been isolated, which is one of these factors [3].

Table 1. Chemical composition of the fruit of unabi (in 100 g wet fruit)

Basic ingredients						
Calorie content		Water	Carbohydrate		Protein	Lipid
79 kkal		77.86 g	20.23 g		1.2 g	0.2 g
Submolecular active substances						
Phenols	Flavanoids	Anthocyanins	Carotenes		-carotene	-tocopherol
275.6-541.8 mg	62.0-284.9 mg	29.79-42.91 mg*	4.12-5.98 mg*		35 mg	0.04-0.07 mg
Vitamines						
C	A	PP	B_1		B_2	B_6
69.0 mg	2.0 mg	0.9 mg	0.02 mg		0.04 mg	0.081 mg
Microelements						
K	P	Ca	Mg	Na	Fe	Zn
250 mg	23 mg	21 mg	10 mg	3 mg	0.48 mg	0.05 mg

* - in 100 g of dry fruits;

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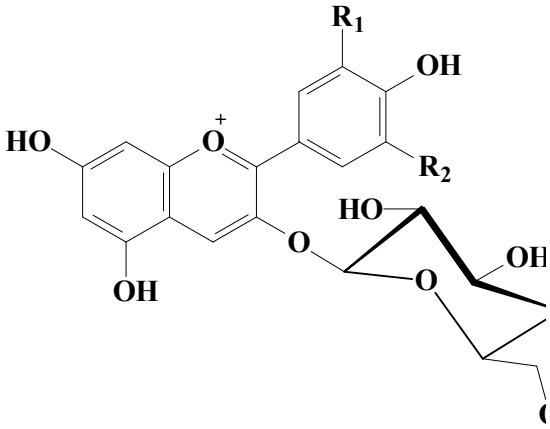
3%, protein is up to 1.6%, and fat is around 0.3%. It is also noted that the amount of Vitamin C is high, while the amount of V1, V2, V5, beta-carotene, and steroids is small, it is one of the factors that ensure the healing of chilonjiyda fruit. Minerals such as Sa, R, K, Fe, Mg, Co and I_2 have been isolated, which are some of these factors [3].

A local jujube species studied by Chinese scientists, Ziziphus jujube Mill. The chemical substances contained in the plant are not significantly different from other species in terms of quantity and quality. In the sample they studied, vitamins C, B1, B2, B6, PP, and A are present, of which vitamins C and A are in large amounts, i.e. 69 mg and 40 mg, respectively. Among microelements, potassium - K is much more than other microelements, its amount is 250 mg. Also, the weight of important biogenic elements such as phosphorus - R (23 mg), calcium - Sa (21 mg), and magnesium - Mg (10 mg) is quite large (Table 1) [4].

The antioxidant capacity of chilonjiyda fruits is closely related to the presence of phenolic compounds and vitamin C, which neutralize oxygen radicals in their content [5]. Another group of Chinese scientists compared the antioxidant properties of extracts from 5 varieties of chilonjiyda. First, the antioxidant properties of the five cultivars were observed to differ from each other, and secondly, no general pattern was identified between the total phenolic content and antioxidant properties [6].



	R_1	R_2
1. Malvidin	OCH_3	OCH_3
2. Petunidin	OCH_3	OH
3. Peonidin	OCH_3	H
4. Delphinidin	OH	OH
5. Cainidine	OH	H

R_3 - acetyl, coumarin groups.

Figure 2. General formula and representatives of anthocyanins

Later, X. Zhang and his colleagues compared the antioxidant properties of extracts obtained from different organs of chilonjiyda and found that the peel of the fruit of all varieties showed the highest antioxidant properties. They pointed out that the reason for this is the large amount of phenolic compounds, flavonoids and anthocyanins (Fig. 2), which have antioxidant properties, in the fruit peel. They found that the phenolic derivatives of protocatechin, gallol, chlorogenic and caffeic acids, malvidin, petunidin, peonidin, etc., and anthocyanins are in large quantities in the fruit peel [7].

A group of Iranian scientists noted that chilonjiyda can be effectively used in the treatment of tumour diseases. Studies have shown that organic acids such as ursolin, oleanolin and botulinum (Figure 3), which are steroids of chilonjyda, penetrate into tumour cells, produce toxic substances, stop the growth and development of tumour cells, and cause them to die

[8].

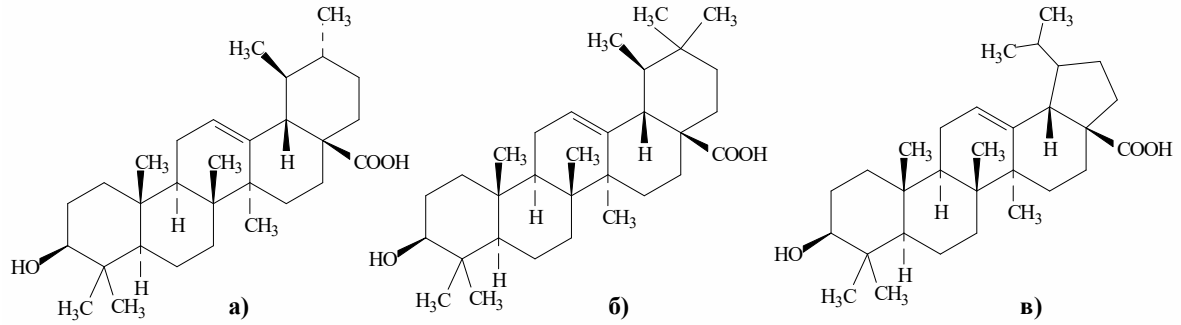


Figure 3. Antitumor substances contained in unabi: a) ursolic acid, b) oleanolinic acid, c) betulinic acid.

APPLICATION IN FOLK MEDICINE.

In folk medicine and medicine, unabi is widely used as an antioxidant, expectorant, anti-cold, immunity booster, blood thinner, nervous system calmer, cardiovascular diseases, especially blood pressure, and cholesterol-lowering agent. Unabi fruits are also a very good diuretic. In addition, ripe fruits are useful for constipation, while raw fruits, on the contrary, are used as a laxative.

All organs of unabi are used as raw materials for obtaining medicinal preparations: fruit, seed, leaf, bark, and root. They have a wide range of physiological activity. For example, its seeds reduce hypersensitivity to various drugs, improve digestion, decoction of root pods prevent diarrhoea. Research has shown that chilongjii fruit extract, added to skin creams, has skin rejuvenating properties and cures chronic constipation due to the antioxidants contained in its fruit extract. Also, studies have confirmed that unabi decoction is very useful in the treatment of jaundice in young children [9].

Because it is rich in vitamins and physiologically active substances, a thick decoction made from the bark of unabi tree strengthens hair, improves blood circulation in hair follicles, and unclogs blockages when applied to hair. It is usually recommended to eat chilangji fruit without removing the skin. Because the skin of the fruit is rich in many useful substances, especially antibacterial and antioxidant substances. Therefore, cosmetologists use the thick mass made from the skin of the fruit by adding it to skin rejuvenating agents and creams [10].

The leaves of chilonji have a unique taste and property, and when it is chewed a little, the tongue loses its ability to perceive bitter and sweet tastes. Earlier, it was effectively used in the treatment of some diseases. That is, before drinking the bitter medicine, the patient was advised to chew the leaves of chilongji. As a result, the patient did not feel the bitter taste of the medicine [11].

CONCLUSION

Unabi fruit contains vitamins such as C, A, PP, B_1, B_2, and B_6, biologically important trace elements such as K, R, Na, Ca, Mg, Fe and Zn, as well as anthocyanins and triterpene acids of ursolic, oleanolinic and betulinic. With this in mind, it is proposed to develop and put into practice a food supplement that enhances immunity, prevents the occurrence of tumors and helps in the treatment, based on the unabi fruit.

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