

bergapten and xanthotoxin has photosensitizing properties, stimulates hair growth, and is used to treat psoriasis, vitiligo, nesting swollenness. Therefore, due to the chemical composition and raw material base, phytochemical study of parsnip is relevant.

Aim. The purpose of our study was phytochemical study of root crops and leaves of parsnip.

Materials and methods. Identification of biologically active substances in the investigated raw material was carried out using qualitative reactions, paper and thin-layer chromatography. The sum of oxidizable polyphenols was determined by the permanganate-metric method in the Leventhal modification, using as a titrant 0,02 M potassium permanganate solution. A quantitative determination of the free organic acids total content was carried out using alkalimetric titration, using as a titrant 0,1 M solution of sodium hydroxide. The content of the sum of hydroxycinnamic and amino acids was determined using a spectrophotometric method. Quantitative analysis of the sum of water soluble polysaccharides in root crops and leaves of parsnip sowing was carried out gravimetrically.

Results and discussion. As a result of the experiment, polysaccharides, organic, hydroxycinnamic, and amino acids, flavonoids, tannins were found in root crops and leaves of parsnip sowing. Quantitative analysis of the content of certain groups of biologically active substances in the raw material of parsnip seedlings showed that the content of the sum of oxidizable polyphenols in terms of tannin in root crops was 0,08%, in the leaves – 1,55%. The total free organic acids content in terms of mallic acid in the root crops of parsnip sowing was 1,65%, in the leaves – 1,63%; hydroxycinnamic acids in terms of chlorogenic acid – 0,26% and 1,66%; amino acids in terms of leucine is 1,08% and 2,46% respectively. The quantitative content of the sum of water-soluble polysaccharides in the root crops of parsnip sowing was 9,84%, in the leaves – 16,40%.

Conclusions. The results of the phytochemical study of the investigated raw material showed significant content of water-soluble polysaccharides and amino acids. The experimental data obtained will be used later in developing the relevant sections of the quality control methods for root crop and leaves parsnip.

SOURCES OF PHYTONUTRIENTS AND THEIR INFLUENCE ARE ON THE ORGANISM OF MAN

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Introduction. At least, the one-third of all cases of disease crawfish is preventive. Most benefit for an organism, as a preventive, bring those elements and biologically active substances that come in the organism of man in natural way, namely with foodstuffs.

Aim. To Investigate and analyze the substances of vegetables that find out an antitumoral action.

Materials and methods. Review of literature of scientific reference book, descriptive, searching, logical methods.

Results and discussion. In plants there are very useful substances that is named phytonutrients. If to consume phytonutrients every day, it is possible to get rid from such problems, as a high level of cholesterol, heart trouble, senilism, including formation of malignant tumours. Phytonutrients are natural medications, what safe and popular.

To the substances of natural origin allyl sulfides (foods with a pungent odor, for example bow, garlic) belong with an antitumoral action; ketoles and isotiocyanates (cabbage of broccoli, cabbage white-haired, cauliflower, sheet mustard); isoflavones (bobs, lentil, soy); saponins (potato, soy, spinach, tomatoes), carotenoids (carrot, cabbage of broccoli, cauliflower, green leaf vegetableness, tomatoes), flavonoids (a cabbage is white-haired, bow).

Exactly phytonutrients give the bright colouring to the vegetables. To carotenoids and flavonoids belong, so-called, pigments that determine the color of vegetables.

Presently about 2 thousand pigments are known in the vegetable world, among what approximately 150 is most proof. All pigments distribute on three groups: chlorophyll, carotenoids and anthocyanins.

Anthocyanins give to the hide or pulp of vegetables blue, violet, red colouring, "record-holders" on maintenance these substances is an egg-plant(skin) and red cabbage. These substances find out expressed antitumoral antimutagenic, cardioprotective and hepatoprotective operate, and also have a capillary-protector effect (P-vitamin activity), however medicinal facilities with such properties on the basis of антоціанів it is not created as yet. At the market there are only admixtures to food foods, anthocyanins enter in the complement of that, whortleberries got from berries and blackberry, proanthocyanidine - from the stones of red sorts of vine.

On a person attention is deserved by lycopene (Lycopene) is a natural liposoluble carotenoid pigment accountable for the bright colouring of vegetables of red, bright yellow, orange color. He slits fats, has the expressed antioxidant effect, prevents the senilism of cage, formation of free radicals that at certain terms is able to cause a cancer, protects immune system. It is known that under act of heat treatment of lycopene does not not only collapse but also changes the structure and better mastered by an organism. The richest on lycopene are tomatoes, water-melons, swede, carrot, pepper red, brier. There is medicinal preparation of "Lycopene" at the pharmaceutical market.

Another powerful antioxidant is chlorophyll. The reception of chlorophyll reduces the risk of development of some types of chaste, and also slows inflammatory processes in an organism. It costs to mark ability of his molecules to link carcinogenic molecules, preventing them to harmful influence on cages. To the number of carcinogens with that chlorophyll contests successfully, belong: polycyclic aromatic carbohydrates, form as a result of incomplete combustion fuels; heterocyclic amines that is contained in the foods prepared on a grill; aflatoxins, that is produced by mould that lives on dsafoods feed. The natural sources of chlorophyll it the sprouts of wheat and barley, cabbage of broccoli, Brussels cabbage, lettuce, spinach, leaves parsley.

Conclusions. Phytonutrients, in that calculate pigments, for which rich vegetable cultures, play an important role the prophylaxis of oncologic and many other illnesses of man, and is a perspective source for creation of antitumoral pharmaceutical preparations.

CONTENT OF MAIN GROUPS OF BIOLOGICALLY ACTIVE SUBSTANCES IN TWO CHEMOTYPES OF *THYMUS SERPYLLUM* L., GROWING IN THE KAZAKHSTAN TERRITORY

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Introduction. The therapeutic properties of the herb *Thymus serpyllum* L.s.l. have been known since ancient times and for many centuries used in folk medicine. *Thymus serpyllum* is included in the State Pharmacopoeias of Ukraine, the Russian Federation, Kazakhstan, Britain and other countries. It is used in official medicine as a medicinal plant raw material with antibacterial, astringent, anti-inflammatory, soothing, anticonvulsant, expectorant, spasmolytic, choleric, analgesic, diuretic, wound healing and helminthic action, and is used in the form of decoctions and infusions. In the pharmaceutical industry, the herb *T. serpyllum* is used in the manufacture of galenic preparations (tinctures, liquid extracts), which is a source of medicines used in the treatment of upper respiratory tract diseases as an expectorant. For example, the liquid extract of the herb *T. serpyllum* is the active basis of the medication «Pertussin». Despite the fact that the herb *T. serpyllum* is included in the State Pharmacopoeia of the Republic of Kazakhstan, the chemical composition of this domestic medicinal plant has not been studied. However, only an analysis of the chemical composition of essential oil *Thymus serpyllum* L., collected in the natural habitat in different regions of Northern Kazakhstan in the first decade of July 2013 at the stage of full flowering, has been published.

Aim. The aim of the study is a comparative phytochemical study of the main groups of biologically active substances and the mineral composition of the two chemotypes *Thymus serpyllum* L.s.l, growing in the territory of Central Kazakhstan.