

SECONDARY PLANT METABOLITES ASTRAGALUS ALOPECIAS

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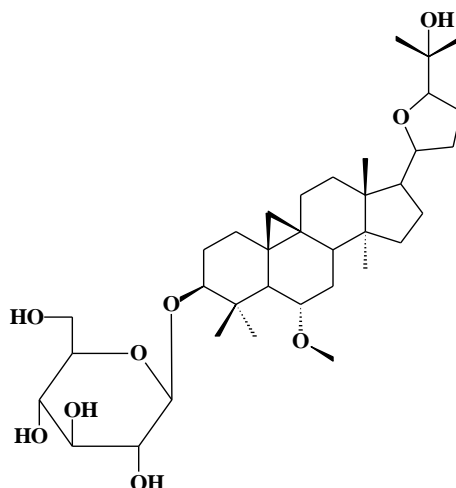
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Introduction. Biologically active substances derived from medicinal plants occupy an important place in the pharmacotherapy and prevention of various diseases. Since time immemorial, people have been using medicinal plants to treat various diseases. Scientists devote much attention to the identification, study and introduction of new types of medicinal plants, which are harvested in natural places of growth. In this respect, plants of the genus *Astragalus*, which are widespread in the South Kazakhstan region, are of considerable interest.

Aim. Isolation of secondary metabolites from plants. Plants of great interest are *Astragalus alopecias* Pall. Objects of the study were samples of raw material above-ground part of *Astragalus alopecias* Pall. collected in 2017.

Materials and methods. The dried and crushed aerial part of the plant was extracted with ethyl alcohol. The resulting extract was concentrated by distilling off the alcohols on a rotary evaporator and a double volume of water was added to the condensed residue. The residues of alcohols were further distilled off on a rotary evaporator.

Results and discussion. From the ethanol fraction, a compound -3-O- β -D-glucopyranoside-6-O-methyl epoxy cyclocarartan-3 β ,6 α ,24-triol



Conclusions. A triterpene compound was isolated from the ethanol extract of the aerial part of the plant *Astragalus alopecias* Pall.

DETERMINATION OF PHYSICAL AND CHEMICAL PROPERTIES OF SAFFLOWER FATTY OIL (*CARTHAMUS TINCTORIUS* L.)

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Introduction. Today, medicinal plants are one of the most important sources of obtaining medicinal products and dietary supplements that are used in various areas of medical practice. In our country today it is allowed to use of safflower oil only as biologically active substances and in cosmetology. At the same time, in foreign pharmacopoeias (pharmacopoeia of the USA, the British pharmacopoeia, the Chinese Pharmacopoeia) there are articles on safflower oil.

The **aim** of the work was to study the physical and chemical properties and indexes of safflower oil (unrefined oil).

Materials and methods. Seeds of safflower harvested during the period of full ripening in 2017 on the experimental part of the botanical garden of NUPh. With the help of Soxhlet apparatus (solvent – hexane), we received the oil of this plant. The study of the basic physical and chemical constants (acid value, iodine number, saponification value) was carried out in accordance with the requirements of the State Pharmacopoeia.

Results and discussion. We analyzed the organoleptic properties of safflower oil and definite indexes. As a result of our research, we determined the importance of the physicochemical constants characteristic of safflower oil. Results are represented in the table 1.

Table 1

Physical and chemical characteristics of safflower oil

№	Characteristic	Results
1	Relative density	0,919-0,924
2	Refractive index	1,473-1,474
3	Iodine number, (J2/100 g)	130-140
4	Acid value (mg KOH/g)	0,96-5,76
5	Saponification value (mg KOH/g)	186-198
6	Peroxide value	9,0

The obtained data was processed statistically using the methods of variation statistics.

Conclusions. In the course of the study, the physical and chemical characteristics of the oil of safflower were determined. Safflower oil meets the requirements of the State Pharmacopoeia and is promising for further study in the pharmacological aspect and food production.

DEVELOPMENT OF COMPOSITION AND TECHNOLOGY OF TABLETS FOR PROPHYLAXIS AND TREATMENT OF UROLITHIASIS

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Introduction. Urolithiasis, is a kidney disease characterized by the formation of sand and stones in the organs of the urinary system. According to researchers, the disease has a tendency to increase, which makes the problem of urolithiasis even more urgent. The largest percentage of patients are middle-aged people between the ages of 20 and 40 - the most able-bodied and socially active. The most optimal means for the treatment of kidney diseases are drugs based on medicinal plant material. With phytotherapy there is an opportunity to improve the quality of life of patients, their social and labor activity. The need of the pharmaceutical market of Ukraine for such drugs is not satisfied. Therefore, creation of new drugs for the prevention and treatment of urolithiasis is an urgent task of the present.

Aim. The purpose of this work is to study the physico-chemical and pharmaco-technological properties of raw materials, mixtures of tablet masses, creation of a scientifically based optimal composition and technology of the preparation in the form of tablets, as well as the development of a technological scheme for the production of the drug.

Materials and methods. The subject of research was selected: crushed and dried roots of parsley and celery and beebread; the choice of auxiliary substances and the creation of solid dosage forms in the form of tablets on their basis.

Results and discussion. The analysis of the range of medicinal products for the treatment of urolithiasis in the pharmaceutical market of Ukraine has been carried out and the necessity of creating new combined herbal preparations has been established. On the basis of crystallographic, pharmaco-technical and physico-chemical research, a combined preparation in the form of tablets based on medicinal raw materials for the prevention and treatment of urolithiasis has been developed.