

Its characteristic parameter is the weighted average particle size. The results of studies of the fractional composition of the mixture of crushed medicinal plant raw materials and collection are given in Table 1.

Table 1

Fractional analysis of medicinal plants (n = 5, P = 95%)

Plant	Sieve diameter, mm / Amount of raw materials passed through the sieve, %								
	10	5	4,5	3,25	2,0	1,4	1,0	0,5	Pallet (dust)
Calendula officinalis flowers	0,4	8,76	7,6	31,5	17,9	16,8	9,88	3,7	3,46
Plantain large leaves	0,1	1,4	2,1	28,7	34,5	18,4	7,7	1,9	5,2
Sea buckthorn fruit	0,1	2,5	12,6	39,5	12,9	18,2	20,9	8,54	3,99
Coriander seed fruit	0,2	2,7	5,2	9,6	33,5	27,5	10,36	7,6	3,34
Marsh grass	0,3	7,76	6,9	21,5	27,9	19,9	9,88	3,7	2,16

Conclusions. Fractional analysis showed that about 65% of the collection fraction passes through sieves with a pore diameter of 2.0 to 0.5 mm, which meets the requirements of the State Pharmacopoeia. Sieve analysis data indicate the need for additional grinding and sieving of plant components that make up the developed collection.

USING SAUSSUREA LAPPA FOR CREATE MEDICINES

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Introduction. The object of study in this work was the Kyst al-Hindi plant, which is widespread in the eastern countries, or Costus (the latin name is Saussurea Lappa or Saussurea Costus). It belongs to the family Costaceae (Latin Costaceae), genus – Saussurea. It is believed that the root of the plant has medicinal properties. Costus root (Aucklandiae radix, Saussureae radix) contains essential oils, which have been used in medicine and cosmetology since ancient times. In addition to the root the Indians collected the bark of the plant for medicinal purposes and used it to treat many diseases.

Herbalists consider it a bush and a tree at the same time. In India, for the property of the plant to give the skin smoothness and shine, as well as for the pleasant aroma of flowers and roots, the plant is called «prakasini» or «surabhi». In Greece, the plant is called «Costus», which in translation means «хинди arrived from the East». The ending «Hindi» means that the plant is native to India.

The composition of biologically active substances Saussurea Lappa is not well studied. According to literary sources, the plant contains organic acids, sesquiterpene lactones, steroid saponins, tannins, essential oil, vitamins and other active compounds, which determine its pharmacological action. In Ayurvedic, Chinese and Arabic medicine, kyst is used to treat more than 100 diseases.

Considering the wide range of pharmacological action of medicines, which are obtained from the plant, their effectiveness and safety, as well as the limited assortment on the

pharmaceutical market, the creation of new medicines based on *Saussurea Lappa* in the form of various dosage forms is a topical issue of eastern medicine.

Aim. The aim of this work is to study the range of medicines from the *Saussurea Lappa* plant, as well as to develop the composition and technology of the drug in the form of an extract and to conduct research to determine its quality indicators.

Materials and methods. The roots of *Saussurea Lappa* were used as a raw material for creating the medicine. During the work, we used analytical, logical, systemic methods for analyzing scientific sources of literature. When developing the composition and technology of the plant medicine, modern methods of physicochemical, pharmacotechnological and statistical research were used.

Results and discussion. Analysis of scientific sources of literature and the pharmaceutical market indicates, that the range of drugs from costus is represented mainly by the powder of the plant root and the oil obtained on its basis. In eastern countries, costus is widely used to create perfumery and also for therapeutic and prophylactic cosmetics (ointments, creams, etc.).

Costus is quite often used to treat various diseases in folk medicine in the form of an aqueous mixture of powder, decoctions, lotions, rinses, etc. To obtain medicinal products, the root and bark of the plant are used. Medicines from the costus exhibit antimicrobial, fungicidal, antiviral, anti-inflammatory, antipyretic, immunomodulatory, wound healing effect. They are used to treat a number of infectious, acute respiratory, skin diseases, gastrointestinal disorders, hormonal disorders in women and men, etc.

At the Department of Pharmaceutical Technology of Drugs of the National University of Pharmacy, research is being carried out to develop the composition and technology of a drug from the root of *kyst al-Hindi* in the form of a liquid extract. To obtain the extract, using the requirements and methods of the State Pharmacopoeia of Ukraine and other current regulatory documents, the influence of factors such as the ratio of raw materials and extractant, the degree of grinding of raw materials, nature and concentration of the extractant, extraction time, temperature on the process of extracting biologically active substances from plant raw materials was studied.

Studies have shown that for the extraction of biologically active substances, it is better to use ethanol, which, in comparison with other extractants, not only contributes to the maximum extraction of active substances from the root, but also allows you to preserve the antimicrobial properties of the extract and increase its shelf life.

Extraction is greatly influenced by temperature. Taking into account the data of literary sources and the results of our own research, in order to preserve thermolabile substances, extraction is best carried out at room temperature. Heating has a negative effect on the process of extracting thermolabile biologically active substances.

The extraction of active ingredients is also affected by the size of the raw material. The use of crushed plant roots for the preparation of a drug significantly increases the concentration of extractives in the medicine. Taking into account the peculiarities and composition of biologically active substances of *Costus* roots, a liquid extract (1: 2) was obtained by extraction with ethanol.

Conclusions. Literary data testify to the centuries-old use of *Costus* in eastern medicine for treatment various diseases. The range of the drug market from *Saussurea lappa* very limitations, therefore the development of new drugs based on the plant is a promising area for the creation of new drugs.

Using the roots of a plant as a raw material, studies were carried out to select the optimal mode of extraction parameters for its biologically active substances. The composition and technology of the plant-based liquid extract have been developed. Research is currently underway to standardize it.