property helps prolong drug delivery at the application site. A semisolid dosage form is advantageous in terms of its easy application, rapid formulation, and ability to topically deliver a wide variety of drug molecules.

Aim. The aim of the work was to study the possibility of using semisolids in dermatology

Results and discussion. Semisolids are available as a wide range of dosage forms, each having unique characteristics. Ointments are semisolid preparations for external application to skin or mucous membranes. Their composition softens but does not melt upon application to the skin. Therapeutically, ointments function as skin protectives and emollients, but they are used primarily as vehicles for the topical application of drug substances. Creams are semisolid dosage forms that contain one or more drug substances dissolved or dispersed in a suitable base, usually an oilin-water emulsion or aqueous microcrystalline dispersion of long-chain fatty acids or alcohols that are water-washable and are cosmetically and aesthetically acceptable. Gels are semisolid systems that consist of either suspensions of small inorganic particles or large organic molecules interpenetrated by a liquid. Gels can be either water based (aqueous gels) or organic solvent based (organogels). Pastes are semisolid dosage forms that contain one or more drug substances incorporated in a base with large proportions of finely dispersed solids.

A wide range of raw materials is available for the preparation of a semisolid dosage form. Apart from the usual pharmaceutical ingredients such as preservatives, antioxidants, and solubilizers, the basic constituents of a semisolid dosage form are unique to its composition. The basic raw materials used in the development of various semisolid dosage forms. The choice of suitable raw materials for a formulation development is made on the basis of the drug delivery requirements and the particular need to impart sufficient emolliency or other quasi-medicinal qualities in the formulation. Semisolid dosage forms usually are intended for localized drug delivery. In the past few years, however, these forms also have been explored for the systemic delivery of various drug candidates whose peroral bioavailability is questionable. Several novel drug-carrier systems have been examined that offer enhanced release, controlled release, or a stable environment for the incorporated drug. Even greater interest has been shown in the advancement of methods with which to characterize semisolid dosage forms. Skin, which is the most easily accessible organ of the human body, continues to be the preferred site for the application of topical drug delivery systems.

Conclusions. Thus, the use of soft medicinal forms is a promising direction of dermatology.

STUDY OF DISPERSION DEGREE OF MEDICINAL PLANT MATERIAL

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Introduction. Over the last three decades, there has been a huge increase in use of herbal raw material (HRM) across the world. About 80% of the world's population, especially those in developing countries, uses herbal medicines as part of their primary health care needs.

Aim. The aim of the work is to study the powders of medicinal plant raw material used for making filter packages (FP) and substantiation of the standardization system for raw materials and water extracts obtained from the filter package.

Materials and methods. The objects of the study were industrial batches of 30 types of raw materials in filter bags and water extracts made from them.

Determination of medicinal plants dispersion was carried out in accordance with article StPHU "Determination of powder disintegration."

The study of morphological features of raw materials performed on binocular stereomicroscope MBS-2 and IBI-6 with glasses and h15 x7, x8 and h40 lens.

Results and discussion. Optimal grinding of HRM contributes to a more complete extraction of biologically active substances. The size of the particles has a significant impact on the quality of received water extracts. Previously, research was conducted on comparative analysis of water extracts from grinded HRM packed in packets and filter bags. But our research has shown that the grinded HRM packaged in filter bags is in the range of 2.0 mm to 0.16 mm and the content of particles of different batches varies. Fractionation of powders was carried out by sieving successively through a set of sieve diameters

of meshes 2; 1; 0.5; 0.25; 0.16 mm. Weight of the sample was at least 30.0 g of raw materials, it was put on a set of sieves, then strainers connected, stirred for 20 minutes, occasionally tapping on fat. The obtained fractions of raw materials were a pass through a sieve with meshes of greater diameter and leave of a sieve of smaller diameter. Thus, each fraction was considered as an interval between the upper and lower sieve and was designated: 2.0-1.0 mm, 1.0-0.5 mm, 0.5-0.25 mm, 0.25-0.16 mm, less than 0.16 mm.

Conducted studies showed that the percentage content of individual fractions of plant material in filter bags is not the same. The leaves of mint, sage, plantain, and kidney tea main part of raw materials was with particle size of 1.0 to 0.25 mm. For leathery, dense, hard- walled leaves (flour, cranberries and senna) it was a fraction of particle size from 2.0 to 0.5 mm. The smallest fraction (with a particle size less than 0.16 mm) was observed for the leaf of the sage.

In the raw mint, sage and senna, the main amount of stems is contained in the first two fractions, which may affect the quality of infusions and the content of biologically active substances. Raw senna leaves has characteristic pattern: at decreasing of raw materials dispersion degree increases the content of the leaves and decreases fruit. In the raw material of the plantain, the large stem (flower peduncles) and flowers observed only in the first fractions, as they are hardly grinded objects.

During the research of nine types of herbs in the filter bags, it was established that in the filter packages of herbs of oregano, thyme, Melissa main fractions 1 and 2 (2.0-1.0 mm and 1.0-0 , 5 mm), in the filter bags of herbs, St. John's wort, celandine and yarrow - fractions 1, 2 and 3; in the filter packets of the herb of motherwort- 1 and 3 fractions; in the bur-marigold packaged in filter bags predominate fractions with a particle size of 1.0 - 0.25 mm. In the violets herb in the first three fractions have practically identical size of particles from 2.0 mm to 0.5 mm. Thus, it is evident that in the herbs packed in filter bags, the first three fractions with a particle size of 2.0 mm to 0.25 mm are the main.

Studies have shown that the ratio of stems, leaves and flowers in investigated herb fractions for different plants is uneven. This is due primarily to the morphological and anatomical characteristics of the plants (pubescence, the size of the leaf plate, the nature of inflorescences and the structure of the flower, etc.). All factions of the motherwortherb are represented mainly by stems, due to the presence in this plant of thick, branched stem and small lanceolate, with three incised segments of leaves, as well as small (no more than 5 mm) numerous baskets collected at the top of the stems in a complex shield. In other investigated objects the ratio of stems, leaves and flowers is directly proportional to the size of the particles: with an increase in the dispersion of the raw material, it decreases the content of the stems and increases leaves and flowers, which mainly contain biologically active substances.

For a non-prescription issue only 10 items of raw material "flower" are allowed. In the filter bags 5 items are issued. For analysis were used the most commonly flower raw materials in filter bags: chamomile, calendula, hibiscus and linden. The analysis of the dispersion of the flowers packed in the filter bags showed that in the raw material of the calendula 1 and 3 fractions had a particle size of 2.0 to 0.25 mm predominate, while in the chamomile 1t fraction is represented in the smallest amount, the main ones are 3 and 4 fractions with a particle size of 0.5 to 0.16 mm.

For raw hibiscus with a fairly dense, coarse petals are predominant fraction with the size of 2,0-0,5 mm (tab. 3.5).

The raw material of calendula flowers packed in filter bags is a separate part of inflorescences of various shapes passing through a sieve with a diameter of meshes 2 mm of brownish-orange color with a weak specific odor. Flowers of chamomile are separate parts of inflorescences of various shapes, yellowish-green color with a specific aromatic smell. Flowers of linden are uniformly ground at processing and the main content of particles is observed in the first three fractions.

Medicinal herbal raw materials "fruits" fam. Celery (Apiaceae) is packed in holistic form. Fruits of a jester, cherry and blueberries as an individual raw material sale in the drugstore in a holistic form for preparation of decoctions. For research were taken filter packets of the most used fruits such as the fruits of hips and hawthorn.

Raw material "bark" in the range of pharmacies is represented by only three species: buckthorn, oak, viburnum. For researches, filter packages were used as the most commonly used raw material. Viburnum is not yet released in the filter bags.

The hardest grind raw materials were the fruits of hawthorn and alder seedheads. In these objects predominates the first fraction with particle size from 2.0 to 1.0 mm. Fruits of wild rose occupy an intermediate position and in the filter bags predominate fractions with particle size from 2.0 to 0.5 mm. Bark of buckthorn was more fragile raw material than fruit. The predominant fractions raw material is the 1st, 2nd and 3rd fractions with a particle size of 2.0 to 0.25 mm.

Underground organs have a rather dense histological structure, which prevents rapid and fine grinding. For non-prescription are permitted 15 types of raw materials pertaining to underground bodies. For the analysis were used the types of raw materials produced in the filter bags: rhizomes calamus, valerian rhizomes with roots, elecampane.

Conclusion. Was studied dispersion of more than 30 names of medicinal plant material, which is produced in filter bags of different morphological groups leaves, herbs, flowers, fruits, bark, underground organs. It was established that in the filter bags the predominant fractions of raw materials are: for leaves and herbs - 2.0-0.25 mm, for bark - 2.0-1.0 mm; for flowers calendula - 2,0-0,5 mm, and chamomile - 0,5-0,16 mm, for fruits - 2,0-0,5 mm; rhizomes with roots of valerian - 2,0-0,25 mm. It has been established that a morphological group herb is characterized by an increase in grinding in fractions, the percentage content of flowers and leaves increases and decreases - stems.

DEVELOPMENT OF COMBINED SUPPOSITORIES FOR TREATMENT OF MIXED INFECTIONS IN GYNAECOLOGY

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Introduction. Over the past decade, an increasing incidence of gynecological diseases has been observed worldwide. Modern gynecology has a variety of tools for the treatment and prevention of diseases of the female sex system. The main of these drugs are vaginal suppositories of anti-inflammatory and antibacterial action, to the disadvantage of which should be attributed unidirectional therapeutic effect. However, infectious diseases of the vagina are rarely caused by one type of pathogen.

Aim of the work. Development of the composition of combined vaginal suppositories with antibacterial, anti-inflammatory and antifungal action.

Materials and methods. Active components of the suppositories under development are metronidazole and levomycetin (antibacterial and anti-inflammatory effect), as well as nystatin (antifungal action).

As a basis of suppositories, solid fat with the addition of lanolin is used.

The quality of suppositories obtained was assessed organoleptically (appearance, homogeneity of weight), by determining the average weight and disintegration, and also by antimicrobial activity.

Results. Suppositories were prepared on a hydrophobic basis by pouring, taking into account the solubility of active substances according to the rules of pharmaceutical technology. The concentration of active substances was selected on the basis of literature data. In the study of suppositories obtained, it was found that in appearance, homogeniety, average weight and disintegration, they meet the requirements of SPU. Suppositories have a pronounced antibacterial activity against most gram-positive and gram-negative microorganisms and fungal flora.

Conclusions. The proposed composition of vaginal suppositories is intended for the treatment of mixed infections in gynecology. Further studies are aimed at studying the process of active substances release from the base.