

Aim. To conduct a comparative phytochemical analysis of the hawthorn drugs of different manufacturers represented in the pharmaceutical market of Ukraine.

Materials and methods. As objects for research were used the tinctures of hawthorn from domestic manufacturers «Fitofarm», «Krasnaya Zvezda», «Viola», State Enterprise «Pharmaceutical Factory» (Zhytomyr), «Lubnyfarm», medicinal plant material – hawthorn fruit from two domestic producers «Liktravy» and «Viola», as well as leaves and flowers from the species *C. monogyna* L. and *C. prunifolia* L. were taken.

Preliminary chromatographic study was performed by the method of paper chromatography (PC). The same quantities of studied examples were applied to the start line of the paper Filtrak and chromatographed by upward method in solvent system ethyl acetate – glacial acetic acid – water (10:2:3). The dried chromatograms were viewed in UV light at a wavelength 354 nm.

For spectrophotometric determination, were prepared dilutions in the ratio 0.5: 25, as a standard 70% ethyl alcohol was used. The optical density was measured on epy spectrophotometer SF-46.

Results and discussion. As a result of chromatographic study, on the chromatogram of ready-made tinctures 6 spots appeared, on the chromatogram of tinctures made from hawthorn fruits of domestic manufacturers – 7 spots, on the chromatogram of tinctures made from leaves and flowers of *C. monogyna* L. and *C. prunifolia* L. – 10 spots. These spots were identified as phenolic compounds (including chlorogenic acid, rutin, hyperoside, isoquercetin and vitexin).

After spectrophotometric determination the amounts of flavonoids recounting on rutin were calculated for each studied example. It is determined that tincture manufactured by «Fitofarm» contained 0.04% of flavonoids, tincture by «Krasnaya Zvezda» – 0.03%, tincture by «Viola» – 0.03%, tincture by «Pharmaceutical Factory» – 0.03%, tincture by «Lubnyfarm» – 0.03%; tincture obtained from the fruits manufactured by «Liktravy» – 0.27%, tincture from the «Viola» fruits – 0.30%; tincture from *C. monogyna* L. leaves – 0.09%, tincture from *C. monogyna* L. flowers – 0.62%; tincture from *C. prunifolia* L. leaves – 0.77%; tincture from *C. prunifolia* L. flowers – 0.92%.

Conclusion. As a result of the study it was found that tinctures made in laboratory conditions from the hawthorn fruits manufactured by domestic producers, as well as from leaves and flowers of *C. monogyna* L. and *C. prunifolia* L., contain much more flavonoids, both qualitatively and quantitatively, than ready-made tinctures manufactured by domestic producers.

PLANT RAW MATERIALS IN THE CORRECTION OF ERECTILE DYSFUNCTION

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Introduction. The problem of maintaining reproductive health of men is increasingly being discussed in professional and popular science literature. This is due to the growth of functional and organic disorders of the sexual sphere, due to the acceleration of the pace of life, pressure of stressful situations, adverse environmental conditions. Using herbal remedies, it is possible to achieve significant success in the prevention and treatment of the pathology of the male sexual sphere. Natural preparations in comparison with synthetic have a milder and more versatile effect due to the variety of components that actively influence the body, and, as a rule, rarely cause side effects.

Aim. The study of modern literature and analysis of the role of plant raw materials in the correction of erectile dysfunction in men.

Materials and methods. Studying the sources of scientific literature from 2014 to 2018.

Results and discussion. After studying the composition of the most popular drugs and dietary supplements that correct erectile dysfunction, we found that the most commonly used raw materials are: herb of *Tribulus terrestris*, *Solidago canadensis* and *Hipericum perforatum*; *Pausinystalia johimbe* bark; *Abelmoschus moschatus* seed oil; stems, leaves, fruits and roots of *Leptadenia reticulata*; roots of *Urtica dioica*, *Glycyrrhiza glabra* and *Echinacea purpurea*; lipophilic extracts from the bark of *Pygeum africanum*, *Cucurbita pepo* seeds and *Serenoa repens* fruits. Also at pharmacological correction of sexual dysfunction

in men have the positive effect of such plants as *Anacyclus pyrethrum*, *Argyreia speciosa*, *Asphaltum purified*, *Astercantha longifolia*, *Bombax malabaricum*, *Celastrus paniculatus*, *Cinnamomum cassia*, *Crocus sativus*, *Gossypium indicum*, *Lactuca scariola*, *Mucuna pruriens*, *Mutilla occidentalis*, *Myristica fragrans*, *Orchis mascula*, *Pheritima posthuma*, etc.

Conclusions. Currently, the social importance and relevance of the regulators of erectile function, given their contribution to the maintenance of reproductive health of the population, are very high. Undoubtedly, joint efforts of manufacturers of phytopreparations and biologically active additives, scientists, and specialists regulating the registration of phytopreparations and biologically active additives are needed to increase the level of rendering medical, preventive and health-improving assistance to the population.

PERSPECTIVES OF RESEARCH OF BIOLOGICAL ACTIVITY OF SUBSTANCE OF HELICHRYSUM BRACTEATUM

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Introduction. The creation of medicines and dietary supplements on the basis of medicinal plant material is an important area of scientific activity in present time. One of the promising plants for research is the immortelle (*Helichrysum bracteatum*) (Asteraceae). This plant is widely cultivated in Ukraine, where many interesting decorative varieties are created.

The **aim** of the work is to conduct a preliminary phytochemical research of the immortelle to determine the chemical composition of biologically active substances.

Materials and methods. Different methods of chromatography were used for the analysis of phenolic compounds: thin-layer and paper, and specific reagents. The determination of flavonoids and hydroxycinnamic acids was carried out in comparison with probable samples. As a material for analysis, alcoholic extract of grass, flowers and roots of the immortelle was used, and extracts obtained after acid hydrolysis. Extraction was carried out with 70% alcohol (1: 5).

Solvent systems were used for the separation of the compounds: acetic acid 2, 15 and 30%, butanol-acetic acid-water (4: 1: 2, 4: 1: 5), chloroform-methanol-water 24: 14: 3, toluene-ethylformate - formic acid 50:40:10. Acid hydrolyzate of alcohol extract of grass, flowers and roots was also researched for the determination of aglycones, which were also identified by chromatography.

Results and discussion. We have found that immortelle contains hydroxycinnamic acids, flavonoids, flavonglicosides and other biologically active substances in its composition. 15 phenolic derivatives were identified, including coffee and chlorogenic acids, luteolin derivatives, including O- and C-glycosides, as well as aurons and their glycosides. The obtained UV spectrum of the extract indicates the possibility of determining the content of the amount of phenolic compounds in terms of luteolin.

Conclusions. The obtained results point to the prospect of studies of the immortelle, for the purpose of creating drugs and dietary supplements.

DANDELION EXTRACT USE IN MEDICINE

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Introduction. While many people think of the dandelion (*Taraxacum officinale*) as a pesky weed, it is chock full of vitamins A, B, C, and D, as well as minerals, such as iron, potassium, and zinc. Dandelion leaves are used to add flavor to salads, sandwiches, and teas. The roots are used in some coffee substitutes, and the flowers are used to make wines.