

Conclusions. A new promising source of raw materials – the leaves of *Wisteria sinensis* – is provided for the production of various groups of biologically active substances. In the future, a more detailed study of the chemical composition of the flowers and fruits of the *Wisteria sinensis* and the study of their biological activity remains promising.

COMPARATIVE ANALYSIS OF EXTRACTIVES TUBERS GRADES DAHLIAS DEPENDING ON THE SOLVENT

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Introduction. Most phytochemical substances prepared using water or water-alcohol mixtures of varying concentrations. This is due to the fact that these solvents are cost-effective, widely available and safe for human health. When you select a group account for extracting the substances that they want to extract from plant material. The main active compounds are polysaccharides korneklubney dahlia.

Currently, the plant of the genus *Dahlia* (*Dahlia* Cav.) Is cultivated in almost all the world, and a variety of grades of up to more than 15 thousand.

Aim. Experimentally select the optimal extractant for extracting extractives from dahlia tuber varieties.

Materials and methods. Used for analysis tubers 3 grades: Smuglyanka, Colorado Classic, Lunokhod were collected in the National Botanical Garden M. Grishka, Kiev (Ukraine). Mass tubers was 450 g, 400 g and 380 g, respectively, with the bush. In addition, the grade data undemanding to grow, do not require special storage conditions, resistant to disease and pests. Raw dried to air-dry state by conventional means. Dried underground organs were ground and sieved through a sieve, particle size was 1-3 mm. Comparative extractives exit analysis was performed according to the procedure described in Ukraine State Pharmacopeia 2.0 monograph using purified water as extractants, as well as aqueous-alcoholic solutions of different concentrations (40% ethyl alcohol and 70% ethyl alcohol).

Result and discussion. Max extractives from tubers represented grades of purified water were recovered. The highest values were observed in varieties Colorado Classic ($36,09 \pm 0,31\%$) for that solvent. Extractives content in the tuber varieties Smuglyanka and Lunokhod was less – $30,10 \pm 0,27\%$ and $30,54 \pm 0,40\%$, respectively. Yield extractives, which did not differ extracted with 40% ethanol in tuber varieties Classic and Smuglyanka and reached $32,97 \pm 0,32\%$ and $32,04 \pm 0,27\%$, respectively, Tubers variety Lunokhod 1.16 times inferior content extractives, extracted with 40% ethanol ($26,28 \pm 0,32\%$), the above-mentioned varieties. Results obtained by extraction with 70% ethanol in Lunokhod and Smuglyanka grades differ slightly and amounted $29,53 \pm 0,31\%$ and $29,35 \pm 0,31\%$, respectively.

Conclusions. Thus, for optimum extractant korneklubney dahlia grades is presented purified water. The results will be used later in developing substance.

DETERMINATION OF PYRROLIZIDINE ALKALOIDS IN MEDICAL HERBAL MIX AND HERBAL REMEDIES

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Introduction. Pyrrolizidine alkaloids were found in 14 families, mainly at Asteraceae (*Senecio*, *Tussilago*), Boraginaceae (*Borago*, *Echium*, *Heliotropium*, *Symphytum*, *Pseudomertensia*, *Onosma*), Fabaceae (*Crotalaria*). Remedies of platyphylline and sarracin show cholinolytic and spasmolytic effect, they are used to relieve spasm of smooth muscles of the abdominal cavity, bronchial asthma, arterial

hypertension. However, today it has been discovered that pyrrolizidine alkaloids can cause necrosis in the vascular glomeruli and epithelium of the urinary tract tubules of the kidneys. The hepatotoxicity, genotoxicity and carcinogenicity of the pyrrolizidine alkaloids may be misinterpreted as a result of other etiological factors such as alcohol abuse, for example. The Committee on Herbal Medicinal Products (HMPC) controls the content of pyrrolizidine alkaloids, both in medicines and in foodstuffs.

Such alkaloids include echimidine, europine, cheliotropine, heliotrine, erucifoline, lasiocarpine, monocrotaline, retosine, senecionine, seneciophylline, sarracine, senkirine, trichodesmine, integerrimine and others. In particular, the HMPC claims that since the alkaloids are excreted from the body for 24 hours, the intoxication of the human body can not be confirmed, because the symptoms can be observed in a few days or months. The HMPC recommends that the daily dose of alkaloids in drugs should not exceed 1 µg, with a limited duration of use of six weeks per year. The Medical Agency (EMA) has set a daily dose of less than 0.035 µg for adults (body weight 50 kg); for a child – 0.014 micrograms (body weight 20 kg). At the same time there are drugs at the pharmaceutical market that have become popular for the treatment of various diseases that may contain pyrrolizidine alkaloids.

Aim. Therefore, it was appropriate to analyze the official herbal mix and herbal remedies for the content of pyrrolizidine alkaloids

Materials and methods. Official herbal mix were chosen as the objects of the study: "Chest collection number", "Chest collection number 2" and "Zhivokist" root, 100 g. Alkaloids were isolated from the raw materials by known classical methods. The sum of alkaloids was chromatographed by thin-layer chromatography in various solvent systems: chloroform-methanol-benzene (20: 1: 2) and chloroform-methanol-ammonia (85: 14: 1). Remedies of platyphillin were taken as substance- witness, as well as the sum of alkaloids of the roots of *Senecio platyphylloides*. Chromogenic reagents were Dragendorff reagents (brown color) and Ehrlich (after preliminary oxidation with sodium nitroprusside – red-violet color).

Results and discussion. The extracts from the objects that were studied gave a positive hydroxamic test, which is typical for esters formed by a necine base (amino alcohols) and one or more necic acids; with solutions of potassium dichromate and perhydrol in acetone (1:10); solution of ferrous (II) sulphate, hydrogen peroxide and alkali. The quantitative determination of alkaloids was carried out by spectrophotometry at $\lambda = 220$ nm in terms of platyphylline, using the specific absorption rate of platyphylline hydrobromide at the same wavelength.

Conclusion: The alkaloids were found in investigated objects by chemical and chromatographic methods and classified as pyrrolizidine derivatives. The content of alkaloids was determined by spectrophotometric method.

RESEARCH OF ANTHOCYANINS IN MEDICAL HERBAL MIX OF ANTI-INFLAMMATORY ACTION

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Introduction. The official medical herbal mix of anti-inflammatory drugs, that are presented at the Ukrainian pharmaceutical market, often include plant material containing anthocyanins. Anthocyanins belong to flavonoids, which have a restored isopropane fragment that gives them antioxidant properties. Multifunctional pharmacological action of anthocyanins was proven through experiments – membrane-stabilizing, immunomodulating, anti-inflammatory, anticancer. This action is a «trap» for free radicals.

Aim. Anthocyanins are valuable components of herbal mixtures that provide an antioxidant and anti-inflammatory effect. Therefore, it is appropriate to analyze herbal mix for the presence of anthocyanins.

Materials and methods. Official herbal mix – herbal tea and a complex remedy based on herbal mix were chosen as the objects of the study: *Species diureticae №1* (leaves of martyrs 3 parts, flowers of