it does not affect blood pressure and respiration, the activity of the heart muscle, the functions of the nervous system. The anti-inflammatory effect of chamazulene and guayazulen is manifested in the disappearance of pain, itching, stimulates the growth of the combined tissue, the epithelization of varicose and trophic ulcers of the skin. Effective results were obtained in the treatment of ulcerative cystitis, bronchial asthma, eczema, colitis, erosion of the cervix. Azulenic herbs and phytopreparations on their basis are an effective means for treating inflammation of mucous membranes, malignant tumors, wounds and carbuncles. Azulene derivatives have a pronounced analgesic effect, reduce pain responses by 70%. Hamazulin from essential oil of plants exhibits strong activity against Staphylococcus aureus and Candida albicans. High anti-inflammatory, bactericidal and antiallergic activity of drugs containing chamazulen has proven the feasibility of their use as components of toothpastes, creams, baby and cosmetic soap, skin care products.

The **aim** of the work was to: determine the accumulation of essential oils and azulene derivatives in the grass of the hollow tree (Achillea collina J. Becker ex Reichenh.) And the honey (Ach. Micranthoides Klok.)

Materials and methods. Vegetable raw material of Achillea collina J. Becker ex Reichenh and Achillea micranthoides Klok. Was harvested in 2013-2017 (September-October) in Zaporozhye, Dnipropetrovsk, Kherson, Mykolayiv regions in accordance with the requirements of the State Joint Stock Company. The drying was carried out in a drying cabinet Termolab CINOL 24/350 (t = 400C) for 10 hours. Corresponding morphological and anatomical characteristics of the investigated plant material were determined using an ICBM-2 microscope. Selection of EO was carried out by Klevenger method in the device, respectively, DFU from pre-ground (d = 0.3 mm) air-dry plant material. The volume in the graduated part of the device was determined after completion of distillation and cooling to room temperature, after 2 hours. after the end of the process. The content of EO was calculated in terms of volumetric percentages (X). The components of the studied EO were analyzed by the GC-MS method on the Agilent Technology 6890N chromatograph with the MS detector 5973N, adapted for working with capillary columns in the programmed mode.

Results and discussion. The quantitative accumulation of essential oil (EO) during flowering in the grass Achillea micranthoides Klok was established. and Achillea Collina J. Becker ex Reichenh. and the amount of azulenes was 2.75 ± 0.31% (30.60 ± 2.80%), 3.99 ± 0.34% (18.52 ± 1.61%). The main components of EO have been identified and their quantitative content in the grass Achillea micranthoides Klok has been determined. to 56; Achillea Collina J. Becker ex Reichenh. up to 40. The main identified compounds were also 1,8-cineol, terpinen-4-ol, camphor, α-terpineol, sucinyl acetate, thymol, cariofilin, hermakren D, nonrolidol, cariofilin oxide, β-eudesmol. It was established that the expressed wound healing and hemostatic action of extracts obtained from the grass of these species.

Conclusions. Thus, the promising use of Achillea collina J. Becker ex Reichenh. et al. (Achillea micranthoides Klok.) For the production of essential oils with high content of biologically active azulene derivatives has been established. Species of the genus Achillea L. with late harvesting are promising for use in medicine.

PROSPECTS IN INVESTIGATION OF ROSETTE LEAVES OF COMMON BORAGE, ALBA CULTIVAR

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Introduction. The study of medicinal plants and herbal raw materials in terms of chemical composition and the development of medicines based on them are urgent tasks of modern pharmacy. Common borage (*Borago officinalis* L.) of borage family (*Boraginaceae* Juss.) is promising in this direction. It is widely cultivated both in Ukraine and in many countries of the world as ornamental, honey and vegetable culture. In folk medicine, herb and leaves of common borage are used as antitoxic and tonic for improvement of metabolism, normalization of the heart function, strengthening of the nervous system. Raw material has anti-inflammatory, antispasmodic, diaphoretic, diuretic and antipyretic effect. In cooking

fresh leaves are prepared with salads, drinks, sauces, vegetable soups. Previously, we studied raw materials (herb, fruits, leaves, flowers) of borage with blue flowers. We studied the chemical composition and developed substances with membrane-stabilizing and anti-inflammatory action based on the raw material. There are also two cultivated varieties of borage: with white flowers, Alba, and with spotted leaves, Variegata. We continue the study of cultivated in Ukraine borage Alba in order to expand the base of raw materials.

Aim. The aim of this work was to study a number of quality indicators of the borage Alba rosette leaves, and a preliminary studying of the qualitative composition of the main biologically active substances.

Materials and methods. Raw materials were harvested in the Kharkiv region during the full unfolding of the leaves (late April - early May 2017.). For the dried raw materials, the following numerical values were determined: loss on drying, total ash, extractant absorption coefficient; a preliminary studying of the chemical composition was carried out using qualitative reactions and chromatography on paper.

Results and discussion. When examining samples of raw materials, it was found that the loss on drying was 9.34±0.19%; the total ash content was 9.82±0.27%; coefficient of water absorption – 3.89±0.15%; the absorption coefficient of 50% ethanol was 4.42±0.16%. According to the results of previous studying of borage rosette leaves, they contain free and bound carbohydrates, free and bound aminoacids, organic and phenolcarboxylic acids, flavonoids, tannins, ascorbic acid.

Conclutions. The obtained results will be used in further research to expand the raw material base for obtaining the substance.

PHYTOCHEMICAL RESEARCH OF BIOLOGICALLY ACTIVE COMPOUNDS OF THE HERB OF *GLYCYRRHIZA GLABRA*

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Introduction. One of the cosmopolitan plants in the temperate zone is representatives of the genus Licorice - Glycyrrhiza L. legume family - Fabaceae. The official species are licorice - Glycyrrhiza glabra L. and Chinese licorice - Glycyrrhiza uralensis, in which roots are used as a raw material. The raw material is included in most national pharmacopoeias of the world, used for the production of mucolytic, bronchodilator, antiulcer drugs. The above-ground part, considering the volumes of annual harvesting and processing of roots, has an impressive raw material base, but is practically not used.

Aim. Determination of chemical composition of the licorice herb to confirm the possibility of using the herb Glycyzrhiza glabra L. as a new source of biologically active substances (BAS).

Materials and methods. The object of the study was the licorice herb, harvested during the flowering period of the plant in June 2017 in pharmacopoeia section of the NUPh. The qualitative composition of raw materials was determined by generally accepted qualitative reactions and chromatographic analysis. The content of BAS was determined in aqueous extraction: extractive substances and polysaccharides - by gravimetry, the sum of organic acids and ascorbic acid - by the titrimetry method, hydroxycinnamic acids, flavonoids and polyphenolic compounds - by spectrophotometry.

Results and discussion. Organic acids, polysaccharides, phenolic and hydroxycinnamic acids, coumarins, flavonoids, tannins, iridoids, triterpene saponins were found in the raw material. The content of extractive substances in the aqueous extract of licorice herb is 24,05%, water-soluble polysaccharides - 9.02%, organic acids - 2.3%, ascorbic acid - 0.02%, hydroxycinnamic acids as chlorogenic acid - 1,26%, flavonoids as rutin - 0.63%, polyphenolic compounds as gallic acid - 2.16%. Optimal is the triple extaction of raw materials with water, which allows extraction of 91.68% of extractive substances, 91.66% of water-soluble polysaccharides, 87.30% of hydroxycinnamic acids, 93.06% of flavonoids and 87.96% of polyphenolic compounds.

Conclusions. Obtained results confirm the possibility of using licorice herb as a new source of BAS.