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Materials and methods. Aerial part of *Phalaenopsis* was collected during blossoming and full expansion of a leaf blade – March-April, 2017 and October-November, 2017.

Results and discussion. Orchids are perennial herbaceous plants. The structure of the leaves corresponds to the specific habitat of the plant. Species that typically bask in sunlight, or grow on sites which can be occasionally very dry, have thick, leathery leaves and the laminae are covered by a waxy cuticle to retain their necessary water supply. Shade-loving species, on the other hand, have long, thin leaves. Leaves of an orchid have length up to 30 cm, color of leaves ranges from light green to dark green, but there are species with unusually painted foliage. The leaf is simple, sessile, entire, very dense, fleshy, succulent. Venation is reticulate, trichomes are absent. *Phalaenopsis* usually has up to 6 leaves, but in large healthy samples – up to 10-12 leaves are sparsely met. Usually, when the plant gives a new leaf, an old one dries out.

Conclusions. The obtained data will be used for a further research of representatives of orchid family which are prospective plants for obtaining new types of medicinal plant material of relevant orientation of action.

PHYTOCHEMICAL RESEARCH CONTENTS OF ESSENTIAL OIL WITH THE ACCUMULATION OF AZULENE DERIVATIVES IN THE HERBS SPECIES OF ACHILLEA L.

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Introduction. The Asian family (Asteraceae) is known to be the richest species in the species (over 30,000), which are almost 2,000 genera. Its representatives are common on all continents (except Antarctica) and are found in various plant groups. In the flora of Ukraine there are 695 species belonging to 121 species. Among the asteric species, such life forms as grasses, half-edges, bushes, rarely wood are widespread. The Achllea L. (woody) family of Asteraceae is distinguished by morphological and species diversity. It combines over 200 species, which are distributed almost worldwide, but most of them are found in the northern hemisphere and in Ukraine, where germinates over 23. They are most common: on meadows, in the steppes, meadows, forests, pastures, near roads, in the deserts of east and south-east of Ukraine. In science and folk medicine, species of the genus Achillea L. are used as hemostatic, healing and anti-inflammatory drugs, as well as for improving digestion. In modern medicine, complex drugs from plant material of species of the genus Achillea L. are used: herbal infusions (1:10), tree extract, oil extract of wood, antiperspirant, anti-hemorrhoids, appetite and gastric tea (Ukraine); Rotokan, Vundekhil, phytolabs "The original recipe", tincture of complex Pankov, Phytone SD (RF); Menodoron-Tropfe, Origanal grosser Bittner Balsam, (Austria); Floradix Multipretten Kruuter-Dragees, Siligutal-Tropfen, Doppelherz, Stomachysat Burger, Salus Schafgraben-Tropfen, Befelka-Tinctur, Schamill Schafgarbe-Extrakt, Alasenn Krutergranulat, Dr. Kleinschrod's. They include: A. submillefolium Klok. to Krytzkathe, A. millefolium L., A. collina J. Becker ex Reichenh., A. euxina Klok., A. inundata Kondr., A. pannonica Scheele., A. setacea Waldst. to Kit., A. steposa, A. distans Waldst. to Kit., A. carpatica Blocki ex Dubovik, A. stricta (Koch.). And also the section Filipendulinae (DC.) Afan. The most famous species of which: A. taurica Bieb. (Crimean), A. leptophylla Bieb., A. micrantha Willd.; A. filipendulina Lam.; A. micranthoides Klok.

The following phytochemical studies were selected for species containing higher concentrations of essential oil and azulenes in its composition, representatives of the Filipendulinae (DC.) section (A. micranthoides Klok.), and Millefolium (Mill.) Koch. (A. It has been established that the grass species of the genus Achillea L. also contains: flavonoids, hydroxycinnamic acids (hydroxycaric acid), flavonoids, hydroxycinnamic acids , vitamins K_1 and C, saccharides, carotenoids, amino acids, inorganic elements, tannins echovyny. azulene derivatives (S10N8) (bytsyklo- [5.3.0] -deka-1, 3, 5, 7, 9 - pentaen) is the source of many useful biological properties.

Plants that contain high concentrations of azulene derivatives (guayasuln, hamasulen, etc.) are widely used in official and folk medicine. Azulene derivatives are non-toxic substances. It has been established that LD_{50} of white mice with intra-muscle injection of khamasulin is 3 g / kg. In effective doses,

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

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1. SYNTHESIS OF PHYSIOLOGICALLY ACTIVE SUBSTANCES

2. STUDY OF MEDICINAL PLANTS AND CREATION OF HERBAL MEDICINAL PRODUCTS