plates «Silufol», the solvent system: chloroform – methanol (9:1). Quantitative content was determined by spectrophotometric method. An absorbance was detected for chlorophyll *a* at wavelength λ=665 nm and for chlorophyll *b* at wavelength λ=649 nm. An absorbance for quantitative content determination of carotenoids was detected at wavelength λ=441 nm. An ethanol 96% was a reference solution in all the cases.

Results and discussion. Chlorophylls were detected as the red zones and carotenoids as the yellow-orange zones in UV light at the chromatograms. The content of chlorophyll *a* was 0,96±0,02, chlorophyll *b* – 0,27±0,02, carotenoids – 0,31±0,02.

Conclusions. Chlorophylls and carotenoids in *Tanacetum parthenium* herb were identified by TLC. Quantitative content of chlorophyll *a*, chlorophyll *b* and carotenoids was determined by spectrophotometric method. The obtained data will be used in further research.

RESEARCH OF ELEMENTAL COMPOSITION OF GLADIOLUS X HYBRIDUS HORT.

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Introduction. Gladiolus x hybridus hort. is a perennial flowering plants in the iris family (Iridaceae) and representatives of the genus Gladiolus L. Gladiolus are cultivated on the territory of Ukraine and have long been used in folk medicine as an analgesic, anti-inflammatory, immunomodulating and also stimulates lactation

The chemical composition of the leaves of Gladiolus x hybridus hort is poorly understood.The detection of the elemental composition of Gladiolus plays an important role in medicinal plant standardization in order to construct and create new phytopreparations.

Aim. To determine the elemental composition of Gladiolus x hybridus hort. and DSB varieties leaves by the atomic emission spectroscopy method with an arc excitation of the spectrum.

Materials and methods. The objects of the study were leaves of Gladiolus x hybridus hort. harvested during the growing season in 2017, at the Botanical Garden of the National University of Pharmacy (Kharkiv). Studies of the mineral complex took place in the State Scientific Institution "Institute for Single Crystals" of the National Academy of Sciences of Ukraine.

The atomic emission spectroscopy with arc excitation was used to determine the elemental composition of studied objects. The principle of spectral analysis is based on the study of emission spectra of free atoms and ions in the gas phase excited in a light source. As a light source, in this case, an electric arc was used.

Pre – treated by sulfuric acid, the crushed raw materials of the investigated object were insulated in porcelain crucibles at a temperature of 500 ° C for 1 hour in a muffle furnace. To obtain and record the spectra of samples, the DFS – 8 spectrograph was used, with the diffraction gratings of 600 ps/mm and the three – line slit illumination system. Measurement of the intensity of the emission lines was carried out using a microfotometer MF – 4. Sample data was compared with standard sample items. The results are obtained by averaging 4 – 5 parallel tests.

Results and discussion. As a result of the analysis, it has been found that the in the raw materal of Gladiolus, 19 elements in total were identified, among which were 5 – macroelements (Mg, Ca, Na, K, P), 10 – microelements elements (Fe, Cu, Zn, Mn, Si, Al, Pl, Ni, Mo, Sr), 4 – ultra microelements (Hg, Co, Cd, As,), set quantitative content. A significant amount contains potassium (3450 mg/100 g), calcium (920 mg/100 g) which are important elements for ensuring the conformation of enzymes proteins, regulating osmotic potential, control the permeability of membranes of plant cells.

Such macroelements as magnesium (170 mg/100 g), phosphorus (115 mg/100 g) and sodium (90 mg/100 g) accumulate in smaller quantities. Sodium transfer of potentials in the plant cell and participates in maintaining osmotic pressure. Magnesium interact with polyphosphate compounds such as Adenosine

triphosphate (ATP**)**, Deoxyribonucleic acid (DNA**)**, Ribonucleic acid (RNA**)**, ensuring the formation of coenzymes.

Phosphorus also acts as an energy source in the form of Adenosine triphosphoric acid (ATP),Nicotinamide adenine dinucleotide (NAD), Nicotinamide adenine dinucleotide phosphate (NADPH) and contributes to the formation of etheric bonds between natural alcohol groups.

Raw material of gladiolus accumulates a considerable amount of silicium (115 mg/100 g), aluminum (23 mg/100 g), iron (17 mg/100 g), zinc (5.7 mg/100 g), strontium (4.3 mg/100 g).

These trace elements are participate in the transport of substances, as well as in the formation of enzymes. Elements are detecte d such as cobalt (<0.03 mg/100g), mercury, cadmium and arsenic (<0.001 mg/100g).

The content of the elements in the samples of raw Gladiolus x hybridus hort., can be arranged in the following decreasing sequence of the content for leaves – K >Ca>Mg>P=Si>Na>Al>Fe>Zn>Sr>Mn>Cu>Pb=Ni=Mo=Co>Hg=Cd=As.

Conclusions. The content of 19 elements in leaves of gladiolus has been determined. A significant amount contains potassium, calcium, magnesium, phosphorus, silicium. Heavy, toxic metals, such as Pb, Ni, Mo, Co (<0.03 mg/100g), Hg, Cd, As (<0.001 mg/100g) are within the permissible limits for medicinal raw materials.

Experimental data will be further used to standardize raw material of gladiolus. The study of plant of the of Gladiolus x hybridus hort. continues.

MORPHOLOGICAL RESEARCH FRUIT OF COCOS NUCIFERA

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Introduction. The coconut tree (*Cocos nucifera*) is a tropical plant from the palm family grown primarily for its fruit, coconuts. The tree is native to the South Pacific region and is widely cultivated in all the tropical regions of the world, growing particularly well in coastal areas. The single-trunked tree has a mature height of 80 to 100 feet. The dwarf-sized varieties tend to grow much shorter. The straight, columnar trunk is light gray in color and often develops a swollen base with maturity. Certain cultivars have curved or slightly leaning trunks. The trunk diameter generally remains a consistent 10 to 13 inches from the base to the top. The yellowish-green leaves are 8 to 18 feet long with a width of 3 to 5 feet. The tree sheds and produces 10 to 15 leaves every year. The feathery-textured foliage is pinnate and grows on 3- to 5-foot long, spineless stalks. At the age of 4 to 6 years, coconut trees start to produce flowers. The light yellow, smaller male flowers grow at the ends of the branchlets while the larger female flowers grow at the base. Younger fruit has more milk that gradually dries to create the meat in mature nuts. Coconut oil receive from coconut pulp. There are many various cumulative biologically active components present in coconut oil.

Aim. Morphological study of *Cocos nucifera* fruits.

Materials and Methods. The object of the study were fruit of *Cocos nucifera*.

Results. The fruit of the coconut palm (*Cocos nucifera*) is the upper pseudomonocarpic dry drupe. The size of fruit is large with clearly differentiated parts of the pericarp. Ovary is formed by three carpels with one ovule in each nest. Mellow fruit is unilocular and one-seeded. Exocarp is thin, leathery, dense and smooth. Mesocarpy is powerful, developed and fibrous. The endocarp consists of very hard stony cells. Three meridional ridges are distinctly visible on it - these are traces of fusion of carpels. At the base of the fruit, there are 3 germinal openings, 2 of which are overgrown, and the third serves as the exit point of the embryonic root. The endosperm of the seed is rich in oil, initially it is liquid, by the time of maturation the endosperm hardens.

Conclusions. The research of the morphological of *Cocos nucifera* fruits was conducted.