

The results of the determination of TPC in four tested extracts of *Salvia sclarea* are presented in table 3.

Table 3. Mean TPC in the tested extracts (mg eq-gallic acid/L and mg eq-rutin/L)

Reference substance	Number of extract			
	1	2	3	4
gallic acid at 60 min	832.8	567.9	703.0	<b>1268.9</b>
rutin at 60 min	1675.6	1142.01	1414.09	<b>2103.12</b>

**Conclusion.** It is obvious that *Salvia sclarea* growing in Ukraine is a valuable species in terms of the TPC. Optimum conditions for analysis were chosen and experimentally justified (dilutions of extracts, 60 min of interaction of the extract with the Folin-Ciocalteu reagent, a wavelength of 760 nm for measurements, and gallic acid and rutin as reference substances). Under these conditions, the developed analytical procedure is robust, and easy for performing in phytochemical and technological laboratories.

**Acknowledgments:** These studies were supported by a scholarship from Slovak Academic Information Agency (SAIA) (the Selection committee of SAJA awarded 13.06.2017) .

### References

1. Kumar R., Kaundal M., Sharma S., Thakur M., Kumar N., Kaur T et al. Effect of elevated [CO<sub>2</sub>] and temperature on growth, physiology and essential oil composition of *Salvia sclarea* L. in the western Himalayas Journal of Applied Research on Medicinal and Aromatic Plants. 2017; 6: 22–30
2. Sepahvand R, Delfan B, Ghanbarzadeh S, Rashidipour M, Veiskarami GH, Ghasemian-Yadegari J. Chemical composition, antioxidant activity and antibacterial effect of essential oil of the aerial parts of *Salvia sclareoides*. Asian Pac J Trop Med. 2014; 7(1): 491–496.
3. Zengin G., Senkardes I., Mollica A., Picot-Allain C. M. N., Bulut G., Dogan A., Mahomoodally M.F., New insights into the in vitro biological effects, in silico docking and chemical profile of clary sage – *Salvia sclarea* L. Computational Biology and Chemistry. 2018; 75: 111–119.

### **Aloe arborescens – prospects of using in medicine, pharmacy and cosmetology**

**Konovalenko I. S., Kupriyanenko A. A.**

*National University of Pharmacy*

*Drug technology department*

*(Kharkiv, Ukraine)*

[ilonakonovalenko1601@gmail.com](mailto:ilonakonovalenko1601@gmail.com)

Modern conditions of human life (unfavorable environmental conditions, stressful situations, hypodynamia, etc.) have caused the so-called “diseases of civilization” - diseases associated with weakening of the adaptation mechanisms of the body, and a decrease in immunity. The progressive increase in the number of these diseases, often the cause of disability and even disability, makes the development of highly effective drugs adaptogenic and immunostimulating action - drugs of biogenic stimulants [3].

In medical practice, medicinal raw materials from plants, mushrooms, animals, estuary mud, peat are currently used as biogenic stimulants. Along with the well-known benefits, herbal remedies are close to endogenous bioregulatory compounds. The most famous of these are the leaves of aloe

- a perennial succulent, on the basis of which the liquid extract is produced, juice, liniment, syrup and tablets, as well as a large range of cosmetic preparations [4].

Despite the relatively complete information on the composition of biologically active substances (BAS) of aloe tree (anthracene derivatives, phloroglucides, carbohydrates, proteids, etc.), the question of the effect of unfavorable conditions of storage of raw materials on the qualitative and quantitative changes in biologically active substances remains unexplored.

The solution of this issue will allow to optimize not only the technology of herbal remedies, but also their standardization involving the most informative physicochemical methods. This is especially necessary, given that the current regulatory documentation regulates the quality of aloe phytopreparations according to non-specific indicators (content not typical for aloe arborescens, the amount of reducing agents, etc.) using less informative control methods or not providing a quantitative definition (for juice). In addition, by identifying new groups of biologically active substances and their more complete use, it is possible to expand the scope of use of raw materials for aloe [1, 2].

Thus, a more deep research of the composition of the biologically active substances of aloe arborescens leaves, the development of methods for obtaining the amount of biologically active substances from them for the creation of medicinal and cosmetic products is an actual problem for pharmaceutical science.

#### References:

1. Державна Фармакопея України / Держ. п-во «Український науковий фармакопейний центр якості лікарських засобів». – 1-е вид., 4 допов. – Х.: Державне підприємство «Український науковий фармакопейний центр якості лікарських засобів», 2011. – 540 с.
2. Державна Фармакопея України : в 3 т. / Державне підприємство «Український науковий фармакопейний центр якості лікарських засобів». – 2-е вид. – Харків: Державне підприємство «Український науковий фармакопейний центр якості лікарських засобів», 2015. – Т. 1. – 1034 – 1036 с.
3. Муравьева, Д.А. Фармакогнозия: Учебник. – 4-е изд; перераб. и доп./ Муравьева Д.А., Самылина И.А., Яковлев Г.П.-М.: Медицина, 2002. – 659 с.
4. Соколов, С.Я. Справочник по лекарственным растениям. Фитотерапия / С.Я. Соколов, И.П. Замотаев. – 2-е изд., стереотип. – М.: Недра, 2015. – 512 с.