tent of trace elements. The aerial parts of 55 different plants of family Boraginaceae, which were collected on the Eurasian continent, were used as the research objects. Besides, various parts of plants of genus *Pulmonaria* which possessed the different pharmacological activity were used as objects of research too. The amount of the trace elements in the researched object was determined by means of inductively-coupled plasma mass spectroscopy. It was determined the content of 59 elements. As a result it was established that the dividing of elements into clusters in a hierarchical tree correlates with the systematic position of plants (factor of correlation 0,92). Besides, the dividing of elements into clusters for various parts of *Pulmonaria* correlates with pharmacological activity of the phytomedicines which were made from these parts. Thus, the offered method of the analysis of the trace element structure of a plant allows more effectively looking up the new plants which will be sources of the essential elements.

PHENOLIC COMPOUNDS OF *PULMONARIA MOLLIS*

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The development cycle of *Pulmonaria mollis* Wulf ex Hornem can be divided into 2 periods — the first one is a short period from germination to the end of the fruiting stage, during which the floriferous shoots are developing; and the second one is a long period during which the root leaves are growing from underground resting buds. The medicines made from floriferous shoots have an antianemic activity. At the same time, the medicines made from the root leaves have expectorant activity. The aim of work is the characterization of phenol compounds of these parts of the plant. The floriferous shoots and the root leaves were collected in the Novosibirsk region. The raw materials were dried before analysis. The amount of phenolic compounds was measured by means of HPLC. Identification of components was done by comparison with the standard substances.

For the first time dihydroquercetin was discovered among the phenolic compounds of floriferous shoots, and vicenin in the root leaves. It is noteworthy that dihydroquercetin possesses strong anti-hemorrhagic action while vicenin has mainly an expectorant action. Thus, the various pharmacological activities of medicines made from theinvestigated plant parts of *P. mollis* could be connected with the different contents of phenolic compounds.

Table. The content of phenol compounds in different parts of *P.mollis*

Compound	Relative amount, %	
	floriferous shoots	root leaves
Gallic acid	20,6	24,23
Catechin	2,22	1,8
Chlorogenic acid	3,75	0,94
Neochlorogenic acid	2,58	2,97
Caffeic acid	3,94	-*1
Cichoric acid	-	3,4
Ferulic acid	22,5	-
Vicenin	-	1,79
Dihydroquercetin	8,11	-
Kaempferol	1,46	-
Luteolin 7-glucoside	-	1,16
Apigenin	-	0,18
*1 — it is not revealed		