RESULTS OF BIOCHEMICAL ANALYZES OF SOUTHERN PLANTS ARALKUM

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Determining the molecular-biological, biochemical and ecological features of adaptation of plant species in arid and saline soils in the world and using them in economic sectors on this basis is one of the urgent problems.

After the independence of Uzbekistan, special attention has been paid to the practical use of plants from the little-explored regions of our republic, especially as phytomeliorant and medicinal raw materials, and their protection. the molecular-biological, biochemical and ecological features of adaptation of plant species in arid and saline soils in the world and using them in economic sectors on this basis is one of the urgent problems.

Water-soluble vitamins in Atriplex pratovii Sukhor., A. tatarica L., Salsola dendroides J. Pall., Tamarix hispida Willd., Lycium ruthenicum Murr., Nitraria schoberi L., Caparis spinosa L. plants distributed in the South Island for the first time in this research work and carbohydrates were determined.

Taking into account that the vitamin content of these plants, distributed in the dry southern regions of the Aral Sea, has not been studied, the amount of water-soluble vitamins in their surface parts was determined by the YuSSX method in comparison with standard vitamins. The obtained results are presented in Table 1.

Table 1 Content of water-soluble vitamins, (M±m, n=5)

Plants	C	PP	B_1	B_2	B_6	B_9
Amount of vitamins (mg/g), RSD ≤3%						
A. pratovii	0.05	-	-	0.31	0.23	1.33
A. tatarica	0.25	0.29	0.05	0.45	2.43	8.14
S. dendroides	-	0.03	0.08	7.62	0.44	9.06
T. hispida	-	0.09	0.11	**19.81**	1.96	**43.35**
L. ruthenicum (leaf)	-	-	0.18	0.38	1.80	**12.69**
N. schoberi (leaf)	1.03	**27.95**	0.02	0.98	-	5.43
C.spinosa (leaf)	0.38	0.04	-	1.48	0.45	-

From the obtained results (Table 1), the presence of ascorbic acid, PP, B_1, B_2, B_6 and B_9 vitamins in the above-ground parts of the studied plants was determined. Also, in the leaves of N. schoberi, the most vitamin PP is 27.95 μg/g, in T. hispida plant, vitamins B_9 and B_2 are 43.35-19.81 μg/g, respectively, in S. dendroides plant, 9.06 - 7.62 μg/g, L. ruthenicum B_9 in leaves is 12.69 μg/g, compared to other plants was found to be in large quantities. Thus, the fact that these plants are a rich source of vitamins, despite growing in unfavorable climatic conditions of the archipelago, indicates that they can be used effectively in the future and as promising species in the development of biologically active supplements.

At the next stage of our research, the analysis of carbohydrates in the above-mentioned plants was carried out using the YuSSX method. The obtained results are presented in Table 2.

Table 2

Carbohydrate content, (M±m, n=5)

Plants	Carbohydrate content (%), RSD ≤3%				
	Fructose	**Glucose**	**Sucrose**	**Maltose**	**Total**
A. tatarica	0.6±0.16	0.55±0.11	0.13±0.10	-	1.29±0.06
A. pratovii	1.17±0.06	0.81±0.14	0.31±0.01	-	2.29±0.03
T. hispida	0.43±0.08	0.17±0.05	0.76±0.04	0.34±0.02	1.69±0.08
S. dendroides	0.03±0.1	0.28±0.12	0.15±0.02	0.01±0.05	0.46±0.03
L. ruthenicum (leaf)	0.29±0.06	0.41±0.15	0.05±0.02	0.03±0.01	0.78±0.04
N. schoberi (leaf)	2.63± 0.03	2.66± 0.04	-	-	5.29 ±0.02
C. spinosa (leaf)	0.21±0.01	0.45±0.14	0.01±0.02	0.02±0.04	0.69±0.08

From the data presented in Table 2, it can be seen that sharp differences were observed in the carbohydrate content of all plants. For example, the amount of sucrose in T. hispida was 0.76±0.04%, while in L. ruthenicum this amount of carbohydrates was 0.05±0.02%. Maltose was not detected in A. tatarica and A. pratovii plants. T. hispida was shown to be 34 times more than S. dendroides. The content of fructose and glucose in these plants is also sharply different from each other, it is 2.63 ± 0.03 - 2.66 ± 0.04 % in N. schoberi, and sucrose and maltose are not found. The content of fructose and glucose in the leaves of C. spinosa was 0.21±0.01 - 0.45±0.14%, respectively, and it was found that it was higher than sucrose and maltose.

Based on the results of the comparative analysis of South Island plants, it can be concluded that A. pratovii, T. hispida and N. schoberi plants can be considered as a rich source of carbohydrates compared to the other studied species. This indicates that they need to be further researched in the future. This opens up opportunities for their use in food, fodder, medicine and other fields.