

PUBLICATIONS

POLAR LIPIDS OF THE AERIAL PART OF *Artemisia glanduligera*

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Artemisia glanduligera Krasch. ex Poljakov (ferruginous wormwood) is a plant endemic to Central Asia. It grows in the north of Uzbekistan, Kazakhstan and Tajikistan. The phytochemical composition of this plant species, which is widespread in our republic, has not been studied yet.

The aim of this study is to study polar lipids (PL) - glycolipids (GL) and phospholipids (PhL) - of the aerial part of the *A. glanduligera* plant native to Uzbekistan.

PL was extracted from the grounded aerial part of the plant using a mixture of chloroform and methanol (2:1, v/v) after neutral lipids were removed. PL was separated into GL (eluted with acetone) and PhL (eluted with methanol) using silica gel column chromatography. The content of PL was 2.49%, including GL 1.91% and PhL 0.58%. By alkaline hydrolysis, fatty acids were isolated from the lipids and their composition as methyl esters was determined using GC on an Agilent GG 8860 chromatograph (table).

Table. Fatty acid compositions of GL and PhL of the aerial part of *A. glanduligera* GC, % by the mass of acids

Acid	GL	PhL	Acid	GL	PhL
10:0, 12:0, 14:0	5.63	5.52	γ -18:3n6	0.78	0.82
15:0	0.77	1.11	20:0, 21:0, 22:0	3.07	2.64
15:1	tr.	-	20:1	1.52	1.00
16:0	37.22	40.97	20:2	0.60	0.49
16:1	0.62	0.65	20:3	0.82	0.50
17:0	0.87	0.91	20:5	0.76	0.60
17:1	0.42	0.53	22:1	0.92	1.02
18:0	8.97	4.64	22:6	0.57	0.38
<i>cis</i> -18:1n9	21.64	21.22	24:0	1.00	1.87
<i>trans</i> -18:1	1.28	1.97	24:1	1.12	2.87
18:2n6	6.95	5.90	Σ saturated fatty acid	57.53	57.66
α -18:3n3	4.47	4.39	Σ unsaturated fatty acid	42.47	42.34

The results show that the aerial part of *A. glanduligera*, which grows in Uzbekistan, contains 2.49% PL. The fatty acids of GL and PhL consisted of 26 and 24 components with a carbon chain length of 10 to 24 C atoms. The content of highly active unsaturated FA, such as linoleic acid (α -18:2n6); γ -linolenic acid (γ -18:3n6); α -linolenic acid (α -18:3n3); eicosadienoic acid (20:2n6); eicosatrienoic acid (20:3n3); eicosapentaenoic acid (20:5n3) and docosahexaenoic acid (22:6n3) was in the range of 13.08-14.95% of the total of all identified fatty acids.

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