

**LIPIDS OF THE AERIAL PARTS OF *ARTEMISIA ANNUA* L.**¹ **Normakhamatov N.S.**¹ **A.A. Turaboev**¹ **Ch.T. Toshtemirova**² **F.A. Kodiralieva**² **A.A. Siddikova**¹ Tashkent Pharmaceutical Institute, Tashkent, Uzbekistan² Institute of Plant Chemistry named after Academician S. Yu. Yunusov
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Relevance: Lipids of medicinal plants are of interest as a source of biologically active compounds. *Artemisia annua* L. (annual wormwood) is known for its antimalarial and anti-inflammatory properties, but the lipid composition of its aboveground parts has not been sufficiently studied.

The aim of the study: To determine the content, composition and fatty acid profile of neutral and polar lipids of the aboveground part of *Artemisia annua* L.

Materials and methods: Air-dried above-ground part of *Artemisia annua* L. Neutral lipids were isolated by extraction with gasoline (b.p. 75–80 °C). Polar lipids were extracted using the Folch method with a mixture of chloroform and methanol (2:1 v/v) and purified with a 0.04% CaCl₂ solution. The component composition was determined by TLC. The fatty acid composition was determined by gas chromatography (Agilent 6890N).

Results: Lipid content is shown in Table 1.

Table 1. Lipid characteristics of the aboveground part *Artemisia annua* L.

Indicator	Content
1. Moisture, % of the weight of the above-ground part	8.6
2. Total lipids, % of the weight of the aboveground part, including:	5.89
2a. Neutral lipids, %	4.34
2b. Polar lipids, %	1.55
3. Content, mg/l: chlorophyll "a"	1.5
chlorophyll "b"	0.5

Component composition: NL contain hydrocarbons, fatty acid esters with phytosterols and triterpenols, triacylglycerides, free fatty acids and alcohols, triterpenols, phytosterols, chlorophyll pigments.

PL are represented by glycolipids and phospholipids.

The fatty acid composition according to (GC) is given in Table 2

Table 2. Fatty acid composition of the aboveground part of *Artemisia annua* L. GC, % of the mass of acids

No.	Fatty acid	Samples	
		NL	PL
1	Linoleic, 18 : 2	41,2	35.1
2	Oleic, 18 : 1	20.5	10.5
3	α - Linolenic, 18 : 3	7.9	5.7
4	Palmitic, 16:00	18.4	14.9



5	Linolenic, 18 : 3	1.7	24.9
6	Stearic, 18:0	3.5	2.2
7	Myristic , 14:0	2.2	1.5
8	Arachinovaya , 20:00	1.5	1.7
9	Eicosene , 20:1	1.8	1.0
10	Begenova , 22:00	1.3	1.9
	Σ saturated fatty acids	26.9	22.2
	Σ unsaturated fatty acids	73.1	77.2

Conclusions : • Lipids of the aboveground part of *Artemisia annua* L. are rich in unsaturated fatty acids (73.1% in NL, 77.2% in PL).

- Essential acids: linoleic , oleic, linolenic, palmitic.
- The data obtained expand the knowledge about the chemical composition of *Artemisia annua* and can be used to develop pr preparations and functional products.