

FATTY-ACID COMPOSITION OF THE OIL OF THE SEEDS AND
FLESH WITH PEEL OF THE FRUIT OF Lycium turcomanicum

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We have previously investigated the yield and physicochemical properties of the seed oil of Lycium turcomanicum Turez ex Miers, family Solanaceae, growing in Azerbadizhan [1].

According to preliminary results, the oil from the ripe fruit of this plant has a pronounced antimutagenic activity. However, the fatty acid composition of the oil has not so far been studied.

In the present communication we give the fatty acid composition of the oil from the seeds and flesh with peel of the ripe fruit of L. turcomanicum collected in the Botanical Garden of the Academy of Sciences of the Azerbaidzhan SSR.

The oil was extracted by treatment with petroleum ether (40-60°) in a Soxhlet apparatus, and the solvent was distilled off [1]. The oil was subjected to alkaline hydrolysis by the procedure described in [2]. The composition of the fatty acids was determined by the GLC method on a Chrom-4 chromatograph with a 4 mm × 2.5 m column filled with 17% of ethylene succinate on Chromaton N-AW-DMCS at 196°C. The fatty acids of the oil were chromatographed in the form of their methyl esters, and the individual comonents were identified by the procedure described in [3]. The results of the analysis are given below (GLC, %):

Oil	Fatty acid									
	12:0	14:0	15:0	16:0	16:1	18:0	18:1	18:2	18:3	20:0
From the seeds	—	0.4	Tr.	10.5	0.8	2.8	14.6	66.9	4.0	—
From the flesh w/peel	0.9	6.4	0.9	28.3	14.2	0.6	10.5	34.0	3.1	1.1

As compared with the oil from the flesh, the seed oil was enriched with the 18:1 and 18:2 acids. The total amount of unsaturated fatty acids in the oils from the flesh with peel was 61.8% and that of saturated acids 38.2%, the corresponding figures for the seed oil being 86.3% and 13.7%, respectively. Among the saturated fatty acids the main comonent was palmitic, and among the unsaturated acids it was linoleic acid.

LITERATURE CITED

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