

## BRIEF COMMUNICATIONS

### LIPIDS FROM THE AERIAL PART OF *Crambe kotschyana*

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In continuation of the study of lipids from plants of the Cruciferae family [1], we investigated lipids from the aerial part of *Crambe kotschyana* Boiss collected in April 2000 near Charvask reservoir (Tashkent district).

The plant was dried. The aerial part was separated from the roots, ground, suspended, and extracted multiple times in the cold by benzene that boiled at 70-75°C. The extract yield was 1.3%. The total extract was separated into fractions by column chromatography over silica gel with elution by benzene, benzene: CHCl<sub>3</sub> (9:1, 8:2, 7:3, 1:1), and pure CHCl<sub>3</sub>.

The lipid classes of the fractions were identified by comparison of TLC mobilities with authentic samples and by qualitative reactions. Table 1 presents the results of the separation.

Three fractions containing free fatty acids (FFA) were combined and treated with diazomethane to convert them to the methyl esters (ME). The methyl esters were separated from other components of the fractions on a silica-gel column with elution of the ME by benzene.

The FFA composition from the aerial part of *C. kotschyana* that was determined by GC is as follows (mass % of acids): 14:0 (2.4), 15:0 (4.6), 16:0 (66.9), 18:0 (4.3), 18:1 (6.5), 18:2 (11.5), 18:3 (3.8), 22:1 (trace).

It can be seen that palmitic acid (16:0) makes up almost 67% of the total acid mass of FFA from the aerial part; the fraction of 18:3, ~4%; erucic acid (22:1), observed only in trace quantities. However, erucic acid is the principal acid in the FFA and triacylglycerol fractions of lipids from *C. kotschyana* seeds (up to 42% in each) [1]. They also have a high content of linolenic acid (18:3, 19.6% in FFA and 24.5% in TAG).

Thus, erucic acid, which is characteristic of seeds from plants of the Cruciferae family, is localized in seeds of *C. kotschyana* and is practically absent in the aerial part.

TABLE 1. Lipids from the Aerial Part of *C. kotschyana*

Lipid classes	Mass %
Hydrocarbons + waxy ethers	20.6
Triterpenol and sterol fatty-acid esters	21.1
Acetates of cyclic alcohols + triacylglycerols	5.9
FFA + isoprenes	3.0
FFA + triterpenes	8.9
FFA + sterols	15.6
Sterols	6.5
Sterols + chlorophyll pigments	4.2
Chlorophyll pigments + unidentified	14.2

## REFERENCES

1. N. T. Ul'chenko, N. P. Bekker, A. I. Glushenkova, and I. G. Akhmedzhanov, *Khim. Prir. Soedin.*, 242 (2001).

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