

É. I. Gigienova, R. R. Avlyanova,  
and A. U. Umarov

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Perennial representatives of the family Boraginaceae are attracting attention by their unusual, as compared with other oil crops, set of fatty acids in the seed oils. In the oils of some representatives of this family that have been investigated [1-5], position isomers were found of trienoic acids and a series of  $C_{20}$ ,  $C_{22}$ , and  $C_{24}$  acids in proportions ranging from fractions to tens of percentage parts. At the same time, not all the representatives of the acids mentioned were found in all the oils studied. Whether this is due to the investigation only of the results of the GLC of the total mixture of acids or to the influence of climatic conditions is not yet clear. We have studied the seed oils of the Central Asian representatives of this family *Anchusa italica* (Italian bugloss) and *Solenanthus circinnatus* (twisted tubuliflor) collected on two occasions (in June of 1963 and 1974) in the region of the village Burchmulla, Tashkent oblast. The average sizes of the seeds were  $7.8 \times 3.4 \times 3.3$  and  $5.2 \times 7.2 \times 5.1$  mm, the weights of 1000 seeds were 31.25 and 52.61 g, their moisture contents 7.26% and 8.13%, their oil contents calculated on the absolutely dry weight 26.84% and 10.94%, the colors of the oils on the iodine scale 25 and 15 units,  $d_4^{20}$  0.9194 and 0.9202) viscosities 7.82 and 7.81  $^{\circ}E_{20}$ ;  $n_D^{20}$  1.4730 and 1.4758; acid Nos. 1.82 and 6.39 mg of KOH/g; saponification Nos. 191.60 and 191.11 mg of KOH/g; Hehner Nos. 95.55 and 95.13%; iodine Nos. 125.70 and 131.22% of  $I_2$ ; phosphatide contents 0.21 and 0.17%; and unsaponifiables 1.46 and 1.96%, respectively.

The mixtures of fatty acids had neutralization Nos. of 199.74 and 198.58 mg of KOH/g, their mean molecular weights were 280.51 and 282.55, their iodine Nos. 141.19 and 153.07% of  $I_2$ , their contents of saturated acids as percentages of the total mixture of acids 10.01 and 7.64%; the neutralization Nos. of the saturated acids 214.71 and 216.21 mg of KOH/g; and the mean molecular weights of the saturated acids 261.25 and 259.47.

The indices of the oils and of the mixtures of fatty acids obtained from the seeds of the plants of the 1963 harvest agree completely with the fatty-acid compositions of the oils of the seeds of the 1974 harvest that we calculated from the results of the GLC and PC of the total mixture of acids, the total saturated acids, and the total monoenoic acids (mole %):  $C_{16:0}$  10.40 and 7.10;  $C_{18:0}$  0.79 and 0.82;  $C_{20:0}$  traces and traces;  $C_{22:0}$  0.70 and traces;  $C_{18:1}$   $\Delta 9$  29.83 and 35.80;  $C_{20:1}$   $\Delta 11$  1.06 and 2.79;  $C_{22:1}$   $\Delta 13$  1.49 and 6.20;  $C_{18:2}$   $\Delta 9,12$  45.59 and 21.03;  $C_{20:2}$   $\Delta 11,14$  not detected and 0.55;  $C_{18:3}$   $\Delta 6, 9, 12, 14$  and 1.28;  $C_{18:3}$   $\Delta 9,12,15$  0.60 and 18.34;  $C_{18:4}$  2.08 and 6.09.

The saturated, the monoenoic, the dienoic, the trienoic, and the tetraenoic acids were isolated by the  $CC/AgNO_3$  method with monitorin by  $TLC/AgNO_3$ . Paper chromatography and UV and IR spectroscopy of the oils and of mixture of the methyl esters of the fatty acids showed the complete absence from them of hydroxy compounds in the presence of traces of acids with conjugated ethylenic bonds and the cis configuration of all the ethylenic bonds. The number of conjugated bonds rose rapidly when the isolated oils and, particularly, the mixtures of fatty acids were stored.

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