Thus, the WSPS fractions of mistletoe and the leaves of the Chinese parasol tree are richest in glucosamine. The host tree has no appreciable influence on the amount of amino sugar mistletoe.

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AN INVESTIGATION OF THE OIL OF Nicotiana tabacum SEEDS

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UDC 547.915.665.3

Tobacco is sown with the aim of obtaining tobacco leaf in the Urgut region of Samarkand province. The average yield of the seeds of this crop in the main zones of cultivation (the Crimea, Transcaucasia, the Ukraine) amounts to 600 kg/ha [1]. The tobacco seeds are not used, although up to 5 thousand tons may be gathered each year in the Uzbek SSR. Physicochemical facts are necessary in order to draw up recommendations for the utilization of these wastes.

We have investigated the oil of tobacco seeds of the 1988 harvest collected after the removal of the leaves (ripe). To free them from nicotine, the seeds were treated in a supersonic apparatus at a velocity of flow of air of 1000 m/s. In the treating process, the upper seed coat is removed, as a result of which the seeds are freed from nicotine. The amount of nicotine was determined by generally adopted methods [2].

The moisture content of the seeds was 5.3% and the oil content at this moisture content 40.8%; calculated on the absolutely dry substance the oil content of the seed was 43.2%, close to figures given in the literature [1].

The oil was isolated from the comminuted seeds by extraction with petroleum ether (T_b 40-60°C) at room temperature, and its indices were determined by generally accepted methods [6]:

Density at 20°C, g/cm^3	0.9231
Refractive index, n^{20}	1.4758
Viscosity at (20°C), cP	54.28
Saponification No., mg KOH/g	193.56
Wijs iodine No., % I_2	143.82
Thiocyanogen No., % I_2	71.54
Hehner No., %	93.47
Unsaponifiable substances, %	1.24

To determine the qualitative and quantitative composition of the fatty acids they were isolated from the oil by saponification, and were converted by treatment by diazomethane into their methyl esters [4]. The fatty acid methyl esters were chromatographed on a LKhM-7

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Translated from Khimiya Prirodnykh Soedinenii, No. 6, p. 827-828, November-December, 1990. Original article submitted January 30, 1990.

0009-3130/90/2606-0706$12.50

chromatograph under the following conditions: stainless-steel column, 0.5 × 2 m, with a temperature of the sample inlet of 300°C, and a rate of feed of helium of 120 ml/min with, as packing, Chromaton (60-80 mesh) impregnated with 17% of poly(ethylene succinate). The fatty acids were identified from their optimum retention times in comparison with known literature figures [4] and with standard samples. The amounts of the individual acids were determined by Carral's method [5]. The following acids were found (%): 16:0-6.1; 18:1-7.2; 12:2-85.2.

Thin-layer chromatography in the heptane—methyl ethyl ketone-acetic acid (43:7:0.5) system [6] showed the presence in the oil of: hydrocarbons, triacylglycerols, free fatty acids, phytosterols, diacylglycerols, and monoacylglycerols. The analyses show that from 5 thousand tons of seeds it is posible to obtain about 2 thousand tons of a semidrying technical oil for the domestic economy — for example, for the paint and varnish industry.

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LIPIDS OF THE SEEDS OF TWO SPECIES OF Jurinea

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UDC 547.915:665.3

Plants of the genus Jurinea (family Asteraceae) include more than 300 species, 150 of which grow in Central Asia [1]. There is no information in the literature available to us on the lipids of the seeds of these plants. There is only information on a study of the triterpene compounds of J. anatolica and J. cousanquinea, the total amount of which in these species is about 40% [2].

We have investigated the neutral lipids (NLs) of the seeds of J. bipinnatifida Winkl. (I) and J. kokanika Iljin (II). The lipids were extracted from the comminuted seeds with hexane. The yields of total NLs were: (I) 6.2%; (II) 10.8%.

The separation of the total lipids into individual classes, the identification of the latter, the isolation of the fatty acids (FAs), and the determination of their composition were carried out as described previously [3]. The lipid compositions of the species investigated (I and II) are given below (% by weight): hydrocarbons, 0.1 and 0.3; esters of triterpenols and fatty acids, 0.1 and 4.9; triacylglycerols (TAGs), 80.9 and 74.0; epoxyacyldiacylglycerols (Ep-DAGs), 11.4 and 4.6; free fatty acids (FFAs), tri. and 1.3; hydroxyacyldiacyclglycerols (H-DAGs) + free triterpenols, 4.7 and 7.0; epoxyacyl, hydroxyacyl, and monoacyl-glycerols (Ep-H-MAGs), 0.5 and 1.6; diacylglycerols (DAGs) + free sterols, 1.2 and 2.7; unidentified triterpene components, 0.5 and 2.7; and monoacylglycerols (MAGs), 0.6 and 0.9.

Thus, the NLs of the two species of plants had the same set of lipid classes but differed from one another with respect to their amounts.

The lipids of (II) showed a fairly high content of triterpene compounds (more than 7.6%).

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Translated from Khimiya Prirodnykh Soedinenii, No. 6, p. 828-829, November-December, 1990. Original article submitted March 22, 1990.