

The oil is light golden in color with a faint pleasant odor. The physical and chemical characteristics of the oil and the fatty acids are as follows:

<u>Index</u>	<u>Oil</u>	<u>Fatty acids</u>
Specific gravity	0.9234	—
Refractive index, n_D^{18}	1.4769	1.4680
Saponification no., mg KOH/g	194.34	—
Neutralization no., mg KOH/g	—	199.88
Mean mol. wt.	—	280.72
Iodine no., %	144.37	149.52
Thiocyanogen no., %	79.65	80.64
Content of saturated acids, %	—	10.33
Their neutralization no.	—	223.09
Their mean mol. wt.	—	251.51
Content of nonvolatile water-insoluble acids, %	93.13	—
Content of unsaponifiabiles, %	2.21	—
Content of phosphatides, %	0.29	—

The fatty-acid composition of the oil, determined by the GLC method, is shown below:

<u>Acid</u>	<u>Content, %</u>
Capric	0.095
Palmitic	7.31
Stearic	2.17
Oleic	10.83
Linoleic	78.29
Linolenic	1.29

The oil belongs to the group of semidrying oils.

REFERENCE

1. Flora Uzbekistana, Tashkent, 11, p. 87, 1953.

26 April 1968

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UDC 547.915.3

OIL OF THE SEEDS OF NIEDZWEDZKIA SEMIRETCHENSKAIA

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Khimiya Prirodnikh Soedinenii, Vol. 4, No. 5, p. 317, 1968

Niedzwedzkia semiretchenskaia is assigned in the "Flora of the USSR" to the family Bignoniaceae; however, the question of its belonging to this family remains disputable [1]. The fruit of the plant consists of pods within which there are seeds with dimensions of $7 \times 5 \times 1.1$ mm. The weight of 1000 seeds is 9.2 g, and their oil content 36.1%. The oil is greenish yellow. Its physical and chemical characteristics are as follows:

<u>Index</u>	<u>Oil</u>	<u>Fatty acids</u>
Specific gravity	0.9224	—
Refractive index, n_D^{20}	1.4782	—
Saponification no., mg KOH/g	184.63	—
Neutralization no., mg KOH/g	—	203.32
Mean mol. wt.	—	275.97
Iodine no.	137.59	141.53
Thiocyanogen no.	82.41	83.70
Hehner no., %	95.06	—
Content of unsaponifiabiles, %	1.24	—
Content of phosphatides, %	0.19	—

The fatty-acid composition of the oil, according to the results of GLC, is given below:

Acid	Content, %
Caprylic	0.28
Tridecylic	0.66
Myristic	1.65
Palmitic	6.07
Stearic	3.54
Arachidic	0.66
Behenic	0.53
Palmitoleic	3.62
Oleic	26.01
Octadecadienic	55.62
Octadecatrienic	1.36

The UV spectra of the mixture of fatty acids shows the presence in it of 10.03% of acids with two double bonds in the conjugated position. This peculiar feature—the association in one oil of two types of unsaturated acids with isolated and conjugated double bonds—makes *Niedzwedzka* similar to southern catalpa (*Catalpa bignonioides*, *C. syringaeifolia*) in the oil of which the same association of acids has been found previously [2]. Since the catalpa also belongs to the family Bignoniaceae, this feature in the composition of the oil of *Niedzwedzka* is another argument in favor of its assignment to this family.

REFERENCES

1. Flora USSR, Moscow-Leningrad, 23, pp. 5-9, 1958.
2. A. L. Markman and M. D. Bodnya, ZhOKh, 27, 2293, 1957.

26 April 1968

Institute of the Chemistry of Plant Substances. AS UzSSR

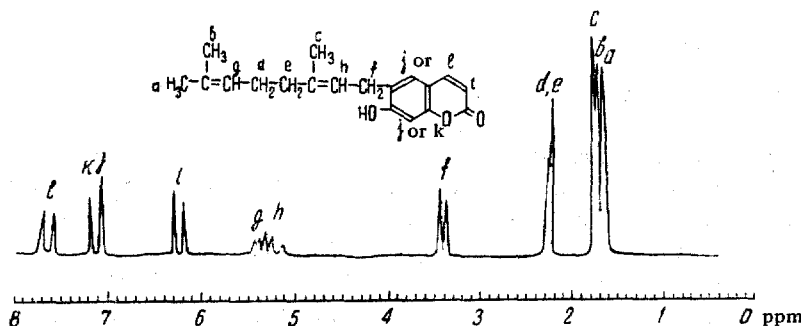
UDC 577.15/17:582.89

OSTRUTHIN — A COMPONENT OF THE ROOTS OF *AGASYLLIS LATIFOLIA* AND *LIBANOTIS CONDENSATA*

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Khimiya Prirodnikh Soedinenii, Vol. 4, No. 5, p. 318, 1968

The existing schemes for the biosynthesis of furo- and pyranocoumarins from 6- or 8-alkyl-substituted umbelliferones permits the assumption that in plants these substances accompany one another.



Compounds of the type of osthenol [1], ostruthin [2], peumorisin (peucenol) [3, 4], and suberosin [5] have been found in a number of plants containing furocoumarins as associated components.

From the roots of *Agasyllis latifolia* (M. B.) Boiss of the family Umbelliferae, by column chromatography on alumina we have obtained a hydroxycoumarin of the composition $C_{19}H_{22}O_3$ with mp 117-118° C (aqueous methanol); (monoacetate $C_{21}H_{24}O_5$ with mp 78-79° C). On the basis of its physicochemical properties and NMR spectrum (figure), this substance was identified as ostruthin (6-geranyl-7-hydroxycoumarin). In this case, the ostruthin is accompanied by deltoin [5'-(1"-angeloyloxy-1"-methylethyl)-4', 5'-dihydrofuro-2', 3':7, 6-coumarin] [6].