

OIL OF THE SEEDS OF DATISCA CANNABINA

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Datisca cannabina, which belongs to the family Datisceae, is a perennial herb growing almost throughout Central Asia, flowering in June/July and bearing fruit in August/September [1]. The seeds are small; their bulk density is 503 g/l. The oil content of the seeds on the dry weight is 34.47%.

Index	Oil	Fatty acids	Index	Oil	Fatty acids
Density, d_4^{20} , g/l	0.9234	—	Content of sat. fatty acids, %	—	12.04
Relative viscosity, °E	7.2	—	Neutralization no., mg KOH/g	—	213.36
Refractive index, n_D^{20}	1.4687	—	Mean mol. wt.	—	262
Acid no., mg KOH/g	0.94	—	Iodine no., %	153.48	174.36
Saponification no., mg KOH/g	185.33	—	Thiocyanogen no., %	84.36	84.60
Hehner no., %	96.28	—	Content of unsaponifiables, %	1.56	—
Neutralization no., mg KOH/g	—	198.44	Content of phosphatides	Traces	—
Mean mol. wt.	—	282.70			

The fatty-acid composition of the oil was determined by gas-liquid chromatography.

There is no information in the literature on the oil of Datisca. The oil obtained by extracts in the cold is golden-yellow and odorless. The physical and chemical properties of the oil and of the fatty acids isolated from it are given in the table.

Acid	In <u>Datisca</u> oil	In hemp oil [2]
Tridecanoic	0.02	5.0
Myristic	0.04	
Palmitic	7.89	
Stearic	3.34	
Palmitoleic	0.16	—
Oleic	10.61	14.0
Linoleic	42.50	65.0
Linolenic	35.44	16.0

For comparison, we give the fatty-acid composition of hemp oil from the seeds of Cannabis sativa (family Moraceae). This comparison is of interest because, in spite of the fact that Datisca and hemp belong to families remote from one another, their oils are extremely similar in fatty-acid composition and in technical properties (good drying oils). The pigments in the oil include α -carotene.

REFERENCES

1. Flora USSR, Tashkent, **15**, 480, 1949; **4**, 221, 1959.
2. A. Grün, Analyse der Fette und Wachse, Vol. II, Berlin, 36, 1929.

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