

# THE OIL OF THE SEEDS OF *ROBINIA PSEUDACACIA* AND *MELILOTUS OFFICINALIS*

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*Robinia pseudacacia* (black locust) and *Melilotus officinalis* (yellow sweetclover) belong to the family Leguminosae [1]. The literature information on the oils of these plants [2] is fragmentary. According to the qualitative indices that

Table 1

Index	Robinia		Melilotus	
	oil	fatty acids	oil	fatty acids
Sp. gr., $d_4^{20}$	0.9193	—	0.9198	—
Refractive index, $n_D^{20}$	1.4778	—	1.4765	—
Relative viscosity, $E^\circ$	11.77	—	10.10	—
Saponification no., mg KOH	180.82	—	180.71	—
Iodine no. %	153.42	167.32	156.03	164.14
Thiocyanogen no., %	85.77	91.40	84.39	96.54
Hehner no., %	93.7	—	96.12	—
Hexabromide no.	—	9.63	—	12.26
Acetyl no.	34.68	—	—	—
Hydroxyl no.	1.08	—	—	—
Mean mol. wt.	—	287.13	—	275.72
Content of saturated acids, %	—	7.57	—	10.36
Their mean mol. wt.	—	297.11	—	276.05
Content of				
Unsaponifiables, %	3.88	—	6.39	—
Phosphatides, %	0.40	—	0.61	—
Tocopherols, mg-%	0.042	—	0.109	—

we have obtained, the oil of these plants from Uzbekistan differs considerably from the oil of plants of European origin.

Robinia seeds: dimensions  $4.5 \times 3 \times 2$  mm; weight of 1000 seeds 20 g; bulk density 420 g/l; oil content 12.72%.

Melilotus seeds: very small; weight of 1000 seeds 4.2 g; oil content 9.88%.

Table 2

Acid, %	Robinia	Melilotus
Palmitic	4.72	4.60
Stearic	2.35	3.36
Oleic	24.26	12.69
Linoleic	53.18	63.26
Linolenic	12.04	14.68
Arachidic	3.31	1.30
Behenic, lignoceric	Traces	Traces

The physical and chemical properties of the oils and of the fatty acids isolated from them are given in Table 1 and the fatty-acid composition in Table 2. The fatty-acid composition is close to that of the oils of other Leguminosae [3]. Both oils belong to the category of semidrying oils. Investigations carried out in the pharmacology laboratory have shown that these oils are nontoxic.

## REFERENCES

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