

THE OILS OF THE KERNELS OF *Cerasus vulgaris*  
AND *C. erythracarpa*

A. U. Umarov and M. Mirzabaeva

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*Cerasus erythracarpa* Nevski grows widely in the Tashkent region and in other regions of Soviet Central Asia (the Western Tien-Shan, Pamir-Alai) [1].

The kernels of *C. vulgaris* Mill form the waste product of a jam factory; the oil of these kernels has been studied inadequately [2]. We have investigated the oil of the kernels of *C. erythracarpa* Nevski selected in Chimgan and those of *C. vulgaris* Mill., family Rosaceae.

The oil of the kernels of *C. vulgaris* is present in an amount of 30.68%; it is a golden yellow liquid with an almond-like odor, and the oil of the kernels of *C. erythracarpa* Nevski is present in an amount of 51.08% and is a dark yellow liquid also with an almond odor. The physicochemical indices of the oils and the fatty acids are given in Table 1.

The fatty acid composition of the oils determined by gas-liquid chromatography is shown below:

Fatty acid	<i>C. vulgaris</i> Mill.	<i>C. erythracarpa</i> Nevski
Capric	1.58	—
Lauric	0.25	—
Myristic	0.90	—
Palmitoleic	Traces	1.36
Palmitic	8.83	4.36
Margaric	2.92	Traces
Stearic	Traces	1.21
Oleic	43.74	73.56
Linoleic	41.78	19.51

The triglyceride compositions of the oils were determined by enzymatic hydrolysis [3], and the results are given in Table 2.

TABLE 1

Index	<i>C. vulgaris</i> Mill		<i>C. erythracarpa</i> Nevski	
	oil	fatty acids	oil	fatty acids
Specific gravity, $d_4^{20}$	0,9210	—	0,9140	—
Absolute viscosity, cP	—	—	0,8443	—
Saponification No., mg KOH/g	179,3	—	187,9	—
Höhner No., %	95,00	—	94,42	—
Acid No., mg KOH/g	0,39	—	0,31	—
Iodine No., % I <sub>2</sub>	129,67	131,96	96,15	95,47
Thiocyanogen No., % I <sub>2</sub>	78,57	72,26	76,40	82,86
Content of unsaponifiables, %	0,39	—	0,31	—
Neutralization No., mg KOH/g	—	202	—	200
Mean mol. wt.	—	277	—	280

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The qualitative composition of the main fatty acids of the oil of the cultivated species *C. vulgaris* differs little from the oil of the wild species *C. erythracarpa*, but the two oils differ in their quantitative composition. The first of them has a larger amount of saturated fatty acids and a considerable amount of linoleic acid (41.78%). The fatty acids of *C. erythracarpa* consist mainly of oleic acid (73.56%).

TABLE 2

Plant	Glyceride composition, %					
	GIS <sub>3</sub>	GISU <sub>2</sub>	GIU <sub>2</sub> S	GIS <sub>2</sub> U	GISU <sub>2</sub>	GIU <sub>3</sub>
<i>C. vulgaris</i> Mill	0,29	36,08	8,09	2,26	23,79	62,49
<i>C. erythracarpa</i> Nevski	—	0,32	11,08	0,12	2,52	86,03

Note: G) glyceride residue; S) saturated acid; U) unsaturated acid.

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