CHARACTERIZATION OF THE CAROTENOID COMPLEX OF THE LEAVES OF DIFFERENT VARIETIES OF SUBTROPICAL PERSIMMON

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We have continued a study of the carotenoids of subtropical persimmon – an industrially important crop of Transcaucasia and Central Asia. From the leaves of trees growing in the collection section of the Sukhumi selection station of the All-Union Institute of Plant-Breeding we have isolated carotenoids and investigated them as described previously [1]. The total amount of carotenoids in the leaves of six varieties of persimmon and their qualitative and quantitative properties are given in Table 1.

The leaves of each variety of persimmon have a characteristic complex of carotenoids. The most diverse with respect to their set of components are the carotenoids of persimmon leaves of the Khachna variety. It must be mentioned that the fruit of this variety [2] differs greatly from the leaves with respect both to the qualitative and quantitative composition of the carotenoids.

TABLE 1

Index	Variety*					
	Khachna	Sidless [Seedless]	Khiakume	Zendzhi-Maru	Fuiyu	Chinebuli
Total carotenoid content, mg/100 g of absolutely dry mass of the leaves	43,5	39,4	35,1	39,1	38,6	32,6
Amounts of individual carotenoids, % of their total in the leaves:						
Violaxanthin	76,84	14,57	15,33	3,44	2,85	70,77
Luteoxanthin	1,05	—	6,11	—	—	—
Neo-α-carotene I	8,13	—	—	—	—	—
Neo-α-carotene W	0,27	—	—	—	4,59	—
Neo-β-carotene V	0,32	—	—	—	—	—
Neo-β-carotene I	0,11	—	—	—	—	—
Taraxanthin	0,48	—	—	—	—	—
cis-Luteoxanthin	0,05	—	—	—	—	—
Cryptoxanthin	—	61,01	73,11	71,13	75,07	—
neo-β-carotene B	—	11,60	2,50	4,52	3,43	1,54
α-Carotene	—	—	—	—	4,40	—
Lutein epoxide	—	—	—	—	1,16	17,04
Neo-β-carotene A	—	—	—	8,92	—	0,74
Unidentified	12,75	12,82	2,95	11,99	8,50	9,91

*The fruits of the Khachna and Sidless varieties are always tart; the tartness of the Khiakume and Zendzhi-Maru fruits depends on pollination (varying); the Fuiyu and Chinebuli fruits are never tart.

LITERATURE CITED

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