

Berberis ALKALOIDS.**XXXIII. INVESTIGATIONS OF THE ALKALOIDS OF *Berberis****vulgaris*

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UDC 547.944/945

Berberis vulgaris growing in the Northern Caucasus, is a plant raw material for obtaining the valuable drug berberine bisulfate [1]. The supplies of the wild-growing raw material are insufficient, and therefore the necessity arises for introducing the species into cultivation.

Continuing the investigations of the alkaloids of plants of the genus *Berberis*, we have studied the introduced species *B. vulgaris*, which has not hitherto been investigated by anyone. The raw material was collected in Tashkent province in the flowering phase in May, 1993. The bases were isolated from the roots, young shoots, and leaves by the method described in [2]. Individual bases were obtained by separating the mixture on a column of silica gel and were identified by direct comparison with authentic specimens and from their spectral characteristics, and the percentage amounts of the total and of the individual alkaloids were calculated on the weight of the dry plant (Table 1).

It follows from a comparison of the alkaloids isolated from the wild [3-7] and cultivated specimens that the latter retain a high level of berberine, which considerably exceeds other wild-growing barberry species of the Central Asian region [8]. In the two cases, the main and the accompanying alkaloids coincided, with the exception of the aporphine base isocorydine, which was not found in wild-growing samples studied in detail. Thus, seven alkaloids have been isolated from *B. vulgaris* growing in Tashkent province, of which isocorydine has been obtained from this species for the first time. The level of berberine in the roots permits this plant to be recommended as an industrial source of berberine bisulfate.

TABLE 1. *B. vulgaris* Alkaloids

Plant organ	Total bases ii	Main alkaloids	Accompanying alkaloids
Roots	1.84	Berberine - 0.97	Jatrorrhizine, oxyacanthine, barbamine, berbaminine
Young shoots	0.74	Oxyacanthine - 0.17	Berberine
Leaves	0.07	Thalicmidine 0.01	Isocorydine, oxyacanthine

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