

It was shown by special experiments that there was no appreciable amount of substances in the samples that appeared at temperatures above 260°C. The amounts of the individual alkaloids calculated as percentages of the total are given in Table 1.

The main alkaloids of *Peganum harmala* L. growing in the basin of the R. Yagnob were harmine and deoxyvascisinone. The amount of harmine was highest in the green fruit and roots, and deoxyvascisinone was the main alkaloid of the epigeal part. The amount of peganine was higher in the ripe fruit. The alkaloid harmaline was not predominating in any part of the plant.

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ALKALOIDS OF THE SEEDS OF *Dipthychocarpus strictus*

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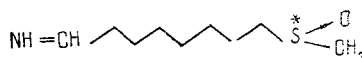
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In an investigation of the seeds of *Dipthychocarpus strictus* (Fisch) Trautv. collected in the environs of the village of Dzhilga (Chimkentskii region, Kaz. SSR) we have found 0.13% of combined alkaloids. From the ethereal fraction of the total, by treatment with acetone we have isolated diptocarpine sulfate [1], and from the mother liquor diptocarpilidine [2]. Treatment of the chloroform fraction with petroleum ether led to diptocarpilidine and treatment with acetone to a very small amount of a crystalline substance with mp 91-92°C which we have called diptocarpinine. The combined mother liquors from the ethereal and chloroform fractions were chromatographed on a column of silica gel (1:30). The alkaloids were eluted successively with benzene, chloroform, and chloroform-methanol (9:1, 8:2, and 1:1). From the benzene eluate we isolated diptocarpilidine and from the other fractions, successively, deoxydiptocarpine [3], diptocarpiline [4], and deoxydiptocarpidine [5].

Diptocarpinine (I) is an optically active white crystalline substance with the composition $C_9H_{19}NOS$, M^+ 189, mp 91-92°C (chloroform). Its IR spectrum showed the absorption bands of $=NH$ (3400 cm^{-1}), $-N=CH$ (1680 cm^{-1}), and $S \rightarrow O$ (1030 cm^{-1}) bonds. The PMR spectrum contained the signals of the protons of the following groups: $CH_3-S \rightarrow O$ (2.53 ppm, 3 H, s); $O \leftarrow S-CH_2$ (2.65 ppm, 2 H, q, $J = 6\text{ Hz}$); $-N=CH-CH_2-$ (2.16 ppm, 2 H); $-N=CH-$ (6.26 ppm, 1 H); and $-CH=NH$ (6.51 ppm, 1 H). The signals of the protons from five methylene groups appeared in the 1.15-2.00 region (10 H).

The presence of the signal of a $=NH$ proton and one olefinic proton in the PMR spectrum and also the absorption of a double bond ($HC=NH$) in the IR spectrum showed that (I) contained a terminal $-HC=NH$ group. In the mass spectrum of diptocarpinine there were intense peaks of ions with m/z 189 [$M(6\%)$] $^+$, 174 (5), 172 (22), 174 (5), 126 (61), 112 (14), 106 (52), 84 (19), 70 (12), 59 (22), 43 (100).

A comparative study of the mass spectra of diptocarpilidine [2] and (I) showed that their molecular weights differed by 16 m/z . The absence of any oxygen-containing group in addition to $S \rightarrow O$, and also the results of IR and PMR spectroscopy, permit the proposal for diptocarpinine of the following most probable structure:



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ALKALOIDS OF *Allium odorum*

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The chemical composition of the plant *Allium odorum* L. (family Liliaceae) [1, 2] has not been studied and there is no information on the presence of alkaloids in it.

In the present communication we give the total amounts of alkaloids in *A. odorum* [3] collected in various regions of the Buryat ASSR in the full vegetation phase according to the collection site and the various plant organs, and also the results of the separation of the combined alkaloids:

Collection site and date	Plant organ	Total amount of alkaloids, %
Environs of Ulan-Ude July 26, 1975	Epigeal part,	0.18
	Hypogeal part	0.05
Environs of the village of Ivolga July 18, 1976	Epigeal part	0.14
	Hypogeal part	0.06
Village of Ivolga, June 15, 1979	Leaves	0.08
	Bulbs	0.10
" " July 21, 1979	Leaves	0.22
	Stems	0.10
" " "	Bulbs	0.05
	Flowers	0.15
" " Aug. 10, 1979	Leaves	0.07
	Stems	0.04
" " "	Bulbs	0.09
	Epigeal part	0.16
Environs of the town of Gusinoozersk July 23, 1976	Hypogeal part	0.05
	Epigeal part	0.16
Environs of the village of Mukhorshibir' July 20, 1979	Hypogeal part	0.05
	Epigeal part	0.11
Environs of the village of Bilyutai July 25, 1982	Hypogeal part	0.05
	Epigeal part	0.13
Environs of the village of Sibir' July 24, 1982	Epigeal part	0.10
	Hypogeal part	0.10

The amounts of alkaloids varied inconsiderably from one growth site to another. The epigeal organs (leaves, flowers, fruit) were rich in alkaloids with small amounts in the bulbs. A high amount of alkaloids was found in the middle of the vegetation period in the phase of full flowering of the plant, when its height reaches 40-50 cm.

For the epigeal and hypogeal parts of *A. odorum* collected on July 24, 1982 in the environs of the village of Sibir', Ulan-Ude region, Buryat ASSR, by extraction with ethanol we obtained the total alkaloids and then separated them on columns of silica gel and alumina (eluent benzene-methanol (15:1), (9:1), and (9:3)). After further separations, a base was isolated with mp 91-92°C, $C_{11}H_{14}N_2O$.

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