ALKALOIDS OF Nitraria komarovii. I.

UDC 547.944/945

T. S. Tulyaganov, A. A. Ibragimov, and S. Yu. Yunusov

We have studied the alkaloids in the individual organs of *Nitraria komarovii*. In all cases apart from the seeds we used ordinary chloroform extraction of the air-dry plant moist-ened with 8% ammonia. The following results were obtained:

Plant organ	Time of collection	Vegetation period	Yield, %
Roots	Sept., 1975	Fruit-bearing	0.036
Stems	May, 1976	Beginning of flowering	0.20
Leaves	u		0.50
Seeds*	Sept., 1975	Fruit bearing	0.11

*The seeds were extracted with a 2% solution of CH3COOH in chloroform.

Additional extraction of a meal of the leaves raised the yield of total alkaloids by 13%.

The chloroform fraction of the total material from the leaves was separated according to basicity into fractions corresponding to pH values of 8 to 4 with an interval of 1. From the various fractions we isolated the alkaloids schoberidine [1], nitrarine [2], isonitrarine [3], nitramidine [4], and tetramethylenetetrahydro- β -carboline [5], which have been described previously.

Since the structure of schoberidine [1] was shown on the basis of spectral characteristics, we attempted to confirm it chemically by passing from the known nitrarine to schoberidine. When selenium dioxide and sulfur were used as dehydrogenating agents, no schoberidine was detected in the reaction products.

The catalytic dehydrogenation of nitrarine with palladium black in the presence of maleic acid enabled schoberidine to be obtained with a yield of 23%; it was identical with a natural sample (UV spectra in various media, mixed melting point).

LITERATURE CITED

 A. A. Ibragimov, S. Kh. Maekh, and S. Yu. Yunusov, Khim. Prir. Soedin., 275 (1975).
A. A. Ibragimov, S. M. Nasirov, V. T. Andrianov, S. Kh. Maekh, Yu. T. Struchkova, and S. Yu. Yunusov, Khim. Prir. Soedin., 273 (1975).

- 3. A. A. Ibragimov, S. Kh. Maekh, and S. Yu. Yunusov, Khim. Prir, Soedin., 276 (1975).
- 4. A. A. Ibragimov, S. Kh. Maekh, and S. Yu. Yunusov, Khim. Prir. Soedin., 275 (1975).
- 5. B. M. Pakhritdinov, N. Yu. Novogorodova, M. Normatov, and S. Yu. Yunusov, Khim. Prir. Soedin., 641 (1970).

Institute of the Chemistry of Plant Substances, Academy of Sciences of the Uzbek SSR, Tashkent. Translated from Khimiya Prirodnykh Soedinenii, No. 5, p. 737, September-October, 1979. Original article submitted April 4, 1979.