

The alkaloids trisphaerine, tazettine, hippeastrine, lycorine, and galanthamine were identified on the basis of their physicochemical properties and spectral characteristics and from the absence of a depression of the melting point of mixtures with authentic samples of reference alkaloids, and the alkaloid pancratine by a comparison of its properties and spectral characteristics with those given in the literature.

We are the first to have studied the *Hymenocallis littoralis* Salisb. of the flora of the Upper Volta and the Ivory Coast. Eight bases have been isolated: lycorine and tazettine, which have been obtained from this species previously and, for the first time, trisphaeridine, hippeastrine (trisphaerine), pancratine (hemanthidine), galanthamine, and bases (I) and (II).

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#### ALKALOIDS OF *Aconitum saposhnikovii* AND *A. karacolicum*

M. N. Sultankhodzhaev, M. S. Yunusov,  
and S. Yu. Yunusov

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We have investigated shoots of *Aconitum saposhnikovii* B. Fedtsch., collected in the Dolon Pass (Kirghiz SSR).

The usual chloroform extraction yielded 0.54% of total alkaloids. Chromatography on a column of alumina led to the isolation of talatisamine [1, 2], isoboldine [3, 4], 14-acetyl-talatisamine [5, 6], and a new base with mp 128–130°C (ether) having the composition  $C_{24}H_{37}NO_5$  (I). The NMR spectrum of the alkaloid had the signals of a N-ethyl group (3-proton triplet at 1.03 ppm) and of three methoxy groups (6-proton singlet at 3.21 ppm and three-proton singlet at 3.19 ppm). The mass spectrum was characterized by the peaks of the ions  $M^+$  419 (23%),  $M - 15$  (18%),  $M - 31$  (100%),  $m/z$  374 (15%) and  $m/z$  372 (17%) and was similar to that of talatisamine (II).

A comparison of the molecular weights and functional compositions of the alkaloids, and also the presence in the IR spectrum of the absorption band of a carbonyl group in a five-membered ring at  $1760\text{ cm}^{-1}$  permitted the assumption that the alkaloid (I) was 14-dehydrotalatisamine. In actual fact, when talatisamine was oxidized with chromium trioxide, 14-dehydrotalatisamine was obtained [7] and proved to be identical with the base isolated according to the results of a mixed melting point test, IR spectra, and TLC. 14-Dehydrotalatisamine has not previously been isolated from the plant.

When the separation of the combined alkaloids from the epigeal part of *Aconitum karacolicum* Rapaics. collected in the upper reaches of R. Tyup (Kirghiz SSR) in the seed-ripening period was continued, in addition to aconitine, songorine, isoboldine, and napelline N-oxide [8], we isolated a new base with mp 235°C (acetone), having the composition  $C_{24}H_{35}NO_5$  (III). Compound (III) dissolved readily in water and methanol and moderately well in chloroform.

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The NMR spectrum of (II) showed signals from a tertiary C-methyl group (0.80 ppm, 3 H, singlet), a N-ethyl group (1.37 ppm, 3 H, triplet), an acetoxy group (1.91 ppm, 3 H, singlet), and a terminal methylene group (4.86 and 5.11 ppm, broadened one-proton singlets). The IR spectrum had the absorption band of an ester carbonyl at  $1730\text{ cm}^{-1}$  and the mass spectrum a triplet of the peaks of the  $M^+ - 16$ ,  $M^+ - 17$ , and  $M^+ - 18$  ions that is characteristic for alkaloid N-oxides. The empirical formula of (III) differed from that of 12-acetylnapelline [9] by the presence of an additional oxygen atom. These facts form evidence in favor of the assumption that the alkaloid isolated was 12-acetylnapelline N-oxide, and this was confirmed by the formation of 12-acetylnapelline when (III) was reduced with ferrous sulfate.

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