11-DEHYDROKOBUSINE – A NEW ALKALOID FROM Aconitum thalassicum

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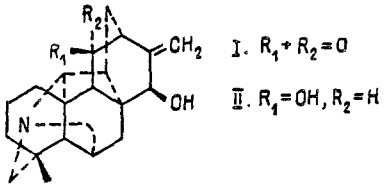
Continuing the separation of the total alkaloids of the epigeal part of the plant Acontium thalassicum M. Pop., when the mixture obtained from fraction (II) [1] was chromatographed on silica gel 0.01 g of a base with the composition $C_{20}H_{25}NO_2$ (I), mp 239-241°C (acetone), was isolated.

The base was readily soluble in methanol and chloroform and sparingly soluble in ether and hexane. Its IR spectrum (ν_{max}^{KBr}, cm^{-1}) had absorption bands of hydroxy groups (3080) and of a carbonyl group in a five-membered ring (1725). The PMR spectrum (100 MHz, $CDCl_3$) showed the signals of a C-methyl group (0.93 ppm, 3 H, s, CH_3-18) and of a terminal methylene group (5.07 and 5.15 ppm, 1 H each, br.s, $=CH_2$) and of a proton at C-15 (4.07 ppm, br.s, 1 H). In the mass spectrum there were the peaks of the molecular ion, M^+ 317 (87%) and also of the ions $M^+ - 28$ (100%) and $M^+ - 45$ (38%).

A comparison of the developed formulas of the base and the alkaloid kobusine showed the presence of a carbonyl in (I) in place of a hydroxyl in (II), while the absence from the PMR spectrum of (I) of the signal of a proton at C-11 gave grounds for assuming that the alkaloid isolated was 11-dehydrokobusine. To confirm this, we obtained 11-dehydrokobusine from kobusine [2] and found it to be identical with (I) by a mixed melting point, TLC, and spectral characteristics (IR, PMR, and mass spectra).

Consequently, the alkaloid was 11-dehydrokobusine, and this is the first time that it has been isolated from plants.



I. $R_1 + R_2 = O$

II. $R_1 = OH, R_2 = H$

LITERATURE CITED

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