KORSINE N-OXIDE FROM Korolkowia sewerzowii

K. Samikov, R. Shakirov,
and S. Yu. Yunusov

UDC 547.941/945

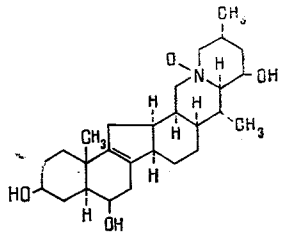
Continuing an investigation of the total alkaloids of Korolkowia sewerzowii Regl. [1,2], from combined fractions 25-34 we have isolated a previously unknown alkaloid (I) with the composition $C_{27}H_{43}NO_4$, mp 257-259°C (acetone), $[\alpha]_D$ − 8° (c, 0.74; ethanol).

The IR spectrum of (I) had absorption bands of active hydrogen atoms (3400 cm^{-1}) and of C=C bonds (1655 cm^{-1}). In the PMR spectrum of the base (in CD_3OD, C-60 HL), protons resonated in the form of a singlet at 0.98 ppm (3 H, 19-CH_3) and of doublets at 0.87 (3 H, 21-CH_3) and 1.04 ppm (3 H, 27-CH_3). The mass spectrum of (I) contained the main peaks of ions with m/z 445 $(M)^+$, 430 $(M-15)^+$, 429 $(M-16)^+$ (100%), 428 $(M-18)^+$ 426, 425, 414, 412, 410, 400, 358, 288, 286, 256, 180, 178, 149, 141, 129, 128 (100%), 127, 121, 114, 110.

The comparatively ready solubility of the bases in water and the presence in the mass spectrum of strong peaks of ions with m/z $(M-16)^+$ and $(M-17)^+$ permitted (I) to be assigned to the N-oxides.

When (I) was reduced with zinc and sulfuric acid, a compound identical according to its R_f value and spectral characteristics with korsine [1, 3] was obtained.

The oxidation of korsine with hydrogen peroxide led to its N-oxide, which was identical with alkaloid (I). Thus, it may be concluded unambiguously that (I) was korsine N-oxide.



LITERATURE CITED

1. K. Samikov, R. Shakirov, and S. Yu. Yunusov, Khim. Prir. Soedin., 367 (1976).
2. K. Samikov, D. U. Abdullaeva, R. Shakirov, and S. Yu. Yunusov, Khim. Prir. Soedin., 823 (1979).
3. R. N. Nuriddinov, A. I. Saidkhodzhaev, and S. Yu. Yunusov, Khim. Prir. Soedin., 61 (1969).

Institute of the Chemistry of Plant Substances of the Academy of Sciences of the Uzbek SSR, Tashkent. Translated from Khimiya Prirodnykh Soedinenii, No. 2, p. 251, March-April, 1986. Original article submitted September 23, 1985.

