

DEHYDROTHALICMINE - A NEW BASE FROM

Thalictrum isopyroides

S. Kh. Maekh, V. G. Khodzhaev,
and S. Yu. Yunusov

UDC 547.944/945

From the benzene eluate obtained in the chromatography of the nonphenolic fraction of the combined alkaloids from the roots of *Thalictrum isopyroides* on a column of alumina we have isolated a crystalline base (I) with mp 190-191°C (chloroform/ethanol). The UV spectrum of (I) [λ_{max} 267, 337 nm (log ϵ 4.60, 3.93)] is characteristic for the dehydroaporphine bases [1-3]. The IR spectrum of (I) has a strong band in the 1590-1640 cm^{-1} region and bands at 960 cm^{-1} (CH_2O_2) and 2845 cm^{-1} (OCH_3). The NMR spectrum of (I) (τ scale) has a three-proton singlet at 7.04 ppm ($\text{N}-\text{CH}_3$), a four-proton multiplet in the 6.93-6.68 ppm region (2CH_2), singlets at 6.05 and 5.95 ppm (9H; 3OCH_3), a two-proton singlet at 3.90 ppm (CH_2O_2), and three one-proton singlets at 3.48, 3.02, and 1.72 ppm due to aromatic protons. The downfield shift of the signals of the $\text{N}-\text{CH}_3$ group and of the aromatic protons at C_{11} confirms the dehydroaporphine structure for (I) [1-3]. The mass spectrum of (I) shows the peak of the molecular ion with m/e 367 (100%) and a strong ($M-15$) peak. The ($M-1$) and ($M-43$) peaks characteristic of aporphine bases are absent.

Since the base contains the same substituents as thalicmine (II) but differs from it by two mass units, we assume that it is a dehydrothalicmine. A direct comparison of R_f values and UV and IR spectra and a mixed melting point with an authentic sample identified (I) as the dehydrothalicmine obtained by the oxidation of (II) with potassium permanganate in acetonic solution.

LITERATURE CITED

1. M. P. Cava, S. C. Havicek, A. Lindert, and R. J. Spandler, *Tetrahedron Lett.*, **1966**, 2937.
2. H. G. Kiryakow and I. P. Pavlov, *Chem. Ind. (London)*, **1968**, No. 51 1807.
3. M. P. Cava, V. Watanabe, K. Bessho, and M. L. Mitchell, *Tetrahedron Lett.*, **1968**, No. 20, 2427.

Order of the Red Banner of Labor Institute of the Chemistry of Plant Substances of the Academy of Sciences of the Uzbek SSR. Translated from *Khimiya Prirodnikh Soedinenii*, No. 3, p. 381, May-June, 1971. Original article submitted February 19, 1971.

© 1973 Consultants Bureau, a division of Plenum Publishing Corporation, 227 West 17th Street, New York, N. Y. 10011. All rights reserved. This article cannot be reproduced for any purpose whatsoever without permission of the publisher. A copy of this article is available from the publisher for \$15.00.