

FLAVONOIDS OF *Dorycnium intermedium*

T. S. Zurabishvili and É. P. Kemertelidze

UDC 547.972

The epigeal part of *Dorycnium intermedium* Ldb. collected in the environs of Tbilisi (Georgian SSR) was extracted with 80% methanol; after evaporation of the ethanol, the aqueous liquid was purified with ethyl ether, dried, and left in the cold. The yellow crystalline powder that separated out (1%) contained three flavonoids: A, B, and C. The main component was A, and substance C was present in very small amount. The separation of this material into individual flavonoids was achieved by column chromatography on polyamide sorbent and by preparative separation on a paper chromatogram.

Flavonoid A, $C_{21}H_{20}O_{12}$, mp 192–194°C, $[\alpha]_D^{20} - 157.9^\circ$ (c 0.5; ethanol). In UV light, $\lambda_{\max}^{C_2H_5OH}$ 255 nm. Acid hydrolysis with 2% H_2SO_4 gave the aglycone (yield 51%) with mp 351–358°C, which prove to be identical with myricetin [1]. L-Rhamnose was found in the carbohydrate fraction of the hydrolyzate.

On the basis of the above facts, and also IR and UV spectroscopy with complex-forming and ionizing additives, we characterized flavonoid A as 3,3',4',5,5',7-hexahydroxyflavone 3-O-rhamnoside, or myricitrin [2, 3].

Flavonoid B, $C_{27}H_{30}O_{14}$, mp 202–206°C, in UV light $\lambda_{\max}^{C_2H_5OH}$ 265, 345 nm; was identified from its physico-chemical constants as kaempferol 3,7-di(O- α -L-rhamnoside), or kaempferitrin [4].

Flavonoid C with mp 271–273°C, from its mobility on paper chromatography in various solvent systems and a mixed melting point, was identified as kaempferol.

LITERATURE CITED

1. V. A. Bandyukova, *Rast. Res.*, **1**, 97 (1968).
2. R. Paris and A. Stambull, *Ann. Pharm. Franc.*, **18**, 364 (1960).
3. R. Hönsel and L. Hörhammer, *Arch. Pharm.*, **287**, 117 (1954).
4. T. S. Zurabishvili and É. P. Kemertelidze, *Khim. Prirodn. Soedin.*, 835 (1971).

I. G. Kutateladze Institute of Pharmacochimistry, Academy of Sciences of the Georgian SSR. Translated from *Khimiya Prirodnikh Soedinenii*, No. 2, pp. 253–254, March–April, 1974. Original article submitted November 17, 1973.

© 1975 Plenum Publishing Corporation, 227 West 17th Street, New York, N.Y. 10011. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, microfilming, recording or otherwise, without written permission of the publisher. A copy of this article is available from the publisher for \$15.00.