# FLAVONOIDS FROM *Anthemis tinctoria*

N. A. Kaloshina, V. I. Glyzin,
and A. I. Ban'kovskii

UDC 547.972

From the flowers of *Anthemis tinctoria* L. (golden camomile) collected in the flowering period in the Vitebsk oblast, by chromatography of an ethanolic extract on a column of polyamide with subsequent elution by mixtures of ethanol and water, we have isolated a flavonoid glycoside with a lemon-yellow color and the composition $C_{22}H_{22}O_{13}$, mp 251-252°C, $R_f$ 0.31 (BAW, 4:1:5) and 0.11 (15% $CH_3COOH$), $\lambda_{max}$ 259, 372 nm.

The NMR spectrum of the silylated glycoside had the following signals: multiplet at 7.60 ppm (2 H), H-2',6'; doublet at 6.80 ppm (1 H), J = 8 Hz, H-5'; singlet at 6.60 ppm (1 H), H-8; doublet at 5.00 ppm (1 H), J = 7 Hz — the signal of the glycosidic center of β-glucose; and singlet at 3.72 ppm — $OCH_3$; signals at 3.5 and 3.8 ppm correspond to the protons of glucose.

The hydrolysis of the glycoside with 10% sulfuric acid gave an aglycone with the composition $C_{16}H_{12}O_8$, mp 239-242°C, which was identified as patuletin. The identity of the patuletin was confirmed by the results of chromatography and IR, UV, and NMR spectroscopy [1-3].

D-glucose was found in the mother solution by chromatography on paper.

On the basis of the facts given above, the glycoside was characterized as patuletin 7-O-β-D-glucopyranoside (patulitrin). This is the first time it has been isolated from plants of the genus *Anthemis*.

## LITERATURE CITED

1. I. P. Kovalev and V. I. Litvinenko, Khim. Prirodn. Soedin., 233 (1965).
2. V. I. Litvinenko and N. P. Maksyutina, Khim. Prirodn. Soedin., 420 (1965).
3. T. I. Mabry, K. R. Markham, and M. B. Thomas, The Systematic Identification of Flavonoids, Springer, New York (1970).

Zaporzh'e Medical Institute. Translated from Khimiya Prirodnykh Soedinenii, No. 5, pp. 654, September-October, 1975. Original article submitted April 15, 1975.

*© 1976 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.*