COUMARINS FROM Artemisia annua

I. M. Saitbaeva and G. P. Sidyakin UDC 547.597

We have investigated Artemisia annua L., collected in September 1968 in the Tashkent region.

From an ethanolic extract of the epigeal part by chromatography on a column of acid alumina (activity grade III) we have isolated a coumarin with mp 203-204°C (from benzene). Its IR spectrum has absorption bands at 3350 cm⁻¹ (OH group), 1720 cm⁻¹ (carbonyl of a coumarin), and 1610, 1570, and 1520 cm⁻¹ (aromatic ring). By a mixed melting point and a comparison of the IR spectra, this coumarin was identified as scopoletin.

When an acetone extract was treated with ether, a precipitate deposited which was soluble in ethanol and in water. On acid hydrolysis it yielded scopoletin. Paper chromatography (with a marker) in the butan-1-ol-acetic acid-water (4:1:5) system showed the presence of D-glucose. Thus, it has been established that this substance is scopolin.

Scopoletin and scopolin have not been found previously in Artemisia annua L.

We have not confirmed literature information [1] on the presence of sesquiterpene lactones in this species.

LITERATURE CITED

1. I. A. Damirov, I. K. Gol'berg, and R. K. Aliev, The Presence of Santonin in Some Species of Wormwood Growing in Azerbaidzhan [in Russian], Baku, 1957.

Institute of the Chemistry of Plant Substances, Academy of Sciences of the Uzbek SSR. Translated from Khimiya Prirodnykh Soedinenii, No. 6, p. 758, November-December, 1970. Original article submitted August 1, 1970.

© 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.