

## COUMARINS OF ARTEMISIA SANTOLINIFOLIA

A. Babakhodzhaev, Sh. Z. Kasymov, and G. P. Sidyakin

Khimiya Prirodnykh Soedinenii, Vol. 6, No. 3, pp. 363-364, 1970

UDC 547.597

Scopoletin has previously been isolated from the epigeal part of A. santolinifolia collected during the flowering stage [1].

We have studied this species of wormwood collected in the budding period in the basin of the R. Chon-Kemin (Kirghiz SSR). The epigeal part of the plant was extracted with hot water (75-85° C) and the aqueous extract was shaken with chloroform. After elimination of the solvent, the residue crystallized. Chromatography in a thin layer of silica gel fixed with gypsum in an ethyl acetate-toluene (1 : 3) system gave two spots of a coumarin nature, visible in UV light, with  $R_f$  0.2 and 0.3. The coumarins were separated by preparative chromatography.

The first substance with mp 203° C was shown by mixed melting point and by comparison of IR spectra to be scopoletin.

The second substance was converted by methylation with diazomethane into herniarin, mp 117° C (from ether) [2]. By direct comparison it was identified as umbelliferone [3]. This is the first time that umbelliferone has been obtained from the genus Artemisia.

### REFERENCES

1. K. S. Rybalko, I. A. Gubanov, and M. I. Vlasov, Med. prom. SSSR, 2, 19, 1964.
2. V. A. Tarasov, Sh. Z. Kasymov, and G. P. Sidyakin, KhPS [Chemistry of Natural Compounds], 5, 436, 1969.
3. G. A. Kuznetsova, in: Natural Coumarins and Furocoumarins [in Russian], Leningrad, 1967.

13 February 1970

Institute of the Chemistry of Plant Substances, AS UzSSR