COUMARINS OF THE RACEMES OF Cichorium intybus

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We have studied the coumarin composition of the racemes of <u>Cichorium intybus</u> L., family Compositae (common chicory). The comminuted raw material was extracted with 70% ethanol, the extract was concentrated, and the aqueous residue was treated with chloroform. The aqueous phase was separated chromatographically on a column of polyamide, using water and mixtures of water and ethanol as the eluents. Crystalline products which we called substances (I)-(V) were obtained.

Substance (III), according to elementary analysis, UV spectra, color reactions, and melting point in admixture with an authentic sample is 6,7-dihydroxycoumarin. Substance (I) is identical with esculetin 7-glucoside (cichoriin) isolated previously from the flowers of Cichorium [1, 2], and compound (II) is esculetin $6-\beta$ -D-glucoside (esculin).

The chromomatographic separation on a column of polyamide (with 10-40% ethanol as the solvent) of the chloroform extract of the original extract yielded substances (IV) and (V) which were shown to be umbelliferone and scopoletin, respectively.

In the racemes of the Cichorium the main components quantitatively are cichoriin and esculetin.

LITERATURE CITED

- 1. R. Nietzki, Arch. Pharm., 208, 327 (1876).
- 2. K. W. Merz, Arch. Pharm., 270, 476 (1932).

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