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A NEW ACETYLENIC ESTER FROM *ARTEMISIA ABSINTHIUM*

HARALD GREGER

Botanisches Institut der Universität Wien, A-1030 Wien, Rennweg 14, Austria

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Key Word Index—*Artemisia absinthium*; Compositae; Anthemideae; root acetylenes

Abstract—*trans*-Dehydromatricaria ester, a new thiopene derivative, a C_{14}-*trans*-spiroketalenol ether and a C_{13}-*trans*-spiroketalenol ether were isolated from the roots of *Artemisia absinthium* collected in E. Austria. Plants grown from a Finnish source gave an identical acetylenic profile.

In the course of current comparative work on *Artemisia* polyynes, constituents have been isolated from the roots of *A. absinthium* L. (wormwood) from different localities. Besides the *trans*-dehydromatricaria ester (**1**), C_{14}-*trans*-spiroketalenol ether (**3**) and C_{13}-*trans*-spiroketalenol ether (**4**), already known from other *Artemisia* species [1, 2], a new thiophene (**2**) derived from dehydromatricaria ester were detected in both samples. The occurrence of polyacetylenes in *A. absinthium* is reported here for the first time.

EXPERIMENTAL

Fr. roots from *A. absinthium* collected in E. Austria (Burgenland) (90 g) as well as from plants grown from achenes received from the Botanical Garden Helsinki (collected near Helsinki) and cultivated in the Botanical Garden of the University of Vienna (AR-797) (100 g) were separately cut to small pieces and extracted with petrol–Et_2O (2 : 1) for 2 days at room temp. The extract was chromatographed on Si gel column with petrol–Et_2O. TLC on 1 mm thick layers of Si gel GF_{254} (20 × 20 cm plates) developed with the same eluants was used to isolate the various acetylenes. **1**, **3** and **4** were identified by UV, IR and TLC comparison with authentic samples. Methyl-3-(5-prop-1-yne-1-yl-thienyl-(2)-propionate (**2**)—IR (CCl_4): CO_2R 1742 cm^{-1}; UV (Et_2O): λ_{max} = 272 nm. ^{1}H-NMR ($CDCl_3$, 270 MHz): 2-H, *t* 2.66 (2H, J = 7.5 Hz), 3-H, *t*(*br*) 3.09 (2H, J = 7.5 Hz), 5-H, *d* 6.64 (1H, J = 4 Hz), 6-H, *d*6.92 (1H, J = 4 Hz), 10-H, *s*2.06 (3H). MS. M^+ *m/e* 208.029 (49%) ($C_{11}H_{12}O_2S$); —HCO_2Me 148 (35); —$^{\cdot}CH_2COOMe$ 135(100). Voucher specimens are deposited at the herbarium of the Institute of Botany, University of Vienna (WU).

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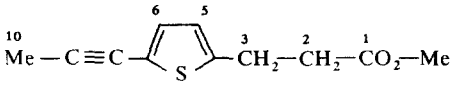
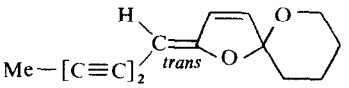
(**1**)



(**2**)



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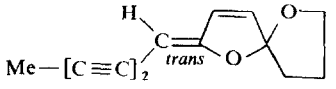

(**4**)