

A NEW POLYACETYLENE FROM *ARTEMISIA CAPILLARIS*

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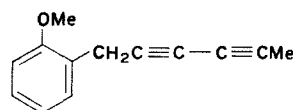
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Key Word Index—*Artemisia capillaris*; Compositae; 1-(2'-methoxy phenyl)-2,4-hexadiyne.

The acetylenes, capillin, capillon, capillen and capillarin have been isolated from in *Artemisia capillaris* Thunb [1-4]. During an investigation of the essential oil, a new acetylenic component was isolated whose structure is described below.

The compound constitutes 5% of the essential oil and was isolated by preparative GLC, using Celite 545 as the stationary phase. The compound analysed for $C_{13}H_{12}O$; IR (liq. film) shows $-C\equiv C-$ str at 2150, 2200, 2275 cm^{-1} (W), C-O def at 1240 cm^{-1} (S), aromatic str at 1600, 1500 cm^{-1} (M), aromatic adjacent 4H drf at 755 cm^{-1} (S); NMR shows signals for three propargylic methyl protons at $\delta_{ppm}^{CCl_4}$ 1.91, as a broad singlet. The four protons of the benzene ring give a multiplet at δ 7.50~7.60. The singlet at δ 3.81 indicates either a methyl group on a ring or an oxygen, or a quaternary carbon. Its signal is best satisfied by assuming it to be -OMe. The remaining feature of the spectrum is a broad signal at *ca* δ 3.68 attributable to the methylene protons of the grouping $\phi-CH_2C\equiv C-$.

Thus the compound is 1-(2'-methoxyphenyl)-2,4-hexadiyne (1). This is confirmed by MS, with



(1)

major peaks at m/e 184(M^+), 169, 141, 139 and 115, consistent with the assigned structure. We believe that it is this component which is responsible for the characteristic odour of *A. capillaris*. No compound of this type has previously been found in Nature.

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