A NEW XANTHONE COMPOUND FROM *Centaurium erythraea*

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A new hexa-substituted xanthone compound has been isolated from *Centaurium erythraea* Rafn.

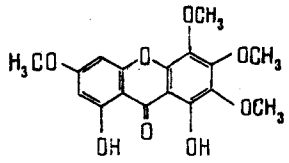
Hexa-substituted xanthones with the 1,3,5,6,7,8 type of substitution such as 1,3,5,6,7,8-hexamethoxyxanthone and 1-hydroxy-3,5,6,7,8-pentamethoxyxanthone have been isolated previously from the roots of *Canscora decussata* Schult. [1, 2]. In addition to a hexa-substituted xanthone isolated previously — 1,6,8-trihydroxy-3,5,7-trimethoxyxanthone — we have now isolated a new compound.

From a chloroform extract by chromatography on silica gel in the petroleum ether—chloroform (7 : 3) system we isolated a total of three xanthone compounds. By rechromatography on silica gel, a yellow crystalline substance with the composition $C_{17}H_{16}O_8$, M^+ 348, mp 156-158°C (from MeOH) of xanthone nature was isolated.

The UV spectrum of the substance showed three absorption maxima: λ_{max}^{MeOH} 235, 259, 333 nm; + NaOAc 259, 333 nm; + NaOAc/H_3BO_3 259, 333 nm; + $AlCl_3$ 276, 333 sh, 368 nm; $AlCl_3$/HCl 277, 333 sh, 368 nm; + NaOMe 242, 270, 340, 390 nm.

The PMR spectrum of the substance ($CDCl_3$, ppm), showed the signals of two protons at 6.28 and 6.44 ppm (d, J = 2.5 Hz, 1 H each), belonging to H-2 and H-4, respectively. There were no other signals of aromatic protons. Consequently, ring B was completely substituted. There were the signals of four methoxy groups: 4.18, 3.96 (s, 3 H each) and 3.98 (s, 6 H). The chemical shift of the signal of one methoxy group was 4.18 ppm, which agreed with the literature figure for a methoxy group in position 5 [3]. The other two substituents were OH groups present in positions 1 and 8 in the molecule, as was shown by the UV spectrum in the presence of $AlCl_3$ and the existence of two signals of protons of hydroxy groups (11.92 and 11.86 ppm) bound to a carbonyl group by intramolecular hydrogen bonds [4].

On the basis of the facts given above, it may be concluded that the substance has the structure of 1,8-dihydroxy-3,5,6,7-tetramethoxyxanthone and is a new xanthone compound.



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