ANTHROQUINONES OF *Caloplaca murorum*

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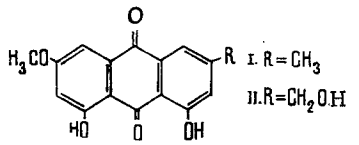
Thallus of *Caloplaca murorum* (Hoffm.) Th. F_2 (Armenia, Lake Sevan, 1977) (780 g) was extracted with chloroform in a ratio of 1:10 three times. The extract was evaporated to small volume, the total crystalline material (8.4 g) was separated off, and it was chromatographed on a column (silica gel L 100/250 μ) in the following system: petroleum ether–chloroform (1:1), chloroform, and chloroform–methanol in increasing concentration.

The chloroform fractions after evaporation and recrystallization of the residue from methanol yielded substance (I). Substance (II) was obtained by preparative chromatography on plates (silica gel L 5/40 μ) of the fractions containing 15% of methanol. Separation was performed in the ethyl acetate–chloroform (2:3) system.



Substances (I) – $C_{16}H_{12}O_5$, mp 200-203°C, acetate, mp 169-171°C, $\lambda_{max}^{CH_3OH}$ 224, 254, 290, 440 nm; M^+ 284 (100%). m/e 241, 226, 213, 198, 185. NMR spectrum in $CDCl_3$: s 2.42 ($C-CH_3$), s 3.90 ($-OCH_3$), d 6.66 (H-2), s 7.09 (H-7), d 7.36 (H-4), s 7.62 (H-5), s 12.10 and 12.30 (OH in positions 1 and 8).

Substance (I) was identified as physcion on the basis of a comparison of the characteristics of its UV, IR, and NMR spectra with literature information [1].

Substance (II) – $C_{16}H_{12}O_6$, mp 232-235°C; acetate, mp 193-194°C; $\lambda_{max}^{CHCl_3}$ 254, 270, 292, 449 nm, M^+ 300. The NMR signal of substance (II), in contrast to that of physcion, lacked the signal of a methyl group and had the signal of a methylene group (s 4.49 ppm), which may be due to the presence of a hydroxy methyl group in position 6. Thus, substance (II) is probably teloschistin, isolated previously from *Teloschistes flavicans* [2] and *Xanthoria fallax* [3].

LITERATURE CITED

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