COUMARINS FROM Stellera chamaejasmae

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UDC 547.597

Stellera chamaejasmae L., family Thymelaeaceae, is a herbaceous perennial found in the USSR in Eastern Siberia [1]. Its chemical composition has not been studied previously [2]. We hve investigated the composition of the coumarins of the roots of S. chamaejasmae L. growing in the Mongolian People's Republic. The material was collected by the resources team of a combined Soviet–Mongolian comprehensive biologicial expeditionof the Academy of Sciences of the USSR in the gorge of the river Tsétsérlég in the Khangai range (Arkhangaiskii aimak, Tsétsérlég somon) in June, 1972 in the flowering period of the plants. Five coumarin derivatives were detected by the chromatography (FN-12 paper with petroleum ether as the mobile phase and ethylene glycol as the stationary phase) of an ethanolic extract of the roots of S. chamaejasmae [3].

When the extract was separated and the individual fractions were chromatographed on a column of alumina (activity grade III) and on thin-layer chromatograms (Silufol UV 254 plates), we obtained four coumarin derivatives. On the basis of the results of physicochemical analysis and IR and NMR spectroscopy, and also mixed melting points with authentic samples, the substances obtained were identified as pimpinellin, isobergapten, isopimpinellin, and sphondin. In addition, from the extract we obtained sucrose, which was identified by its IR spectrum and by chromatography with a marker (R_f 0.6 in the pyridine–ethyl acetate–water (2:8:1) system).

The coumarin composition of S. chamaejasmae L. has been studied for the first time, and pimpinellin, isobergapten, isopimpinellin, and sphondin have been identified. These compounds have not been found previously in species of the family Thymelaeaceae.

LITERATURE CITED

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V. L. Komarov Botanical Institute of the Academy of Sciences of the USSR. Translated from Khimiya Prirodnykh Soedinenii, No. 3, p. 402, May-June, 1974. Original article submitted October 29, 1973.