

## COUMARINS OF THE FRUIT OF ANGELICA DECURSIVA

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As has been shown previously, the fruit of Angelica decursiva (Miq.) Franch. et Savat. contains a considerable amount of coumarins forming a mixture of several substances [1-3]. From the fruit of this species collected in the Maritime Territory in the valley of the R. Sandugi, we have obtained the total lactones (1.34%), consisting of six components with  $R_f$  0.97, 0.92, 0.88, 0.84, 0.41 (traces), and 0.03 (Leningrad type B paper impregnated with a 10% solution of formamide in methanol; mobile phase: n-hexane-benzene-methanol (5:4:1)).

By chromatography on a column of alumina, from the purified total coumarins we have isolated five individual lactones: umbelliprenin,  $C_{24}H_{30}O_3$ , mp 61-62° C,  $R_f$  0.97, isoimperatorin,  $C_{16}H_{14}O_4$ , mp 107-109° C,  $R_f$  0.92; imperatorin,  $C_{16}H_{14}O_4$ , mp 101-102° C,  $R_f$  0.88; (+)-oxypeucedanin,  $C_{16}H_{14}O_5$ , mp 103-104° C,  $[\alpha]_D^{22} +17.8^\circ$  (c 0.84; chloroform),  $R_f$  0.84; and (+)-oxypeucedanin hydrate,  $C_{16}H_{16}O_6$ , mp 129-130° C,  $[\alpha]_D^{22} +23.4$  (c 0.96; acetone),  $R_f$  0.03.

The authenticity of the substances was established by their IR spectra, the preparation of derivatives, and the absence of depressions of the melting points in mixture with known samples.

### REFERENCES

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