

THE ESSENTIAL OIL OF *Artemisia halophila*

F. S. Sharipova, A. A. El'chibekova,
E. S. Nedel'ko, and V. A. Averina

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Artemisia halophila Krasch. grows on the solonchaks [saline soils] of Central Asia and Kazakhstan. α -Santonin and artemin have been isolated from the epigeal part of the plant [1], and the yield of essential oil has been given [2, 3].

We have investigated the essential oil obtained by the steam distillation of plants collected in the budding stage in Ili region, Alma-Ata province. Yield 0.4%, light yellow liquid with a pleasant cineole-camphor odor, n_D^{20} 1.4700, d_4^{20} 0.9348.

The composition of the essential oil was determined by gas-liquid chromatography on a Vyukhrom instrument with a flame-ionization detector in 300×0.3 cm steel columns containing 7% of PEG 1540 and 7% of PEG adipate on Celite 545 (80-100 mesh). For analysis we used a regime with a linear programming of the temperature from 70 to 160°C at the rate of 2 deg/min. The temperature of the detector was 200°C and that of the evaporator 210°C. The rate of flow of helium was 120 ml/min. The preliminary separation of the components was effected on a UKh-2 chromatograph in a 110×0.6 cm column filled with Celite 545 (80-100 mesh) impregnated with 20% PEG 1540, at 160°C.

The amounts of the components were determined by the method of internal standardization and by the introduction of an internal standard [4].

The components isolated were identified by comparing the IR spectra and melting points of their 2,4-dinitrophenylhydrazones with literature figures [5].

The terpene hydrocarbons were identified from their retention times and by the addition of known components. In this way the essential oil of *A. halophila* was found to contain (% on the total oil): α -pinene, 0.46; camphene, 2.48; β -pinene, 0.6; sabinene, 0.7; myrcene, 1.86; limonene, 0.37; cineole, 30.7; γ -terpinene, 0.8; p-cymene, 2.3; artemisiaketone, 5.86; β -thujone, 7.45; α -thujone, 6.11; artemisi alcohol, 1.58; camphane, 24.84; terpinenol-4, 4.09; bornyl acetate, 2.6; isobornyl acetate, 2.1; isoborneol, 0.65; borneol, 1.64; α -terpineol, 2.32.

The essential oil of the plant possesses antimicrobial activity, has a pleasant odor, and can be recommended to the perfumery industry for the scenting of soaps.

LITERATURE CITED

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