

ESSENTIAL OIL OF *Chaerophyllum macrospermum*

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In view of the small extent to which representatives of the genus *Chaerophyllum* L. (fam. Apiaceae) in the flora of Azerbaidzhan have been studied, we have continued an investigation of their essential oil content [1]. We have investigated wild-growing perennial polycarpous plants of *Chaerophyllum macrospermum* (Willd. ex Spreng.) Fisch. et Mey., gathered in regions of the Nakhichevan' AR.

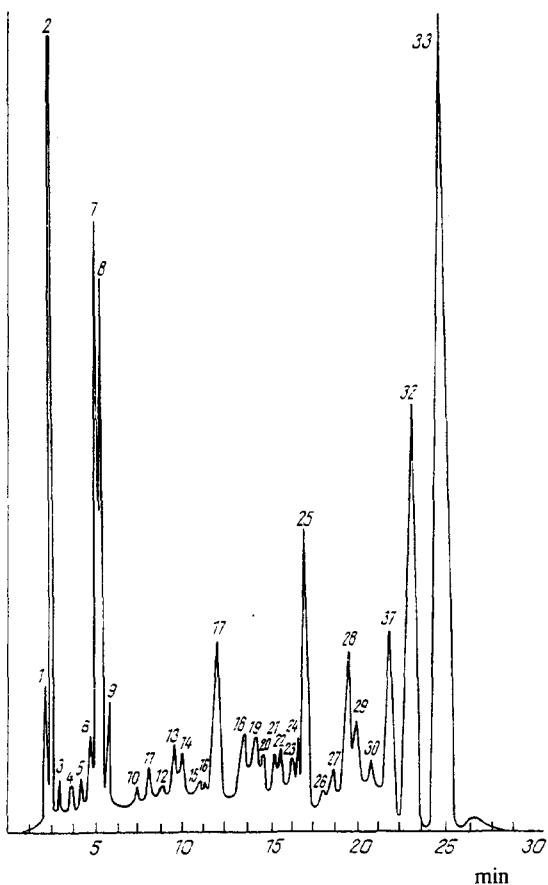


Fig. 1. GLC of the essential oil from inflorescences of *Chaerophyllum macrospermum*: 3) santene; 5) α -pinene; 6) camphene; 7) cineole; 8) linalool; 10) methylchavicol; 11) camphor; 12) β -pinene; 13) *p*-cymene; 14) fenchone; 15) menthol; 16) linalyl acetate; 17) Δ^3 -carene; 19) limonene; 22) anethole; 23) carvone; 24) geranyl acetate; 25) α -terpineol; 26) isoeugenol; 31) farnesol; 1, 2, 4, 9, 18, 20, 21, 28, 29, 30, 32, and 33) unidentified components.

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The literature gives fragmentary information only on the presence of an essential oil in plants of this species. We have investigated the amounts of essential oil in individual organs of the plants in the flowering phase and their component compositions. The essential oil obtained by steam distillation consisted of a clear slightly viscous yellow liquid with a pleasant smell and a slightly burning taste. It was characterized by the following physicochemical indices: acid No. 1.82; ester No. 26.18; d_{24}^{24} 0.9008; n_d^{20} 1.512. The yield from the inflorescences (on the air-dry mass) was 1.4-1.8%, and that from the stems and leaves 0.10-0.35%.

The GLC analysis of samples of the essential oils was conducted under the conditions of [1]. In the composition of the essential oil from the inflorescences we found 33 components, and in that from the stems and leaves 28, of which the following were identified (%): santene — 0.4 (1.4); α -pinene — 0.6 (1.0); camphene — 1.4 (2.12); cineole — 7.2 (1.4); linalool — 6.7 (2.1); methylchavicol — 0.8; camphor — 1.1 (2.1); β -pinene — 0.7 (1.4); *p*-cymene — 1.0 (3.0); fenchone — 1.0 (1.4); menthol — 0.8; linalyl acetate — 0.6; Δ^3 -carene — 4.4 (5.0); limonene — 1.1 (4.0); carvone — 0.4 (1.4); geranyl acetate — 1.0; α -terpineol — 4.7 (1.46); isoeugenol — 0.4 (1.4); eugenol — 1.0 (9.3); farnesol — 4.0 (2.1). The percentages of the substances in the essential oil of the stems and leaves are given in parentheses.

REFERENCE

1. S. A. Mamedov and É. R. Akhmedova, Khim. Prir. Soedin., 287 (1991).