ESSENTIAL OIL OF *Leucanthemum vulgare*

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In continuation of the study of flowers of *Leucanthemum vulgare* Lam. (Compositae) [1-6] collected in the vicinity of Tbilisi (Georgia), we studied the chemical composition of its essential oil (EO).

The EO makes up 0.4-0.5% of the air-dried mass and was obtained by steam distillation as a thin light-yellow oily liquid with a specific fragrance. It darkens on storage, changing to a thick mass. TLC of the EO on silica-gel plates using benzene—ethylacetate (99:5) and H_2SO_4—vanillin developer showed that farnesol, farnesene, and α-bisabolol, which give specifically colored spots, dominate in it.

The components of the EO were determined by GC using a Chrom-42 chromatograph with a flame-ionization detector and glass column (2.5 m × 3 mm). The stationary phase was 5% silicone XE-60 on chromaton N-AW-DMCS; carrier gas, He; column temperature, 122°C; recorder speed, 120 mm/h. Components of the EO were identified using standards by comparing their retention times with those of peaks on the chromatograms. The mass fraction of the components was determined from normalized peak areas.

The component composition of the EO of *L. vulgare* growing in Georgia is:

Component	Content, %
Nerolidol	4.9
Unident.	6.0
“	10.1
“	4.2
α-Bisabolol	15.5
Unident.	8.6
“	8.4
Farnesol	4.2
Farnesene	38.3

Thus, the EO of *L. vulgare* contains nine components, among which we identified: sesquiterpene alcohols nerolidol, α-bisabolol, and farnesol and the sesquiterpene hydrocarbon farnesene. Farnesene (38.3%) and α-bisabolol (15.5%) are the principal constituents of the EO.

It should be noted that the EO of *L. vulgare* does not contain azulene-like sesquiterpenes, which are biosynthesized in EO of *Marticaria recutita* L. However, the contents of farnesene and α-bisabolol are close to those in the commercial product [7-12].

REFERENCES

1. T. G. Sagareishvili, M. D. Alaniya, and E. P. Kemertelidze, *Khim. Prir. Soedin.*, 567 (1980).
2. T. G. Sagareishvili, N. E. Zambakhidze, and E. P. Kemertelidze, *Khim. Prir. Soedin.*, 240 (1983).
3. T. G. Sagareishvili, M. D. Alaniya, and E. P. Kemertelidze, *Khim. Prir. Soedin.*, 647 (1983).
4. T. G. Sagareishvili and M. D. Alaniya, *Khim. Prir. Soedin.*, 583 (1991).

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5. T. G. Sagareishvili, M. D. Alaniya, Dzh. Aneli, and A. Ya. Shtromberg, *Nauch. Tr. Vses. Nauchno-Issled. Inst. Farm.*, **29**, 115 (1991).
6. T. G. Sagareishvili, *Khim. Prir. Soedin.*, 265 (2000).
7. O. A. Konovalova, V. S. Kabanov, K. S. Rybalko, M. V. Glazava, and A. N. Shavlinskii, *Khim.-Farm. Zh.*, 468 (1986).
8. S. A. Chetvernya, A.F. Lebeda, A. Ya. Bezmenov, A. T. Gorban′, and O. M. Perepelova, *Khim.-Farm. Zh.*, 595 (1987).
9. G. Verzar-Petri and E. Emberkovics, *Herba Hung.*, **46**, 129 (1976).
10. O. Seidl and I. Zieba, *Herba Hung.*, **12**, 64 (1966).
11. O. Isaak, *Planta Med.*, **35**, 118 (1979).
12. V. Jakovlev, O. Isaak, K. Timer, and R. Kunde, *Planta Med.*, **35**, 125 (1979).