LITERATURE CITED

1. A. L. Markman and V. P. Rzhekhin, Gossypol and Its Derivatives [in Russian], Moscow (1965), p. 23.
2. R. T. Grigorchuk, E. B. Skomorokhova, A. N. Mironova, and U. I. Tros'ko, Maslob-Zhir. Promst., No. 11, 11 (1979).
3. Kh. K. Kholmatov, T. V. Chernenko, A. I. Glushenkova, and A. U. Umarov, Abstracts of Lectures at a Conference on Problems of Extraction from Solids [in Russian], Tashkent (1977).

COMPONENTS OF *Artemisia leucodes*

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UDC 547.314+547.972

We have continued the study of the chemical composition of the epigeal part of *Artemisia leucodes* Schrenk collected in the budding stage in the Chemkent province, Kazakh SSR [1].

The chromatographic separation of the total lactone material on neutral alumina followed by rechromatography of the individual fractions in a silica gel column yielded two substances.

Substance I with mp 176-178°C was readily soluble in all organic solvents. A comparison of IR spectra and a mixed melting point showed that compound (I) was *l*-camphor, which has been isolated from the essential oil of *A. leucodes* previously [2].

Substance (II) had mp 190-191°C (from ethanol) and the composition $C_{17}H_{20}O_5$, with R_f 0.43 on Silufol in the chloroform—ethyl acetate (9:1) system. The IR spectrum of (II) contained absorption bands at (cm^{-1}) 1790 (carbonyl of a γ-lactone ring), 1745, 1240 (carbonyl of an ester group), 1685 (α,β-unsaturated cyclopentanone), and 1640 and 1625 (conjugated double bond). The facts given for (II) correspond to the sesquiterpene lactone matricarin [3]. A direct comparison of (II) with matricarin which we obtained by the acetylation of austricin, showed their identity.

This is the first time that matricarin has been isolated from *Artemisia leucodes.*

From *A. leucodes* in the flowering stage, together with sesquiterpene lactones [4], we isolated yellow needles with mp 227-228°C (benzene—chloroform), having the composition $C_{18}H_{16}O_7$ which were assigned, on the basis of their UV spectrum (λ_{max} 252, 277, 345 nm) and qualitative reactions to the flavone derivatives. It was established from the PMR spectrum that the flavonoid contained three OCH_3 groups (3.66, 3.70, and 3.82 ppm, 3 H each). The presence in the mass spectrum of the peaks of ions with m/z 165 and 162 showed that two of the OCH_3 groups are present in ring B [5].

Analysis of the PMR, mass, and UV spectra, and also a comparison of the physicochemical properties with literature figures enabled the flavonoid isolated to be identified as eupatilin [5, 6]. Eupatalin has been isolated previously from *Artemisia frigida* [7].

LITERATURE CITED

1. I. M. Saitbaeva, A. Mallabaev, and G. P. Sidyakin, Khim. Prir. Soedin., 56 (1983).
2. M. I. Goryaev, V. S. Bazalitskaya, and P. P. Polyakov, Chemical Composition of Wormwoods [in Russian], Alma-Ata (1962), p. 94.
3. W. Herr and K. Ueda, J. Am. Chem. Soc., 83, 1139 (1961).
4. I. M. Saitbaeva, A. Mallabaev, and G. P. Sidyakin, Khim. Prir. Soedin., 247 (1981).
5. M. Goudard, J. Favre-Bonvin, P. Lebretow, and J. Chopin, Phytochemistry, 145 (1978).
6. M. Kupchan, C. W. Sigel, et al., Tetrahedron, 1603 (1969).
7. G.-L. Lin and T. J. Mabry, Phytochemistry, 1389 (1981).

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