

## ALKALOIDS OF *Adenostyles alliaræ*

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The assignment of the Caucasian medicinal plant *Senecio rhombifolius* containing the alkaloids platyphylline, seneciphylline, and sarracine [1, 2] to the genus *Adenostyles* Cass. [3] was responsible for our interest in the study of the chemical composition of another species of the same genus found in the USSR — *Adenostyles alliaræ* (Gouan) Kern. Sesquiterpene lactones have been isolated previously from a plant of this species [4, 5], but there is no information in the literature on the presence of alkaloids in it.

The rhizomes and roots of *A. alliaræ* were collected in the Carpathians, in the high mountain vegetation on the slopes of Mt. Goverla. The alkaloids (1.48%) were extracted from the plant raw material with 4% sulfuric acid in the presence of zinc dust (to reduce N-oxide forms) by the method described previously [6]. It was shown by TLC on silica gel [7] that the total alkaloids included 8% of platyphylline and 70% of seneciphylline.

For the isolation of the individual alkaloids we used preparative chromatography of "Filtrak FN-3" paper (GDR). The mobile phase was a 2% aqueous solution of ammonia. In this system, the R<sub>f</sub> value of platyphylline is 0.7 and that of seneciphylline is close to 0. The alkaloids were eluted with dilute sulfuric acid. After recrystallization from acetone, the platyphylline had mp 122–123°C, and after recrystallization from ethanol the seneciphylline melted at 215–216°C. Both alkaloids were identified by comparison with authentic samples with respect to their IR and NMR spectra.

The isolation from *A. alliaræ* of alkaloids identical with those of *A. rhombifolia* is a chemosystematic proof of the genetic relationships of these two species which were previously assigned to different genera of the Compositae.

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