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Sedum ALKALOIDS

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The alkaloids of *Sedum acre* (goldmoss stonecrop) have been considered in various publications [1-5]. We have investigated the alkaloid compositions of the epigeal parts of four Siberian species of *Sedum*: *S. aizoon* L. (aizoon stonecrop), *S. purpureum* (L.) Shult. (purple stonecrop), *S. hydridum* L. (evergreen stonecrop), and *S. ewersii* Ledeb. (Ewers stonecrop), collected in the Tomsk oblast (village of Urtam) and in the Gorno-Altai Autonomous Region (villages of Maima and Kebezen') in the flowering phase.

The combined bases were isolated by Franck's method [4]. TLC on plates coated with Al_2O_3 in the benzene–methanol (85 : 15) (system 1) and ethyl acetate–chloroform–methanol (2.5 : 2.0 : 0.5) (system 2) systems showed that the first three species have the same qualitative composition (each containing three bases), while the chloroform extract from *S. ewersii* revealed the presence of only one alkaloid (III). The alkaloids were separated on comumn of alunina (activity grade II, neutral) being eluted successively with benzene and mixtures of benzene with 5-25% of methanol.

Base (I) was isolated in the form of a colorless oily residue with R_f 0.89 (system 1) and 0.86 (system 2) and gave a picrate with mp 156-158°C. IR spectrum, cm^{-1}: 2950 (CH_3), 1690 ($C=O$). On the basis of these results, the substance was identified as (±)-methlyisopelletierine [6].

Base (II), mp 119-121°C, R_f 0.28 (system 1) and 0.75 (system 2) decolorized a solution of potassium permanganate and bromine water. Its IR spectrum showed absorption bands at (cm^{-1}) 3385 (OH), 2935 (CH_3), 1630 (π-bond), 1590 (aromatic ring), and 760, 745 (monosubstituted benzene nucleus). It formed a hydrochloride with mp 169-170°C, $[\alpha]_D^{20} -140$°C (c 0.04; CH_3OH). The base was identified as (−)-sedinine [7].

Base (III), mp 89-90°C, R_f 0.22 (system 1) and 0.61 (system 2). IR spectrum, cm^{-1}: 3280 (OH), 2955 (CH_3), 1570, 1485 (benzene ring). The substance formed a hydrochloride with mp 186-188°C. The results obtained permitted the conclusion that base (III) was (±)-sedamine [4, 8]. A direct comparison with (±)-sedamine confirmed their identity.

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