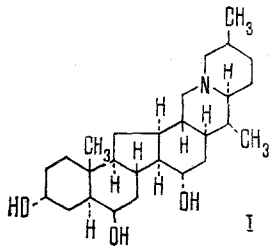
In the NMR spectrum of (II), the protons geminal to the acetoxy groups resonate in a weaker field (see Table 1) and are oriented equatorially [9]. Consequently, the OH groups at C_3 and C_{15} are α-axially and that at C_6 β-axially oriented. According to the values of the CS of the protons of the secondary methyl groups [10], the 21-CH_3 group has the α-equatorial and the 27-CH_3 group the β-axial orientation.

The facts presented permit the structure and configuration of 3α, 16β, 15α-trihydroxycevanine (I) to be put forward as the most probable for edpetisinine:



I

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ALKALOIDS OF Heliotropium eichwaldi

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We have studied the alkaloid composition of Heliotropium eichwaldi Steud. – which is morphologically close to H. lasiocarpum Fisch et Mey. [1] – growing in the environs of Erevan. The comminuted raw material collected in the flowering phase was extracted with methanol in the usual way to give the total tertiary alkaloids (yield 0.44% of the weight of the raw material) and N-oxide alkaloids (0.5% – after reduction). By TLC [nonfixed layer of alumina (activity grade III): chloroform–ethanol (20 : 1) system] it was shown that the two fractions of the combined alkaloids have the same qualitative composition (R_f 0.82 and 0.2). By chromatography on a column of alumina, both fractions of the combined material were separated quantitatively into individual alkaloids which were identified by IR, NMR, and mass spectroscopy and mixed melting points as lasiocarpine (R_f 0.82) (I) and heliotrine (R_f 0.2) (II). The amount of (I) in the fraction of tertiary bases from the combined alkaloids was 64% and of (II) 36%, and the amount of the N-oxide of (I) in the N-oxide fraction was 15% and of the N-oxide of (II) 85%.

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