STRUCTURE OF GLAUFINE

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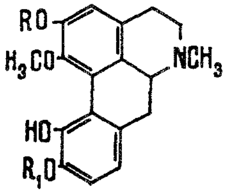
We obtained 0.82% of combined alkaloids by the chloroform extaction of the roots of *Glaucium fimbrilligerum* collected on May 25, 197[illegible] in the flowering stage of the mountain slopes at Kara-Mazar (Kirghiz SSR). From the phenolic part of the ether-soluble fraction we isolated two bases.

Base (I), mp 197-198°C, $[\alpha]_D$ +340° (c 0.64; CH_3OH). UV spectrum: λ_{max} 219, 272, 307 nm (log ε 4.62, 4.20, 3.81). The mass spectrum of the base has the peaks of ions with m/e 327 (M^+), 312, 310, 296, and 284. The NMR spectrum of (I) taken in $CDCl_3$ has signals at (ppm) 2.48 (s, 3 H, $N-CH_3$), 3.58 (s, 3 H, OCH_3), 3.85 (s, 3 H, OCH_3), 6.55 (s, 1H), and 6.78 (s, 2 H), and also multiplets at 2.60-3.00 ppm (7 H). Methylation of the base with diazomethane gave an O-methyl ether identical with isocorydine. From the facts given, base (I) was identified as N-methyllindcarpine [1].

Base (II), amorphous, $[\alpha]_D$ +183° (c 0.2; CH_3OH), rapidly darkening on standing, proved to be new and we have called it glaufine (II). UV spectrum λ_{max}, nm: 217, 274, 308 (log ε 4.60, 4.21, 3.84). The NMR spectrum taken in $CDCl_3-CD_3OD$ has signals at 2.49 ppm (s, 3 H, $N-CH_3$) and 3.63 ppm (s, 3 H, OCH_3). In the aromatic region at 6.70-7.20 ppm there are signals from three protons. The CD curves of N-methyllindcarpine and glaufine are similar.

The facts given above permit glaufine to be assigned to the aporphine alkaloids [1, 2]. Glaufine was methylated with diazomethane, and the course of the reaction was followed by TLC [chloroform–ethanol (9:1)] system. After 6 h, an O-methyl ether had been formed corresponding in its R_f value and green coloration to N-methyllindcarpine. On further methylation, after a day a product was formed which was identical, according to TLC, and mass spectrum, with isocorydine (III). The appearance in the NMR spectrum of glaufine of the signals of a methoxy group in the strong field (3.63 ppm) and the production of its methylation of N-methyllindcarpine and isocorydine shows that it is present at C_1.

Thus, glaufine has the structure (II).



I. $R=H, R_1=CH_3$
II. $R=R_1=H$
III. $R=R_1=CH_3$

LITERATURE CITED

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2. M. Shamma, The Isoquinoline Alkaloids, Academic Press, New York (1972), p. 221.

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