SYNTHESIS OF 11-PHENYLDEOXYPEGANINE AND ITS DERIVATIVES

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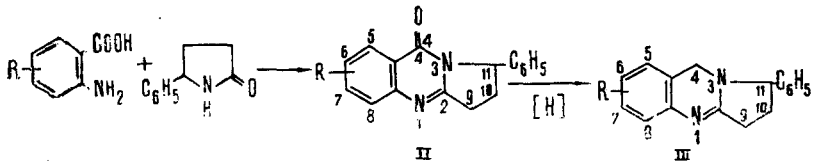
Continuing an investigation on the synthesis of deoxypeganine derivatives [1], we have studied the reaction of anthranilic acid and substituted anthranilic acids with 5-phenylpyrrolidone: 11-phenyldeoxyvasicinone and its derivatives were obtained. By the Clemmensen reduction of the latter we have synthesized derivatives of 11-phenyldeoxypeganine:



II III

a) R = H, b) R = 6-Br, c) R = 6-Cl, d) R = 6-I, e) R = 6-NO_2, f) R = 7-NO_2, g) R = 8-OCH_3.

The yields and properties of the products obtained are given in Table 1.

The structure of the compounds obtained was shown by means of elementary analysis and their IR and mass spectra. The IR spectra of (IIa-g) have the absorption bands of an amide carbonyl in the 1680-1700 cm^{-1} region which is characteristic for quinazol-4-ones while compounds (IIIa-g) lack these absorption bands. In the mass spectra of these compounds, the strongest peak is that of the M − 1 ion (100 %). The intensity of the peak of the molecular ion amounts to 40-50 %.

TABLE 1

Reaction products	Yield, %	mp, °C	Reaction product	Yield, % ‡	mp, °C (solvent)
II a	47*	173–175* (chloroform–absolute ether)	II g	33,3	125–126(benzene–hexane)
II b	34,5	117–118(benzene–hexane)	III a	52,6*	125–127 The same
II c	30,3	166–168 The same	III b	63,1*	200† (chloroform–absolute ether)
II d	36,3	143–145 The same	III c	47,6*	199–201† The same
II e	40	184–185(methanol)			
II f	36	200 The same	III g	76,9*	115–117 (hexane)

*) Yields calculated on the hydrochloride. †) Melting point of the hydrochloride. ‡) Yields of (IIIa-g) calculated on the (IIa-g).

LITERATURE CITED

1. Kh. M. Shakhidoyatov, A. Irisbaev, and Ch. Sh. Kadyrov, Khim. Prirodn. Soedin., 681 (1974).

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