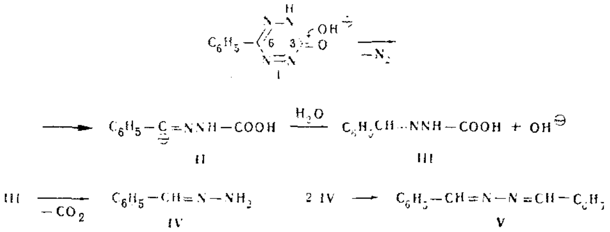
which determines the position of attack of the hydroxyl ion. From the anion II arising as a result of the splitting out of N_2 is formed benzylidenecarbazic acid (III) which undergoes decarboxylation and gives benzaldehyde hydrazone (IV). The latter, as is well known [2], is unstable, and two molecules disproportionate to give V and hydrazine.



Hydrolytic cleavage of I. A solution of 0.35 g (0.002 mole) of I in 10 ml of 5% KOH was heated in the water bath for 30 min. The color of the solution changed from dark red to yellow. The cooled solution was diluted with 100 ml of water and acidified with dil HCl to a weakly acid reaction. Yellow prisms from ethanol, mp 92° C. Yield 0.19 g (45%). Found, %: C 80.98; H 5.93; N 13.93. Calculated for $C_{14}H_{12}N_2$, %: C 80.74; H 6.81; N 13.45. The reaction product was identified as benzaldehyde azine by a comparison of the IR spectra and by a mixed melting point test with an authentic sample of benzaldehyde azine.

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AMINATION OF 5, 6-DIHYDROIMIDAZO[4, 5, 1-i, j]QUINOLINE

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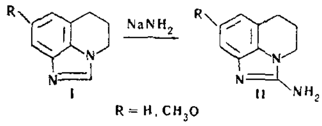
In spite of statements that the preparative importance of the Chichibabin [Tschitschibabin] reaction is limited to the production of amino derivatives of six-membered nitrogen heterocycles [1], derivatives of some five-membered systems—benzimidazole and naphthimidazole substituted in the NH group—smoothly undergo amination under the action of sodium amide [2]. We have found that 5, 6-dihydroimidazo[4, 5, 1-i, j]quinoline (I) and its derivatives can be subjected to direct amination. Compound I aminates at 160° C in dimethylaniline, forming the 2-amino derivative with a yield of 47%. When a methoxy group is present in position 8, the reaction takes place even at 120° C and the yield rises to 75%.



2-Amino-5, 6-dihydroimidazo[4, 5, 1-i, j]quinoline (IIa). Colorless crystals with mp 199–200° C (from water) (according to the literature [3], 201–202° C). p-Nitrobenzylidene derivative, yellow crystals with mp 151–153° C (from aqueous ethanol). Found, %: N 18.49. Calculated for $C_{17}H_{14}O_2N_4$, %: N 18.29.

2-Amino-8-methoxy-5, 6-dihydroimidazo[4, 5, 1-i, j]quinoline (IIb). Colorless prisms with mp 229–230° C (from water). Found, %: C 65.06; H 6.67; N 20.45. Calculated for $C_{11}H_{13}ON_3$, %: C 65.00; H 6.45; N 20.67. With p-nitrobenzaldehyde it forms an anil. Red prisms with mp 210–211° C (from ethanol). Found, %: N 16.36. Calculated for $C_{18}N_{16}O_3N_4$, %: N 16.62.

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23 December 1968

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