

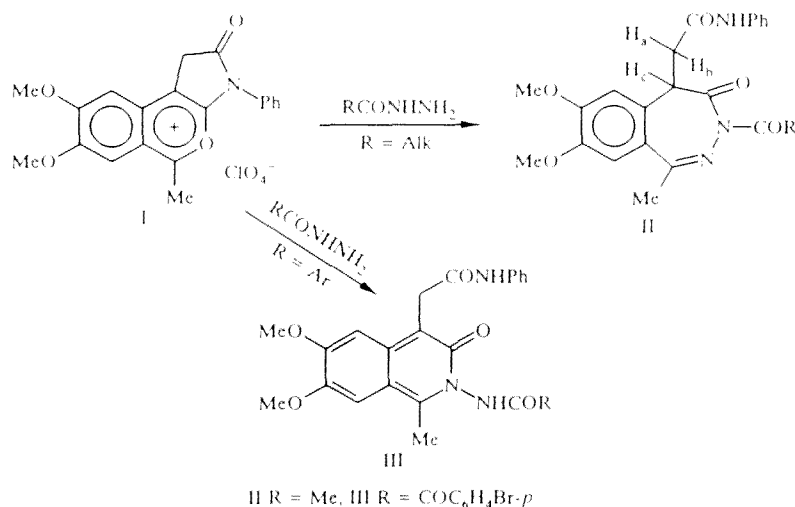
LETTERS TO THE EDITOR

RECYCLIZATION OF 2-OXOBENZO[c]PYRROLO[3,2-e]- PYRYLIUM PERCHLORATES BY ACID HYDRAZIDES

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During the investigation of the transformations of 2-oxobenzo[c]pyrrolo[3,2-e]pyrylium perchlorates in the presence of the hydrazides of carboxylic acids, we found that the structure of the reaction products is determined by the nature of the acyl substituent in the acylhydrazine. It was established that 4-acyl-substituted benzo-2,3-diazepin-4(5H)-ones (II) are formed when equimolar amounts of the salt (I) and aliphatic acid hydrazides are heated in isopropyl alcohol for 1-2 h. The use of aroylhydrazines under the same conditions leads to the 2-aroylaminoisoquinolin-3(2H)-ones (III).

In our opinion, the direction of the reaction and the type of heterocycle formed as a result of recyclization of the benzo[c]pyrylium cation depend both on the basicity of the reagent and on the size of the substituent in the acylhydrazine.



1-Methyl-7,8-dimethoxy-3-acetyl-5-(phenylaminocarbonyl)methylbenzo-2,3-diazepin-4(5H)-one (II). The yield was 68%; mp 233-235°C. PMR spectrum (DMSO-*d*₆): 2.04 (3H, s, CH₃), 2.19 (3H, s, CH₃), 2.98 (1H, dd, H_a, J_{ab} = 16.1, J_{ac} = 6.8 Hz), 3.23 (1H, dd, H_b, J_{ab} = 16.1, J_{bc} = 9 Hz), 3.78 (6H, s, 2OCH₃), 4.60 (1H, dd, H_c, J_{ac} = 6.8, J_{bc} = 9 Hz), 6.93 (2H, s, H arom), 6.95-7.58 (5H, m, H arom), 10.30 (1H, NH). Found %: C 64.2, H 5.3, N 10.5. C₂₂H₂₃N₃O₅. Calculated %: C 64.5, H 5.6, N 10.2.

1-Methyl-6,7-dimethoxy-2-(4-bromobenzoyl)amino-4-(phenylaminocarbonyl)methylisoquinolin-3(2H)-one (III). The yield was 88%; mp 220°C. PMR spectrum (DMSO-*d*₆): 2.47 (3H, s, CH₃), 3.85 (8H, s, 2OCH₃, CH₂), 7.11 (1H, H arom), 7.29-7.36 (6H, H arom), 7.66 (2H, d, H arom, J = 8.2 Hz), 7.96 (2H, d, H arom, J = 8.2 Hz), 11.44 (1H, NH), 12.53 (1H, NH). Found %: C 56.7, H 4.3, N 8.1, Br 15.3. C₂₅H₂₄BrN₃O₅. Calculated %: C 57.0, H 4.6, N 8.0, Br 15.2.

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