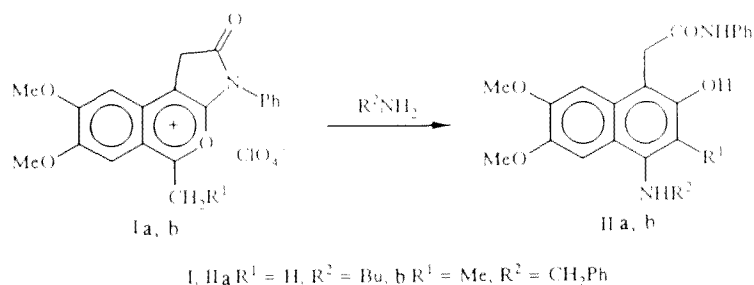


NATURE OF THE REACTION OF 2-OXOBENZO[c]PYRROLO-[3,2-c]PYRYLIUM SALTS WITH AMINES

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The recyclization of 1,3-dialkylbenzo[c]pyrylium salts with primary and secondary amines, leading to N-R-isoquinolinium derivatives and dialkylaminonaphthalenes, has been investigated fairly well [1, 2]. Nevertheless, there are no published data on the analogous transformations of the benzo[c]pyrylium cation containing easily transformed substituents such as alkoxy, dialkylamino, and acylamino groups at position 3.

We found that 2-oxo-5-alkylbenzo[c]pyrrolo[3,2-c]pyrylium perchlorates (I), in which the oxopyrrole ring can be regarded as a cyclic acylamino group, open the oxopyrrole ring in reaction with aliphatic amines and are converted into 1,3-aminonaphthols (II).



1-(n-Butylamino)-3-hydroxy-4-(phenylaminocarbonylmethyl)-6,7-dimethoxynaphthalene (IIa). The yield was 79%; mp 207-209°C. PMR spectrum (deuteriochloroform): 1.09 (3H, t, CH₃, J = 9 Hz), 1.51 (2H, m, CH₂, J = 9 Hz), 1.79 (2H, m, CH₂, J = 9 Hz), 3.17 (2H, t, CH₂, J = 9 Hz), 3.88 (3H, s, OCH₃), 3.96 (3H, s, OCH₃), 4.02 (2H, s, CH₂), 6.31 (1H, s, OH), 6.98 (1H, s, H_{arom}), 7.02 (1H, t, H_{arom}, J = 7 Hz), 7.18-7.30 (3H, m, H_{arom}), 7.34 (1H, c, H_{arom}), 7.37 (2H, d, H_{arom}, J = 7 Hz), 7.71 (1H, s, H_{arom}). Found %: C 70.4, H 6.8, N 7.0, C₂₄H₂₈N₂O₄. Calculated %: C 76.6, H 6.9, N 6.8.

2-Methyl-1-benzylamino-3-hydroxy-4-(phenylaminocarbonylmethyl)-6,7-dimethoxynaphthalene (IIb). The yield was 73%; mp 160-162°C. PMR spectrum (trifluoroacetic acid): 2.27 (3H, s, CH₃), 4.13 (3H, s, OCH₃), 4.22 (3H, s, OCH₃), 4.40 (2H, s, CH₂), 5.11 (2H, s, CH₂), 7.43-7.76 (12H, m, H_{arom}). Found %: C 73.4, H 6.0, N 6.3, C₂₈H₂₈N₂O₄. Calculated %: C 73.6, H 6.2, N 6.1.

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