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Reactions of 4-benzoyl-1,5-diphenyl-1H-pyrazole-3- carboxylic acid chloride with various hydroxylamines and carbazates

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Abstract: The 1H-pyrazole-3-carboxylic acid 2 was converted via reactions of its acid chloride 3 with various hydroxylamine 4a-f and carbazate derivatives 8a-c into the corresponding novel N-substituted-4-benzoyl-1,5-diphenyl-1H-pyrazole-3-carboxamides 5a-c, N,N-disubstituted-4-benzoyl-1,5-diphenyl-1H-pyrazole-3-carboxylates 6d,e, 4-benzoyl-N-[(4-benzoyl-1,5-diphenyl-1H-pyrazol-3-yl)carbonyl]oxy- N-methyl-1,5dip- henyl-1H-pyrazole-3-carboxamide (7), and 4-benzoyl-N'(alkoxycarbonyl)-1,5-diphenyl-1H-pyrazole-3-car- bohazides 9a,b and 10, respectively, in good yields (65%-90%). The reactions of 3 with 4 and 8 in xylene for 8-15 h with catalytic amounts of base led to the formation of the products 5-7, 9, and 10. The structures of all new synthesized compounds were established by the ¹³C-NMR, ¹H-NMR, IR spectroscopic data, and elemental analyses.

Key Words: Pyrazole-3-carboxylic acid, nucleophilic substitution, furan-2,3-dione, carbazate, hydroxylamine

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