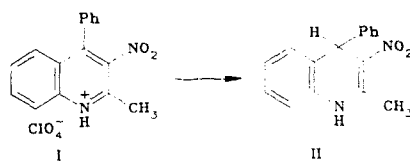


Quinolines, substituted in position 3 by electron acceptor groups, are reduced by sodium borohydride upon refluxing in ethanol to form 1,4-dihydroquinolines [1]. Use of quaternary N-methylquinolinium salts in this reaction leads principally to 1,2-dihydroquinolines [2].

3-Substituted 2-methyl-4-phenylquinolines are not reduced by sodium borohydride even upon prolonged refluxing in ethanol. We have found that the perchlorate of 2-methyl-3-nitro-4-phenylquinoline (I) is reduced in pyridine at room temperature in good yield to form the corresponding 1,4-dihydroquinoline II.



2-Methyl-3-nitro-4-phenyl-1,4-dihydroquinoline (II, C₁₆H₁₄N₂O₂) is obtained by treating the perchlorate I (1.88 g, 5 mmoles) with sodium borohydride (0.94 g, 25 mmoles) in dry pyridine (20 ml) at room temperature for 12 h. The yellow substance crystallized from ethanol with one mole of solvent and gave II upon heating at 80°C (10 mm Hg). Yield 1.22 g (92%), mp 222°C. IR spectrum: 1610, 1630 (>C=C<), 3240, 3260 cm⁻¹ (NH). UV spectrum (ethanol), λ_{max} (log ϵ): 205 (4.51), 222 sh (4.32), 256 (4.05), 408 nm (4.26). PMR spectrum (DMSO-d₆): 2.62 (3H, s, 2-CH₃), 5.44 (1H, s, 4-H), 6.84-7.16 (9H, m, arom), 10.18 ppm (1H, s, NH).

LITERATURE CITED

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