Synthesis, Reactions and Spectroscopy of 3-Benzoyl-6-phenylpyridazines of Expected Biological Activity

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Pyridazine Derivatives, Biological Activity

Oxidative decyanation of phenyl(6-phenylpyridazin-3-yl)acetonitrile (1) in methanol yielded 3-benzoyl-6-phenylpyridazine (2). Phenyl(6-phenyl-pyridazin-3-yl)methanol (3) has been obtained via NaBH₄ reduction of ketone 2. Reaction of 2 with hydroxylamine or its O-alkyl analogue has been found to yield 3-benzoyloxime-6-phenylpyridazine (4) and alkylloximes (5), respectively. Treatment of 4 with a mixture of acetic acid and sulfuric acid afforded ketone 2 again and not the rearranged products (6 or 7). Beckmann rearrangement has however been achieved for 3-benzoyl(O-ethyloxime)-6-phenylpyridazine (5a) and oxime 4 giving solely 3-carboxanilide-6-phenylpyridazine (6), 4-Benzoyloxime-3-phenyl-6-chloro-pyridazine (17) has been synthesized from the corresponding ketone 16.