

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 alkyloximes (**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-chloropyridazine (**17**) has been synthesized from the corresponding ketone **16**.