

# Synthesis and Properties of Ethyl 1-Aryl-5-methyl-4-[1-(phenylhydrazinylidene)ethyl]-1*H*-pyrazole-3-carboxylates

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**Abstract**—Ethyl 1-aryl-4-acetyl-5-methyl-1*H*-pyrazole-3-carboxylates reacted with phenylhydrazine to give the corresponding hydrazones, ethyl 1-aryl-5-methyl-4-[1-(phenylhydrazinylidene)ethyl]-1*H*-pyrazole-3-carboxylates, which were converted to ethyl 1'-aryl-4-formyl-5'-methyl-1-phenyl-1*H*,1'*H*-3,4'-bipyrazole-3'-carboxylates by treatment with the Vilsmeier–Haack reagent. No indole derivatives were formed from the same hydrazones under the Fischer reaction conditions, but cyclization to 2-aryl-3,4-dimethyl-6-phenyl-2,6-dihydro-7*H*-pyrazolo[3,4-*d*]pyridazin-7-ones was observed.

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