

SOME REACTIONS OF ACETOACETAMIDE DERIVATIVES

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3-Aminocrotonamide reacted with α,β -unsaturated esters to afford the corresponding 2-substituted-6-methyl-4(3H)-pyrimidone derivatives and glutarimide derivatives. On the other hand, reaction of acetoacetamide with α,β -unsaturated esters afforded 3-acetylglutarimide derivatives.

Treatment of acetoacetamide with benzaldehyde and salicyl aldehyde in the presence of piperidine gave α -benzylideneacetoacetamide and 3-acetylcoumarin, respectively.

Reaction of acetoacetamide with 1,3-dicarbonyl derivatives, such as 2,4-pentanedione, 4-methoxy-3-penten-2-one, 2-formylcyclohexanone, 4-hydroxy-3-buten-2-one, and 3-ethoxymethylene-2,4-pentanedione afforded 3-acetyl-4,6-dimethyl-2(1H)-pyridone, 3-acetyl-5,6,7,8-tetrahydro-2-quinolone, 3-acetyl-6-methyl-2(1H)-pyridone and 3,5-diacetyl-6-methyl-2(1H)-pyridone, respectively.

On the other hand, the reaction of 3-aminocrotonamide with 2,4-pentanedione and 2-formylcyclohexanone resulted in the formation of 2,4,6-trimethylpyridine-3-carboxamide and 2-methyl-5,6,7,8-tetrahydroquinoline-3-carboxamide, respectively.

Reaction of acetoacetamide with α,β -unsaturated ketone, such as 3-buten-2-one, gave rise to 3-carbamoyl-2,6-heptanedione, 2-carbamoyl-5-hydroxy-5-methylcyclohexanone, 6-carbamoyl-3-methyl-2-cyclohexanone, 3-acetyl-6-methyl-3,4-dihydro-2(1H)pyridone and 2-azaspiro-[5,5]-3,9-dimethylundeca-3,8-diene-1,7-dione.