

Fluorinated 2-Benzoylcyclohexane-1,3-diones and Their Vinylogous Acyl Chlorides in the Reactions with Primary and Secondary Amines

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Abstract—The reaction of 5,5-dimethyl-2-[(3-fluoro- and 4-fluoro)benzoyl]cyclohexane-1,3-diones with primary and secondary amines affords their exocyclic enamine derivatives. Under similar conditions 5,5-dimethyl-2-(2-fluorobenzoyl)cyclohexane-1,3-dione undergoes dehydrofluorination and intramolecular cyclization to give 3,3-dimethyl-2,3,4,9-tetrahydro-1*H*-xanthene-1,9-dione. The reaction of vinylogous substitution of the enol derivatives of the fluorinated 5,5-dimethyl-2-benzoylcyclohexane-1,3-diones (vinylogous acyl chlorides) with amines results in the formation of the endocyclic enamino derivatives.

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