

THE REACTION OF β -IMIDAZOLYL- α,β -UNSATURATED ESTERS AND
NITRILES WITH N-SUBSTITUTED UREAS

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Uracil derivatives and sytosine derivatives are important compounds for biochemistry. Though the syntheses and reactions of these derivatives were widely reported, the syntheses of N-substituted derivatives have little attention. Therefore, we attempted the preparation of these derivatives from phenylurea and methylurea with β -imidazolyl- α,β -unsaturated esters and nitriles.

When the mixture of phenylurea and 3-imidazolyl-2-butenic acid ethyl ester (1-a) in the presence of sodium hydride was heated for 4 hours in sealed tube, 1-phenyl-6-methyluracil was obtained in good yield. Similarly, in the reaction of phenylurea with other esters (1-b,c), 1-phenyluracil derivatives were obtained. Further, the mixture of phenylurea and nitriles (1-d~1-f) gave 1-phenylsytosine derivatives in good yield. On the other hand, the reaction of methylurea with esters (1-a, 1-b) gave 3-methyluracil derivatives.

