It should be noted that in the reaction of 6-aminouracil with 4-hydroxy-6-methyl-2-pyrone, under reflux of ethanol in the presence of Et_3N , we observed another competitive reaction between two molecules of 4-hydroxy-6 -methyl-2-pyrone, this reaction is kinetically favored over the first reaction.

Scheme

Proposed mechanism for the synthesis of Ethyl (E)-2-(2,7-dimethyl-5-oxo-4H,5H-pyrano-[4,3-b]pyran-4-ylidene)acetate