SYNTHESIS AND PROPERTIES OF PYROLO [2,3-d] PYRIMIDINE DERIVATIVE AND RELATED COMPOUNDS

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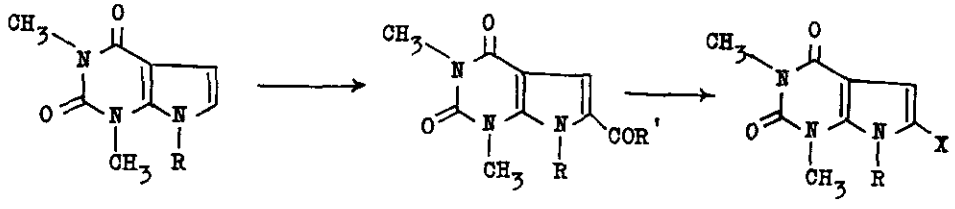

R = H, CH_3

R' = CH_3, CF_3, CCl_3

X = CO_2H, CO_2Me, CO_2Et, $CONH_2$, $CONHNH_2$, $CONHPr^i$, $CONHBu^n$

7-Deazaxanthines such as 2,4-dioxo-1,2,3,4-tetrahydropyrolo [2,3-d] pyrimidines undergoes electrophilic acylation reactions under mild conditions. The halogenated acetyl derivative was found to be a good starting material for several derivatives namely amide and substituted amides, hydrazide, carboxy acid and carboxy esters with high yields. This method of synthesis is very useful for further heterocyclic compounds having 7-deazaxanthene unit. NMR and UV spectra were determined and PKa of N-H was measured. Mercuration and mild nitration gave unidentified solid products.