

# Acylation With Acid Chlorides And Anhydrides

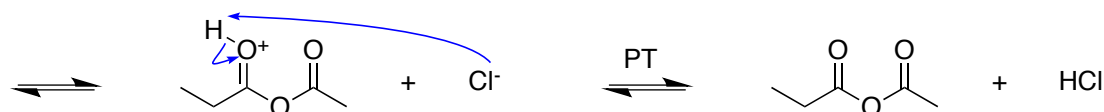
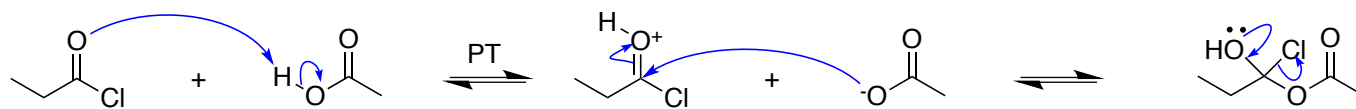
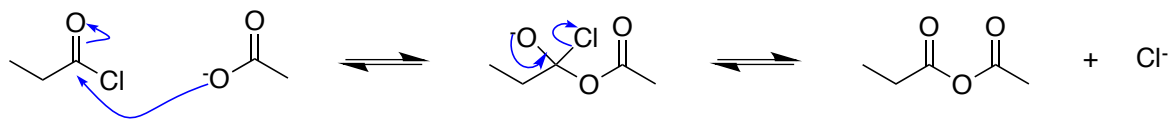
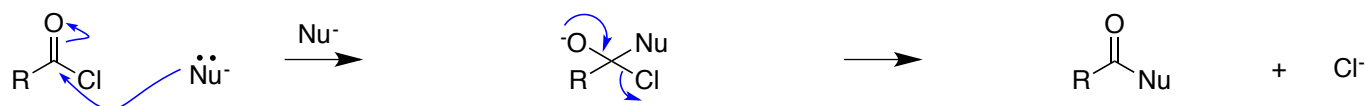
from chapter(s) \_\_\_\_\_ in the recommended text

## A. Introduction

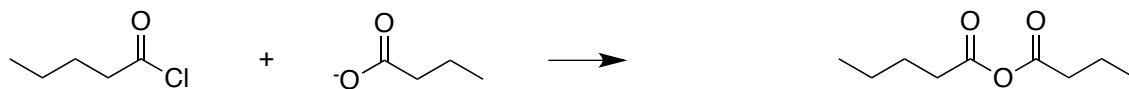
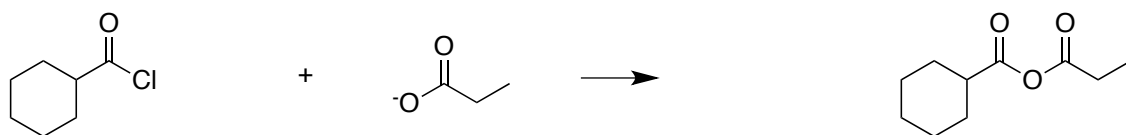
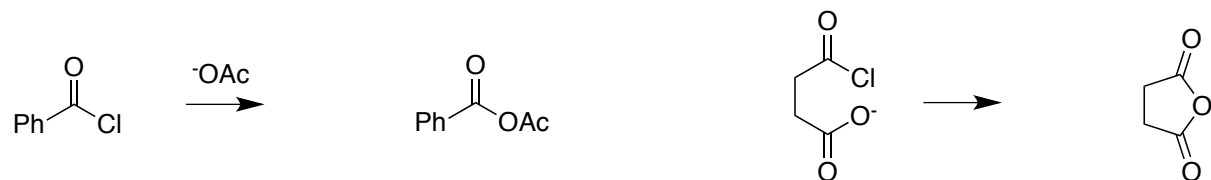
## B. Reactions Of Acyl Halides

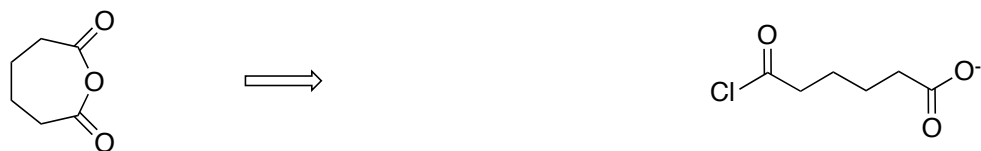
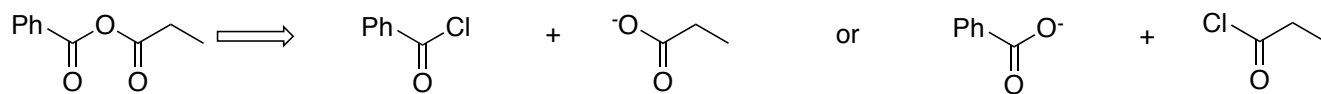
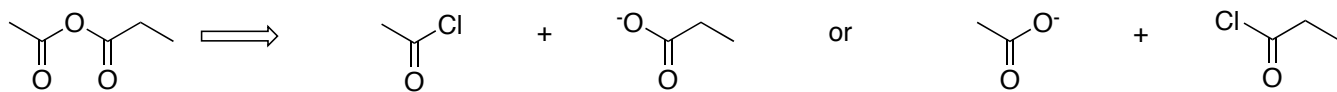
### Under Basic Conditions

Chloride is a relatively *irreversible*.



## Syntheses Of Anhydrides Via Acylation Of Carboxylates

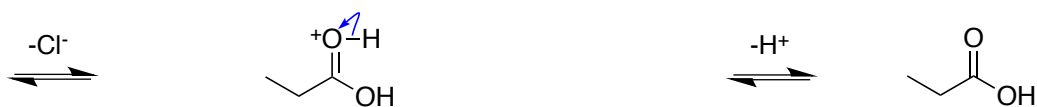
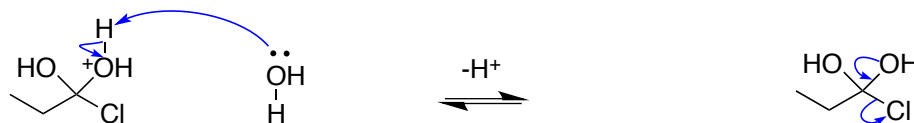




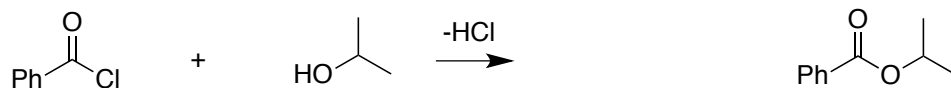
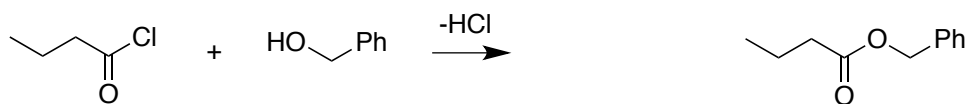
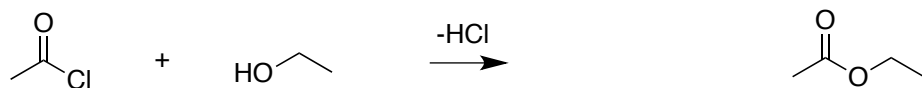
## Hydrolysis Of Acid Chlorides To Form Carboxylic Acids

the nucleophile is *hydroxide*,  
it is *water*;  
*acylation* of water.

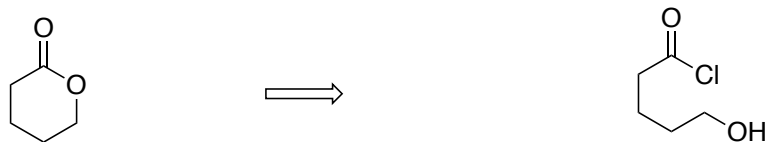
under *acidic* conditions.



## Acylation Of Alcohols To Form Esters

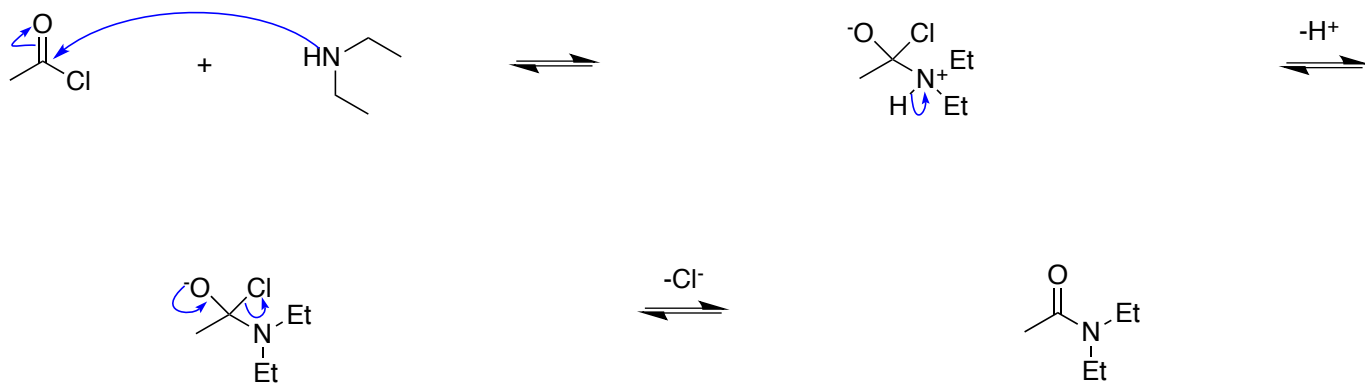


Indicate acid chloride and alcohol starting materials that could be used to make the following esters.

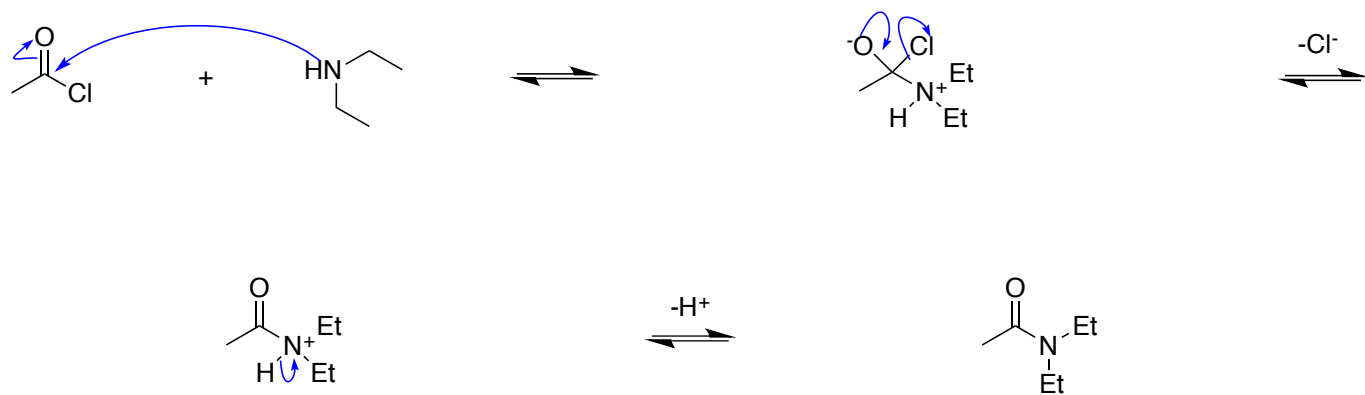




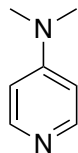
## Acylation Of Amines To Give Amides



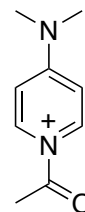
proton *before* chloride loss,  
shows it *after*.



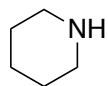
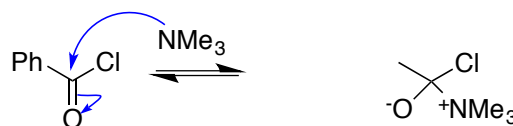
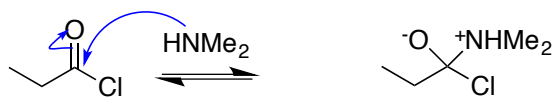
gives *unstable* products



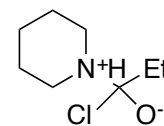
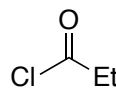
DMAP



*N*-acetyl DMAP  
good acylating agent for other nucleophiles

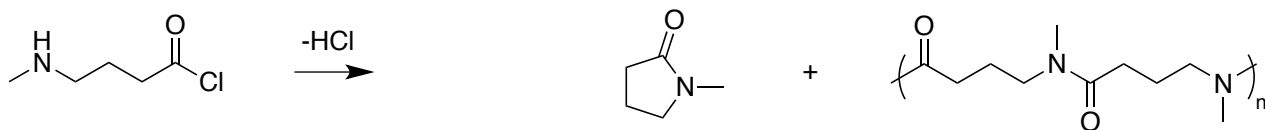
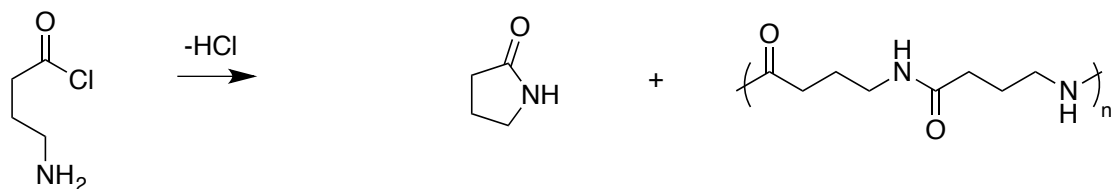
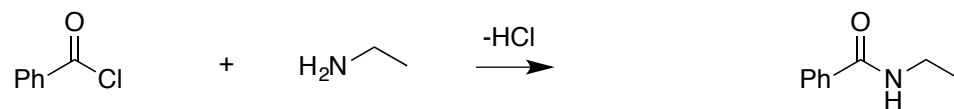
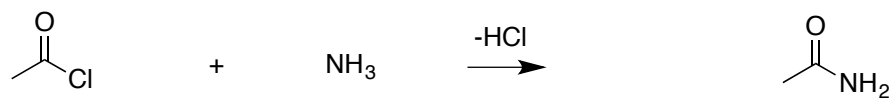


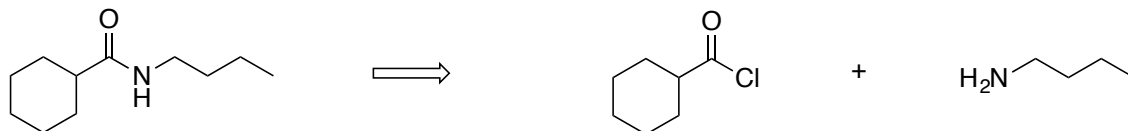
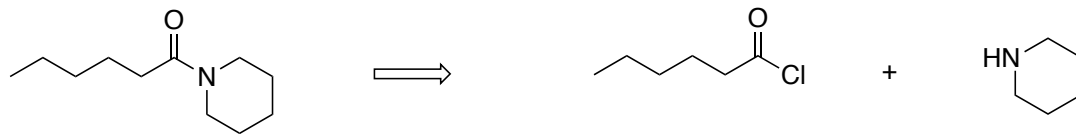
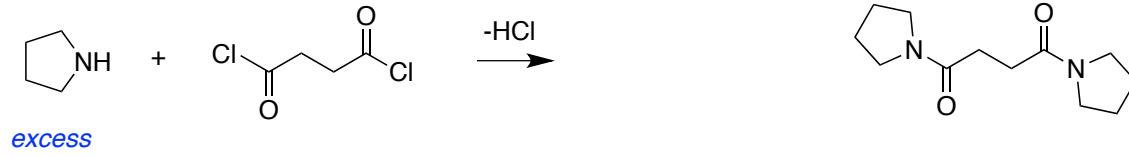
+

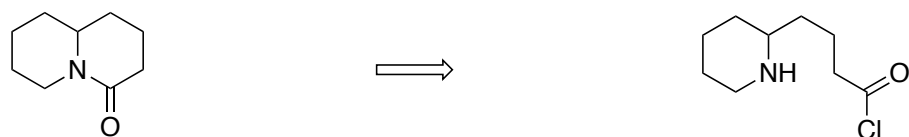
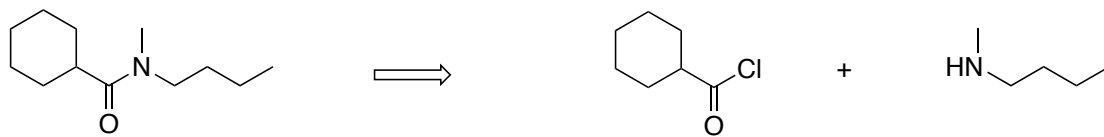


*which amine?*









give *esters*,  
*acids*,  
ammonia to give *amides*.

## C. Acylation Reactions Of Carboxylic Acid Anhydrides

*slightly less* reactive

would be *the same*.

*an electrophile* and the

would be *a good strategy*.

