

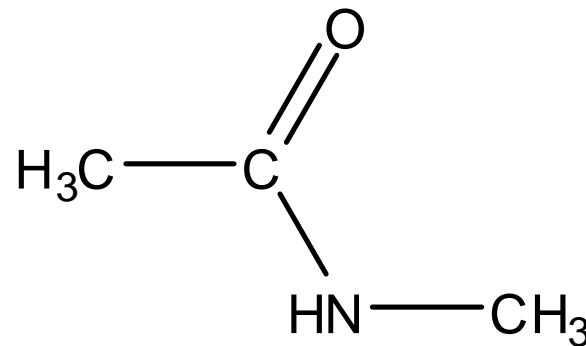
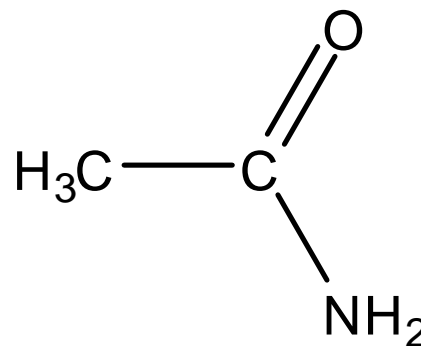
Chemistry 3.5

Advanced Organic Chemistry

Amides

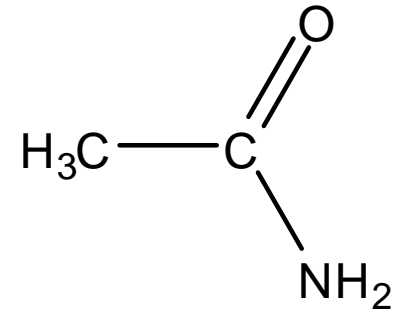
Amides

- There are two types of amides
- Primary amide
 - Similar to carboxylic acid
 - Replace OH with NH₂
- Secondary amide
 - Similar to ester
 - Replace O with NH

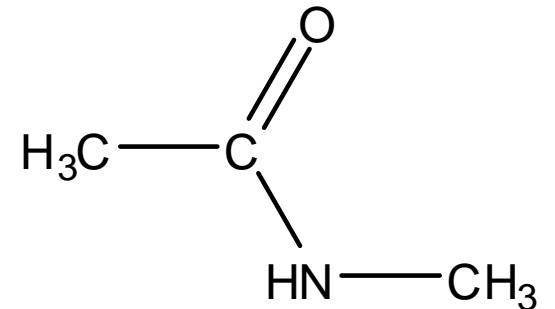


Naming amide

- Primary amide
 - Suffix anamide
- Secondary amide
 - Similar to ester
 - “N-” on the chain attached



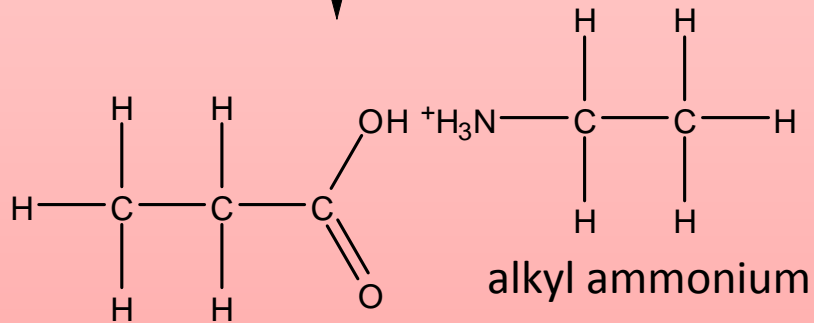
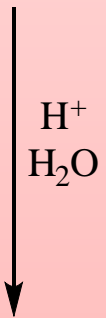
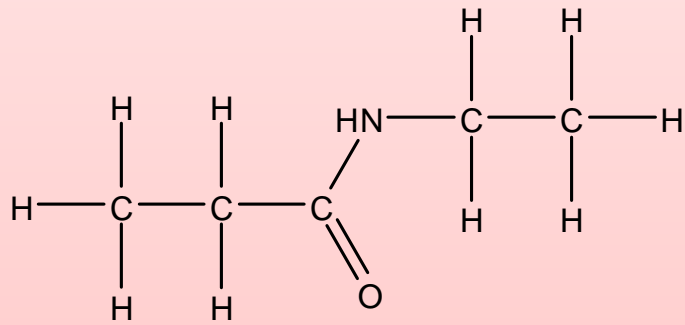
Ethanamide



N-methyl ethanamide

Hydrolysis of amides

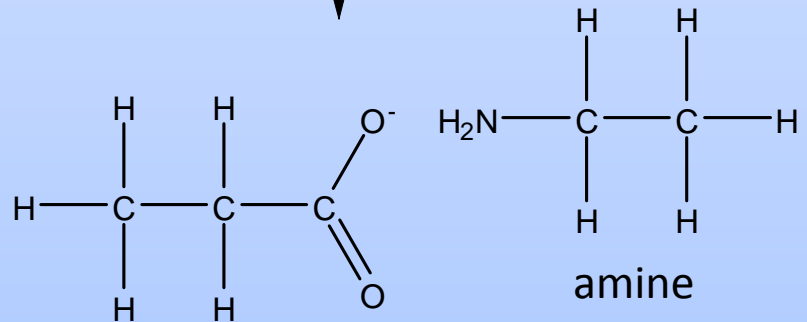
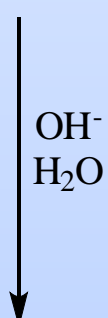
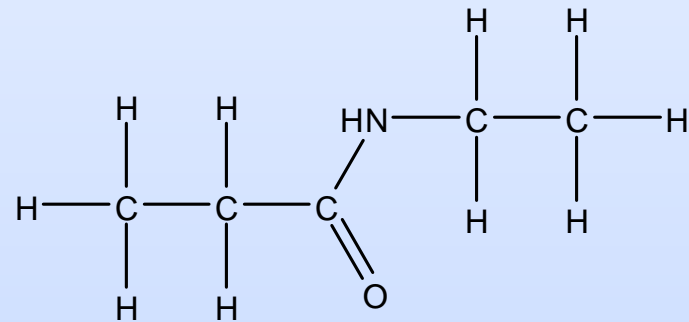
- Similar to esters, amide bonds can be broken by water (hydrolysis)
- This can be done under two conditions
 - **Acidic condition**
Carboxylic acid + alkyl ammonium ion
 - **Basic condition**
Carboxylate ion + amine



carboxylic acid

alkyl ammonium

Acidic condition



carboxylate

amine

Basic condition