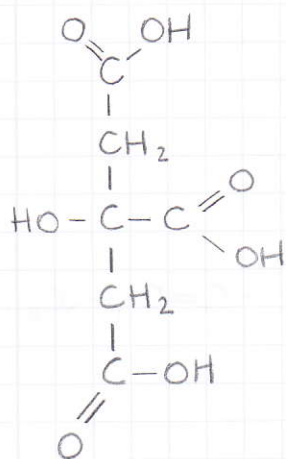


$pK_s = 9,9$

Optische Isomerie, Salze  
Milchsäure, Malonsäure, Citronensäure, Brenztraubensäure

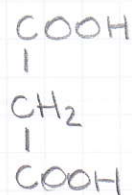
### Citronensäure

optisch inaktiv  
Salze: Citrate



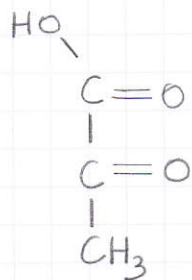
### Malonsäure

optisch inaktiv  
Salze: Malonate



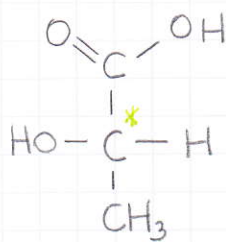
### Brenztraubensäure

optisch inaktiv  
Salze: Pyruvate

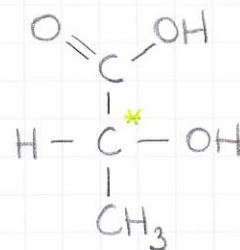


### Milchsäure

optisch aktiv  
Salze: Lactate

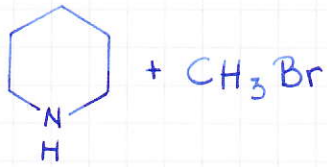


L-Form



D-Form

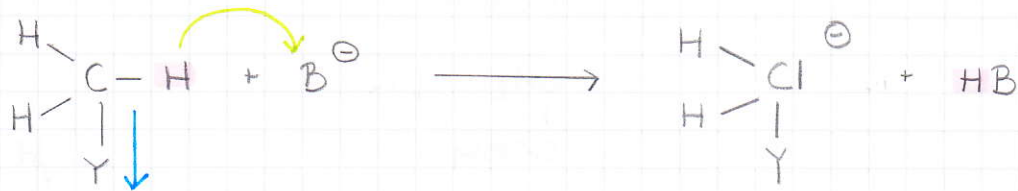
Reaktionsgleichung(en) + Alle Substanzen benennen



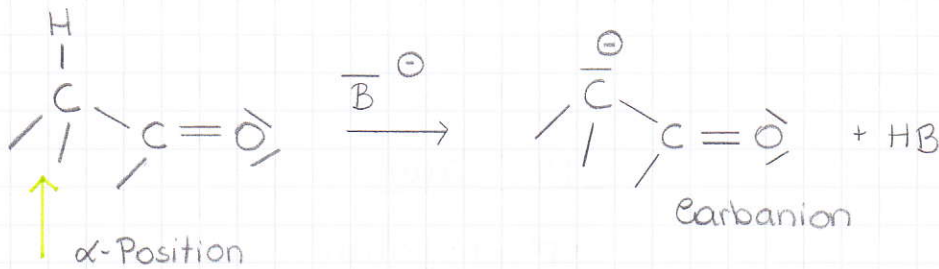
Piperidin      Brommethan

## Aldolkondensation (?)

auch Aldoladdition genannt → Addition von Carbanionen  
C-H **acide** Verbindungen



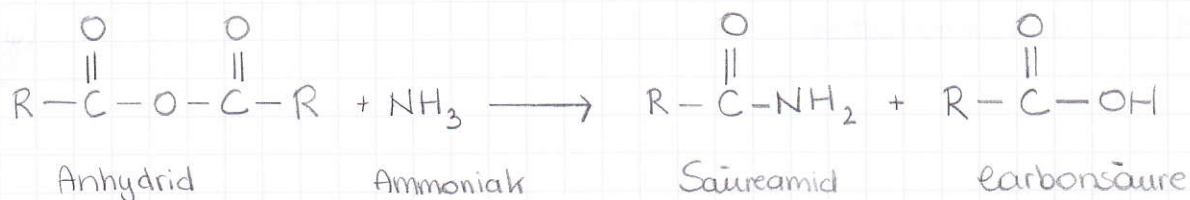
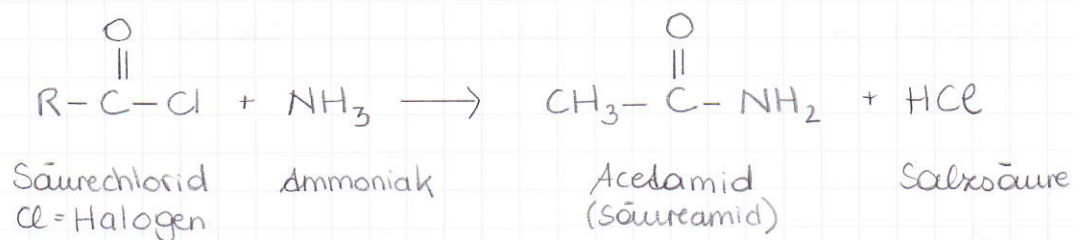
Y = elektronenabziehende Gruppen: -CN, -COOH, -COOR, -C=O, -SO<sub>2</sub>, -NO<sub>2</sub>



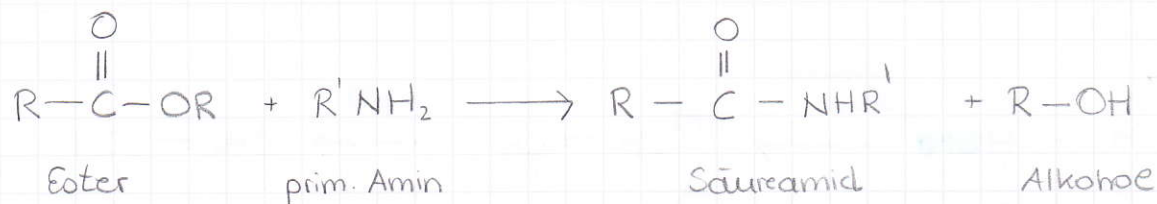
# Herstellungsmethoden für Säureamide

## 1. Aus Säurehalogeniden, -Anhydriden, -Eestern

### a) Ammonolyse

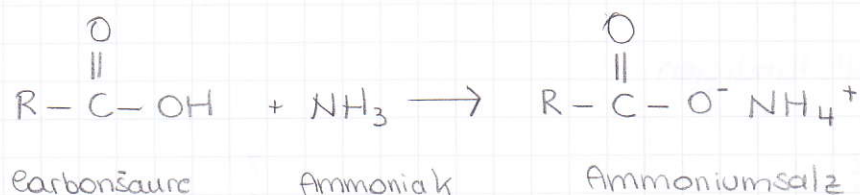


### b) Reaktion von Estern mit Aminen

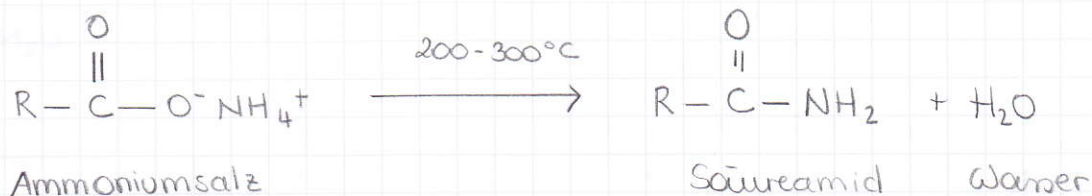


## 2. Aus Ammoniumsalzen der Carbonsäuren (Erhitzen)

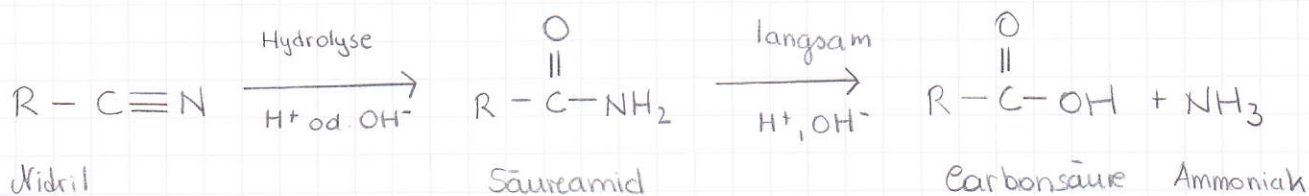
### 1. Schritt



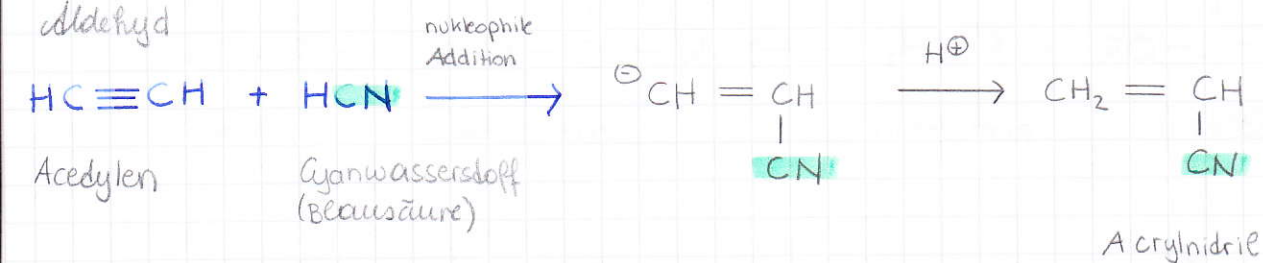
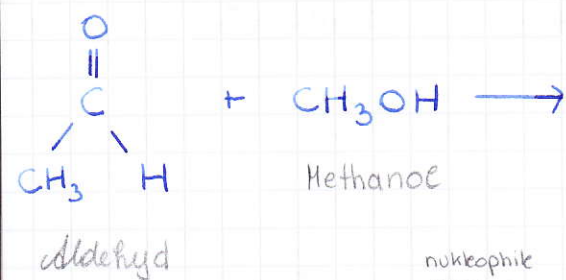
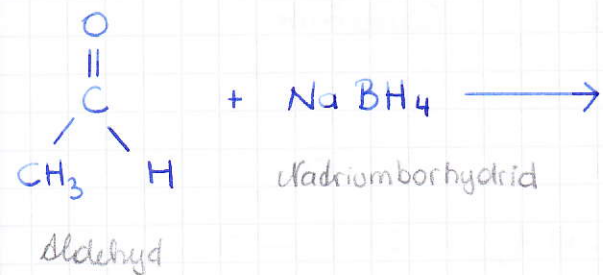
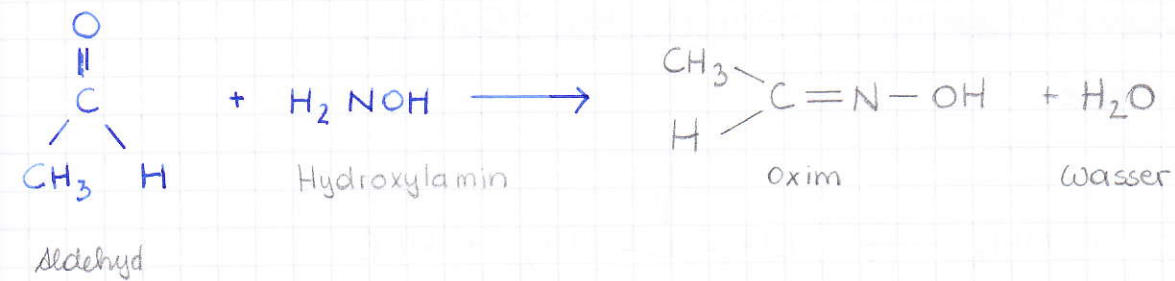
### 2. Schritt



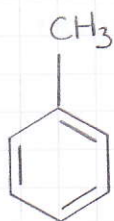
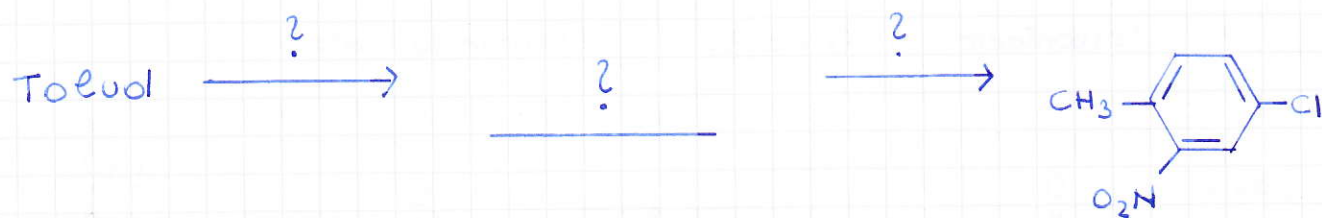
## 3. Durch Hydrolyse von Nitrilen



## Reaktionsgleichungen formulieren

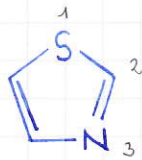


## Reaktion vervollständigen

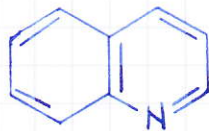




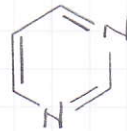
# Heterocyden



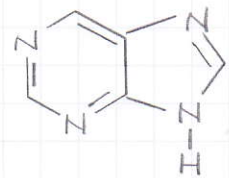
1,3-Thiazol



Chinolin



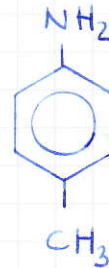
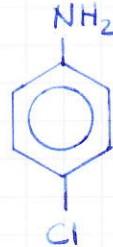
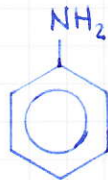
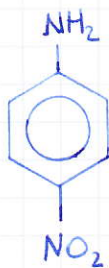
Pyrimidin



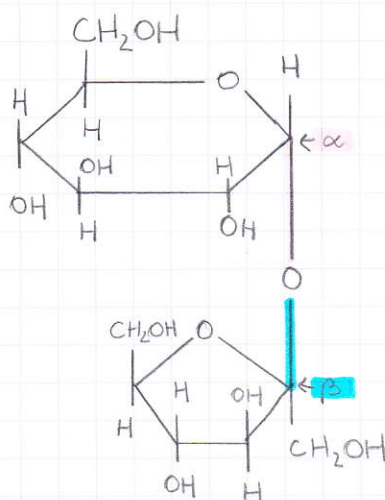
Purin

1,3-Diazin

## Nach Basenstärke ordnen



## Saccharose: zeichnen, wie verknüpft, wie spaltbar



$\alpha$ -D-Glucopyranosyl (1 $\rightarrow$ 2)- $\beta$ -D-Fructofuranosid

Monosaccharide: Glucose + Fructose

Saccharose

- stabil gegen Alkali
- durch Säure gespalten
- Enzym Invertase spaltet

→ entstehendes Gemisch aus Fructose + Glucose  $\rightarrow$  Invertzucker