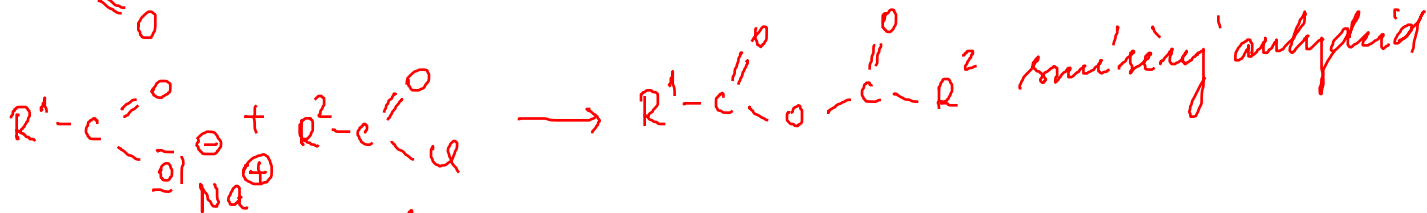
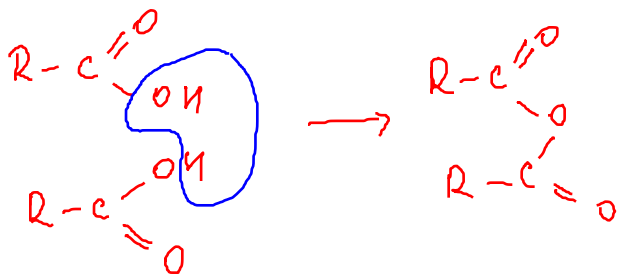
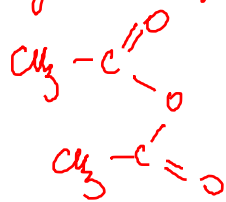
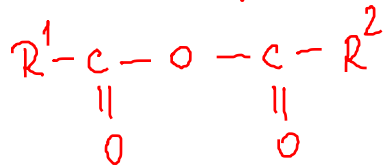
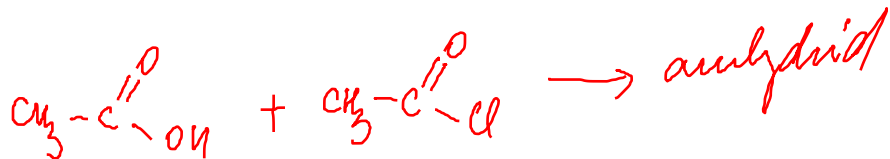
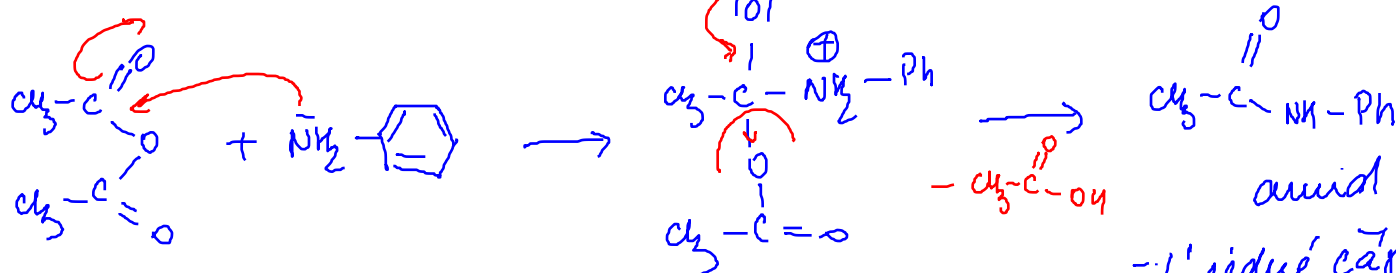
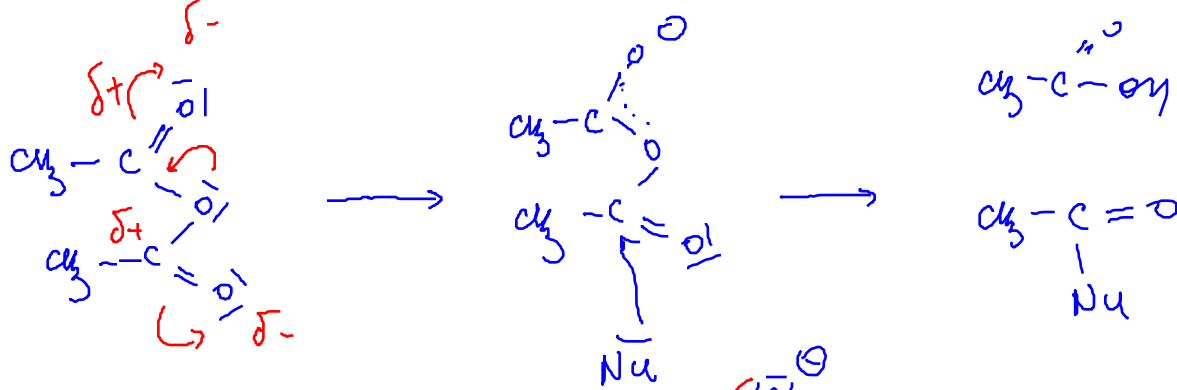


Anhydridy karboxylových kyselin

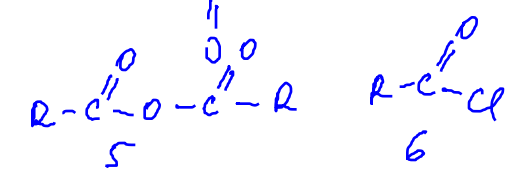
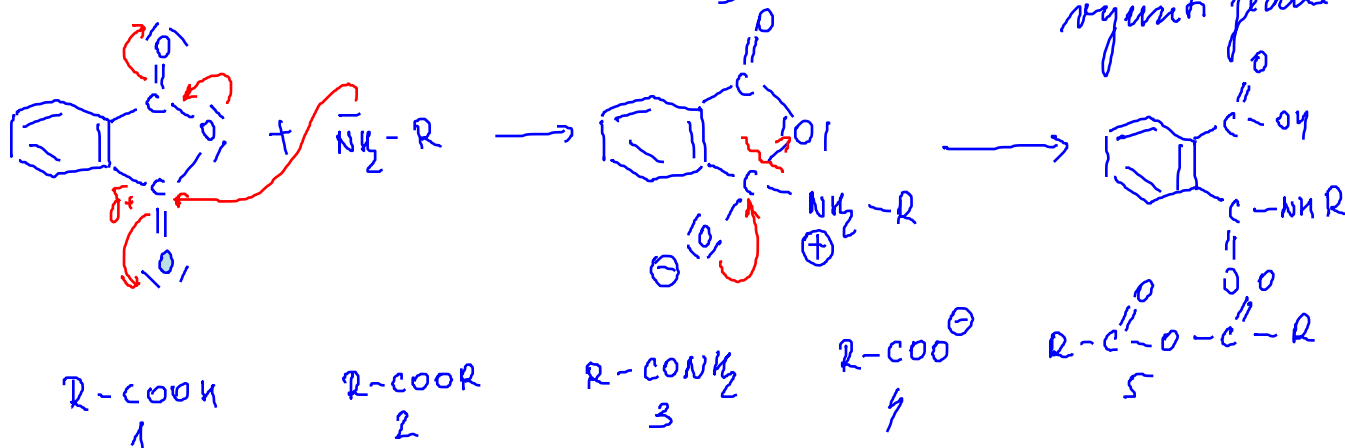


anhydrid kys. octové
-||- kys. benzoové





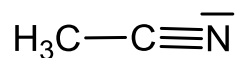
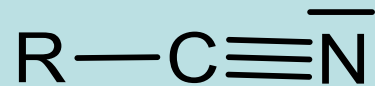
ryvniti jednu casti molekuly



reaktivite vůči nukleof. činidlu
atamu

6 > 5 > 2 > 3 > 4 > 1

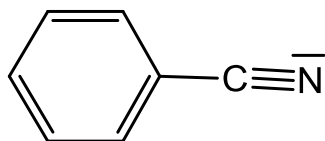
NITRILY A ISOKYANIDY



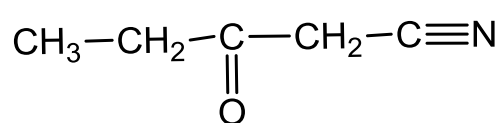
**ethannitril, acetonitril, nitril
kyseliny octové**



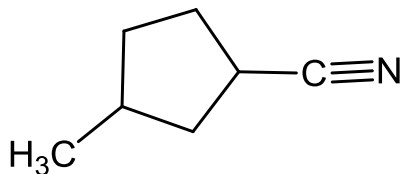
butannitril, nitril kys. butanové



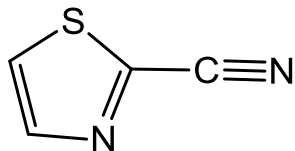
benzonitril, nitril kys. benzoové



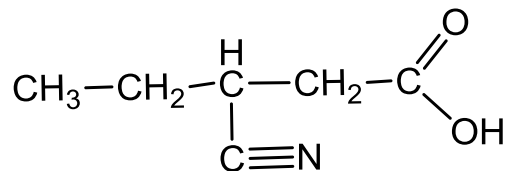
3-oxo-pentannitril



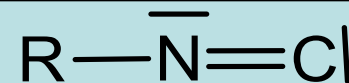
3-methylcyklopentankarbonitril



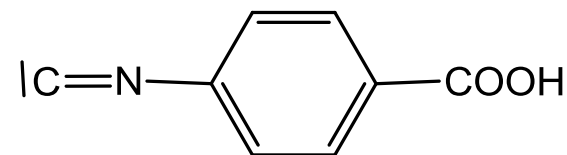
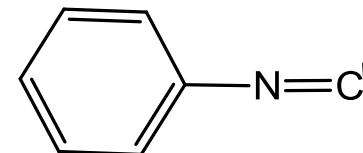
thiazol-2-karbonitril



3-kyan-pentanová kyselina

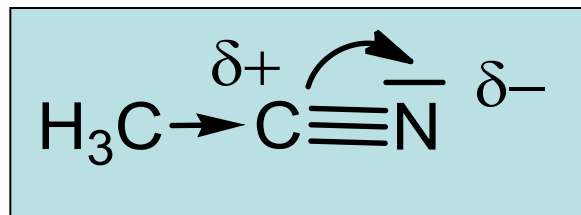


fenyloisokyanid



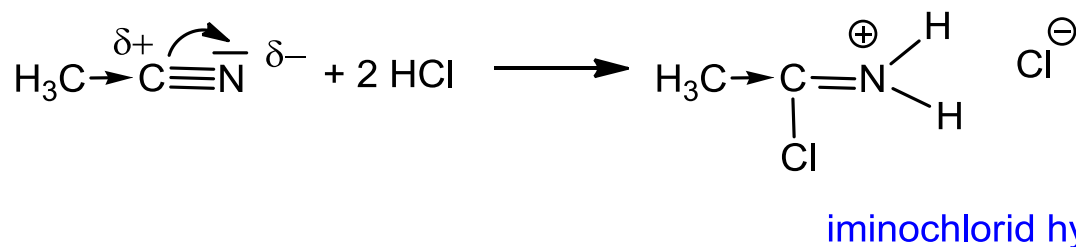
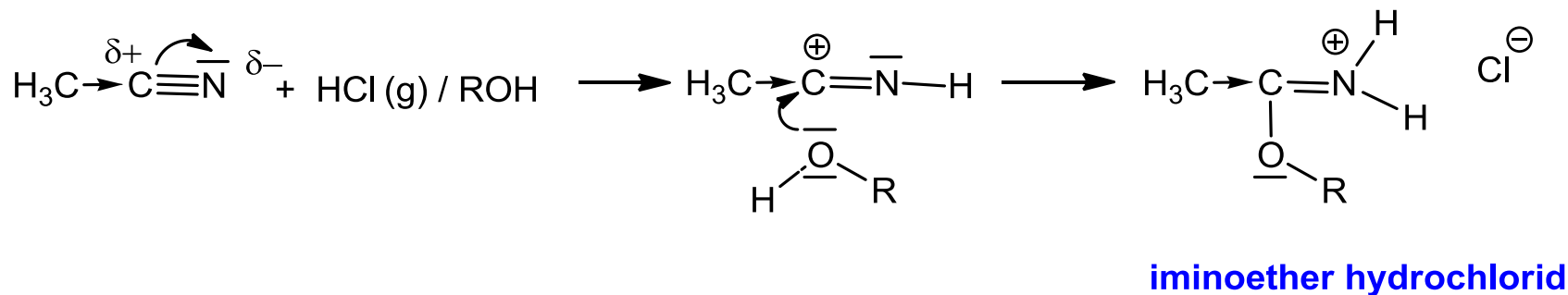
4-isokyanbenzoová kys.

NITRILY A ISOKYANIDY

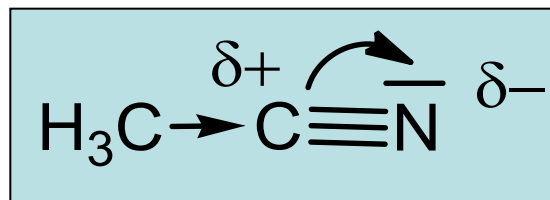


REAKTIVITA:

- 1) aktivace trojné vazby atakem elektrofilu na N atom a následně nukleofilu na atom uhlíku
- 2) silný nukleofil napadne přímo uhlíkový atom
- 3) kyselý vodík v α -poloze

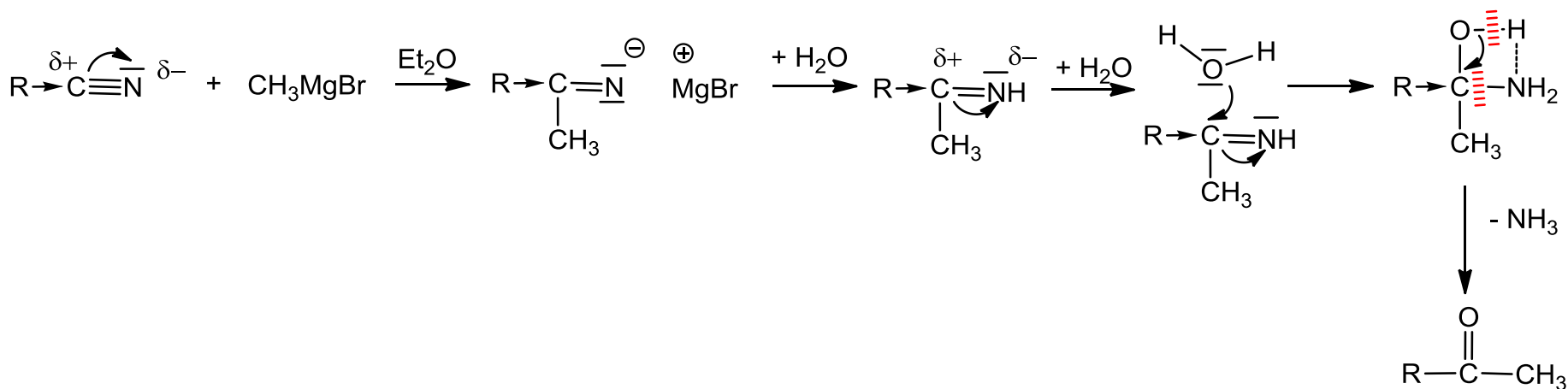
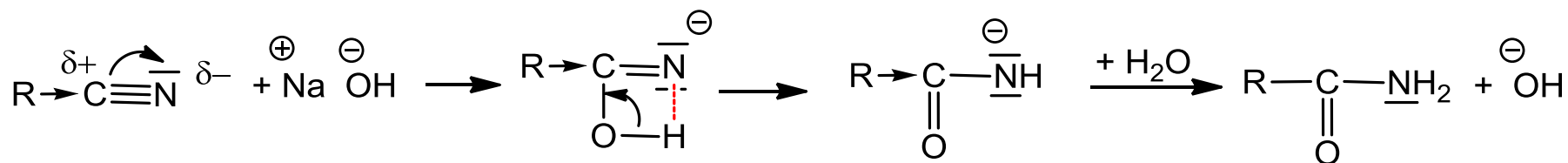


NITRILY A ISOKYANIDY

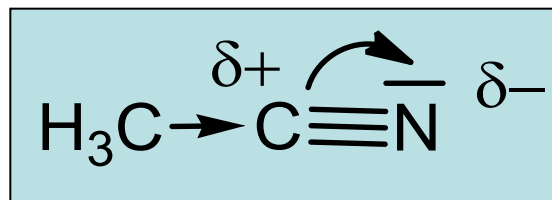


REAKTIVITA:

- 1) aktivace trojné vazby atakem elektrofilu na N atom a následně nukleofilu na atom uhlíku
- 2) silný nukleofil napadne přímo uhlíkový atom
- 3) kyselý vodík v α -poloze



NITRILY A ISOKYANIDY

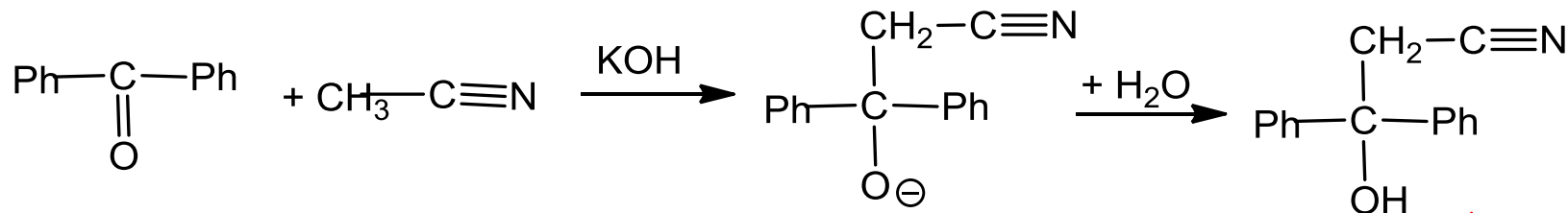


$$pK_a = 25$$

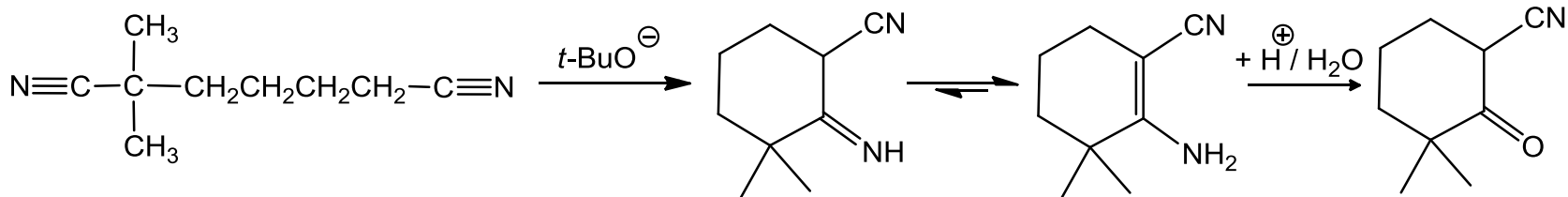
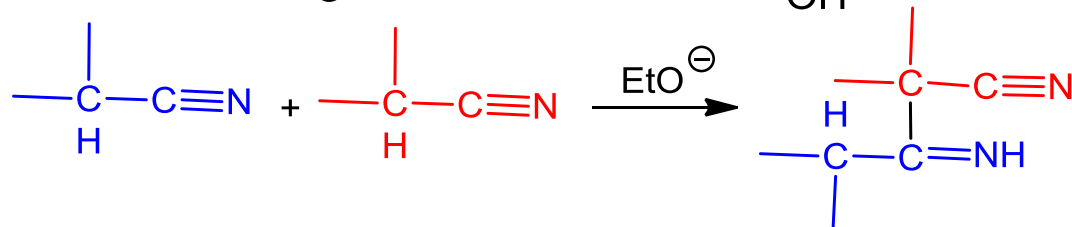
REAKTIVITA:

- 1) aktivace trojné vazby atakem elektrofilu na N atom a následně nukleofilu na atom uhlíku
- 2) silný nukleofil napadne přímo uhlíkový atom
- 3) kyselý vodík v α -poloze

kondensace s aldehydy a ketony
Knoevenagelova kondenzace



kondensace s jiným nitrilem
Thorpe-Zieglerova reakce

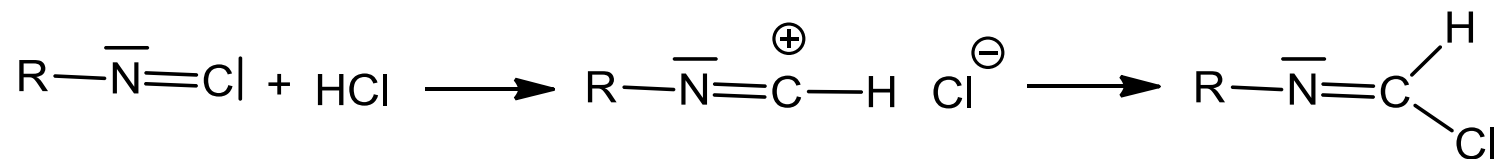


NITRILY A ISOKYANIDY



jedovaté a zapáchající sloučeniny

reagují s elektrofilny na uhlíkovém atomu



deriváty kyseliny mravenčí

„isonitrilová“ zkouška – důkaz aminoskupiny v biomateriálu

