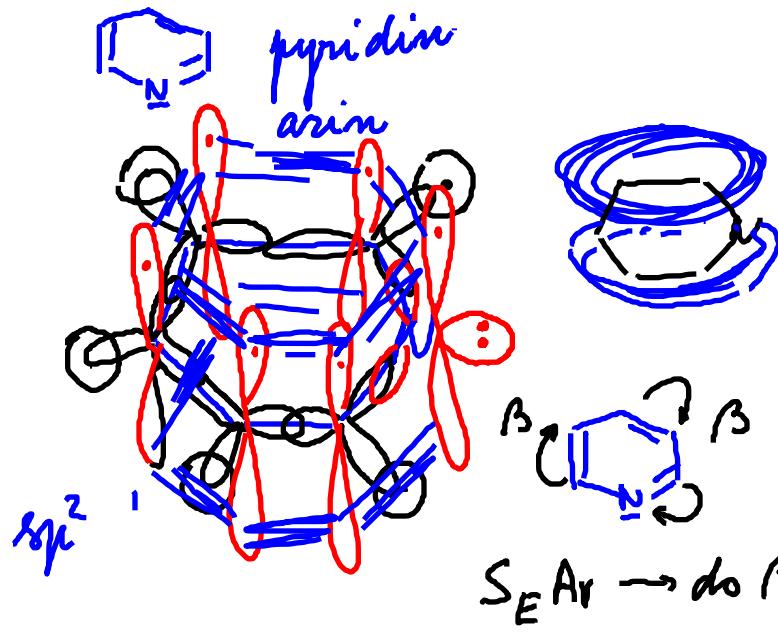


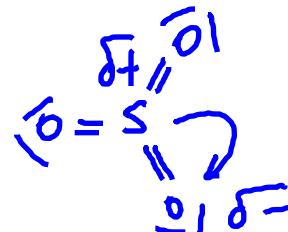
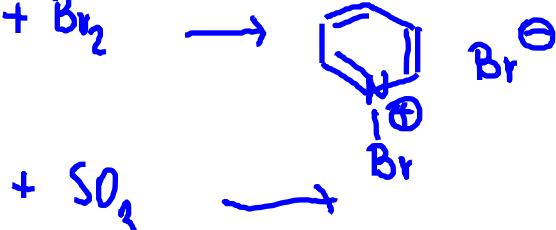
Heterocyklické sloučeniny

sestřílenné heterocykly

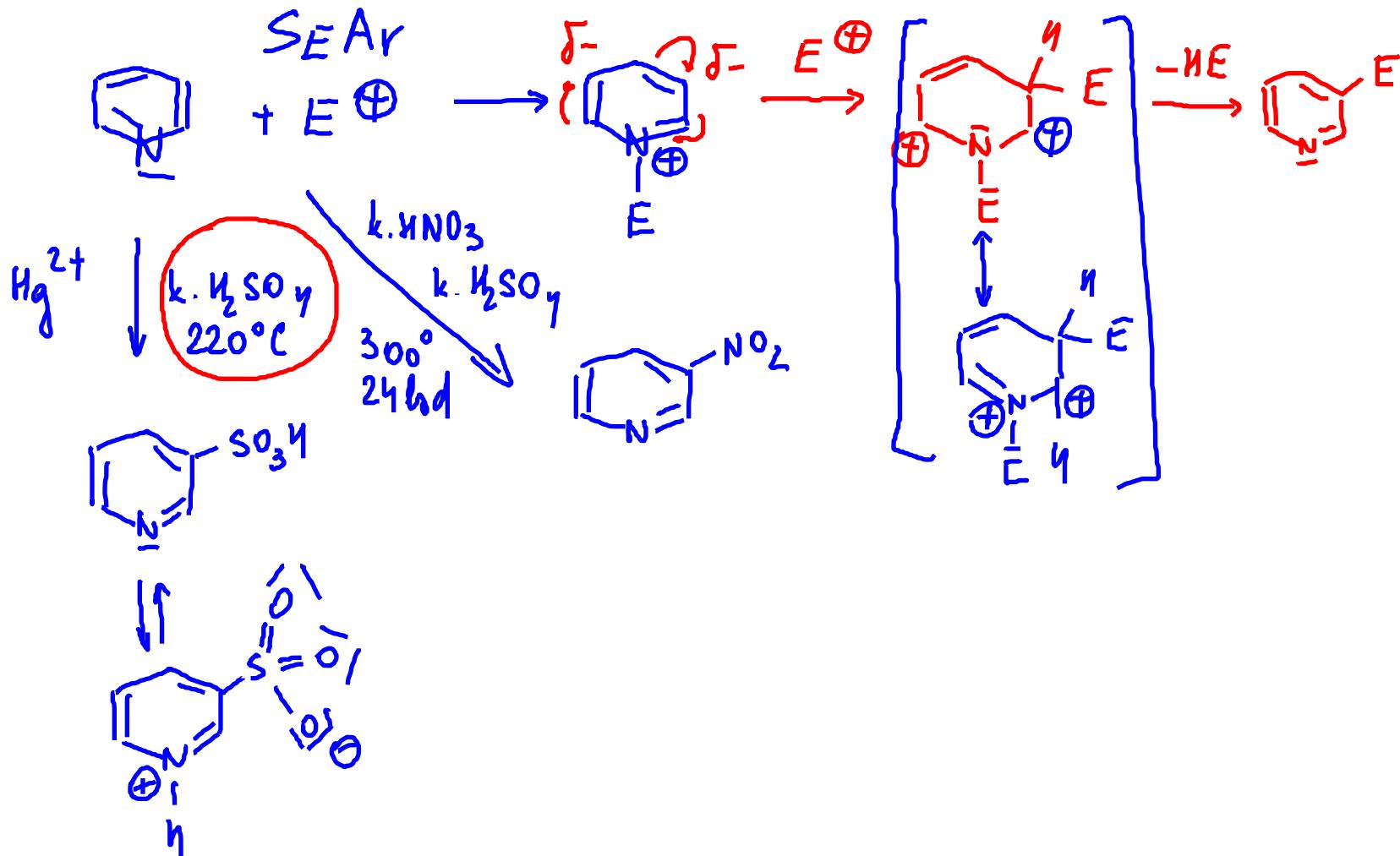


aromatický derivát
benzoidní aroma

1. basicita $\text{pK}_b = 8,8$
2. elektrofilní aromat. substituce (obtížné),
3. reaguje do $S_N \text{Ar}$

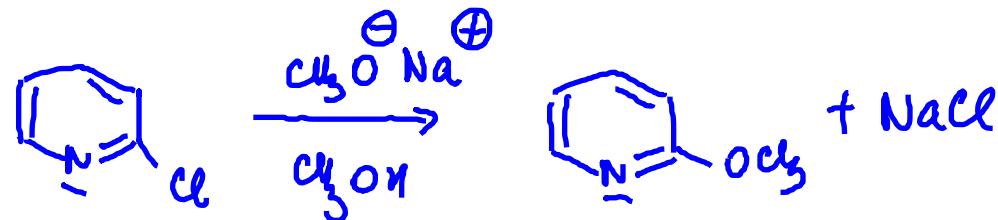


Heterocyklické sloučeniny

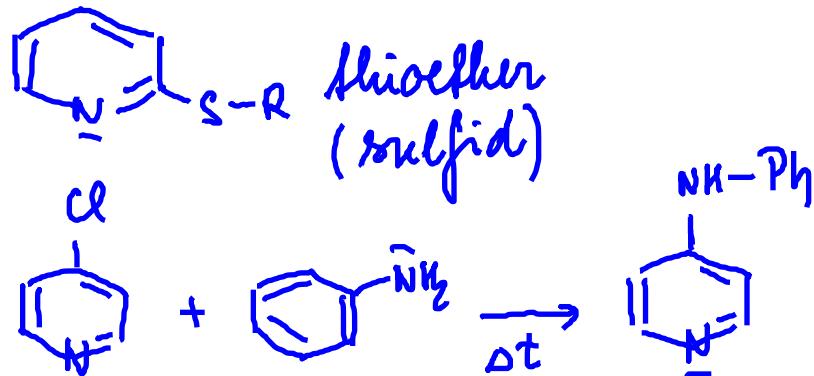


Heterocyklické sloučeniny

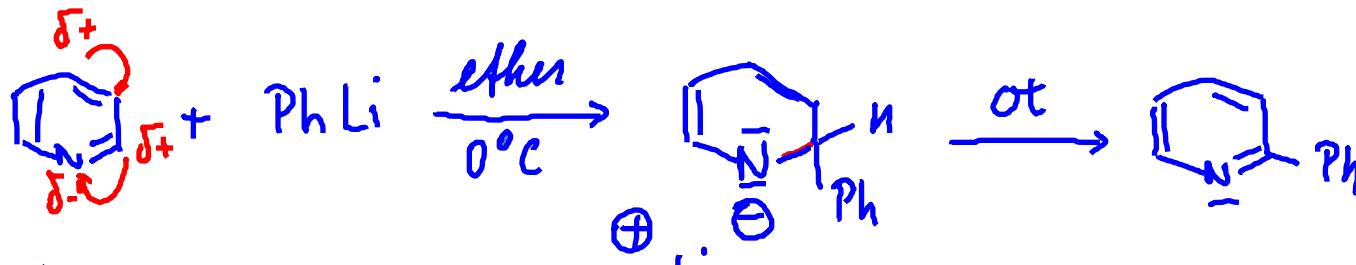
Substituce mříleofilní
s dobrým odst. stupnem



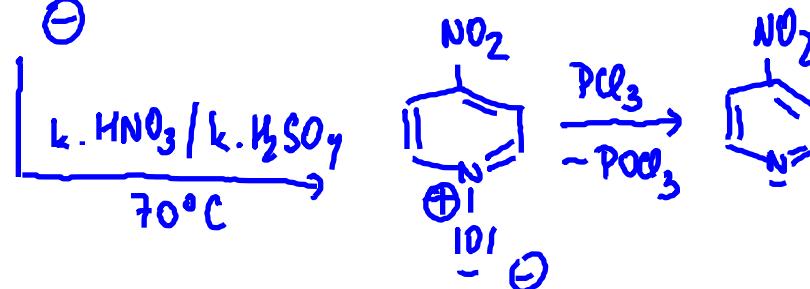
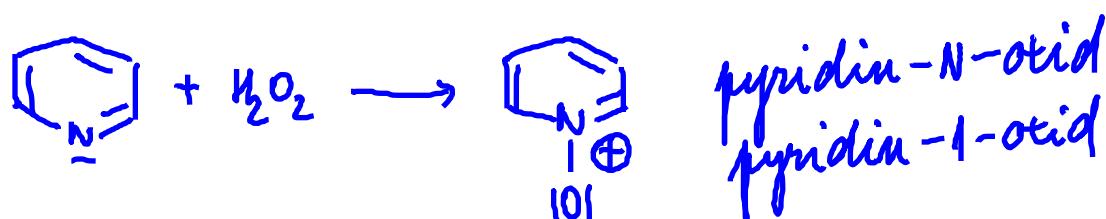
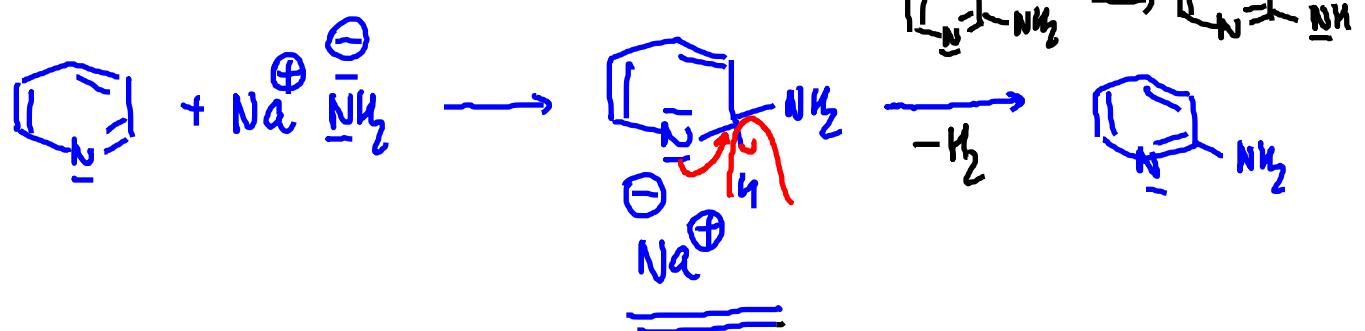
\downarrow
 R-SH/TEA



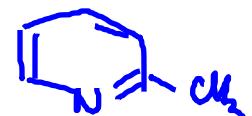
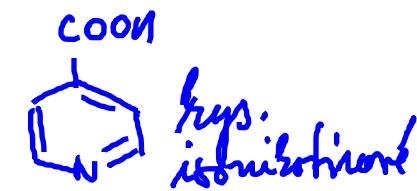
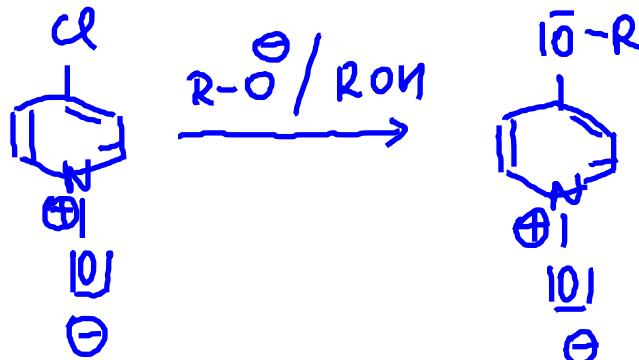
Heterocyklické sloučeniny



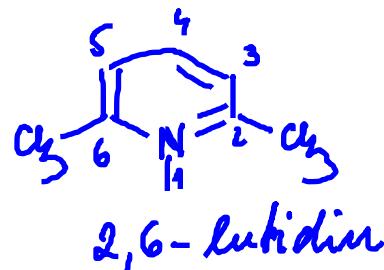
Čičibabin



Heterocyklické sloučeniny



α-pirolin



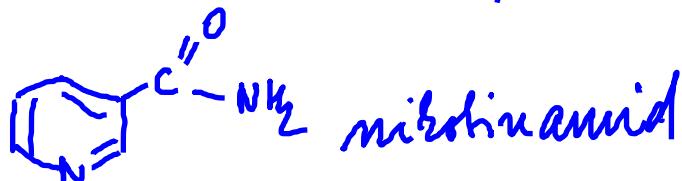
2,6-lutidin



lys. pirolinová



lys. nirotinová



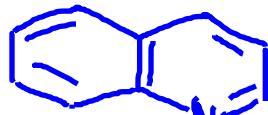
nirotinamid



B6 - pyridotin



piperidin



chinolin



isochinolin

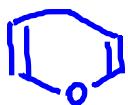


acridin

Heterocyklické sloučeniny



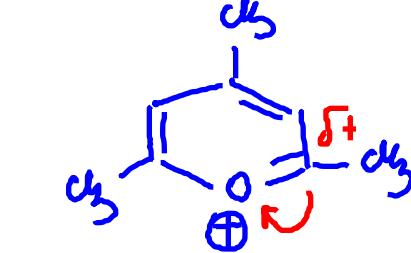
2H-pyran



4H-pyran



X^-

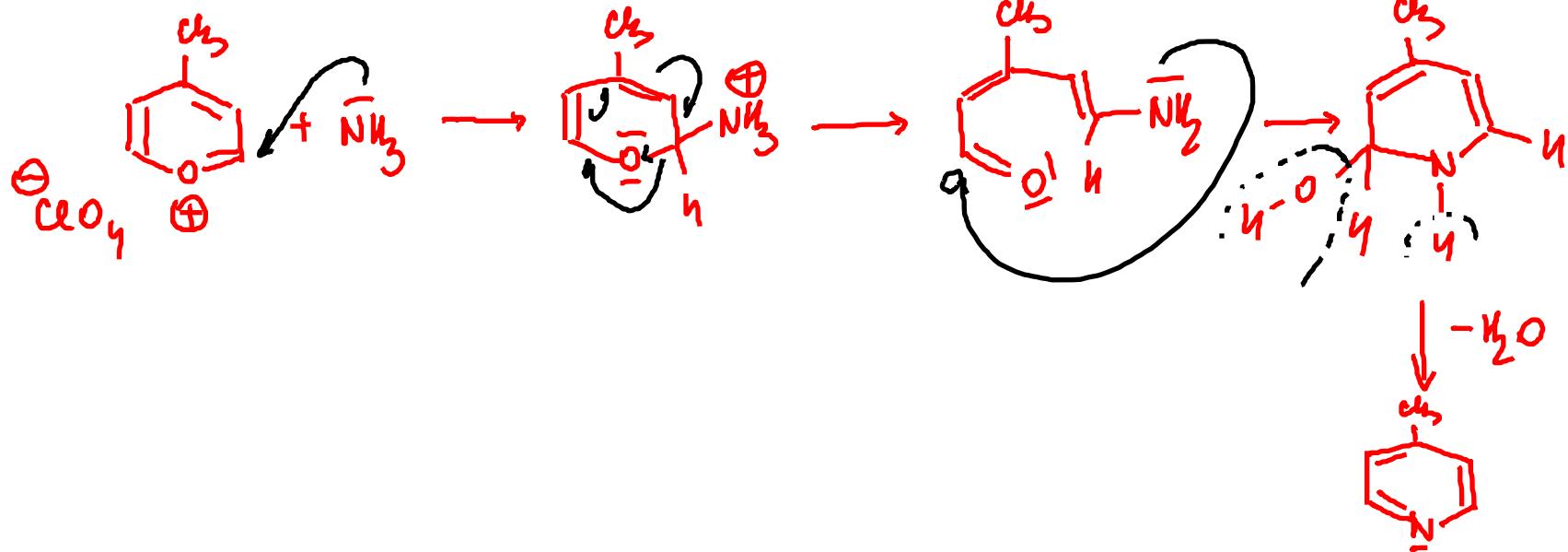


X^- slabý / nukleofil

ClO_4^-

BF_3^-

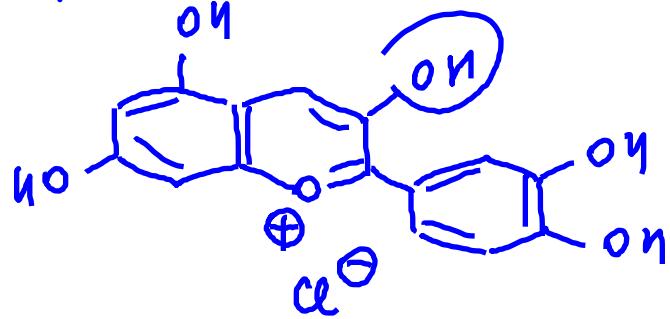
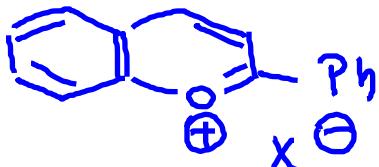
pyryliové soli



Heterocyklické sloučeniny

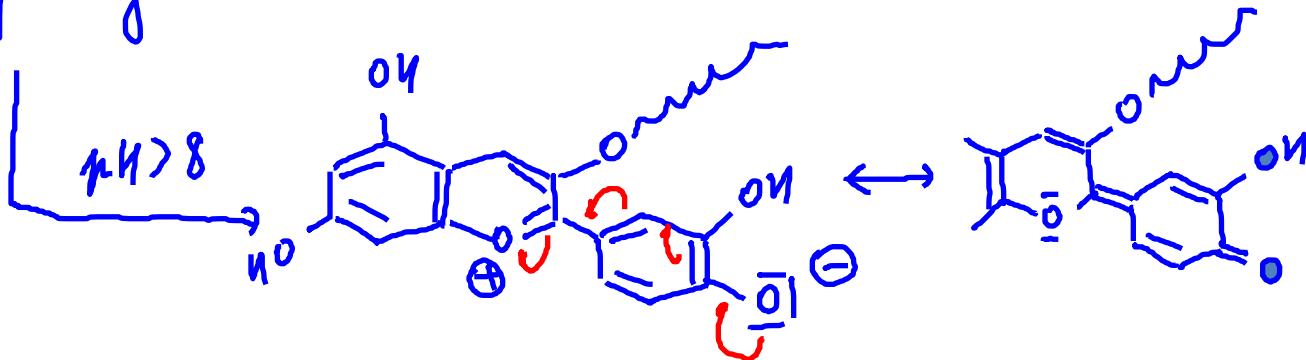


flavoflore' soří

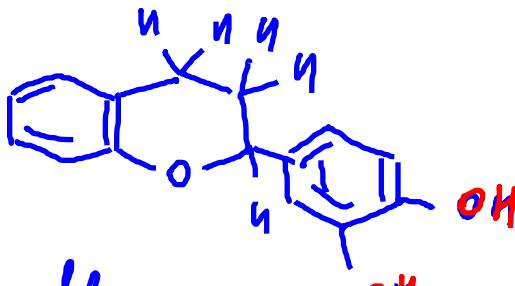


pelargonidin

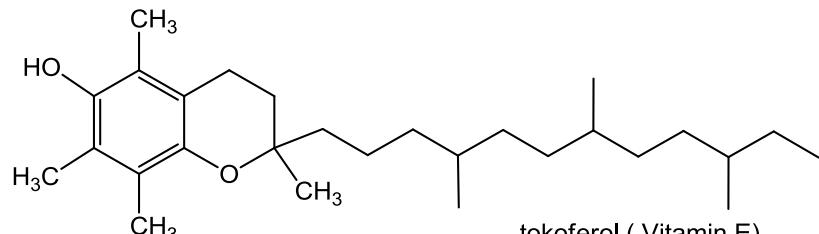
antalyanová barnine
měru barevnost a závislosti na pH



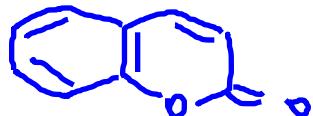
Heterocyklické sloučeniny



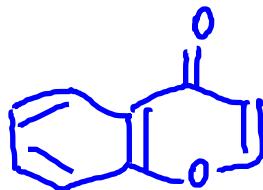
flavan OH vitamin E
dihydroflavonol



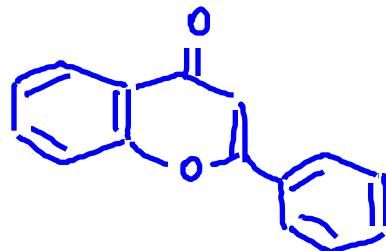
tokoferol (Vitamin E)



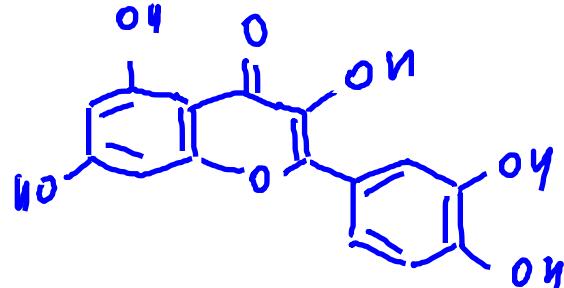
kaurene



chromone



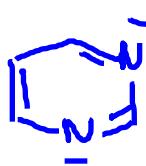
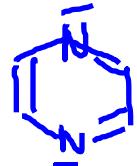
flaron



kaurene
flavonone
kaurene

Heterocyklické sloučeniny

Diaziny



pyrazin

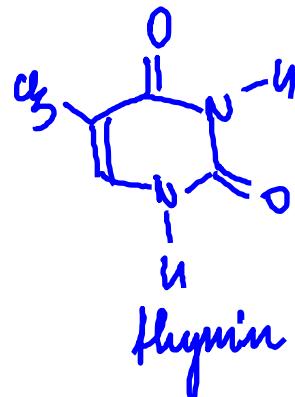
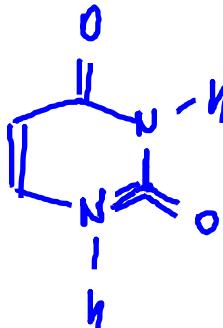
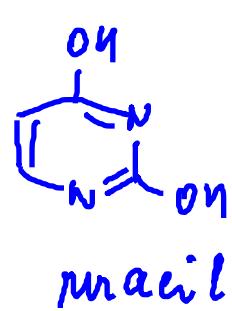
pyrimidin

pyridazin

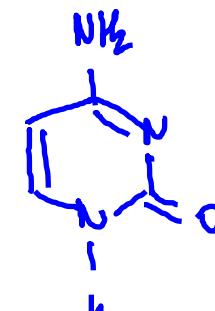
$$\mu K_b = 13,35$$

$$12,70$$

$$11,67$$



thymin

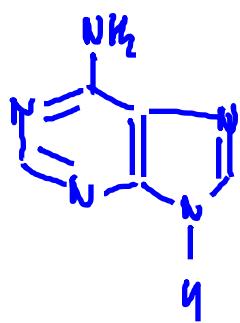
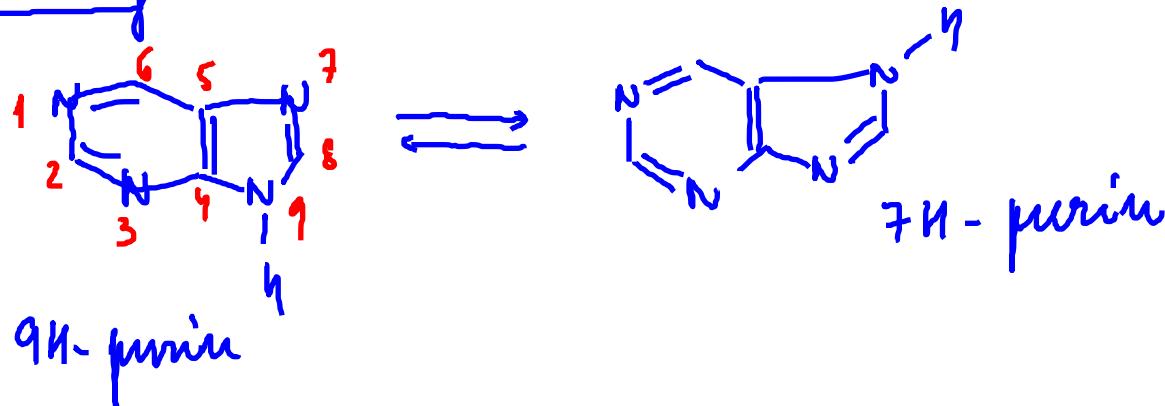


cytosin

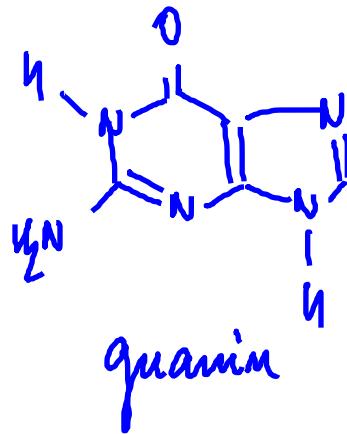
Heterocyklické sloučeniny

Kondensované heterocykly

Puriny



adenin



guamin