


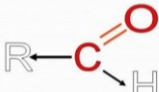
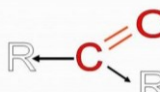
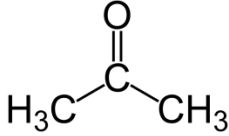
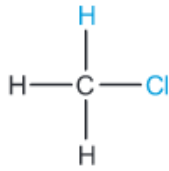


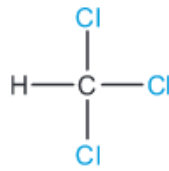
Deriváty uhľovodíkov - sú organické zlúčeniny, odvodené od uhľovodíkov nahradením jedného alebo viacerých atómov vodíka iným atómom (pr. -Cl, -F....) alebo skupinou atómov (pr. -NO₂, -COOH)

R-uhľovodíkový zvyšok, ktorý vznikne odtrhnutím H z nejakého alkylu
-z metánu – metyl (-CH₃), z etánu etyl (-CH₂-CH₃)

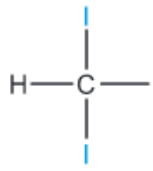
1.Halogénderiváty	R-X X=(Cl,F,Br,I)	chlórmetán CH ₃ Cl, difluórmetán CH ₂ F ₂
2.Dusíkaté deriváty	a)amíny – pozor nemajú funkčnú skupinu ! (nahradzujeme 1-3 H v molekule NH ₃) môžu byť: primárne, sekundárne, terciárne Podľa počtu nahradených atómov vodíka v molekule amoniaku rozlišujeme: <ul style="list-style-type: none"> • primárne amíny - vznikajú nahradením jedného atómu vodíka, • sekundárne amíny - vznikajú nahradením dvoch atómov vodíka, • terciárne amíny - vznikajú nahradením troch atómov vodíka. <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>primárny amín</p> </div> <div style="text-align: center;">  <p>sekundárny amín</p> </div> <div style="text-align: center;">  <p>terciárny amín</p> </div> </div>	CH ₃ NH ₂ metylamín (CH ₃) ₂ NH dimetylamín (CH ₃) ₃ N trimetylamín
	b)nitrozlúčeniny R-NO₂ -NO₂ - nitroskupina	CH ₃ NO ₂ nitrometán
3Kyslíkaté deriváty	c)Hydroxyzlúčeniny - OH hydroxylová skupina - alkoholy R-OH - fenoly Ar-OH (Ar – benzénové jadro)	CH ₃ OH metanol, CH ₃ CH ₂ OH etanol fenol
	d) Étery R-O-R'	CH ₃ -CH ₂ -O-CH ₂ -CH ₃ dietyléter
	e)Karbonylové zlúč. -Aldehydy R-COH -Ketóny R-CO-R' <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>- aldehydy</p> <p>CH₃-CH₂-C(=O)H</p> </div> <div style="text-align: center;">  <p>- ketóny</p> <p>CH₃-C(=O)-CH₃</p> </div> </div>	HCOH formaldehyd CH ₃ COH acetaldehyd CH ₃ -CO-CH ₃ acetón= dimetylketón 
	f) karboxylové zlúčeniny R-COOH -COOH karboxylová skupina	HCOOH kyselina mravčia CH ₃ COOH kyselina octová



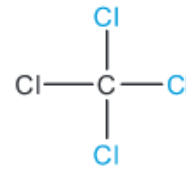
chlórmetán
metylchlorid



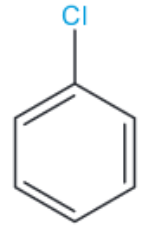
trichlórmetán
chloroform



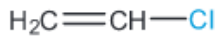
trijódmetán
jodoform



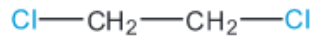
tetrachlórmetán
(chlorid uhličítý)



chlórbenzén



vinylchlorid
chlóretén



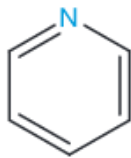
1,2-dichlóretán
etyléndichlorid



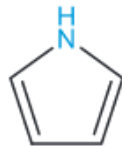
dichlórdifluórmetán
freón 12



tetrafluóretén
tetrafluóretylén

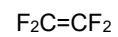


pyridín

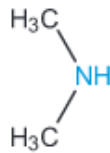


pyrol

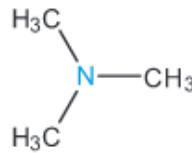
Tetrafluóretylén



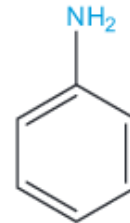
metylamin



dimetylamin



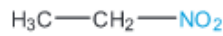
trimetylamin



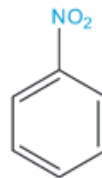
fenylamin
anilín



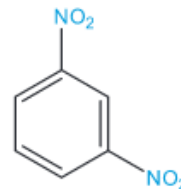
nitrometán



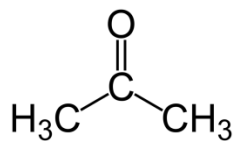
nitroetán



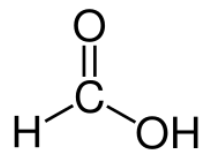
nitrobenzén



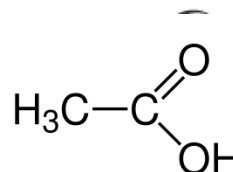
1,3-dinitrobenzén
m-dinitrobenzén



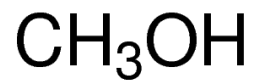
Acetón(dimetylketón)



kyselina mravčia
k.metánová

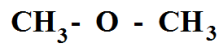


kys.octová
k.etánová

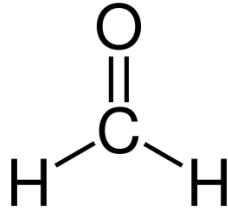
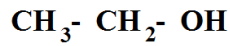


metanol

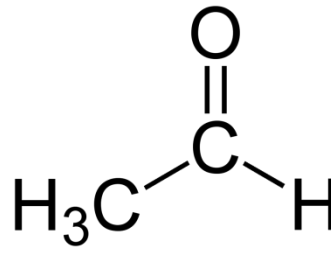
dimetyléter



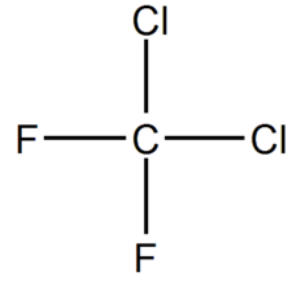
etanol



formaldehyd

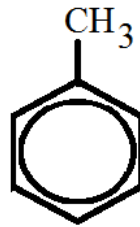
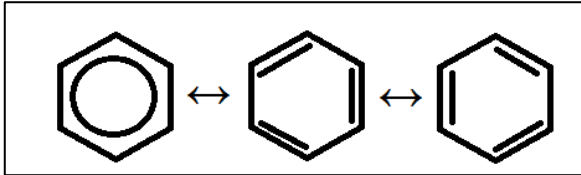


acetaldehyd

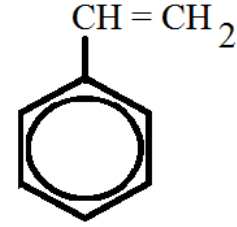


CCl_2F_2 (freón 12)

benzén

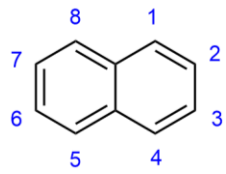
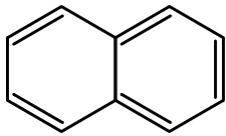


toluén

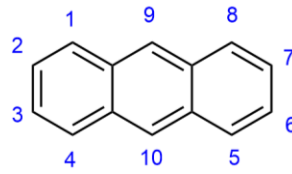


styren

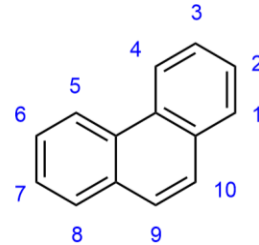
=vinylbenzén



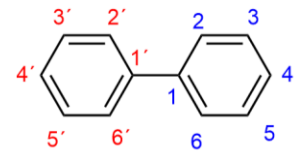
naftalén



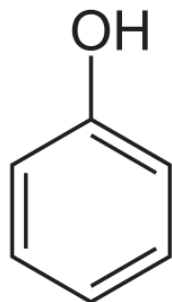
antracén



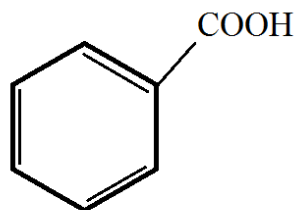
fenantrén



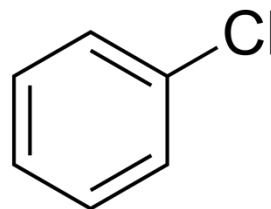
bifenyl



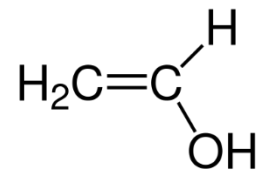
fenol



kys.benzoová

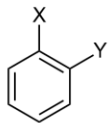


chlóbenzén

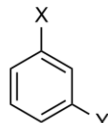


Vinylalkohol

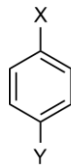
Poloha substituentov:



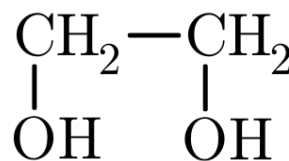
o- (ortho)
1,2-



m- (meta)
1,3-



p- (para)
1,4-



etylenglykol