2001 CHEM1405 (Vet. Science)

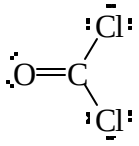
2001-J-2

- $Mn(ClO_4)_2(s) \rightarrow Mn^{2+}(aq) + 2ClO_4^-(aq)$

- iron(III) chloride-6-water
  $(NH_4)_2CO_3$
  potassium dichromate
  PbO_2

- –835 kJ mol^{-1}

- Particles in a negatively charged sol repel each other. Addition of a cation overcomes the interparticle repulsions and allows the particles to get closer to each other and hence promotes coagulation.

- 

2001-J-3

- 666 g mol^{-1}

- 1.45×10^{-3} M

- $HPO_4^{2-}(aq) + H_3O^+(aq) \rightarrow H_2PO_4^-(aq) + H_2O$
  $H_2PO_4^-(aq) + OH^-(aq) \rightarrow HPO_4^{2-}(aq) + H_2O$

2001-J-4

- k = 0.210 $hour^{-1}$ $t_{½}$= 3.30 hour

  6.60 hour

  The appropriate second order rate law is Rate = k[sucrose][water].

  The concentration of water (present in vast excess as the solvent) does not change over time, thus giving a pseudo first order rate law: Rate = k_1[sucrose] where $k_1 = k$[water].

2001-J-5

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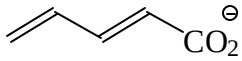
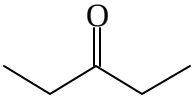
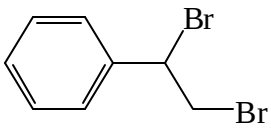
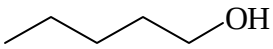
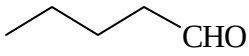
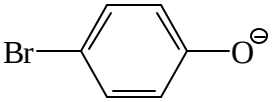
	conc. H_2SO_4	
		 + CH_3OH
	excess $HN(CH_3)_2$	
		
		
 or 		
		

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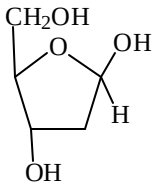
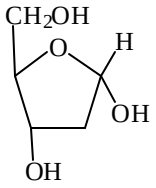
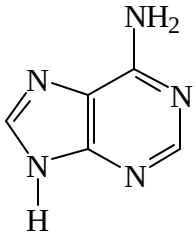
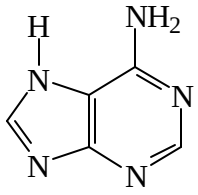
- 



α-D-2-deoxyribofuranose





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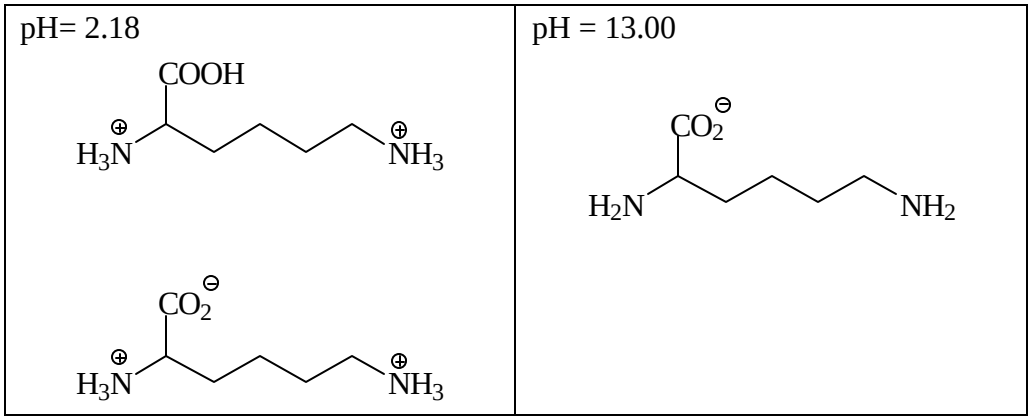
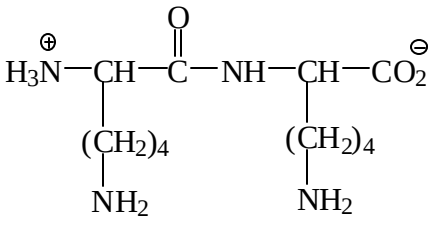
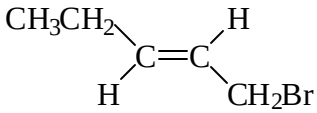
- 





- 4-ethyl-2,3-dimethyl-1-hexanol

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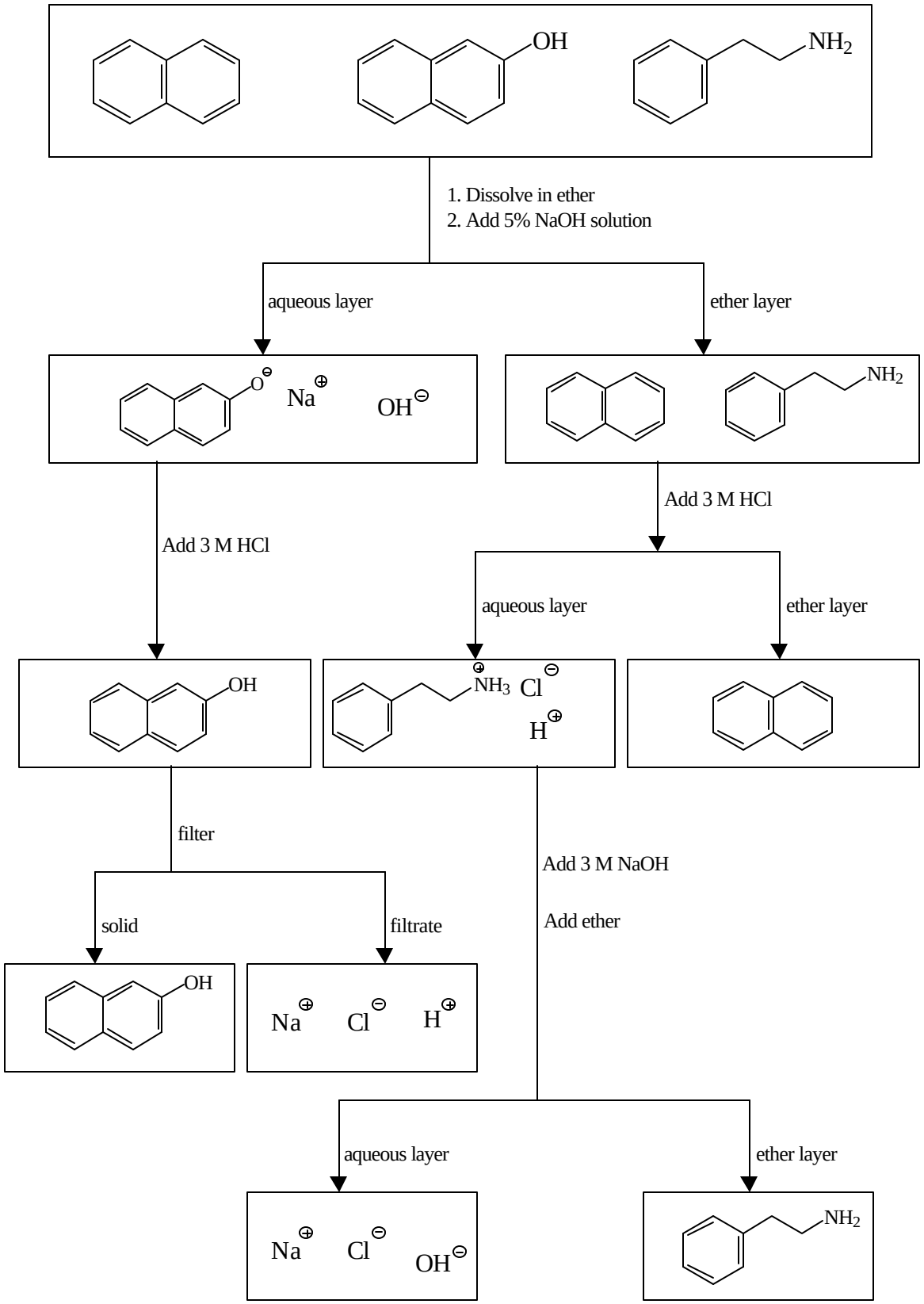
OH
NH2
1. Dissolve in ether
2. Add 5% NaOH solution
aqueous layer
ether layer
O
Na
OH
NH2
Add 3 M HCl
Add 3 M HCl
aqueous layer
ether layer
OH
NH3
Cl
H
filter
Add 3 M NaOH
Add ether
solid
filtrate
OH
Na
Cl
H
aqueous layer
ether layer
Na
Cl
OH
NH2