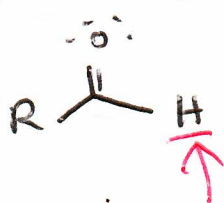


1/11/12

Aldehydes + Ketones



R = H or alkyl

C=O carbonyl bond

At least one H must be connected to C=O

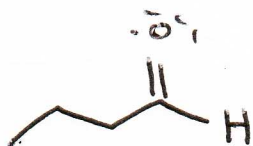


R ≠ H

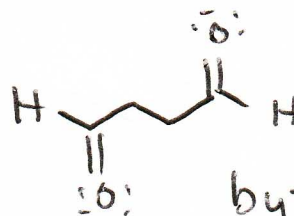
No H on C=O

Aldehydes

-al



butanal



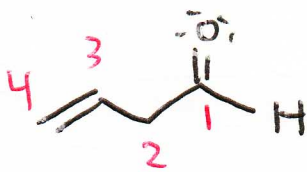
butanedial

Functional Group Priority

more important ↑

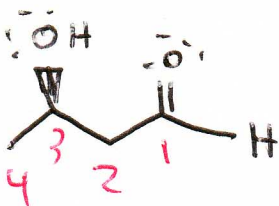
- aldehydes
- ketones
- alcohols
- alkenes / alkynes

A compound may only have one primary functional group ending.

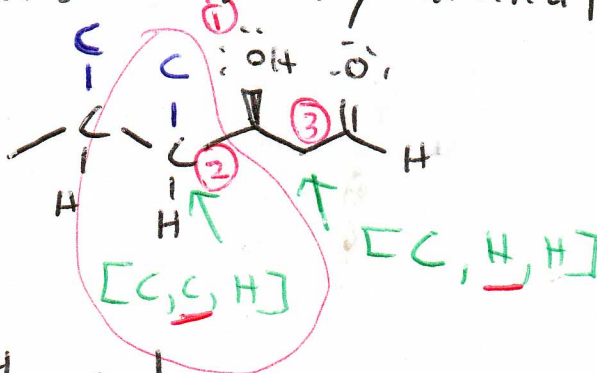
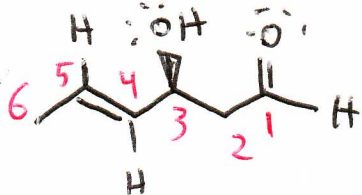


but-3-enal

alcohol substituent → hydroxy



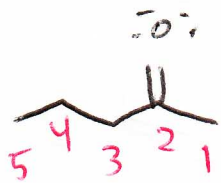
(R)-3-hydroxybutanal



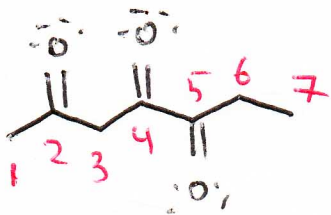
(3S, 4E)-3-hydroxyhex-4-enal

Ketones

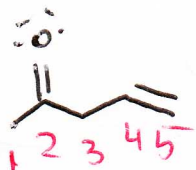
pentan-2-one



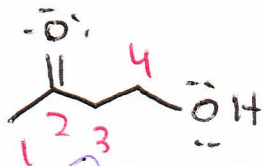
heptane-2,4,5-trione



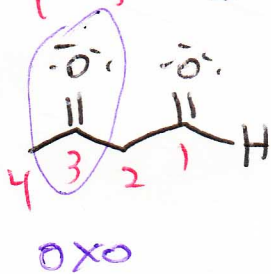
pent-4-en-2-one



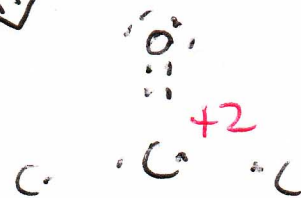
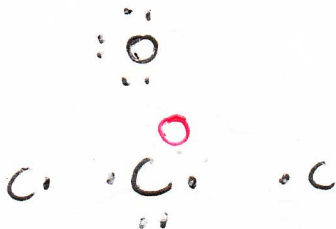
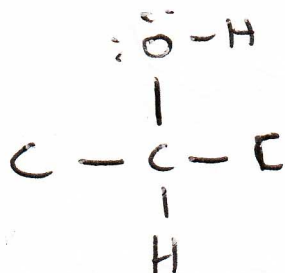
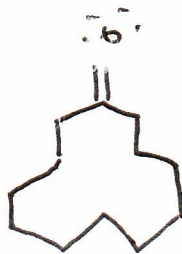
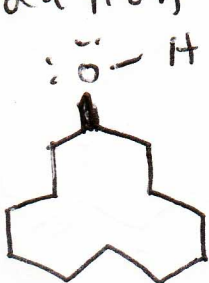
4-hydroxybutan-2-one



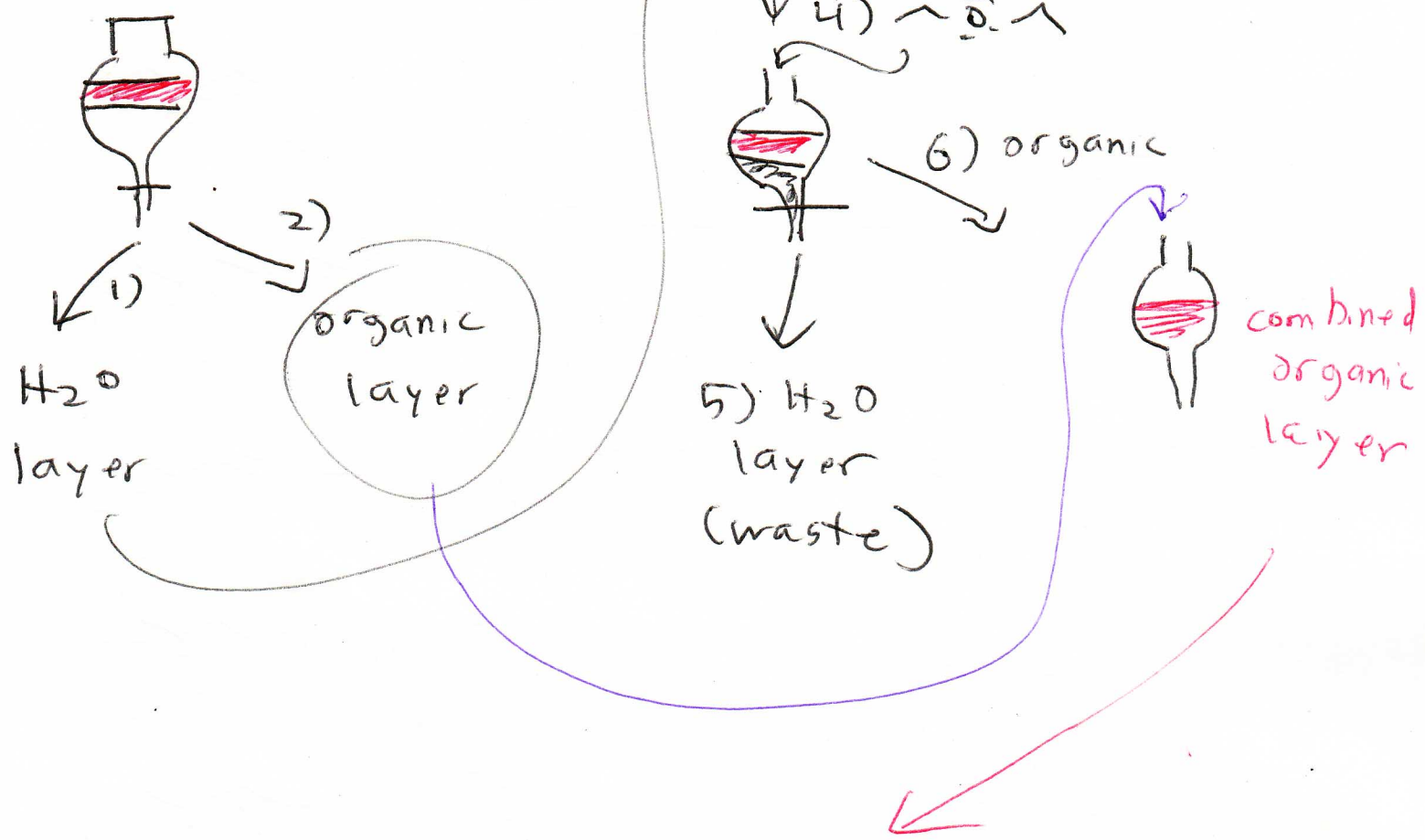
3-oxobutanal



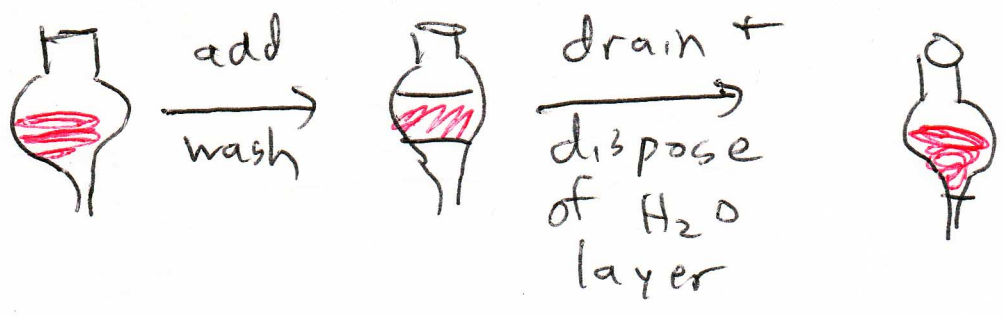
oxidation



start



wash



- 1) $NaHCO_3$ - neutralize excess acid
- 2) $NaHSO_3$ - reduce excess bleach
- 3) $NaCl$ - forces out ionic impurities