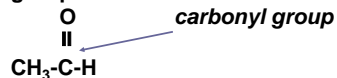


Aldehydes and Ketones

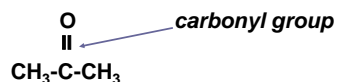
Chapter 1.6

Aldehydes and Ketones

- In an aldehyde, an H atom is attached to a carbonyl group

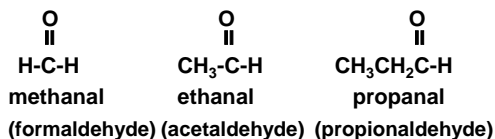


- In a ketone, two carbon groups are attached to a carbonyl group

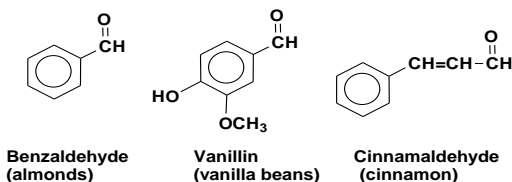


Naming Aldehydes

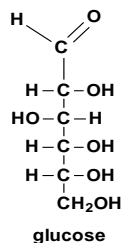
- IUPAC Replace the -e in the alkane name -al
- Common Add *aldehyde* to the prefixes *form* (1C), *acet* (2C), *propion*(3), and *butyry*(4C)



Aldehydes as Flavorings

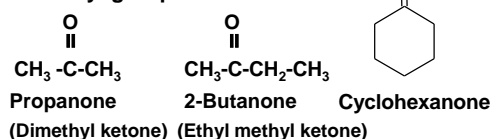


Glucose is an aldehyde

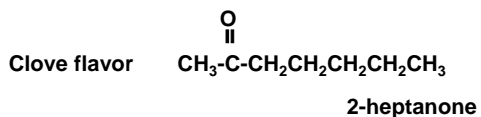
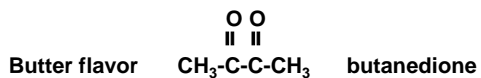


Naming Ketones

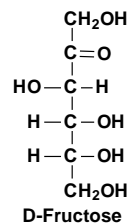
- In the IUPAC name, the -e in the alkane name is replaced with -one
- In the common name, add the word *ketone* after naming the alkyl groups attached to the carbonyl group



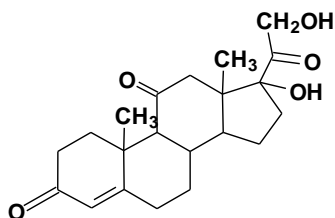
Ketones



Fructose is a Ketone



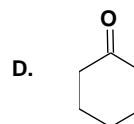
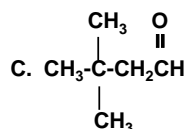
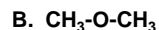
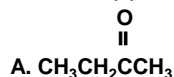
Ketones as Hormones



Cortisone

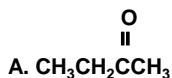
Learning Check

Classify each as an aldehyde (1), ketone (2) or neither(3).

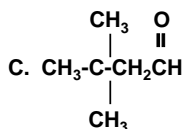
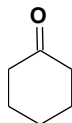


Learning Check

Name the following



B.



Learning Check

Draw the structural formulas for each:

A. 3-Methylpentanal

B. 2,3-Dibromopropanal

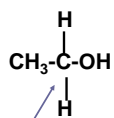
C. 3-Methyl-2-butanone

Classification of Alcohols

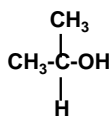
Primary (1°)

Secondary (2°)

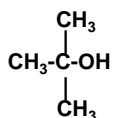
Tertiary (3°)



1 CH₃
attached
to C-OH



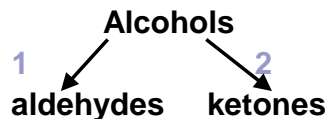
2 CH₃
attached
to C-OH



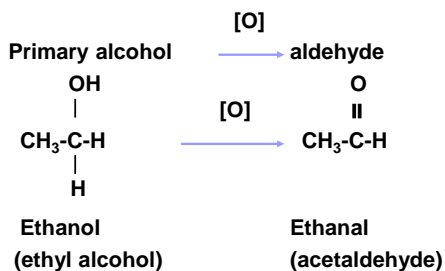
3 CH₃
attached
to C-OH

Alcohols

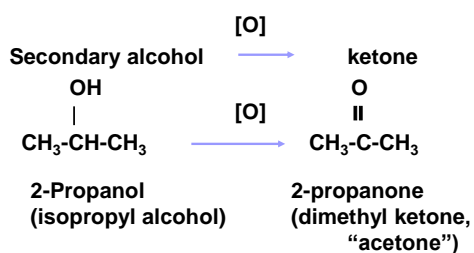
1 alcohols are oxidized to aldehydes and 2 alcohols are oxidized to ketones



Oxidation of Alcohols



Oxidation of Alcohols



Oxidation of Alcohols

