Chap 14
Aldehydes, and ketones

Both contain a carbonyl group.

Ex. list in order from high boiling point to low.

Slightly water soluble.

1. Nomenclature-
   a. replace –e with –al for aldehydes and –one for ketones.
   b. Name the chain and number closest to aldehyde or ketone.

2. Reactions
   a) oxidations- ketones don’t oxidize. Aldehydes can use KMnO₄, H₂O, OH⁻ or H₂CrO₄. Aldehydes oxidize all the way to carboxylic acids.

b) Benedict’s test. A test for aldehydes, usually in sugars.
Sugar (aldose) + $2\text{Cu}^{2+}$ $\rightarrow$ oxidized sugar + Cu$_2$O

c) Reductions-

\[\text{R} - \text{R}' + \text{H}_2 \xrightarrow{\text{Pt}} \text{R} - \text{CH}_2\text{R}' + \text{alcohol}\]

Ex.

\[\text{H}_2\text{CO}_2\text{H} + \text{H}_2 \xrightarrow{\text{Ni}} \text{OH}_2\text{OH}\]