Carboxylic Acids

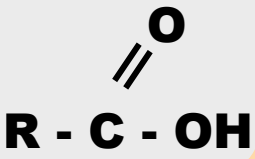
Carboxylic Acids

- A ketone is a hydrocarbon derivative that contains a ***carboxyl*** functional group at the ***end*** on the base chain.

IUPAC Names

5C- pentanoic acid
4C- butanoic acid
9 C- nonanoic acid
10 C- decanoic acid

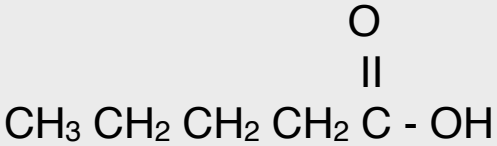
- The general formula for the series is



Naming Carboxylic Acids

1) Identify the base number of carbons.
   - The base is the longest continuous chain of carbons that contains the carboxyl group.
   - Use the number of carbons as a prefix before the suffix **-oic acid**
2) Since the carboxyl group is always at the end, it's location doesn't have to be provided. The carbon that contains the carboxyl group is always carbon 1.
3) Name any additional side chains and identify their positions using numbers.

Example:



Answer: pentanoic acid

Drawing Carboxylic Acids

1) Start by drawing the base chain. Draw the number of carbons as indicated by the prefix.
2) Add the carboxyl group to the appropriate carbon.
3) Add any indicated double or triple bonds.
3) Add any indicated side chains.
4) Saturated the remaining carbons

Example: 3-methylbutanoic acid

Answer: