

# Hydrocarbons

Hydrocarbons are molecules that contain only Carbon and Hydrogen

Can be found in all states:

Solid – ex. Candle wax

Liquids – ex. Butane

Gases – ex. Propane

There is a large variety of compounds because Carbon can form 4 bonds with other atoms, and can single, double or triple bond with another carbon.

Hydrocarbons can be straight chains, branched chains or rings.

Examples:

Hydrocarbons are broken into 3 major families:

1. Alkanes – only single bonds between C's
2. Alkenes – at least 1 double bond
3. Alkynes – at least 1 triple bond

## Naming Hydrocarbons:

Prefix – Tells you how many C's are in the chain:

Number	Prefix
1	meth
2	eth
3	prop
4	but
5	pent
6	hex
7	hept
8	oct
9	non
10	dec

Ending – “ane” = alkane

- “ene” = alkene

- “yne” = alkyne

The names of alkenes and alkynes have a number in front telling you where the double or triple bonds are.

Ex 1. Pentane

Ex 2. 1-hexene

Ex 3. 2-butyne

Condensed Structural Formulas

Ex. Octane

Drawing:

Formula:

Condensed:

Ex 2. 2-methyl propane

Drawing:

Formula:

Condensed:

Ex 3. Butane