# Alcohols

The term alkyl refers to the group of organic compounds previously referred to as hydrocarbons, specifically alkanes. We will also use the shorthand symbol of "R" instead of writing out a hydrocarbon chain.

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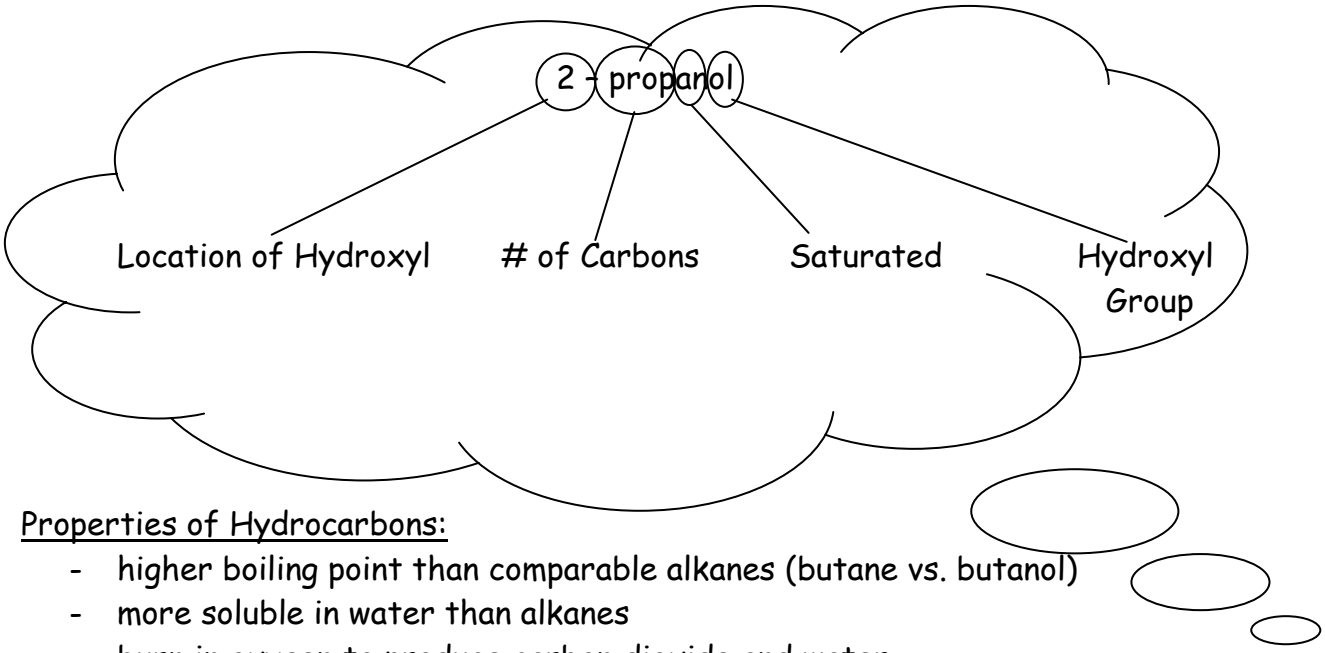
## Alcohols

Alcohols take the general form of:

R – O – H or 


The functional group that is common to all alcohols is the –OH (hydroxyl) group. An alcohol consists of a hydrocarbon chain with a hydroxyl attached somewhere on the chain of hydrocarbons.

## Naming Alcohols/Determining Formulas:

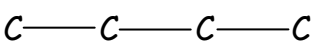



## Properties of Hydrocarbons:

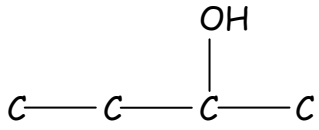
- higher boiling point than comparable alkanes (butane vs. butanol)
- more soluble in water than alkanes
- burn in oxygen to produce carbon dioxide and water

**Example 1:** Draw the structural diagram and determine the formula for 2-butanol.

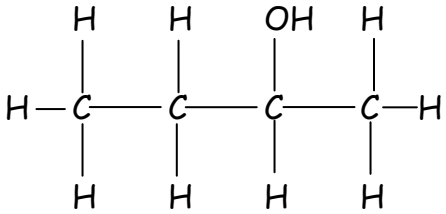
Step 1: draw carbon backbone:



Step 2: add –OH Group in appropriate position



Step 3: fill in remaining positions with hydrogen bonds



or

$CH_3CH(OH)CH_2CH_3$ or $C_4H_9OH$

**Example 2:** Write the name of the alcohol that has the condensed structural formula $CH_3CH_2CH_2CH(OH)CH_3$.

Step 1: count carbon atoms to determine prefix

Step 2: look at a functional group to establish suffix.

Step 3: find functional group and count carbons to establish location.

2 – pentanol.

Hmrk pg. 206 #1 & 2