

## CHEMISTRY DAILY PLAN

**Class:**

**Date:**

**Subject: Alcohols**

**Time:**

**R - OH or  $C_nH_{2n+2}O$**

Alcohols are the hydrocarbons that have a hydroxyl group in them.

**Physical Property:** They are polar. They have higher boiling points than other hydrocarbons due to hydrogen bonds. Soluble in water but the higher the molecular weights the lower the solubility. (like dissolves like)

The normal alcohols from  $C_1$  to  $C_{11}$  are colorless and have a characteristic smell

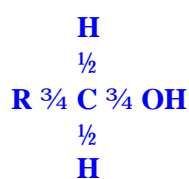
**Source:** They are mainly obtained from petroleum, natural gas, and coal. Except ethyl alcohol  $C_2H_5OH$  all others are toxic. For example, the vapor of methyl alcohol may cause blindness or death if taken internally.

Alcohols are used as a good solvents, because it is polar when they have more OH in their structure.

**Nomenclature:**

$CH_3OH$	- Methyl Alcohol	(Methanol)
$C_2H_5OH$	- Ethyl Alcohol	(Ethanol)
$C_3H_7OH$	- Propyl Alcohol	(Propanol)
$C_4H_9OH$	- Butyl Alcohol	(Butanol)
$C_5H_{11}OH$	- Pentyl Alcohol	(Pentanol)

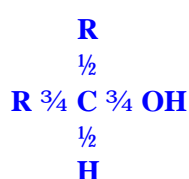
**With one hydroxyl group: (Monohydric Alcohols)**



1° Alcohol

Primary Alcohol

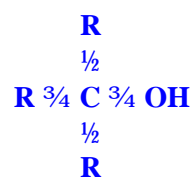
n - Alcohol



2° Alcohol

Secondary Alcohol

Iso - Alcohol

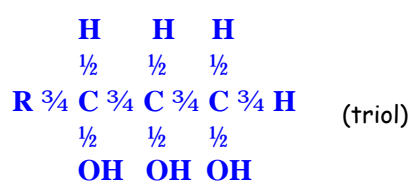
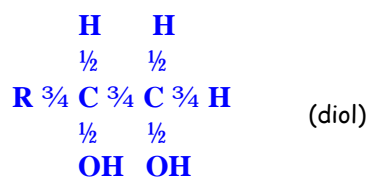


3° Alcohol

Tertiary Alcohol

Neo - Alcohol

**With more than one hydroxyl group: (Polyhydric Alcohols)**



**Example:** n-propyl alcohol, 2-butanol, 2-ethyl-1-pentanol, tert-butyl alcohol, isobutyl alcohol, 2-butene-1-ol, 1,3-propanediol, 1,2 ethanediol (glycol), 1,2,3, propanetriol (glycerol)

**Example:** If 60% of a monohydric alcohol is carbon by mass, what is the molecular formula of the alcohol?