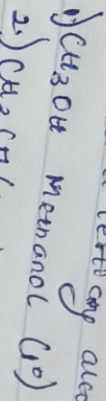


Q1

chem 102

a) Based on the number of hydrogen atoms attached to the carbon atom containing the hydroxyl group. If the numbers of hydrogen atoms attached to the carbon atom belongs to the carbon atom bearing the hydroxyl group are three or two, it is called a primary alcohol. If it's one hydrogen atom, it is called secondary group, it is called a tertiary alcohol.



b) Based on the number of hydroxyl groups they possess. Monohydric alcohols also called glycols, having two hydroxyl groups present in the alcohol structure. Polyhydric alcohols or thols have three hydroxyl groups present in the alcohol structure of the alcohol. Polyhydric alcohols or polyols have more than three hydroxyl groups.

Examples:  $CH_3CH_2CH_2OH$  propanol (monohydric alcohol)  
 $CH_2CH_2CH_2OH$  Propene-1, 2, 3-thiol (trihydric alcohol)  
 $CH_3CH_2CH_2CH_2CH_2CH_2OH$  as Glycol reagent,  
 $CH_3CH_2CH_2CH_2CH_2CH_2OH$  - C=O  
 $CH_3CH_2CH_2CH_2CH_2CH_2OH$  - C=O  
 $CH_3CH_2CH_2CH_2CH_2CH_2OH$  - C=O  
 $CH_3CH_2CH_2CH_2CH_2CH_2OH$  - C=O

Q2

Carbohydrates such as starch can be made to yield alcohol by the process of fermentation. The enzymes in yeast, break them into ethanol to yield  $C_2H_5OH$ . The starch containing both malt to  $6^{\circ}$  are converted into maltose by diastase.  $2(C_6H_{10}O_5)_n + nH_2O \xrightarrow{\text{diastase}} C_{12}H_{22}O_{11}$   
 The maltose is broken down into glucose on addition of yeast which contains maltase at  $15^{\circ}C$   
 $C_{12}H_{22}O_{11} + nH_2O \xrightarrow{15^{\circ}C / \text{maltase}} 2C_6H_{12}O_6$  glucose  
 The glucose at constant temperature of  $15^{\circ}C$  is converted to alcohol by zymase also in yeast.  
 $C_6H_{12}O_6 \xrightarrow{15^{\circ}C / \text{zymase}} 2C_2H_5OH + 2CO_2$

