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1.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 bearing the hydroxyl group are three or two, it is called a primary alcohol. If it is one hydrogen atom, it is called a secondary alcohol and if no hydrogen atom is attached to the carbon atom bearing the hydroxyl group, it is called a tertiary alcohol

e.g Methanol is a primary alcohol

2-Methylpropan-2-ol is a tertiary alcohol

Based on the number of hydroxyl groups they possess. Monoydric alcohols have one hydroxyl group present in the alcohol structure. Dihydric alcohols are also called glycols and have two hydroxyl groups present in the alcohol structure while trihydric alcohols or triols have three hydroxyl groups present in the structure of the alcohol. Polyhydric alcohols or polyols have more than three hydroxyl groups.

E.g propanol($CH_3CH_2CH_2OH$) is a monohydric alcohol

Hexane-2.4-diol($CH_3CH(OH)CH_2CH(OH)CH_2CH_3$) is a dihydric alcohol

3.The biological catalysts, enzymes found in yeast break down the carbohydrate molecules into ethanol to give a yield of 95%. The starch containing materials include molasses, potatoes, cereals, rice and on warming with malt to 60degreescelsius for a specific period of time are converted into maltose by the enzyme diastase contained in the malt

$2(C_6H_{10}O_5)n + n\ H_2O$ --------- $n\ C_{12}H_{22}O_{11}$

Carbohydrate 60degree Celsius/diastase maltose

The maltose is broken down into glucose on addition of yeast which contains the enzyme maltase and at a temperature of 15 degree Celsius

$C_{12}H_{22}O_{11} + H_2O$ ---------- $2C_6H_{12}O_6$

Maltose maltase/15 degree Celsius glucose

The glucose at constant temperature of 15 degree Celsius is then converted into alcohol by the enzyme Zymase contained also in yeast

$C_6H_{12}O_6$ ---------- $2CH_3CH_2OH + 2CO_2$

Glucose 15 degree Celsius/zymase Ethanol

4. The reduction of an alkanal produces a primary alkanol while the reduction of an alkanone produces a secondary alkanol