class.

1) The first classification is based on the number of hydrogen atoms attach the carbon atom containing the hydroxyl group. If the number of hydrog atoms attached to the carbon atom having the hydroxyl group is three it is called a PRIMARY ALCOHOL (1°). If it has only one hydrogen atom, called SECONDARY ALCOHOL (2°) and if no hydrogen is attached to the ca atom bearing the hydroxyl group, it is called TERTIARY ALCOHOL (3°).

examples – $CH_3CH_2CH_2OH$ propanol (primary alcohol)

– CH_3OH methanol (primary alcohol)

– The second classification is based on the number of hydroxyl groups b possess. Alcohols that have one hydroxyl group are called MONOHYDRIC DIHYDRIC ALCOHOLS (GLYCOLS) have two hydroxyl groups while TRIHYD ALCOHOLS (TRIOLS) have three hydroxyl groups in the alcohol structure. PO ALCOHOLS (POLYOLS) have more than three hydroxyl groups.

examples – $CH_3CH_2CH_2OH$ propanol (monohydric)

2) Solubility in Alcohols; Lower alcohols with up to three carbon atoms in their molecules are soluble in water because these lower alcohols can form hydrogen bond with water molecules. The water solubility of alcohols decreases with increasing relative molecular mass. All monohydric alcohols are soluble in organic solvents. The solubility of simple alcohols and polyhydric alcohols is largely due to their ability to form hydrogen bonds with water molecules.

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

$$\underset{\text{carbohydrate}}{2(C_6H_{10}O_5)_n} + nH_2O \xrightarrow[60^\circ c/\text{diastase}]{} \underset{\text{maltose}}{n(C_{12}H_{22}O_{11}}$$

the maltose is broken down into glucose on addition of yeast which co the enzyme maltase and at a temperature of 15°c

$$\underset{\text{maltose}}{C_{12}H_{22}O_{11}} + H_2O \xrightarrow[\text{maltase}]{15^\circ C} 2(C_6H_{12}O_6$$

the glucose at constant temperature of 15°c is then converted into by the enzyme Zymase contained in yeast.

$$\underset{\text{glucose}}{C_6H_{12}O_6} \xrightarrow[\text{Zymase}]{15^\circ C} \underset{\text{ethanol}}{2CH_3CH_2OH} + 2CO_2$$

f)

propan-1-nogorglyttlan

propan-1-ol ⇒ propan-2-ol

8) $CH_3CH_2CH_2OH + H_2SO_4 \longrightarrow CH_3CH_2CH_2OH_2OSO_3H \xrightarrow{-H_2O}$

$CH_3CH_2CH_2OSO_3H \xrightarrow{-H_2SO_4} CH_3CH=CH_2$

propp-1-ene

$H^+ OH^- + CH_3CH=CH_2 \rightarrow CH_3-CH(OH)-CH_3$

propan-2-ol