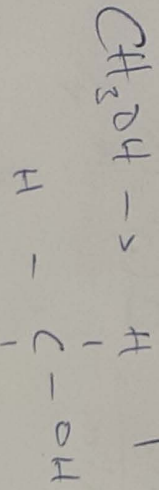


Alcohols

Alcohols can be classified based on

- i Number of hydrogen atoms attached to the carbon atom
 - Primary alcohol - 1 hydrogen and two other - three hydrogen
 - Secondary alcohol - 2 hydrogen and one other - three hydrogen
 - Tertiary alcohol - 3 hydrogen and no other - three hydrogen



Methanol (1°)

Number of hydroxyl groups they possess

Primary alcohols have one hydroxyl group, secondary alcohols have two hydroxyl groups, tertiary alcohols have three hydroxyl groups

Based Example

$$OH - \begin{array}{c} | \\ C - \\ | \\ H \end{array} - \begin{array}{c} | \\ C - \\ | \\ H \end{array} - OH$$

→ Methanol, 1-2, etc

Primary alcohol

2 Water

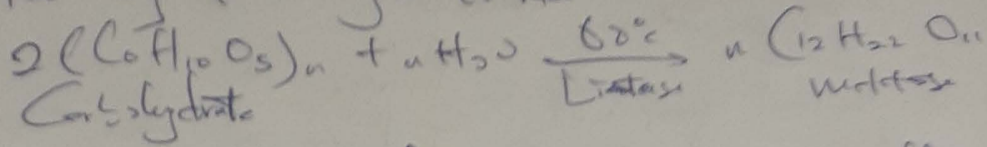
Lower alcohols with up to five carbon atoms in linear molecules are soluble in water because these lower alcohols can form hydrogen bonds with water molecules. The water solubility decreases with increasing relative molecular mass

Organic Solvent

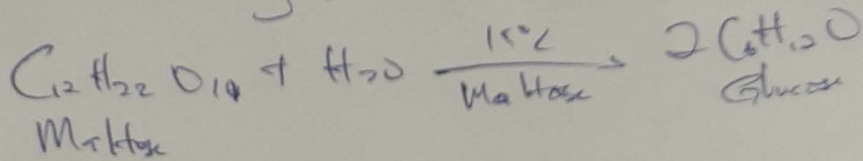
All unsaturated alcohols, in soluble in organic solvents

The solubility of small alcohols and polyhydroxy alcohols is largely due to their ability to form hydrogen bonds with water molecules

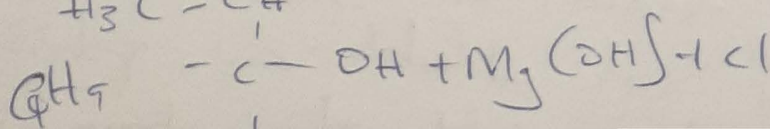
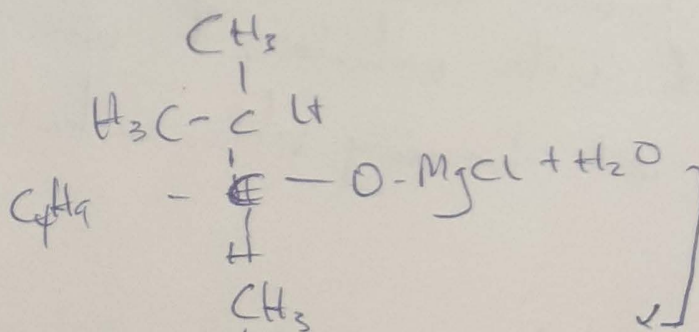
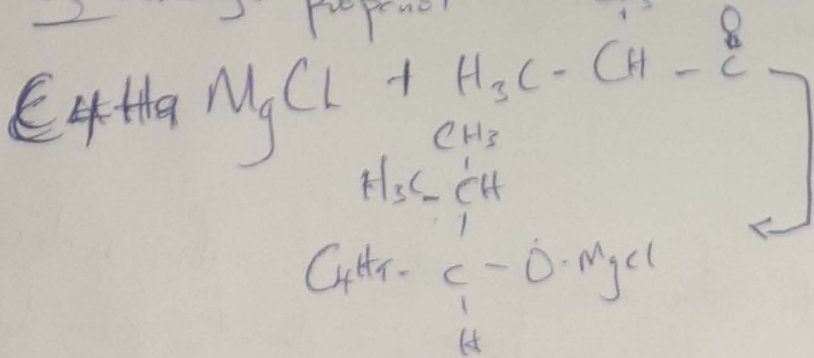
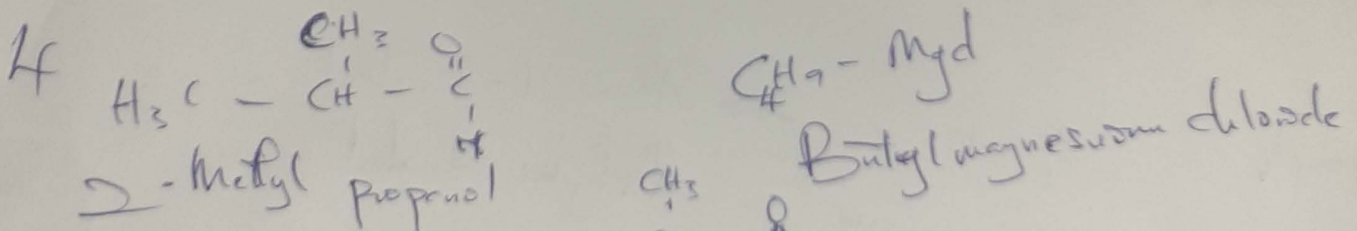
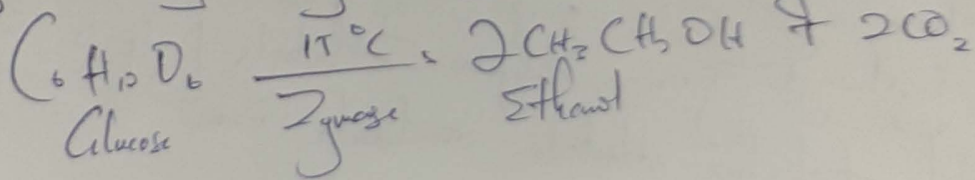
3 Manufacture of ethanol Industrially Starch containing carbohydrates including molasses, potatoes, cereals, etc are warmed with water at 60°C for a specific period of time and converted into maltose by the enzyme diastase contained in the malt



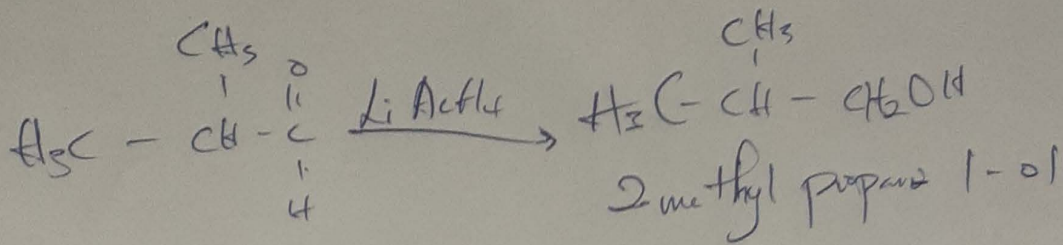
The maltose is broken down into glucose on addition of yeast which contains the enzyme maltase and at temperature of 15°C



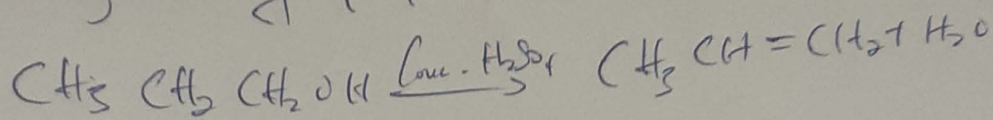
The glucose at constant temperature of 15°C is then converted into alcohol by the enzyme Zymase contained also in yeast



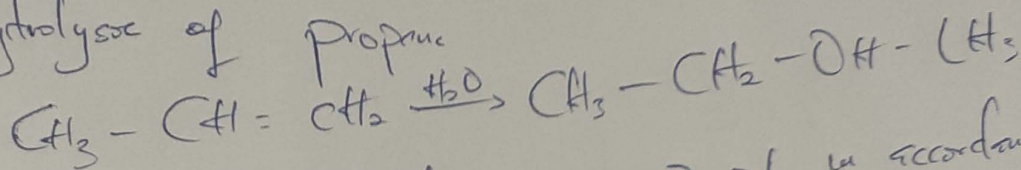
7 Reduction of 2-methyl Propanal



8 Dehydration of Propan-1-ol



ii) 4 Hydrolysis of Propene



Propene is hydrolyzed to propan-2-ol in accordance with Markovnikov's addition which states that in an unsymmetrical reagent the negative part of the reagent gets attached itself to the carbon atom of the alkene which has less number of hydrogen atoms.