(8) $CH_3CH_2CH_2OH \xrightarrow[375^\circ C]{Al_2O_3} CH_2=CHCH_3$

Propan-1-ol. Propene.

$CH_2=CHCH_3 + H_2SO_4 \longrightarrow CH_3CH(OSO_3H)CH_3$

$H_2SO_4 + CH_3CH(OH)CH_3$

Propan-2-ol

$C_8H_{14}O$
C_3H_5OH.

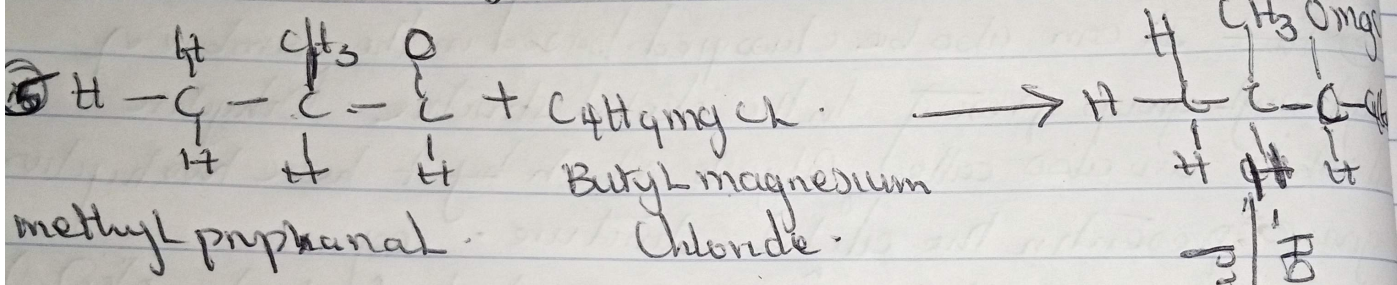
$$2(C_6H_{10}O_5)_n + nH_2O \xrightarrow[\text{Diastase}]{60^\circ C} nC_{12}H_{22}O_{11}$$
maltose.

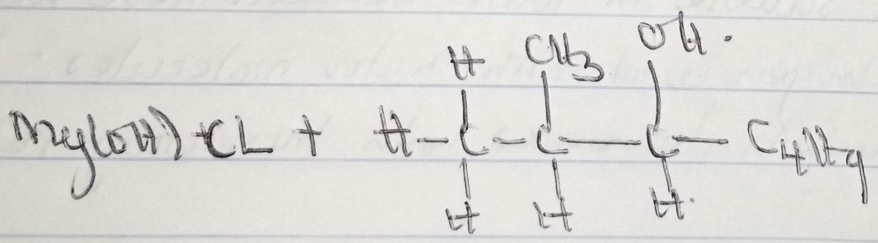
The maltose is broken down into glucose in addition of yeast which contains the enzyme maltase and at a temperature of 15°C.

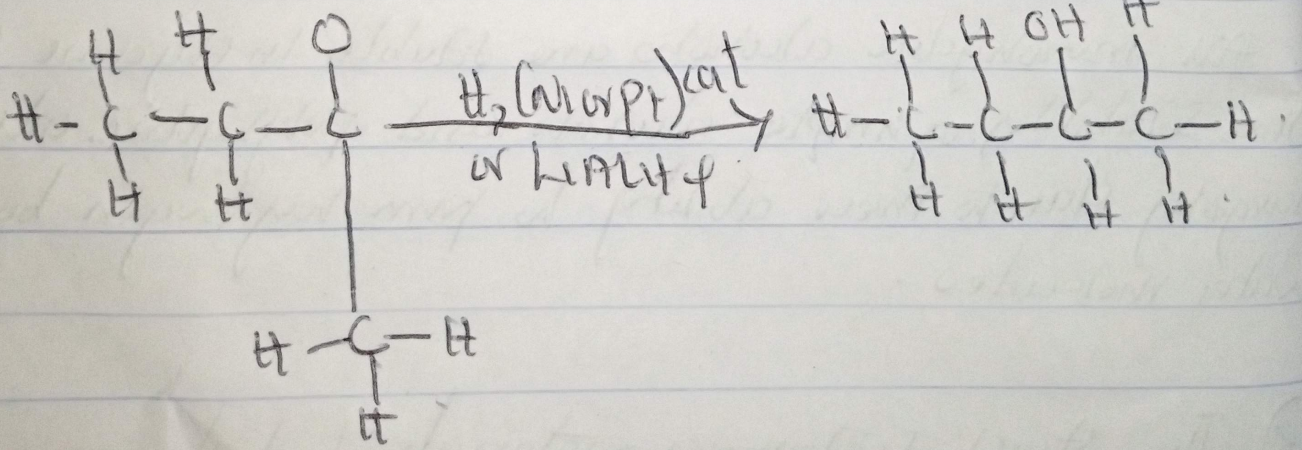
$$C_{12}H_{22}O_{11} + H_2O \xrightarrow[\text{maltase}]{15^\circ C} 2C_6H_{12}O_6$$
Maltose. glucose.

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

$$C_6H_{12}O_6 \xrightarrow[\text{Zymase}]{15^\circ C} 2CH_3CH_2OH + 2CO_2$$
Glucose. Ethanol







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(1) Alcohols can be classified based on two way.

(a) Alcohols can be classified based on the number of hydrogen atoms attached to the carbon atom containing the hydroxyl group. If the numbers of hydrogen atom attached to the carbon bearing the hydroxyl group are three or two it is called Primary alcohol and if it is one hydrogen atom it is called Secondary alcohol and if no hydrogen atom is attached it is called a tertiary alcohol. eg CH_3CH_2OH (Primary)

(b) It can also be classified based on the number of hydroxyl group present in the alcohol structure. Dihydric alcohols are also called Glycols which have two hydroxyl groups present in the alcohol structure. eg. $HO(CH_2)_2OH$ — Ethane 1, 2 diol. Dihydric alcohols.

(c) 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 solvent. The solubility of simple alcohols and polyhydric alcohols is largely due to their ability to form hydrogen bonds with water molecules.

(3) The starch containing materials include rice, potato and on warming with malt to 60°C for a specific period of time are converted to maltose by the enzyme diastase contained in the malt.