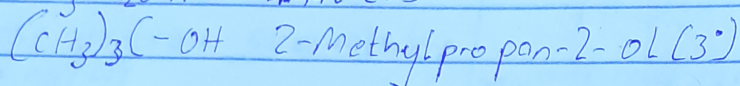
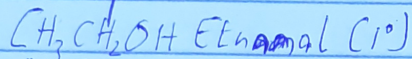


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1 The two major classification of Alkanols are:

④ This is based on the number of the hydrogen atoms attached to the carbon atom containing the hydroxyl group. They are three different forms which are primary alcohol (1°); if the numbers of hydrogen atoms attached to the carbon atom bearing the hydroxyl group are three or two. Secondary alcohol (2°); if it is one hydrogen atom is attached to the carbon atom bearing the hydroxyl group and Tertiary alcohol (3°), if no hydrogen atom is attached to the carbon atom bearing the hydroxyl group.

Examples

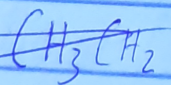
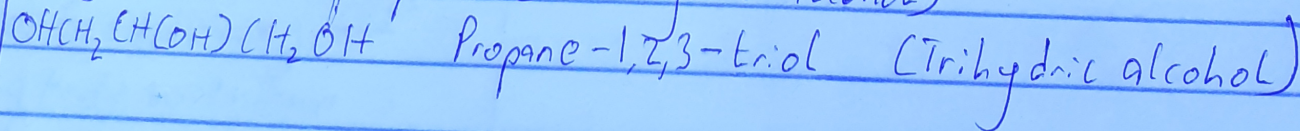
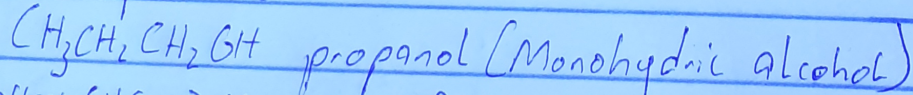


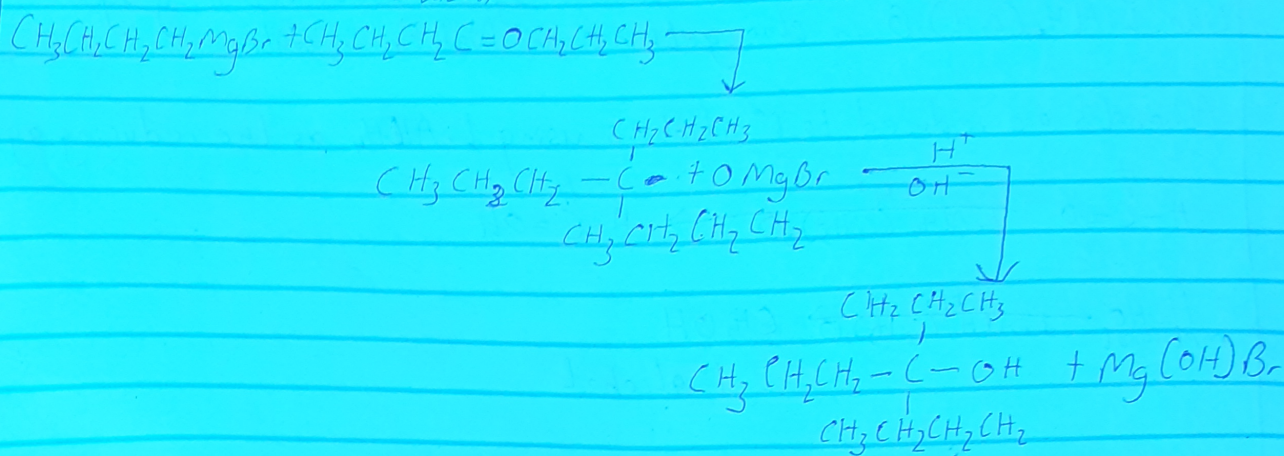
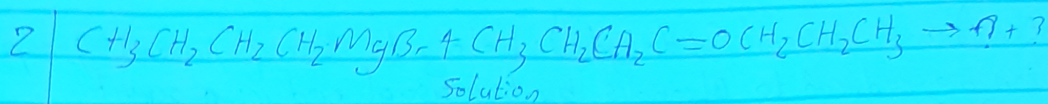
⑤ This is based on the number of hydroxyl groups they possess.

Monohydric alcohols have one hydroxyl group present in the alcohol structure. Dihydric alcohols are also called glycols have two hydroxyl groups present in the alcohol structure while trihydric alcohols or triols have three hydroxyl group present in the structure of the alcohol.

Polyhydric alcohols or polyols have more than three hydroxyl groups.

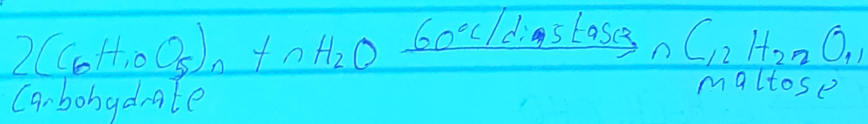
Examples are



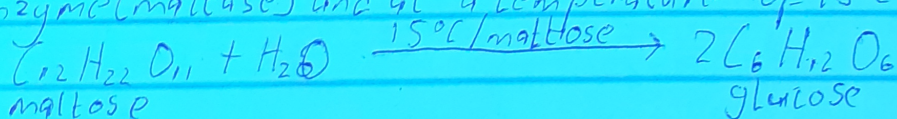


3 Carbohydrate such as starch are major group of saturated compounds that can be made to yield ethanol by the biological process of fermentation. The biological catalyst enzymes found in yeast breakdown the carbohydrate into ethanol which gives rise to 95% of the ethanol.

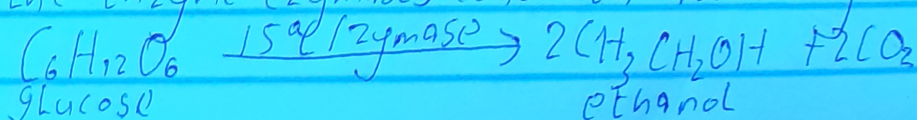
The starch containing substances with malt to 60°C for a specific period of time are converted to maltose by the enzyme diastase contained in the malt:



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

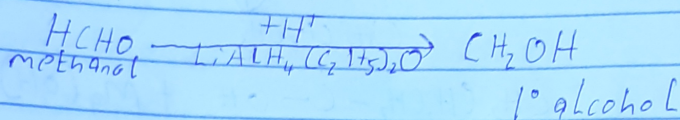
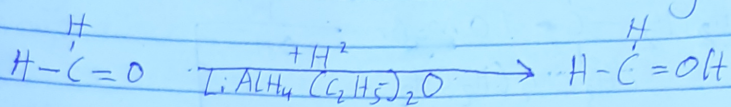


The glucose at constant temperature of 15°C is then convert to alcohol by the enzyme (zymase) contained also in yeast.



Alkanone (ketone) and Alkanal (aldehyde) belong to the functional group carbonyl and can be reduced to alcohols by the usual reducing agent like LiAlH_4 , $(\text{C}_2\text{H}_5)_2\text{O}$ in ethoxyethane or NaBH_4 in water.

Alkanal's are reduced to 1° alcohols using LiAlH_4 as the reducing agent.



Alkanone's are reduced to 2° alcohols using LiAlH_4 as the reducing agent. $\text{R}-\underset{\text{R}}{\text{C}}=\text{O}$

