

19/11/2020 MBBS LEBILE CELINE MOTUNRE  
CHEM 102 ASSIGNMENT 4

1) Alcohols can be classified based on the number of H-atoms attached to the carbon atom containing the hydroxyl group.

Primary alcohol  $\rightarrow$  Methanol

Secondary "  $\rightarrow$  Ethanol

Tertiary alcohol  $\rightarrow$  2-methyl propan-2-ol

• They can also be classified based on the number of hydroxyl group they possess.

Monohydric  $\rightarrow$  Propanol

Dihydric  $\rightarrow$  Ethane-1,2-diol

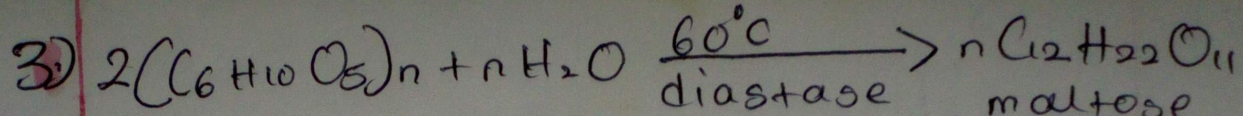
Trihydric  $\rightarrow$  propane-1,2,3-triol

Polyhydric  $\rightarrow$  Heptane-2,3,4,5,6-pentaol

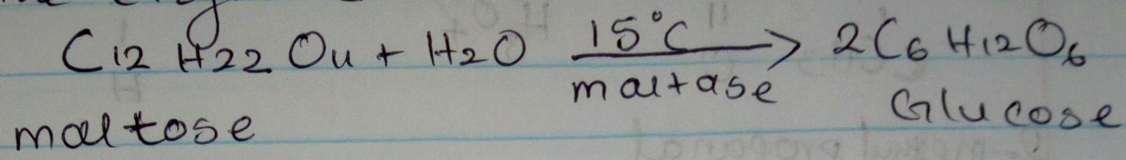
2 Lower alcohols with up to 3 C-atoms in their molecules are soluble in water because these lower alcohols can form hydrogen bond with water molecules. The water solubility of alcohols decreases with increasing relative molecular mass.

All monohydric alcohols are soluble in organic solvents.

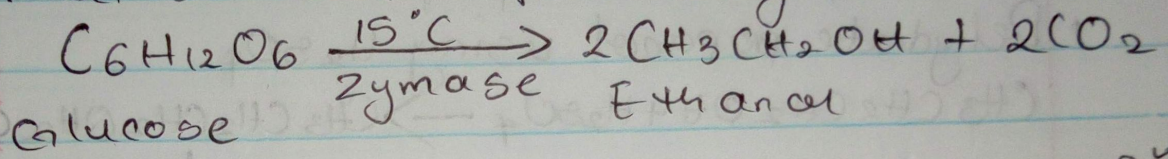




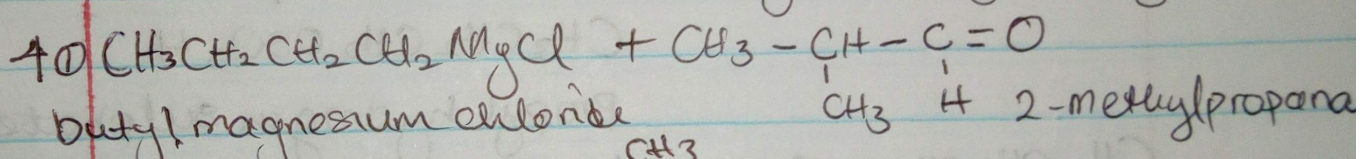
Starch containing materials are warmed with malt to 60°C, then its converted into maltose by the enzyme diastase in the malt



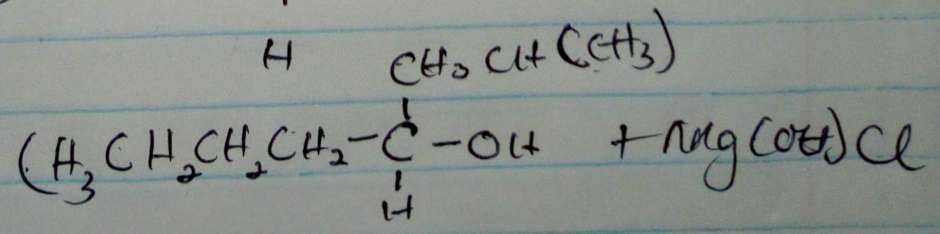
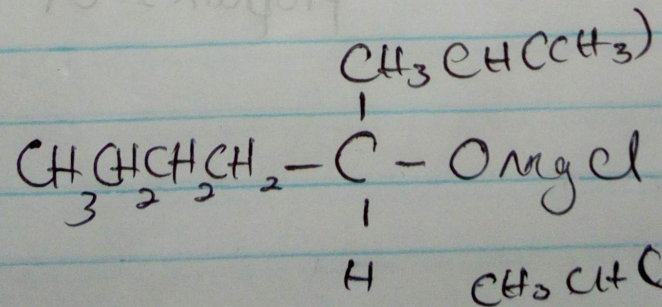
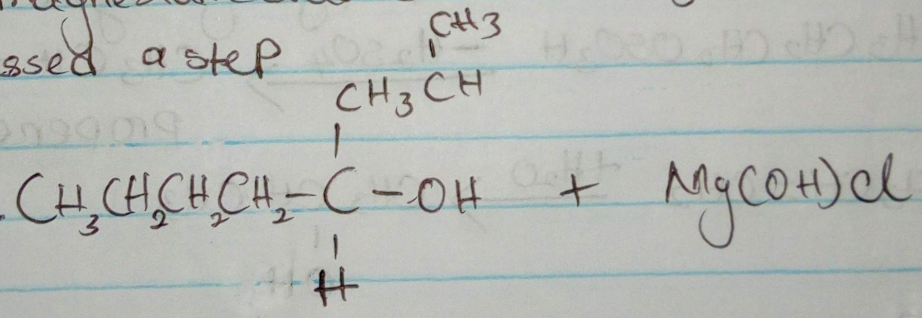
The maltose is broken down into glucose on addition of yeast which contains the enzyme maltase at a temperature of 15°C



glucose, at a constant temperature of 15°C is converted to alcohol by the enzyme Zymase



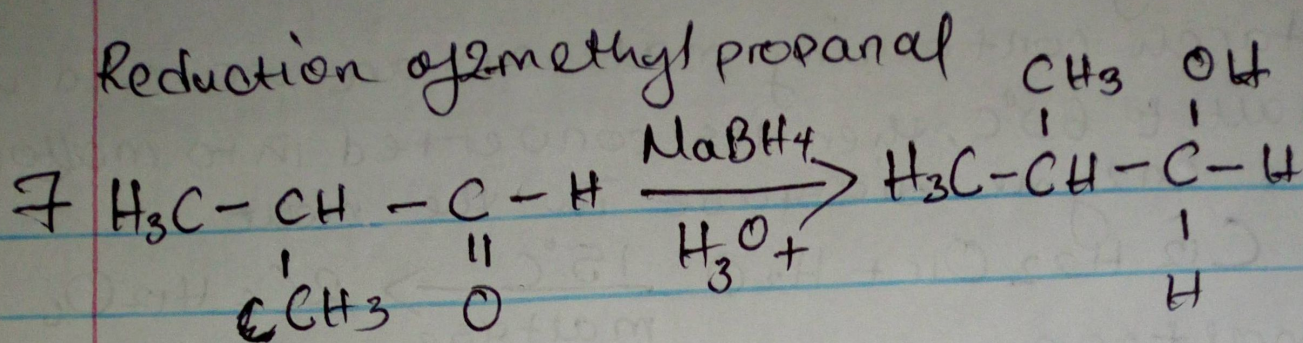
Missed a step



Octan-5-ol



Reduction of 2-methyl propanal

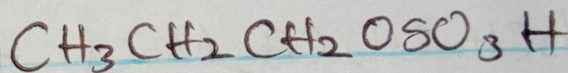
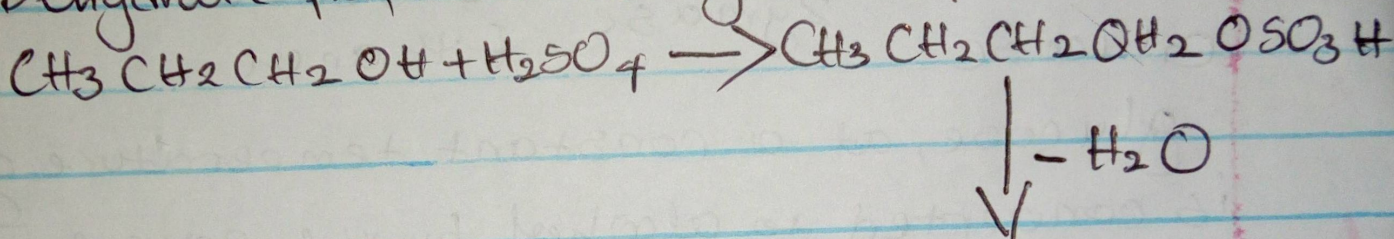


2-methyl propanal

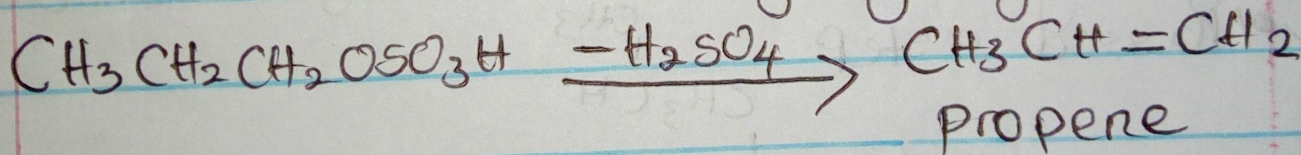
2-methyl propanol

8 Convert propan-1-ol to propan-2-ol

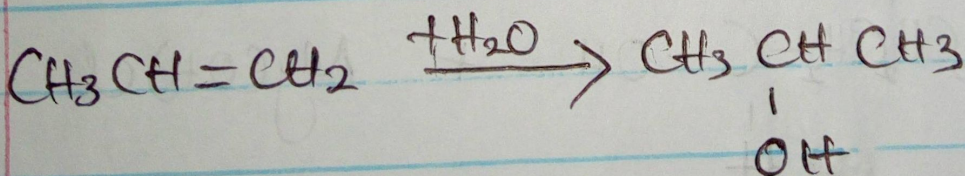
• Dehydrate propanol using  $\text{H}_2\text{SO}_4$



Propyl hydrogen sulphate



Propene



Propan-2-ol