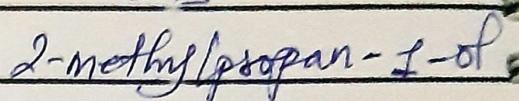
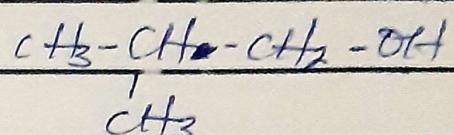
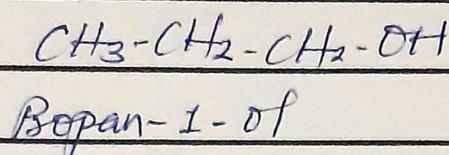
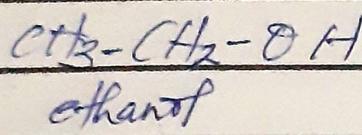


Chemistry

I(a) Primary alkanols

they are those alcohols where the carbon atom on the hydroxyl group (OH) is attached to only one single alkyl group.
Some examples include:

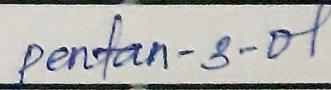
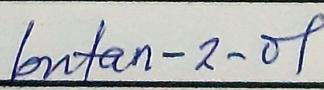
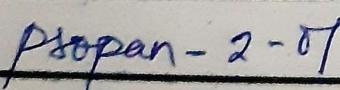
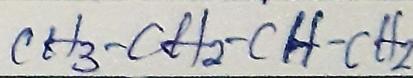
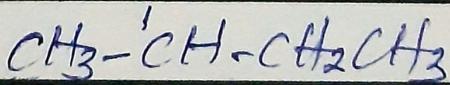
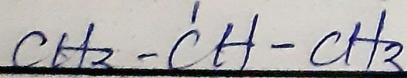


Note: The existence of only one linkage among -OH group and an alkyl group are the things that qualify any alcohol as primary.

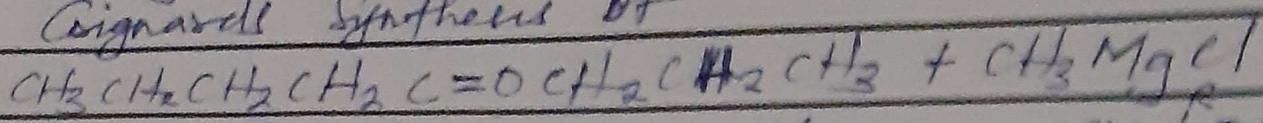
I(b) Secondary alkanols

they are those alcohols where the carbon atom of the hydroxyl group is attached to two alkyl groups on either side. The two alkyl groups present may be either structurally identical or different.

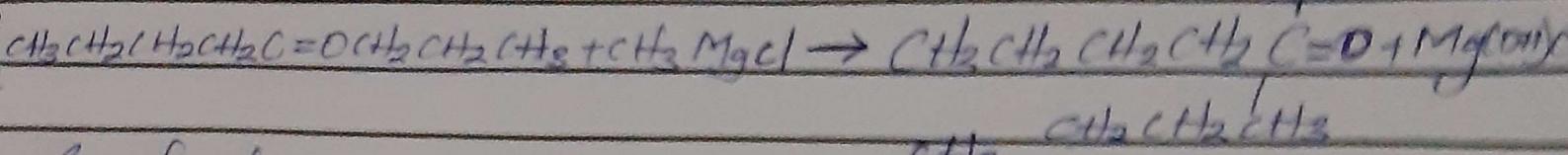
Some examples include;



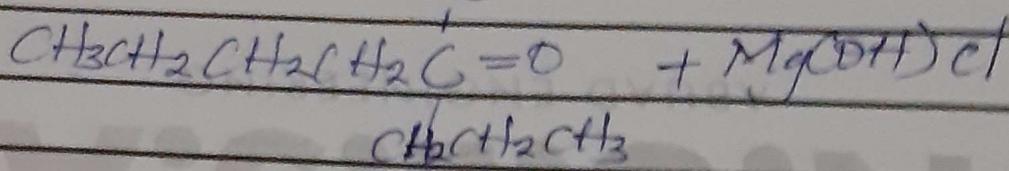
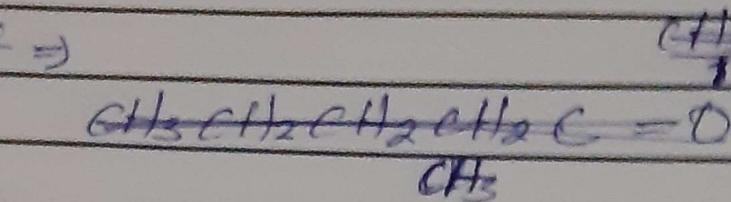
2. Using (CH_3MgCl) Methylmagnesium chloride
Grignard Synthesis of



Using the formula $RMgX + R'RC=O \rightarrow R'R'C=O + Mg(OH)_2$



Reactant \Rightarrow

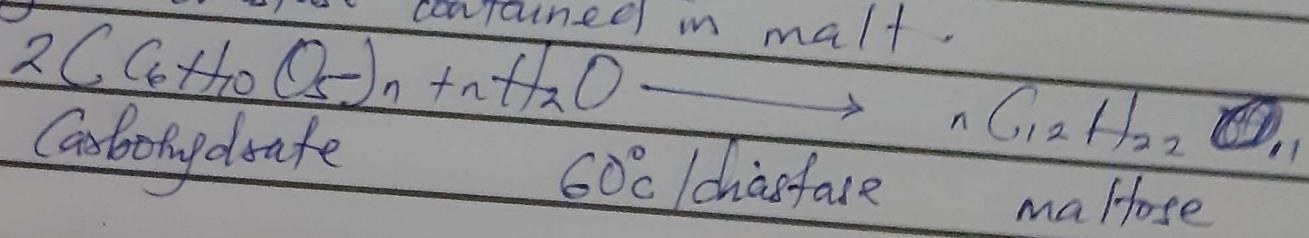


3. Industrial preparation of Ethanol.

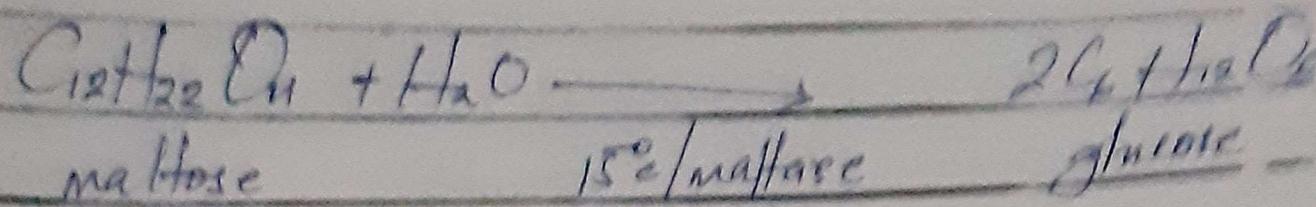
Carbohydrates such as starch are major group of natural compounds that can be made to yield ethanol by the biological process of fermentation. It yields 95% ethanol.

STEPS :

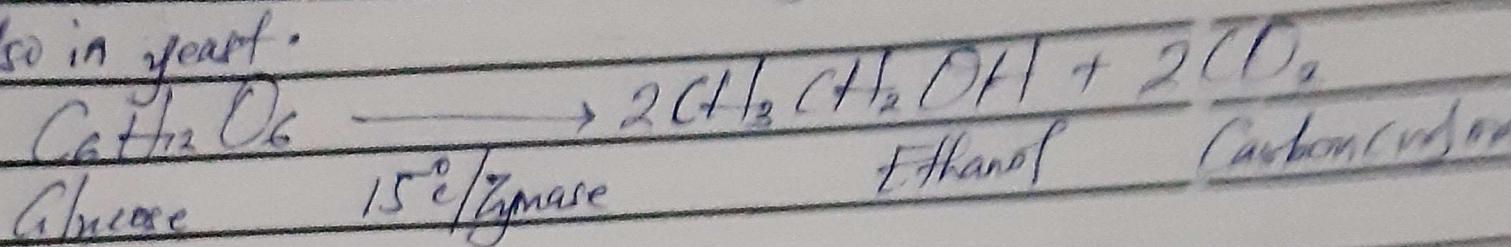
①. The starch containing material on warming with malt to $60^\circ C$ for a specific period of time are converted to maltose by the enzyme diastase contained in malt.



②. The maltose is broken down into glucose on adding yeast which contains the enzyme maltase and at a temperature of $15^\circ C$

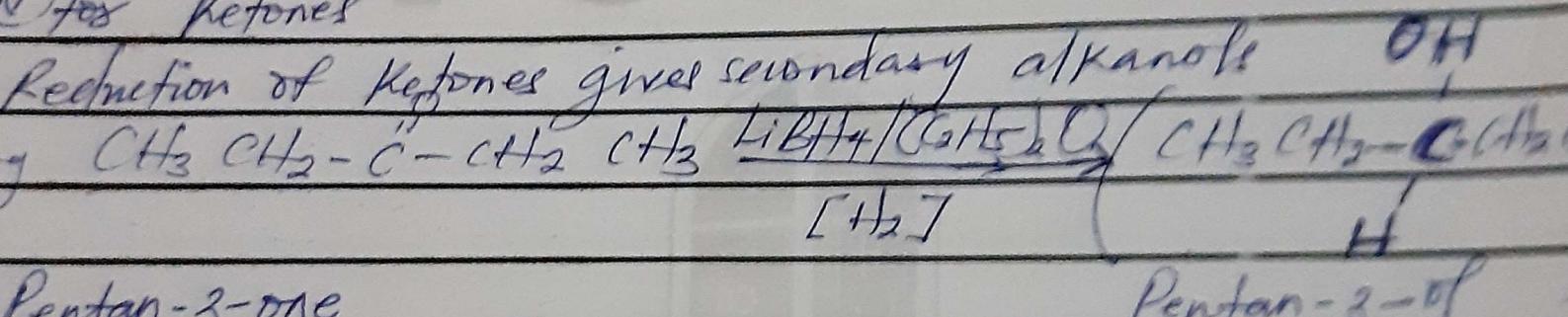


③ The glucose at constant temperature of 15°C is often converted into alcohol by the enzyme Zymase contained also in yeast.



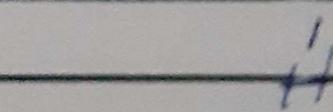
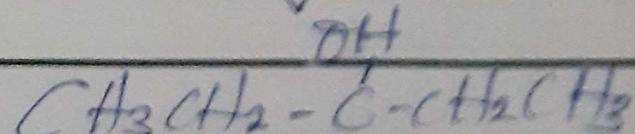
4- Reduction of Carboxylic Compounds (Alkanone and Alkanal) using Lithiumtetrahydrido aluminate (II) / ethane LiBH₄ / (C₂H₅)₂O

① For ketones



Pentan-3-one

Pentan-3-ol



fentan-3-ol

Reduction of Aldehydes gives primary alcohols

