

# Anisole :-

## (1) Preparation :-

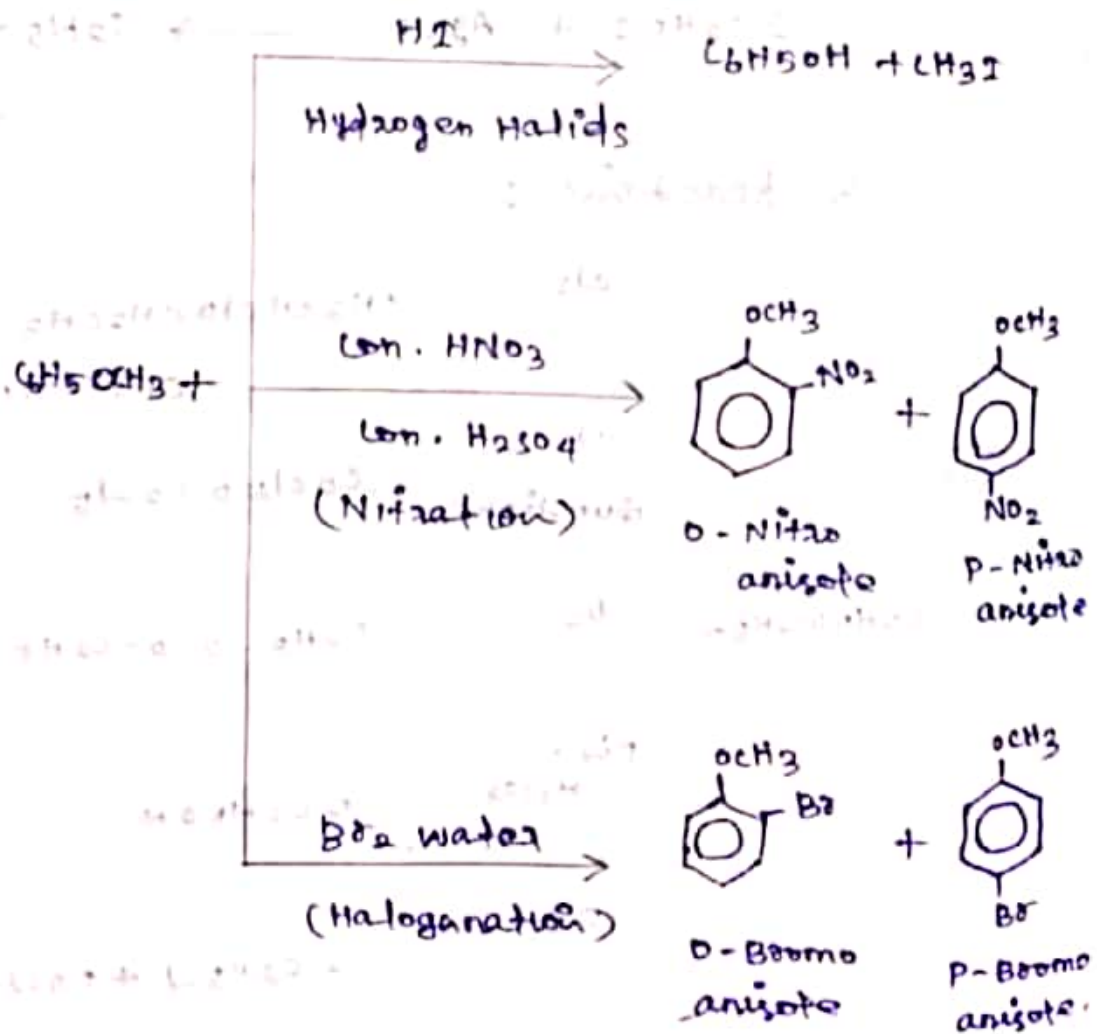
(i) Williamson Ether synthesis ;



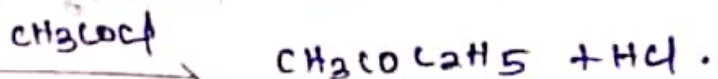
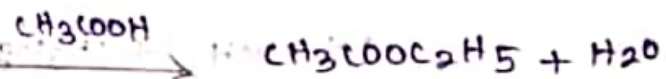
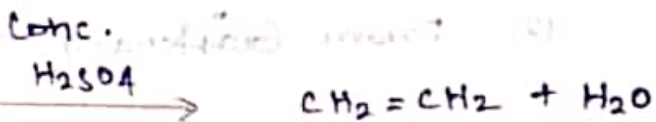
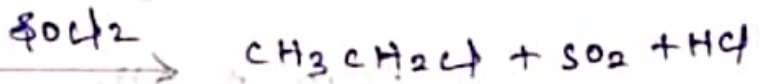
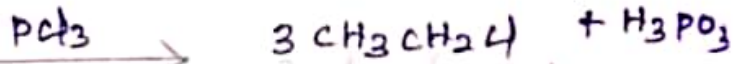
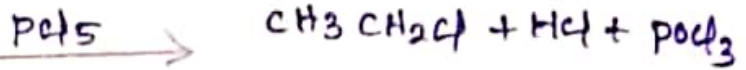
(ii) Used to Diazomethane,



## (2) Reactions :-



# Reactions of primary alcohol :-

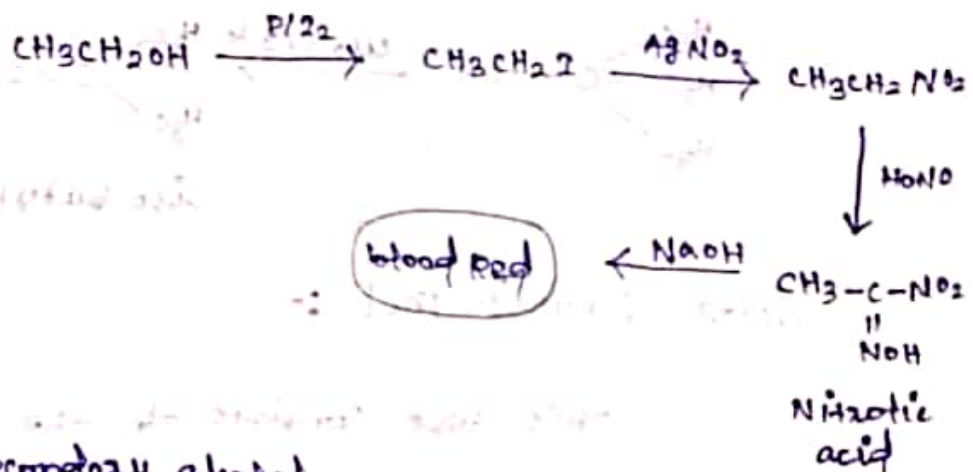


(ii) The alkyl iodides are then treated with silver nitrite to form the corresponding nitroalkanes.

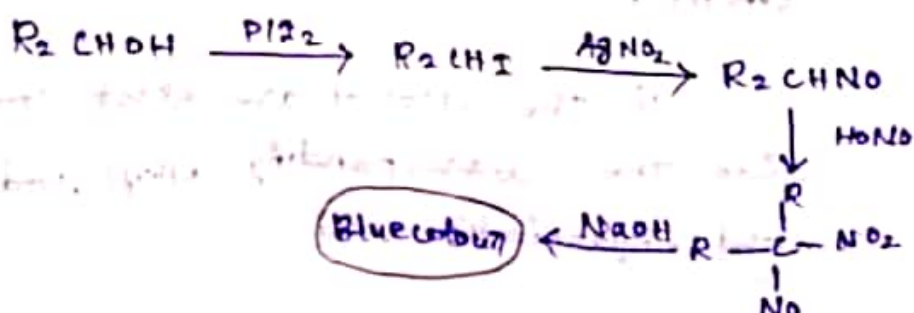
(iii) The nitroalkanes are treated with nitrous acid ( $\text{NaNO}_2 + \text{HCl}$ ) and alkali the alcohols are identified from the products formed.

Type	Colour
(1°) alcohol	blood red
(2°) alcohol	Blue
(3°) alcohol	colourless

Primary alcohol,



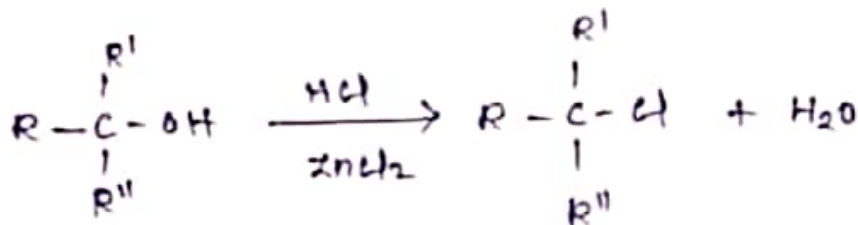
Secondary alcohol,



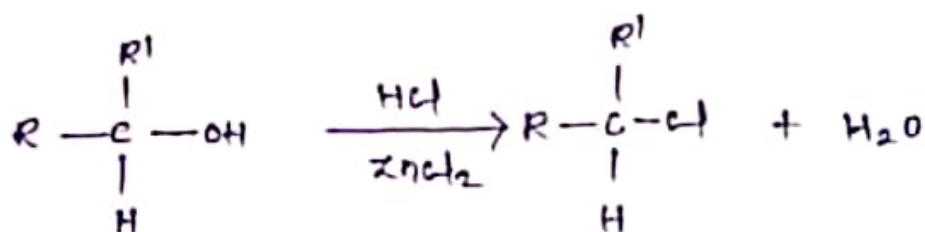
## Lucas Test :-

A mixture of  $\text{Con. ZnCl}_2$  is known as Lucas reagent. The three alcohols are treated with Lucas reagent at room temperature to convert into the corresponding alkyl chloride. The alkyl chloride formed is insoluble in the medium which is indicated by the appearance of turbidity in the reaction mixture.

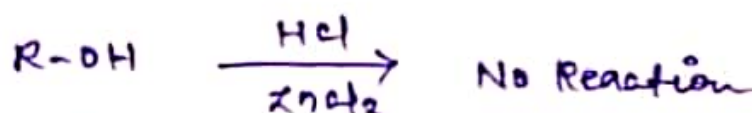
(a) With tertiary alcohol turbidity appears immediately.



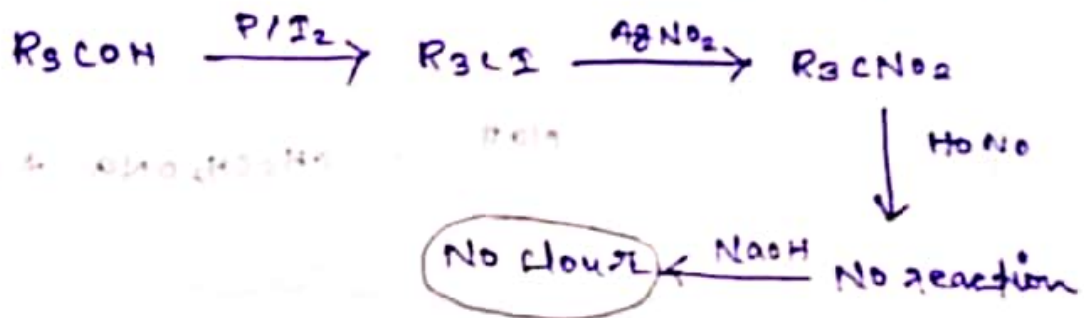
(b) With secondary alcohol turbidity appears 5 to 10 minutes.



(c) Primary alcohol do not react with Lucas reagent at room temperature.



tertiary alcohol,

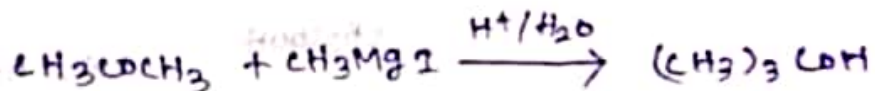
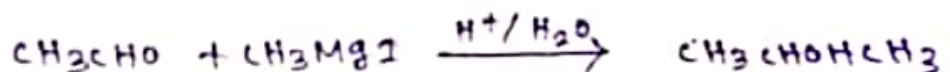
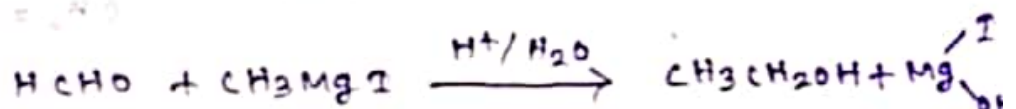


Preparation of primary alcohol :-

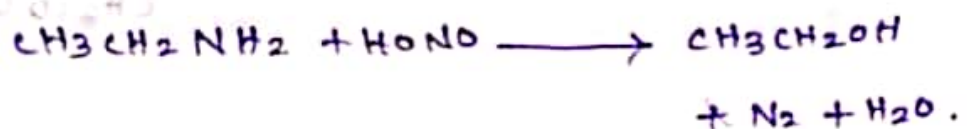
(1) Reduction of carbonyl compounds ;



(2) From Grignard reagent,



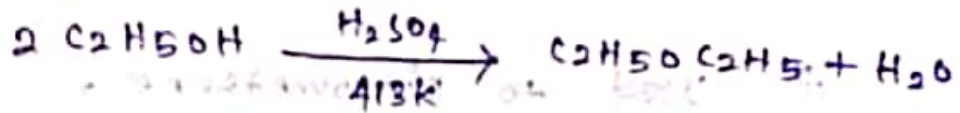
(3) From primary amines,



# Di-Ethyl - Ether :-

## (1) preparation :-

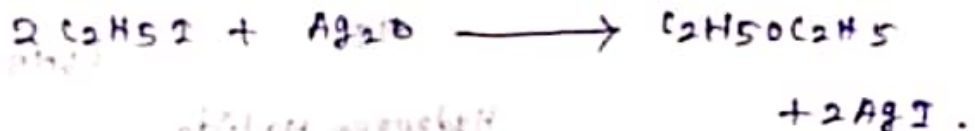
### (i) Dehydration of alcohol,



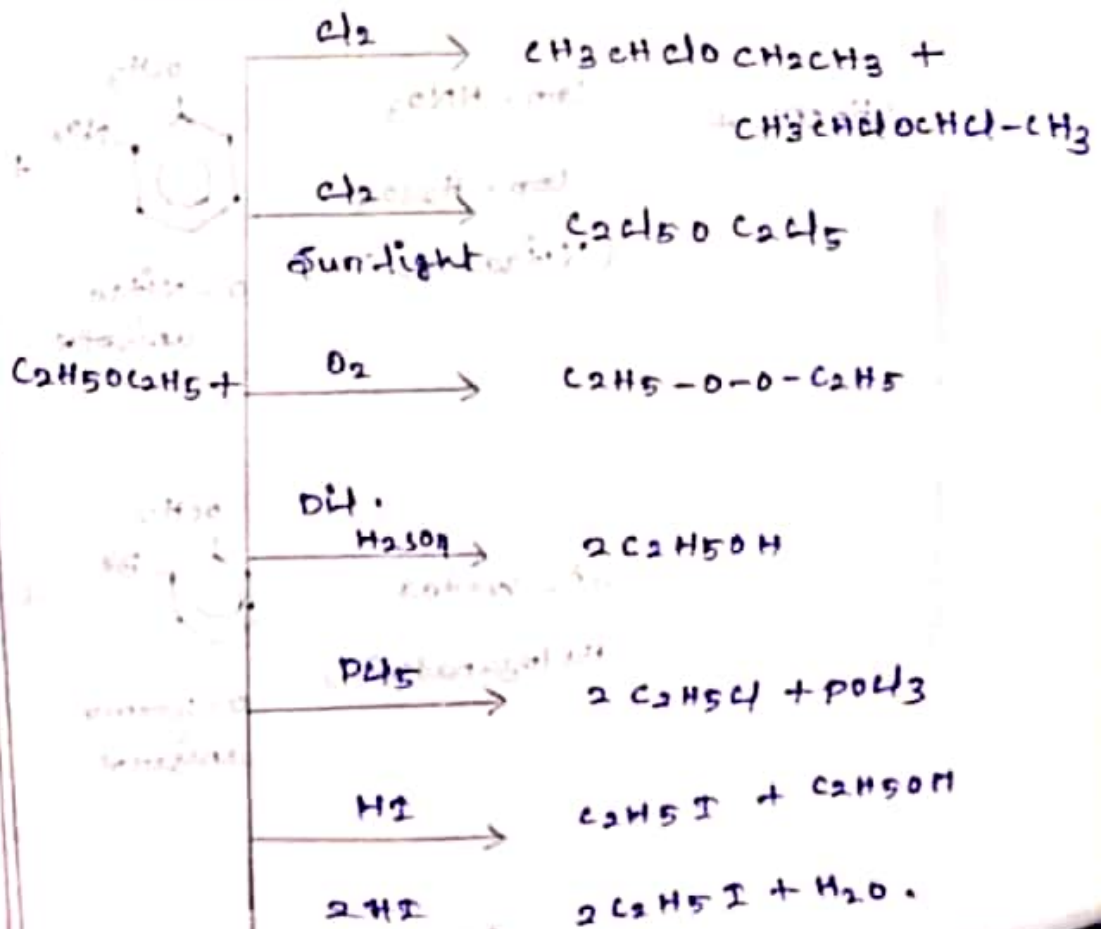
### (ii) Williamson-Ether Synthesis,



### (iii) From silver oxide,

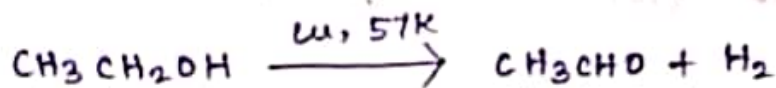


## (2) Reactions :-

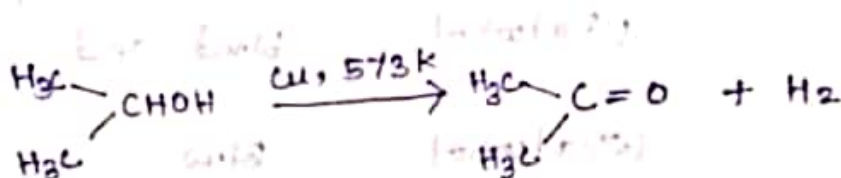


## Catalysis / dehydrogenation :-

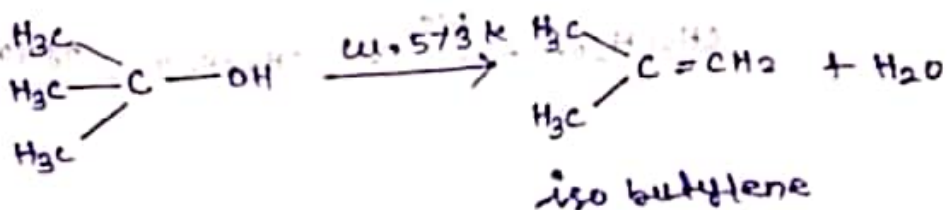
The three different classes of alcohol give different products when their vapours are passed over reduced copper at 573K.



Secondary alcohol is dehydrogenated to a ketone.



Tertiary alcohol is dehydrogenated to an alkane.



## Victor Meyer's Test :-

This test consists of the following steps.

(i) The alcohols are first converted into the corresponding alkyl iodides with cold hydroiodic acid.