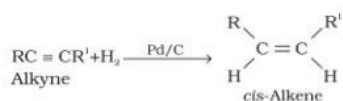


#### From alkynes:

- On partial reduction of alkyne with calculated amount of dihydrogen in the presence of Lindlar's catalyst
- On partial reduction of alkyne dihydrogen cis geometry is obtained.
- On partial reduction of alkyne with sodium in liquid ammonia form trans alkenes.

Eg.

(i)

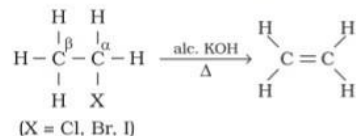


(ii)



#### From alkyl halides:

- On heating with alcoholic potash one molecule of halogen acid is eliminated to form alkenes
- The above process is called dehydrohalogenation



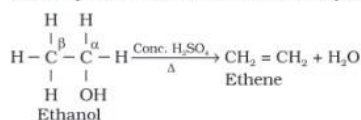
- For halogens the rate of reaction is: iodine > bromine > chlorine
- For alkyl groups the rate of reaction is: tert > secondary > primary

#### From vicinal dihalides:

- Dihalides in which two halogen atoms are attached to two adjacent carbon atoms are known as vicinal dihalides.
- Vicinal dihalides goes dehalogenation for the formation of alkenes.  
 $\text{CH}_3\text{CHBr}-\text{CH}_2\text{Br} + \text{Zn} \longrightarrow \text{CH}_3\text{CH}=\text{CH}_2 + \text{ZnBr}_2$

#### From alcohols by acidic dehydration:

- On heating alcohols with concentrated sulphuric acid
- Above process is known as acidic dehydration of alcohols

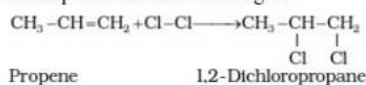


#### Physical Properties of Alkene:

- Resemble alkanes in physical properties

#### Chemical Properties of Alkene:

- Electrophilic Addition of halogens



- Addition reaction of HBr to unsymmetrical alkenes follows Markovnikov Rule

**Markovnikov rule:** It states that negative part of the addendum (adding molecule) gets attached to that carbon atom which possesses lesser number of hydrogen atoms.