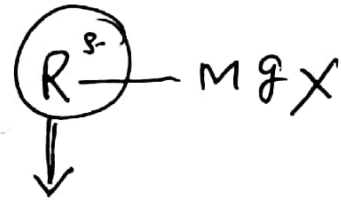
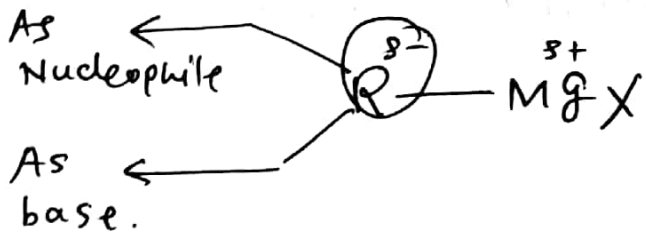


Synthetic application of Grignard reagent or Rexn's of GR:-



Nucleophilic Property

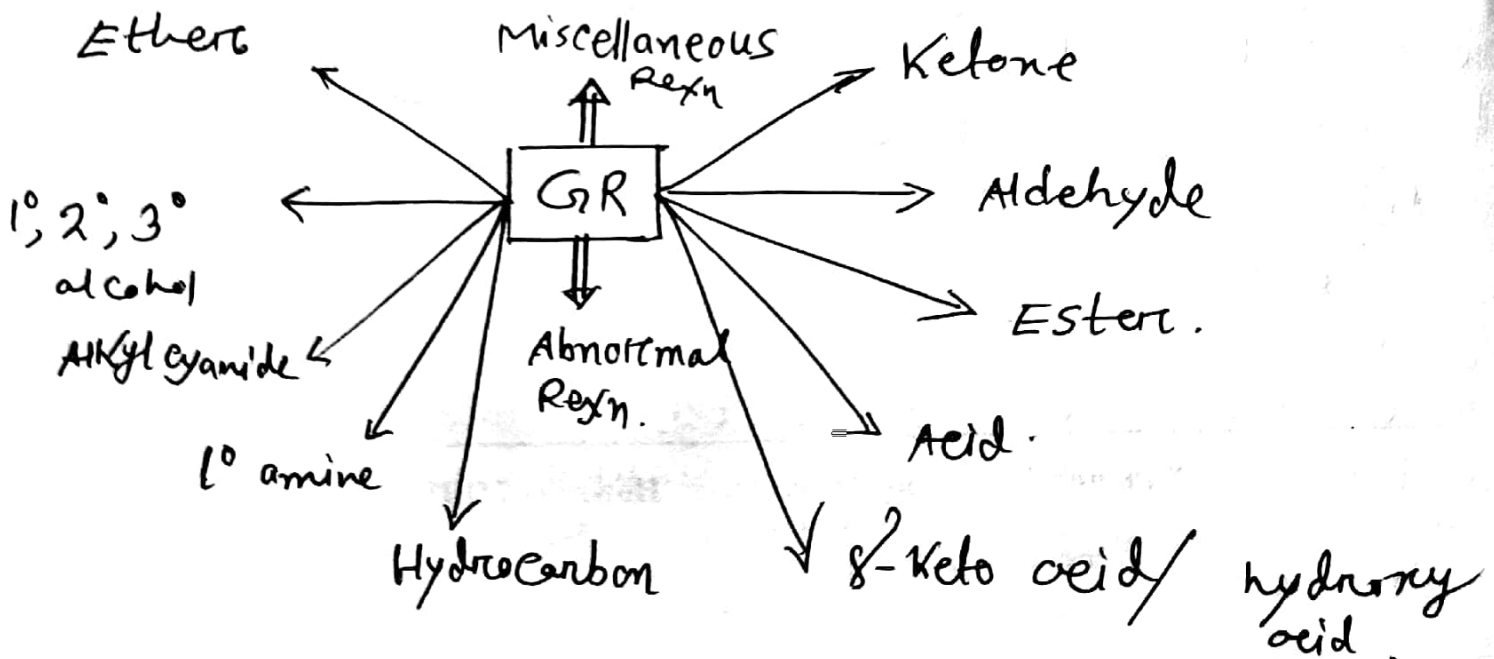
Nucleophilic addition

Nucleophilic substitution

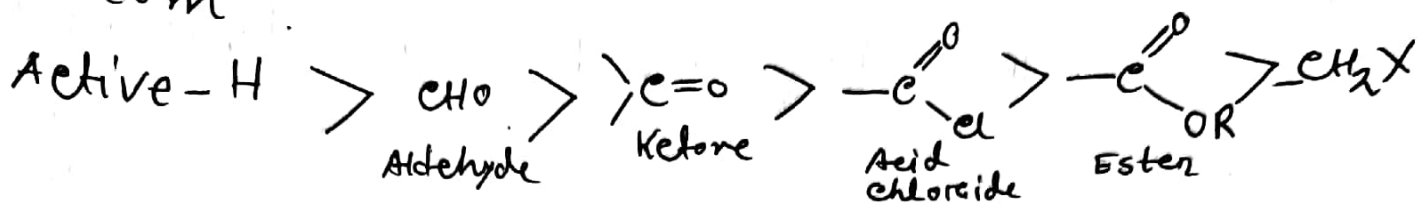
Basic Property

It abstracts active H. C such as ROH, RNH₂, enol-H, Phenol OH, acetylenic-H etc.). (very important)

Flow chart (Application of GR)

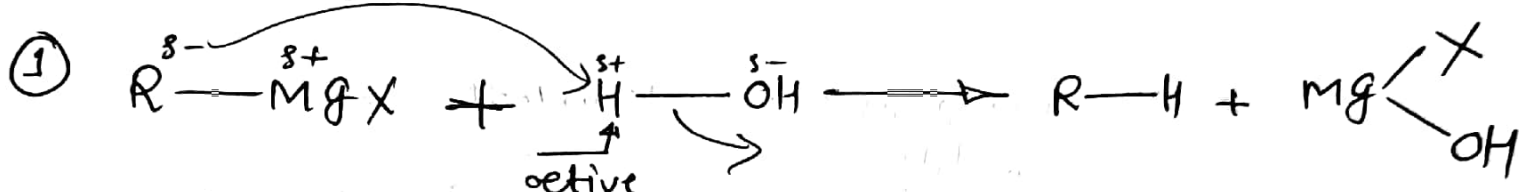


Note: Reactivity order of GR towards various functional group or reactive atom (2)

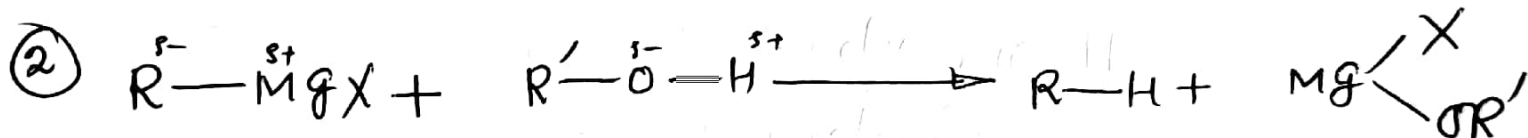


Synthesis of alkane

GR when acts as a base and abstracts active H, then alkane is formed.

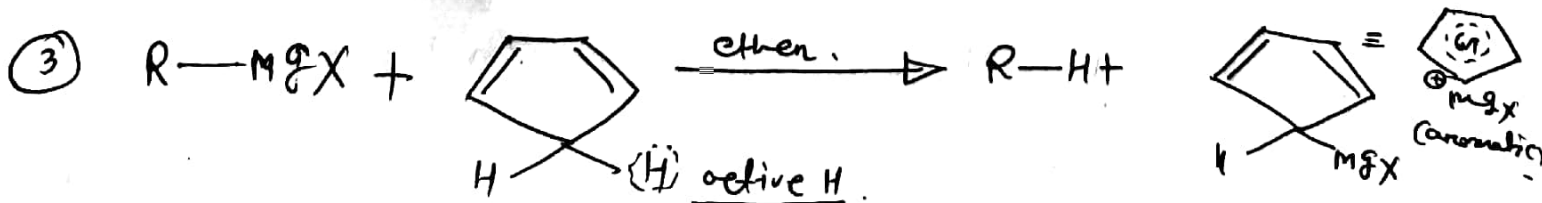


That is why GR Preparation is done under moisture free condition.



In above rxn the no. of moles of alkane i.e. formed is equal to the no. of active H present in the substrate. Thus quantitative yield of hydrocarbon (here alkane) is valuable for the determination of active H.

\implies Known as Zerewitinoff's active hydrogen determination.



③

Hydrocarbon is also formed from GR by its nucleophilic substitution rxn.

