

CHEMISTRY STUDY MATERIALS FOR CLASS 12

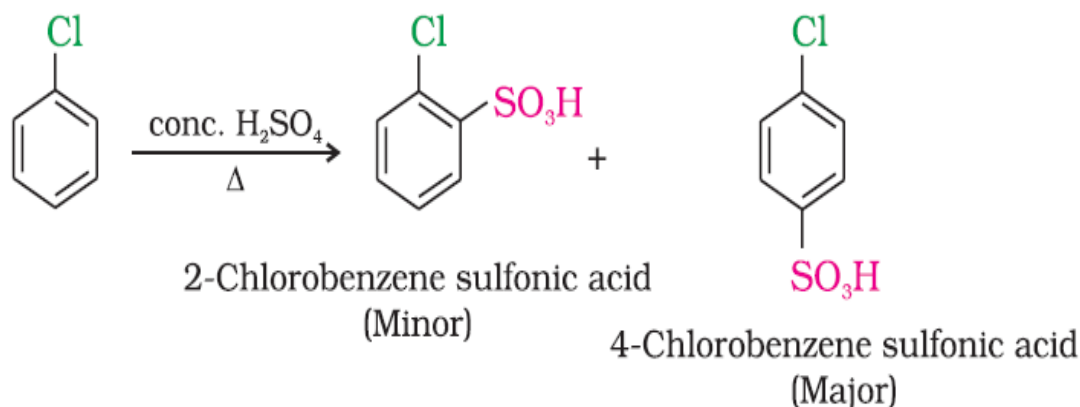
(NCERT BASED NOTES OF CHAPTER - 10)

GANESH KUMAR DATE:- 17/09/2020

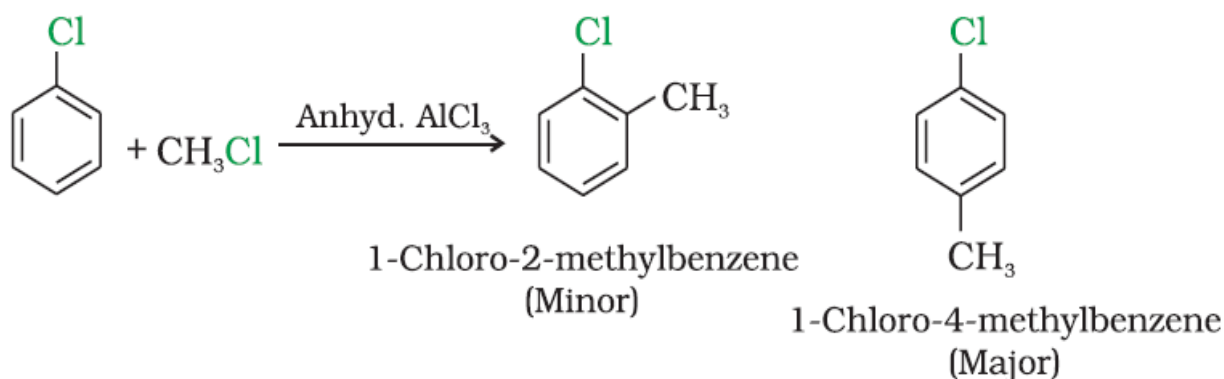
Haloalkanes and Haloarenes

Electrophilic substitution reactions:

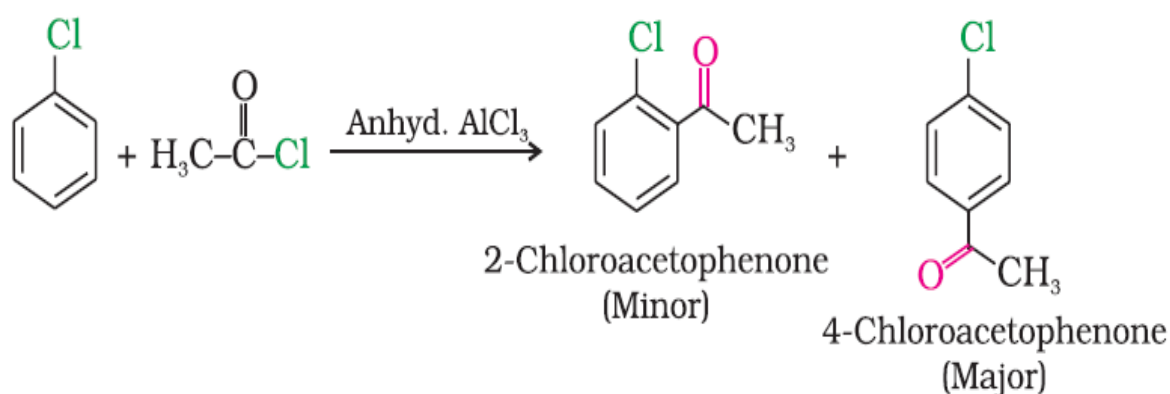
(iii) Sulphonation: On sulphonation using Conc. H_2SO_4 , chlorobenzene gives p-chloro benzenesulphonic acid as the major product.



(iv) Friedel – Crafts Alkylation: Chlorobenzene when treated with methyl chloride (CH_3-Cl) in presence of anhydrous $AlCl_3$, we get p-chlorotoluene as the major product.

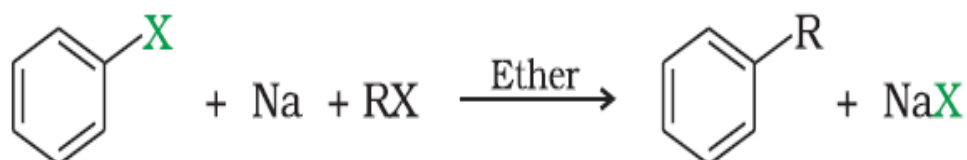


(v) Friedel – Crafts Acylation: Chlorobenzene when treated with acetyl chloride ($CH_3-CO-Cl$) in presence of anhydrous $AlCl_3$, we get p-chloroacetophenone as the major product.

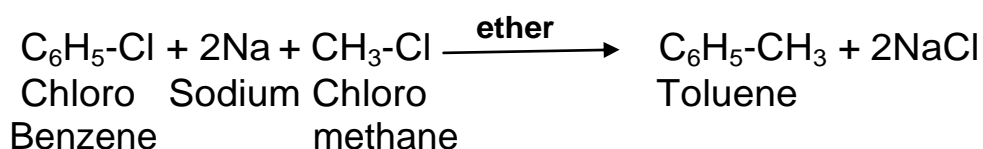


Reaction with metals:

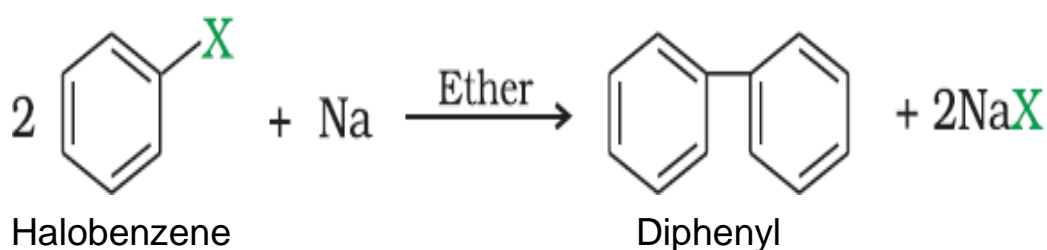
a) Wurtz-Fittig reaction: When a mixture of alkyl halide and aryl halide is treated with sodium in dry ether, an alkyl arene is formed and this reaction is called Wurtz-Fittig reaction.



For e.g. when Chlorobenzene is treated with methyl chloride in presence of metallic sodium in ether medium, we get toluene.



b) Fittig reaction: Aryl halides when treated with sodium in dry ether, we get diaryls (diphenyls). This reaction is called Fittig reaction.



*****The End*****