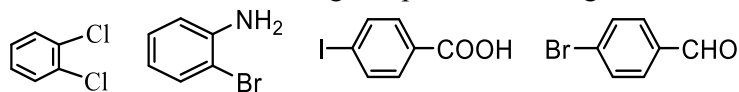


9. HALOARENES- SQS

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Introduction, Nomenclature and Isomerism

1. Write the name of the following compound according to the IUPAC rules.



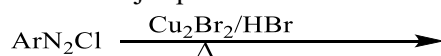
Preparation

1. From benzene (by halogenation)

2. Give the correct chemical reaction for the preparation of chlorobenzene from benzene. 1

2. From benzene diazonium chloride

3. Give an example of the *Sandmeyer* reaction. 1
4. Predict the major products of the following reactions: 1

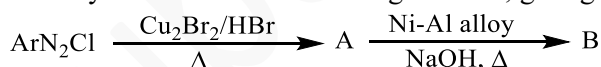


5. What products would you expect when benzene diazonium chloride is heated with copper powder in the presence of HCl? 1
6. Give the correct chemical reaction for the preparation of chlorobenzene from benzene diazonium chloride. 1
7. Write any three methods of preparation of Chlorobenzene. 3
8. Show your familiarity with Gattermann's reaction. 1

Physical Properties

Chemical Properties

9. Why are haloarenes less reactive towards nucleophilic substitution *reactions* than haloalkanes? 2
Why is nucleophilic substitution difficult in haloarenes? 3
Why is a nucleophilic substitution reaction in Chlorobenzene difficult as compared to Chloroethane? 2
Give *reasons* why haloalkanes are more reactive than haloarenes in nucleophilic substitution reactions. 2
10. What happens when Chlorobenzene is heated with alcoholic KOH?
11. What happens when Chlorobenzene is treated with Ni-Al in an alkaline medium? 1
12. How would you obtain benzene from Chlorobenzene? 2
13. Identify A and B in the following reaction, giving pertinent equations.



14. Write the chemical equation to illustrate the Wurtz-Fittig reaction. 1
15. How would you convert Chlorobenzene into Toluene? 1
16. What happens when Chlorobenzene is treated with chloral in an acidic medium?
How does Chlorobenzene react with chloral? 1
What products would you expect when Chlorobenzene is heated with 2,2,2-trichloroethanal? 1
How would you convert Chlorobenzene into DDT? 1
17. How will you carry out the following conversion: phenol to DDT? 2
18. An aromatic compound (A) undergoes Sandmeyer's reaction to give (B). The compound (B) is reduced with Ni-Al in the presence of alkali to give compound (C). The compound (C) further reacts with CH_3Cl in the presence of anhydrous AlCl_3 . The compound (B), when heated with chloral in an acidic medium, gives a common insecticide. Identify (A), (B), (C), and (D), giving complete reactions. 4
19. Why does Chlorobenzene give ortho and para products during electrophilic substitution?# 2
20. Why is haloarene less reactive than benzene in electrophilic substitution reaction?# 2

Refer to Class XI

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