

Chemistry Practical Class 12 Preparation of Acetanilide Viva Questions with Answers

Q1. What is the IUPAC name of acetanilide?

Answer: N-phenylacetamide is the IUPAC name of acetanilide.

Q2. What is an acetylating agent? Give an example.

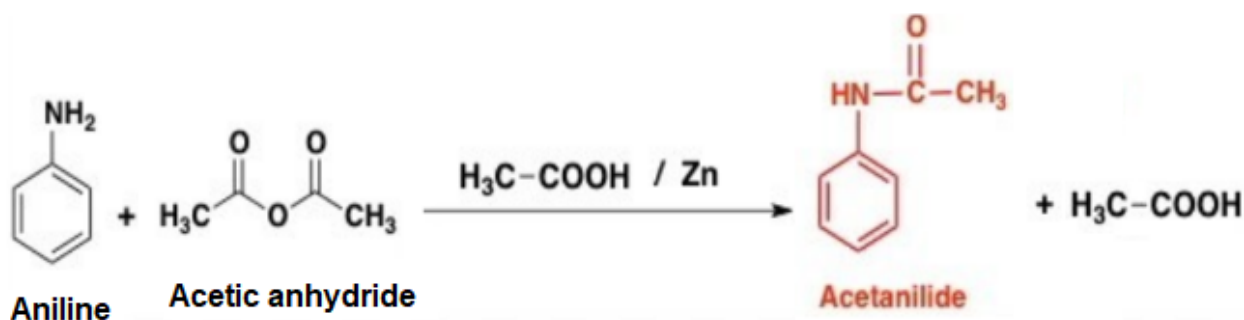
Answer: A reagent capable of bonding an acetyl group onto an organic molecule is known as an acetylating agent. Acetic anhydride and acetyl chloride are examples of acetylating agents.

Q3. What is the function of zinc dust in synthesising acetanilide?

Answer: Zinc is added to prevent the oxidation of aniline during the reaction. It also reduces the coloured impurities present in the solution.

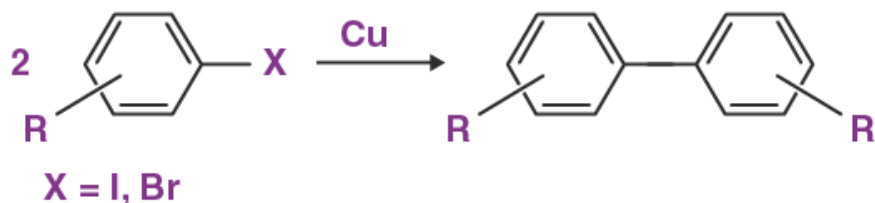
Q4. How can you synthesise acetanilide?

Answer:



Q5. What is a coupling reaction?

Answer: Coupling is an organic reaction involving the joining of two chemical species with the aid of a metal catalyst.



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Q6. Does acetanilide react with water?

Answer: Acetanilide is relatively soluble in boiling water but slightly soluble in room temperature or cold water.

Q7. What is a nitrating mixture?

Answer: A concentrated nitric acid and sulphuric acid mixture is known as a nitrating mixture.

Q8. What are the applications of acetanilide?

Answer: Acetanilide plays a vital role in organic synthesis.

- It is used to synthesise penicillin and other pharmaceuticals drugs.
- It is used as an antipyretic, i.e. can reduce fever.

Q9. Which of the following compounds on diazotisation followed by coupling with beta-naphthol will form an azo dye?

- (a) p-Toluidine
- (b) N-Methylaniline
- (c) Benzylamine

Answer: p-Toluidine is a primary amine. It on diazotisation, coupled with beta-naphthol, will form an azo dye.

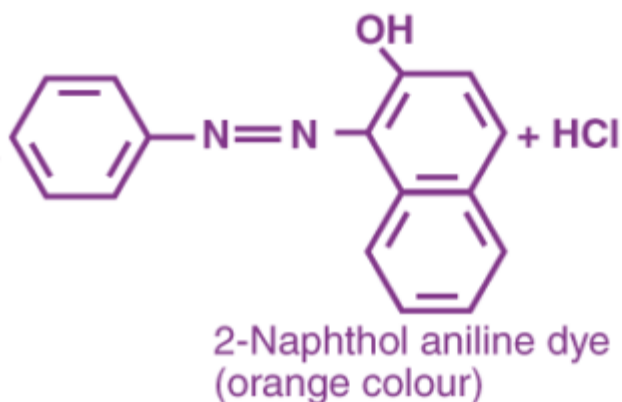
Q10. What is the diazotisation reaction?

Answer: Diazotisation is a reaction of primary aromatic amines with nitrous acid to form diazonium salt and water. It occurs below 5°C.

Q11. What is the colour of the 2-naphthol aniline dye?

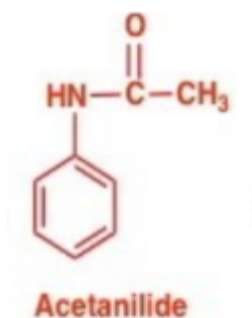
Answer: 2-naphthol aniline dye is orange-red.

Q12. Draw the structure of the 2-naphthol aniline dye.



Answer:

Q13. Draw the structure of the acetanilide.



Answer:

Q14. What is a Claisen-Schmidt reaction?

Answer: The Claisen-Schmidt reaction is a condensation reaction of aromatic aldehydes with aliphatic ketones in dil. NaOH solution leads to the formation of β -hydroxy carbonyl compounds. It is a kind of cross aldol reaction.

