

EXPERIMENT No.14

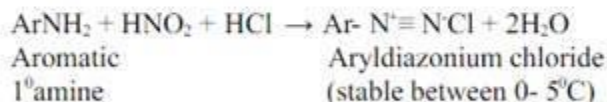
AIM: To test the presence of amino group in the given organic compound.

PROCEDURE:

| S.No | EXPERIMENT | OBSERVATION | INFERENCE |
|------|---|----------------------------------|---------------------------------------|
| 1 | <u>LITMUS TEST</u> Organic compound + few drops of red litmus solution. | Red litmus turns blue | Amino group present. |
| 2 | <u>SOLUBILITY TEST</u> Organic compound + 1-2 ml of dil.HCl. Shake well. | Organic compound dissolves. | Amino group present |
| 3 | <u>CARBYLAMINE TEST</u> Organic compound + CHCl_3 + Alc.KOH. Heat | An obnoxious smell is obtained. | Primary amine present. |
| 4 | <u>AZO DYE TEST</u> Dissolve organic compound in dil.HCl and cool in ice. Add ice cold NaNO_2 solution to it. Mix well. Add ice cold solution of β - naphthol + NaOH. | A red or orange dye is obtained. | Primary aromatic amino group present. |

EQUATIONS: (ON BLANK SIDE USING A PENCIL)

- $\text{R-NH}_2 + \text{HCl} \rightarrow \text{R-NH}_3^+\text{Cl}^-$
amine amine salt
- $\text{R-NH}_2 + \text{CHCl}_3 + 3\text{KOH} \rightarrow \text{R-N}\equiv\text{C} + 3\text{KCl} + 3\text{H}_2\text{O}$
Isocyanide
or carbylamine
- $\text{NaNO}_2 + \text{HCl} \rightarrow \text{HNO}_2 + \text{NaCl}$



β - naphthol (draw structure) + $\text{Ar-N}^+\equiv\text{N}^-\text{Cl} \rightarrow$ (draw structure of the azo dye obtained) + $\text{NaCl} + \text{H}_2\text{O}$.

RESULT: : (ON RULED SIDE) Amino present in the given organic compound.