

EXPERIMENT

Synthesis of Sulphanilamide

Aim:- To synthesis Sulphanilamide from 4-acetamidobenzenesulphanilamide and calculate its percentage yield.

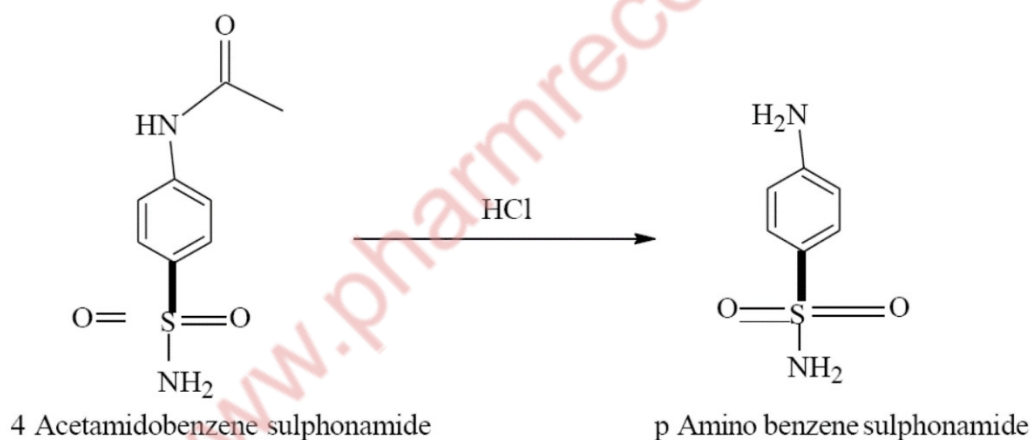
Requirements:-

Chemicals;- 4-acetamidobenzenesulphanilamide, ammonium carbonate, hydrochloric acid, Activated charcoal.

Glassware:- Conical flask, Reflex condenser, Beaker, Measuring cylinder, Glass rod

Equipment:- Weighing balance, Vacuum filter

Principle:- Sulphanilamide can be synthesized through the reaction of 4-acetamidobenzenesulphanilamide with hydrochloric acid or ammonium carbonate.

**Procedure;-**

- 1) 4-acetamidobenzenesulfonamide (2 gm) treated with a mixture of 0.1 ml of concentrated HCL diluted with 2.0 ml water.
- 2) This mixture is gently heated under reflux for 1h.
- 3) Then 3.0 ml water is added & solution boiled again, with the addition of small quantity of activated charcoal.

- 4) Then solution is filtered & Filtered is neutralized with powdered sodium carbonate with stirring until all effervescence ceases and sulfonamide is precipitated as a white powder.
- 5) Then wash with water & dried.
- 6) Then recrystallized from hot water yielding colorless crystals of sulfonamide.

Calculation:-

Theoretical yield:-.....g

Practical yield:-.....g

Formula:- % yield= Practical yield/Theoretical yield $\times$ 100

Result:- The s sulphanilamide was synthesized successfully by 4-acetamidobenzenesulphanilamide and percent yield was found to be%