Aim: Preparation of Strong Solution of Ammonium Acetate

References

1. Indian Pharmacopoeia - Monograph on Ammonium Acetate Solutions.
2. British Pharmacopoeia (BP) - Section on Solutions for Pharmaceutical Use.
3. Articles on "Ammonium Acetate Applications" from PubMed.

Objective

To prepare 100 mL of Strong Solution of Ammonium Acetate as per pharmaceutical standards for use as a systemic alkalizer or diuretic.

Materials Required

Chemicals:

- **Ammonium Acetate:** 20 g
- **Distilled Water:** q.s. to 100 mL

Equipment:

- Analytical balance
- Beaker (100 mL)
- Stirring rod
- Measuring cylinder (100 mL)
- Funnel
- Storage bottle (Amber-colored)

Principle

The strong solution of ammonium acetate is prepared by dissolving a measured quantity of ammonium acetate in distilled water. Ammonium acetate acts as a systemic alkalizer, and the solution is used in pharmaceutical preparations.

Procedure

1. **Weighing**:

- Accurately weigh 20 g of ammonium acetate using an analytical balance.

2. **Dissolution**:

   - Transfer the ammonium acetate into a 100 mL beaker.
   - Add 70 mL of distilled water to the beaker.
   - Stir the mixture until the ammonium acetate dissolves completely.

3. **Volume Adjustment**:

   - Transfer the solution into a measuring cylinder and make up the volume to 100 mL with distilled water.
   - Mix thoroughly to ensure uniformity.

4. **Filtration (if necessary)**:

   - Filter the solution through muslin cloth or filter paper to remove any undissolved particles.

5. **Packaging**:

   - Transfer the prepared solution into an amber-colored storage bottle to protect it from light.

Label

- **Product Name**: Strong Solution of Ammonium Acetate
- **Strength**: 20% w/v Ammonium Acetate
- **Storage**: Store in a cool, dry place, away from direct sunlight.
- **Precautions**: For pharmaceutical use only. Keep out of reach of children.

Precautions

1. Use accurate weighing techniques to ensure the proper strength of the solution.
2. Ensure that ammonium acetate is completely dissolved before making up the volume.
3. Use distilled water to prevent contamination and ensure solution clarity.
4. Store in an airtight container to prevent absorption of moisture from the air.