

Aim: Preparation of Terpin Hydrate Linctus IP'66

References

1. Indian Pharmacopoeia (1966 Edition) - Monograph on Terpin Hydrate Linctus.
2. Remington: The Science and Practice of Pharmacy - 22nd Edition.
3. Research articles on "Cough Relief Mechanisms of Terpin Hydrate" from PubMed.

Objective: To prepare 100 mL of Terpin Hydrate Linctus IP'66 as per the Indian Pharmacopoeia (IP) 1966 standards.

Materials Required

Chemicals:

- **Terpin Hydrate:** 0.375 g
- **Citric Acid:** 0.05 g
- **Codeine Phosphate (if prescribed):** 0.01 g
- **Sucrose:** 65 g
- **Alcohol (95% v/v):** 10 mL
- **Chloroform Spirit (Preservative):** 0.25 mL
- **Distilled Water:** q.s. to 100 mL

Equipment:

- Analytical balance
- Beaker (100 mL, 250 mL)
- Stirring rod
- Measuring cylinder (10 mL, 100 mL)
- Water bath
- Funnel
- Amber-colored storage bottle

Principle

Linctus is a viscous oral liquid preparation intended to relieve cough. Terpin hydrate acts as an expectorant to help clear mucus. The formula uses alcohol as a solvent to dissolve terpin hydrate and enhance its bioavailability, while sucrose provides viscosity and sweetness.

Procedure

1. Dissolution of Terpin Hydrate:

- Weigh 0.375 g of terpin hydrate and transfer it to a 100 mL beaker.
- Add 10 mL of alcohol and stir gently to dissolve the terpin hydrate completely.

2. Preparation of Sugar Syrup:

- Weigh 65 g of sucrose and dissolve it in 50 mL of distilled water by heating gently in a 250 mL beaker.
- Ensure complete dissolution of sucrose. Allow the solution to cool.

3. Incorporation of Preservative:

- Add 0.25 mL of chloroform spirit to the sugar syrup while stirring continuously.

4. Addition of Citric Acid:

- Weigh 0.05 g of citric acid and dissolve it in a small quantity of distilled water. Add it to the sugar syrup.

5. Combining Solutions:

- Slowly add the alcohol solution containing terpin hydrate to the sugar syrup with constant stirring.

6. Adjustment of Volume:

- Add distilled water q.s. to make up the total volume to 100 mL. Mix thoroughly.

7. Filtration and Packaging:

- Filter the linctus to remove any undissolved particles.
- Transfer the linctus to an amber-colored storage bottle and label appropriately.

Label

- **Product Name:** Terpin Hydrate Linctus IP'66

- **Dosage:** As directed by the physician (typically 5-10 mL every 6-8 hours).
- **Storage:** Store at room temperature, away from light and heat.
- **Shake well before use.**
- **Keep out of reach of children.**

Precautions

1. Ensure accurate weighing of terpin hydrate to avoid overdose.
2. Do not overheat the solution to prevent degradation of active ingredients.
3. Maintain proper hygiene during preparation to prevent contamination.
4. Ensure the final product is free of undissolved particles.

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