First Hope

COMPLETE NOTES

Click here to visit our website

PHARMACY PRACTICAL NOTES

Complete subject and semesters are available on FirstHope app only.

Scan or click here

Click here to get the app >

Available on Google Play

JOIN THE FIRSTHOPE COMMUNITY

Join our Telegram channel

Click here to join Telegram >

Scan or click here

@FirstHopeNotes

Instagram

@firsthope.official

Click here to follow >

YouTube channel

FirstHope-Pharmacy / Live streams

Click here to watch >

WhatsApp channel

Follow FirstHope on WhatsApp

Click here to join >

FirstHope website

firsthope.co.in

Click here to visit >

B.Pharm / D.Pharm / M.Pharm / Pharm.D

Complete subjects and semesters are available in the FirstHope app.

Zinc Oxide Suppository

Experiment 12 - Practical Notes

Name: _____ Roll no.: _____ Date: _____

Aim

To disperse zinc oxide uniformly in the assigned suppository base and calculate the base allowance.

Principle

Zinc oxide is an insoluble powder in a fatty base and is generally dispersed rather than dissolved. Particle fineness, mixing during filling and displacement correction affect the uniformity and mass of the units.

Requirements

- Prescribed IP formulation, zinc oxide and specified suppository base.
- Balance, mortar, spatula, water bath and calibrated mould.

Procedure

1. Calculate

Identify zinc oxide per unit, number of units, calibrated base capacity and the stated displacement-value convention.

2. Prepare the dispersion

Reduce permissible agglomerates and wet the powder with a small suitable portion of base or the assigned levigating material. Obtain a smooth dispersion.

3. Combine with base

Incorporate the remaining gently melted base. Mix uniformly without overheating or adding excess liquid.

4. Fill

Keep the mass mixed during filling to limit settling of zinc oxide. Pour into the prepared mould and allow controlled setting.

5. Assess

Compare units for visible distribution, integrity and mass. Record recovery and package with the assigned instructions.

Observations and Record

Item	Required information	Record
Base calibration	Mass per cavity	___ g
Drug / displacement	Drug total and displacement value	_____
Units	Appearance, number and mass	_____

Worked Example

The numbers below are illustrative; enter your own observations in the record.

- Illustrative calculation: 6 cavities hold 2.0 g plain base each; zinc oxide is 0.20 g per unit; total drug = 1.20 g.
- Assume, for this exercise only, f = 4 g zinc oxide displaces 1 g base. Base displaced = 1.20 ÷ 4 = 0.30 g.
- Required base before authorised excess = 12.00 - 0.30 = 11.70 g. Use the experimentally assigned f for the actual base.

Result

Record the observed outcome and calculated value, with units. State whether the stated laboratory specification was met; do not copy the worked example as your result.

Precautions

- Do not assume zinc oxide dissolves in the melt.
- Continue appropriate mixing during filling; sedimentation can produce unequal drug distribution.
- Do not claim content uniformity from mass uniformity alone.

Viva Questions and Answers

1. Why levigate the powder?

It helps break up agglomerates and distribute an insoluble solid smoothly.

2. Why mix during filling?

Dense solid particles can settle before all cavities are filled.

3. Why subtract displaced base?

Drug occupies part of the calibrated cavity volume.

First Hope

COMPLETE NOTES

Click here to visit our website

PHARMACY PRACTICAL NOTES

Complete subject and semesters are available on FirstHope app only.

Scan or click here

Click here to get the app >

Available on Google Play

JOIN THE FIRSTHOPE COMMUNITY

Join our Telegram channel

Click here to join Telegram >

Scan or click here

@FirstHopeNotes

Instagram

@firsthope.official

Click here to follow >

YouTube channel

FirstHope-Pharmacy / Live streams

Click here to watch >

WhatsApp channel

Follow FirstHope on WhatsApp

Click here to join >

FirstHope website

firsthope.co.in

Click here to visit >

B.Pharm / D.Pharm / M.Pharm / Pharm.D

Complete subjects and semesters are available in the FirstHope app.