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Glycerogelatin Suppository

Experiment 10 - Practical Notes

Name: _____ Roll no.: _____ Date: _____

Aim

To prepare suppositories using a glycerogelatin base and relate mould calibration to unit mass.

Principle

A glycerogelatin base contains gelatin, glycerol and water. Gelatin forms the supporting network, glycerol contributes plasticity and humectancy, and water hydrates gelatin. The base differs from fatty bases in melting, dissolution and storage behaviour.

Requirements

- Prescribed BPC base formula: gelatin, glycerol and purified water.
- Calibrated mould, balance, controlled water bath, beaker, stirring rod and suitable packaging.

Procedure

1. Prepare the mould

Check cleanliness, mould capacity for this base and the prescribed mould treatment. Calculate the batch, including only the allowed processing excess.

2. Hydrate gelatin

Allow gelatin to hydrate in the specified water quantity before warming. Avoid adding dry gelatin directly to a hot viscous mass.

3. Prepare the base

Incorporate glycerol and warm gently as prescribed until uniform. Stir without introducing excessive air; avoid prolonged heating and water loss.

4. Fill

Fill the mould cavities with the homogeneous mass. Allow setting under the stated conditions before trimming and removal.

5. Evaluate and package

Record unit appearance, cracks, bubbles and individual masses. Wrap or pack to limit moisture exchange, and use the specified storage conditions.

Observations and Record

Check	Record	Observation
Mould calibration	Capacity with the selected base	____ g / cavity
Finished units	Number, appearance and bubbles	_____
Unit masses	Weighed after setting	____ g

Worked Example

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

- Teaching scaling example only: if an assigned base uses glycerol:gelatin:water = 70:20:10 by mass, a 30 g batch needs 21 g, 6 g and 3 g.
- If the calibrated cavity holds 3.0 g of plain base, 6 cavities require 18.0 g before any approved excess.
- The actual BPC formulation, product type and mould treatment must follow the prescribed laboratory formula.

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

- Avoid excess heat and uncontrolled evaporation, which change the water content.
- Do not lubricate the mould with an arbitrary material; use the prescribed treatment.
- Protect finished units from unsuitable moisture and temperature conditions.

Viva Questions and Answers

1. Why hydrate gelatin first?

Hydration helps produce a uniform gel rather than undissolved lumps.

2. Can cocoa butter mould capacity be used directly?

No; different bases have different densities and require appropriate calibration.

3. Why record bubbles?

Voids can affect appearance, mechanical strength and unit mass.

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