Preparation of Sulphur Ointment

Experiment 10 - Practical Notes

Name: _____ Roll no.: _____ Date: _____

Aim

To prepare a smooth sulphur ointment by incorporation and evaluate its uniformity.

Principle

Sulphur is dispersed as a solid in an ointment base. Levigation with a suitable portion of the base or prescribed levigating agent reduces grittiness; geometric incorporation distributes the powder through the remaining base.

Requirements

- Sulphur of the specified grade, prescribed IP ointment base and formula.
- Balance, mortar or slab, spatula and compatible ointment container.

Procedure

1. Calculate the formula

Identify sulphur concentration on the mass basis and the required final ointment mass. Check whether the base is supplied or must first be prepared.

2. Prepare sulphur

Reduce permissible agglomerates without exposing yourself to dust. Levigate with the prescribed compatible material to obtain a smooth paste.

3. Incorporate the base

Add the base in portions comparable to the paste amount, then progressively add the remainder. Scrape the working surface to recover all material.

4. Evaluate

Inspect colour and texture, spread a small portion on a clean inspection surface, and look for visible gritty particles or separated liquid.

5. Fill and label

Transfer to a suitable well-closed container. Record net mass and apply external-use, strength and storage details from the laboratory formula.

Observations and Record

Characteristic	Assessment	Record
Texture	Smoothness and visible particles	_____
Uniformity	Colour and consistency throughout	_____
Net mass	Weighed container minus tare	___ g

Worked Example

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

- Illustrative 10% w/w exercise: 25 g final ointment requires 2.5 g sulphur and enough prescribed base to make 25 g.
- If the base is the only other ingredient, calculated base = 25 - 2.5 = 22.5 g.
- Yield: if 24.0 g is recovered, percentage recovery = 24.0 ÷ 25.0 × 100 = 96%. The assigned IP formula determines the actual strength.

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

- A levigating liquid must be compatible with the base and permitted by the formula.
- Avoid excess heating and uncontrolled addition of vehicle.
- Do not use fingers to inspect texture; use a clean surface or spatula.

Viva Questions and Answers

1. Is sulphur usually dissolved in the base?

No; it is dispersed as a solid in this type of ointment.

2. What is the purpose of levigation?

To obtain a smoother dispersion and reduce agglomerates.

3. Why fill by net mass?

Container tare must be excluded from the amount of preparation.

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