Preparation of Dusting Powder

Experiment 16 - Practical Notes

Name: _____ Roll no.: _____ Date: _____

Aim

To prepare a fine, uniform dusting powder and evaluate its suitability for the assigned external application.

Principle

Dusting powders are dry external preparations. Uniform particle size and mixing help produce smooth application. An ordinary compounded powder is not automatically sterile and must not be described as suitable for an open wound unless its specified formulation and processing support that use.

Requirements

- Prescribed IP powder formula and dry ingredients.
- Balance, mortar, assigned sieve and clean sifter container.

Procedure

1. Read the formula

Identify the intended site of application, ingredient quantities and required grade and fineness. Calculate the final mass.

2. Prepare individual powders

Reduce allowable agglomerates and sieve ingredients as prescribed. Handle fine powders to minimise airborne dust.

3. Mix

Use geometric dilution for low-level ingredients. Add powders of similar size progressively and mix consistently.

4. Evaluate

Check texture on a clean inspection surface, visible particles, uniformity and delivery through the assigned container. Do not test an unapproved preparation on skin.

5. Package and label

Transfer with minimal loss to a suitable sifter container. Record net mass and label external use and the prescribed application restrictions.

Observations and Record

Characteristic	Method of assessment	Record
Fineness / texture	Prescribed sieve and visual inspection	_____
Uniformity	Appearance across the mixed batch	_____
Net yield / delivery	Final mass and sifter operation	_____

Worked Example

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

- Illustrative 20 g teaching blend: 10% zinc oxide, 20% starch and 70% specified inert base gives 2 g, 4 g and 14 g.
- Check: 2 + 4 + 14 = 20 g. If 19.4 g is recovered, yield = 19.4 ÷ 20 × 100 = 97%.
- This example demonstrates mixing calculations. Use the assigned IP composition and material grades for the actual practical.

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 infer sterility from dryness or fine particle size.
- Avoid inhalation and contamination during mixing and filling.
- Do not substitute mineral powders or grades without instructor approval.

Viva Questions and Answers

1. Why is fineness important?

Coarse particles can make application unpleasant and non-uniform.

2. Why use a sifter container?

It supports controlled external distribution of the powder.

3. What is geometric dilution?

Progressively mixing a smaller quantity with comparable quantities of a larger component.

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