

Clove - Macroscopy Powder and Microscopy

Experiment 9 - Practical Notes

Name: _____ Roll no.: _____ Date: _____

Aim

To describe the authenticated dried unopened flower bud material of Clove and record supporting identity characters.

Principle

A crude drug is identified from a combination of botanical source, plant part, external morphology and microscopic evidence. Common fragments are not sufficient on their own.

Requirements

- Authenticated Clove specimen and supplied powder or prepared slide.
- Microscope, measuring scale, slide tools and the assigned species atlas.

Procedure

1. Establish source

Record *Syzygium aromaticum*; Myrtaceae. State the specimen code and the supplied plant part.

2. Macroscopic study

Nail-like bud with a stalk-like hypanthium and rounded head. Measure size, colour, surface and fracture without tasting the material.

3. Section study

Orient the prepared section, identify outer and inner tissue regions and draw a labelled outline.

4. Powder study

Oil glands and floral/pollen fragments in the supplied section or powder. Record only the structures actually observed and the magnification used.

5. Compare and conclude

Compare intact bud shape with powder evidence and detect excessive stalk material. Compare the combined evidence with the assigned authenticated specimen.

Pharmacognosy and Phytopharmaceuticals

Observations and Record

Record	Observation
Source / plant part / code	_____
Macroscopic characters	_____
Section tissues and drawing	_____
Powder fragments / magnification	_____
Supported identity and limitation	_____

Result

Clove specimen code: _____. Plant part: _____. Supporting features: _____. Comparison outcome and limitation: _____.

Precautions

- Never taste crude drugs; toxic specimens require the assigned contained handling or prepared material.
- Record botanical source and plant part instead of relying only on the commercial name.
- Distinguish expected comparison characters from features actually seen.

Viva Questions and Answers**1. What is the examined plant part?**

Dried unopened flower bud.

2. Which features support the comparison?

Nail-like bud with a stalk-like hypanthium and rounded head. Oil glands and floral/pollen fragments in the supplied section or powder.

3. Does one common fragment establish identity?

No. Use the combined specimen and microscopic evidence.

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