

Ephedra - Macroscopy Powder and Microscopy

Experiment 7 - Practical Notes

Name: _____ Roll no.: _____ Date: _____

Aim

To describe the authenticated stem material of Ephedra 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 Ephedra specimen and supplied powder or prepared slide.
- Microscope, measuring scale, slide tools and the assigned species atlas.

Procedure

1. Establish source

Record Assigned official Ephedra species; Ephedraceae. State the specimen code and the supplied plant part.

2. Macroscopic study

Jointed ridged stems with small scale leaves at nodes. 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

Ridges, epidermis, vascular bundles and supporting tissues in the labelled stem section. Record only the structures actually observed and the magnification used.

5. Compare and conclude

Node and stem evidence should accompany powder observations. 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

Ephedra 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?**

Stem.

2. Which features support the comparison?

Jointed ridged stems with small scale leaves at nodes. Ridges, epidermis, vascular bundles and supporting tissues in the labelled stem section.

3. Does one common fragment establish identity?

No. Use the combined specimen and microscopic evidence.

Continue Learning with FirstHope

Complete Notes on the FirstHope App

Complete subject and semesters are available on FirstHope app only.

- Get complete subject and semester notes in the FirstHope app.
- Available for B.Pharm, D.Pharm, M.Pharm and Pharm.D students.

[Click here to get the FirstHope app](#)

Join the FirstHope Telegram Channel

Join FirstHope Notes and keep up with channel updates.

[Click here to join Telegram](#)

Instagram

@firsthope.official

[Click here to follow Instagram](#)

YouTube Channel

FirstHope-Pharmacy / Live streams

[Click here to watch the YouTube channel](#)

WhatsApp Channel

Follow FirstHope on WhatsApp.

[Click here to join the WhatsApp channel](#)

FirstHope Website

firsthopenotes.com

[Click here to visit the website](#)