

Transverse Section Microscopy of Nux Vomica

Experiment 26 - Practical Notes

Name: _____ Roll no.: _____ Date: _____

Aim

To study a transverse section of the assigned nux vomica seed and record diagnostic tissues.

Principle

A thin transverse section reveals how protective, conducting, supporting, storage and secretory tissues are arranged. The seed coat bears characteristic thick-walled hairs; the endosperm has thick-walled storage cells with pore-like connections and protein/oil reserves.

Identity and Drawing Guide

Field	Guide
Botanical source	Strychnos nux-vomica
Family	Loganiaceae
Part	Seed
Labels to include	Label seed coat, lignified hairs, endosperm walls, storage contents and embryo if visible.

Requirements

- Authenticated prepared section or teacher-assigned sectioning material
- Compound microscope, slides, coverslips and approved mountant/stains
- Pencil and labelled drawing sheet

Procedure

1. Verify material

Record botanical source, part, specimen treatment and section level.

2. Prepare or select slide

Use the assigned thin section or prepared slide; select an intact representative region.

3. Survey at low power

Identify the tissue outline and major regions before increasing magnification.

4. Examine diagnostic details

Locate supporting and secretory features. Radially arranged surface hairs and characteristic endosperm are diagnostic teaching features.

Pharmacognosy

5. Draw and label

Label seed coat, lignified hairs, endosperm walls, storage contents and embryo if visible.

6. Compare

Compare with authenticated material and write which observed features support identity.

Observations and Record

Feature	Actual observation / drawing label
Outer protective region	_____
Ground / storage tissue	_____
Vascular arrangement	_____
Diagnostic structure	_____
Magnification / scale	_____

Result

Diagnostic tissues observed: _____. The section _____ supports the assigned identity because _____.

Precautions

- Use a prepared slide only; this is a toxic strychnine-containing seed.
- Use prepared slides for toxic material and avoid direct exposure to powders.
- Do not mistake folds, air bubbles or stain deposits for diagnostic structures.
- Start with low power and record magnification.

Viva Questions and Answers

1. What is a transverse section?

A section cut across the long axis or specified plane of the material.

2. Why is tissue arrangement important?

The pattern helps distinguish plant parts and authentic materials.

3. Which feature is especially useful here?

Radially arranged surface hairs and characteristic endosperm are diagnostic teaching features.

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](#)