Liquorice - Macroscopy Powder and Microscopy

Experiment 15 - Practical Notes

Name: _____ Roll no.: _____ Date: _____

Aim

To describe the authenticated root / stolon material of Liquorice 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 Liquorice specimen and supplied powder or prepared slide.
- Microscope, measuring scale, slide tools and the assigned species atlas.

Procedure

1. Establish source

Record Assigned official Glycyrrhiza species; Fabaceae. State the specimen code and the supplied plant part.

2. Macroscopic study

Longitudinally striated pieces with a yellow interior; record peeled or unpeeled condition. 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

Thick-walled fibres, crystal-associated cells, starch and vessel fragments. Record only the structures actually observed and the magnification used.

5. Compare and conclude

Peeled material may lack cork; root and stolon anatomy can differ. Compare the combined evidence with the assigned authenticated specimen.

Observations and Record

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

Result

Liquorice 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?

Root / stolon.

2. Which features support the comparison?

Longitudinally striated pieces with a yellow interior; record peeled or unpeeled condition. Thick-walled fibres, crystal-associated cells, starch and vessel fragments.

3. Does one common fragment establish identity?

No. Use the combined specimen and microscopic evidence.

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