



Gujarat Ayurved University Jamnagar

Experiment No. _____

1.0 TITLE :

To study the morphological and microscopical characteristics of Guduci stem

2.0 Aims and objectives:

To study the morphological characters including organoleptic characters and extra features of Guduci stem

To study the microscopical characters including observation of important tissue components of transverse section Guduci stem

3.0 Requirements:

Apparatus: Microscope, watch glass, camel hairbrush, glass slides, coverslips, beaker, dropper, filter paper, forceps, test tubes, test tube holder, tripod stand, wire gauge, dissecting needle, sharp razor, etc.

Chemicals: Phloroglucinol, Conc. HCL, Iodine solution, Glycerin, Ruthenium Red solution

Crude drug: Guduci stem

4.0 Diagram:

Stem

plant photograph

5.0 STEP WISE PROCEDURES:

5.1 **Synonyms :**

5.2 **Biological source :**

5.3 **Macroscopy:**

Organoleptic characters:

5.3.1 Colour

5.3.2 -----

- 5.3.3 -----
- 5.4 **Microscopy :**
 - 5.4.1 -----
 - 5.4.2 -----
 - 5.4.3 -----
- 5.5 **Chemical constituents**
- 5.6 **Rasadipanchaka:**
 - 5.6.1 Rasa
 - 5.6.2 Guna
 - 5.6.3 Virya
 - 5.6.4 Vipaka
 - 5.6.5 Prabhava
- 5.7 **Major Pharmacological actions and uses**
- 5.8 **Allied drugs/ adulterants**
- 5.9 **Visista yoga(Marketed formulations**
- 5.10 **Procedure:**
 - 5.10.1 Clean the platform and issue the apparatus
 - 5.10.2 Issue the sample of crude drug
 - 5.10.3 Preparation of sample for sectioning
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 - 5.10.4 Staining Process
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 - 5.10.5 Mounting Process
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6.0 OBSERVATIONS:

- 1.1 Observation table on macroscopy and organoleptic characters:

Sl No	Test	Observation
	Size	
	Shape	
	Surface	
	Colour	
	Odour	
	Taste	
	Fracture	
	Extra features	

1.2 **Observation on Microscopical characters :**

Cork

Cork cambium

Cortex

Pericycle

Vascular bundle

Pholem

Cambium

Xylem

Medullary rays

Pith

1.3 **Observation table on staining**

Sr. No	Test	Observation	Inference
1	T.S. + Phloglucinol+ Conc. HCL		
2	T.S. + Iodine solution		
3	T.S. + Dil. HCL		
4	T.S. + Dil. Sulphuric acid(60% w/w)		

7.0 CONCLUSION: The given crude drug is found to be _____

8.0 QUESTIONS :

Write answers to QQQQ(Questions to be allotted by the subject teacher.
Subject

(Teacher shall also add few more relevant questions)

1. Give biological source of Guduchi stem.
2. Draw neat labeled macroscopical diagram of Guduchi stem.
3. Which microscopic character is detected by phloroglucinol in case of Guduchi stem?
4. Write two crude drugs, which contain starch in their stem
5. Mention the adulterant of Guduchi stem in the market
6. Give the process of chemical test by which starch are detected from Guduchi stem.
7. Write three synonyms of Guduchipertaing to its morphological characters.
8. Which alkaloids are present in Guduchi stem?
9. Write four Therapeutic indications of ofGuduchi stem.
10. Why is Guduchi is considered ad jwarahara?
11. How Guduchi is propagated?

(Space for answers)

Figure showing macroscopic features

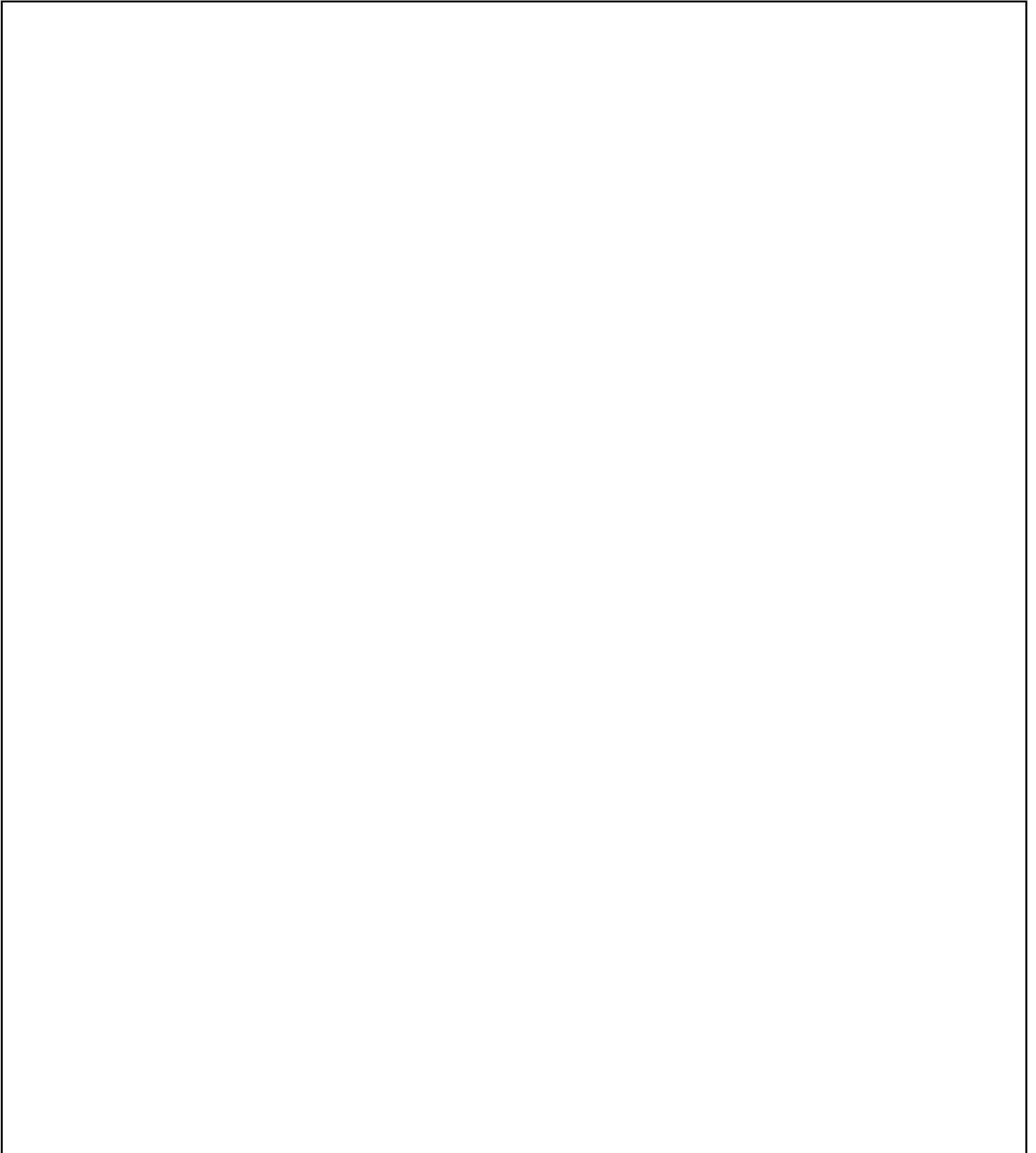
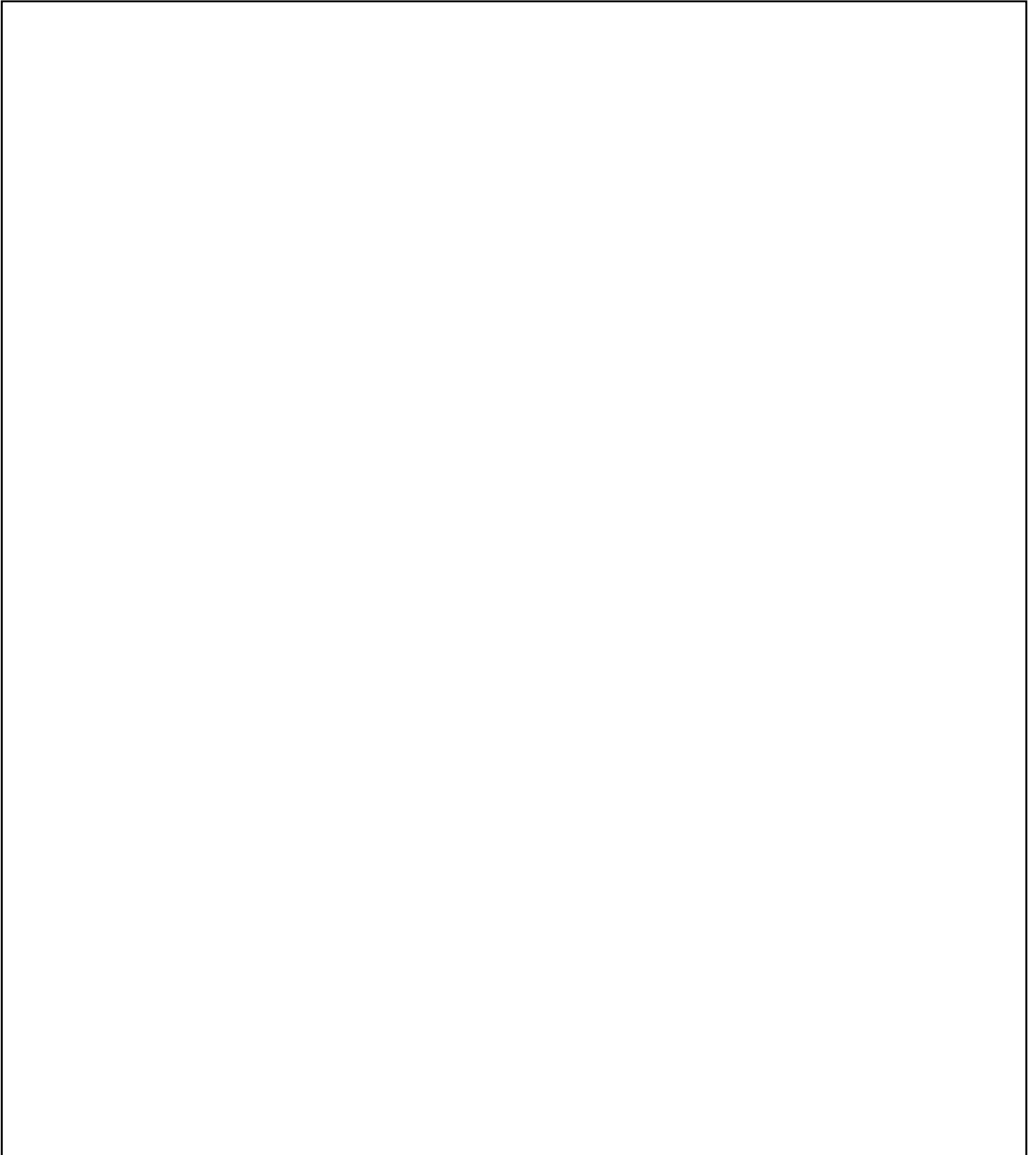


Figure showing microscopic features



Organoleptic study for powder

Sample name-

Sr. No.	Parameters	Description			
		Rasa		Anurasa	
1.	Taste	Madhura		Madhura	
		Amla		Amla	
		Lavana		Lavana	
		Katu		Katu	
		Tikta		Tikta	
		Kashaya		Kashaya	
2.	Colour	White		Others	
		Yellow			
		Green			
		Brown			
3.	Odour	Types of odour		Degree of odour	
		Musky		No Odor	
		Putrid		Very Weak	
		Pungent		Weak	
		Camphoraceous		Distinct	
		Ethereal		Strong	
		Floral		Very Strong	
		Pepperminty		Intolerable	
4.	Touch	Smooth surface		Rough surface	
		None particles		Many particles	
		Oily		Dry	
		Crumble		Brittle	
		Hard		Soft	
		Airy		Dense	
		Uniform		Uneven	
5.	Texture	Particle orientation		Particle shape	
		Cellular		Grainy	
		Crystalline		Gritty	
		Fibrous			
		Coarse			