

Lab 4

Pharmacognosy

PHG112



The background is a dark blue gradient. On the left side, there are several overlapping, curved, light green shapes that create a sense of depth and movement. On the right side, there is a stylized, light-colored outline of a leafy branch, with several leaves of varying sizes and orientations.

Faculty of **Pharmacy**

Vision

The Faculty of Pharmacy of October University for Modern Sciences and Arts is a pioneer in tutelage, scientific research, and community service at the local and regional levels, and holds an advanced position among its counterparts in international Pharmacy subject ranking

الرؤية

- كلية الصيدلة جامعة أكتوبر للعلوم الحديثة و الآداب كلية رائدة فى مجال التعليم و البحث العلمى و المشاركة المجتمعية على المستوى القومى و الإقليمى و لها ترتيب متقدم فى التصنيف العالمى لكليات الصيدلة.

Mission

•The Faculty of Pharmacy of October University for Modern Sciences and Arts is nationally accredited, has British partnership, and is committed to producing graduates who are able to compete in national and international job markets and entrepreneurship, and to be an effective member of the medical team providing best medical care, while heeding professional ethics, through an outstanding academic programme and proficient academic staff. The faculty is devoted also to provide effective community services, and exceptional applied scientific research.

الرسالة

• كلية الصيدلة جامعة أكتوبر للعلوم الحديثة والآداب معتمدة محليا، بشراكة بريطانية، تلتزم بتخريج صيدلى قادر على المنافسة فى أسواق العمل المحلية و الدولية و قيادة الأعمال، و أن يكون عضو فعال فى الفريق الطبى بتقديم أفضل رعاية صحية، مراعيأ أخلاقيات المهنة، من خلال برنامج تعليمى متميز و أعضاء هيئة تدريس أكفاء، وكذلك تلتزم الكليه بتقديم خدمات مجتمعية فعالة و أبحاث علمية تطبيقية متميزة.

Pharmacognosy

PHG112

Items	Marks
Quizzes	5 Marks
Assignment	15 Marks (10+5)
Practical Exam(s)	40 Marks (15+15+10)
Mid Term Exam	30 Marks
Final Exam	60 Marks
TOTAL	150 Marks



Pharmacognosy

PHG112

RULES

- **Lab evaluation** –10 marks
- **Attendance**
 - (only 15 min late is allowed)
 - (sign for yourself).
- **Lab coat:**
 - (not allowed to be in the lab without it).
 - (take it on and off before and after you get to the lab).
- **Drawing:**
 - (during the lab time).
 - (in a specific note using pencil).



Pharmacognosy

PHG112

RULES

- **Lab evaluation --10 marks**
- **Work place and tools:**

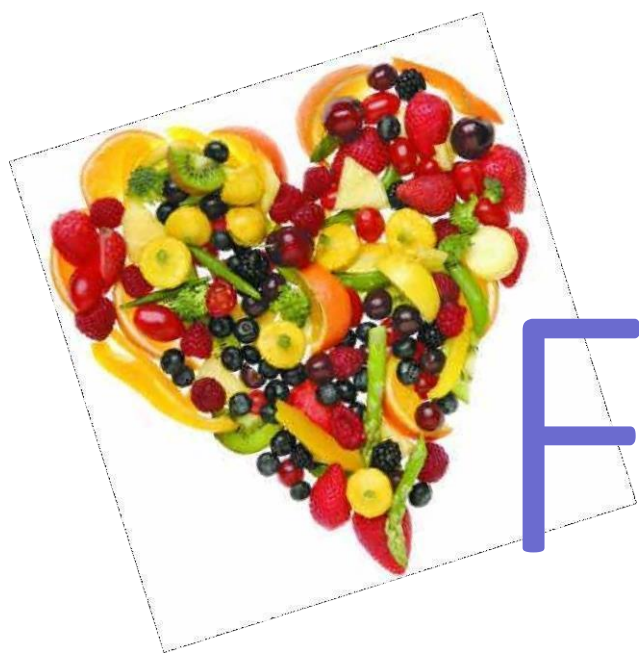


- (waste disposal → don't throw anything in the **Sink**).
- (microscope → **switch it OFF**).

- **Behavior:**

- (may get you to loose the whole 5 marks).





Fruits



Anise

- **Origin:**

-It is the dried fruits of *Pimpinella anisum* Family Apiaceae

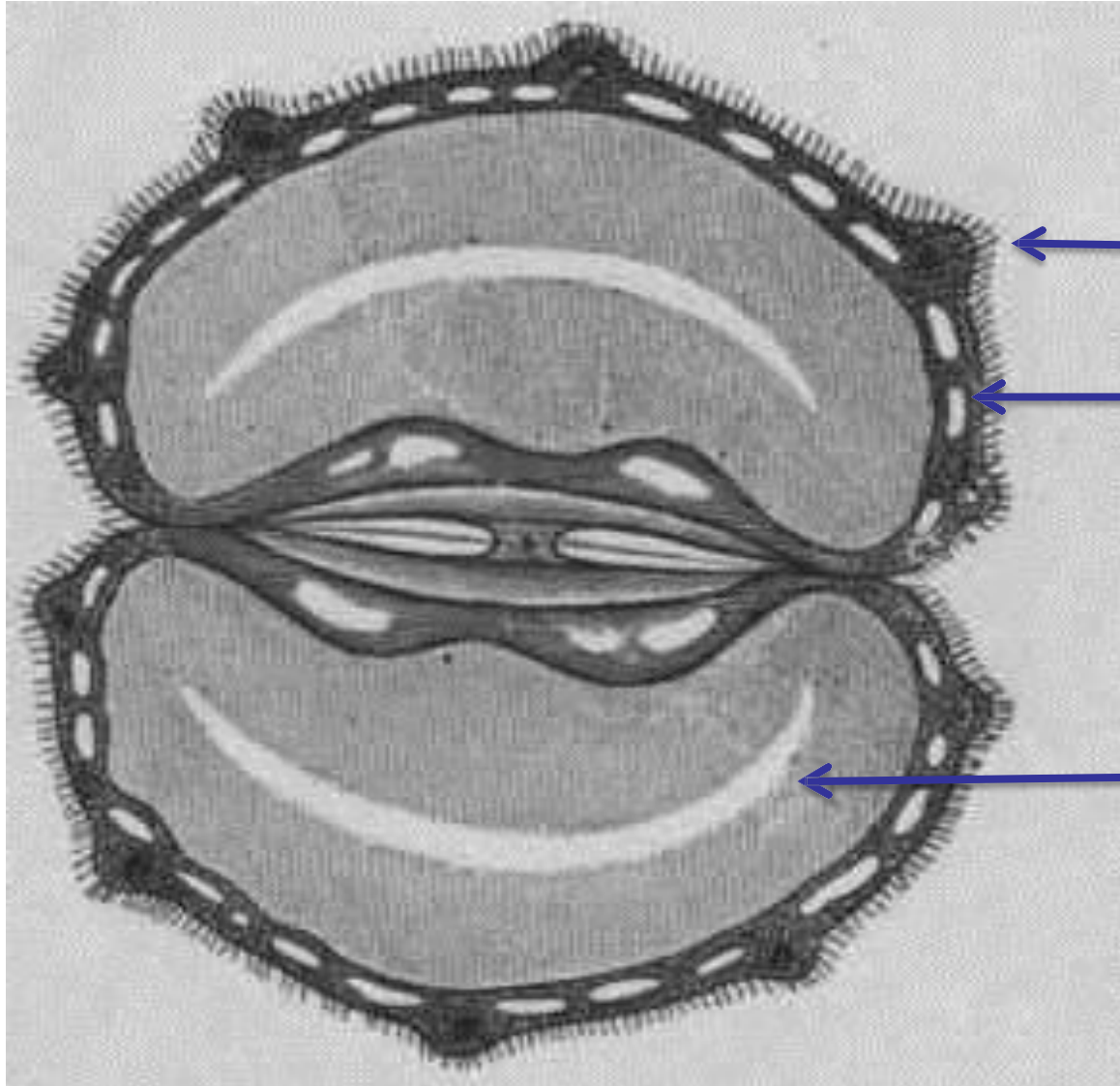


- **Morphology:**

- **Shape:** Pear shaped, large base and tapered ends
- **Size:** Small
- **Colour:** Greenish grey
- **Odour:** Aromatic agreeable
- **Surface:** Hairy on dorsal side



• T.S.



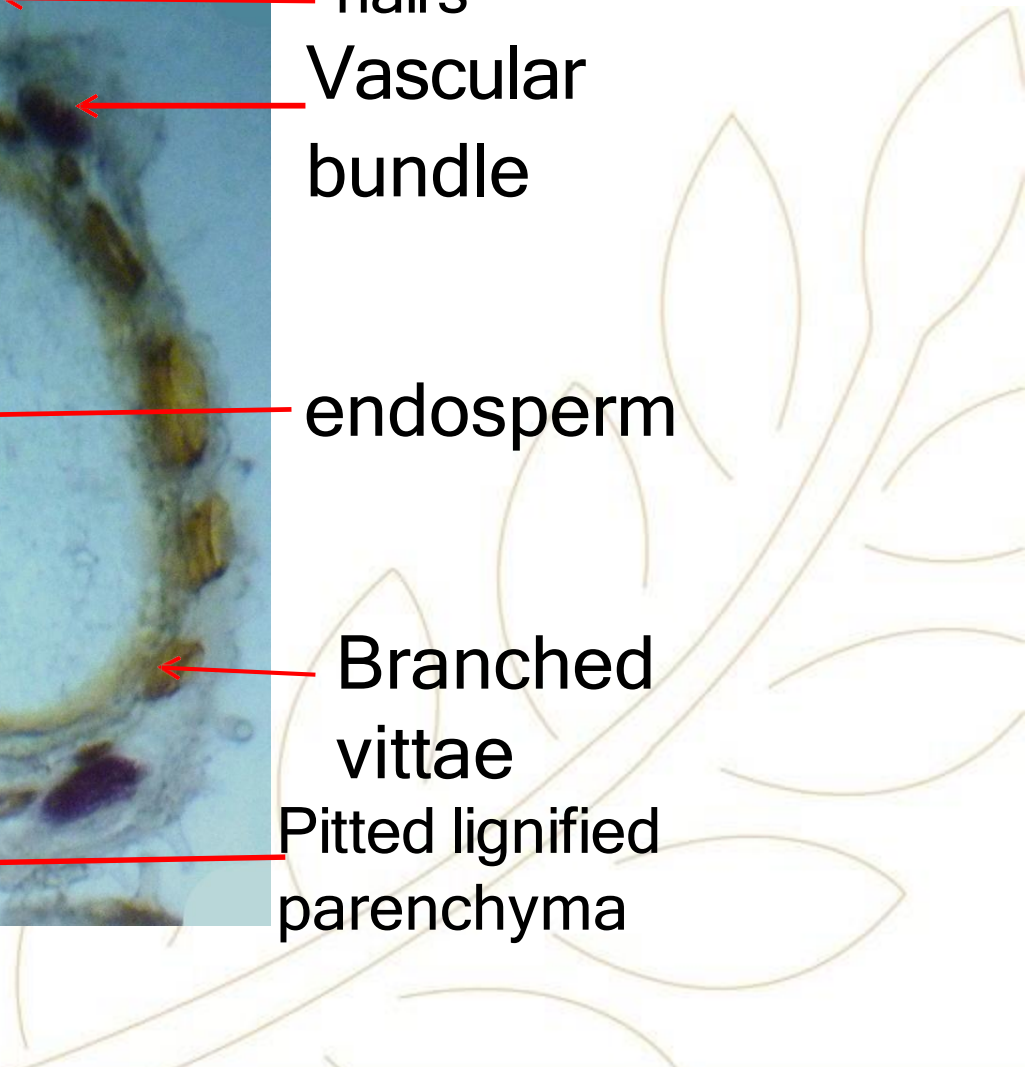
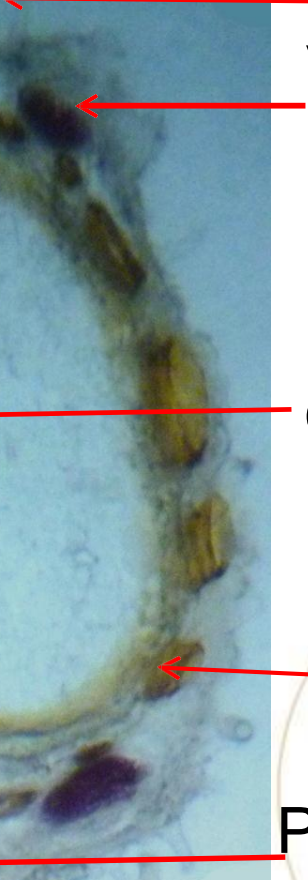
Hairy pericarp

Branched vittae

Endosperm



hairs
Vascular bundle
endosperm
Branched vittae
Pitted lignified parenchyma



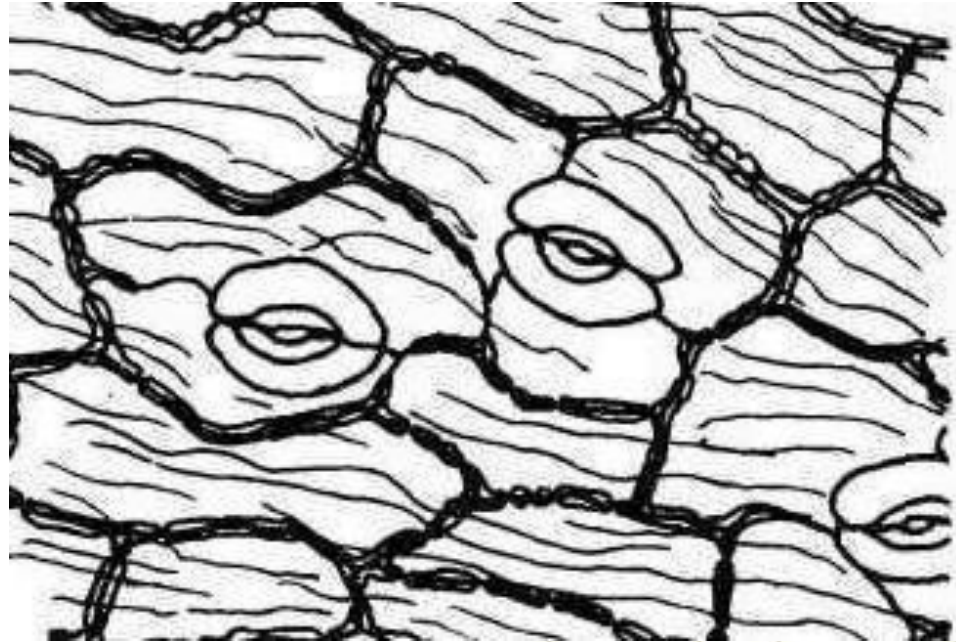
• Physical characters:

- **Condition:** Fine powder
- **Color:** Yellowish green
- **Odour:** Aromatic odour
- **Taste:** Sweet aromatic taste

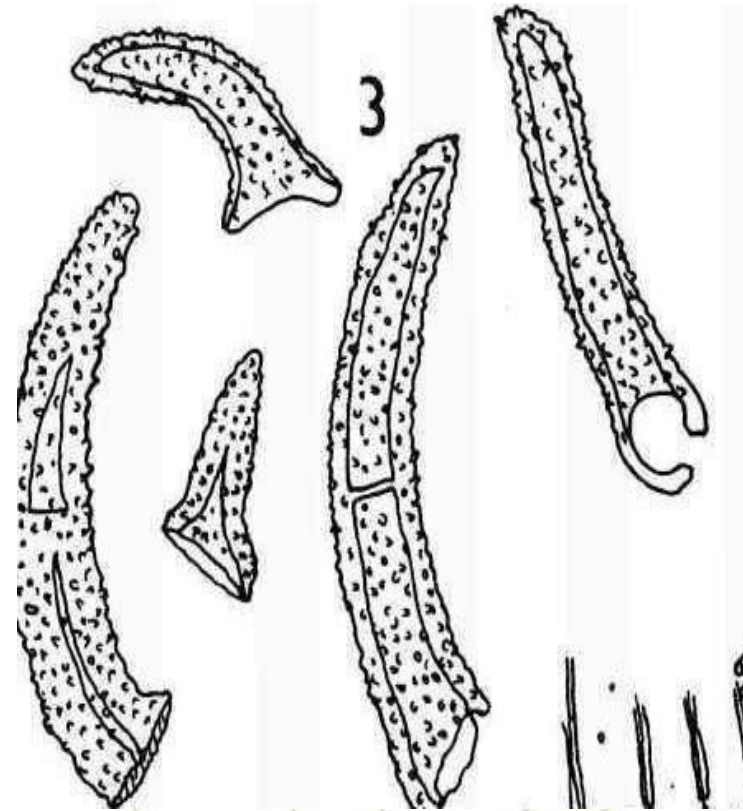


Key elements: 1- Epicarp

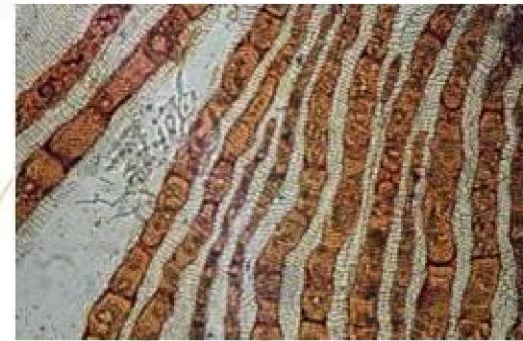
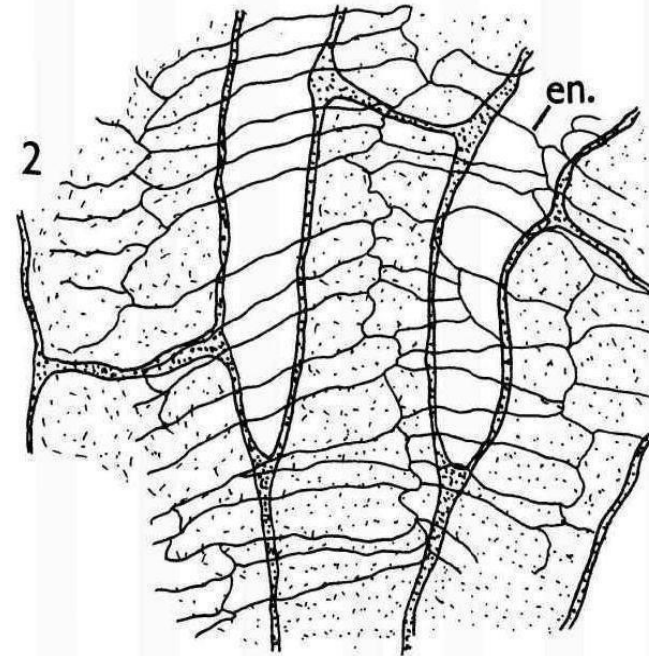
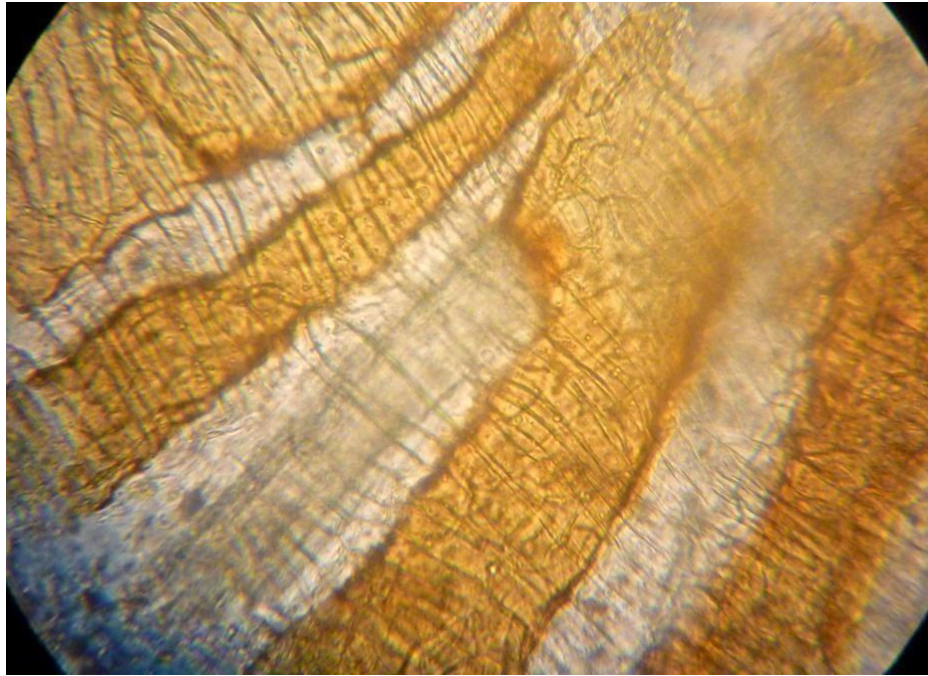
Slightly wavy wall, striated cuticle, anomocytic stomata.



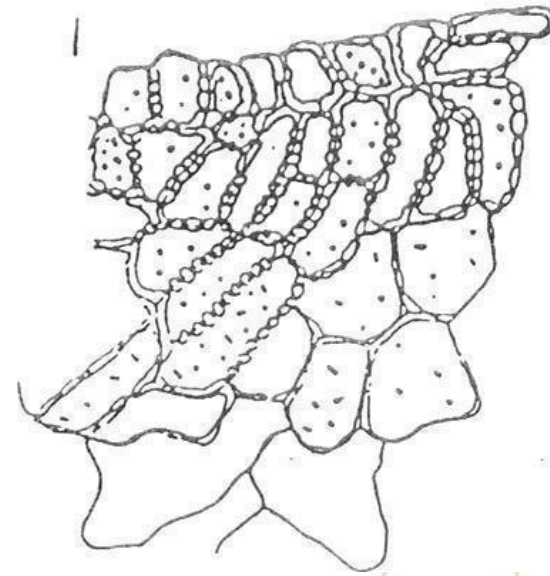
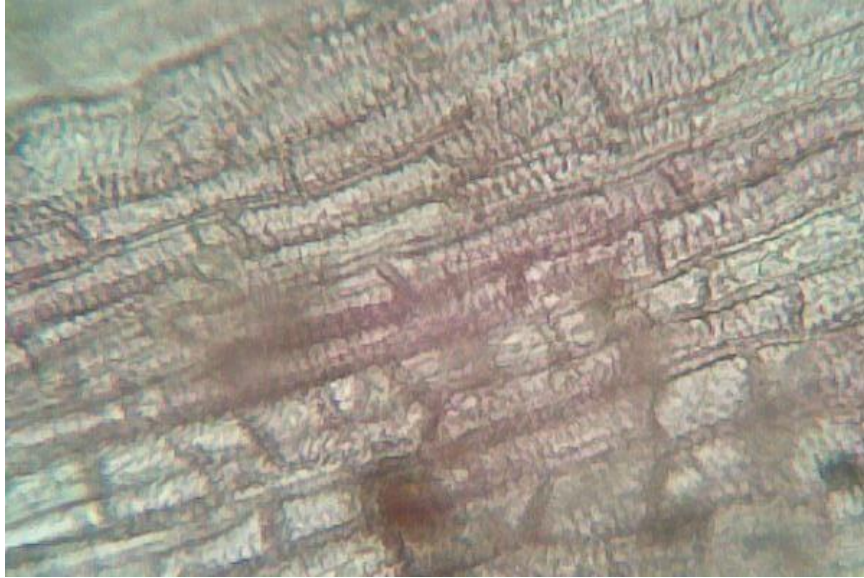
- **Unicellular (occasionally bicellular)
non glandular hair with warty
cuticle**



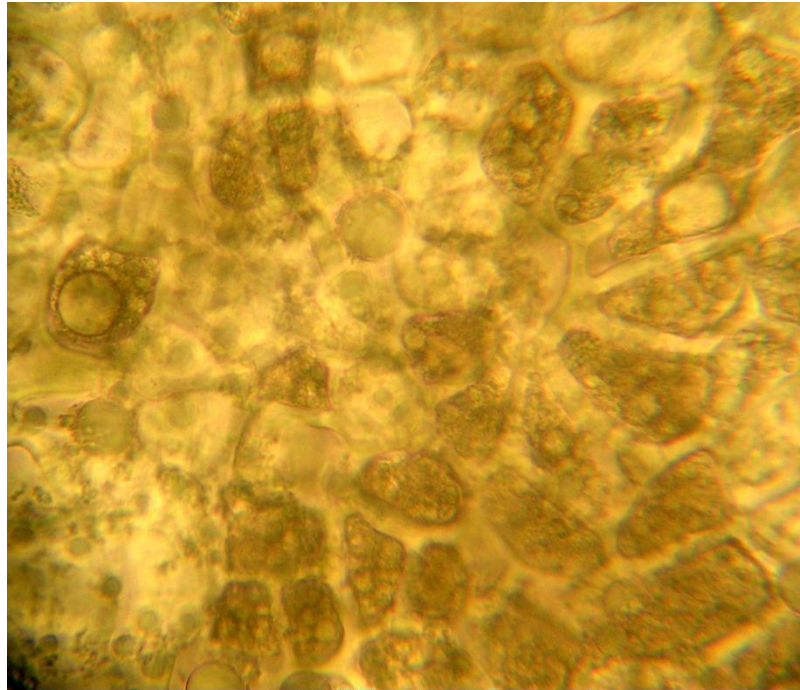
Branched vittae overlapped by non-parquetory endocarp



Lignified pitted parenchyma



Numerous fragments of endosperm.



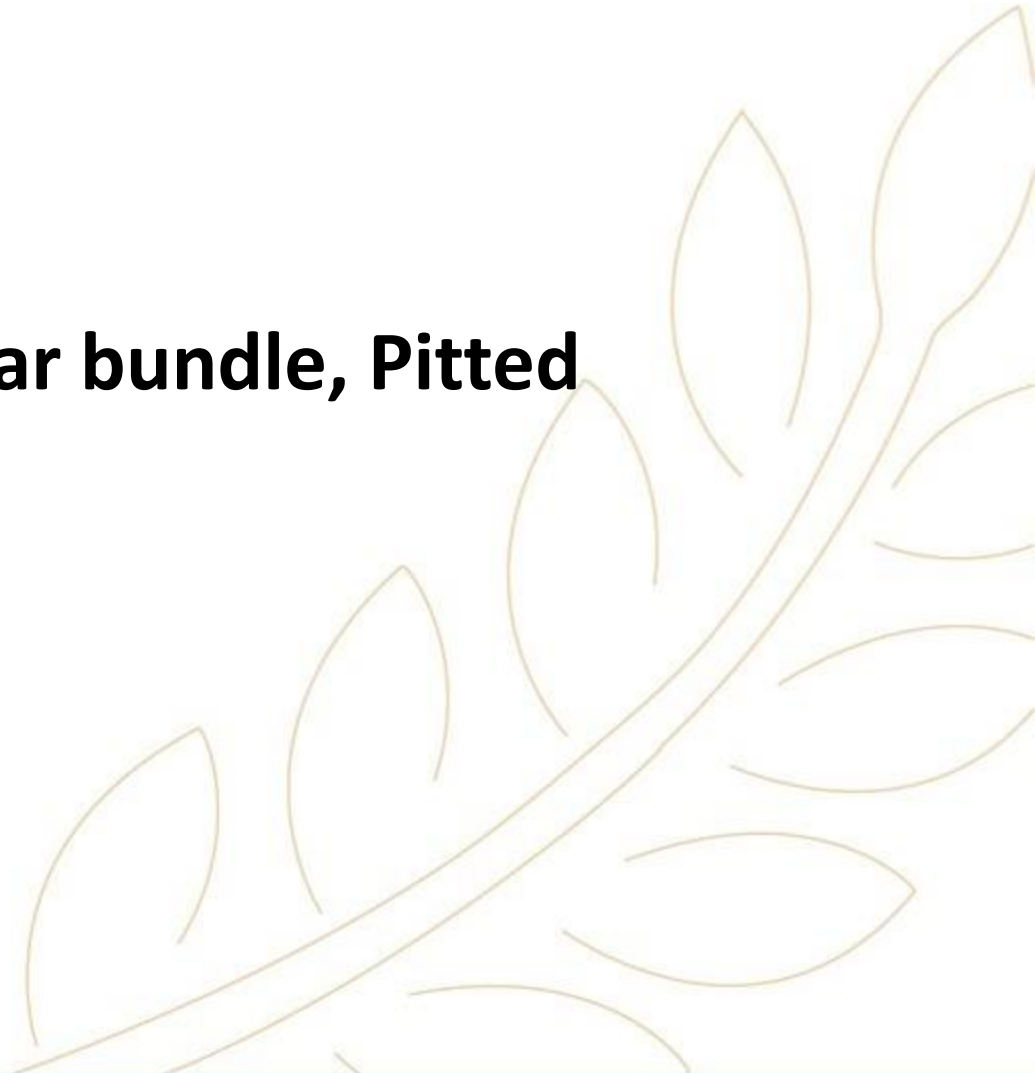
Microscopical Character:

Mount in KOH: All key elements

Mount in Phloroglycinol: Raphe, Vascular bundle, Pitted

lignified parenchyma and Carpophore

Mount in Water: Negative



Uses

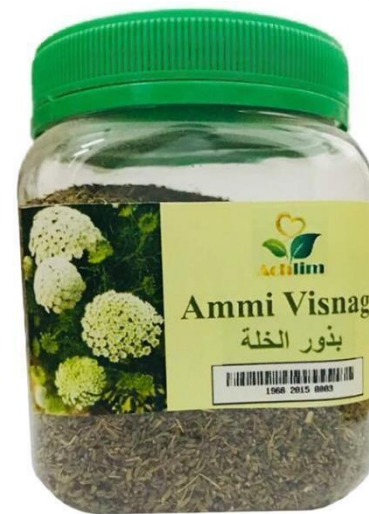
1. **Treat respiratory tract infections as cough and bronchitis**
2. **Carminative and Relieving colic in children.**
3. **Lactagogue**
4. **Has a sedative action.**
5. **Oil is also employed in food & drink industry as flavoring agent**



Ammi visnaga

Origin:

It is the dried ripe fruit of
Ammi visnaga family Apiaceae



Morphology:

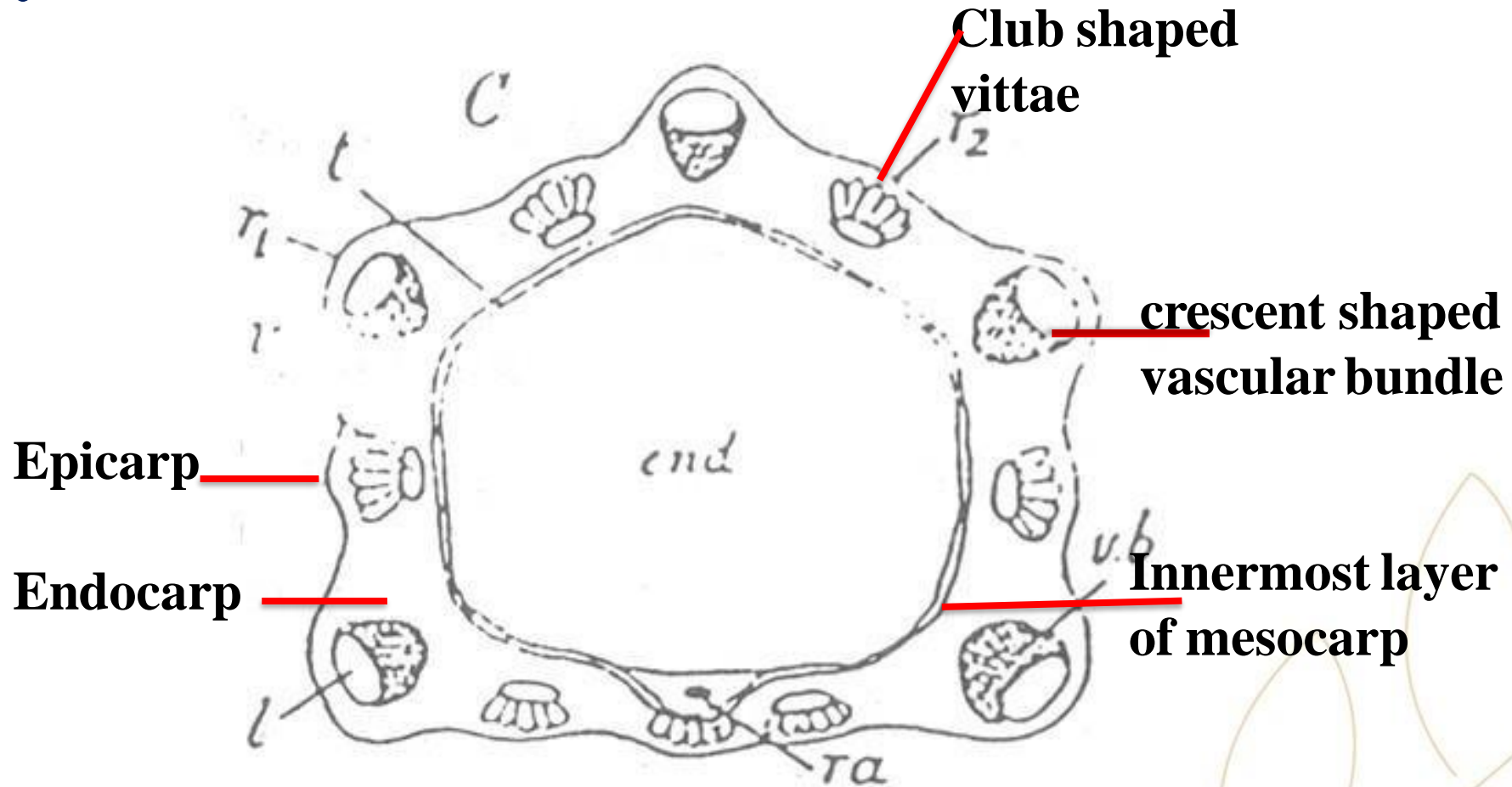
- **Shape:** Small ovoid
- **Colour:** Brownish green with violet tinge
- **Odour:** Slightly aromatic
- **Taste:** Bitter
- **Surface:** Primary ridge
Secondary ridge



T.S.



T.S.



T. S. of Ammi visnaga mericarp (diagram)

Powder:

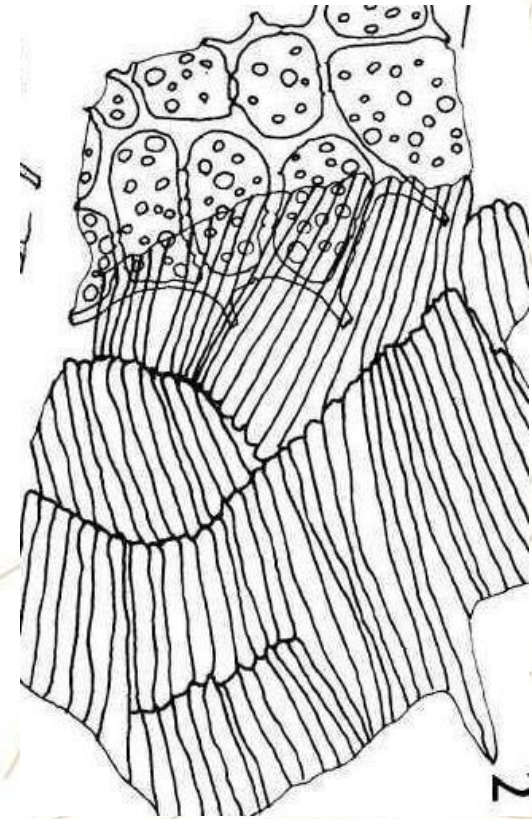
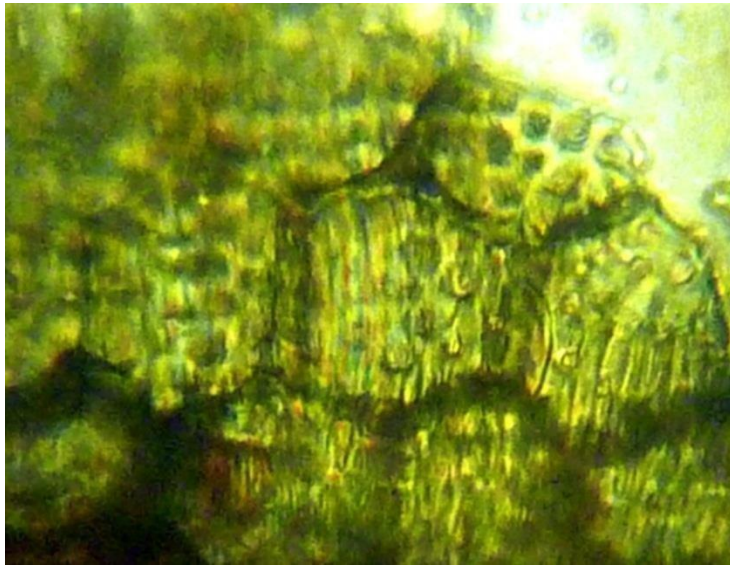
- **Condition:** Fine powder
- **Colour:** Brownish green
- **Odour:** Slightly aromatic
- **Taste:** Bitter



Powder:

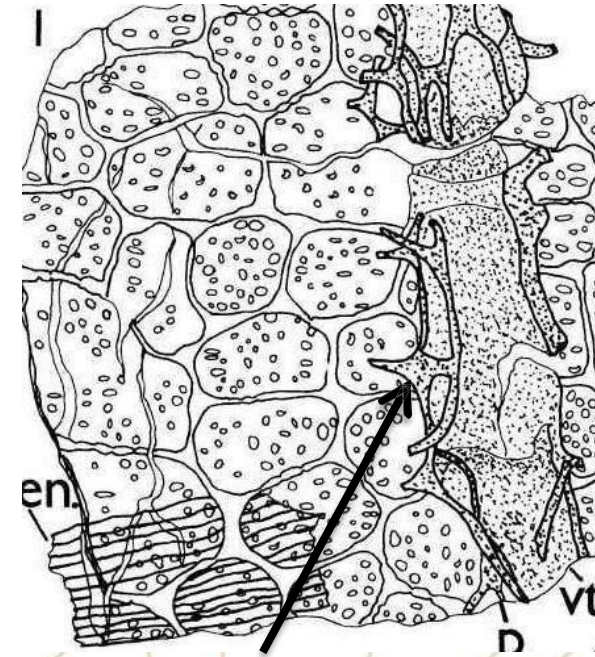
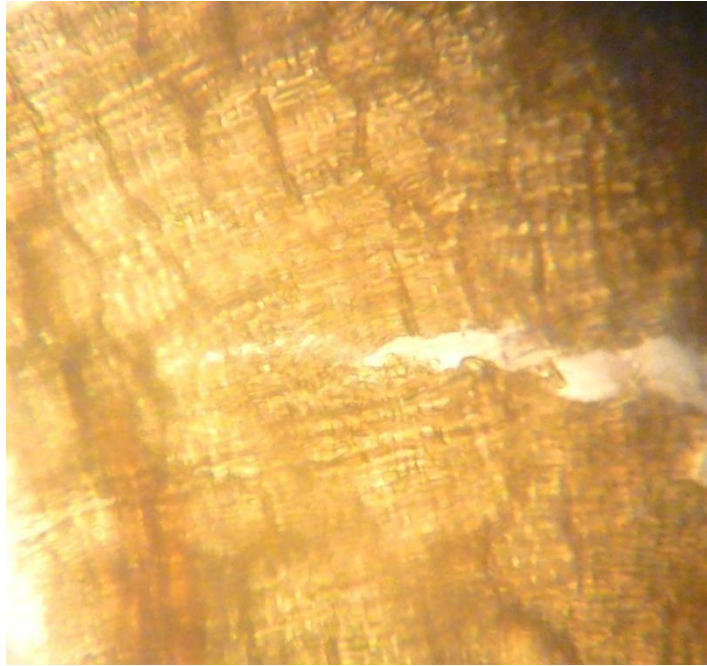
**1- Fragments showing innermost layer of mesocarp
(porous layer) accompanied by parquetry endocarp**

- Inner most layer of mesocarp**
- Parquetry endocarp**



Powder:

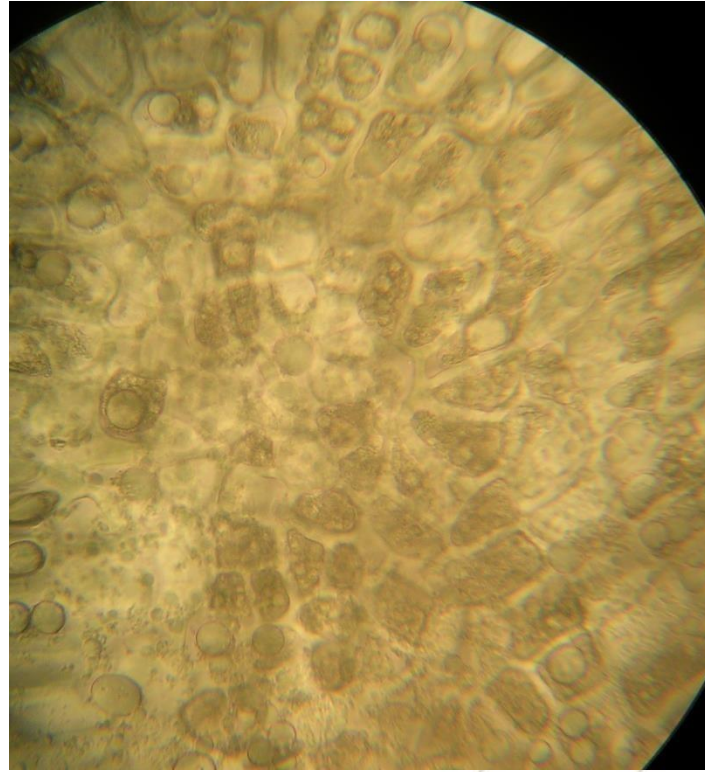
2- Fragments showing innermost layer of mesocarp (porous layer) accompanied by parquetry endocarp and club shaped vittae



Club shaped vittae with radiating cells

Powder:

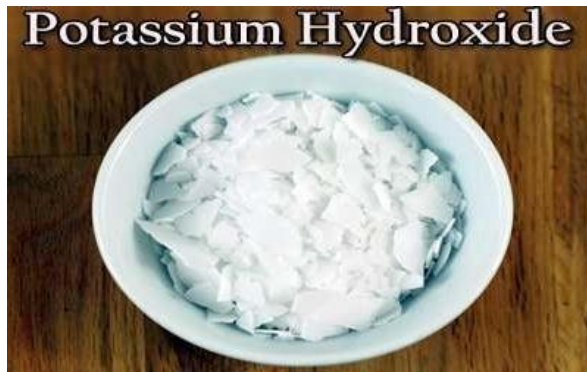
3- Numerous fragments of endosperm showing aleurone grains, containing micro-rosette crystals of calcium oxalate.



Chemical test:

Khellin test:

Put the *ammi visnaga* powder in a filter paper and add few specks of KOH solid (pellets)



after 1-2 mins

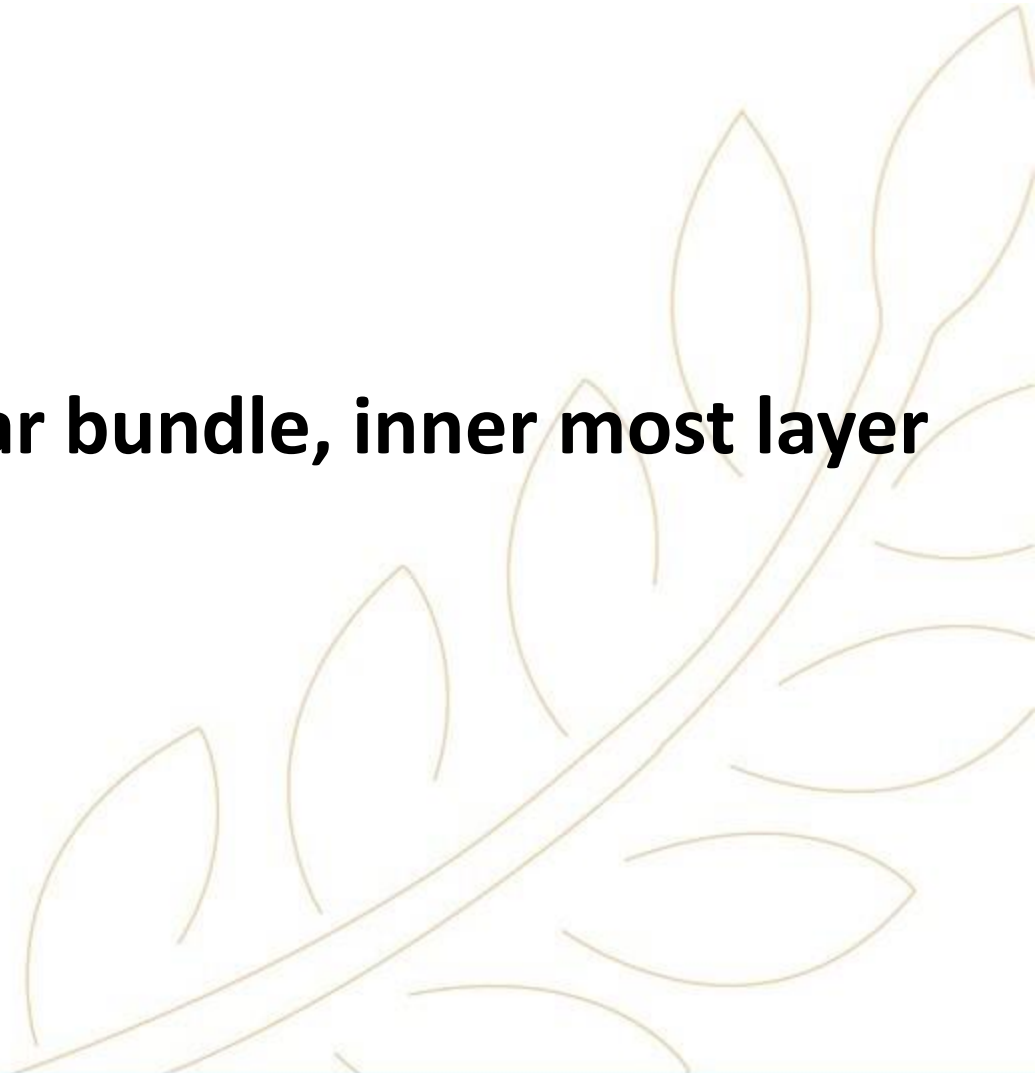


Microscopical Character:

Mount in KOH: All key elements

Mount in Phloroglycinol: Raphe, Vascular bundle, inner most layer of mesocarp and Carpophore

Mount in Water: Negative



Uses

- 1. Spasmolytic** (especially on the muscles of the bronchi, GIT, biliary tract, urogenital system and the coronary vessels)
- 2. Whooping cough** (use for ttt bronchial asthma)
- 3. Cramp-like conditions of GIT, biliary colic, and painful menstruation.**





Established by Dr.Nawal El Degwi
October Univeristy for Modern Sciences and Arts
جامعة أكتوبر للعلوم الحديثة والآداب

Thank You!

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