

**PHARMACOGNOSY III PRACTICE**

**MICROSCOPY 2**

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**✘ Considerations when using a microscope;**

**Clearing**

**Reagents**

**Optical Parameters**

**Microscop View**

**Depth of object**

# REAGENTS

## ✘ CHLORAL HYDRATE SOLUTION:

Used to examine the leaves. The starch is abundant because the leaves do photosynthesis. Chloralhydrate is used to melt starch.

## ✘ SARTUR REAGENTS (Sarım Çelebioğlu & Turhan Baytop, 1949):

Seed, cortex and roots are used to examine. Painting feature; paints different structures in different colors and provides appropriate examination media.

- Pure Lactic Acid.....	60 ml
-Lactic acid saturated with cold in Sudan III .....	45 ml
- Pure Aniline.....	2 g
- Iodine.....	0.20 g
- Potasium iodide .....	1 g
- Ethanol 95°.....	10 ml
- Distilled water .....	80 ml



# 1- SEMEN STRYCHNI


(*Strychnos nux-vomica*) (**LOGANIACEAE**)

Examination component= Sartur, 10x40

a) Testa epiderm that has been woody and feathery.

(yellow-orange)

b) Endosperma cells containing abundant oil drops.



Seed cortex

## **2- SEMEN COFFEAE**

**(*Coffea arabica*)**

**(RUBIACEAE)**

**Examination component= Sartur, 10x40**

**a) Sclerenchyma fibers in endocarp**

**b) Endosperma cells containing oil drops**

# **3- FOLIA BOLDO**

**(*Peumus boldus*)**

**(MONIMIACEAE)**

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**Examination component= Chloralhydrate**

**10x40**

**a) Stoma and adjacent cells\***

**Paracitic Type (Parallel Cell) Stoma:  
Two adjacent cells parallel to the  
stoma axis.**

**b) Bunch villus**

**c) Sclerenchyma bundle**



# 4- FOLIA THEAE

(*Camellia sinensis*)

(THEACEAE)

Examination Component= Sartur

\*10x40

a). Idioblast ( Sleeved stone cells):

\*Stone cells; The walls are thickened cells with lignin accumulation. Stone cells can be present individually or in groups between parenchyma. Prolonged sleeve stone cells whose walls may have different thicknesses are called idioblast.

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## b) Single cell and wooded eglandular trichome

Yellow color due to aniline



Paints lignin to yellow

## c) Parenchyma texture

druz = Ca-oxalate crystal