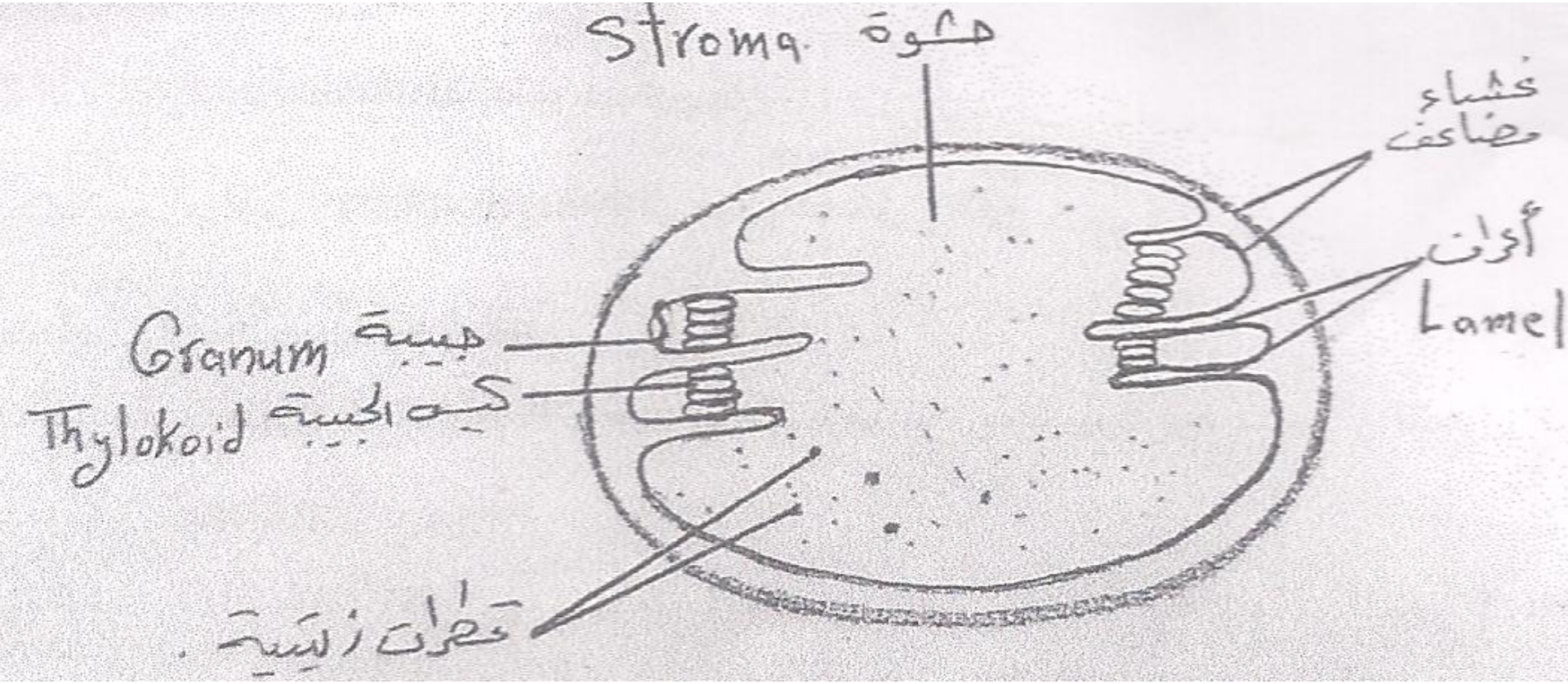
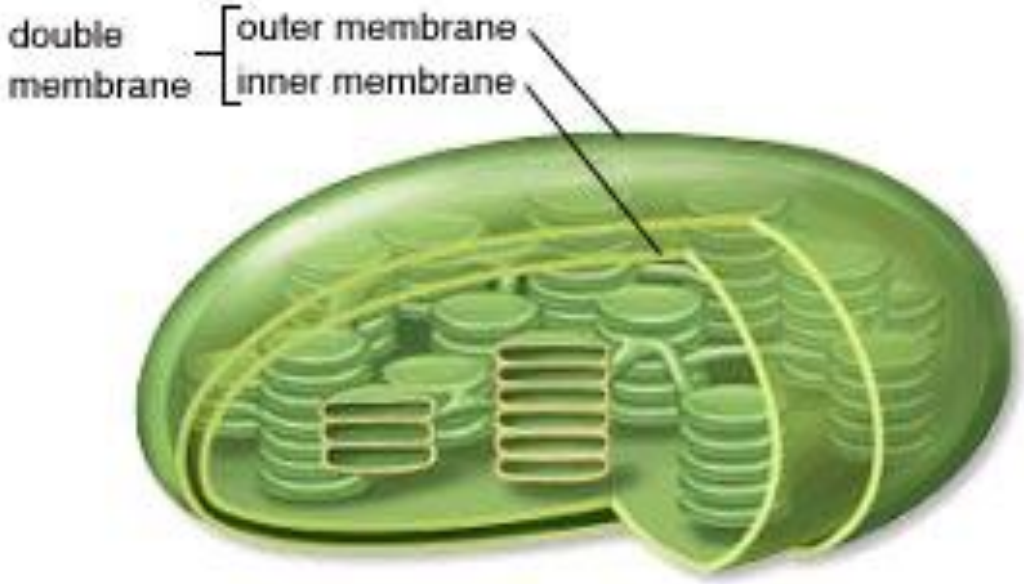
Plastid

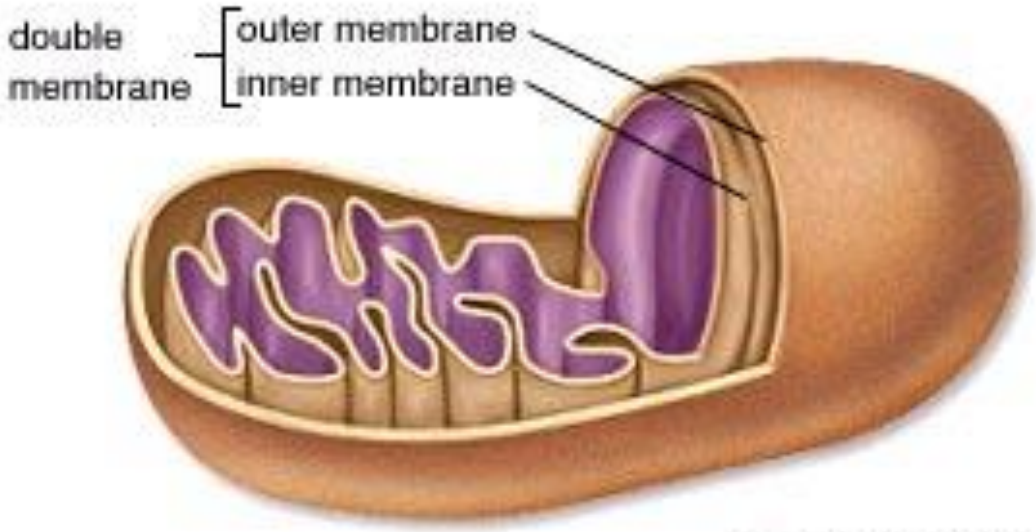
الصانعات

أ. محمد أبو زيتون أ. عبير العاني


Stroma حشوة
غشاء مضاعف
أغراف
Lamel
Granum حبيبة
Thylokoid كيس الحبيبة
قطرات زيتية



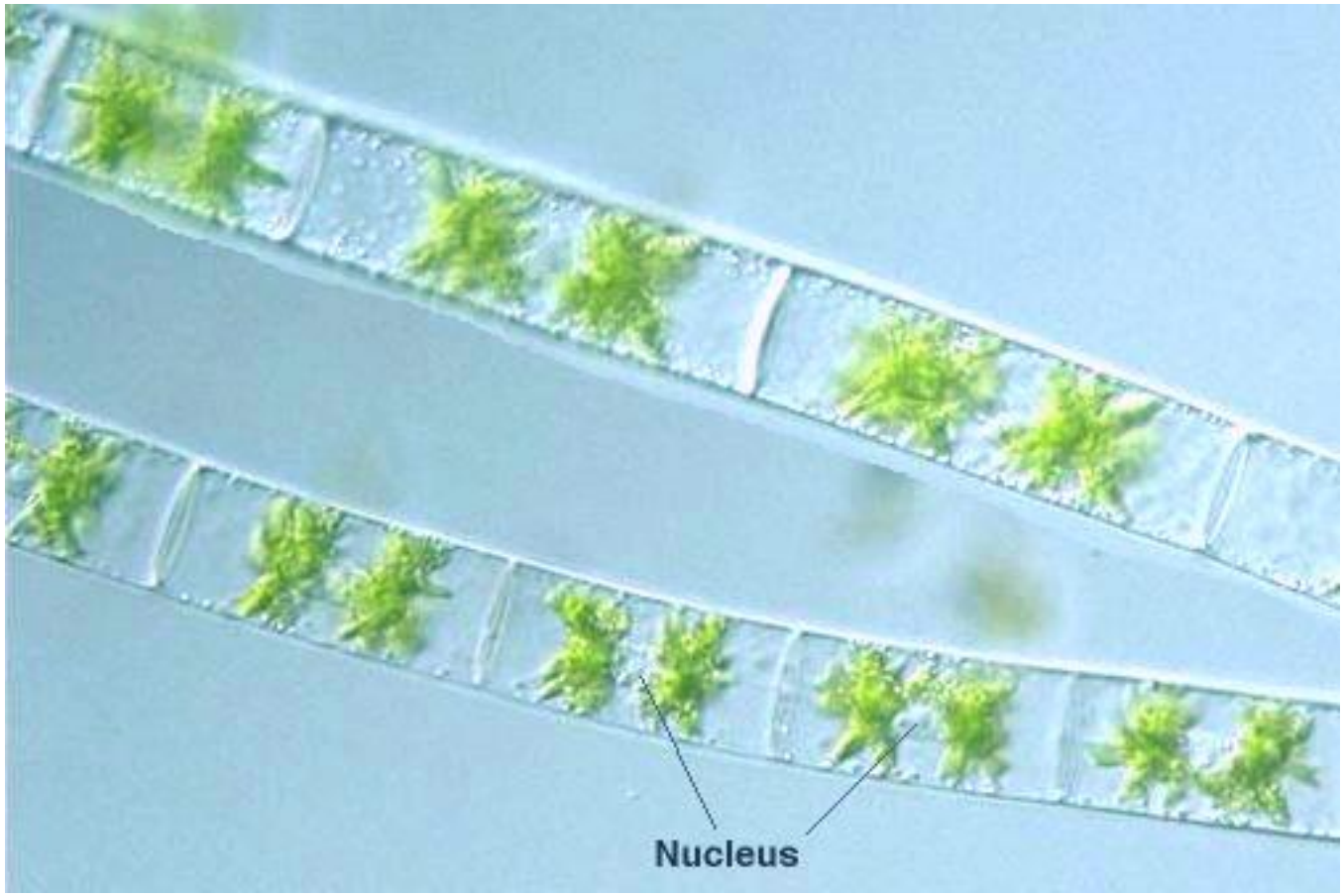
Chloroplast



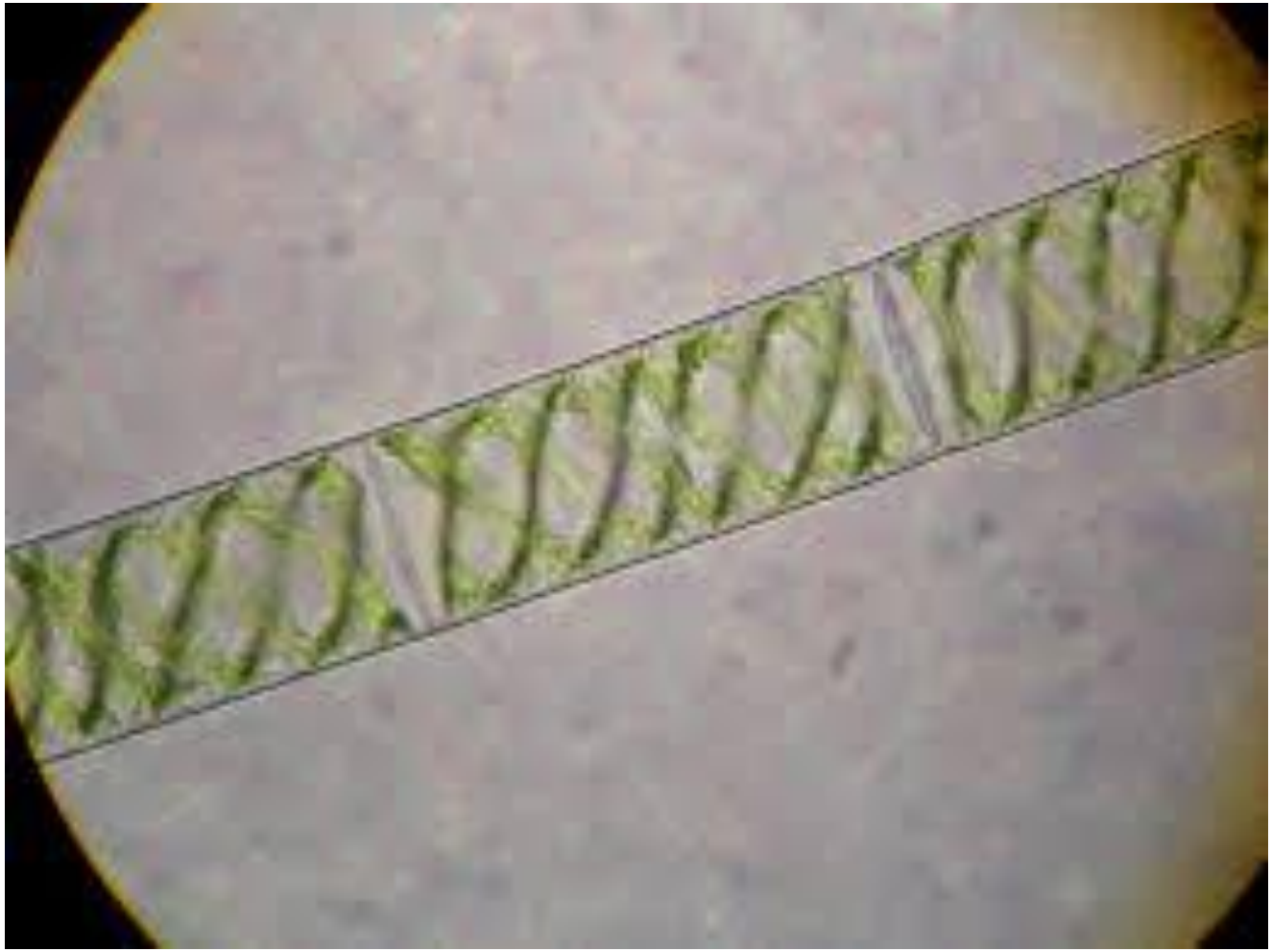
Mitochondrion

- Chlorophylle A $C_{55}H_{72}O_5N_4Mg$
- Chlorophylle B $C_{55}H_{70}O_6N_4Mg$
- Carotene $C_{40}H_{56}$
- Xanthophyle $C_{40}H_{56}O_2$

Chloroplast
Zygnema

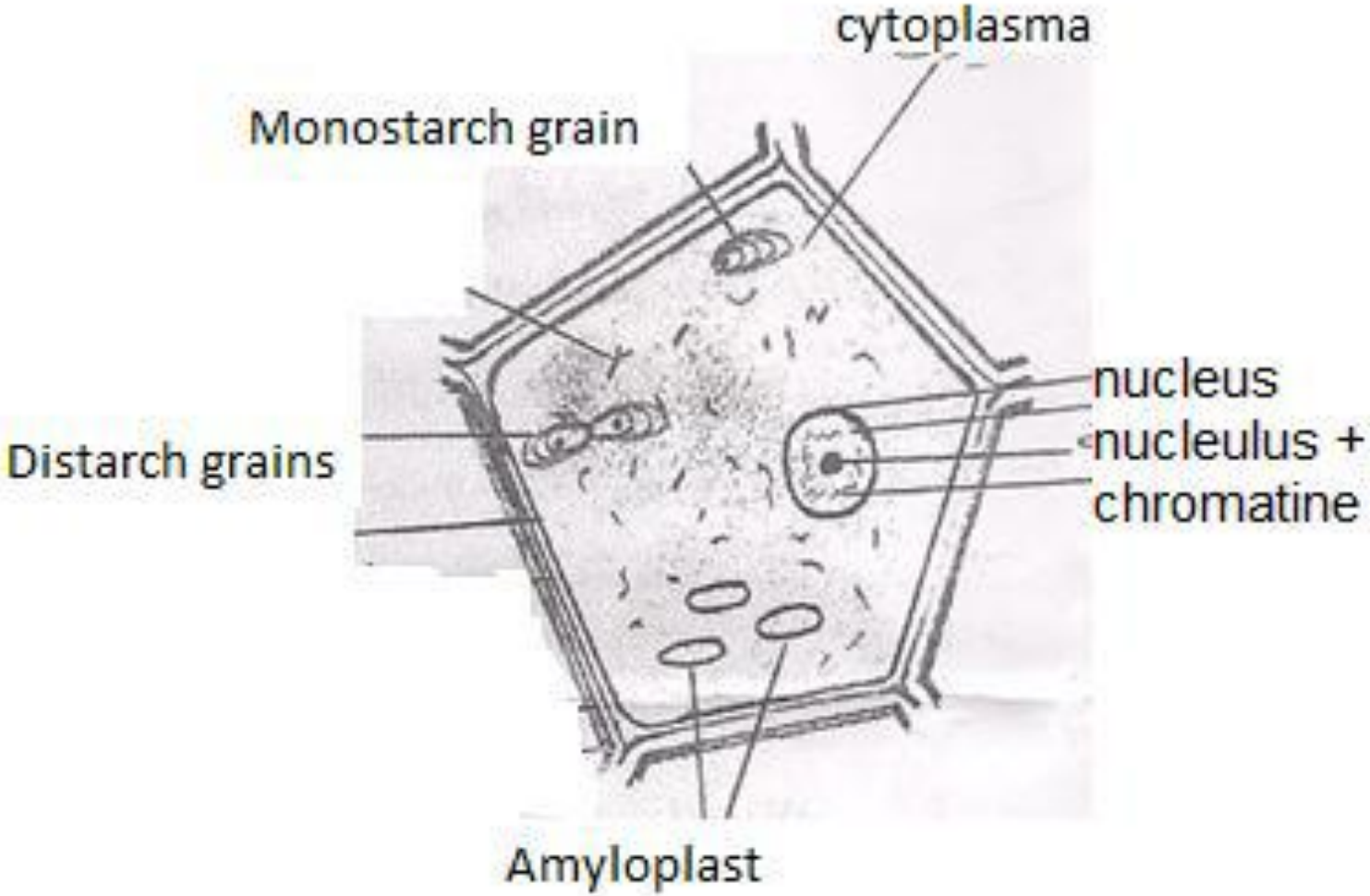


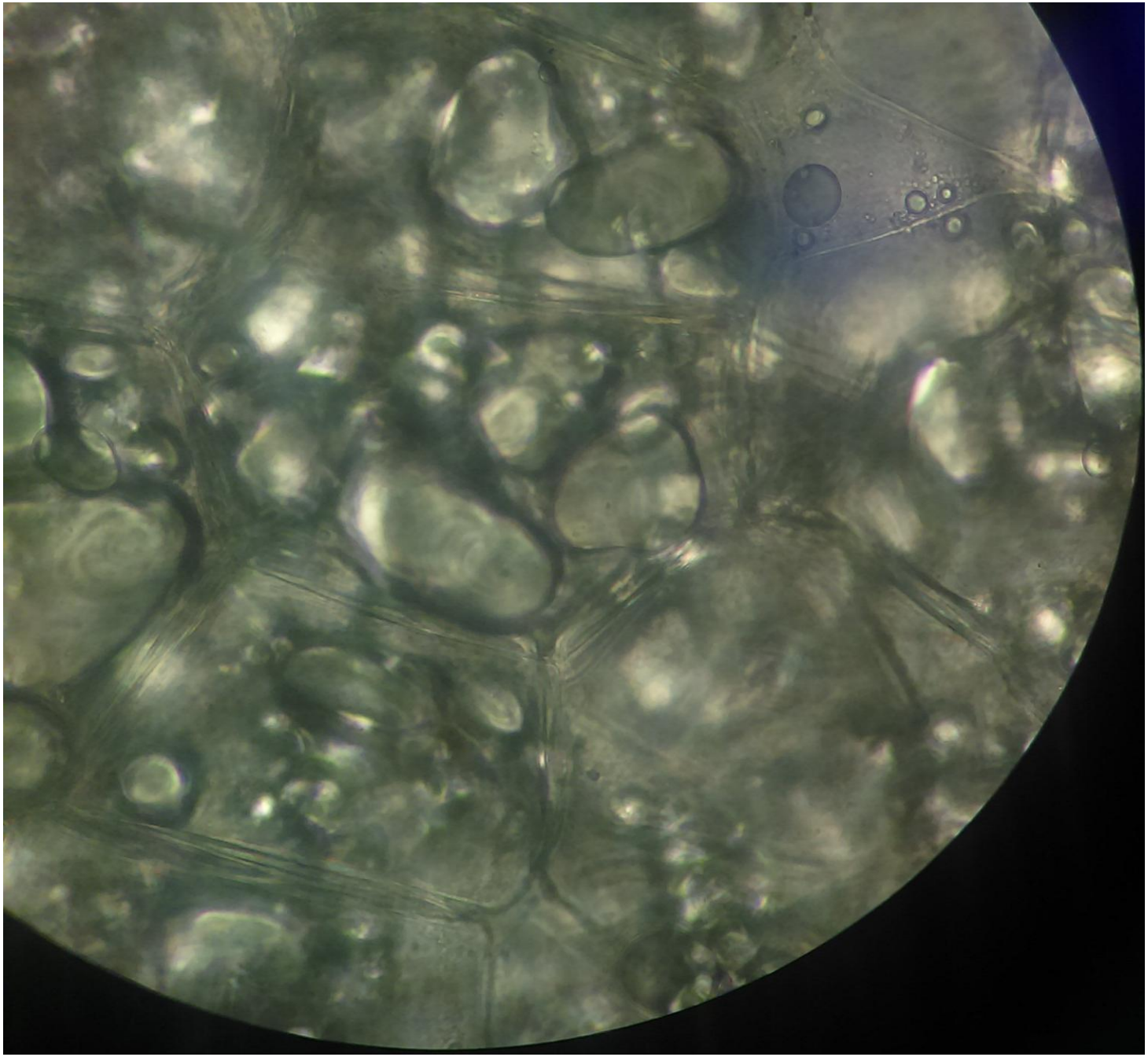
Spirogera

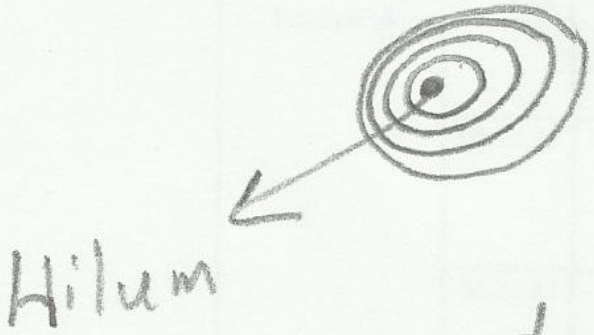


Amyloplast

- Family: Solanaceae
- Genus: Solanum
- Species: Solanum tuberosum
- Organ: potato tuber
- Medium: iodin or water

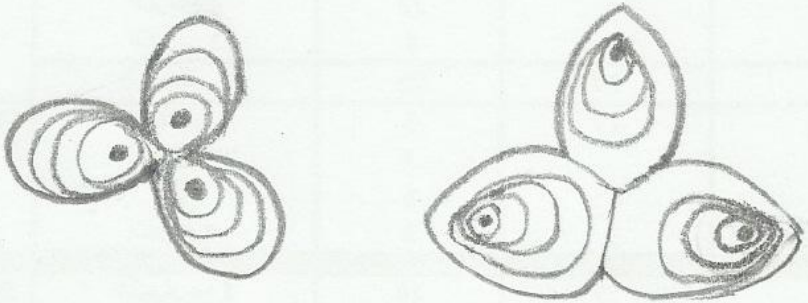

cytoplasma
Monostarch grain
nucleus
nucleulus +
chromatine
Distarch grains
Amyloplast



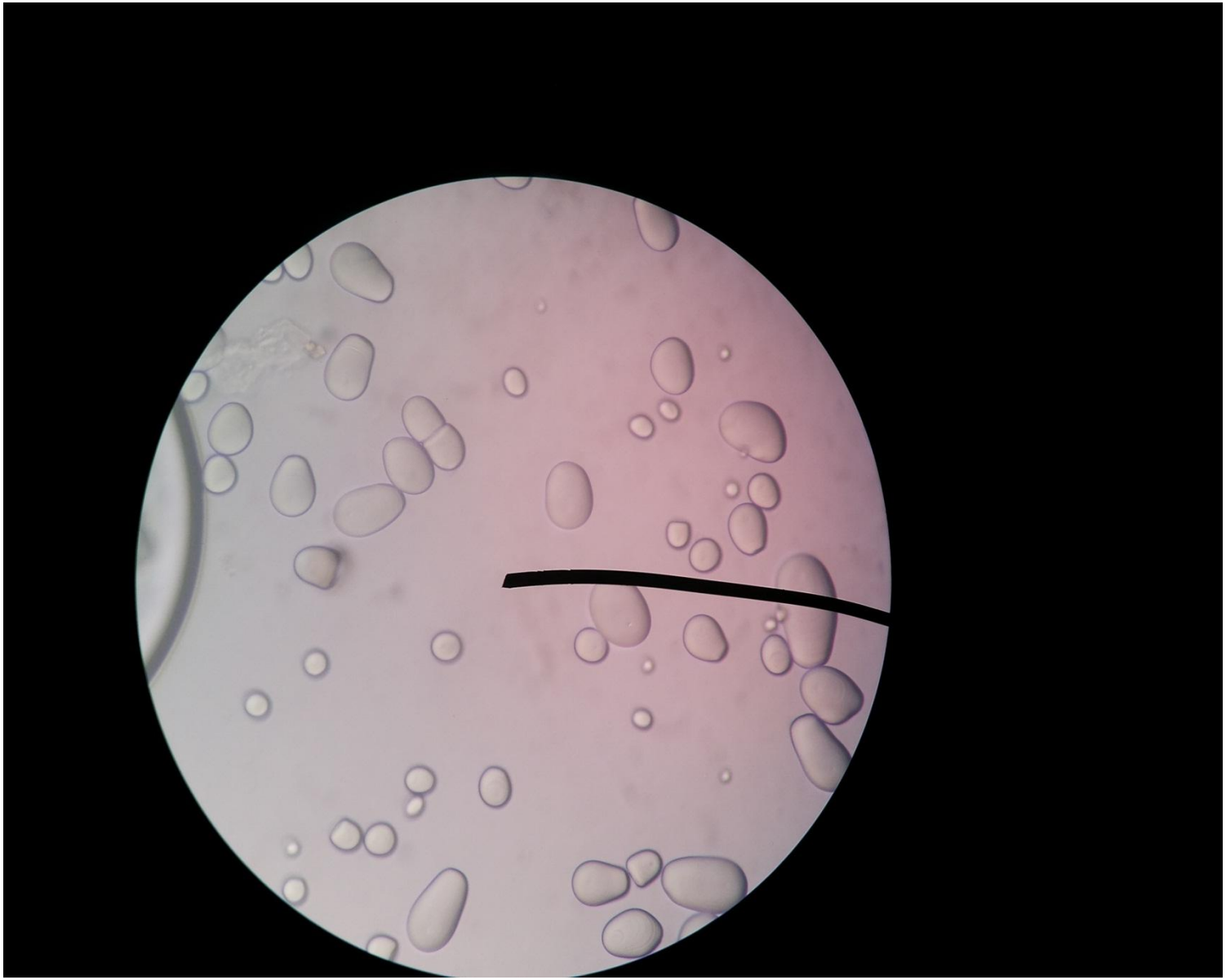


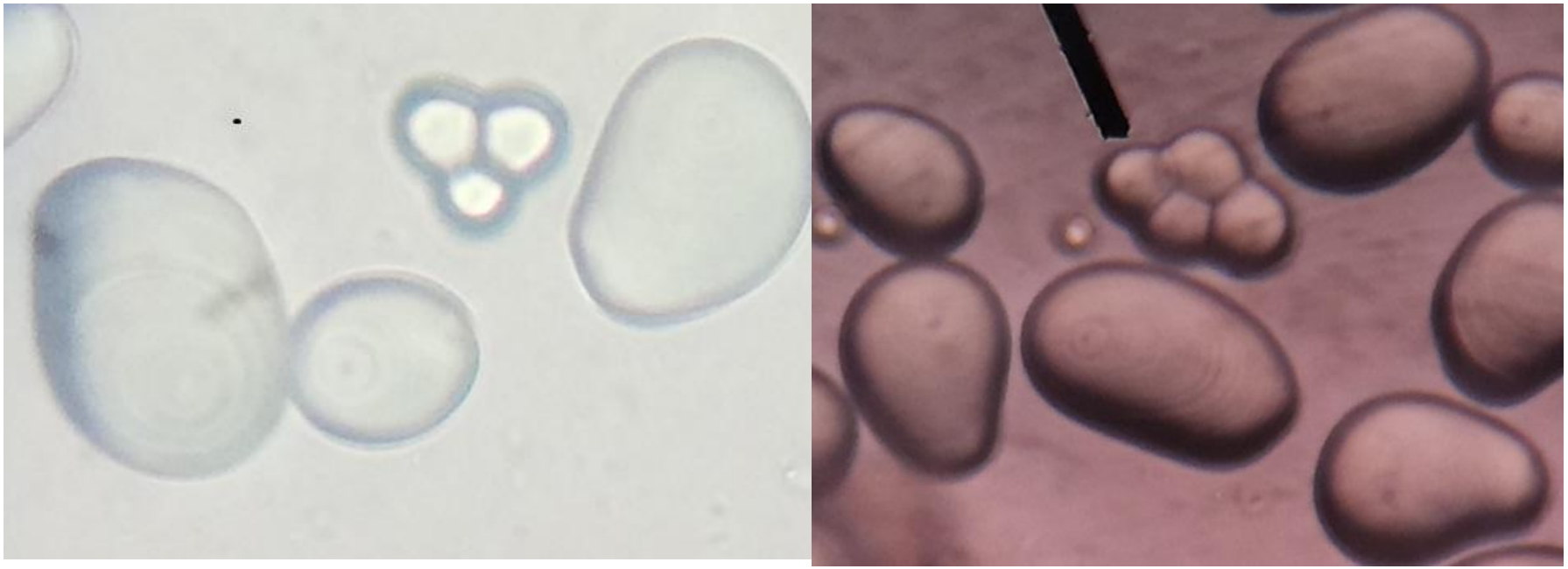
monostrach

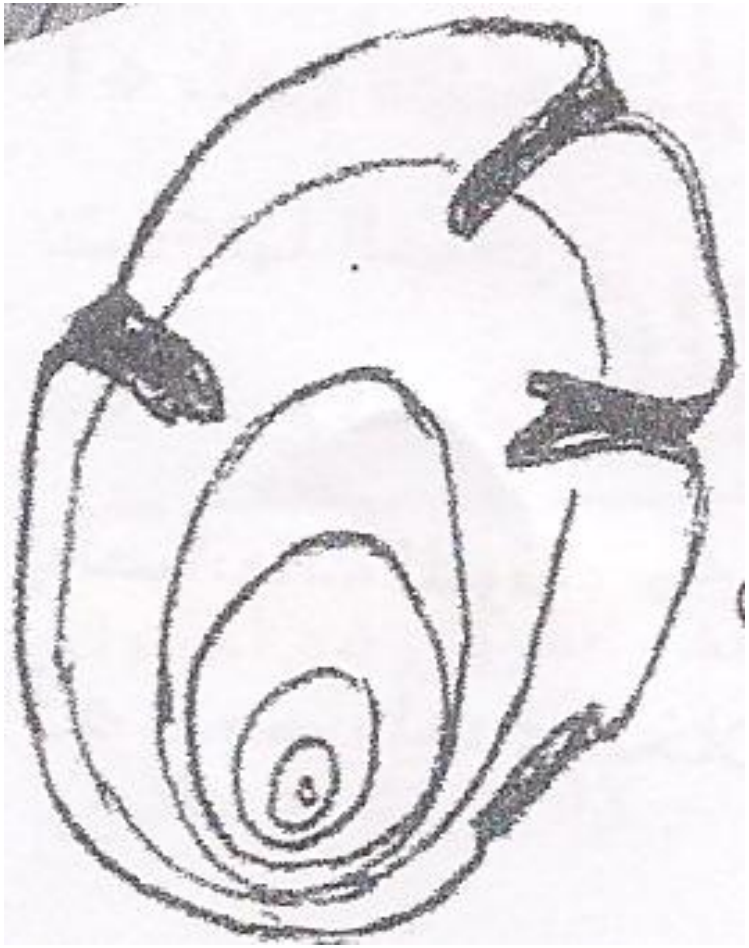
Distrach

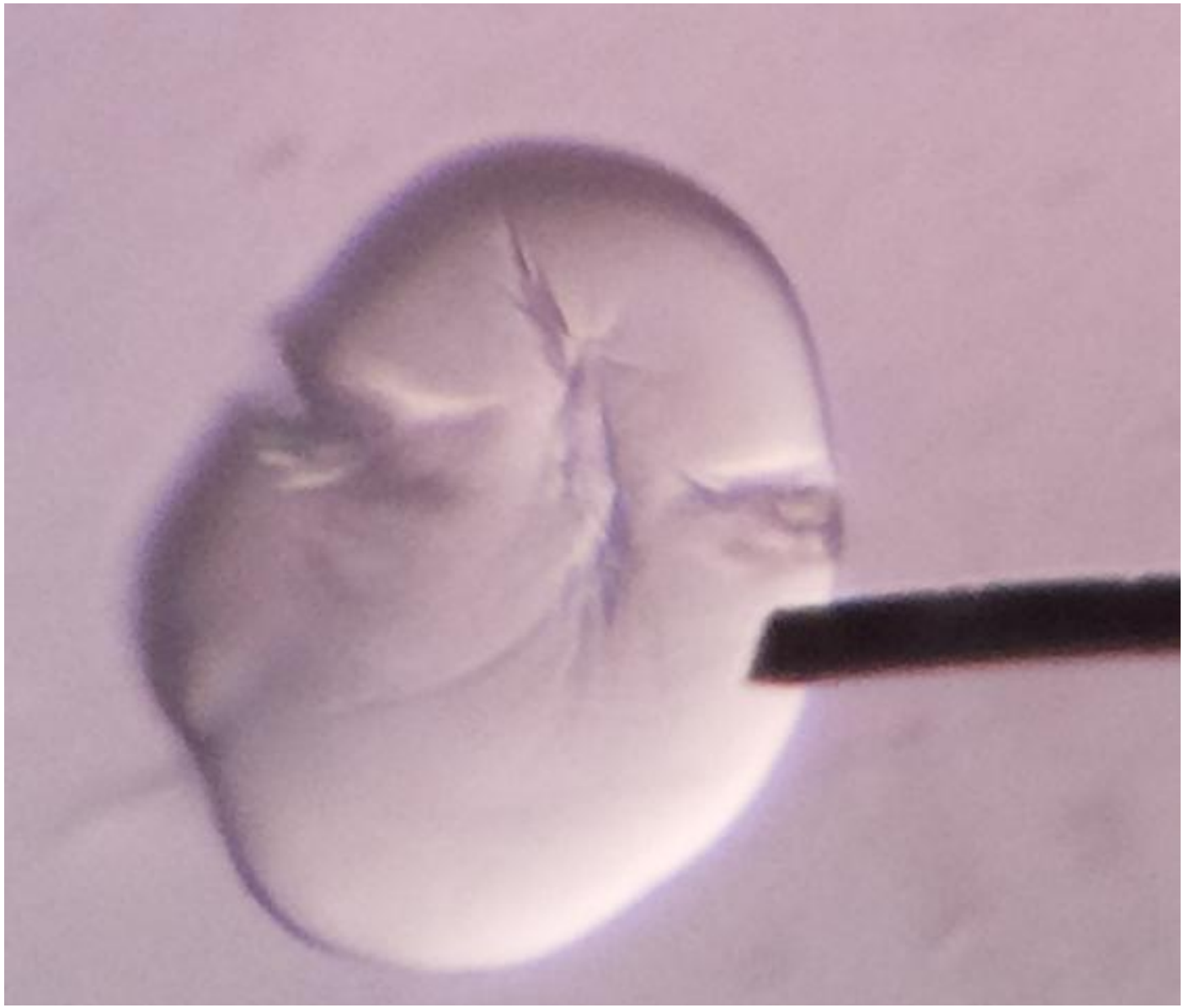


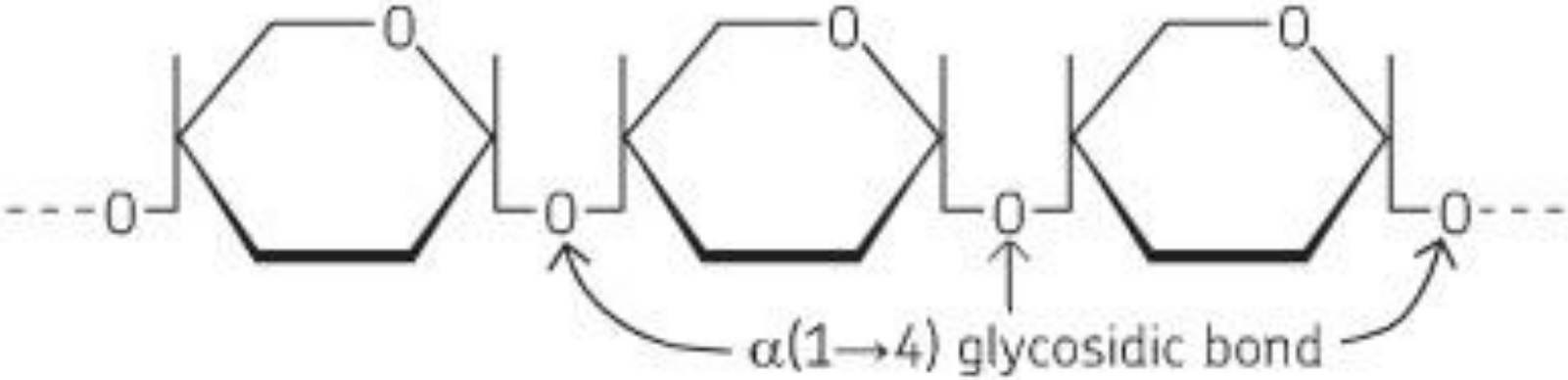
Triplestrach

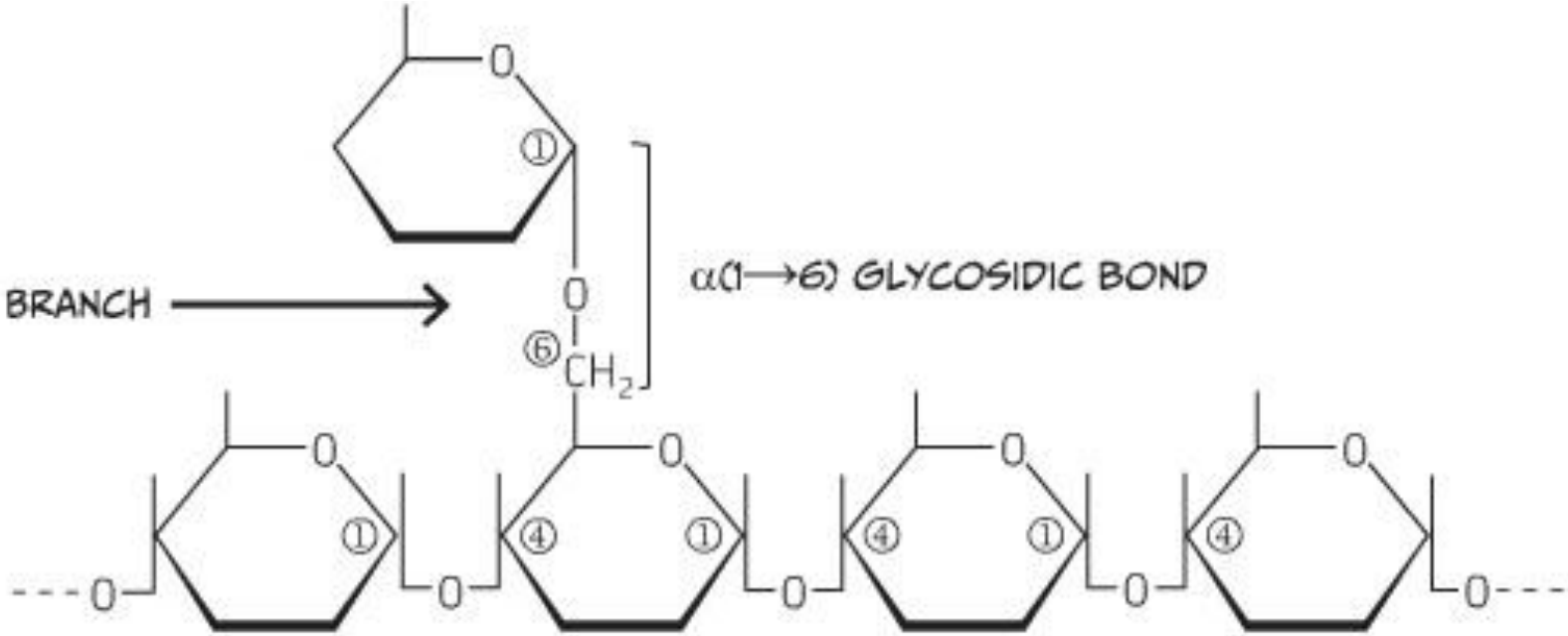









α(1→4) glycosidic bond

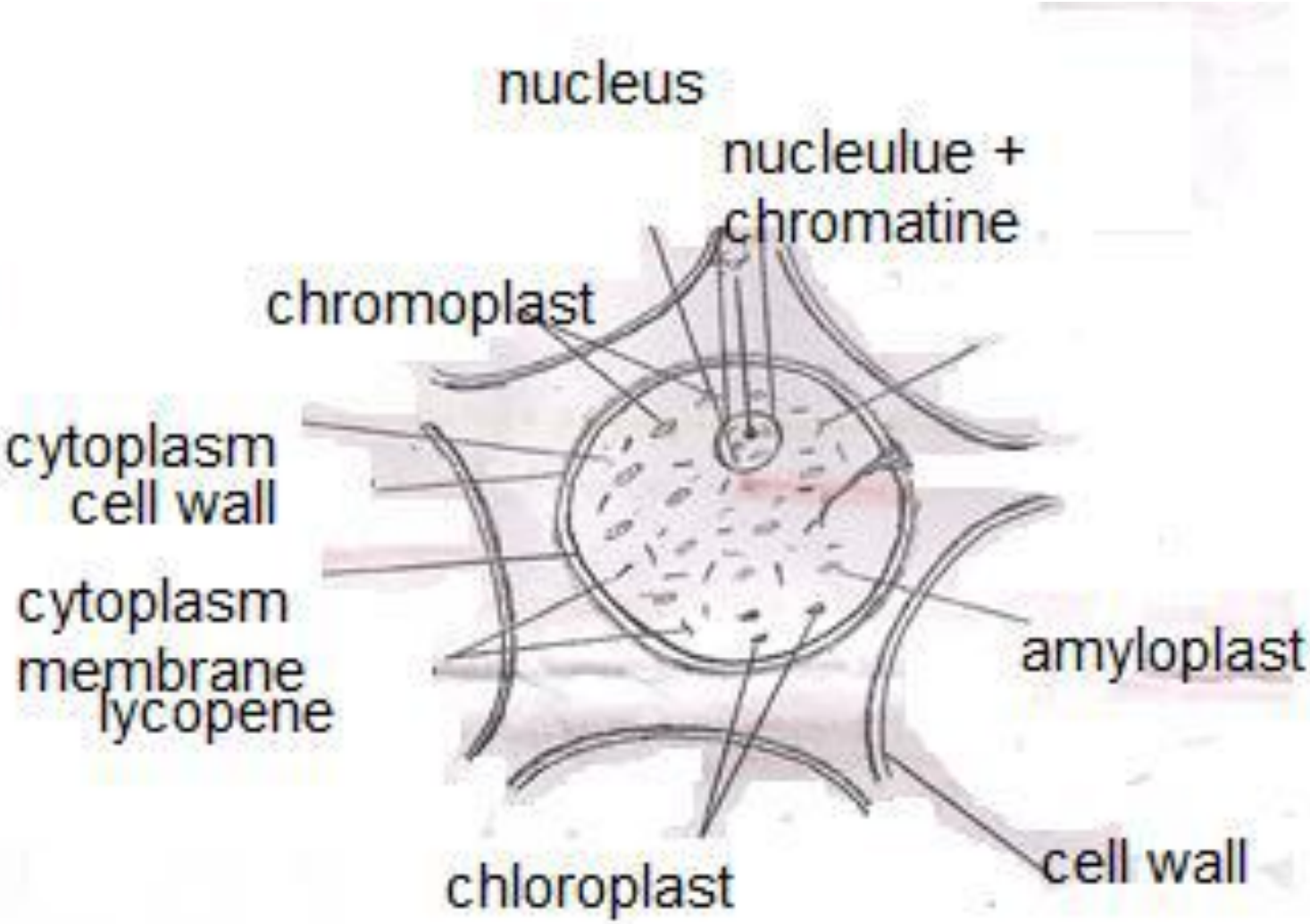

BRANCH
α(1→6) GLYCOSIDIC BOND

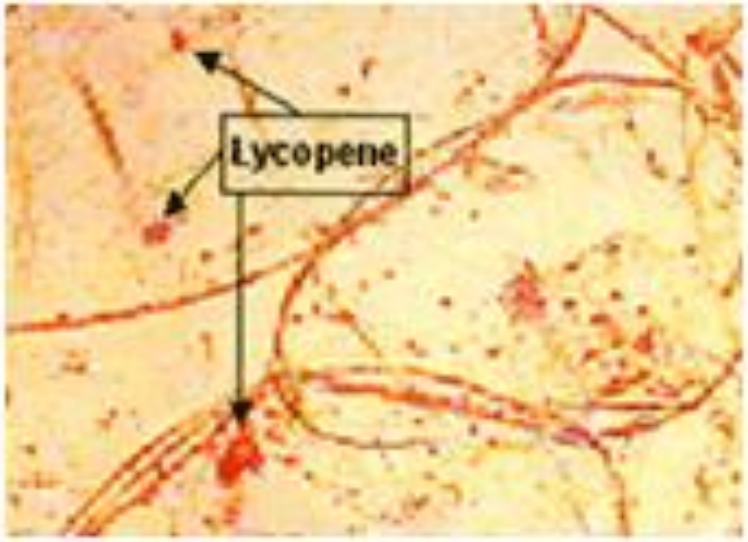
The difference between Amylose and amylopectin

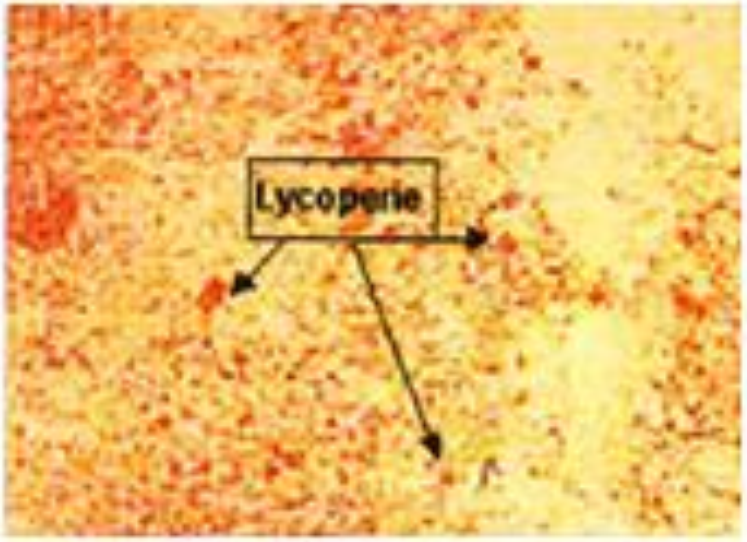
Amylose	Amylopectin
alpha glucose sugar bonded by 1-4 gylcosidic bonds.	amylopectin is alpha glucose sugars bonded by1-4 glycosidic bonds with 1-6 branches
the shape of amylose is straight	the shape of amylopectin is branched
It constitutes about 20-30% of the strach	It constitutes about 70-80% of the strach
With iodine amylose stain blue	With iodine amylose stain reddish brown
More soluble in water	Less soluble in water

Chromoplast

- **Family: Solanaceae**
- **Genus: Solanum**
- **Species: Solanum lycopersicum**
- **Organ: fruit**
- **Medium: water**


nucleus
nucleulue +
chromatine
chromoplast
cytoplasm
cell wall
cytoplasm
membrane
lycopene
amyloplast
chloroplast
cell wall


Lycopene


Lycoperie