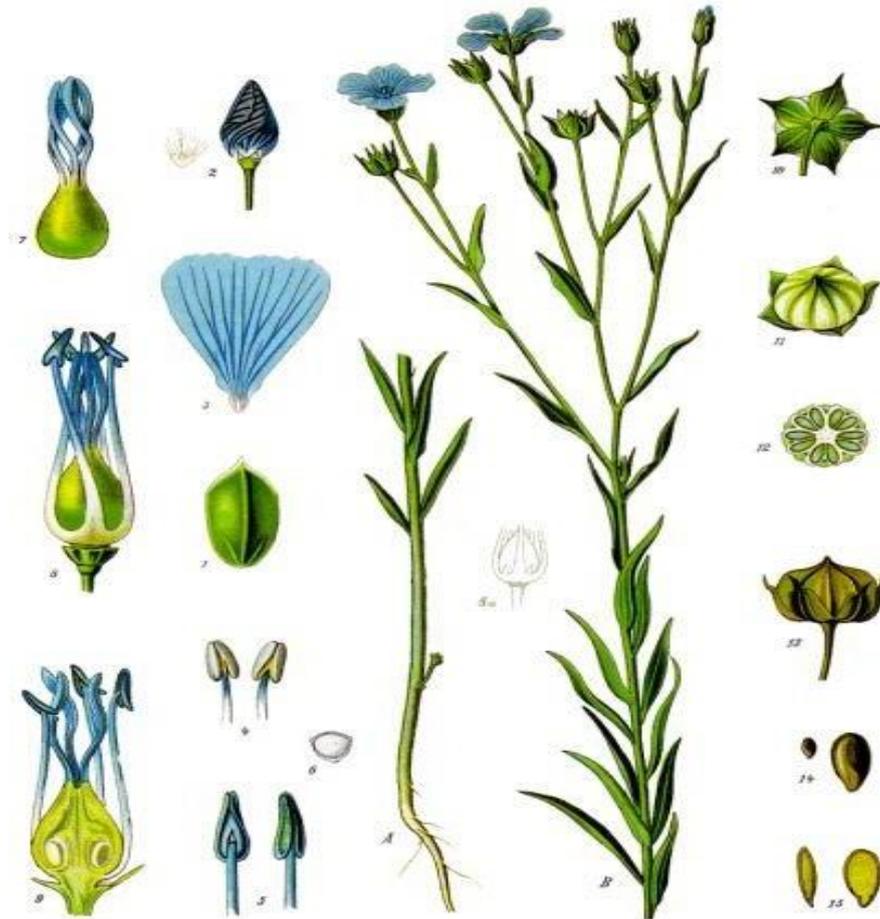


EXPERIMENT NO: 9

Lin seed (Flax seed): Semin Lini

Latin name: *Linum usitatissimum L.*

Family: *Linaceae*



Linum usitatissimum

- Annual herbaceous plant, with blue flowers.
- Colour: pale brown coloured seeds.
- Odourless.
- Taste: mucilagenous taste (Nutty).
- Origin : tropical regions.

Chemical constituents:

- 1- Fixed oil 30-40 % (Lin oil).
- 2- Protein (in aleurone layer).
- 3- Mucilage.
- 4- Cyanogenic glycoside (linamarin).

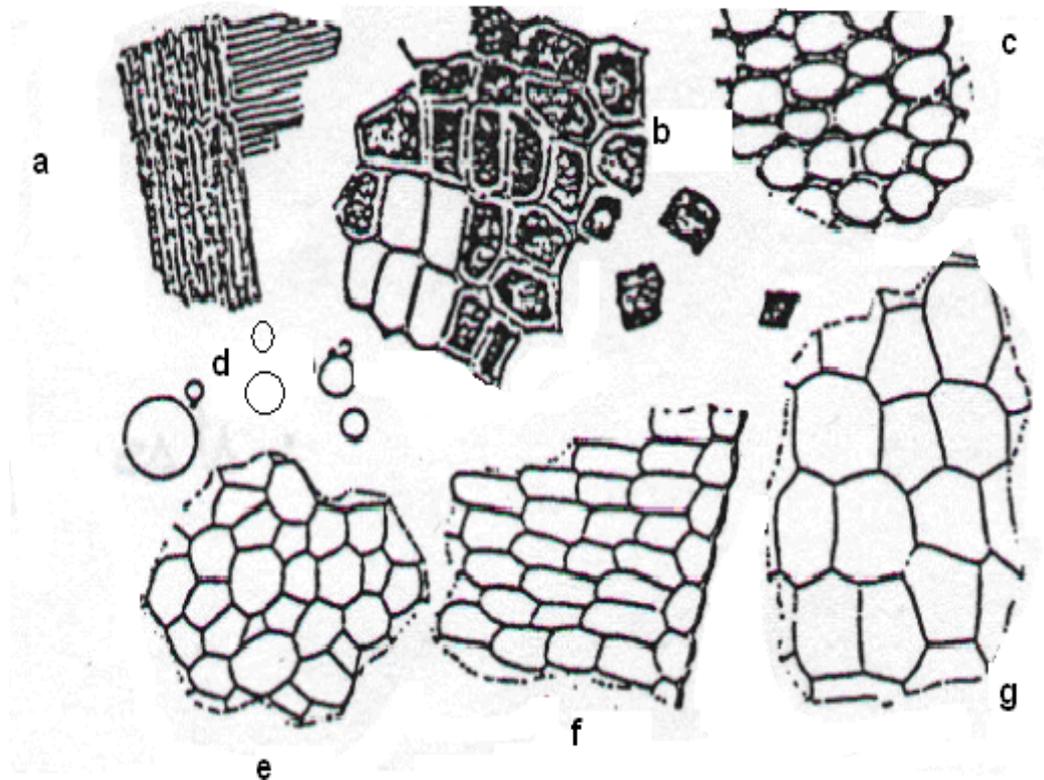
Uses of linseed oil:

1. Demulcent.
2. Mild laxative.
3. Emollient.
4. Cosmetics (creams and lotions).
5. Industrial uses (paint & varnishes “drying oil”, ink and soap).

Microscopical examination:

Characteristic microscopical features:

1. Pigment cell layer (b).
2. Fragment from the seed coat(c).
3. Cotyledon tissue (e).



- a) Fragment of internal integument with the cells of the sclerenchymal fiber layer, cells from the peripendicular layer
- b) Fragment from the pigment cell layer and pigment aggregates in top view
- c) Fragment from the seed coat in top view
- d) Oil droplets
- e) Fragment from the cotyledon tissue
- f) Fragment from the cotyledon in cross section
- g) Fragment from the seed coat epidermis in top view

Homework:

- Q1- Give all the commercial uses for Lin seeds and Lin plant (Flax).
Q2-List the uses of Lin oil in the pharmaceutical industry.