



**Identification of
Tiny Seed and Fruit
Types of Chinese
Materia Medica**



Semen Lini*



1 cm

Source

The dried ripe seed of *Linum usitatissimum* L. in the family Linaceae

Property and flavour

Neutral; sweet

Meridian affinity

Lung, liver and large intestine meridians

Actions

To moisten dryness and promote bowel movements; to nourish blood and remove wind

Note:

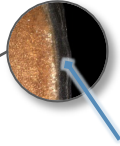
* Its name in Chinese Pharmacopoeia (2020 Edition) is “Lini Semen”.

Micro-morphological features

Shape

Flattened ovate

Relative pointed at one end



After being soaked in warm water, epidermis swells to form a transparent mucilaginous membrane surrounding the whole seed

Relatively round at another end



Surface view



Hilum is located at the dented part of the pointed end, with lighter colour



Visible with light brown edge in lateral view

Lateral view

1 mm

Surface

Reddish-brown, smooth and lustrous, with brown dots

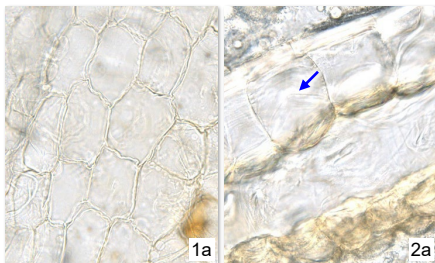


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0.2 mm

Powder microscopic features

Testa

Epidermal cell of testa



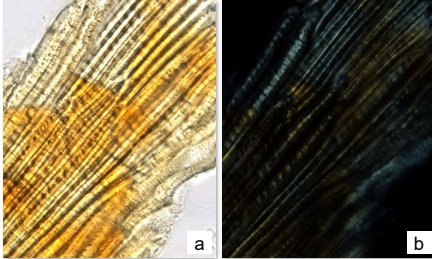
Appears polygonal or sub-polygonal in surface view (1), relatively large, slightly shriveled, with thin wall; lateral side (2) is occasionally found, sub-square or sub-rectangular, with mucilage (→) in lumen

Hypodermal cell



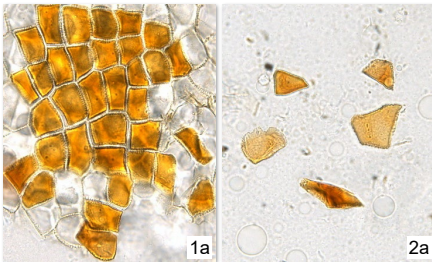
Light yellow, appears sub-polygonal or sub-rounded in surface view, with slightly thick wall

Sclerenchymatous cell



Light yellow or yellow, strip-shaped, wall is thick or slightly thick, with small and dense pits; yellow or white under polarized light microscope

Pigment cell



Appears square, rectangular or polygonal in surface view (1), with tightly beaded anticlinal wall, usually contains yellowish-brown or brown substances that easily fragment into irregular pigment masses (2)

Key identification features

Micro-morphology

- ⊙ Flattened ovate
- ⊙ Visible with light brown edge in lateral view
- ⊙ Surface is smooth and lustrous, with brown dots

Powder microscopy

- ⊙ Epidermal cell of testa: slightly shriveled in surface view, with thin wall; lateral side is occasionally found, with mucilage in lumen
- ⊙ Sclerenchymatous cell: strip-shaped, wall is thick or slightly thick, with small and dense pits
- ⊙ Pigment cell: with tightly beaded anticlinal wall, usually contains yellowish-brown or brown substances

For more information, please refer to [website of the Hong Kong Chinese Materia Medica Standards](#):

Lini Semen – HKCMMS (Vol 9)

Government Chinese Medicines Testing Institute

Department of Health

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