



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

Semen Trigonellae*



Source

The dried ripe seed of *Trigonella foenum-graecum* L. in the family Leguminosae

Property and flavour

Warm; bitter

Meridian affinity

Kidney meridian

Actions

To warm the kidney and strengthen yang; to dissipate cold and alleviate pain

Note:

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

Micro-morphological features

Shape

Rhomboid, rectangular, trapeziform or oblong



1 mm



Surface view

With 1 deep groove visible on both sides in surface view, slantly dividing the seed into 2 asymmetrical parts

0.5 mm

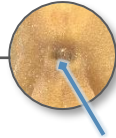
Usually thicker
on the dorsal side



Dorsal view



Ventral view



Hilum is located at the
intersection of the deep
grooves on the ventral
side, sub-rounded



Top view



Bottom view

Sub-ovate or sub-
lanceolate in top and
bottom views

Surface

Yellowish-brown or yellowish-green, with irregular granular protuberances



0.5 mm

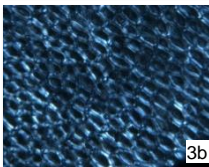
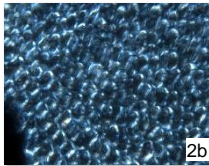
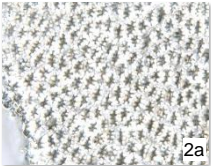
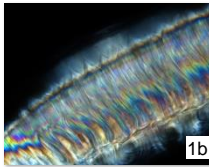
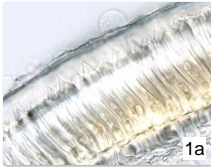
Odour

Aromatic

Powder microscopic features

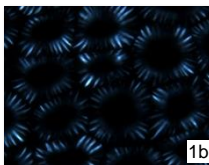
Testa

Palisade cell of testa

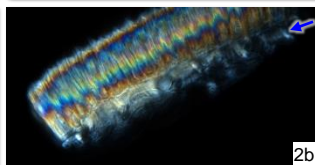
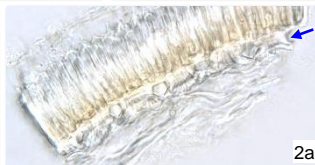


Colourless or light yellowish-brown, cells occur in 1 row in lateral view (1), covered with thick cuticle, outer wall is relatively thick, with acute apex and 1 luciferous band; appears sub-polygonal in top view (2), lumen is relatively small, with distinct pit canals; lumen is relatively large in bottom view (3); bright white or polychromatic under polarized light microscope

Brace cell



Colourless, usually adheres to palisade cell of testa; appears polygonal or sub-polygonal in surface view (1), lumen is large, with dense radial striations; cells occur in 1 row (→) in lateral view (2), dumbbell-shaped or trumpet-shaped, upper end is relatively narrow, with distinct stripes; white under polarized light microscope



Key identification features

Micro-morphology

- ⊙ Rhomboid, rectangular, trapeziform or oblong
- ⊙ With 1 slant deep groove on both sides in surface view
- ⊙ With irregular granular protuberances on the surface

Powder microscopy

- ⊙ Palisade cell of testa: cells occur in 1 row in lateral view, with acute apex; with distinct pit canals in top view, lumen is relatively large in bottom view
- ⊙ Brace cell: with dense radial striations in surface view and distinct stripes in lateral view

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

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