



Identification of
Tiny Seed and Fruit
Types of Chinese
Materia Medica

Semen Astragali Complanati*



Source

The dried ripe seed of *Astragalus complanatus* R. Br. in the family Leguminosae

Property and flavour

Warm; sweet

Meridian affinity

Liver and kidney meridians

Actions

To tonify the kidney and assist yang; to secure essence and reduce urination; to nourish the liver and brighten the eyes

Note:

* Its name in Chinese Pharmacopoeia (2020 Edition) is "Astragali Complanati Semen".

Micro-morphological features

Shape

Flattened reniform



Slightly dented area of ventral side has hilum and is located slightly towards one side

Surface view



Round hilum is observable in ventral view

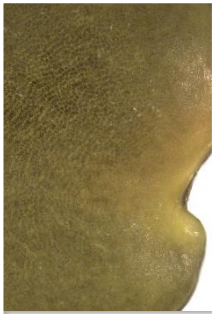
With slightly protruding raphe on one side

Ventral view

0.5 mm

Surface

Smooth, brownish-green or dark brownish-green, dented area of ventral side is yellowish-brown or yellowish-green, with darker colour around the raphe (→)



Surface view

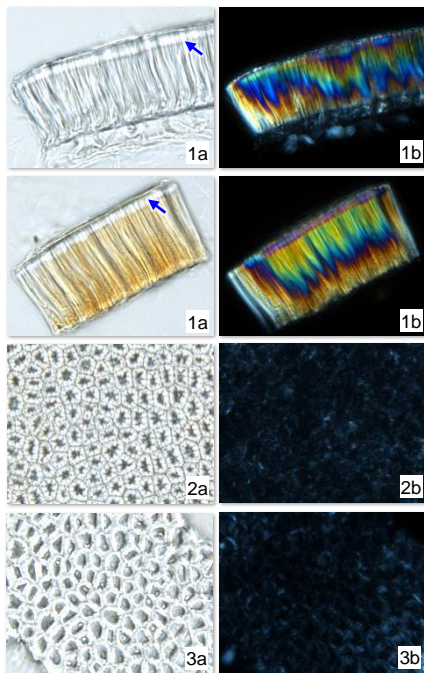


Ventral view

0.5 mm

Powder microscopic features

Testa

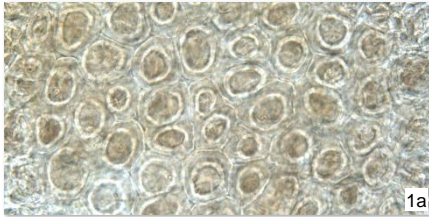
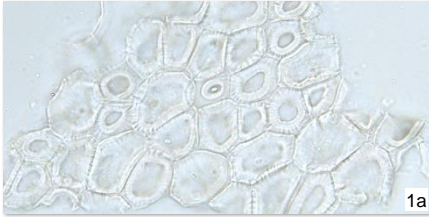
Palisade cell of testa

Colourless or light yellowish-brown. Cells occur in 1 row in lateral view (1), outer wall is relatively thick, with 1 luciferous band (→); polychromatic under polarized light microscope. Cell appears polygonal in top view (2), lumen is relatively small, with distinct pits; cell appears polygonal or sub-polygonal in bottom view (3), lumen is relatively large; white under polarized light microscope

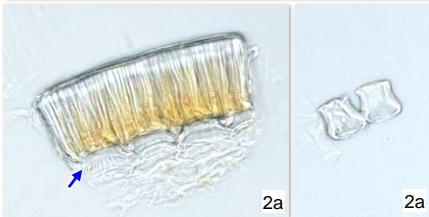
a. features under bright field; b. features under polarized light

50 μ m

Brace cell of testa



Colourless, some contain light brown substances in lumina, usually adheres to palisade cell of testa; cell appears polygonal or sub-polygonal in surface view (1), with 1 sub-rounded or sub-elliptical ring inside, radial striations are sometimes observable; cells occur in 1 row (→) in lateral view (2), dumbbell-shaped or trumpet-like



Key identification features

Micro-morphology

- ⊙ Flattened reniform, ventral side is slightly dented
- ⊙ Round hilum is observable in ventral view, with raphe on one side
- ⊙ Surface is brownish-green or dark brownish-green, dented area of ventral side is yellowish-brown or yellowish-green

Powder microscopy

- ⊙ Palisade cell of testa: with 1 luciferous band observable in lateral view, lumen is relatively small in top view, with distinct pits
- ⊙ Brace cell of testa: cell appears polygonal or sub-polygonal in surface view, with 1 sub-rounded or sub-elliptical ring inside; appears dumbbell-shaped or trumpet-like in lateral view

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

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