



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

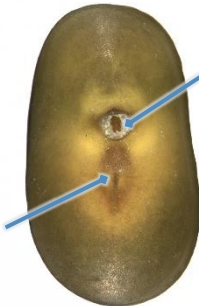
### Shape

Flattened reniform



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

Surface view



Round hilum is visible 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

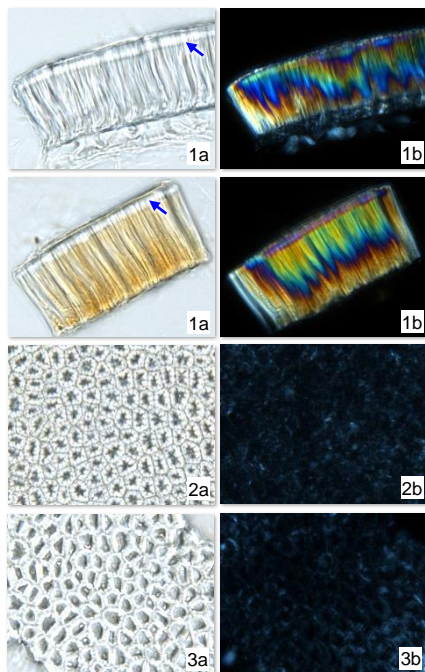


Ventral view

0.5 mm

## Powder microscopic features

## Testa

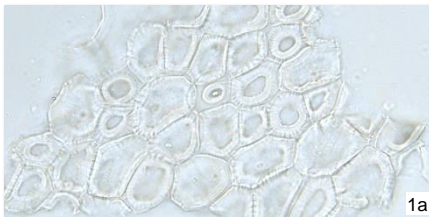
Palisade cell of testa

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 pit canals; cell appears polygonal or sub-polygonal in bottom view (3), lumen is relatively large; white under polarized light microscope

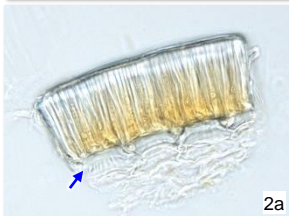
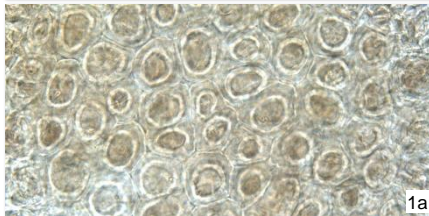
*a. features under bright field; b. features under polarized light*

50  $\mu$ 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, some with radial striations; cells occur in 1 row (→) in lateral view (2), dumbbell-shaped or trumpet-shaped



## Key identification features

### Micro-morphology

- ⊙ Flattened reniform, ventral side is slightly dented
- ⊙ Round hilum is visible 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 visible 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-shaped in lateral view

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

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Government Chinese Medicines Testing Institute

Department of Health

Enquiry hotline: 3188 8079

Website: [www.cmro.gov.hk](http://www.cmro.gov.hk)

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