



Identification of
Tiny Seed and Fruit
Types of Chinese
Materia Medica

Cuscutae Semen*



1 cm

Source*

The dried ripe seed of *Cuscuta australis* R. Br. or *C. chinensis* Lam. in the family Convolvulaceae

Property and flavour

Neutral; pungent and sweet

Meridian affinity

Liver, kidney and spleen meridians

Actions

To tonify the liver and kidney; to secure essence and reduce urination; to secure the fetus; to brighten the eyes; to stop diarrhoea; to disperse wind and resolve macule for external use

Note:

* The name and source listed in Schedule 2 of the Chinese Medicine Ordinance are “Semen Cuscutae” and “Ripe seed of *Cuscuta chinensis* Lam.”, correspondingly.

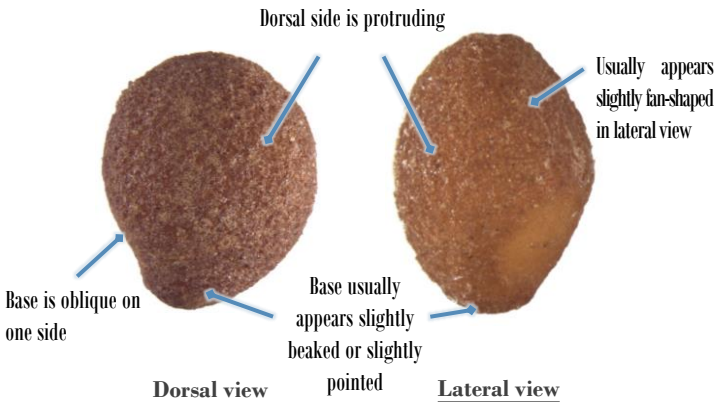
Micro-morphological features

Shape

Sub-obovate or sub-elliptical

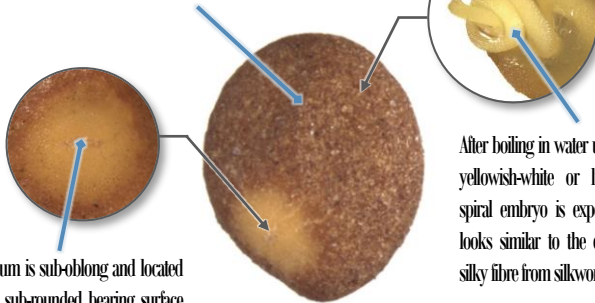


0.5 mm



0.2 mm

A longitudinal or slightly slanting ridge is frequently observable and located in the middle or slightly towards one side



Hilum is sub-oblong and located on sub-rounded bearing surface which is on one side of the base

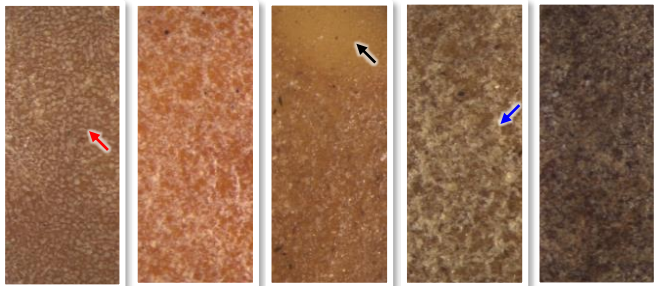
After boiling in water until broken, yellowish-white or light yellow spiral embryo is exposed, which looks similar to the exudation of silky fibre from silkworm

Ventral view

0.2 mm

Surface

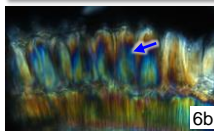
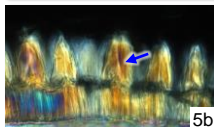
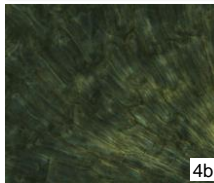
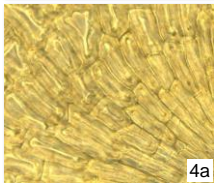
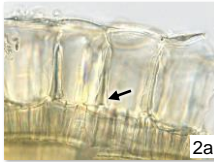
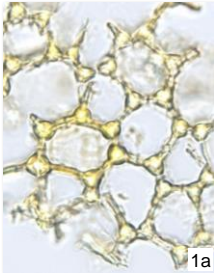
Rough, brown, reddish-brown, yellowish-brown, greenish-brown or blackish-brown, bearing surface (→) is usually lighter in colour, with irregularly distributed granular substances (→) and extremely small reticulate striations (→)



0.2 mm

Powder microscopic features

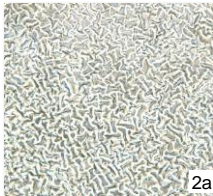
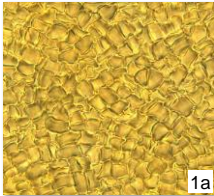
Testa

Epidermal cell of testa

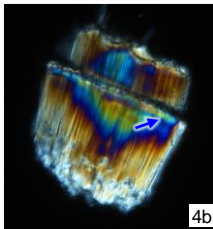
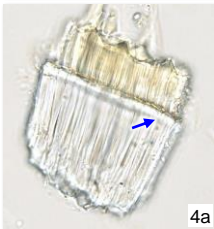
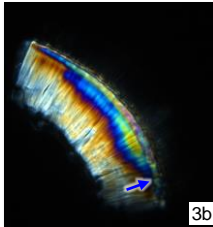
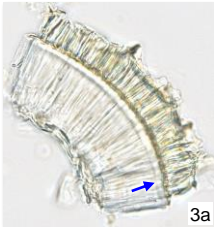
Colourless or yellowish-brown. With 2 forms. One form appears polygonal or sub-polygonal in surface view (1), anticlinal wall is thickened where the corners are particularly distinct; appears sub-square or sub-rectangular in lateral view (2), with thickened anticlinal wall (→) sometimes observable, some contain starch granules (3). The surface of another form (4) is barely found, sub-rectangular or sub-polygonal, with extremely thick anticlinal wall, cells are radially arranged from small to large; appears sub-square or sub-rectangular in lateral view, with distinctly thickened anticlinal wall (5), some cell boundaries are indistinct (6); orange-yellow, white or polychromatic for thickening (→) under polarized light microscope

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

50 μm

Palisade cell of testa

Colourless or yellowish-brown. Appears sub-polygonal or sub-square (1) in surface view, usually shriveled (2). Cells occur in 2 rows in lateral view, cells of the outer row are shorter than that of the inner row, with luciferous band (→) at the upper part of the cells of the inner row; polychromatic for cells of the inner row only (3) or both rows (4) under polarized light microscope



Key identification features

Micro-morphology

- ⊙ Sub-obovate or sub-elliptical; base usually appears slightly beaked or slightly pointed
- ⊙ Surface has irregularly distributed granular substances and extremely small reticulate striations
- ⊙ After boiling in water until broken, yellowish-white or light yellow spiral embryo is exposed, which looks similar to the exudation of silky fibre from silkworm

Powder microscopy

- ⊙ Epidermal cell of testa: with 2 forms. One form appears polygonal or sub-polygonal in surface view, anticlinal wall is thickened where the corners are particularly distinct; surface of another form appears sub-rectangular or sub-polygonal, with extremely thick anticlinal wall
- ⊙ Palisade cell of testa: cells occur in 2 rows in lateral view, cells of the outer row are shorter than that of the inner row, with luciferous band at the upper part of the cells of the inner row

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

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Government Chinese Medicines Testing Institute

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