



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

Semen *Hygrophilae* *Salicifoliae*



Source

The dried ripe seed of *Hygrophila salicifolia* (Vahl) Nees in the family Acanthaceae

Property and flavour

Cold; bitter

Meridian affinity

Spleen meridian

Actions

To clear heat and remove toxins; to resolve swelling and alleviate pain

Micro-morphological features

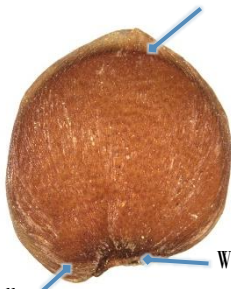
Shape

Flattened, appears cordate or sub-oblong in surface view



0.5 mm

With translucent membranous trichomes on the surface



Base is usually oblique

Surface view

With linear hilum

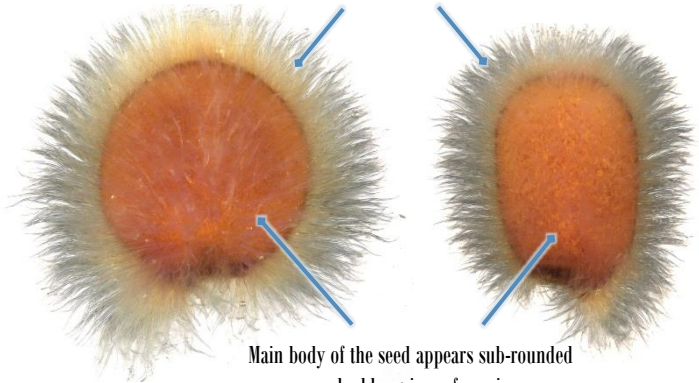


Bottom view

0.5 mm

Semen *Hygrophilae Salicifoliae*

Trichomes swell and spread out after soaking in water



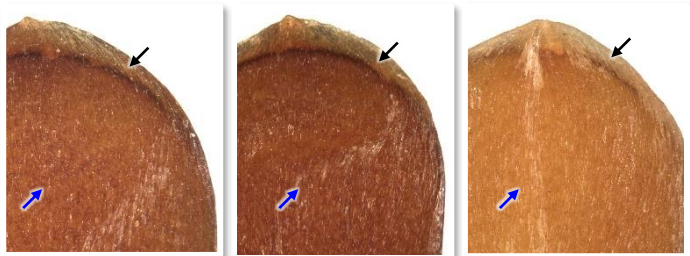
Main body of the seed appears sub-rounded or sub-oblong in surface view

Surface view

0.5 mm

Surface

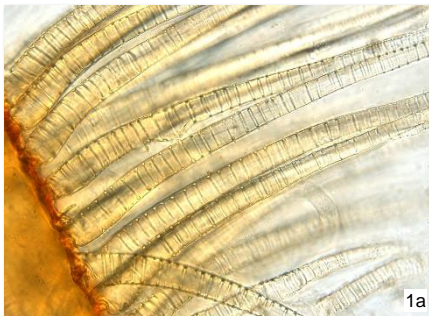
Membrane (→) is translucent, linear striations are faintly observable; main body of the seed (↗) is brownish-red, dark brown or yellowish-brown



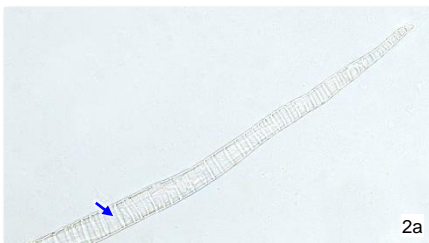
0.2 mm

Powder microscopic features

Trichome

Mucilaginous trichome

Numerous, light yellowish-brown or colourless, distributed on exotesta cell (1) or scattered (2), most of them are broken, with annular thickening, contains mucilage (→)

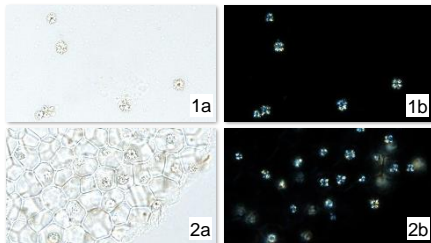


a. features under bright field; b. features under polarized light

50 μ m

Crystal

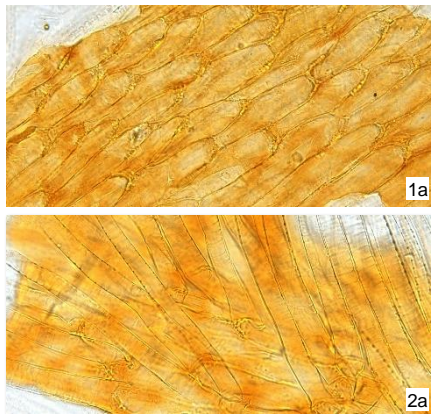
Cluster of calcium oxalate



Numerous, fine, scattered (1) or present in cotyledon cell (2); polychromatic under polarized light microscope

Testa

Exotesta cell



Yellowish-brown, cell appears long-elliptical, sub-polygonal or sub-rectangular in surface view, some anticlinal walls are beaded-thickened (1), cell boundary is usually indistinct (2), with numerous trichomes on the surface

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

50 μ m

Key identification features

Micro-morphology

- ⊙ Flattened, appears cordate or sub-oblong in surface view
- ⊙ With translucent membranous trichomes on the surface, which swell and spread out after soaking in water

Powder microscopy

- ⊙ Mucilaginous trichome: with annular thickening, contains mucilage
- ⊙ Cluster of calcium oxalate: numerous and fine
- ⊙ Exotesta cell: with numerous trichomes on the surface

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