



Identification of
Tiny Seed and Fruit
Types of Chinese
Materia Medica

Semen Impatiensis*



1 cm

Source

The dried ripe seed of *Impatiens balsamina* L. in the family Balsaminaceae

Property and flavour

Warm; mild bitter and pungent; slightly toxic

Meridian affinity

Lung and liver meridians

Actions

To break blood; to soften hardness; to resolve masses

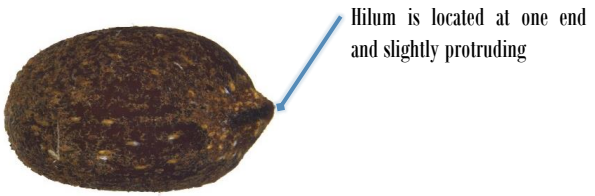
Note:

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

Micro-morphological features

Shape

Flattened ovate or sub-spherical

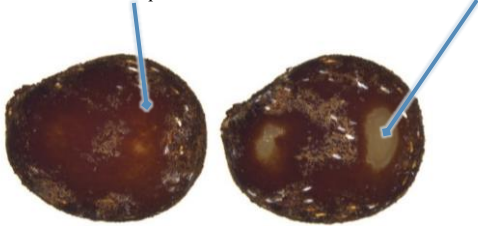


Lateral view

1 mm

Though with hard texture, the rough outermost layer of testa can be easily abraded to show its brown portion

Testa is thin, with greyish-white or milky white cotyledon observable after abrasion

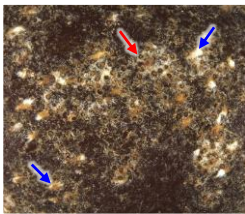


Surface view

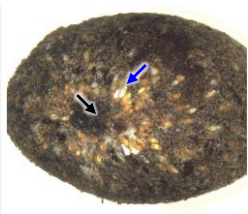
1 mm

Surface

Brown or greyish-brown, rough, with fine and dense warty protuberances (→) and sparse white or light yellowish-brown maculae (→); maculae are relatively dense near the hilum (→), usually radially arranged



0.5 mm

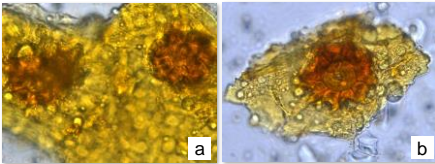


0.5 mm

Powder microscopic features

Trichome

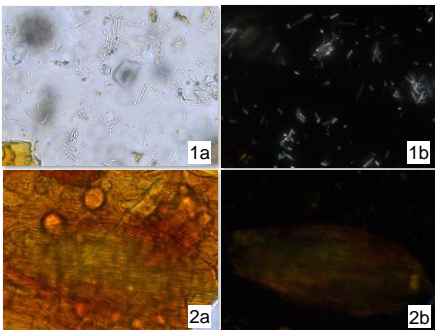
Glandular scale



Head is sub-spherical, consists of 5-10 cells, lumen filled with yellowish-brown substances

Crystal

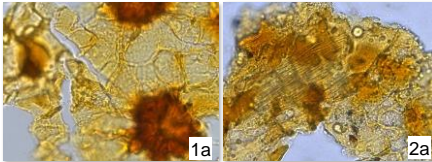
Raphide of calcium oxalate



Numerous, mostly scattered (1) or in bundles, presence in bundle in large saciform cell is sometimes observable (2); bright white or polychromatic under polarized light microscope

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

50 μ m

Testa**Epidermal cell of testa**

Mostly broken, irregularly shaped in surface view, with sinuous anticlinal wall, usually densely covered with glandular scales on the surface (1); below which is sometimes observable with large sacciform cell containing bundle of raphide of calcium oxalate (2)

Key identification features

Micro-morphology

- ⊙ Flattened ovate or sub-spherical
- ⊙ Hilum is located at one end and slightly protruding
- ⊙ Brown or greyish-brown, rough, with fine and dense warty protuberances and sparse white or light yellowish-brown maculae

Powder microscopy

- ⊙ Glandular scale: head is sub-spherical, consists of 5-10 cells, lumen filled with yellowish-brown substances
- ⊙ Raphide of calcium oxalate: numerous, mostly scattered or in bundles, presence in bundle in large sacciform cell is sometimes observable
- ⊙ Epidermal cell of testa: mostly broken, irregularly shaped in surface view, usually densely covered with glandular scales on the surface

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