



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

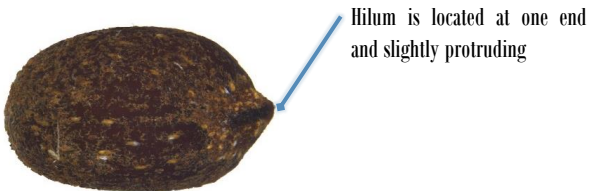
Note:

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

Micro-morphological features

Shape

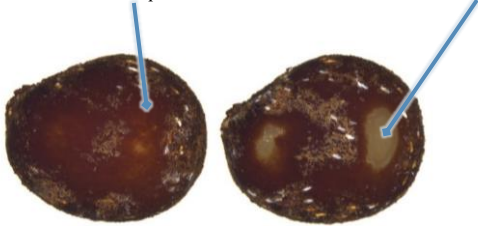
Flattened ovate or sub-spherical



Lateral view

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

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

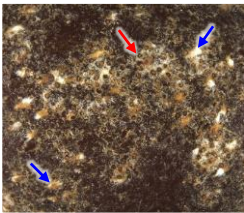


Surface view

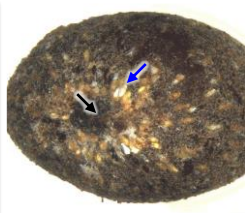
1 mm

Surface

Brown or greyish-brown, rough, with small 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

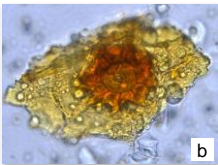
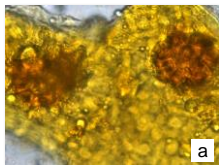


0.5 mm

Powder microscopic features

Trichome

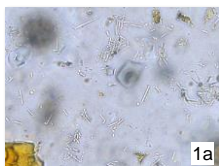
Glandular scale



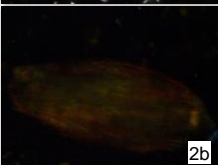
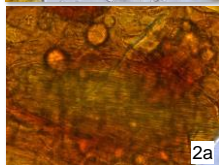
Head is sub-spherical, consists of 5-10 cells, lumen filled with yellowish-brown substances

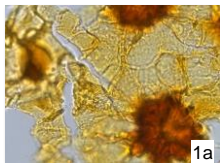
Crystal

Raphide of calcium oxalate

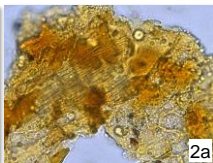


Numerous, usually scattered (1) or in bundles, sometimes present in bundle in large sacciform cell (2); bright white or polychromatic under polarized light microscope



Testa**Epidermal cell of testa**

1a



2a

Usually broken, irregularly shaped in surface view, with sinuous anticlinal wall, usually densely covered with glandular scales on the surface (1); below which sometimes has 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 small 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, usually scattered or in bundles, sometimes present in bundle in large sacciform cell
- Epidermal cell of testa: usually broken, irregularly shaped in surface view, usually densely covered with glandular scales on the surface

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