

Herba Patriniae versus Thlaspi Herba



Source

Herba Patriniae

is the dried whole part of
Patrinia scabiosaefolia Fisch. or
P. villosa (Thunb.) Juss.
in the family Valerianaceae

Thlaspi Herba

is the dried aerial part of
Thlaspi arvense L.
in the family Cruciferae

Overview

The Chinese Materia Medica (CMM) Herba Patriniae is listed in Schedule 2 of the Chinese Medicine Ordinance, while Thlaspi Herba is only listed in the Chinese Pharmacopoeia (2020). According to the research from *Differentiation and Clinical Application of Confusable Traditional Chinese Medicinal Herbs' Varieties*, for a long time, the application of the commodity “Bai jiang cao” has been complicated, where in Central and Southeast China often used *Thlaspi arvense* in Cruciferae family; while the authentic species in Valerianaceae family, such as *Patrinia villosa*, are often used as folk medicine and is rare in the medicinal market. According to *Zhong hua ben cao*, Herba Patriniae can clear heat and detoxify, activate blood and expel pus, while Thlaspi Herba can clear heat and detoxify, induce diuresis to alleviate edema. As the efficacy varies between these two CMM, they should be used accordingly.

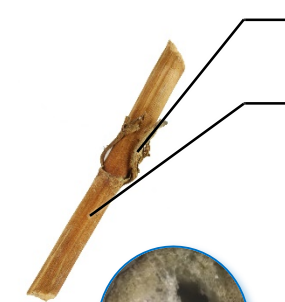
Key identification features

Macroscopic features of Herba Patriniae decoction pieces



1 cm

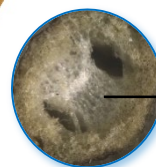
◆ Characteristic odour



1 cm

Leaf is opposite and extremely broken

Stem is cylindrical, yellowish-green or yellowish-brown and has longitudinal ridges on the surface, distinct nodes

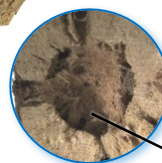


Fracture has pith in the centre, while some are hollow



5 mm

Rhizome is cylindrical, brown or dark brown and has easily fallen off periderm and uneven nodes. Sometimes with observable rootlets or root scars on node



Fracture is fibrous and sometimes appears brown or deep brown in the centre

Micro-morphological features

A: Only area around the node has frequently observable non-glandular hairs



(Surface of the stem)

2 mm

B: Sparsely covered with non-glandular hairs on both sides



(Upper surface of the leaf)

1 mm



(Lower surface of the leaf)

1 mm

Macroscopic features of Thlaspi Herba decoction pieces



◆ Slight odour

Micro-morphological features

A: Glabrous

B: With non-glandular hairs occasionally found or glabrous on both sides



(Surface of the stem)

1 mm



(Upper surface of the leaf)

1 mm

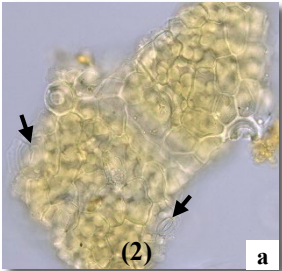
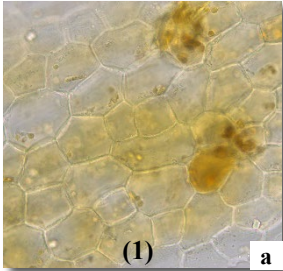
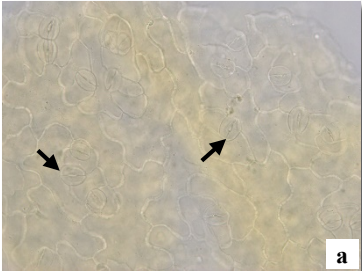

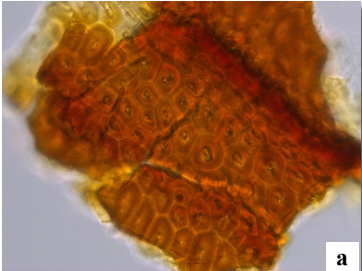
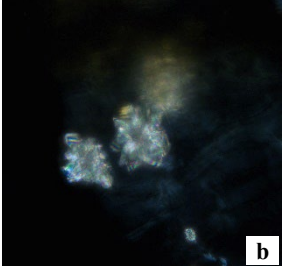
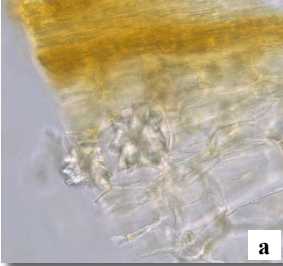



(Lower surface of the leaf)

1 mm

Microscopic feature comparison of Herba Patriniae decoction pieces and Thlaspi Herba decoction pieces powder



	Herba Patriniae decoction pieces	Thlaspi Herba decoction pieces
Epidermal cell of leaf	<div></div> <p>Upper epidermal cell(1) appears polygonal, straight anticlinal wall, without stomata; lower epidermal cell(2) appears polygonal, nearly straight or slightly curved anticlinal wall, anomocytic stomata (→)</p>	<div></div> <p>Similar appearance for upper and lower epidermal cells, narrow and long cell, deeply sinuous anticlinal wall, anisocytic stomata (→)</p>
Palisade cell of testa	<div></div> <p>Absent</p>	<div></div> <p>Brown, sub-rounded or polygonal in surface view, extremely thick wall with uneven longitudinal thickening which causes two sizes of ring are observable in lumen sometimes</p>
Cluster of calcium oxalate	<div></div> <p>Scattered or present in cell; polychromatic under the polarized light microscope</p>	<div></div> <p>Absent</p>

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

50 μm

Summary

Major differences in the features between Herba Patriniae decoction pieces and Thlaspi Herba decoction pieces:

		Herba Patriniae decoction pieces	Thlaspi Herba decoction pieces
Macroscopic and micro-morphological features	Rhizome	Present	Absent
	Surface of stem	With hairs	Glabrous
	Odour	Characteristic	Slight
Microscopic features	Epidermal cell of leaf	Polygonal, with relatively straight anticlinal wall	Narrow and long, with deeply sinuous anticlinal wall
	Palisade cell of testa	Absent	Present
	Cluster of calcium oxalate	Present	Absent



Government Chinese Medicines Testing Institute
Department of Health
Enquiry Hotline: 3188 8079
Website: www.cmro.gov.hk

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