

# Herba Spirodelaе

versus

# Herba Pistiaе Stratiotis



1 cm



1 cm

## Source

**\*Herba Spirodelaе**  
is the dried whole part of  
*Spirodela polyrhiza* (L.) Schleid.  
in the family Lemnaceae

**Herba Pistiaе Stratiotis**  
is the dried whole part of  
*Pistia stratiotes* L.  
in the family Araceae

## Overview

Herba Spirodelaе is listed under both Schedule 2 of the Chinese Medicine Ordinance and the Chinese Pharmacopoeia (2020), while Herba Pistiaе Stratiotis is not listed in either. According to *Zhong hua ben cao*, both Herba Spirodelaе and Herba Pistiaе Stratiotis are aquatic plants. Whilst Herba Spirodelaе is widely distributed in the central, southern and northern parts of China, Herba Pistiaе Stratiotis is cultivated in all parts of the southern region of the Changjiang river basin. As recorded by the *Guang dong zhong yao zhi*, Herba Pistiaе Stratiotis has been commonly used as “*Fu ping*” in the Guangdong Province for a long history. Chinese Pharmacopoeia states that Herba Spirodelaе has effects of diffusing wind-heat, outthrusting rashes, and diuretic. Meanwhile, *Zhong hua ben cao* indicates that Herba Pistiaе Stratiotis can be used for dispersing wind to outthrust rashes and can promote diuresis to eliminate dampness, at the same time it is blood-cooling and blood-activating. As these two Chinese Materia Medica function differently at certain extent, they should be identified and used correctly.

Note:

\*Its name in the Chinese Pharmacopoeia (2020) is “Spirodelaе Herba”.

## Key identification features

### Macroscopic features of Herba Spirodelae



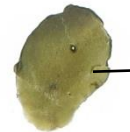
◆ Flat thallus



1 cm



Upper surface of leaf in light green to greyish-green with entire or slightly curly margin



Ovate leaf

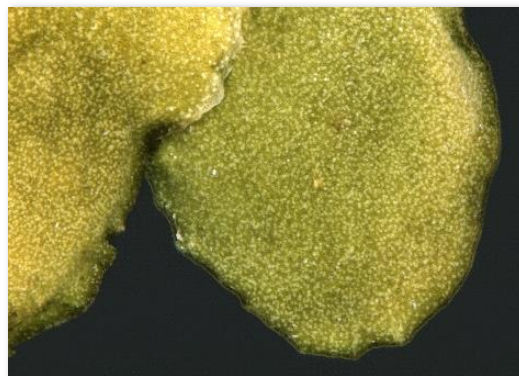


Lower surface of leaf in purplish-green to purplish-brown with a few fibrous roots inserted

5 mm

### Micro-morphological feature

A: Glabrous



(Surface of the leaf)

0.5 mm

## Macroscopic features of Herba Pistiae Stratiotis



◆ Mostly shriveled to masses



Leaf base is covered with long, dense and brown hairs and remained with fibrous root

Leaf appears obovate-cuneate when flattened

Surface of leaf in light yellow to light green, both sides densely covered with white short fine hairs

### Micro-morphological feature

A: With glomerate, dense, white short fine hairs



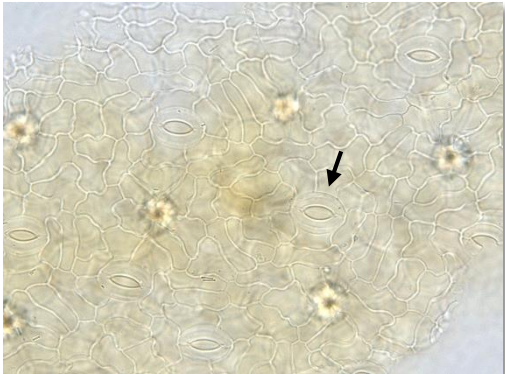



(Surface of the leaf)

1 mm

**Microscopic feature comparison of  
Herba Spirodelae and Herba Pistiae Stratiotis powder**



	<b>Herba Spirodelae</b>	<b>Herba Pistiae Stratiotis</b>
<b>Non-glandular hair</b>	 Absent	 Numerous, multicellular, extremely long, thin wall, mostly broken and shriveled
<b>Upper epidermal cell</b>	 Irregular or long-polygonal in surface view, anticlinal wall slightly wavy, stomata (→) frequently found, anomocytic	 Polygonal or sub-polygonal in surface view, anticlinal wall straight, non-glandular hair (→) frequently found, stomata (→) sometimes visible, anomocytic

50 μm

## Summary

Major differences in the features between Herba Spirodelae and Herba Pistiae Stratiotis:

		Herba Spirodelae	Herba Pistiae Stratiotis
<b>Macroscopic and micro-morphological features</b>	<b>Shape</b>	Flat thallus; ovate leaf	Mostly shriveled to masses. Leaf appears obovate-cuneate when flattened
	<b>Size of the leaf</b>	Smaller	Larger
	<b>Surface of the leaf</b>	Glabrous	With glomerate, dense, white short fine hairs
<b>Microscopic features</b>	<b>Non-glandular hair</b>	Absent	Numerous
	<b>Upper epidermal cell</b>	Irregular or long-polygonal in surface view, anticlinal wall slightly wavy	Polygonal or sub-polygonal in surface view, anticlinal wall straight



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