

Herba Potentillae Discoloris versus Herba Potentillae Chinensis



Source

***Herba Potentillae Discoloris**
is the dried whole part with root of
Potentilla discolor Bunge
in the family Rosaceae

Herba Potentillae Chinensis[^]
is the dried whole part of
Potentilla chinensis Ser.
in the family Rosaceae

Overview

Herba Potentillae Discoloris and Herba Potentillae Chinensis are both listed in Schedule 2 of the Chinese Medicine Ordinance and the Chinese Pharmacopoeia (2020). Both are whole part originated from the *Potentilla* genus in the family Rosaceae, and lower surface of leaves are densely covered with villi. According to *Zhong hua ben cao*, Herba Potentillae Chinensis is also called “*Fan bai cao*”. Due to similarity in appearance and names, these two Chinese Materia Medica (CMM) are often confused. According to the Chinese Pharmacopoeia, Herba Potentillae Discoloris can clear heat and detoxify, relieve dysentery and stop bleeding; while Herba Potentillae Chinensis can clear heat and detoxify, cool blood and relieve dysentery. As the functions of these two CMM differ, they should be used accordingly.

Note:

*Its name in the Chinese Pharmacopoeia (2020) is “Potentillae Discoloris Herba”.

[^]Its name in the Chinese Pharmacopoeia (2020) is “Potentillae Chinensis Herba”.

Key identification features

Macroscopic features of Herba Potentillae Discoloris



◆ Shriveled to masses



1 cm

◆ Hard root



Leaflet is oblong or elliptical with the blade of the apical leaflet relatively large and serrate margin. Upper surface is dark green or greyish-green and the lower surface is densely covered with white villi. Petiole is greyish-white and densely covered with greyish-white villi



Basal leaf. Odd-pinnate compound leaf with petiole



Fusiform or cylindrical root. Yellowish-brown or dark brown surface with irregularly twisted striations

Root easily broken, with greyish-white or yellowish-white and thin bark in fracture

Micro-morphological feature

A: Covered with twisted non-glandular hairs(→) and sparsely covered with long and straight non-glandular hairs(→)



(Surface of the petiole)

1 mm

Macroscopic features of Herba Potentillae Chinensis



◆ Shriveled to masses



◆ Hard root



Elliptical leaflet with pinnatipartite margin. Upper surface is dark green or greyish-green. Greyish-white lower surface and petiole are densely covered with greyish-white villi



Basal leaf. Odd-pinnate compound leaf with petiole

Slightly twisted cylindrical or sub-conic root, some with branches. Surface of the root is dark brown or dark purplish-red and has longitudinal striations. The rough bark easily exfoliated into fragments



Root easily broken, with dark brown and thin bark in fracture
Bark frequently separated from wood and rays arranged radially

Micro-morphological feature

A: Covered with long and straight non-glandular hairs

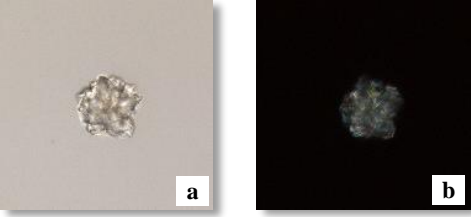
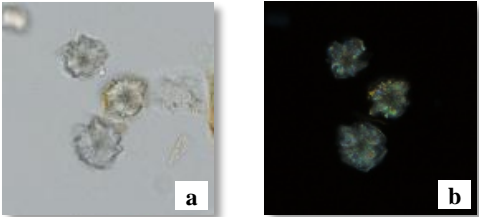
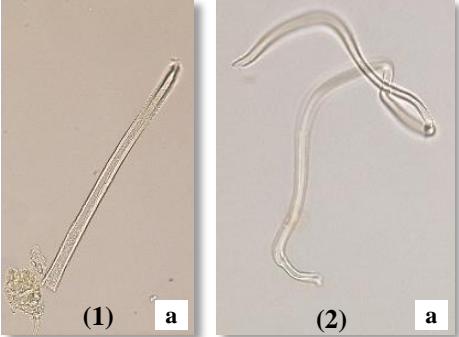
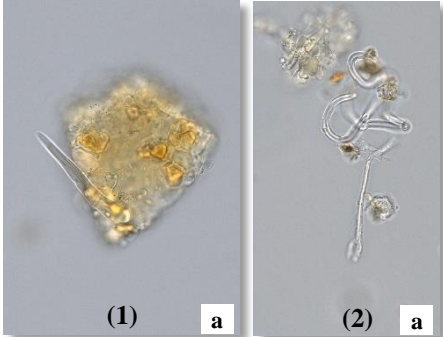


(Surface of the petiole)

1 mm

Microscopic feature comparison of Herba Potentillae Discoloris and Herba Potentillae Chinensis powder #



| | Herba Potentillae Discoloris | Herba Potentillae Chinensis |
|-----------------------------------|--|---|
| Cluster of calcium oxalate |  <p>Frequently found, present in mesophyll or parenchyma, or singly scattered; polychromatic under the polarized light microscope</p> |  <p>Frequently found, present in mesophyll or parenchyma, or singly scattered; polychromatic under the polarized light microscope</p> |
| Non-glandular hair |  <p>Numerous, unicellular, straight(1) or curved(2), some twisted into masses, slender, mostly broken</p> |  <p>Numerous, unicellular, straight(1) or curved(2), some twisted into masses, slender, mostly broken</p> |

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

50 μm

Note:

Features of Herba Potentillae Discoloris and Herba Potentillae Chinensis powders do not have significant differences.

Summary

Major differences in the features between Herba Potentillae Discoloris and Herba Potentillae Chinensis:

| | | Herba Potentillae Discoloris | Herba Potentillae Chinensis |
|--|-----------------------------------|--|--|
| Macroscopic and micro-morphological features | Leaf margin | Serrate | Pinnatipartite |
| | Fracture of root | Greyish-white or yellowish-white | Dark brown |
| | Surface of petiole | Densely covered with twisted non-glandular hairs and sparsely covered with long and straight non-glandular hairs | Densely covered with long and straight non-glandular hairs |
| Microscopic features | Cluster of calcium oxalate | Present | Present |
| | Non-glandular hair | Numerous | Numerous |

For more information, please refer to the [Hong Kong Chinese Materia Medica Standards website](#) :



Potentillae Discoloris Herba - Hong Kong Chinese Materia Medica Standards (Volume 9)

Potentillae Chinensis Herba - Hong Kong Chinese Materia Medica Standards (Volume 8)



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