Identification of Easily Confused Species of Chinese Materia Medica in Hong Kong by Macroscopic and Microscopic Characteristics Project

Cacumen Platycladi versus Folium Podocarpi





Source

*Cacumen Platycladi

is the dried twig or leaf of Platycladus orientalis (L.) Franco in the family Cupressaceae

Folium Podocarpi

is the dried branch and leaf of Podocarpus macrophyllus (Thunb.) D. Don or P. macrophyllus var. maki Endl. in the family Podocarpaceae

Overview

Cacumen Platycladi is listed in both Schedule 2 of the Chinese Medicine Ordinance and the Chinese Pharmacopoeia (2020), while Folium Podocarpi has not been recorded in either reference. Both Chinese Materia Medica (CMM) originate from the evergreen trees of gymnosperm. According to the research by the Herbalogy Research, Review & Identification of Chinese Medicinal Materials, the non-Authorization Species Used in Hong Kong, the Guangdong region had recorded Folium Podocarpi in the Guang dong zhong yao zhi as "Jiang nan bai". According to the Chinese Pharmacopoeia, Cacumen Platycladi can cool the blood to stop bleeding, resolve phlegm and suppress cough, and promote hair growth and darkening. On the other hand, Zhong hua ben cao has recorded Folium Podocarpi with hemostatic function. As these two CMM possess different functions, they should be used accordingly.

Note:

*Its name in Chinese Pharmacopoeia (2020) is "Platycladi Cacumen".

Key identification features

Macroscopic features of Cacumen Platycladi





Micro-morphological features

A: Dented in the middle



(Upper surface of the leaf)

B: With irregularly arranged white dots

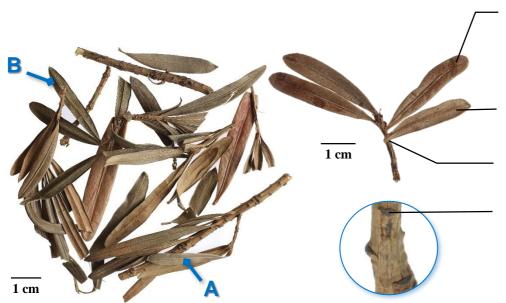


(Lower surface of the leaf)

1 mm

Macroscopic features of Folium Podocarpi





Strip-shaped lanceolate leaf with acute or obtuse apex; with greyish-green to dark brown upper surface of leaf

Yellowish-green to light brown lower surface of leaf

Spirally inserted blades

Cylindrical branch. Surface is light yellowishbrown, rough and has spirally arranged subtriangular leaf base scars

Micro-morphological features

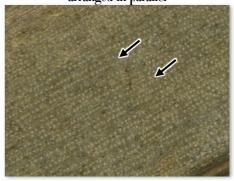
A: Midrib protruded



(Upper surface of the leaf)

1 mm

B: Densely distributed with white dots arranged in parallel

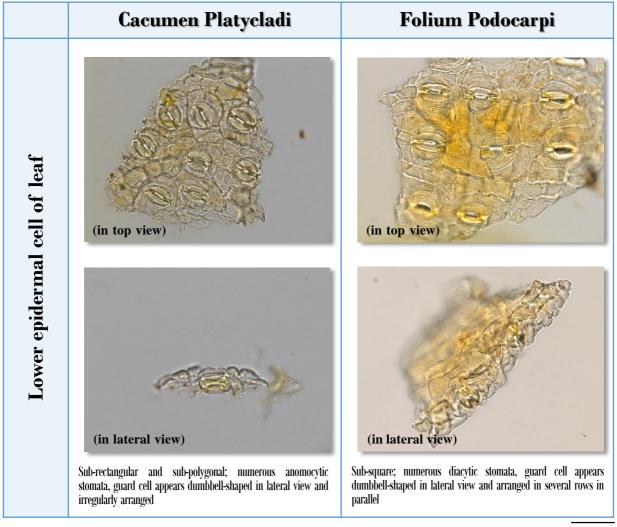


(Lower surface of the leaf)

0.5 mm

Microscopic feature comparison of Cacumen Platycladi and Folium Podocarpi powder 🥞





50 µm

Summary

Major differences in the features between Cacumen Platycladi and Folium Podocarpi:

| | | Cacumen Platycladi | Folium Podocarpi |
|---|---------------------------------------|---|--|
| Macroscopic and micro-morphological features | Leaf | Small squamiform | Strip-shaped lanceolate |
| | Surface of leaf | Middle of the upper surface of leaf dented; with irregularly arranged white dots on the lower surface of leaf | Midrib protruded on the upper surface of leaf; with white dots densely distributed and arranged in parallel on the lower surface of leaf |
| | Insert method of leaf | Decussate and appressed on the branch | Spirally inserted |
| Microscopic features | Lower epidermal cell of leaf | Anomocytic stomata irregularly arranged | Diacytic stomata arranged in several rows in parallel |

For more information, please refer to the <u>Hong Kong Chinese Materia Medica</u> Standards website:



Platycladi Cacumen - Hong Kong Chinese Materia Medica Standards (Volume 5)



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