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

# Folium Apocyni Veneti versus **Folium Sennae**





#### Source

\*Folium Apocyni Veneti is the dried leaf of Apocynum venetum L. in the family Apocynaceae

Folium Sennae<sup>#</sup> is the dried leaflet of *Cassia angustifolia* Vahl<sup>^</sup> or C. acutifolia Lelile in the family Leguminosae

#### **Overview**

Folium Apocyni Veneti and Folium Sennae are Chinese Materia Medica (CMM) listed in both Schedule 2 of the Chinese Medicine Ordinance and Chinese Pharmacopoeia (2020). Although these two CMM originate from plants of different families, their appearance and size are very similar. According to the Chinese Pharmacopoeia, the functions of these two CMM differ, where Folium Apocyni Veneti can pacify the liver to tranquilize, and clear heat and drain water; while Folium Sennae can purge fire and move stagnation, relax the bowels, and induce diuresis. According to the Modern Chinese Materia Medica, sennoside, the main active ingredient of Folium Sennae can cause diarrhea, individuals that are weak or pregnant should be prohibited from taking the CMM. Folium Apocyni Veneti, on the other hand, does not contain this active ingredient. As the function and pharmacological effects of these two CMM vary significantly, they should be used cautiously.

Note:

\*Its name in the Chinese Pharmacopoeia (2020) is "Apocyni Veneti Folium".

<sup>#</sup>Its name in the Chinese Pharmacopoeia (2020) is "Sennae Folium".

<sup>&</sup>lt;sup>^</sup>Only *Cassia angustifolia* is included in this study as currently it is the main species of Folium Sennae in the market.

### Folium Apocyni Veneti vs Folium Sennae

### Key identification features

# Macroscopic features of Folium Apocyni Veneti 🔍

- ◆ Mostly shriveled and curved, some are broken
- ◆ Light green or greyish-green



◆ Papyraceous, fragile

### **Micro-morphological feature**

A : Flat, with short and fine non-glandular hairs occasionally observable at the vein of the lower surface



# Folium Apocyni Veneti vs Folium Sennae



#### **Micro-morphological feature**

A: Flat, with non-glandular hairs observable on both sides. Non-glandular hairs are usually denser at the vein of the lower surface



(Upper surface)

500 µm



(Lower surface)

500 µm

# Microscopic feature comparison of Folium Apocyni Veneti and Folium Sennae powder



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

#### Summary

Major differences in the features between Folium Apocyni Veneti and Folium Sennae:

		Folium Apocyni Veneti	Folium Sennae
Macroscopic and micro-morphological features	Base	Rounded or cuneate	Slightly oblique
	Margin	Denticulate	Entire
	Surface	With non-glandular hairs occasionally observable at the lower surface	With non-glandular hairs observable on both sides
Microscopic features	Crystal fibre	Absent	Present
	Lacticifer	Present	Absent
	Non-glandular hair	Consists of 1 to several cells	Unicellular

For more information, please refer to the Hong Kong Chinese Materia Medica

#### Standards website:



Apocyni Veneti Folium - Hong Kong Chinese Materia Medica Standards (Volume 5) Sennae Folium - Hong Kong Chinese Materia Medica Standards (Volume 6)

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