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

Hedyotidis Diffusae Herba versus Herba Hedyotidis Corymbosae





Source

Hedyotidis Diffusae Herba

is the dried whole part of Hedyotis diffusa Willd. in the family Rubiaceae Herba Hedyotidis Corymbosae

is the dried whole part of Hedyotis corymbosa (L.) Lam. in the family Rubiaceae

Overview

1 cm

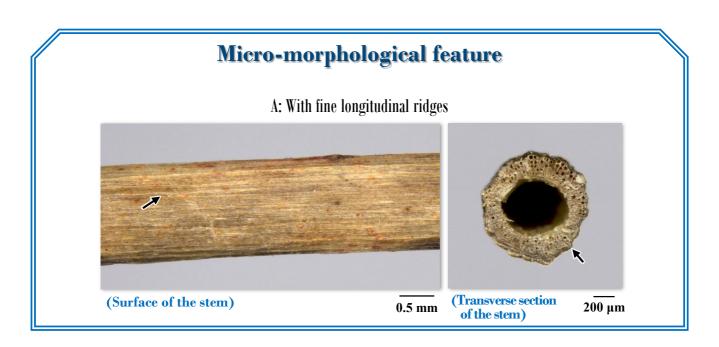
Herba Hedyotidis Corymbosae is listed under Schedule 2 of the Chinese Medicine Ordinance. Neither Hedyotidis Diffusae Herba nor Herba Hedyotidis Corymbosae is listed in the Chinese Pharmacopoeia (2020). According to the Species Systematization and Quality Evaluation of Commonly Used Chinese Traditional Drugs, Hedyotidis Diffusae Herba is named "Bai hua she she cao" as its leaves look similar to a snake's tongue. Herba Hedyotidis Corymbosae, belonging to the same genus as Hedyotidis Diffusae Herba, also has a similar appearance. Hedyotidis Diffusae Herba is mainly produced in the southeast coast of China and is widely used throughout China. On the other hand, Herba Hedyotidis Corymbosae is mainly produced in Guangdong, Guangxi and Fujian, and is mainly used in the Guangdong and Guangxi. According to the Chinese Materia Medica Standards in Guangdong Province, both Chinese Materia Medica (CMM) can clear heat and detoxify, while Hedyotidis Diffusae Herba can further disperse abscesses and nodules, as well as being water-draining and swelling-dispersing. Since the functions of these two CMM slightly differ, they should be used distinctly.

Key identification features

Macroscopic features of Hedyotidis Diffusae Herba decoction pieces



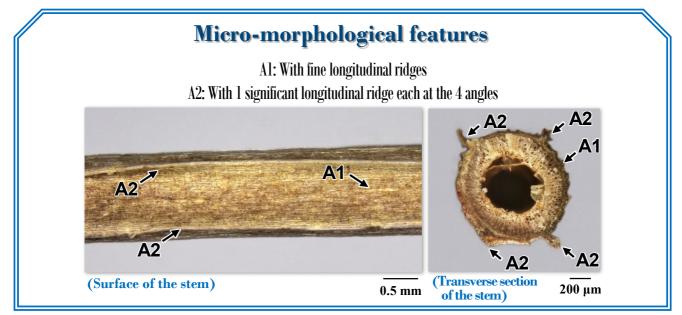




Macroscopic features of Herba Hedyotidis Corymbosae decoction pieces







Microscopic feature comparison of Hedyotidis Diffusae Herba decoction pieces and Herba Hedyotidis Corymbosae decoction pieces powder



	Hedyotidis Diffusae Herba decoction pieces	Herba Hedyotidis Corymbosae decoction pieces
Epidermal cell of testa	Yellowish-brown to reddish brown, polygonal or sub-polygonal in surface view, anticlinal wall mostly straight, with fine and dense pits on the surface	Yellowish-brown to light brown, irregular or subpolygonal in surface view, anticlinal wall mostly sinuous, without pits on the surface
Septal cell of fruit	Light yellow to light brown, sub-polygonal or polygonal in surface view, cell near to the margin slightly papillarily-protruded	Colourless to light yellow, strip-shaped in surface view, cell near to the margin slightly papillarily-protruded

 $50 \, \mu m$

Summary

Major differences in the features between Hedyotidis Diffusae Herba decoction pieces and Herba Hedyotidis Corymbosae decoction pieces:

		Hedyotidis Diffusae Herba decoction pieces	Herba Hedyotidis Corymbosae decoction pieces
Macroscopic and micro-morphological features	Capsule	Single or paired	Arranged in corymbiform shape in groups of 2-5
	Stem	Only with fine longitudinal ridges	With fine longitudinal ridges and 4 significant longitudinal ridges
Microscopic features	Epidermal cell of testa	With fine and dense pits on the surface	Without pits on the surface
	Septal cell of fruit	Sub-polygonal or polygonal	Strip-shaped

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



Hedyotidis Diffusae Herba - Hong Kong Chinese Materia Medica Standards (Volume 9)

Additional information

Photo of crude Hedyotidis Diffusae Herba



- ◆ All twisted into greyish-green to greyishbrown masses
 - Main root is slender, about 2 mm in diameter. Rootlet is tenuous and light greyish-brown
 - Stem is fine, curled, fragile, easily broken and has white pith in the centre
 - Leaf mostly shriveled, broken and easily fallen off; stipule 1-2 mm long
 - Single or paired axillary flower and fruit. Flower usually has short and slightly thick pedicel. Capsule is oblate, 2-2.5 mm in diameter and loculicidal. Persistent calyx is 4-lobed at the upper part and has short and sharp hairs at the margin
- Slight odour and weak taste

Photo of crude Herba Hedyotidis Corymbosae



- Mostly shriveled to masses
 - Capsule is spherical and has smooth apex, persistent sepals and small and numerous seeds
 - Opposite leaf is mostly shriveled. Intact leaf appears linear-lanceolate or linear when flattened, 1.5-3 cm long, 1.5-3.5 mm wide and has rough margin which usually curled towards the back side. Surface is deep greyish-green. Stipule is small, connate, membranous and without stalks or with short stalk
 - Tetragonal stem is mostly branched, 15-50 cm long, fragile and easily broken
- Axillary inflorescence is mostly arranged in corymb with 2-5 flowers and occasionally solitary
- Slight odour and slightly bitter taste

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1 cm