**Overview**

Folium Isatidis is listed in both Schedule 2 of the Chinese Medicine Ordinance and the Chinese Pharmacopoeia (2015 Edition). On the other hand, Folium Baphicacanthi Cusiae has not been recorded in either reference. Many commodities named “Da qing ye” are often found to be different species. According to the research by “Zhong hua ben cao”, there are five different kinds of Chinese Materia Medica (CMM) documented as “Lan” in the “Ben cao gang mu” of the Ming Dynasty, which include *Isatis indigotica* in the family Cruciferae, *Polygonum tinctorium* in the family Polygonaceae, and *Baphicacanthus cusia* in the family Acanthaceae. According to the “Species Systematization and Quality Evaluation of Commonly Used Chinese Traditional Drugs”, the main source of “Da qing ye” is the leaf of *Isatis indigotica* in the family Cruciferae; while in Fujian, Guangdong, Guangxi, Yunnan, and parts of Sichuan, the leaf of *Baphicacanthus cusia* in the family Acanthaceae is the most customarily used. According to the Chinese Pharmacopoeia and “Zhong hua ben cao”, both CMM have the functions of clearing heat and detoxifying. Furthermore, Folium Isatidis can cool the blood and resolve macula, while Folium Baphicacanthi Cusiae can also cool the blood to stop bleeding. Due to differences in functions of the two CMM, they should be used accordingly.

**Source**

*Folium Isatidis*

is the dried leaf of

*Isatis indigotica* Fort.

in the family Cruciferae

*Folium Baphicacanthi Cusiae*

is the dried stem and leaf of

*Baphicacanthus cusia* (Nees) Bremek.

in the family Acanthaceae

Note:


Regional custom
**Key identification features**

**Macroscopic features of Folium Isatidis decoction pieces**

- Mostly irregular section

![Macroscopic features of Folium Isatidis decoction pieces](image)

- Dark greyish-green to brownish-yellow leaves mostly broken
- Blade with entire or slightly wavy margin and obtuse apex when flattened
- Midrib protruded more significantly at the lower surface
- Basal of blade attenuate and decurrent to petiole appears wing-shaped
- Light brownish-yellow petiole fragment

**Micro-morphological feature**

![Micro-morphological feature](image)

A: Glabrous

(Lower surface of the leaf)
Macroscopic features of *Folium Baphicacanthi Cusiae* decoction pieces

- Mostly irregular section, with branchlets sometimes

Leaf mostly broken and with acuminate apex when flattened

Blackish-green to greyish-green blade

Leaf margin with small obtuse serrae

Midrib protruded more significantly at the dorsal side

Cuneate decurrent basal

Blackish-green or greyish-green petiole

Sub-square branchlet with blackish-green to greyish-green surface

**Micro-morphological feature**

A: With numerous non-glandular hairs (→)

(Lower surface of the leaf) 0.5 mm
# Microscopic feature comparison of Folium Isatidis and Folium Baphicacanthi Cusiae decoction pieces powder

<table>
<thead>
<tr>
<th></th>
<th><strong>Folium Isatidis decoction pieces</strong></th>
<th><strong>Folium Baphicacanthi Cusiae decoction pieces</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Glandular scale</td>
<td>Absent</td>
<td>Head consists of 4 cells, occasionally consists of 6 or 8 cells; unicellular stalk</td>
</tr>
<tr>
<td>Cystolith</td>
<td>Absent</td>
<td>Frequently found, light yellow or colourless, long elliptical or elliptical; mostly white or yellowish-white under the polarized light microscope</td>
</tr>
<tr>
<td>Epidermal cell of leaf</td>
<td>Anticlinal wall slightly curved and slightly beaded-thickened; anisocytic stomata (→), 3-4 subsidiary cells</td>
<td>Nearly straight or slightly curved anticlinal wall; diacytic stomata (→)</td>
</tr>
</tbody>
</table>

*a. features under bright field; b. features under polarized light*
## Summary

Major differences in the features between Folium Isatidis and Folium Baphicacanthi Cusiae decoction pieces:

<table>
<thead>
<tr>
<th>Macroscopic and micro-morphological features</th>
<th>Folium Isatidis decoction pieces</th>
<th>Folium Baphicacanthi Cusiae decoction pieces</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Mostly irregular section</td>
<td>Mostly irregular section, with branchlets sometimes</td>
</tr>
<tr>
<td>Blade</td>
<td>Obtuse apex, basal attenuate and decurrent to petiole appears wing-shaped, entire or slightly wavy margin</td>
<td>Acuminate apex, cuneate decurrent basal, leaf margin with small obtuse serrae</td>
</tr>
<tr>
<td>Lower surface of the leaf</td>
<td>Glabrous</td>
<td>With numerous non-glandular hairs</td>
</tr>
<tr>
<td>Glandular scale</td>
<td>Absent</td>
<td>Present</td>
</tr>
<tr>
<td>Cystolith</td>
<td>Absent</td>
<td>Present</td>
</tr>
<tr>
<td>Epidermal cell of leaf</td>
<td>Anisocytic stomata</td>
<td>Diacytic stomata</td>
</tr>
</tbody>
</table>

For more information, please refer to the [Hong Kong Chinese Materia Medica Standards website](#).
**Folium Isatidis vs Folium Baphicacanthi Cusiae**

### Additional information

**Photo of crude Folium Isatidis**

- Mostly shrunken and curved, some broken
- Intact blade appears long elliptical or oblong-oblanceolate, 5-20 cm long, 2.6 cm wide; dark greyish-green upper surface, some with darker and slightly protruded dots visible; obtuse apex, entire or slightly wavy margin, basal attenuate and decurrent to petiole appears wing-shaped
- Light brownish-yellow petiole 4-10 cm long
- Fragile
- Slight odour. Slightly sour, bitter and astringent taste

**Photo of crude Folium Baphicacanthi Cusiae**

- Mostly shrunken to irregular masses, with branchlets sometimes. Appears blackish-green or greyish-green
- Long elliptical or obovate-oblong intact blade, 5-15 cm long, 3.5 cm wide. Leaf margin with small obtuse serrae, acuminate apex, cuneate decurrent basal, midrib protruded more significantly at the dorsal side
- Papyreous, fragile and easily broken
- Slight odour and weak taste

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