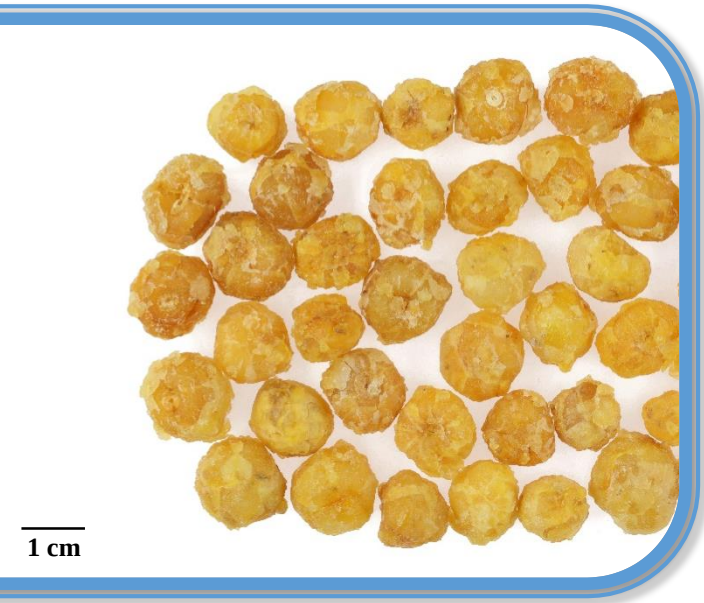
# Processed Rhizoma Pinelliae
# versus
# Processed Rhizoma Typhonii Flagelliformis





## Source

**Processed Rhizoma Pinelliae**
is the dried and processed tuber of
*Pinellia ternata* (Thunb.) Breit.
in the family Araceae

**Processed Rhizoma Typhonii Flagelliformis**
is the dried and processed tuber of
*Typhonium flagelliforme* (Lodd.) Bl.
in the family Araceae

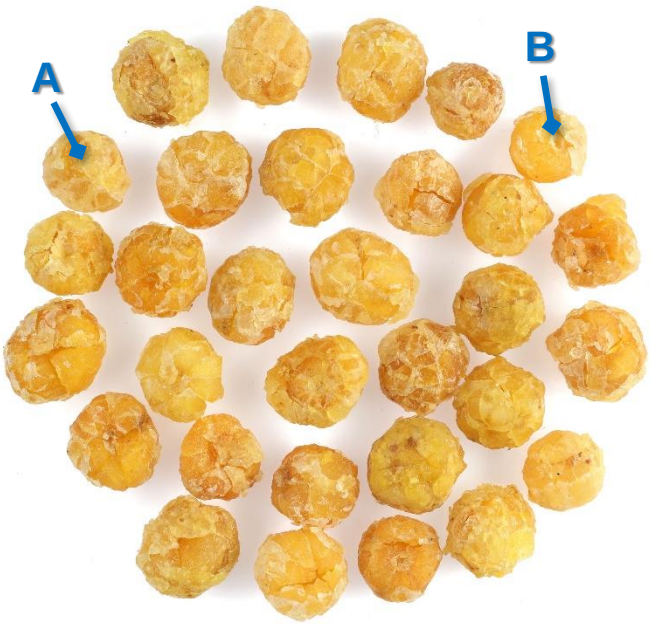
## Overview

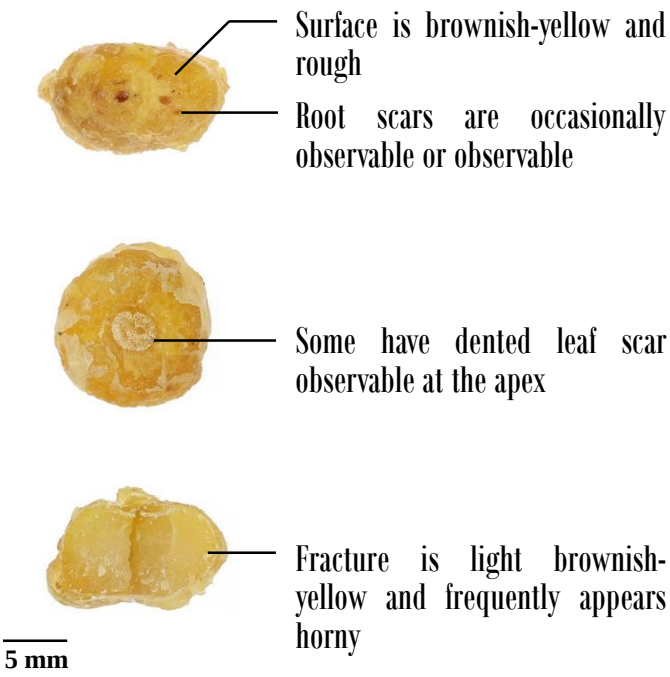
The processed form of Rhizoma Pinelliae is listed under the name of Processed Rhizoma Pinelliae in the Schedule 2 of Chinese Medicine Ordinance (the Ordinance), whilst in the Chinese Pharmacopoeia (2020), it is listed into various monographs according to different processing methods. Processed Rhizoma Typhonii Flagelliformis is neither listed in the Ordinance nor Chinese Pharmacopoeia. As stated in the *Species Systematization and Quality Evaluation of Commonly Used Chinese Traditional Drugs*, due to short supply of Rhizoma Pinelliae, it has resulted in the use of substitutes or regional custom herbs, and Processed Rhizoma Typhonii Flagelliformis is one of the examples. However, due to differences in appearance, chemical compositions, toxicities and even efficacy between the two Chinese Materia Medica (CMM), and moreover, with short clinical application time of Processed Rhizoma Typhonii Flagelliformis, these two CMM should be used accordingly.

# Key identification features

## Macroscopic features of Processed Rhizoma Pinelliae decoction pieces

◆ Oblate



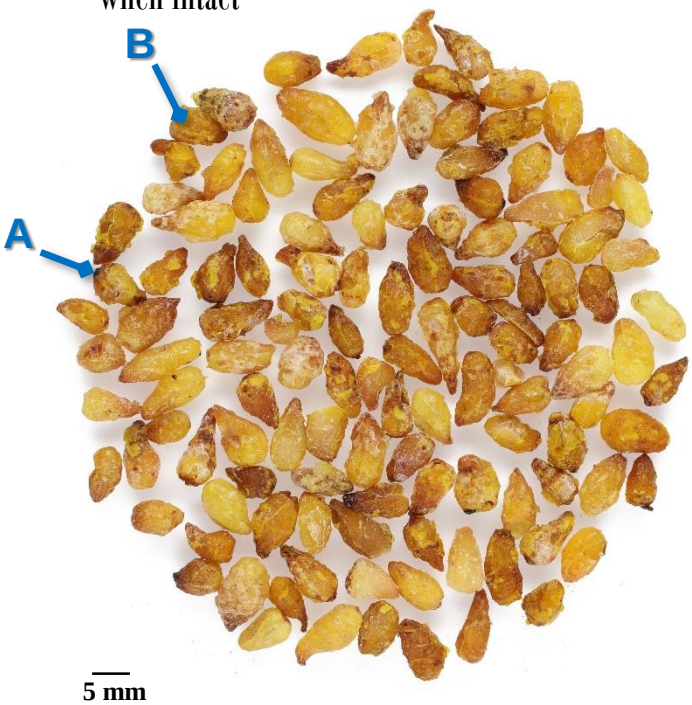

## Micro-morphological features

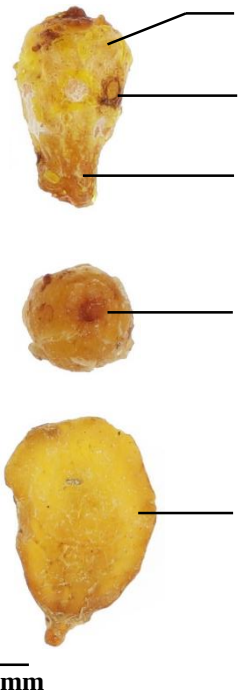
A: With yellowish-white dots


B: Consists of densely distributed yellowish-white dots

## Macroscopic features of Processed Rhizoma Typhonii Flagelliformis decoction pieces

◆ Sub-elliptical slices, appears in sub-obconic or sub-elliptical shape when intact




Surface is brownish-yellow or brown and rough

Root scars are frequently observable

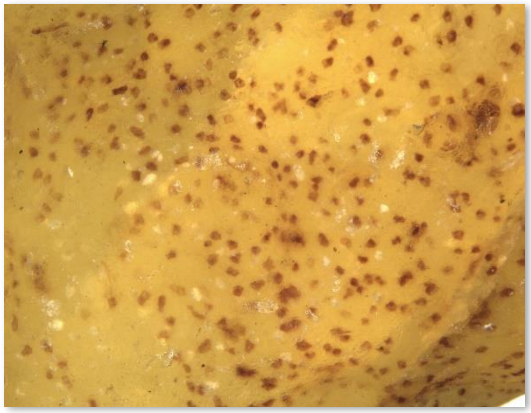
Appears blackish-brown or reddish-brown near the bottom end

Some have protruded leaf scar observable at the apex

Cut surface is light brownish-yellow or light brown and frequently appears horny

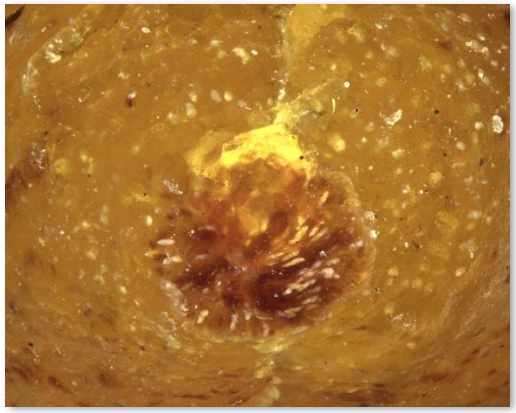
## Micro-morphological features

A: With yellowish-white and brownish-red dots



(Surface) 500 μm

B: Frequently appears brownish-red and with small amount of yellowish-white dots



(Leaf scar) 500 μm

# Microscopic feature comparison of Processed Rhizoma Pinelliae decoction pieces and Processed Rhizoma Typhonii Flagelliformis decoction pieces powder*

| | Processed Rhizoma Pinelliae decoction pieces | Processed Rhizoma Typhonii Flagelliformis decoction pieces |
|---|---|---|
| Brown masses |  Barely found, irregular |  Frequently found or observable, irregular |

50 µm

Note:
*Features of Processed Rhizoma Pinelliae decoction pieces and Processed Rhizoma Typhonii Flagelliformis decoction pieces powders are very similar, only small differences in the amount of brown masses are observable.

## Summary

Major differences in the features between Processed Rhizoma Pinelliae decoction pieces and Processed Rhizoma Typhonii Flagelliformis decoction pieces:

| | | Processed Rhizoma Pinelliae decoction pieces | Processed Rhizoma Typhonii Flagelliformis decoction pieces |
|---|---|---|---|
| Macroscopic and micro-morphological features | **Appearance** | Oblate | Sub-obconic or sub-elliptical when intact |
| | **Leaf scar** | Dented | Protruded |
| | **Surface** | With yellowish-white dots | With yellowish-white and brownish-red dots |
| Microscopic feature | **Brown masses** | Barely found | Frequently found or observable |

# Additional information

## Photo of crude unprocessed Rhizoma Pinelliae^

1 cm

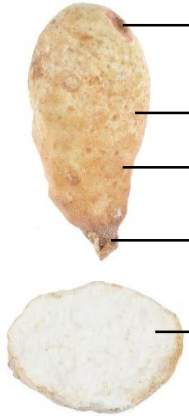
5 mm

- Sub-spherical, some are slightly oblique, 0.7-1.6 cm in diameter
- White or light yellow surface
- With dented stem scar at the apex
- Densely distributed with dotted root scars at the surrounding
- Lower part is obtuse and relatively smooth
- Fracture is white and starchy

- ◆ Hard
- ◆ Slight odour. Pungent taste with numbing and irritating sensation

## Photo of crude Rhizoma Typhonii Flagelliformis

1 cm



5 mm

- Tuber is slightly elliptical, conic or semi-circular, 0.5-1.5 cm in diameter, 0.8-3 cm tall
- Upper end is sub-rounded and usually has oblique and protruded leaf scar or bud scar which appears yellowish-brown
- Whitish or light yellow surface
- Not smooth, with numerous faintly observable dotted root scars
- Some with slightly pointed lower end
- Fracture is white and starchy

- ◆ Hard
- ◆ Slight odour. Pungent taste with numbing and irritating sensation

Note:
^Unprocessed Rhizoma Pinelliae is toxic CMM. Handle it with care and avoid tasting during identification.

Department of Health

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