

Processed Radix Aconiti Lateralis (*Baifupian* (white slice))

versus

Processed Rhizoma Typhonii



Source

***Processed Radix Aconiti Lateralis
(*Baifupian* (white slice))**
is the dried and processed daughter root of
Aconitum carmichaeli Debx.
in the family Ranunculaceae

Processed Rhizoma Typhonii[#]
is the dried and processed tuber of
Typhonium giganteum Engl.[@]
in the family Araceae

Overview

Processed Radix Aconiti Lateralis and Processed Rhizoma Typhonii are both listed in Schedule 2 of the Chinese Medicine Ordinance and the Chinese Pharmacopoeia (2020). According to *Zhong hua ben cao*, Radix Aconiti Lateralis is named as such because “it grows attached to “Wu tou”, like a son attached to his mother”. One of the specification of Radix Aconiti Lateralis decoction pieces is the yellowish-white *Baifupian* (white slice). On the other hand, in the *Species Systematization and Quality Evaluation of Commonly Used Chinese Traditional Drugs*, Li Shizhen was of the opinion Rhizoma Typhonii obtained its name “because it is similar to Radix Aconiti Lateralis”. As documented in the Chinese Pharmacopoeia, *Baifupian* (white slice) has the functions of restoring yang to save from collapse, tonifying fire and assisting yang, dispersing cold to relieve pain, while Processed Rhizoma Typhonii has the functions of dispelling wind-phlegm, settling convulsion, detoxify, dissipating bind and relieving pain. Although their Chinese names only differ by one character, the functions of the two Chinese Materia Medica (CMM) vary greatly and thus should be used distinctly.

Note:

*Its name in Chinese Pharmacopoeia (2020) is “Aconiti Lateralis Radix Praeparata”.

[#]Its name in Chinese Pharmacopoeia (2015) is “Typhonii Rhizoma (processed)”.

[@]The sources of processed Rhizoma Typhonii or Radix Aconiti Corean are *Typhonium giganteum* and *Aconitum coreanum* respectively. Only processed Rhizoma Typhonii is included in this study as currently it is the main species of processed Rhizoma Typhonii or Radix Aconiti Corean in the market.

Key identification features

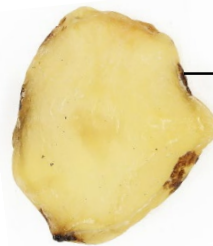
Macroscopic features of processed Radix Aconiti Lateralis decoction pieces (*Baifupian* (white slice))



- ◆ Obovate, sub-rounded or irregular longitudinal slices



1 cm



Outer bark is mostly removed
and the remains appear
blackish-brown



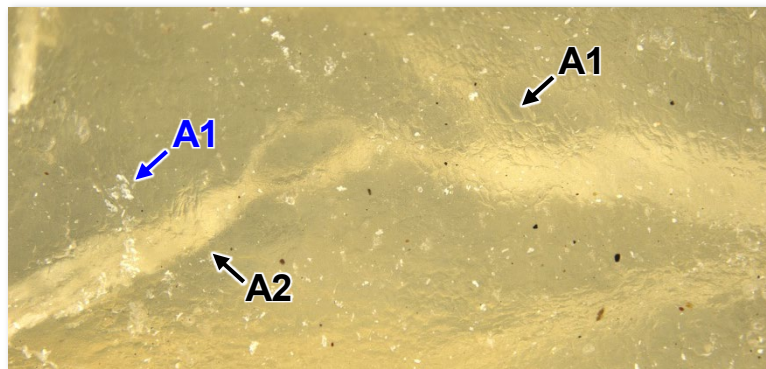
Yellowish-white or light
yellowish-brown, horny and
translucent at the cut surface

1 cm

Micro-morphological features

A1: Translucent, surface with sinuous striations(→) faintly observable
and with white scratches(→)

A2 : Scattered linear vascular bundles



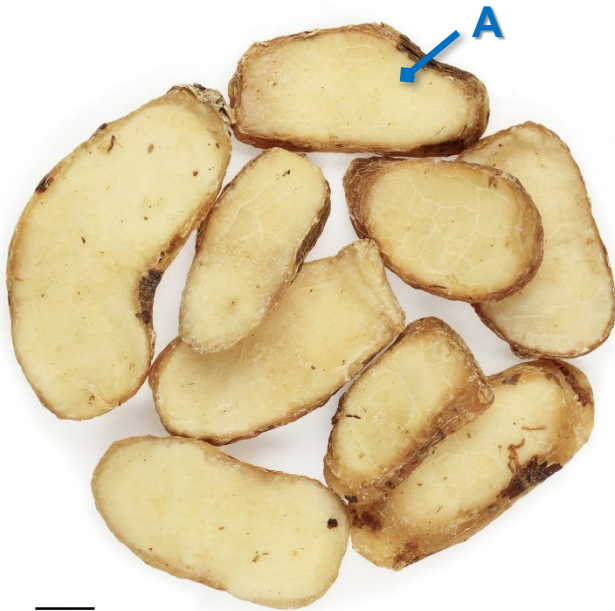
(Cut surface)

1 mm

Macroscopic features of processed Rhizoma Typhonii decoction pieces



- ◆ Elliptical, sub-rounded or irregular longitudinal slices



1 cm



1 cm

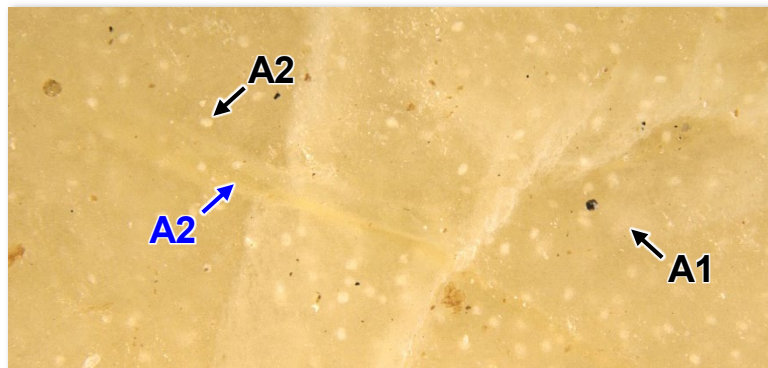
Outer bark is mostly removed and the remains appear light brown or blackish-brown

Yellowish-white or light yellowish-brown and horny at the cut surface

Micro-morphological features

A1: Surface layer appears slightly translucent and the surface is smooth

A2: Scattered sub-rounded or elliptical white dots (→) and linear vascular bundles (→)



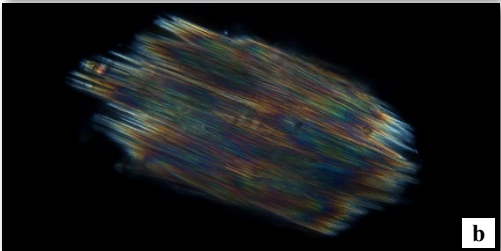
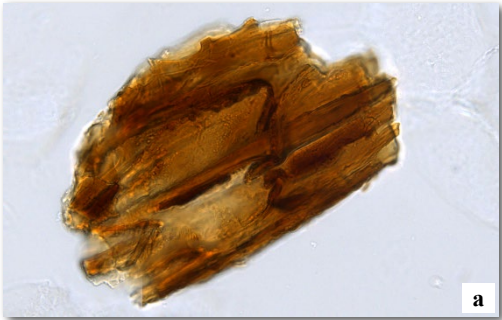



(Cut surface)

1 mm



Microscopic feature comparison of processed Radix Aconiti Lateralis decoction pieces (*Baifupian* (white slice)) and processed Rhizoma Typhonii decoction pieces powder

	Processed Radix Aconiti Lateralis decoction pieces (<i>Baifupian</i> (white slice))	Processed Rhizoma Typhonii decoction pieces
Raphide of calcium oxalate	 Absent	  <p>Numerous, mostly in bundles; polychromatic under the polarized light microscope</p>
Protective tissue	 <p>Metaderm cell barely found, brown, mostly broken, large cell, polygonal or rectangular in surface view, inner side of some anticlinal wall with tubercular protuberances</p>	 <p>Cork cell colourless or light yellowish-brown, polygonal or sub-polygonal in surface view</p>

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

50 μm

Summary

Major differences in the features between processed Radix Aconiti Lateralis decoction pieces (*Baifupian* (white slice)) and processed Rhizoma Typhonii decoction pieces :

		Processed Radix Aconiti Lateralis decoction pieces (<i>Baifupian</i> (white slice))	Processed Rhizoma Typhonii decoction pieces
Macroscopic and micro-morphological features	Appearance	Obovate, sub-rounded or irregular	Elliptical, sub-rounded or irregular
	Transparency	Translucent	Opaque
	Cut surface	Scattered vascular bundles	Scattered white dots and vascular bundles
Microscopic features	Raphide of calcium oxalate	Absent	Present
	Protective tissue	Metaderm cell	Cork cell

For more information, please refer to the [Hong Kong Chinese Materia Medica Standards website](#):



Aconiti Lateralis Radix (unprocessed) - Hong Kong Chinese Materia Medica Standards (Volume 7)

Additional information

Photo of crude unprocessed Radix Aconiti Lateralis%

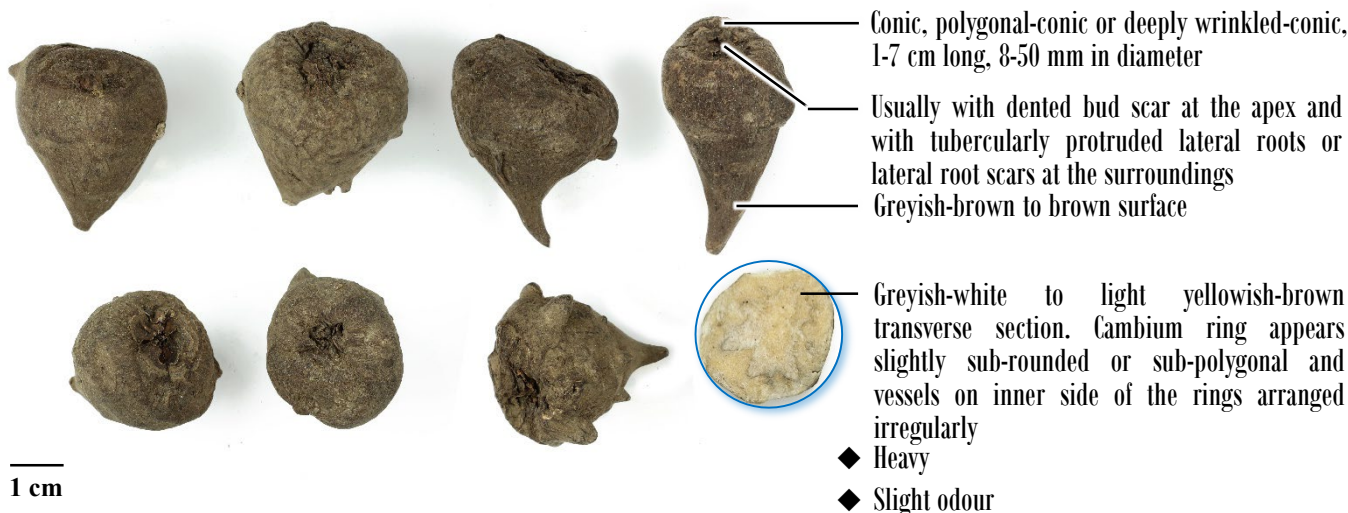
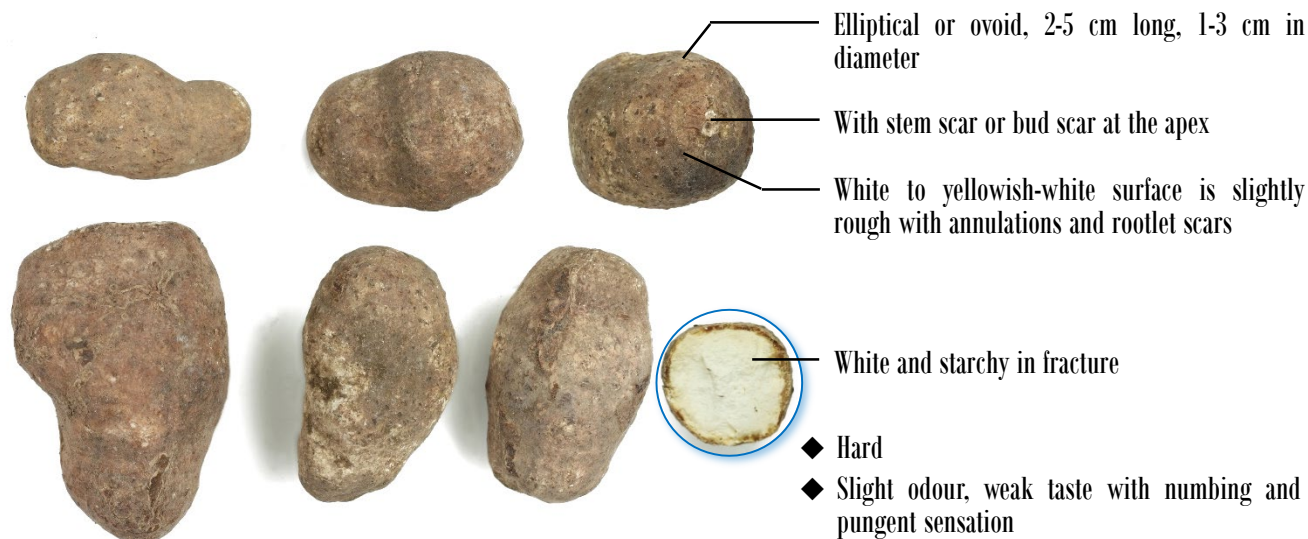


Photo of crude unprocessed Rhizoma Typhonii%



Note:

% Unprocessed Radix Aconiti Lateralis and unprocessed Rhizoma Typhonii are toxic CMM. Handle it with care and avoid tasting during identification.



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