

# Radix Rehmanniae (Sheng Dihuang)

versus

# Radix Rehmanniae (Rehmanniae Radix Praeparata)



## Source

**\*Radix Rehmanniae (Sheng Dihuang)** is the dried root tuber of *Rehmannia glutinosa* Libosch. in the family Scrophulariaceae

**Radix Rehmanniae# (Rehmanniae Radix Praeparata)** is the dried and processed root tuber of *Rehmannia glutinosa* Libosch. in the family Scrophulariaceae

## Overview

Radix Rehmanniae is a Chinese Materia Medica (CMM) listed in Schedule 2 of the Chinese Medicine Ordinance and the Chinese Pharmacopoeia (2020). The Chinese Pharmacopoeia has recorded three types of Radix Rehmanniae: Xian Dihuang, Sheng Dihuang and Rehmanniae Radix Praeparata. Sheng Dihuang is produced from Xian Dihuang which has been slowly roasted and turned black. While Rehmanniae Radix Praeparata is produced from processed Sheng Dihuang. Both Sheng Dihuang and Rehmanniae Radix Praeparata are black and have similar appearance. According to the Chinese Pharmacopoeia, Sheng Dihuang is cold in property and has the functions of clearing heat and cooling the blood, and tonifying yin and engendering fluid; while Rehmanniae Radix Praeparata is slightly warm in property and has the functions of tonifying blood and enriching yin, as well as securing essence and replenishing marrow. As the property and efficacy of these two CMM differ, they should be used accordingly.

Note:

\*Its name in Chinese Pharmacopoeia (2020) is “Rehmanniae Radix”.

#Its name in Chinese Pharmacopoeia (2020) is “Rehmanniae Radix Praeparata”.

## Key identification features

### Macroscopic features of Radix Rehmanniae (Sheng Dihuang) decoction pieces



- ◆ Sub-rounded or irregular and flat masses

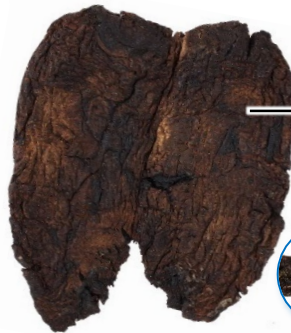


1 cm



Can be separated into small masses

Black, lustrous and viscous on one side



Brown or blackish-brown on the other side



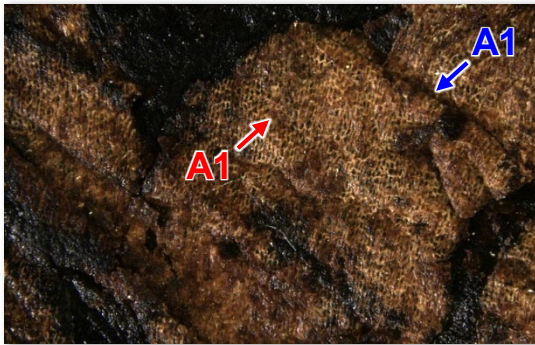
Fracture is black or blackish-brown and lustrous

1 cm

### Micro-morphological features

A1: Usually has epidermis with wrinkles (→) on one side. Some with reticulate striations (→) observable

A2: Scattered linear vascular bundles are observed on the other side



(Surface)

2 mm



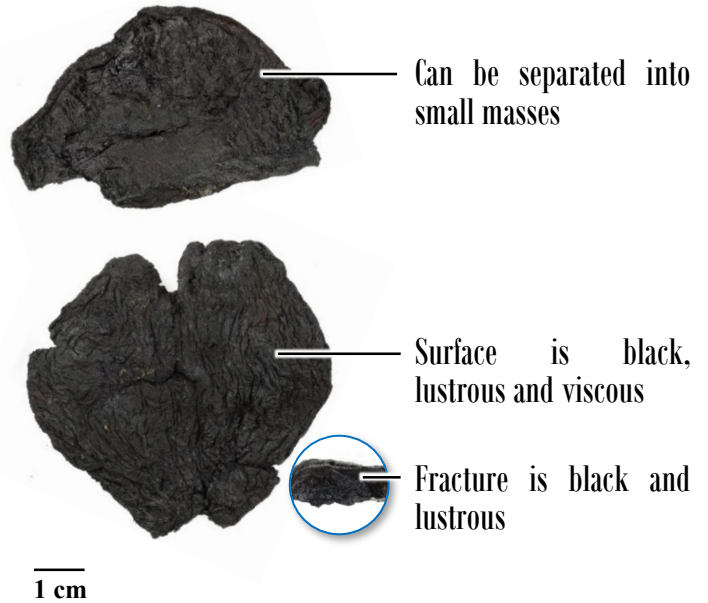
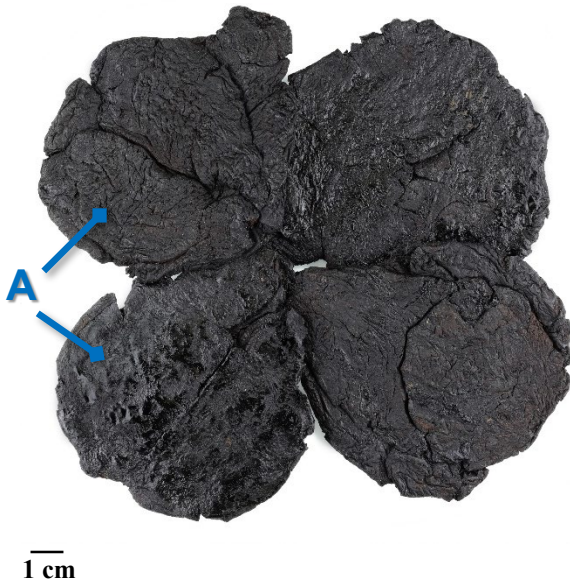
(Surface)

2 mm

## Macroscopic features of Radix Rehmanniae (Rehmanniae Radix Praeparata) decoction pieces



◆ Sub-rounded or irregular and flat masses



### Micro-morphological features

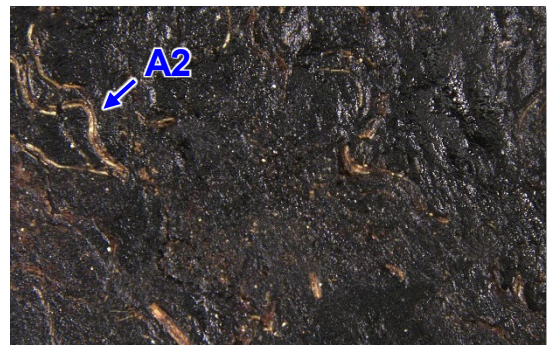
A1: Usually has epidermis with wrinkles(→) on one side

A2: Scattered linear vascular bundles are observed on the other side



(Surface)

2 mm

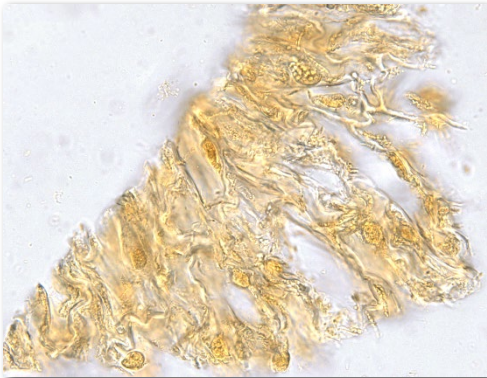
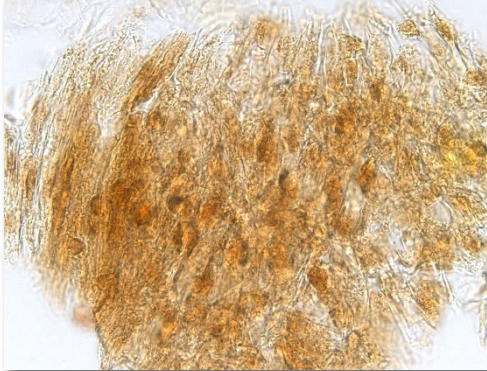

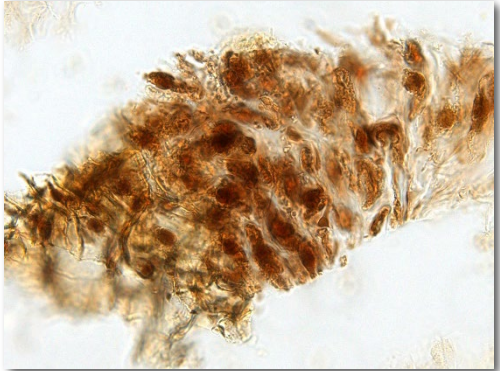


(Surface)

2 mm

**Microscopic feature comparison of Radix Rehmanniae (Sheng Dihuang) decoction pieces and Radix Rehmanniae (Rehmanniae Radix Praeparata) decoction pieces powder<sup>%^</sup>**



	<b>Radix Rehmanniae (Sheng Dihuang) decoction pieces</b>	<b>Radix Rehmanniae (Rehmanniae Radix Praeparata) decoction pieces</b>
<b>Parenchymatous cell</b>	  <p>Numerous, mostly shriveled, overall colour lighter, mostly filled with light yellowish-brown or yellowish-brown substance, small amount filled with brown substance, some with sub-rounded nucleus-like substance</p>	  <p>Numerous, mostly shriveled, overall colour darker, filled with brown or yellowish-brown substance, some with sub-rounded nucleus-like substance</p>

50 μm

Note:

<sup>%</sup>Due to the high viscosity of Radix Rehmanniae decoction pieces, it is difficult to pulverise the sample. It is suggested to freeze the sample until hardened prior to pulverising the sample, or alternatively, to prepare the slide for observation by grinding the sample with water.

<sup>^</sup>Features of Sheng Dihuang decoction pieces and Rehmanniae Radix Praeparata decoction pieces powders are very similar, only small differences in colour are observable.

## Summary

Major differences in the features between Radix Rehmanniae (Sheng Dihuang) decoction pieces and Radix Rehmanniae (Rehmanniae Radix Praeparata) decoction pieces :

		Radix Rehmanniae (Sheng Dihuang) decoction pieces	Radix Rehmanniae (Rehmanniae Radix Praeparata) decoction pieces
Macroscopic and micro-morphological features	<b>Colour</b>	One side is black and the other side is brown or brownish-black	Both sides are black
	<b>Surface</b>	Usually has epidermis with wrinkles on one side. Some with reticulate striations observable	Usually has epidermis with wrinkles on one side
Microscopic feature	<b>Parenchymatous cell</b>	Overall colour lighter	Overall colour darker

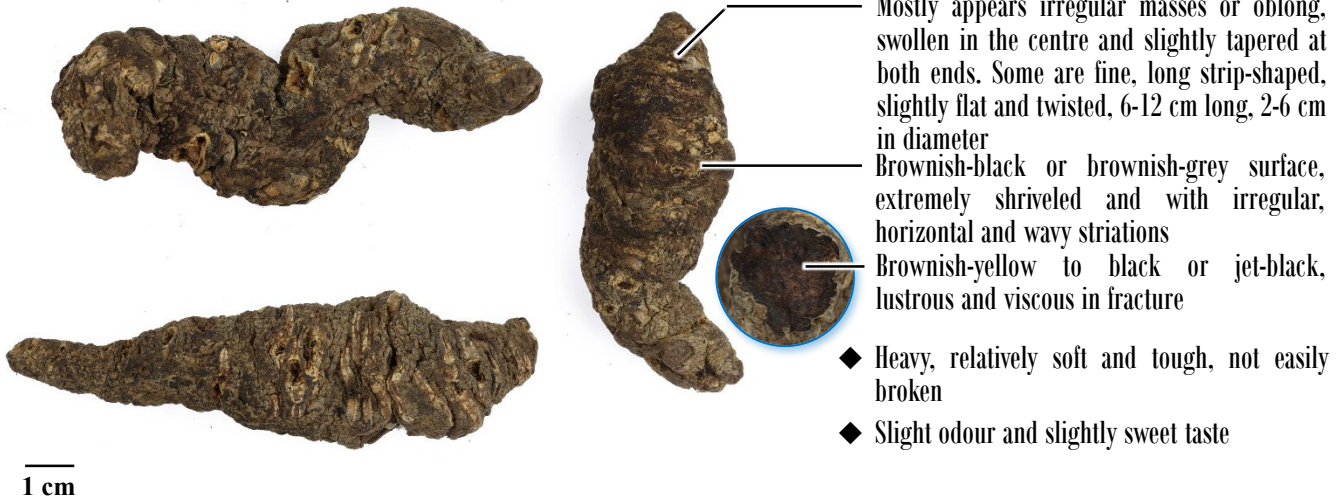
For more information, please refer to the [Hong Kong Chinese Materia Medica Standards website](#):



Radix Rehmanniae - Hong Kong Chinese Materia Medica Standards (Volume 3)

## Additional information

### Photo of crude Radix Rehmanniae



Government Chinese Medicines Testing Institute  
Department of Health  
Enquiry Hotline: 3188 8079  
Website: [www.cmro.gov.hk](http://www.cmro.gov.hk)

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