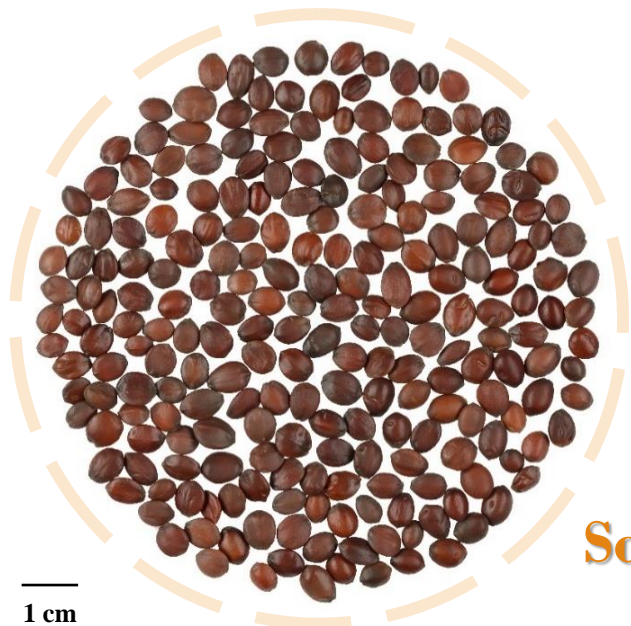


Ziziphi Spinosae Semen

versus

Fructus Psoraleae



Source



Ziziphi Spinosae Semen

is the dried ripe seed of

Ziziphus jujuba Mill. var. *spinosa* (Bunge)

Hu ex H. F. Chou

in the family Rhamnaceae

Fructus Psoraleae*

is the dried ripe fruit of

Psoralea corylifolia L.

in the family Leguminosae

Overview

Ziziphi Spinosae Semen and Fructus Psoraleae are both listed in Chinese Pharmacopoeia (2020 Edition), while Fructus Psoraleae is also listed in Schedule 2 of Chinese Medicines Ordinance. According to the Chinese Pharmacopoeia, Ziziphi Spinosae Semen can nourish the heart and tonify the liver, calm the heart to tranquilize the mind, relieve sweating, and engender fluid. Fructus Psoraleae can warm the kidney and assist yang, absorb qi to relieve wheezing and warm the spleen and stop diarrhea; for topical application, it can disperse wind and resolve macule. As the two Chinese Materia Medica differ in functions, they should be used accordingly.

Note:

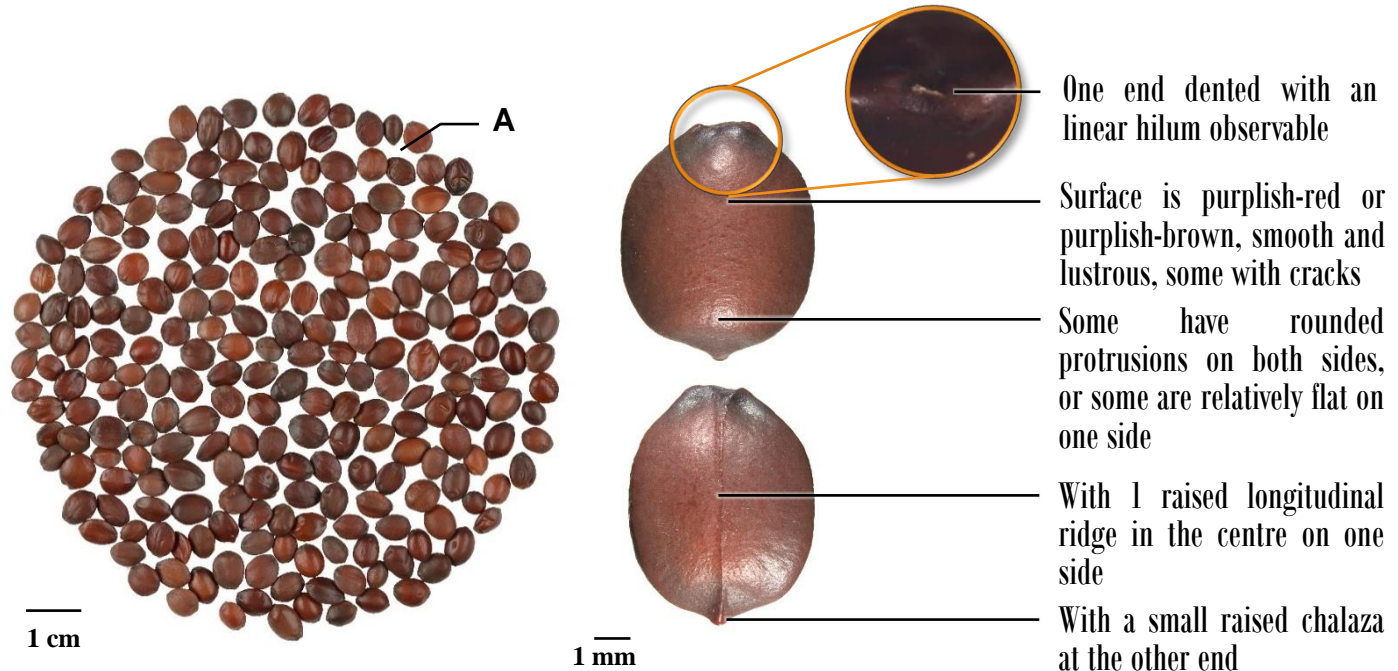
* Its name in the Chinese Pharmacopoeia (2020 Edition) is "Psoraleae Fructus".

Key identification features

Macroscopic features of Ziziphi Spinosae Semen

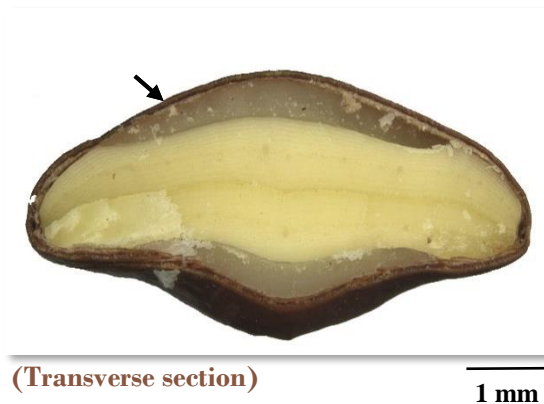


- ◆ Flattened round or flattened elliptical



Micro-morphological feature

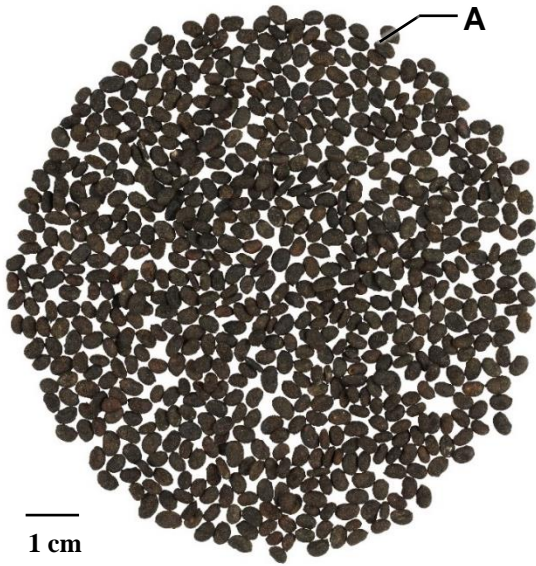
A: Testa (→) thin



Macroscopic features of Fructus Psoraleae



◆ Reniform, slightly flattened



A



Surface is black, blackish-brown or greyish-brown

With fine reticulate wrinkles



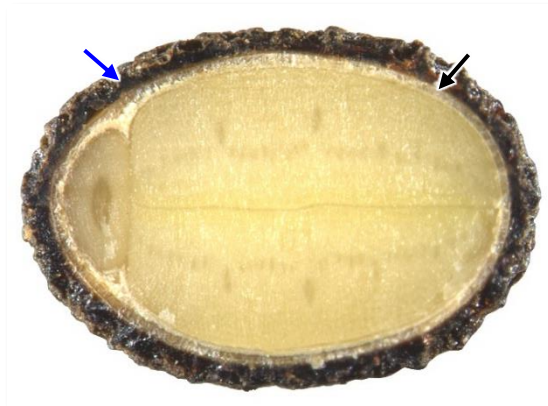
Apex is obtuse-rounded with a small protuberance

With a fruit stalk scar at the depressed end

1 mm

Micro-morphological features

A: Pericarp (→) thick, testa (→) thin

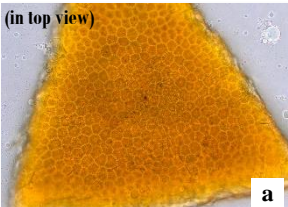
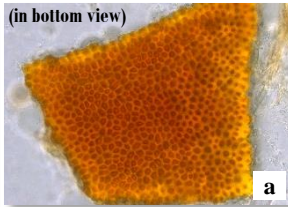
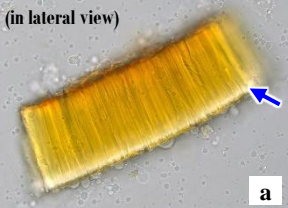
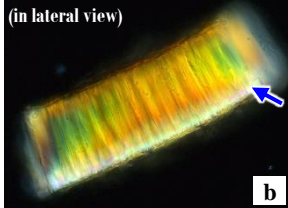
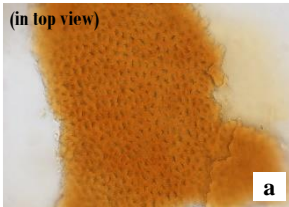
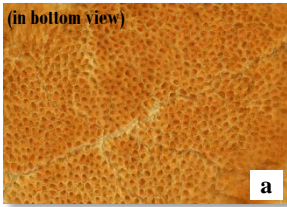
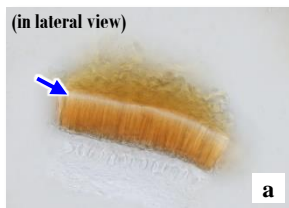
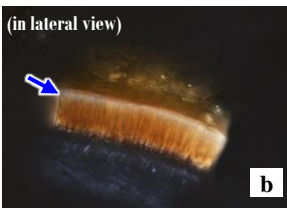

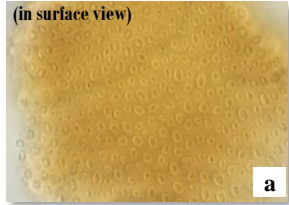
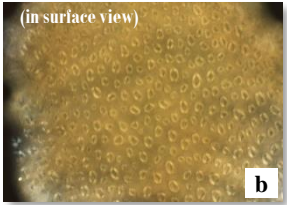
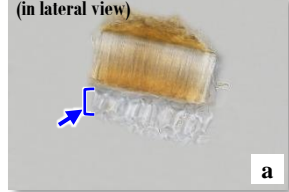
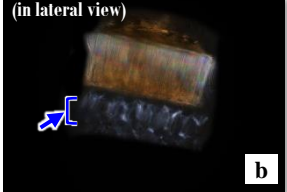
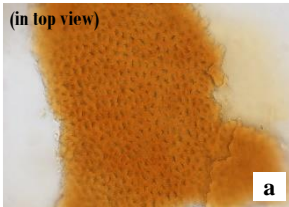
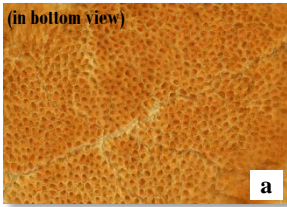
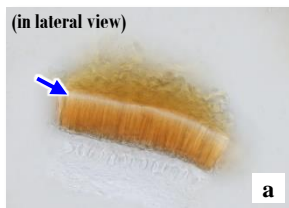
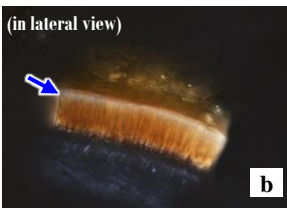

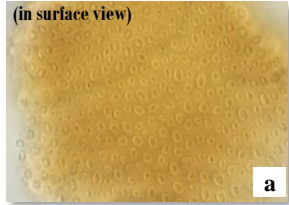
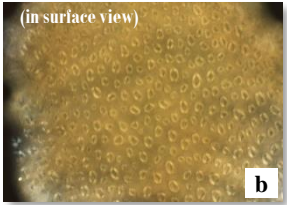
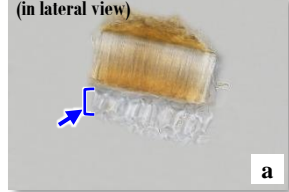
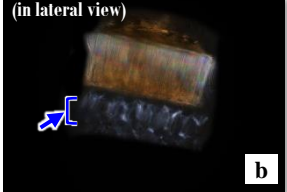
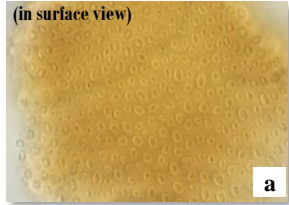
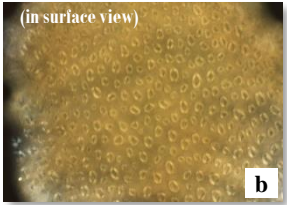
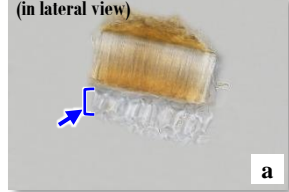
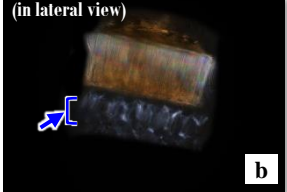





(Transverse section)

1 mm

Microscopic feature comparison of Ziziphi Spinosae Semen and Fructus Psoraleae powder



	Ziziphi Spinosae Semen	Fructus Psoraleae			
Palisade cell of testa	<div><div>(in top view) </div><div>(in bottom view) </div><div>(in lateral view) </div><div>(in lateral view) </div><p>Brownish-red or light brown. Top view is frequently found, polygonal, thick-walled and lignified, with observable radial striations, lumen is small; long strip-shaped in lateral view, with thickened outer walls, the walls are much more thickened in upper and middle parts and the walls are gradually thinner towards the lower part, luciferous band (→) distinct; polychromatic under the polarized light microscope; bottom view is frequently found, sub-polygonal or rounded-polygonal, lumen is slightly large</p></div> <td><div><div>(in top view) </div><div>(in bottom view) </div><div>(in lateral view) </div><div>(in lateral view) </div><p>Brownish-red. Appears polygonal in top view, with extremely small lumen and fine pit canals; longitudinal grooves can be found in lateral view, with 1 luciferous band (→) located at the upper side near the edge; rounded-polygonal in bottom view, with lumen filled with reddish-brown substance; reddish-brown or polychromatic under the polarized light microscope</p></div></td> <td>Sustentacular cell</td> <td><div><div></div><p>Absent</p></div><td><div><div>(in surface view) </div><div>(in surface view) </div><div>(in lateral view) </div><div>(in lateral view) </div><p>Appears sub-rounded in surface view, and dumbbell-shaped in lateral view (→); yellowish-brown or light bright white under the polarized light microscope</p></div></td></td>	<div><div>(in top view) </div><div>(in bottom view) </div><div>(in lateral view) </div><div>(in lateral view) </div><p>Brownish-red. Appears polygonal in top view, with extremely small lumen and fine pit canals; longitudinal grooves can be found in lateral view, with 1 luciferous band (→) located at the upper side near the edge; rounded-polygonal in bottom view, with lumen filled with reddish-brown substance; reddish-brown or polychromatic under the polarized light microscope</p></div>	Sustentacular cell	<div><div></div><p>Absent</p></div> <td><div><div>(in surface view) </div><div>(in surface view) </div><div>(in lateral view) </div><div>(in lateral view) </div><p>Appears sub-rounded in surface view, and dumbbell-shaped in lateral view (→); yellowish-brown or light bright white under the polarized light microscope</p></div></td>	<div><div>(in surface view) </div><div>(in surface view) </div><div>(in lateral view) </div><div>(in lateral view) </div><p>Appears sub-rounded in surface view, and dumbbell-shaped in lateral view (→); yellowish-brown or light bright white under the polarized light microscope</p></div>
Intramural gland (Endogenous gland)	<div><div></div><p>Absent</p></div> <td><div><div></div><p>Mostly broken, sub-rounded if intact, composed of ten more to dozens of radially arranged cells which are longitudinally elongated</p></div></td>	<div><div></div><p>Mostly broken, sub-rounded if intact, composed of ten more to dozens of radially arranged cells which are longitudinally elongated</p></div>			

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

50 μm

Summary

Major differences in the features between Ziziphi Spinosae Semen and Fructus Psoraleae:

		Ziziphi Spinosae Semen	Fructus Psoraleae
Macroscopic and micro-morphological feature	Shape	Flattened round or flattened elliptical	Reniform, slightly flattened
	Colour	Purplish-red or purplish-brown	Black, blackish-brown or greyish-brown
	Transverse section	The outermost layer is testa	The outermost layer is pericarp
Microscopic features	Palisade cell of testa	With radially arranged pit canals in top view	Without radially arranged pit canals in top view
	Sustentacular cell	Absent	Present
	Intramural gland (Endogenous gland)	Absent	Present

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



Fructus Psoraleae - Hong Kong Chinese Materia Medica Standards (Volume 3)



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Website: www.cmro.gov.hk

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