

# Semen Lini

versus

# Sesami Semen Nigrum



1 cm



1 cm

## Source

#**Semen Lini**  
is the dried ripe seed of  
*Linum usitatissimum* L.  
in the family Linaceae

**Sesami Semen Nigrum**  
is the dried ripe seed of  
*Sesamum indicum* L.  
in the family Pedaliaceae

## Overview

Both Semen Lini and Sesami Semen Nigrum are Chinese Materia Medica (CMM) listed in the Chinese Pharmacopoeia (2020), furthermore, Semen Lini is also listed in Schedule 2 of the Chinese Medicine Ordinance. According to *Zhong hua ben cao*, Sesami Semen Nigrum was first listed in the *Shen nong ben cao jing* as “*Hu ma*”, while Semen Lini was also name as “*Hu ma zi*” in the literature *Bo ji fang*. The use of the same name was easy to cause confusion. According to the Chinese Pharmacopoeia, both CMM has the effect of moistening the intestine. Furthermore, Sesami Semen Nigrum can tonify the liver and kidney; and boost essence and blood; while Semen Lini can nourish blood and dispel wind. Due to variations in properties, these two CMM should be used accordingly.

Note:

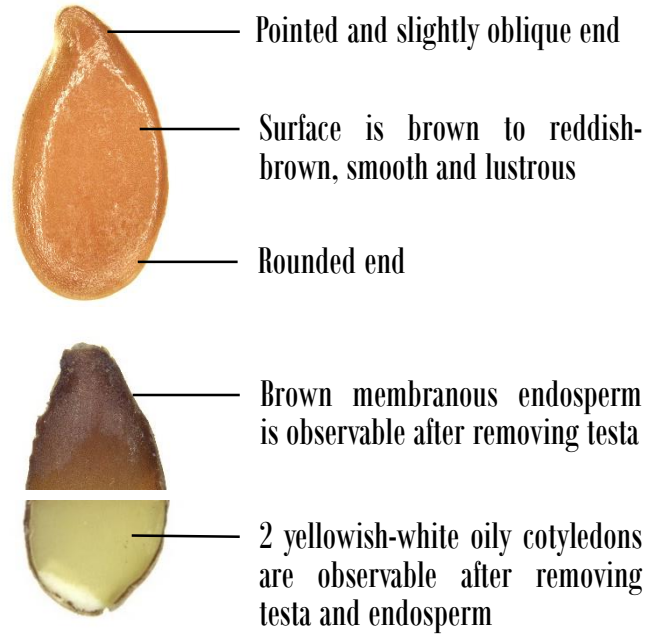
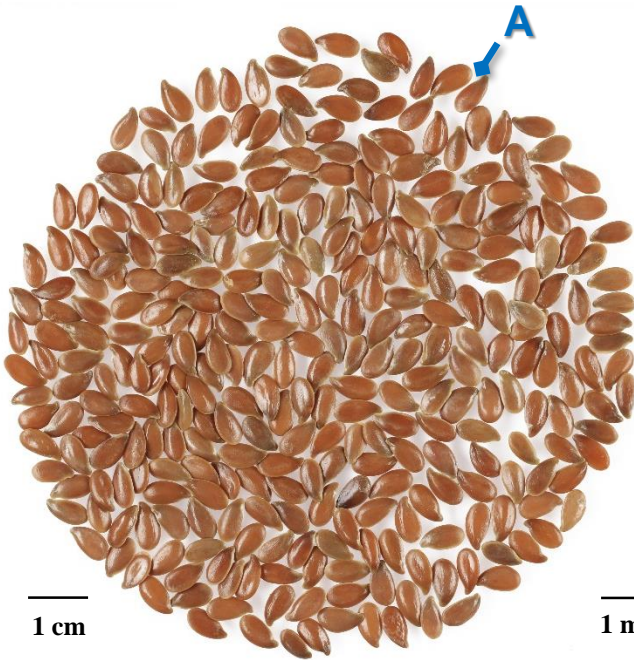
#Its name in the Chinese Pharmacopoeia (2020) is “Lini Semen”.

## Key identification features

### Macroscopic features of Semen Lini



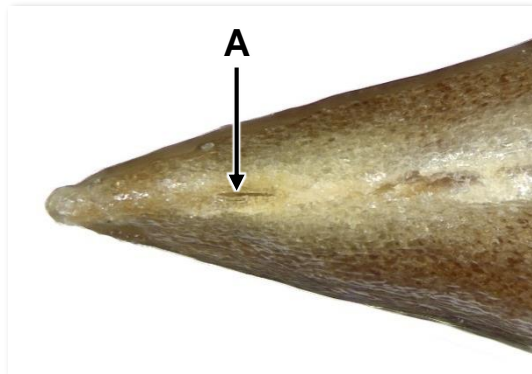
◆ Flattened ovoid



◆ Slight odour and with bean-like taste upon chewing

### Micro-morphological feature

A: Hilum is light brown, oblong and located at the margin of one side



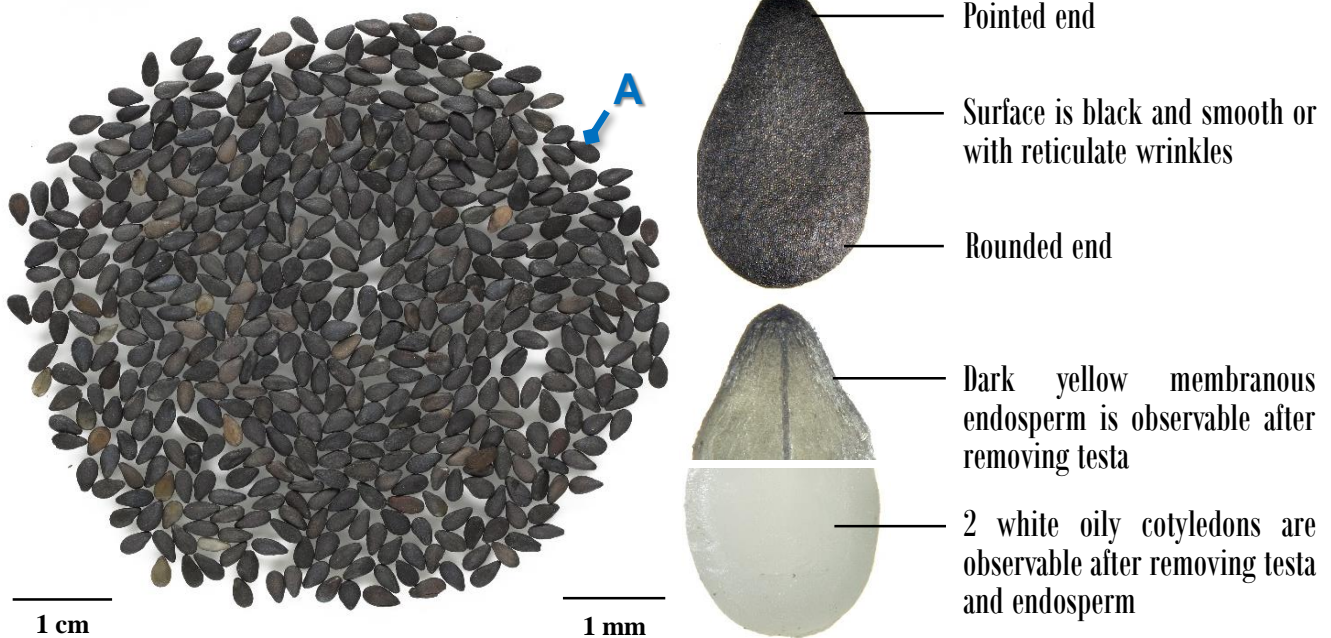
(In lateral view)

100 µm

## Macroscopic features of Sesami Semen Nigrum



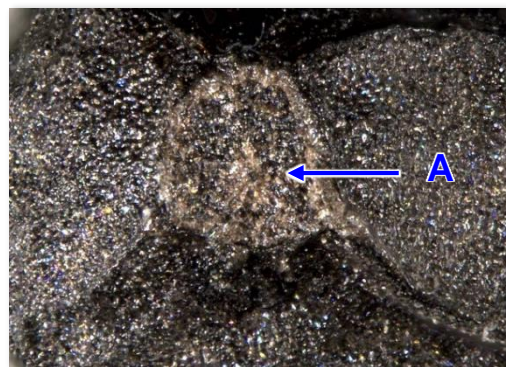
### ◆ Flattened ovoid



◆ Slight odour and sweet taste. With oily aromatic taste upon chewing

### Micro-morphological feature

A: Hilum is brown or brownish-black, sub-rounded and located at the pointed end

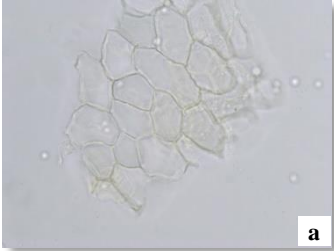
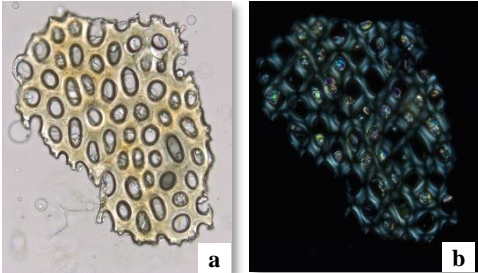



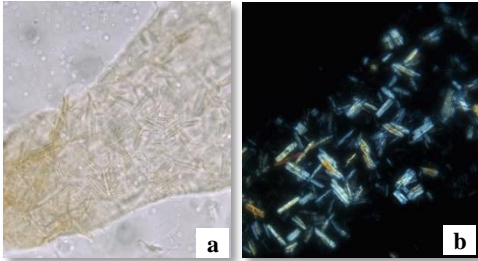


(In top view)

100 µm

## Microscopic feature comparison of Semen Lini and Sesami Semen Nigrum powder



	<b>Semen Lini</b>	<b>Sesami Semen Nigrum</b>
<b>Epidermal cell of testa</b>	 <p>Large, polygonal in surface view, with mucilaginous cell wall</p>	 <p>In groups, lumen contains black pigment*; polygonal in surface view, contains spheroidal crystal of calcium oxalate internally; spheroidal crystal of calcium oxalate is yellow or polychromatic under the polarized light microscope</p>
<b>Pigment mass</b>	 <p>Yellowish-brown, brown or reddish-brown, square, rectangular or polygonal, mostly with small serrulate margin</p>	 <p>Absent</p>
<b>Columnar crystal of calcium oxalate</b>	 <p>Absent</p>	 <p>Scattered or present in compressed cell; white or orange under the polarized light microscope</p>

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

50 μm

Note:

\*This feature should be observed as soon as possible after the slide is prepared.

## Summary

Major differences in the features between Semen Lini and Sesami Semen Nigrum:

		Semen Lini	Sesami Semen Nigrum
Macroscopic and micro-morphological features	<b>Shape</b>	Pointed and slightly oblique at one end and rounded at the other end	Pointed at one end and rounded at the other end
	<b>Surface</b>	Brown to reddish-brown	Black
	<b>Hilum</b>	Light brown, oblong and located at the margin of one side	Brown or brownish-black, sub-rounded and located at the pointed end
Microscopic features	<b>Epidermal cell of testa</b>	Does not contain spheroidal crystal of calcium oxalate	Contains spheroidal crystal of calcium oxalate
	<b>Pigment mass</b>	Frequently found	Absent
	<b>Columnar crystal of calcium oxalate</b>	Absent	Present

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



Semen Lini - Hong Kong Chinese Materia Medica Standards (Volume 9)



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