Semen Ziziphi spinosae
Suanzaoren


Official drugs(1): Ziziphus jujuba Mill. var. spinosa (Bunge) Hu ex H. F. Chou – Rhamnaceae –

Origin(2,3): China (mainly Hebei, Shandong, Liaoning, Henan, Shaanxi), Japan, India, Afghanistan, Malaysia, Australia, tropical Africa.

Description of the drug(1): Oblate or flattened ellipsoidal, 5-9 mm long, 5-7 mm wide, about 3 mm thick seeds. Externally purplish-red or purplish-brown, smooth, lustrous, some fissured. One surface even, with 1 raised longitudinal line in the centre; the other surface slightly raised. One end dented, showing a linear hilum; the other end having a finely raised chalaza. Testa fragile; endosperm white; cotyledons 2; pale yellow, oily. Odour, slight; taste, weak.

Pretreatment of the raw drug(1): The ripe fruits are collected in later autumn and early winter. The seeds are collected, removed from the pulp and shell (endocarp) and dried in the sun.

Semen Ziziphus spinosae: Remove the remained shells, break to pieces before use.

Semen Ziziphus spinosae: The clean drug is placed in a pot, stir-baked with gentle heat until the drug is inflated and the colour slightly darkened. Then it is taken out and cooled, baked to dryness or dried in the sun. The drug is broken into pieces before use.

Medicinal use(1,4): Insomnia, anxiety, restlessness, allergies, anorexia, prophylaxis of liver diseases and stress ulcers
### Effects and indications according to Traditional Chinese Medicine\(^{(1,3,5,6)}\)

<table>
<thead>
<tr>
<th>Taste:</th>
<th>weak sweet and sour</th>
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</thead>
<tbody>
<tr>
<td>Temperature:</td>
<td>neutral</td>
</tr>
<tr>
<td>Channels entered:</td>
<td>heart, spleen, liver, stomach, gall bladder</td>
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<tr>
<td>Effects:</td>
<td>supporting and additional <em>qi</em>, harmonizing and supporting <em>orbis</em>, moisturizing <em>ariditas</em>, promote the production of body fluid, arrest excessive perspiration, and cause tranquillization and balance, replenish the liver</td>
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<tr>
<td>Symptoms and indications:</td>
<td>dream-disturbed sleep, exhaustibility, nervousness, excessive sweating due to debility, thirst due to consumption of body fluid, palpitation, insomnia</td>
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</table>

### Contraindication\(^{(6)}\):
The effect fails when combined with Radix Stephaniae.

### Main constituents\(^{(7)}\):
(see Fig. 1)

- **steroid-saponins**: jujuboside A, jujuboside B, ziziphin
- **triterpenoic acids**: betulinic acid, alphitolic acid, betulonic acid, oleanolic acid, maslinic acid and ursolic acid
- **flavone C-glycosides**: swertisin, spinosin, sinapoylspinosin, feruloylspinosin, coumaroylspinosin
- **alkaloids**: zizyphusine
- **cyclopeptide**: daechucyclopeptide-1
- **cyclic nucleotides**: adenosine-3′,5′-monophosphate, guanosine-3′,5′-monophosphate
- ascorbic acid
- fatty oil
- polysaccharides
- ferulic acid