

Tempeh is a traditional Indonesian food made by fermenting soybeans with a starter culture. Traditional tempeh is a soybean cake that has a rich smoky flavour and aroma, and a firm nutty texture. It is a great source of easily assimilable proteins.

Two types of tempeh starter culture are available in 12 g size.

	<i>Rhizopus oligosporus</i>	<i>Rhizopus oryzae</i>
Incubation time / °C	24h / 29-34°C	36h / 29°C
Yield	8 g starter culture/ kg dried beans	12 g starter culture/ kg dried beans
Substrate	Soybeans, other pulses, and cereals	Soybeans, other pulses
Final Preservation	Frozen	4 days in refrigerator / frozen
Flavour	Pronounced	Light

There are many tempeh recipes and numerous substrates: pulses or cereals are often used. The following is a simple recipe using soybeans.

Ingredients:

- 500g split and hulled [soybeans](#) regular or [organic](#)
  - 30 ml white vinegar
  - [Tempeh starter culture](#), 4g for *R. oligosporus* and 6 g for *R. oryzae*
1. Soak soybeans in 2 L of boiling water. Cover and let sit 12h. Drain water
  2. Boil 2.5 L water, add soybeans and cook for 20 min (adjust if using other types of beans) or until the soybeans can be pierced with a fork; cooking them too long will make them swell to the point of impeding air circulation
  3. Air out the soybeans as you drain them, cool down to 37°C, pat the soybeans dry with a clean dish towel. Add the vinegar. Stir. The ph should be 4.5.
  4. Add tempeh starter culture to soybeans: the proportions will vary depending on the species of tempeh starter and type of substrate; stir gently while being careful not to let the soybeans cool down too much. Place in a re-sealable plastic bag, flatten to obtain 2cm thick. Finely perforated every cm<sup>2</sup>
  5. Place tempeh in incubator at 29°C (in an oven with just the oven light turned on or dehydrator or in other incubator) for 24 to 48h while often checking the temperature. After the first 12h, the product starts generating its own heat. Make sure it doesn't overheat
  6. Tempeh is ready when it's firm, white, and gives off a faint odour of mushrooms that will intensify to a Camembert-like smell. The sporulation will cause dark patches around the perforations, without consequence but having stronger smell and taste. Discard if the odour is unpleasant, tempeh is not white, or it has a slimy consistency
  7. Refrigerate in plastic bags portions expected to be eaten in the following 4 days or freeze for up to 6 months
  8. Before eating tempeh stir-fry, deep-fry or steam. To flavour, marinate before cooking

Note: Starter culture and soybeans will not stick together properly if beans are too hot or too cold at the start; soybeans that are too gluey have been heated too much, which can cause the proliferation of *Bacillus subtilis* to the detriment of desired moulds