

LIGHT SOY SAUCE

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Background

Soy sauce is a salty condiment made from fermented beans (*Glycine max L.*). Four main ingredients in soy sauce production consist of beans, wheat, salt, and water. Soy sauce has quite long history, according to William Shurtleff and Akiko Aoyagi in their book [History of Soy Sauce](#), which recorded soy sauce's history started from the third century in China, and later spread across Asia's mainland and known with different names, such as *chiang-yu* in China, *shoyu* in Japan, *kan jang* in Korea, and later in Indonesia as *kecap*.

There are mainly four kinds of soy sauce, which are light soy sauce, dark soy sauce, sweet soy sauce, and caramelized soy sauce. Each kind has different characteristics. Light soy sauce has a lighter colour (brownish red), watery texture, and mixture of salty and sweet taste. It is also widely used in Asian's dishes, whether those are sauteed dishes, steamed dishes, soups, and also sauces.

Light soy sauce making mainly consists of two main steps, which are mold fermentation and salt fermentation. Mold fermentation is done for one week. During the process, soy beans are washed soaked for 12 – 15 hours, steamed, drained, and cooled down. Later, wheat or barley flour which has been roasted and *koji* powder (*Aspergillus oryzae*) are added to soy beans. The mixture between soy beans, starches from flour, and *koji* powder is what we call *koji*. Later, *koji* obtained from the fermentation will be mixed with salt water with a concentration of 20% and fermented for at least one week and up to six months. The result of this fermentation is named *moromi*. In this step, various flavour components will be produced due to the presence of lactic acid bacteria appeared during the fermentation. The final step of making light soy sauce is ripening and pasteurization, to increase the storage shelf life of the light soy sauce.

Fermentation time (aging) determines the quality of soy sauce produced. The longer the soy sauce aged, the flavour will be better, because the soy sauce is enriched with flavour components. Enzymes will degrade proteins, polysaccharides, and dissolved sugars inside and become lots of flavour compounds. Historically, the ageing process takes about one year to produce soy sauce in its best condition. However, soy sauces manufactured by companies modify the process with sophisticated technology which usually able to adjust the temperature and time used for manufacturing. This allows the soy-sauce-manufacturing companies to make commercial soy sauce efficiently, which the manufacturing only takes around six months.

Taste

Umami, briny/salty, savoury

Nutritional Information

Soy sauce is known for containing plenty of proteins, amino acid, and nutritional compounds which is good for health and body. Soy sauce [contains many kinds of essential amino acids](#), such

as Valine, Tryptophan, Lysine, and Histidine. These amino acids are able to [effectively stimulate net muscle protein balance](#) and [decrease liver damage](#). Vitamin is also contained in soy sauce, especially [B6 vitamin](#) which could help [our body to build protein, make antibodies and hormones, and keeping the nerve system stabilised](#).

Some studies show that soy sauce contains lots of [antioxidant \(isoflavones\), such as daidzein, genistein](#), and [bioactive](#) substances which greatly benefits the health, such as reducing the risks on some chronic diseases, cancer, and also act as [anti-inflammation and anti-cholesterol](#). Other health benefits from soy sauce are [alleviating](#) digestion system, escalating absorption of iron, reducing allergy risks, and [preserve](#) intestinal activity because the sugar content in soy sauce has a prebiotic effect to the probiotic bacteria inside the intestine

However, due to salt being one of the main ingredients and light soy sauce uses a high concentration of salt in its manufacturing, [light soy sauce has](#) the highest sodium and potassium content compared to other kinds of soy sauce. Consumption in excessive amounts will not be good for the body, thus the intake of soy sauce should be considered, especially for people with hypertension.

How to Choose

If you do not cook often using light soy sauce, choose a small bottle or package when buying soy sauce so that the flavour components are still intact even for long shelf life. In addition, when buying soy sauce, pay attention to the packaging label carefully. Make sure the product is not made from GMO soybeans, the preservatives used is safe (a few examples of acceptable and safe preservatives are acetic acid and sodium benzoate), and certification from certain institutions, such as Halal Certificate for Muslim consumers, and certificates issued by the food regulatory institutions to ensure that the product is safe for consumption.

Furthermore, those with gluten intolerance or allergic to wheat can choose soy sauce with the gluten-free label, which usually made using rice or corn starch. If you are not sure if the product is gluten-free or not, tamari soy sauce can be used as an alternative because it is made without using wheat flour.

Soy sauce with the best quality cannot be found just by glancing its colour, however it is recommended to use soy sauce which doesn't contain artificial colouring, instead of natural colour from the fermentation process. The colouring formation occurred around 2 – 3 months of aging. Glucose and other sugars react with amino acids and form melanoidin pigment, creating the unique colour of soy.

Storage Tips

Soy sauce should be stored in a dark and tightly closed container and should not expose to direct sunlight or heat. The best storage time for soy sauce is 3-6 months after opening. After 6 months, soy sauce is still safe for consumption, but the flavour contained in the product will be slowly reduced. In order to keep the product much longer, soy sauce must be stored in the refrigerator,

so the flavour can last longer up to 2 years. The cold temperature in the refrigerator prevents the cause of flavour loss because it can prevent oxidation process.