

Soybean oil – useful and dangerous properties, chemical composition, use in cooking and cosmetology

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Abstract. This oil is a champion in the list of similar plant products in terms of the content of biologically active substances. Moreover, it has the highest degree of digestibility by the body.

Liquid oil from soybean seeds began to be obtained about 6 thousand years ago in China. Then they learned about the medicinal properties of beans and considered soybeans a sacred plant. Later, this plant came to Korea, and from there to the Land of the Rising Sun.

There are mentions of soybeans in the ancient books of Shen-nun, dating back to 3000 BC. It is traditionally cultivated in Indochina, and since the 16th century. this plant was brought to the Far East, Don and Kuban.

It is interesting that soybean entered Europe only in the 20th century. Its most devoted fans in Europe are considered to be the inhabitants of Foggy Albion. In England, an unusual dietary bakery product called “Cambridge bread” is baked with soy, which is famous for its unique vitamin and mineral composition.

Soybean oil is produced from cultivated soybeans, which grow in the subtropical and tropical zones of Asia, Central and Southern Africa, America, Australia, Southern Europe, the islands of the Pacific and Indian Oceans. The growing area of soybeans extends to latitudes of 55-60 degrees.

Key words: soybean oil, chemical composition, nutritional value, beneficial properties, dangerous properties, contraindications, cosmetology, cooking

Soybean oil has a bright, straw-yellow hue. It has a rather sharp, specific aroma. The oil is consumed only in refined form; it is obtained through pressing and extraction. After refining and deodorizing processes, this product becomes transparent and acquires a delicate pink color. Among other oils, soybean is considered the leader in global production.

Soybean oil is an excellent source of lecithin, widely used in the pharmaceutical and food industries. It is used to produce soap and detergents, plastics, dyes and synthetic oils, which, when released into soil and water bodies, do not cause any harm to the environment. And as part of cooling agents, this oil is not dangerous even for the Earth's ozone layer.

How to choose

Unrefined oil has a beautiful brown color with a slight greenish tint, while refined oil has a light yellow color. This lightly flavored oil is ideal for frying. Choose small bottles so that you can not keep the product open for very long.

How to store

After the first use, it is recommended to store soybean oil in the cold in a glass container with a tightly closed lid.

In cooking

There are cold-pressed oils, as well as unrefined and refined.

- **Cold-pressed oil** is considered the most useful, as it retains most of the nutrients. But not everyone may like the taste and pronounced aroma of cold-pressed oil. To improve the condition of the whole body and prolong youth, you can drink 1-2 spoons of it on an empty stomach.
- **Unrefined oil** is considered more popular, whose shelf life is extended due to hydration, but the beneficial substances remain in it. This oil contains a lot of lecithin, which improves brain activity. It is recommended to add it in small quantities to vegetable salads, but you cannot fry it in this oil, since when it is heated, carcinogens harmful to the body are formed.
- **Refined oil** is popular in the Far East, where a lot of soybeans are grown. The oil is refined, but not deodorized. Therefore, this product is odorless and has a rather pleasant taste. It can be added to first and second courses, used in cold appetizers, and fried any vegetables on it. It does not cause any harm, however, there is little benefit in this oil. Due to numerous processing, there are almost no vitamins left in this product, which is why it is practically not used to improve health. But as an alternative to other fats (especially animal fats), it can and should be consumed.

Soybean oil is most often used to make sauces and dressings for a wide variety of salads. It can also be added to baking dough. The refined and deodorized product is the most important raw material for the production of non-dairy cream, margarine, mayonnaise, confectionery and bread. This oil is also used as a stabilizer and preservative for the production of canned food and the processing of many products before freezing.

Calorie content

The calorie content of soybean oil reaches 899 kcal per 100 g. It is worth remembering this and consuming this product in moderation.

Nutritional value per 100 grams:

Proteins, g Fats, gr Carbohydrates, g Ash, gr Water, g Calorie content, kcal

- 99.9 - - 899

Beneficial properties of soybean oil

Composition and presence of nutrients

Soybean oil is considered the champion among oils due to its chemical composition and extraordinary beneficial properties. The chemical composition of this oil is a unique alloy of fatty acids that are beneficial and essential for the body, the list of which includes linoleic, stearic, palmitic, and oleic.

In addition, the soybean product is enriched with iron [1], vitamins E, K [2,3], as well as choline and zinc [4]. And phytosterols, contained in large quantities, have a beneficial effect on the skin, rejuvenating it [5].

Soybean oil contains a record amount of tocopherol (vitamin E [6]), which takes part in the formation of male sperm. It is also useful for women, since it contributes not only to the normal course of the entire pregnancy [7], but also to the proper development of the fetus. Tocopherol also helps in the fight against stress, prevents kidney disorders [8] and cardiovascular diseases.

Interestingly, 100 grams of soybean oil contains 114 mg of tocopherol, while sunflower oil contains 67 mg, and olive oil only 13 mg. Also, soybean oil is considered the record holder among other plant products in terms of the amount of microelements.

Useful and healing properties

The beneficial properties of soybean oil are determined by its composition rich in microelements and vitamins. With regular consumption of this product, the risk of heart attack [9], heart failure and cancer is reduced.

Soybean oil contains organic choline, palmitic, stearic and linolenic acids, which can significantly improve liver [10] and heart function [11].

This herbal product has a positive effect on brain function [12], normalizes cholesterol levels in the blood [13], and improves sexual function in men.

In addition, this oil is recommended to be used to prevent diseases of the digestive system, immune diseases and metabolic disorders.

Doctors advise taking 1-2 tablespoons of oil daily. There were even interesting tests of the product. More than 80,000 people took part in the testing. It turned out that those who took soybean oil regularly had a 6-fold reduction in the risk of developing a heart attack.

Use in cosmetology

The popularity of using soybean oil in facial care lies, first of all, in its composition. Thus, this product contains a record percentage of tocopherol, which guarantees the necessary nutrition of the skin and slows down the aging of skin cells.

Another very valuable component that is part of the oil is lecithin. It plays a vital role in the formation of new and restoration of skin cells damaged for any reason, in alleviating the condition of various skin diseases and improving the protective functions of the skin. In particular, lecithin has nourishing, softening and tonic properties.

It should be noted that soybean oil is excellent for dry and normal skin, but in the case of oily skin it is better to avoid it.

The actions of the oil are aimed at moisturizing, nourishing the skin and increasing its ability to retain moisture. Also, regular use of this product creates a protective barrier on the skin, protecting it from aggressive environmental influences and drying out.

Thanks to its good softening effect, this oil also copes well with the problems of chapped, dry and rough skin, and its tonic properties will return a pleasant color, lost freshness and radiance to the face.

Soybean oil is considered an excellent remedy for rejuvenating aging, tired skin that loses its tone and beauty. It helps slow down the aging process and eliminate signs already observed - smooth out wrinkles, increase skin tone, elasticity and firmness.

Despite all the properties of soybean oil, using it in its pure form can provoke the formation of comedones (blackheads) on the face. Therefore, although you can often hear recommendations to apply undiluted oil to your face, it is still worth using it to enrich home and store-bought cosmetics or in mixtures with other oils. And pure soybean oil can pamper the skin of your hands and body.

To soften, nourish and rejuvenate the skin, you can mix soybean oil with olive, peach, castor, cedar, almond and many other vegetable oils. After studying detailed information about all these oils, you can choose the most suitable combinations (in equal proportions) for your skin.

It is recommended to use the resulting mixture both for cleansing and for removing makeup (in this case, the composition will need to be slightly warmed up). You can also use this mixture of oils instead of daily day or night face cream (if your skin is too dry or in windy and frosty weather). In particular, you can use this mixture as a mask, applying it to the face for 30-40 minutes, or to lubricate chapped, rough and excessively dry areas of the skin. Also, a few more drops of essential oil are often added to the existing composition.

As for enriching store-bought masks and creams, you can add soybean oil by eye. So, you can take a single portion of the cream and apply it pointwise to your face. Also, spot-apply a little soybean oil. After this, rub the cream and oil all over your face with your fingers, that is, the way you always apply cream.

You can add one half teaspoon of soybean oil to one part of a store-bought mask. The oil can also be combined with cleansing milk.

Adding soybean oil to prepared homemade cosmetics is also considered a good remedy. For example, you can simply add a teaspoon of soybean oil to the necessary ingredients in a mask.

If you are making cream, you can replace one of the vegetable oils indicated in the recipe with soybean oil.

Also, if some lotion or scrub recipe lists vegetable oil among the ingredients, you can use soybean oil.

It is worth remembering that all the described methods of using soybean oil are suitable for you if you have dry, normal or aging skin prone to dryness. For oily skin, using soybean oil is not recommended. In case of combination skin type, it is recommended to apply soybean oil only to dry areas, for example, to the cheek area.

Dangerous properties of soybean oil

Soybean oil is contraindicated for use internally and externally in case of individual intolerance and predisposition to allergic reactions [14] to beans and soy protein.

This oil may also be harmful during pregnancy and breastfeeding [15] due to the content of estrogenic isoflavones.

It is not recommended to consume soybean oil in case of serious brain diseases and migraine attacks [16]. This product should be consumed in limited quantities by people with kidney and liver failure, severe diseases of the digestive system, and intestinal disorders.

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