

# Soy as an Ingredient



There is a wide array of foods that contain soy as an ingredient. Soy protein and oil are used as ingredients for their health benefits and functional properties such as solubility, gelation, hydrating capacity, emulsification, adhesion/cohesion, and foaming. Many of these ingredients start as soybean flakes, which are produced by crushing soybeans and removing the oil. Learn more about the ways soy protein and oil enhance your favorite shelf-stable foods.

## Soy Flour

Soy flour is made from ground roasted soybeans. Soy flour contains 50 percent protein, approximately four times more protein than wheat flour. Soy flour fries well and produces a golden crust color. Soy flour is a source of isoflavones and dietary fiber and provides nutrients like potassium and folate.



## Soy Protein Isolate

Soy protein isolate is the protein that is leftover when the fat and carbohydrate portions of the soybean have been almost completely removed. Although it doesn't have much flavor, it packs protein. It is commonly found in protein powders, infant formula, nutrition bars, plant-based meat alternatives, baked goods, breakfast cereals, some soymilk and other dairy alternatives.

## Soy Protein Concentrate

Soy protein concentrate is made by removing the oil and some of the carbohydrates from the whole soybean. Although it contains less protein than soy protein isolate, it contains more fiber. It is used in pre-made foods including baked goods, cereals and some plant-based meat alternatives.

Ingredient	Amount of Protein
Soy Flour	50-65%
Soy Protein Isolate	90%
Textured Soy Protein	52%
Soy Protein Concentrate	50-65%

## Textured Soy Protein



Textured soy protein (TSP), also called textured vegetable protein, is made from soy flour that has had all of the soybean oil removed. TSP contains fiber and soy isoflavones. Due to its neutral flavor, this high protein food is often used as a meat substitute or used with meat to add more protein and bulk to a dish.

## Soybean Oil

Soybean oil is the most widely used edible oil in the U.S. and world. It is neutral in flavor and can be used in many applications, from frying to baking. Soybean oil carries a qualified U.S. Food and Drug Administration health claim, stating that “Supportive but not conclusive scientific evidence suggests that eating about 1½ tablespoons (20.5 grams) daily of soybean oil, which contains unsaturated fat, may reduce the risk of coronary heart disease.”



## High Oleic Soybean Oil

High oleic soybean oil (HOSO) is made from sustainably produced U.S. grown high oleic soybeans. They contain less saturated fat than conventional oil and three times the amount of beneficial monounsaturated fatty acids. HOSO is prized for its extended shelf life, longer fry life, and neutral flavor profile.

## Soy Lecithin



Lecithin is a compound that is extracted from soybean oil and used as an emulsifier or stabilizer in many processed foods, including salad dressings, chocolate, dairy products, infant formulas and breads. Soy lecithin is primarily fat and contains virtually no protein.

## FDA Health Claims for Soy



### Soy Protein

“25 grams of soy protein a day, as part of a diet low in saturated fat and cholesterol, may reduce the risk of heart disease.”



### Soybean Oil

“Supportive but not conclusive scientific evidence suggests that eating about 1½ tablespoons (20.5 grams) daily of soybean oil, which contains unsaturated fat, may reduce the risk of coronary heart disease.”