



Most of the new soyfoods entering the market place contain textured soy protein, also called TSP (or textured vegetable protein, TVP). Textured soy protein can be made from soy flour, soy concentrate or soy protein isolate, but only textured soy flour is readily available for consumers to buy. The wide array of soy protein ingredients, when rehydrated, resembles cooked ground beef or poultry in texture and may be used alone or with meats to make a wide variety of products.

Textured Soy Protein

IN THE MARKET

Textured soy protein (TSP) may be unflavored, meat or chicken flavored, and appear in chunks, slices, flakes, crumbles or bits. This soyfood may be bagged or sold in bulk primarily at natural food supermarkets, food cooperatives, buying clubs, health food stores, or the natural foods section of traditional supermarkets. Some TSP sells through direct mail or online shopping. Many convenient, dry entrée mixes include textured soy protein with additional herbs and flavorings.

RETAIL SUPPLIERS

Clofine Dairy & Food Products – Textured Soy Proteins (mail order)

GIVE ME FIVE

1. Add dry ground beef-style textured soy protein (TSP) to homemade chili along with a little extra tomato sauce and/or water. Season as desired.
2. Make a meatless sausage and egg burrito by using reconstituted sausage-style TSP crumbles along with scrambled eggs in a whole wheat flour tortilla. Serve with salsa.
3. Use chicken-style TSP strips for zesty chicken fajitas.
4. Add chunks of beef-flavored TSP to potatoes and vegetables when making a hearty stew.
5. Enjoy sweet and sour chicken made from TSP chicken strips or chunks and serve over soy angel hair pasta.

IN THE KITCHEN

One cup boiling or hot water, broth or stock poured over 1 cup of small granules will reconstitute in five to 10 minutes. For larger chunks or slices, use 2 cups of liquid to 1 cup of chunks/slices and simmer for 20-30 minutes until tender, but not mushy. TSP granules or flakes can be rehydrated in a microwave, by covering the moistened granules and cooking on high for about five minutes.

A pound of TSP will equal about three pounds of ground beef. One cup dry TSP reconstituted in one cup liquid yields about two cups. Unflavored textured soy protein easily assumes the flavor of other liquids and foods. It combines well with ground meat or poultry, or can appear alone in favorite recipes.

Unflavored textured soy protein will last indefinitely if stored in a dry, airtight container. Stored the same way, flavored TSP will last at least one year. Both can be available for use at any time. Once rehydrated with liquid, TSP should be refrigerated or frozen until used. Refrigeration preserves the reconstituted TSP for only a few days and freezing preserves it for 3 to 6 months.

NUTRITION HIGHLIGHTS

Textured soy protein is at least 50 percent protein. Unflavored textured soy protein is very low in sodium. Textured soy protein is an easy and inexpensive source of dietary fiber, soy protein, and naturally occurring bio-active components, such as isoflavones. Isoflavones are being studied in relationship to relieving menopausal symptoms, such as hot flashes, maintaining healthy bones, and preventing prostate, breast, and colorectal cancers. The content and profile of bio-active components varies from product to product, depending upon how much soy protein is in the food and how the soy protein is processed.

Textured soy protein is a healthy high quality protein source that contains all essential amino acids needed for growth. This high quality protein comes without fat and has no cholesterol and little or no saturated fat.

In addition to the quality of soy protein, scientists have found that soy protein may help reduce the risk of heart disease by lowering blood cholesterol and increasing the flexibility of blood vessels. The FDA has approved a health claim stating that “25 grams of soy protein in a daily diet low in saturated fat and cholesterol can help reduce total and LDL cholesterol that is moderately high to high.”

THE MAKING OF TEXTURED SOY PROTEIN

A variety of processing technology permits the soy protein to be separated from oils, sugars, and dietary fiber that are naturally contained in the soybean. Generally, textured soy protein concentrates are made from the soy flour derived from de-fatted soybean flakes. Using water, heat, and pressure, the ground flour is extruded, then cut and baked to add texture. During processing manufacturers often add vitamins, minerals, colors and flavors to TSP.

Nutrition Facts 1/4 cup fortified dry textured soy protein, 0.75 ounces (21 grams)		
Calories	57	% Daily Value
Total Fat	0	0%
Saturated Fat	0	0%
Total Carbohydrates	6	2%
Protein	11	22%
Cholesterol	0 mg	
Sodium	3 mg	0%
Dietary Fiber	4 g	15%
Calcium	68 mg	6%
Potassium	192 mg	6%
Phosphorus	155 mg	16%
Folate	64 mcg	16%
Source: American Soybean Association Textured Soy Protein Reference Guide		
Average Total Isoflavones	32 mg	
Source: USDA-Iowa State University Database on the Isoflavone Content of Foods-1999, USDA Nutrient Laboratory, Agricultural Research Service (Textured Soy Flour)		
Exchanges: 1-1/2 lean meat/meat substitute		
Source: Based on information from Exchange Lists for Meal Planning, 2nd edition, 2002.		
The American Diabetes Association/The American Dietetic Association.		