

Taiyo is a pioneer in the basic research and manufacture of functional ingredients for the food, beverage, medical food and pharmaceutical industries. Taiyo focuses on the development of innovative ingredients, derived from natural sources, to further develop the body's ability to protect and manage one's health. Taiyo delivers clinically proven nutritional benefits of green tea antioxidants, stress-reducing amino acids of green tea, soluble dietary fiber, vitamin and mineral delivery systems, and other natural ingredients.

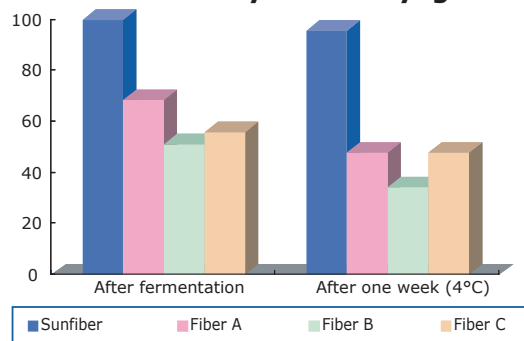
# Sunfiber®

Tasteless, colorless and odorless, Sunfiber® has no visible affect on your product but significantly boosts its health benefits. This all-natural, soluble dietary fiber improves functionality in foods and beverages. It delivers high fiber content and exhibits excellent stability with respect to pH, heat and freeze/thaw conditions. Sunfiber is clinically proven to lower glycemic index, improve mineral absorption and maintain digestive health. If you want all the benefits of fiber with none of the negatives, your only choice is Sunfiber.

## Superior physical and chemical properties

Sunfiber® is among the most adaptable of all dietary fibers. It is 100 percent water soluble, colorless and tasteless. It also features a very low viscosity, remains stable at low pH levels and is extremely resistant to high temperatures. These factors make Sunfiber a superb choice for a wide range of applications, including fruit juices, carbonated and noncarbonated beverages including coffee, milk and tea; as well as yogurts, creams and bakery products.

### Stability of Sunfiber® and three other dietary fibers in yogurt

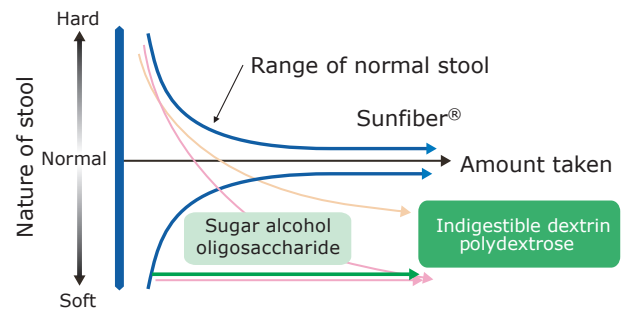


Milk, fiber (3%) and starter yogurt (20%) were mixed and incubated at 40°C for 15 hours in aerobic conditions. Dietary fiber measurements were performed after fermentation and again after one week of storage at 4°C.

## Provides solid regularity

All fibers can help alleviate constipation and irregularity. But Sunfiber® does so without the undesirable and problematic side effects of diarrhea. Sunfiber alleviates constipation without overly degrading stool firmness. The result is regularity with healthy consistency.

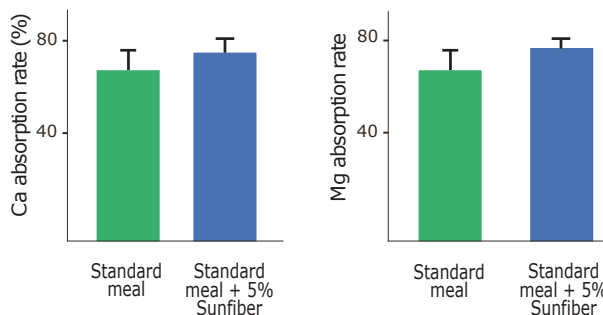
### Stool Normalization from Consumption of Sunfiber®



## Superior absorption of calcium and magnesium

Many dietary fibers block the absorption of essential minerals such as magnesium and calcium into the body. Sunfiber®, on the other hand, actually promotes the absorption and these and other helpful minerals, ensuring the body receives the maximum benefits from the foods it digests.

### Influence of Sunfiber® on Calcium (Ca) and Magnesium (Mg) Absorption Rates

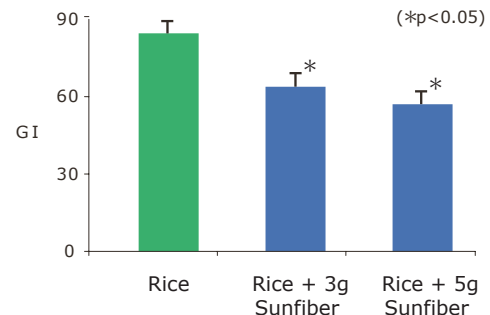


Experiments using rats; After taking Sunfiber for seven days  
British Journal of Nutrition, 76, 773-784, 1996

## Reduces food Glycemic Index – Controls blood sugar levels

Sunfiber® is a secret weapon for anyone suffering from glucose intolerance or problems with blood glucose management, such as diabetics. Whether it's included in the food, or taken with water when eating, Sunfiber helps the body combat increased blood glucose levels by controlling the glycemic index of foods.

### Sunfiber® Influence on Glycemic Index (GI)



Data collected from 10 healthy adults  
Joint experiment with Philippine Nutrition and Food Laboratory



### **What is Sunfiber?**

Sunfiber is a soluble dietary fiber made from partially hydrolyzed guar gum. It is a versatile powder that can be easily added to a wide variety of foods and beverages. Sunfiber does not impact the flavor, color, texture, or aroma of the products to which it is added. It offers an easy way to increase fiber in the diet using consumers favorite foods and beverages.

### **What is Guar Gum?**

Guar gum is a water soluble carbohydrate derived from the guar plant seed. It is used throughout the food industry as a food ingredient for its superior thickening, gelling, emulsifying, and stabilizing properties as a result of its high viscosity.

### **What does Partially Hydrolyzed mean?**

It is a controlled natural enzymatic process that breaks guar gum down into smaller units, greatly decreasing its viscosity and allowing the particles to dissolve more readily.

### **What is the Recommended Daily Allowance (daily dosage) for fiber?**

The Reference Daily Intake (RDI) for fiber is 25 grams per day, based on a 2,000 calorie diet. The average diet intake is approximately 11 grams per day.

### **What is the Difference between Soluble and Insoluble Fiber?**

Dietary fiber comes in two forms, soluble and insoluble. Because soluble fiber tends to hold water, it turns to gel during digestion of foods. This slows the rate of digestion in the stomach and intestine. Natural sources of soluble fiber include: oat bran, pectin (fruits and vegetables), gums (nuts and seeds), and legumes (beans, lentils, and peas). Insoluble fiber has poor water-holding capability and does not dissolve in water. It is the woody kind of fiber associated with the term “roughage”. Insoluble fiber adds bulk to digested foods and speeds their passage through the stomach and intestines. Insoluble fiber is found in wheat bran, whole grains, dried beans, vegetables, and nuts. Many foods contain both soluble and insoluble fiber. Both soluble and insoluble fiber have a laxative action making the stool larger, heavier, and easier to pass. Soluble fiber is also known to assist in lowering blood glucose and cholesterol levels.

### **It is known that fiber can help with constipation, but can it improve diarrhea?**

Yes. Sunfiber binds excess water and tends to add more bulk to the stool. Sunfiber has a prebiotic effect that helps to improve the status of the micro flora in the digestive system.

### **Is Sunfiber Safe?**

Yes. As per the GRAS (Generally Regarded As Safe) determination, Sunfiber is safe for addition to conventional foods and supplements at a level limited only by cGMP. Gradual inclusion (as with any fiber) into the diet is recommended. In addition adequate fluid intake is encouraged.

### **Is Sunfiber a Natural Product?**

Yes. Sunfiber is a natural product. It is minimally processed to obtain a finished product with the desired properties. Sunfiber starts with a natural material, which is grown in fields that are *not* treated with chemicals. No preservatives are used or added during manufacturing. In summary, Sunfiber meets the accepted criteria for a “natural food ingredient”. Also, Sunfiber is certified Kosher, is not of any animal origin nor derivative, is Non-GMO, and all raw materials are kept free from GMO and their derivatives throughout the production process.

**TAIYO INTERNATIONAL, INC.**

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