



# Sucralose

## The Facts

Sucralose is the only non-caloric sweetener derived from sugar. Its unique combination of sugar-like taste and excellent stability allows sucralose to be used as a replacement for sugar in virtually every type of food and beverage, including home cooking and baking recipes.



Sucralose is derived from sugar through a multi-step, patented manufacturing process that selectively substitutes three atoms of chlorine for three hydroxyl groups on the sugar molecule. Chlorine is, of course, present naturally in many foods and beverages that we consume every day and plays an important role in many biological processes and in nature in general. The presence of chlorine in sucralose produces a sweetener that has no calories, yet is 600 times sweeter than sugar. Sucralose tastes like sugar. It has a clean, quickly perceptible, sweet taste that does not leave an unpleasant aftertaste. Moreover, sucralose retains its sweetness during all food and beverage manufacturing processes and this enables it to be used virtually anywhere sugar is used, including cooking and baking in the home.

Sucralose is not utilized for energy in the body because it is

not broken down like sucrose (sugar). It passes rapidly through the body virtually unchanged. Sucralose has been extensively tested in more than 100 studies during a 20-year period and found to be a safe and remarkably inert ingredient. It can be used by all populations, including pregnant women, nursing mothers, and children of all ages. Sucralose is also beneficial for individuals with diabetes because research demonstrates that sucralose has no effect on carbohydrate metabolism, short- or long-term blood glucose control, or insulin secretion.

One advantage of sucralose for food and beverage manufacturers and consumers is its exceptional stability. It retains its sweetness over a wide range of temperature and storage conditions and in solutions over time. Because of its unique combination of a great sugar-like taste coupled with its stability, food manufacturers have used sucralose to create a wide



Discovered in 1976, sucralose has been developed jointly by Tate & Lyle PLC and McNeil Nutritionals, LLC, a Johnson & Johnson company. Sucralose was approved for use in 15 food and beverage categories by the U.S. Food and Drug Administration (FDA) on April 3, 1998. This was the broadest initial approval ever granted by FDA for a food ingredient. The FDA expanded the uses for sucralose in 1999, approving it as a "general purpose" sweetener. Sucralose has also been approved for use in foods and beverages in over 80 countries including Canada, Australia, Japan, the European Union and Mexico.

Continued on page 2

## Continued from page 1

range of great-tasting new foods and beverages. Examples include categories such as canned fruit, low-calorie fruit drinks, baked goods, and sauces and syrups. Sucralose also can be used as a sweetener in nutritional supplements, medical foods, vitamin/mineral supplements, and pharmaceuticals. All in all, consumers have had a greater choice of low calorie foods and beverages due to sucralose.

Sucralose is available as an ingredient for use in a broad range of foods and beverages under the name "SPLENDA® Sucralose". Currently, a range of products sweetened with SPLENDA® Sucralose are on supermarket shelves, such as carbonated soft drinks, low-calorie fruit drinks, yogurts, breakfast cereals, ice cream, baked goods and nutritional supplements. Many foods and beverages also display the "Sweetened with SPLENDA® brand" logo on their packaging.

## BENEFITS



### ► Tastes Like Sugar

Sucralose tastes like sugar and has no unpleasant aftertaste. In scientific taste tests conducted by independent research organizations, sucralose was found to have a taste profile very similar to sugar.

### ► Heat Stable

Sucralose is exceptionally heat stable, making it ideal for use in baking, canning, pasteurization, aseptic processing and

other manufacturing processes that require high temperatures. In studies among a range of baked goods, canned fruits, syrups, jams and jellies, no measurable loss of sucralose occurred during processing and throughout shelf life.

### ► Can Help Control Caloric Intake

Sucralose is not metabolized for energy, thus it has no calories. It passes rapidly through the body virtually unchanged, is unaffected by the body's digestive process and does not accumulate in the body. By replacing sucralose for sugar in foods and beverages, calories can be reduced, or, in many products, practically eliminated.

### ► Suitable for People with Diabetes

Sucralose is not recognized as sugar or a carbohydrate by the body. Thus, it has no effect

on glucose utilization, carbohydrate metabolism, the secretion of insulin, or glucose and fructose absorption. Studies in persons with normal blood glucose levels and in persons with either type 1 or type 2 diabetes have confirmed that sucralose has no effect on short- or long-term blood glucose control.

### ► Does Not Promote Tooth Decay

Scientific studies have shown that sucralose does not support the growth of oral bacteria and does not promote tooth decay.

### ► Long Shelf Life

Sucralose combines the taste of sugar with the heat, liquid and storage stability required for use in all types of foods and beverages. It is very stable in acidic products such as carbonated soft drinks, and in other liquid-based products (e.g., sauces, jelly, milk products, processed fruit drinks). Sucralose is also very stable in dry applications such as powdered beverages, instant desserts, and tabletop sweeteners. Consumers can, therefore, be confident of a great sugar-like taste with products sweetened with sucralose.

## SAFETY

The safety of sucralose is documented by one of the most extensive and thorough safety testing programs ever conducted on a new food additive. More than 100 studies conducted and evaluated over a 20-year period clearly demonstrate the safety of sucralose.

Studies were conducted in a broad range of areas, at amounts many times

Continued on page 3



## Continued from page 2

higher than actual consumption levels, to assess whether there were any safety risks regarding cancer, genetic effects, reproduction and fertility, birth defects, immunology, the central nervous system, and metabolism. These studies all concluded that sucralose was safe for human consumption and there are no known side effects.

## MEETING CONSUMER DEMAND

Recent research shows that more than 180 million adult Americans are incorporating low-calorie, sugar-free foods and beverages into their meal plans as part of a healthy lifestyle. This growing calorie consciousness challenges food manufacturers to provide consumers with a wider selection of good-tasting, reduced-calorie products. The development and approval of a variety of safe, low-calorie sweeteners and other low-calorie ingredients are helping to meet this consumer demand.



## FUTURE

People are demanding a greater variety of low-calorie products as they strive to make healthier food choices. Sucralose can help meet this demand because its combination of sugar-like

taste and excellent stability makes it uniquely suited for numerous products, many of which have been previously unavailable in a reduced calorie, reduced sugar form.

Sucralose can be used to create new categories of food and beverage products, such as reduced-calorie cookies, cakes, ice cream toppings, and fruit and pie fillings. It also can be used to expand markets for existing low-calorie products, such as jams and jellies, chewing gum, and carbonated soft drinks. The availability of sucralose will expand the market to provide products with improved taste, increased stability, lower manufacturing costs, and, ultimately, more choices for consumers.



**A range of products containing sucralose are available at retail as a tabletop sweetener for use in the home as SLENDA® No Calorie Sweetener including:**

- SLENDA® No Calorie Sweetener Granulated: A spoon-for-spoon replacement for sugar. It pours, measures, cooks and bakes like sugar.
- SLENDA® No Calorie Sweetener Packets: Convenient packet form that can be used to sweeten beverages and sprinkle on cereal and fruit.
- SLENDA® No Calorie Sweetener with Fiber: The sweet taste of SLENDA® No Calorie Sweetener now with a gram of healthy fiber per packet.

**Two tabletop products that are blends of sucralose and sugar also are available:**

- SLENDA® Sugar Blend/ SLENDA® Brown Sugar Blend are ideal for baking and reduce sugar used by half.
- More information on the complete range of SLENDA® Sweetener products is available by visiting [www.splenda.com](http://www.splenda.com).



*Calorie Control Council*

1100 Johnson Ferry Road, Suite 300 • Atlanta, GA 30342 • 404-252-3663

**For more information on sucralose, visit [www.caloriecontrol.org](http://www.caloriecontrol.org) and [www.sucralose.org](http://www.sucralose.org).**

Copyright © 2009 Calorie Control Council • Permission to reprint information in whole or in part is granted, provided customary credit is given.