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## **Stevia™ Nature's Perfect Sweetener**

Stevia™ is an all-natural, non-insulin producing sweetener derived from the leaves of the Stevia rebaudiana plant that belongs to the aster or chrysanthemum family. It grows primarily in Paraguay. Stevia rebaudiana is the only species at present, which possesses an inordinate ability to sweeten. The leaves of the Stevia shrub contain specific glycosides, which produce a sweet taste but have no caloric value. Glycosides are organic compounds that naturally contain a sugar component (glycone) and a non-sugar component (aglycone). Stevia can be used in baking because its sweet components don't break down when heated.

Stevia rates between 70 - 400 times sweeter than white sugar. It has a mild herbal taste that usually doesn't interrupt the flavor of beverages and foods it's added to. It never initiates a rise in blood sugar and doesn't provide "food" for microorganisms like bacteria and yeast.

To read all about this amazing natural sweetener visit: [rain-tree.com/stevia.htm](http://rain-tree.com/stevia.htm). The best place to purchase Stevia™ is: [steviasmart.com](http://steviasmart.com). They have the best tasting Stevia™ as well as many flavors and recipes.

### Attributes of Stevia:

- Diabetic-safe
- Calorie-free
- 70-400 times sweeter than white sugar
- Does not adversely affect blood sugar levels
- Is non-toxic
- Inhibits the formation of cavities and plaque
- Contains no artificial ingredients
- Can be used in baking and cooking

Reference: Stevia, Nature's Sweetener, Rita Elkins, M.H., pgs 6-7, Woodland Publishing, Pleasant Grove, UT, 1997, ISBN: 1-58054-013-9

### Packet to Packet Stevia™ Conversions

In general terms, most packet sweeteners are equal to each other or to two teaspoons of sugar. Check on the box to verify.

Sugar	Stevia Blends	Aspartame	Saccharin	Acesulfame K	Sucralose
1 packet	1 packet	1 packet	1 packet	1 packet	1 packet

### Bulk Conversions

Sugar	Granulated Artificial Sweeteners	Stevia Blends (Packets)	Stevia Blends (Bulk)	Clear Stevia Liquid	Pure Steviosides
2 tsp.	2 tsp.	1 packet	1/2 tsp.	1/4 tsp.	1/16 tsp.
1/4 cup	1/4 cup	6 packets	3 tsp.	1/2 tsp.	3/8 tsp.
1/3 cup	1/3 cup	8 packets	4 tsp.	3/4 tsp.	1/2 tsp.
1/2 cup	1/2 cup	12 packets	6 tsp.	1 1/4 tsp.	3/4 tsp.
3/4 cup	3/4 cup	18 packets	9 tsp.	1 3/4 tsp.	1 tsp.
1 cup	1 cup	24 packets	12 tsp.	2 1/2 tsp.	1 1/2 tsp.
2 cups	2 cups	48 packets	24 tsp.	5 1/4 tsp.	3 tsp.

**Note:** This chart compares 4 types of packaged stevia (stevia blends in packets and in some other form such as a jar or shaker) with artificial sweeteners that have been bulked up to equal sugar volume for volume.

**Note 2:** To avoid a bitter taste: Although stevia sweetening strengths vary from one brand to another, when you use a brand high in steviosides, you can achieve a sweeter taste without bitterness. This chart is based on using an extract with over 90% steviosides and a minimum of 30% rebaudioside A. Consequently, when using a pure stevioside with less than the stated requirements, reduce the amount of stevia listed on the chart above by about 30% - the final product will not be as sweet, but you'll avoid the bitter taste.

The chart above and Stevia™ info is provided courtesy of SteviaSpart.com.

Rather than consuming any artificial sweetener, it's always better to just use natural sugar and/or Stevia™. Stevia™ is an ideal way to minimize the use of sugar by increasing the sweetness of recipes without increasing your sugar intake. If you still want to use artificial sweeteners, here is some important information that might just change your mind.

Aspartame:

Methanol (and other ingredients ending in "nol") = wood alcohol – very dangerous poison to the human body (The main ingredient of Aspartame).

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### **The Professor's NEWSFLASH!**

After drinking a typical can of soft drink containing aspartame, you could be consuming almost twice the Environmental Protection Agency's daily limit for methanol.

Source: Your Body Knows Best, Ann Louise Gittleman, M.S., Pocket Books, New York, 1996, page 41.

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The lists of reported negative effects from consumption of aspartame are too many and too long to include here. A good source for this information currently is: [holisticmed.com/aspartame/suffer.faq](http://holisticmed.com/aspartame/suffer.faq). "Reported Aspartame Toxicity Effects."

Areas reported to be effected by Aspartame consumption:

- Eye
- Ear
- Neurological
- Psychologic-Psychiatric
- Chest
- Gastrointestinal
- Skin and Allergies
- Endocrine and Metabolic
- And more...

Reports in scientific literature of aspartame-caused toxicity reactions: Blumenthal (1997), Drake (1986), Johns (1986), Lipton (1989), McCauliffe (1991), Novick (1985), Watts (1991), Walton (1986, 1988), and Wurtman (1985).

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### **The Professor's NEWSFLASH!**

Aspartame + MSG = Brain damage in children = Behavior disorders = Criminal behavior = Perceived control necessity = Totalitarian surveillance and control.

Source: A study by Dr. John Olney, professor of neuropathology and psychiatry, Washington School of Medicine, St. Louis, Missouri.

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Sugar alcohol (also known as polyols) comes from fruit. They are used as sweeteners and bulking agents in processed foods. They provide 1-2 to 1/3 less calories than sugar. These can cause loose stools if eaten in excess.

Sugar Alcohols:

Mannitol Sorbitol Xylitol Lactitol Isomalt  
Maltitol Hydrogenated Starch Hydrolysates (HSH)

Negative effects of sugar alcohol consumption (in large amounts):

Bloating  
Diarrhea  
Weight gain  
Can raise blood sugar

Reference: Yale-New Haven Hospital, 20 York St., New Haven CT 06510-3202, 1999-2002.

Sucralose:

Sucralose is produced by chlorinating sugar (sucrose) in a lab. This involves chemically changing the structure of the sugar molecules by substituting three chlorine atoms for three hydroxyl groups.

Possible negative effects of Sucralose (results from controlled studies on rats):

Shrunken thymus glands (up to 40% shrinkage)  
Enlarged liver and kidneys.  
Atrophy of lymph follicles in the spleen and thymus  
Increased cecal weight  
Reduced growth rate  
Decreased red blood cell count  
Hyperplasia of the pelvis  
Extension of the pregnancy period  
Aborted pregnancy  
Decreased fetal body weights and placental weights  
Diarrhea

The manufacturers of Sucralose have to admit that real sugar is safer for the body. They state: "No artificial sweetener made in the laboratory is going to be neither natural to the body nor safer than unprocessed sugar."

According to research on the hydrolysis of sugars, just the process of inserting chlorine into the sugar molecule (hydrolysis means breaking it into smaller molecules) ultimately allows these chemicals to penetrate the intestinal wall. Reference: Hydrolysis of sugars: the hydrolysis of sugar polymers by acid or enzymes converts.

Here is the actual process for producing sucralose: According to the International Patent A23L001-236 and PEP Review #90-1-4 (July 1991), sucralose is synthesized by this five-step process:

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1. sucrose is tritylated with trityl chloride in the presence of dimethylformamide and 4-methylmorpholine and the tritylated sucrose is then acetylated with acetic anhydride,
2. the resulting TRISPA (6,1',6'-tri-O-trityl-penta-O-acetylsucrose) is chlorinated with hydrogen chloride in the presence of toluene,
3. the resulting 4-PAS (sucrose 2,3,4,3',4'-pentaacetate) is heated in the presence of methyl isobutyl ketone and acetic acid,
4. the resulting 6-PAS (sucrose 2,3,6,3',4'-pentaacetate) is chlorinated with thionyl chloride in the presence of toluene and benzyltriethylammoniumchloride, and
5. the resulting TOSPA (sucralose pentaacetate) is treated with methanol (wood alcohol, a poison) in the presence of sodium methoxide to produce sucralose.

Reference: The Chemical Abstracts Service Registry number for sucralose: 56038-13-2.

Splenda's chemical format: 1,6-dichloro-1, 6-dideoxy-BETA-D-fructofuranosyl-4-chloro-4-deoxy-alpha-D-galactopyranoside.(4) - ...and they say it's a perfectly benign sugar molecule.

More hidden chemicals in Splenda™: • acetone • acetic acid • acetyl alcohol • acetic anhydride • ammonium chloride • benzene • chlorinated sulfates • ethyl alcohol • isobutyl ketones • formaldehyde • hydrogen chloride • lithium chloride • methanol • sodium methoxide • sulfonyl chloride • trityl chloride • toluene • thionyl chloride

Toxicologist Judith Bellin reviewed studies on rats starved under experimental conditions, and concluded that their growth rate was reduced by as much as a third without the thymus losing a significant amount of weight (less than seven percent). The changes were much more obvious in rats fed sucralose. While the animals' growth rate was reduced by between seven and twenty percent, their thymus glands shrank by as much as forty percent.<sup>1</sup>

The absorbed levels of sucralose were found in laboratory studies to concentrate in the liver, kidney, and gastrointestinal tract of laboratory animals.

Research animals fed sucralose exhibited the following symptoms:

- Unexplained death
- Shrunken thymus glands (up to forty percent shrinkage)
- Enlarged liver and kidneys
- Atrophy of lymph follicles in the spleen and thymus
- Reduced growth rate
- Decreased white blood cell count
- Hyperplasia of the pelvis
- Extension of the pregnancy period
- Aborted pregnancy

- Decreased fetal body weight and placental weights
- Chronic diarrhea
- Maternal gastrointestinal disturbances

Nature had provided us with a wonderful sweetener that can be used alone or with a little sugar to satisfy your sweet tooth. Stevia™ is steadily growing in popularity because of its safety of use and other health benefits. I hope you will give it a try.

For free recipes using Stevia™ and other great hints, please visit: [SteviaSmart.com](http://SteviaSmart.com).

If you have any questions or comments about this month's newsletter please e-mail the professor at: [prof-nutrition@sbcglobal.net](mailto:prof-nutrition@sbcglobal.net)