Sweeteners
Nutritive and Non-Nutritive

Nutritive Sweeteners

Sugar (sucrose) Table sugar
- The most important sugar in plants; made up of glucose and fructose.
- Generally extracted from sugar cane or sugar beets and then purified and crystallized.
- Contains 4 calories/gram of food.
- 1 teaspoon = 16 calories.
- 12 oz. regular soft drink contains 9-12 teaspoons of sugar.
- Used as a sweetener in baked products. Important to the structure of many foods including biscuits and cookies, candy canes, ice cream and sorbets. Also has a role in preservation of foods such as jam.

Fructose
- Also known as levulose and fruit sugar.
- The sweetest naturally occurring sugar.
- Found in fruit and honey.

Glucose
- Found in nearly all plant foods.
- Less sweet than sucrose.
- Basic building block of carbohydrates.
- Also known as dextrose and blood sugar.
- The body converts other sugars and carbohydrates to glucose for energy production.

Raw Sugar
- Known as turbinado sugar. Similar in appearance to brown sugar, but paler. In general the two can be exchanged freely in recipes.
- Natural sugar that has been washed to remove impurities.
- Less refined than table sugar.
- Same calories as sucrose.

Lactose
- Known as milk sugar.
- Least sweet of all the natural sugars.
- Used in commercial baby formulas and baked products.
- Some people are lactose intolerant (unable to digest lactose).

Honey
- Mixture of sugars formed from nectar by an enzyme, invertase, found in the body of bees.
- Honey equals fructose and glucose, the same two sugars as in sucrose.
- Is more concentrated than table sugar.
- Not recommended for infants less than 1 year of age.
Corn Syrup
- Syrup made from cornstarch and composed mainly of glucose. A series of enzymatic reactions is used to convert the corn starch to corn syrup.
- Not as sweet as sucrose. Often used in conjunction with high intensity sweeteners.
- Major use is as a thickener in commercially prepared food. It also has moisture retaining properties which help keep food moist and maintain freshness.
- Inhibits crystallization in cooking and freezer jam.

High Fructose Corn Syrup
- High fructose corn syrup is modified corn syrup. Enzymes are used to convert some of the glucose into fructose.
- The resulting syrup is sweeter and more soluble.
- It is used in soft drinks and fruit drinks as the main nutritive sweetener.
- Added to many prepared foods as the sweetener.

Maple Syrup
- The sap is collected from the spring flow of mature sugar maples.
- Sugar is produced by boiling off the liquid from the maple sap.
- Maple sugar is two times sweeter than table sugar.

Other Sweeteners
Sugar Alcohols (Sorbitol, Mannitol, Xylitol, Isomalt, Lactitol, etc.)
- Less sweet than table sugar and about half the calories.
- Some contain carbohydrates and supply calories.
- Their flavor is like table sugar, and they can be used to mask the unpleasant after taste of some high intensity artificial sweeteners.
- Used in diabetic foods, sugar-free hard candy or chewing gum.
- Should be used in moderation; may cause diarrhea, gas or bloating.

Non-Nutritive Sweeteners
AcesulfameK (acesulfame potassium)
Brand names are Sweet One® and Sunett®, Swiss Sweet®.
- Food and Drug Administration (FDA) approved 1988.
- Used as table top sweetener.
- About 200 times sweeter than table sugar.
- Heat stable and can be used in baking.
- Used in sugar-free dry base beverage mixes, puddings and desserts, chewing gun and dairy products.
- Recipe and information www.sweetone.com; 800-544-8610.

Aspartame
Brand names are Equal® and Nutrasweet®.
- FDA approved 1981.
- Approximately 180 times sweeter than table sugar.
- Found in a variety of food products.
- Breaks down under heat, so not a good choice for baking or preserving. Add to food after cooking and cooling.
- Recipe and information www.equal.com; 800-234-5859.
• People with PKU—a rare genetic condition, should not consume aspartame.
• Questions raised about health effects of excess consumption.

Neotame
Manufactured by the Nutrasweet company, but labeled as Neotame®.
• 7,000 times sweeter than sugar.
• FDA approved in July 2002.
• Used as a table top sweetener and in frozen desserts, chewing gum, candy, baked goods, cereals, and beverages.
• Heat stable, can be used in baking and preserving.
• Recipe and information www.neotame.com; 800-323-5321.

Saccharin
Brand names Sweet n’Low®, Sugar Twin®, Necta Sweet®.
• FDA approved in 1958.
• 300 times sweeter than table sugar.
• Used to sweeten hot or cold foods. Can be used in baking and preservation.
• Removed from list of potential carcinogens in 2000.
• Pregnant and lactating women should limit use.
• Recipe and information www.sweetnlow.com; 800-221-1763.

Sucralose
Brand name Splenda®.
• 600 times sweeter than table sugar.
• FDA approved in 1999.
• Only non-caloric sweetener made from real sugar.
• Formulated by altering the structure of the sugar molecule.
• Does not break down with heat so good for baking and preserving foods.
• Recipe and information www.sucralose.com; 800-777-5363.

Not yet approved sweeteners

Stevia (also known as stevioside)
• Extremely sweet non-caloric herb from Paraguay.
• Leaves and green herbal powder 10-15 times sweeter than table sugar; white powder stevioside 200-300 times sweeter than table sugar.
• FDA labels stevia as an unsafe food additive. Can legally be marketed as a dietary supplement under legislation enacted in 1994.
• Available in natural food stores in powdered extract or liquid form.
• Sometimes leaves a slight bitter after taste.
• OSU Extension advises against use in foods until approved by FDA.


Note: Use of brand names should not be considered endorsement of these products.