Reduced-Calorie Sweeteners: Polyols



The following sweeteners are approved for commercial use in the United States. These "polyols", sugar alcohols, provide calories but less than the 4 calories per gram provided by sucrose. Thus, they are referred to as "reduced calorie," and the FDA permits the use of these lower calorie determinations for labeling purposes.

Hydrogenated Starch Hydrolysates (HSH)

A mix of sorbitol, malitol and hydrogenated oligo-saccharides. Depending on the mix, the sweetness varies from 25-50% of that of sucrose. Suitable for a variety of confections. FDA permits use of 3 calories per gram.

Isomalt

45-65% as sweet as sucrose. Can be used in candies, gums, ice cream, jams and jellies, fillings and frostings, beverages, baked products. FDA allows use of 2 calories per gram.

Lactitol

Provides bulk and texture of sucrose with half the calories. 30% to 40% as sweet as sucrose. Can be used in baked goods, gum, confections, frostings, frozen dairy desserts and mixes, jams, jellies. FDA allows use of 2 calories per gram.

Maltitol

About 0.9 times as sweet as sucrose with similar sweetness and body. Particularly good for use in candy coatings. FDA allows the caloric value of 3.0 per gram.

Mannitol

About 0.7 times as sweet as sucrose. Used as a bulking agent in powdered foods and to "dust" chewing gum. Consuming more than 20 grams (0.7 oz.) a day may have a laxative effect. FDA permits the value of 1.6 calories per gram.

Sorbitol

About 0.5-0.7 times as sweet as sucrose. Used in candies and gums. Excess consumption, more than 50-80 grams (1.75 to just under 3 oz.) a day may have a laxative effect. FDA allows the value of 2.6 calories per gram.

Xylitol

Derived from fruits and vegetables, other plants and fibrous vegetation. Same sweetness and bulk as sucrose. FDA allows the value of 2.4 calories per gram.

Source: Calorie Control Commentary. 17(2) Fall 1995.

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