



APPLICATIONS OVERVIEW
NutraSweet® in Confections

USE OF NUTRASWEET® IN CONFECTIONS

NutraSweet® brand sweetener offers many advantages for confectioners wanting to manufacture reduced calorie, sugar-free, no sugar added, and light products that meet the demand of today's health-conscious consumer[§]. NutraSweet provides the desired sweetness profile of sucrose, is non-cariogenic, and enhances certain flavors. In addition, it has established consumer acceptability. The NutraSweet logo is well-recognized and trusted by consumers. When displayed, the logo unit adds value to products because it is a recognized sign of great, sweet taste.

NutraSweet® brand sweetener, generically known as aspartame, is a high-potency sweetener manufactured and marketed by The NutraSweet Company. Aspartame is the methyl ester of the dipeptide L-aspartyl-L-phenylalanine. Its components are identical to those that occur naturally in many common foods.

NutraSweet® brand sweetener consistently meets or exceeds Food Chemical Codex (current edition) and USP/NF Standards for aspartame. The foundation for the high quality of NutraSweet lies in the many years of experience that The NutraSweet Company has in aspartame production. With this experience comes technical expertise and ample production capacity to ensure customers a steady supply of high-quality product at competitive prices. In addition, ongoing efforts of the R&D staff focus on providing product formulation guidance to food and beverage manufacturers.

Sugar and corn syrups are the primary ingredients in nearly all confections. Their removal from the food system requires the use of ingredients to replace their bulk. Bulk fillers currently available for use in confections include sorbitol, mannitol, polydextrose, maltitol, maltitol syrup (hydrogenated starch hydrolysate), xylitol, isomalt, and lactitol. Generally, they are lower in sweetness than their sugar-containing counterparts and offer some caloric savings. The lowered flavor impact and decreased sweetness of hard and soft candies made with these ingredients affect consumer appeal. The addition of NutraSweet improves the sweetness and flavor profile to produce a more acceptable sugar-free candy (see Figure 1) without any of the off-flavors associated with some other intense sweeteners.

[§] It is best to consult with a regulatory or legal consultant to determine the appropriate claims and final labeling

requirements for your products.

Sweetness is key to successful flavor in chocolate. Chocolate depends on precise standards for ingredients and exact process conditions to achieve a product which consistently meets consumer expectations. NutraSweet® brand sweetener provides the appropriate sweetness levels to chocolate with no sugar added. Calorie reduction can be achieved through the use of bulking agents and reduced-calorie fats. The addition of NutraSweet provides sweetness needed to optimize caloric reduction in chocolate compound coatings.

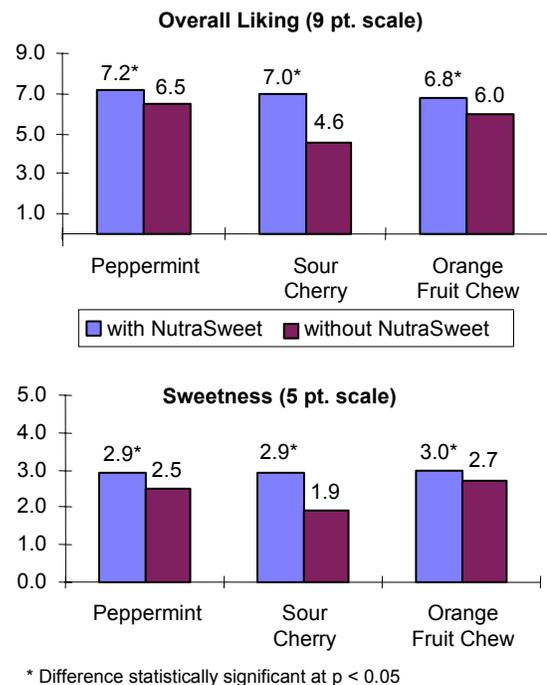


FIGURE 1: SENSORY COMPARISON OF MALTITOL SYRUP CANDIES MADE WITH AND WITHOUT NUTRASWEET®

WORKING WITH NUTRASWEET® IN CONFECTIONS

NutraSweet® brand sweetener is easily incorporated into normal confectionery manufacturing procedures and works well in both batch and continuous processes. It is available in several forms: powder, granular, liquid, and blended with other commonly used ingredients. NutraSweet is usually added along with colors, flavors, and other ingredients after

cooking. In fully continuous systems, NutraSweet can be added at 260° to 280°F (127° to 138°C). Technical bulletins with processing and formulation guidelines on a variety of confections are available through The NutraSweet Company's website at www.nutrasweet.com.

As a dry ingredient, NutraSweet® brand sweetener has excellent stability when stored at low relative humidity. NutraSweet has a long shelf-life, approximately five years, when its container is kept tightly closed and is stored in a cool, dry area. Scientists at The NutraSweet Company have conducted extensive stability studies on candy and cough drops made with NutraSweet® brand sweetener. The data established on caramel, nougat, and gelled candies made with NutraSweet show an acceptable shelf-life of at least six months, which is suitable for normal turnover. In addition, NutraSweet has been shown to be very stable in sorbitol and maltitol syrup candies and will more than meet shelf-life requirements in these candies. A twelve-month study on cough drops showed no perceptible loss of NutraSweet (less than 5% loss).

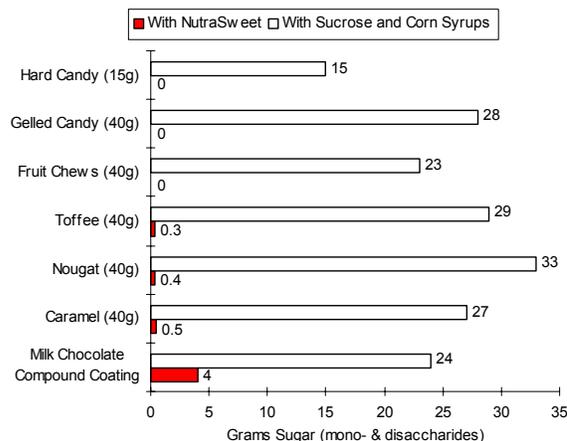
NUTRITION/HEALTH ASPECTS

Nutritionally, NutraSweet® brand sweetener offers confectioners the opportunity to formulate sweet-tasting reduced calorie, sugar-free, no sugar added, and light products. Final product formulations will determine whether a confection made with NutraSweet qualifies for sugar-free, no sugar added, reduced calorie, or light labeling claims. (See Figure 2.) The small amount of mono- and disaccharides present in other ingredients (e.g. milk) may prevent a "sugar-free" claim on individual products. It is best to consult with a regulatory or legal consultant to determine the appropriate claims and final labeling requirements for your product.

In confections, NutraSweet contributes virtually no calories because its actual use level is small. NutraSweet has also been shown to be non-cariogenic in a number of scientific studies. When combined with the appropriate bulking agent, confections made with NutraSweet also would be non-cariogenic.

Individuals with diabetes or with weight control problems generally find the use of products made with NutraSweet a useful adjunct to their basic diet. Research has shown that aspartame does not interfere with blood glucose control in diabetics, making it an acceptable sweetener. However, the total caloric contribution of products containing NutraSweet must be considered a part of the total daily diet. Manufacturers concerned with conveying comprehensive information for those on special diets can include diet exchange guidance on the package label.

FIGURE 2: SUGAR COMPARISON OF CONFECTIONS MADE WITH NUTRASWEET® BRAND SWEETENER AND WITH SUCROSE AND CORN SYRUPS
MORE INFORMATION IS AVAILABLE TO YOU



This bulletin is intended to be general in nature. We are eager to work with you in the development of new products and processes. For additional information about our products, please call o **1-800-323-5321 (USA/Canada)**

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The information contained herein is, to our best knowledge, true and accurate, but all recommendations or suggestions are made without guarantee, since we can neither anticipate nor control the different conditions under which this information and our products are used.

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