



NutraSweet® in Frozen Desserts

ADVANTAGES OF NUTRASWEET® IN FROZEN DESSERTS

NutraSweet® brand sweetener is the perfect choice for use in no sugar added, sugar-free, and light frozen desserts and novelties.[§] The use of NutraSweet in frozen yogurts, ice cream, and novelties can provide today's consumer with a great-tasting alternative to traditional products. The NutraSweet logo, used only on products sweetened with 100% NutraSweet® brand sweetener, 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.

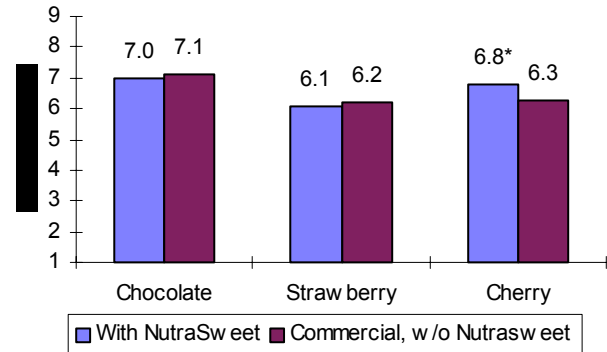
NutraSweet® brand sweetener consistently meets or exceeds Food Chemical Codex (current edition) and USP/NF Standards for aspartame. The foundation for the high quality of NutraSweet lies in the many years of experience that The NutraSweet Company has in aspartame production. With this experience come technical expertise and ample production capacity to ensure customers a steady supply of high-quality product at competitive prices. Additionally, ongoing efforts of our tech service and R&D staff focus on providing product formulations and guidance. Ask your sales or technical service representative for information on our family of ingredients designed for use in frozen desserts.

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

Traditionally, sucrose and other carbohydrate sweeteners have been used to provide sweetness, freezing and melting characteristics, and texture in frozen desserts. These sweeteners also add a significant source of energy or calories to frozen desserts. NutraSweet adds essentially no calories at typical use levels of under 0.1%. Some frozen desserts formulated with NutraSweet may require the use of bulking agents which range from 1-4 calories per gram.

Numerous sensory studies have shown that NutraSweet® brand sweetener has a flavor and taste profile that is comparable to sugar. In addition, NutraSweet can extend and complement flavors. In a study on frozen yogurts, prototype products with NutraSweet were found to be comparable in overall liking to commercially available sugar-sweetened products. (See Figure 1.)

FIGURE 1. SENSORY COMPARISON OF FROZEN YOGURTS



* Difference statistically significant at $p \leq 0.10$

WORKING WITH NUTRASWEET® IN FROZEN DESSERTS

NutraSweet® brand sweetener can be used in standard manufacturing processes. It is available in several forms: powder, granular, liquid, and blended with other commonly used food ingredients. The powder, granular, and liquid forms are all compatible with frozen dessert manufacturing processes. NutraSweet® Granular™ or NutraSweet® Custom Granular 60™ may be especially useful when added to the unpasteurized mix. NutraSweet Custom Liquid 50™ or NutraSweet Custom Granular

100™ is easily added to finished ice cream mixes at the flavor tank.

The actual usage levels of NutraSweet depend upon the desired level of sweetness in the finished product. Typical use levels are 0.05% to 0.10%. In formulation development, as total solids are reduced through the removal of sugar, it is necessary to use appropriate bulking agents to replace solids and functionality.

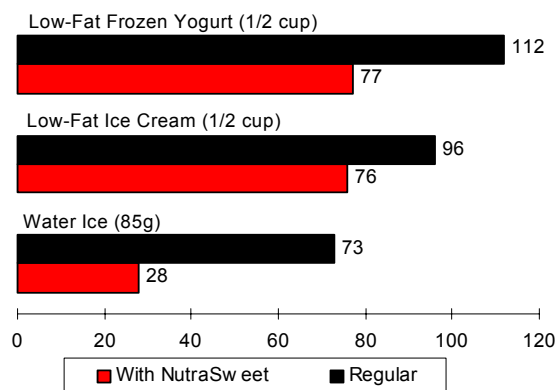
Frozen dessert mixes containing NutraSweet can be pasteurized under High Temperature Short Time (HTST) conditions. More than 90% of the NutraSweet will remain in the mix after thermal processing at 175°F (80°C) for 25 seconds. If vat pasteurization is used, the initial level of NutraSweet in the mix can be optimized to achieve desired sweetness in final product.

As a dry ingredient, the stability of NutraSweet® brand sweetener is excellent. In frozen desserts, studies have shown that minimal aspartame was lost when held at 0°F (-18°C) for six months. A finished product with NutraSweet provides a shelf-life equivalent to that of a traditional frozen dessert.

NUTRITION/HEALTH ASPECTS

Various nutrient content claims are possible when formulating frozen desserts and novelties with NutraSweet. Depending on product formulation, frozen desserts with NutraSweet may qualify for sugar-free, no sugar added, or light labeling claims. Calorie reductions can be achieved in some products made with NutraSweet. (See Figure 2.) A sugar-free claim is possible in products like water ices. It is best to consult with a regulatory or legal consultant to determine the appropriate claims and final labeling requirements for your product.

FIGURE 2. CALORIC COMPARISON OF FROZEN DESSERTS PER SERVING



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 condition 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 label.

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 **1-800-323-5321 (USA/Canada)**



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