



APPLICATIONS OVERVIEW

NutraSweet® in Carbonated Soft Drinks

ADVANTAGES OF NUTRASWEET® IN CARBONATED SOFT DRINKS

NutraSweet® brand sweetener has proven to be the sweetener of choice for diet carbonated soft drinks[§] since its introduction in the early 1980s. NutraSweet offers many advantages, including cost savings in some applications, to manufacturers of carbonated soft drinks. Products that use NutraSweet as the sole sweetening ingredient can take advantage of the proven consumer power of the NutraSweet logo, which 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 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. In addition, ongoing efforts of the R&D staff focus on providing product formulation guidance to food and beverage manufacturers.

Traditionally, sucrose and high fructose corn syrup are the primary sweeteners used in carbonated soft drinks. When formulating beverages without carbohydrate-containing sweeteners, it is important to use a sweetener that provides a clean, sweet taste and works well with other ingredients to produce a great-tasting drink.

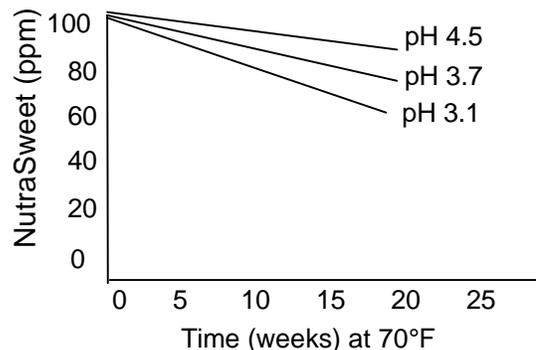
In numerous sensory studies, NutraSweet® brand sweetener has been shown to have a flavor and taste profile that is similar to sugar. NutraSweet can also extend and complement flavors.

WORKING WITH NUTRASWEET® IN CARBONATED SOFT DRINKS

NutraSweet can be used in standard manufacturing processes. It is available in several forms: powder, granular, liquid, and blended with other commonly used food ingredients. NutraSweet® Granular™ has a particle size of 20 to 80 mesh. Traditionally, it has been used in carbonated soft drinks manufacture, as it provides good dispersability in the liquid syrup.

Generally, NutraSweet dissolves more quickly in acidic conditions and at temperatures approaching 70°F (21°C).

FIGURE 1: STABILITY OF NUTRASWEET® IN CARBONATED SOFT DRINKS



As a dry ingredient, the stability of NutraSweet is excellent. When used in carbonated soft drinks, temperature, pH, and storage time all affect its stability. (See Figure 1.) With proper handling and storage, NutraSweet provides sweetness over the normal shelf-life for carbonated soft drinks.

NutraSweet® brand sweetener is approximately 180 times as sweet as sugar in carbonated soft drinks. A use level of 450 to 650 ppm (0.045 to 0.065%) in the finished beverage is recommended, depending on the sweetness level desired. Acidity also should be adjusted to provide optimal sweetness, tartness, and shelf-life. Acceptable carbonated soft drinks can be

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

formulated at a pH from 3.2 to 4.5 to provide maximum shelf-life.

NUTRITION/HEALTH ASPECTS

Non-juice carbonated soft drinks sweetened 100% with NutraSweet can be calorie-free and sugar-free. (See Figure 2.) Depending on product formulation, carbonated soft drinks with NutraSweet may qualify for sugar-free, no sugar added, and light labeling claims. It is best to consult with a regulatory or legal consultant to determine the appropriate claims and final labeling requirements for your product.

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.

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)**

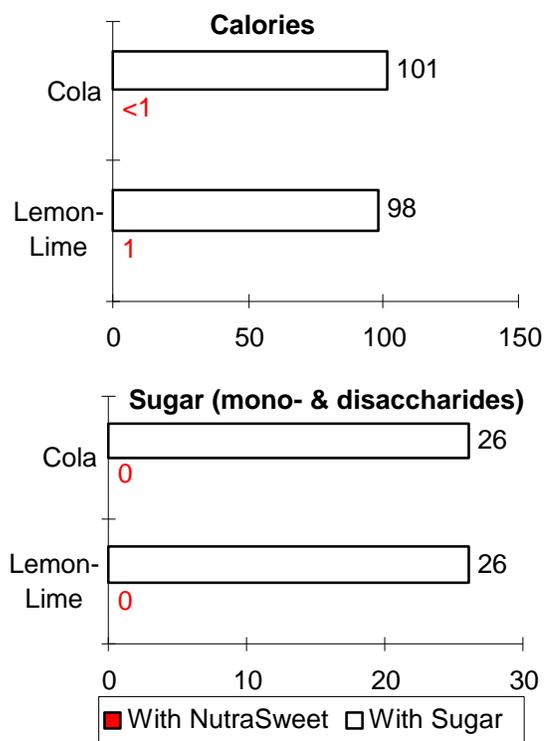


The NutraSweet Company

P.O. Box 2986
Chicago, IL 60654

Visit our website at
www.nutrasweet.com

FIGURE 2: NUTRITIONAL COMPARISONS OF CARBONATED SOFT DRINKS PER 8 FL. OZ.



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. Each manufacturer should evaluate the nutrient content of their final products to determine compliance with FDA food labeling regulations when making nutrient claims. Further, The NutraSweet Company disclaims all liability with regard to its customers' infringement of third party patents. We recommend that our customers apply for licenses under any relevant patents. No statement herein or by our employees shall be construed to imply the nonexistence of relevant patents nor as a recommendation or inducement to infringe said patents. It is our policy, however, to assist our customers and to help in the solution of particular problems that may arise in connection with applications of our products.

NutraSweet® and the NutraSweet symbol are registered trademarks of NutraSweet Property Holdings, Inc. ©2000 NutraSweet Property Holdings, Inc. All Rights Reserved.

Publication date: 02Sep2003
Bulletin no. AG-AO-03-008