



APPLICATIONS OVERVIEW

NutraSweet® in Still/RTD Beverages

ADVANTAGES OF NUTRASWEET® IN STILL/RTD BEVERAGES

NutraSweet® brand sweetener has proven to be the sweetener of choice for diet carbonated soft drinks and many other low calorie, sugar-free beverages[§] since its introduction in the early 1980s. The NutraSweet logo, used only on products sweetened 100% with 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.

Today, "New Age Beverages", alternatives to carbonated soft drinks, are emerging to meet the demands of the health-conscious consumer. This new beverage category includes still/RTD teas, fruit juice drinks, flavored water, and sports drinks, to name a few. Although they are perceived as healthy and more nutritious than carbonated soft drinks, these beverages frequently contain the same amount of calories and carbohydrates as sugar-sweetened carbonated soft drinks. In April 1993 the United States Food and Drug Administration expanded its approval for use of NutraSweet to include use in all still/RTD flavored beverages, providing an opportunity for beverage manufacturers to develop and market New Age Beverages that more closely match the consumer demand for fewer calories and reduced sugar.

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.

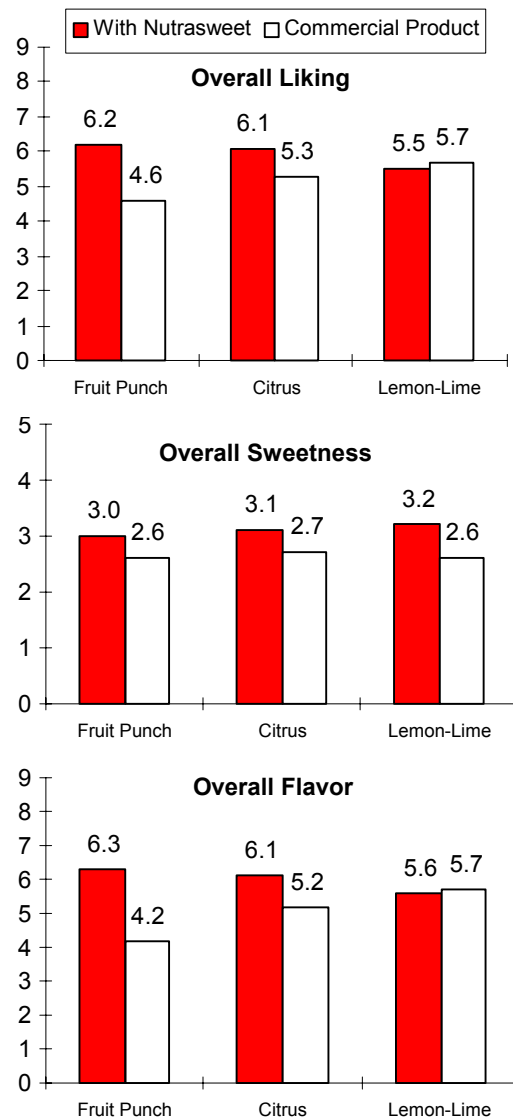
NutraSweet consistently meets or exceeds Food Chemical Codex (current edition) and USP/NF Standards for aspartame. The foundation for the high quality of NutraSweet lies in the many years of experience that The NutraSweet Company has in aspartame production. With this experience come technical expertise and ample capacity to ensure customers a steady supply of high-quality product at competitive prices. 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 still beverages. Besides sweetness, they provide mouth feel and body. 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 comparable to sugar. NutraSweet can also extend and complement flavors, especially citrus. In an acceptance study for sports drinks, those formulated with NutraSweet were at parity or better than a commercial sports drink in overall liking, flavor, and sweetness. (See Figure 1.)

FIGURE 1. SENSORY COMPARISON OF STILL/RTD BEVERAGES



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

WORKING WITH NUTRASWEET® IN STILL/RTD BEVERAGES

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. NutraSweet® Granular™ has consistently worked well in Still/RTD beverages.

When preparing beverages with NutraSweet, pH and temperature are the two most critical factors. Generally, NutraSweet dissolves more quickly in acidic conditions and in temperatures of 50° to 70°F (10° - 21°C). Maximum stability is observed at approximately pH 4.3, regardless of temperature. Typically, still/RTD beverages with NutraSweet can be formulated in the range of pH 3-4.

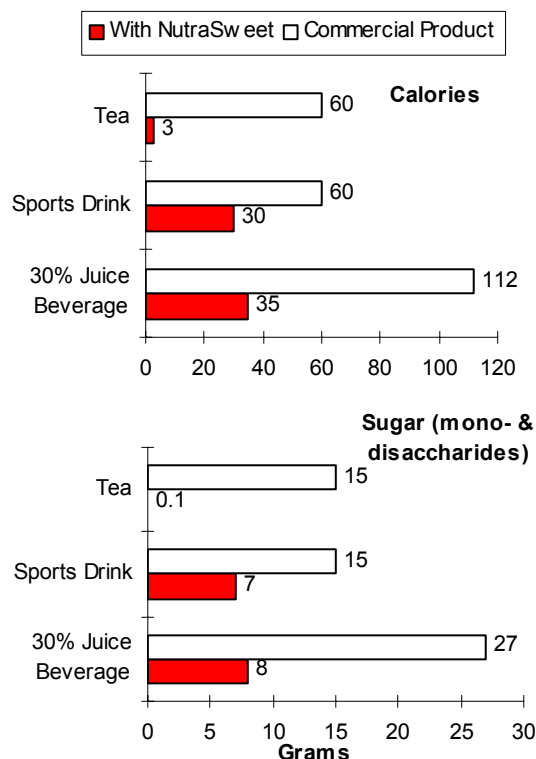
As a dry ingredient, the stability of NutraSweet® brand sweetener is excellent. When used in beverages, pH, temperature, and storage time all affect its stability. Aseptic processes and tunnel, UHT, HTST, and batch pasteurization are all acceptable methods for manufacturing still/RTD beverages with NutraSweet. During processing, 92% to 100% of the NutraSweet remains. Distribution and storage actually exert a greater influence on product stability and acceptability over time. Sensory data indicates that 10% and 30% juice beverages stored at 70°F (21°C) for 16 weeks maintain acceptable ratings. Thus, with proper handling and storage, NutraSweet provides sweetness over the normal shelf-life for beverages (3-6 months).

NUTRITION/HEALTH ASPECTS

Depending on product formulation, beverages with NutraSweet may qualify for sugar-free, no sugar added, and light labeling claims. A caloric reduction of 95-99% is likely in beverages, such as lemon-flavored tea, when sweetened with 100% NutraSweet instead of sugar. In beverages formulated with ingredients that contain mono- and disaccharides, such as sports drinks or fruit juice beverages, a reduction of at least 1/3 of the calories can easily be achieved. (See Figure 2.) It is best to consult with a regulatory or legal consultant to determine the appropriate claims and final labeling requirements for your product.

Products containing NutraSweet provide variety and choice to those with special diet concerns. Studies have shown that NutraSweet does not interfere with the control of blood glucose levels in either insulin-dependent or non-insulin-dependent diabetics. Research also indicates that NutraSweet facilitates weight loss and weight maintenance among obese individuals.

STILL/RTD BEVERAGES PER 8 FL. OZ. SERVING



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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Publication date: 02Sep2003
Bulletin no. AG-AO-03-003

FIGURE 2. NUTRITIONAL COMPARISON OF