

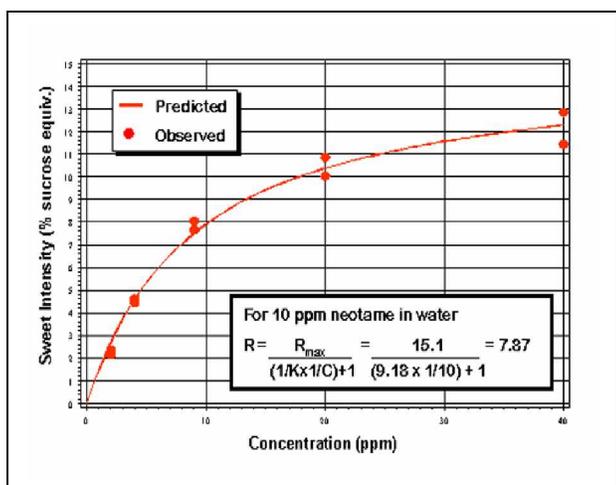
INTRODUCTION

Neotame represents the culmination of more than 20 years of research and development by The NutraSweet Company to identify the next generation of sweeteners. Neotame has been approved in Australia/New Zealand for general use in food and is currently undergoing review by regulatory agencies worldwide including the United States and Europe. Neotame will provide options for product developers and manufacturers, not only as a sweetener but also as a new food ingredient.

Neotame is safe for the general population and contributes no calories. Results of metabolism studies indicate that neotame should not require special labeling for phenylketonuric individuals.

Neotame is 7,000 to 13,000 times sweeter than sucrose. Potency will vary depending upon the amount of sweetness required and the actual application in which it is used (see Figure 1). This unique high potency allows for significantly less total sweetener to be used.

FIGURE 1: CONCENTRATION-RESPONSE CURVE OF NEOTAME IN WATER



(Source: Study #SS3061 on file at The NutraSweet Company)

Neotame can be blended with caloric sweeteners, including sucrose and high fructose corn syrup, as well as with other high-potency sweeteners such as aspartame, acesulfame potassium and saccharin to match the taste of existing regular and diet products. It can also be used to create desirable new tastes and flavors in a variety of food and beverage products.

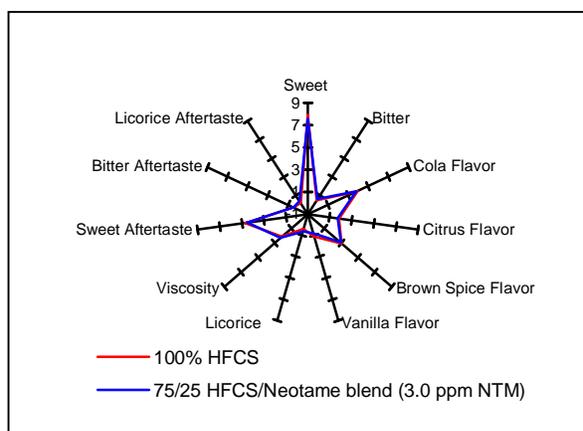
PROPERTIES

Sweetness Profile

Neotame has a clean, sweet taste. Replacing part of the sweetener in traditional or sugar-free beverages with neotame offers potential cost savings as well as appropriate sweetness and flavor.

Research indicates that it is possible to replace 25% of the nutritive or high-potency sweetener with neotame in some beverages. This can be done without any formulation adjustments while maintaining a product with similar sensory attributes (see Figure 2).

FIGURE 2: DESCRIPTIVE TASTE PROFILE OF A NEOTAME:HIGH FRUCTOSE CORN SYRUP BLEND IN A COLA-FLAVORED CARBONATED SOFT DRINK



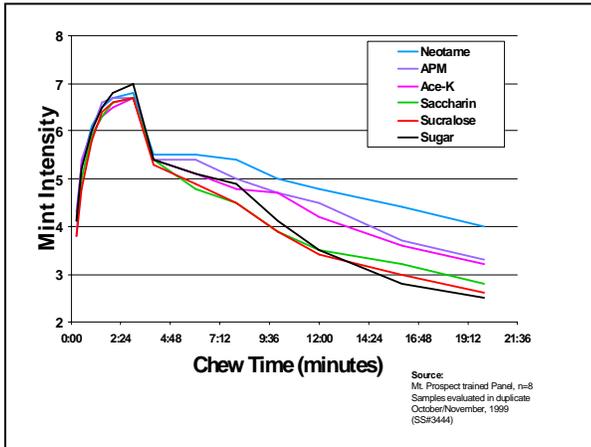
(Source: Study #SS3061 on file at The NutraSweet Company)

An evaluation of the total food system and expected use conditions is essential to establish the amount of neotame needed in specific formulations. We have developed general guidelines to assist in a smooth transition to using neotame.

Flavor Extender and Enhancer

In certain applications and with certain flavor systems, neotame significantly extends and enhances tastes and flavors. For example, after chewing mint-flavored chewing gum for 20 minutes, sensory panelists reported the neotame-sweetened chewing gum to be significantly sweeter and have more mint flavor than samples sweetened with other sweeteners, including sugar (see Figure 3).

FIGURE 3: MINT FLAVOR TEMPORAL PROFILE IN CHEWING GUM AS PERCEIVED WITH VARIOUS SWEETENERS



Use Levels

The low usage requirements for neotame will create an opportunity to deliver great value throughout the supply chain. For example, the sweetness equivalency of two metric tons of sugar can be replaced with as little as 250 grams of neotame. Table 1 illustrates the amount of neotame that would be used in a sugar blending opportunity.

TABLE 1: COMPARATIVE APPROXIMATE USE LEVELS OF NEOTAME, SUGAR, AND SUGAR:NEOTAME BLENDS IN CARBONATED SOFT DRINKS (GRAMS PER 355 ML SERVING)

Neotame (for 100% sweetening at 17 ppm)	Sugar (for 100% sweetening)	75% Sugar:25% Neotame Blend (total sweetness contribution)
0.006 g	35.5 g	26.6 g sugar 0.001 g neotame

Stability

As a dry ingredient, neotame has excellent stability and will function well in finished dry products such as powdered soft drinks and dessert mixes.

In systems where moisture is present, the stability of neotame is usually a function of pH, temperature, and time. When used in batch, tunnel, High Temperature Short Time (HTST) pasteurization and aseptic processes there is very little decrease in neotame concentration in the finished products. Neotame offers versatility for processing options and overall product shelf life. For instance, neotame’s chemical structure makes it an excellent sweetener for both baking and cultured products.

Nutritional and Health Aspects

Neotame safety and suitability for use by all segments of the population has been demonstrated through extensive pre-clinical and clinical safety testing. In fact, more than 100 studies have demonstrated neotame’s safety and functionality.

Using neotame offers the potential for calorie and sugar reduction without changing the characteristic taste profile of the product. If nutritional claims are desired, it is best to check with a regulatory or legal consultant to determine the appropriate claims and final labeling requirements.

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.

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