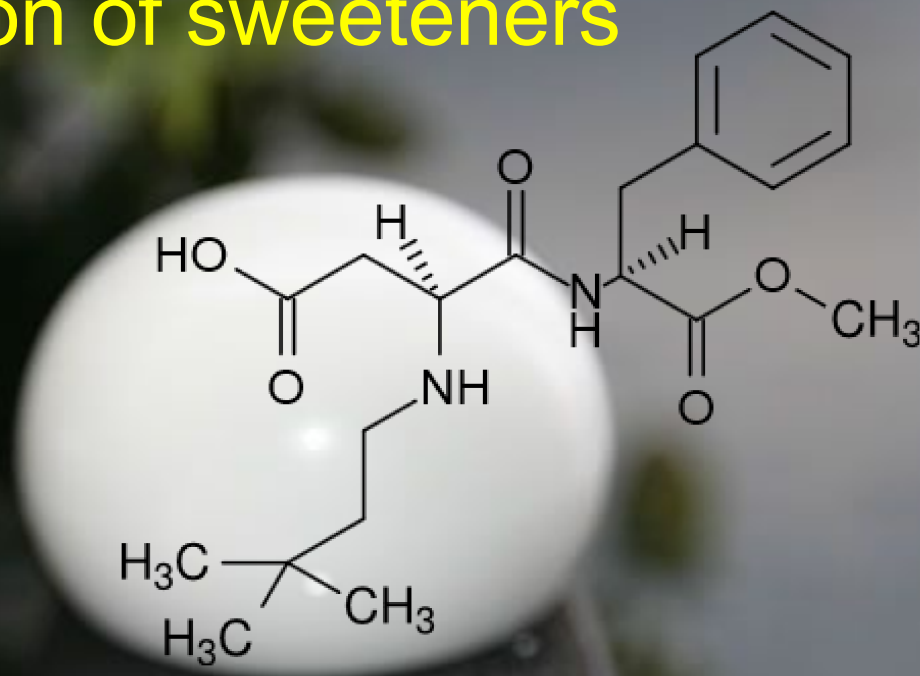


Neotame

- the culmination of sweeteners



WuHan HuaSweet Co., Ltd

Chapter 1 - What's Neotame



- Neotame represents the culmination of high intense sweeteners and identify the next generation of sweeteners. Neotame has been approved in over 20 countries for general use in food and feed. Neotame provides 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.
- It has good stability which is better than Aspartame. In July 2002 neotame was approved by the FDA as a sweetener and flavor modifier used in a variety of food and beverage and feed area.

FDA regulation



- On July 9, 2002, the U.S. Food and Drug Administration (FDA) affirmed neotame's safety and functionality by granting general use approval as a sweetener and flavor enhancer in foods and beverages.
- FDA has a detailed and extensive process for evaluating the safety and functionality of new food additives. This rigorous process included the review of more than 100 scientific studies and provides a high level of confidence in the safety of neotame.

The Characters of Neotame



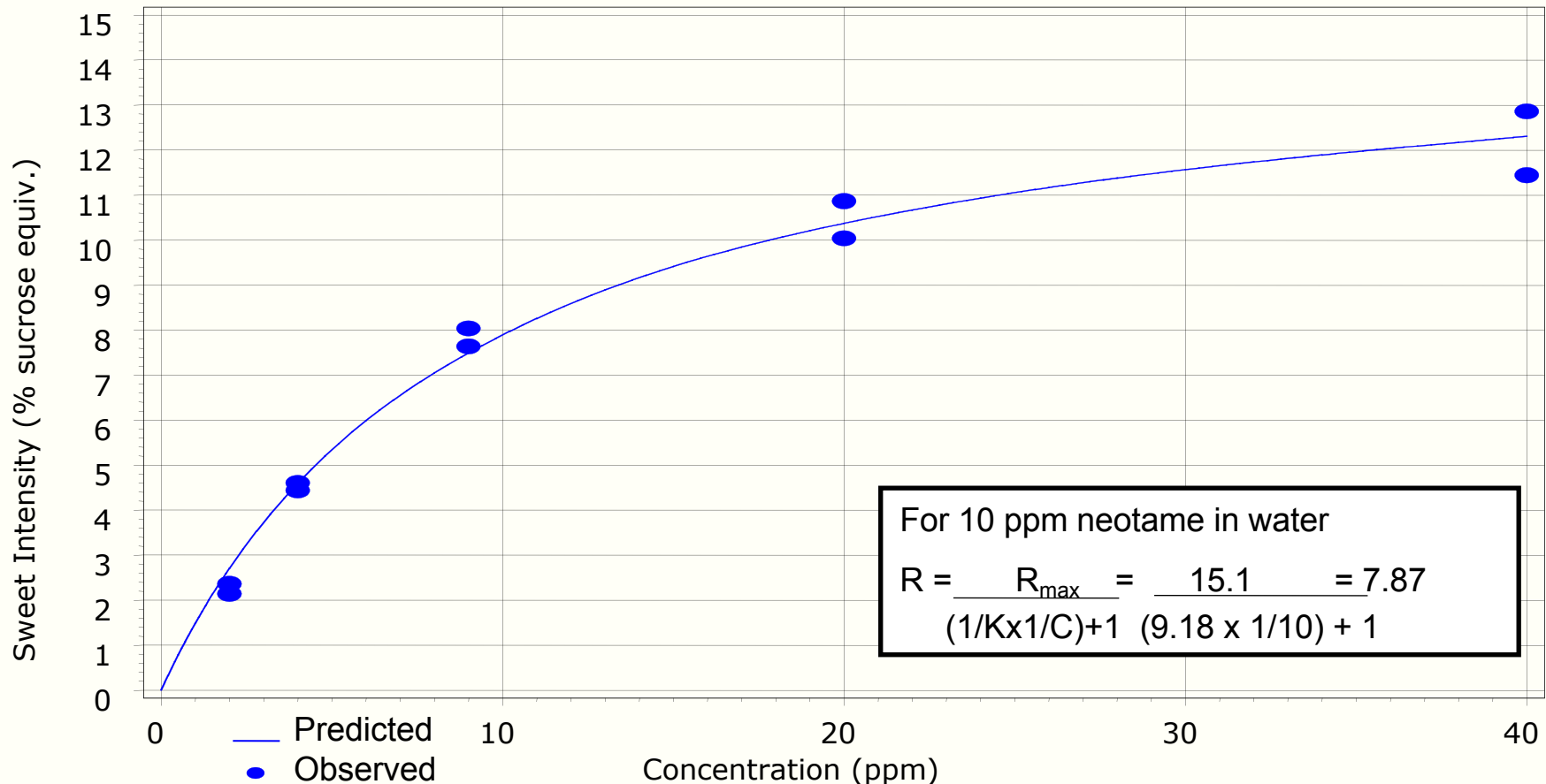
- * Curve of sweetness and concentration
- * Flavor Description
- * Taste character
- * Blend with other sweetener
- * Stability
- * The function of flavor extender and enhancer

The Characters of Neotame

- Curve of sweetness and concentration

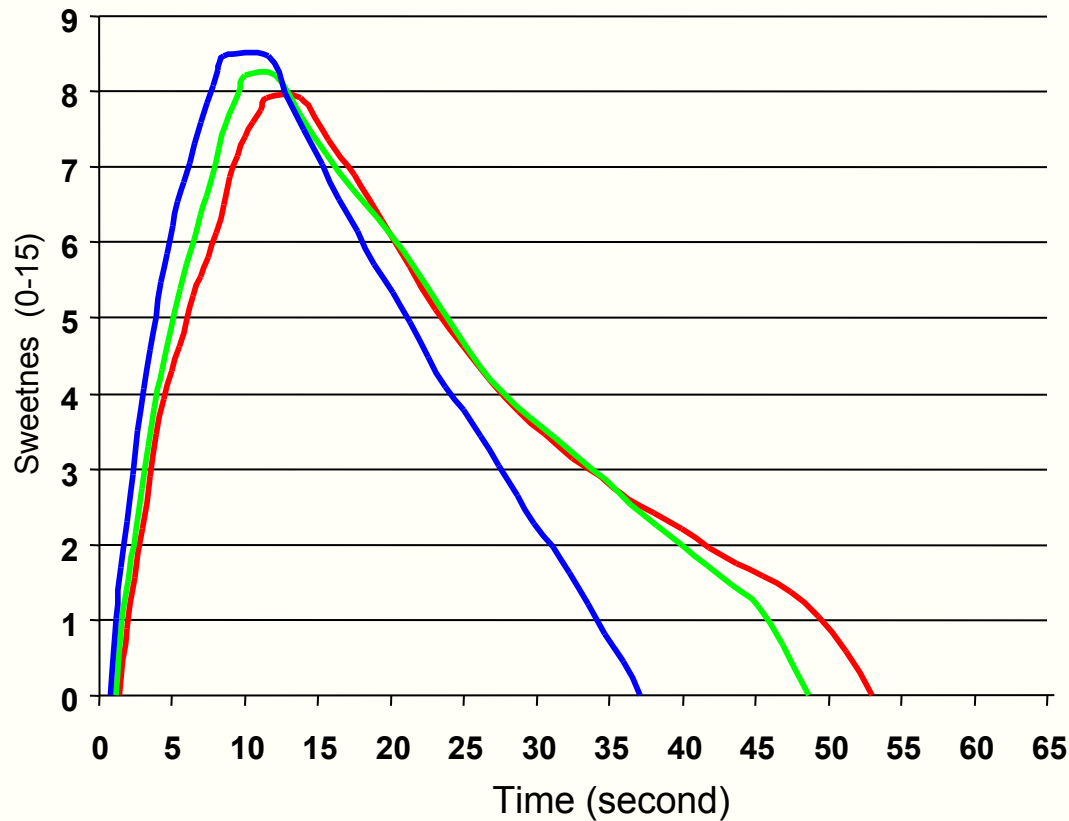


Potency will vary depending upon the amount of sweetness required and the actual application in which it is used (see Figure 1). This unique high potency allows for significantly less total sweetener to be used. This character is the same as other high intense sweeteners. Neotame is 7,000 to 13,000 times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



The Characters of Neotame

- Flavor Description



— 10 ppm Neotame
— 560 ppm Aspartame
— 8% Sucrose

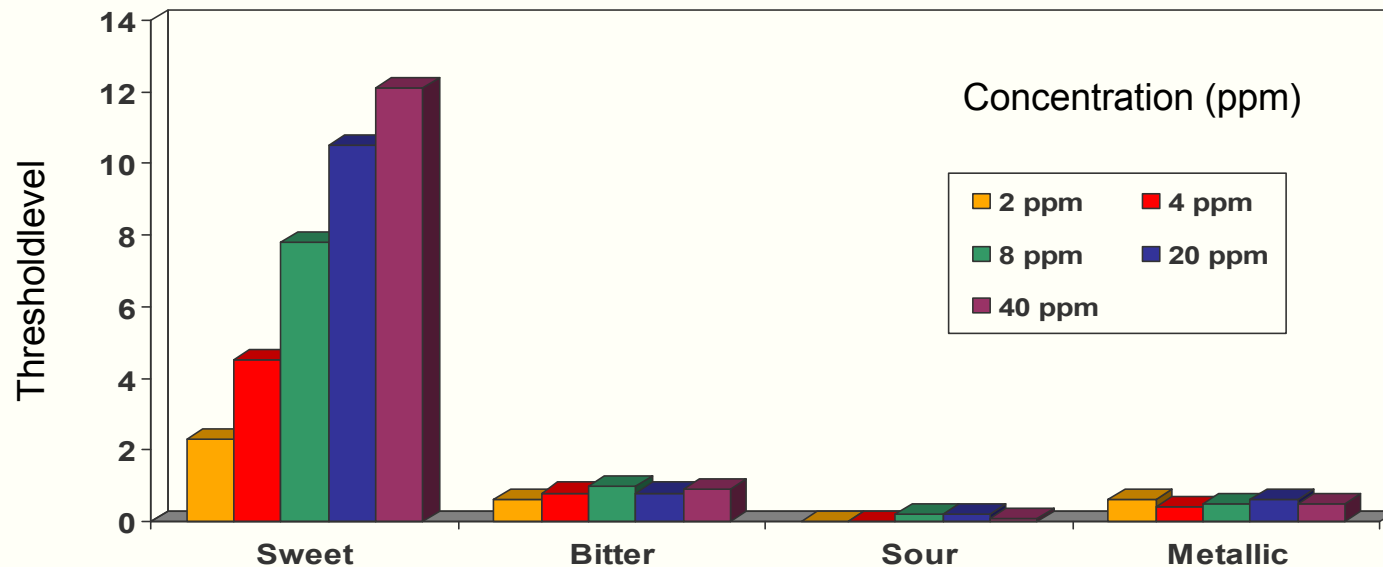
Compared to sucrose and aspartame, Neotame sweetness was felt later than both aspartame and sucrose. But the sweetness extension is much longer. The flavor of Neotame is similar to aspartame.

The Characters of Neotame

- Taste Character



Neotame has clean sweet taste, no bitter taste, neither metallic taste. By increasing concentration, only sweetness increases.



The Characters of Neotame

- Blend with other sweeteners



Neotame is very suitable to use with a blend of other sweeteners.

1. Neotame can replace the nutritive sweeteners and does not add more calories, neither volume. Upon specific application, Neotame can improve or does not significantly change the original characters of the product.

2. Neotame can alternate non-nutritive sweeteners. When used with a blend of AK, saccharin, cyclamate, neotame can improve the taste characteristics, mask the bitter taste, metallic taste and other foreign taste.

It can enhance the flavor of the product.

It can reduce the cost of total sweetness when used with a blend of spartame, sucralose.

The Characters of Neotame

- Blend with other sweeteners



Neotame is very suitable to use with a blend of other sweeteners.

3. With a variety of reducing carbonyl compounds, such as glucose, fructose, high fructose corn syrup, lactose, maltose, etc., used together without generating the Maillard reaction; with a variety of aldehyde-containing flavoring or flavoring substance, such as vanillin, ethyl vanillin, cinnamic aldehyde, acid, citral, etc., used together without the Schiff Alkali reaction.

The Characters of Neotame

- The stability in different pH and temperature



PH	Half-life period		
	25 °C/d	40 °C/d	80 °C/d
2.0	26.11	9.77	14.50
3.0	77.49	22.34	24.09
4.0	156.03	44.19	39.48
4.5	208.25	44.88	39.79
5.0	150.71	37.94	34.18
5.5	112.07	24.28	21.35
6.0	62.3	12.11	11.26
7.0	15.74	2.83	4.13
8.0	4.55	0.72	1.56
9.0	1.54	0.24	0.63

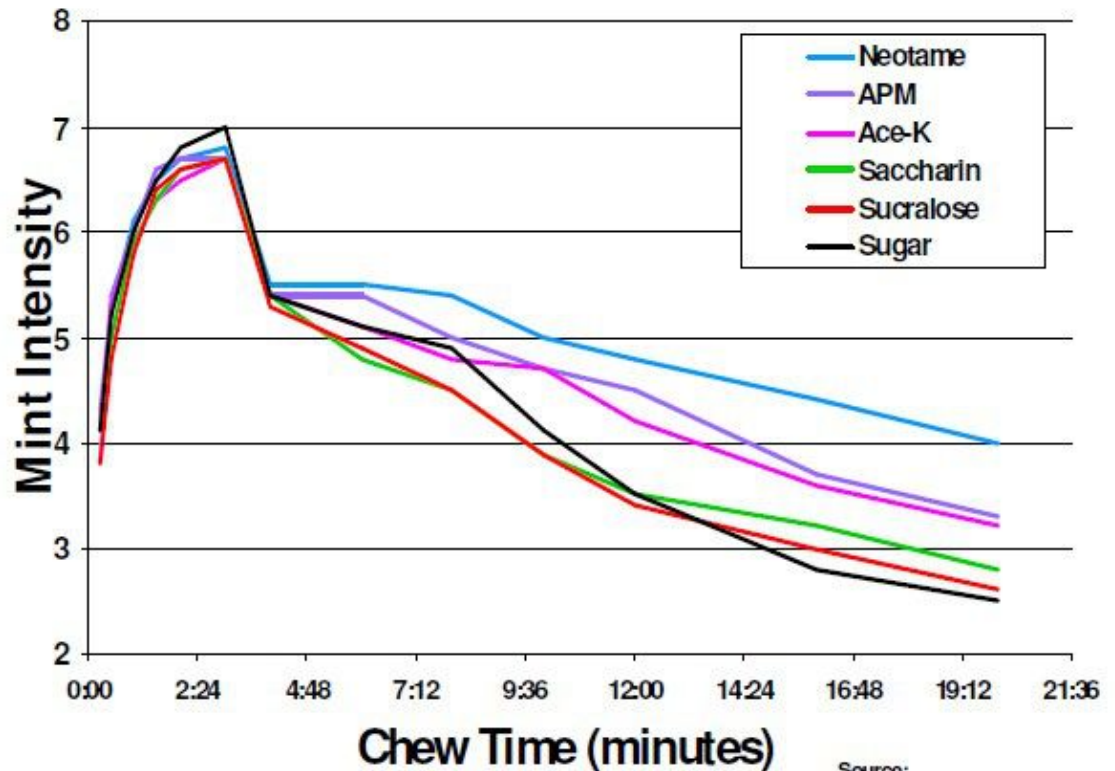
Conclusion: Neotame is most stable in the condition of 25°C with pH 4.5

The Characters of 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.



Source:
Mt. Prospect trained Panel, n=8
Samples evaluated in duplicate
October/November, 1999
(SS#3444)



Thanks a lot for your time!