



Application Update

Baking and Leavening



Beverage

Candy and Confectionary

Dairy

Fruit Fillings

Fruit / Vegetable Processing

Jams and Jellies

pH Reduction

Sauces and Dressings

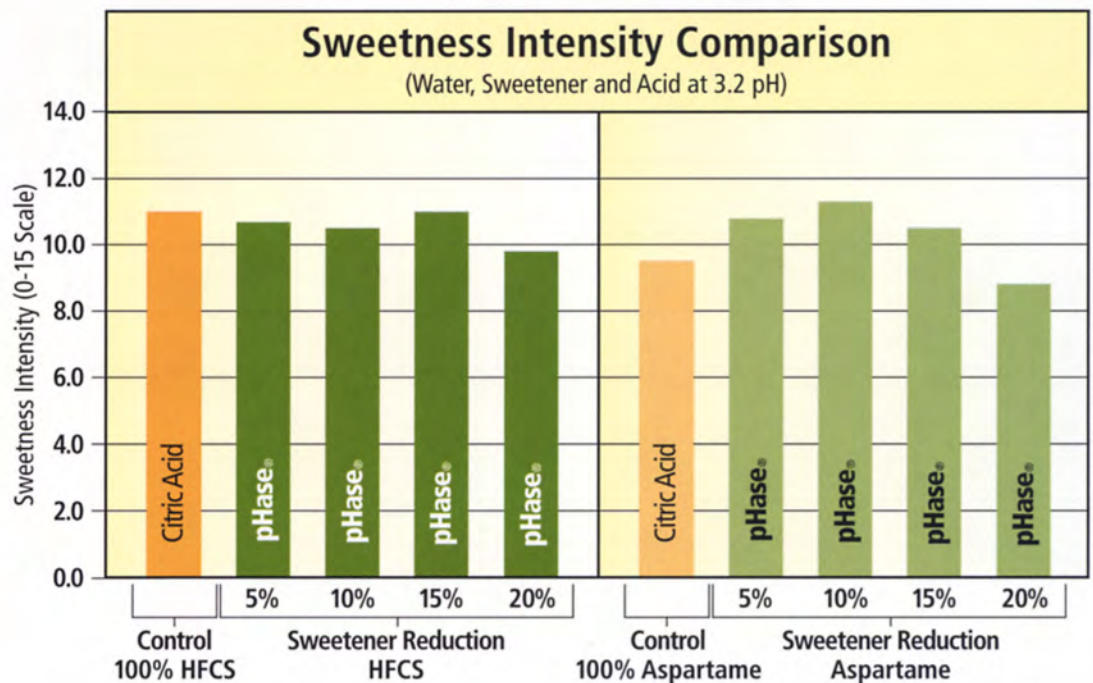
Savory and Seasonings



Discover How an Acidulant Can Lower Your Sweetener Usage Up to 15%.

Sweet and sour flavors need to be balanced in food and beverage formulas to achieve the optimum flavor profile. Sensory analysis proves pHase® lowers pH with low sour intensity. Consequently, less sweetener is required to achieve this sweet and sour balance.

pHase®, citric and phosphoric acid were evaluated in both High Fructose Corn Syrup (HFCS) and Aspartame sweetened systems at a pH of 3.2. In the pHase acidified samples, the sweetener concentration was reduced by 5–20%.



Results:

The results indicate that sweetener levels can be reduced by 15% with minimal difference in perceived sweetness.

(See data points on reverse side.)

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Source: Sensory Spectrum, Inc., Descriptive Analysis of Acidulant–Sweetener Samples, Feb., 2004.

Evaluation Procedure:

Rate the strength of sweet and sour on a 0-15 point intensity scale. Zero (0) represents none and 15 represents very strong. Scale incorporates the ability to use tenths of a point.

	HFCS-55		Aspartame	
	Sweet	Sour	Sweet	Sour
Citric Acid	11.0	4.5	9.5	4.5
Phosphoric, 75%	12.0	4.0	11.5	3.5
5% reduction	10.7	2.8	10.8	3
10% reduction	10.5	3.0	11.3	3.5
15% reduction	11.0	3.2	10.5	2.5
20% reduction	9.8	4.0	8.8	2.7

Evaluate product using the following procedure:

- Evaluate samples by sweetener type in a random order.
- Sip room temperature sample from a plastic soufflé cup.
- Evaluate each product using consensus balloting.
- Expectorate.
- Record qualitative observations.

Attribute Definitions:

Sweet:

The taste on the tongue stimulated by sucrose and other sugars, such as fructose, glucose, etc., and by other sweet substances, such as Saccharin, Aspartame, and Acesulfame-K.

Sour:

Tastes on the tongue stimulated by acids such as citric, malic, phosphoric, etc.