

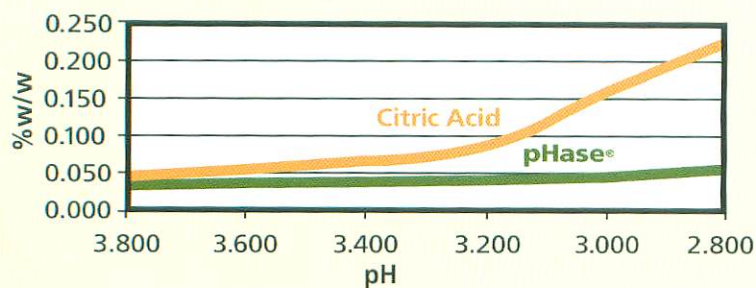
pHase® Lowers pH With No Sour Taste.

Low pH is necessary for preservation and stability, but sour taste can often overpower the intended flavor of your formula.

Lower pH

pH is a measurement of acid concentration. Less pHase® is required to lower pH than citric acid.

pH	pHase®		Citric Acid	
	g/L	%w/w	g/L	%w/w
7.750	0.000	0.000	0.000	0.000
4.000	0.345	0.035	0.410	0.041
3.800	0.350	0.035	0.450	0.045
3.600	0.355	0.036	0.550	0.055
3.400	0.375	0.038	0.685	0.069
3.200	0.400	0.040	0.880	0.088
3.000	0.455	0.046	1.585	0.159
2.800	0.560	0.056	2.245	0.225



Use this chart to calculate the initial pHase® addition rate in your product formulation. Further adjustment may be necessary to achieve the optimum addition rate for pHase®.

1. Select target pH with citric acid.
2. Move across chart to pHase® at same pH.
3. Use ratio of acids (%w/w) to calculate the amount of pHase needed for replacement.

Example:

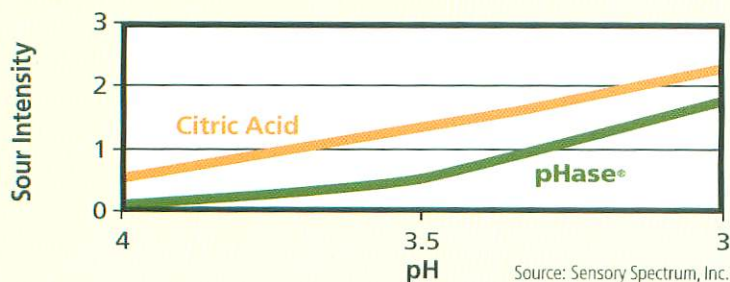
How much pHase® is needed to replace 2.5 grams of citric acid in a formula with a pH of 3.0?

1. Citric acid, pH 3.0=0.159 %w/w
2. pHase, pH 3.0=0.046 %w/w
3. Calculation is: $2.5 * (0.046/0.159) = 0.72$ grams of pHase at pH 3.0

*Make sure pHase %w/w is the numerator in your calculation. Note: The amount of acid needed to adjust pH will depend on product composition and source water characteristics. This chart should be used to determine relative concentrations of acid.

With No Sour Taste.

Sensory analysis proves that pHase® eliminates unwanted sour taste in low pH products.



pHase®
acid
sensory
enhancement

JH

JONES-HAMILTON CO.

30354 Tracy Road • Walbridge, Ohio 43465 • (888) 858-4425

www.jones-hamilton.com

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