

# PURAC® FIT Plus

The multi-purpose acidulant for beverages



- pH regulation
- Taste optimization
- Shelf life extension
- Reduced precipitation-scaling

## About PURAC FIT Plus

PURAC FIT Plus is a unique and natural Lactic Acid, optimized for taste-sensitive applications, such as beverages. Unlike any other grade of Lactic Acid, PURAC FIT Plus has been specifically formulated to ensure that possible impurity levels (associated with typical Lactic Acid flavor) are specified well below their threshold in application. PURAC FIT Plus truly is a multi-purpose acidulant for beverages. Besides regulating pH, it enables flavor optimization, shelf life extension and reduced precipitation-scaling.

## Taste optimization

PURAC® FIT Plus, a natural, purified Lactic Acid gives a mild and lingering sour taste, which differs from sour notes provided by other acidulants. Research has shown that PURAC FIT Plus (opposed to other acidulants) increases the intensity of red fruit and cola flavors. PURAC FIT Plus is, however, known for its ability to mask the lingering sweet taste of high-intensity sweeteners, such as Stevia (see [figure 1](#)).

## PURAC FIT Plus

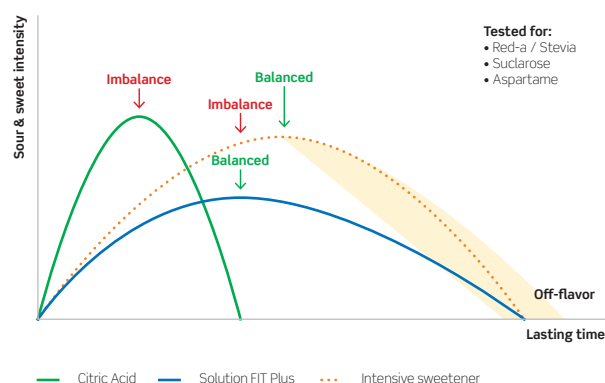


Figure 1: The long-lasting, mildly-sour taste of PURAC FIT Plus masks the long-lasting, sweet taste and off-notes of HIS.



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## Shelf life extension: natural color stability

Anthocyanins (natural, red-purple colors, derived from fruits and vegetable sources) are sensitive and will fade / change in color over time. This is influenced by many factors, including pH, processing and storage conditions. Recent research shows that the type of acidulant also affects the speed at which anthocyanins fade, or change in color. Using PURAC FIT Plus in acidified beverages can increase the anthocyanin stability up to 45%\*, when compared to citric acid (as shown in figure 2).

## Shelf life extension: Alicyclobacillus control

*Alicyclobacillus* spores, until recently an unsolved problem for juice-based beverage producers, can be controlled with PURAC FIT Plus. PURAC FIT Plus inhibits vegetative cells of *Alicyclobacillus* as well as the spores of *Alicyclobacillus*, to germinate (see figure 3).

## Reduced precipitation-scaling

In processing, precipitation-scaling (the forming of solid salts) can be caused by processing parameters, as well as by the choice of salts and acids in the beverage formulation. By selecting PURAC FIT Plus as a beverage acidulant, precipitation-scaling can be reduced, creating energy and cleaning savings.

PURAC® FIT Plus	
Product form	Clear, syrupy liquid
Labeling	Lactic Acid, E270
Target use level	0.1-0.5%

\*) patent application pending

## Black carrot, no heating step

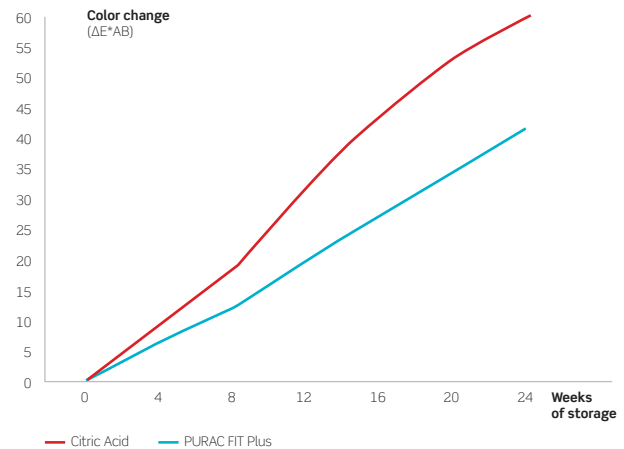


Figure 2

## Shelf life extension: Alicyclobacillus control

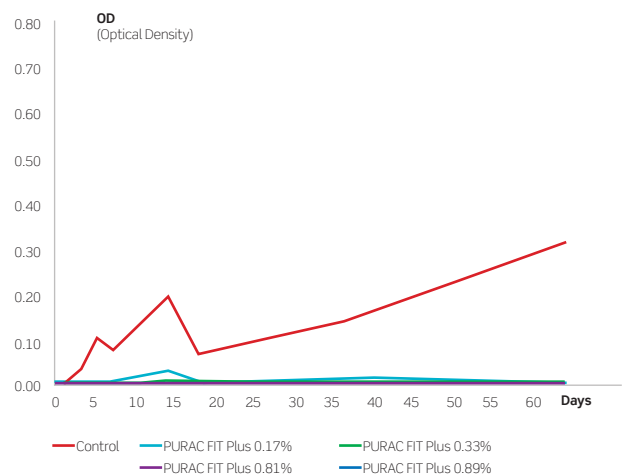


Figure 3

*Alicyclobacillus* Medium - 30°C



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With over 80 years of fermentation expertise and the use of natural raw materials to produce exceptional food and beverage ingredients, Corbion Purac has a wealth of expertise in the world of biobased food ingredients. Corbion is the global market leader in lactic acid, lactic acid derivatives and lactides, and a leading company in functional blends containing enzymes, emulsifiers, minerals and vitamins. Corbion operates 10 production plants, in the USA, the Netherlands, Spain, Brazil and Thailand, and markets its products through a worldwide network of sales offices and distributors.

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