



# International Sugar Organization

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**EXECUTIVE DIRECTOR**

**Press Release(17)44  
(English only)**

**18 October 2017**

## **Articles from Food Navigator.com**

The Executive Director would like to bring your attention to the various relevant articles below from Food Navigator.com

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### **Agri-food mega mergers will push food prices up, report claims**

17-Oct-2017 By Wai Lang Chu

Mega-mergers between the world's largest agri-food companies will squeeze farmers and push retail prices up, according to a new report.

<https://www.foodnavigator.com/Article/2017/10/17/Agri-food-mega-mergers-will-push-food-prices-up-report-claims>

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### **Sugary drink levy in Jamie's Italian restaurants reduces SSB consumption by 11%: study**

17-Oct-2017 By Rachel Arthur

A levy on sugar-sweetened drinks in Jamie's Italian restaurants in the UK is likely to have contributed to a 'significant decline in SSB sales', according to a study published in the Journal of Epidemiology & Community Health.

<https://www.foodnavigator.com/article/2017/10/17/sugary-drink-levy-in-jamie-s-italian-restaurants-reduces-ssb-consumption-by-11-study>

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### **Biotech startup Sugarlogix shows not all sugar is bad – some offer functional benefits people need**

**17-Oct-2017 By Elizabeth Crawford**

As sugar continues to gain prominence as public enemy No. 1 in America for contributing to obesity and other chronic health problems, Berkeley-based biotech startup Sugarlogix has taken on the daunting task of teaching manufacturers and consumers that not all sugar is bad.

<https://www.foodnavigator-usa.com/article/2017/10/17/biotech-startup-sugarlogix-shows-not-all-sugar-is-bad>

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TECHNICAL APPLICATION  
INFORMATION



**The fruit texture principle –  
full enjoyment for beverages  
with no added sugar**

## THE FRUIT TEXTURE PRINCIPLE - FULL ENJOYMENT FOR BEVERAGES WITH NO ADDED SUGAR

They are popular, delicious and fruity. Yet sugar-sweetened soft drinks, especially those that are fruit-based, are still criticized for their sugar content and the associated various health risks.

The sugar content not only provides sweetness. The texture of the beverage and the way it feels in the mouth (mouthfeel) are important factors for consumer satisfaction. Reduced sugar content inevitably results in a change in the multi-sensory perception and, above all, in the mouthfeel. The viscosity of the beverage decreases and the product is perceived as thin and more watery. The loss of mouthfeel can be offset by the use of natural texturising ingredients.

The texture of fruits is based on cellulosic substances and pectin from the cell walls. As a producer of functional pectins and multi-functional fruit fibres with extraordinary water-binding capacity, the Herbstreith & Fox Corporate Group provides a solution for this taste challenge and the ability to optimise mouthfeel in a beverage.

We have researched how a multi-functional citrus fibre and a pectin specially adjusted to the mouthfeel in beverages influence the rheology and sensory perception of fruit juice drinks with no added sugar.

The aim was to offset the unsatisfactory mouthfeel in beverages without added sugar and to optimise the product overall in terms of multi-sensory characteristics.

The study utilised the following:

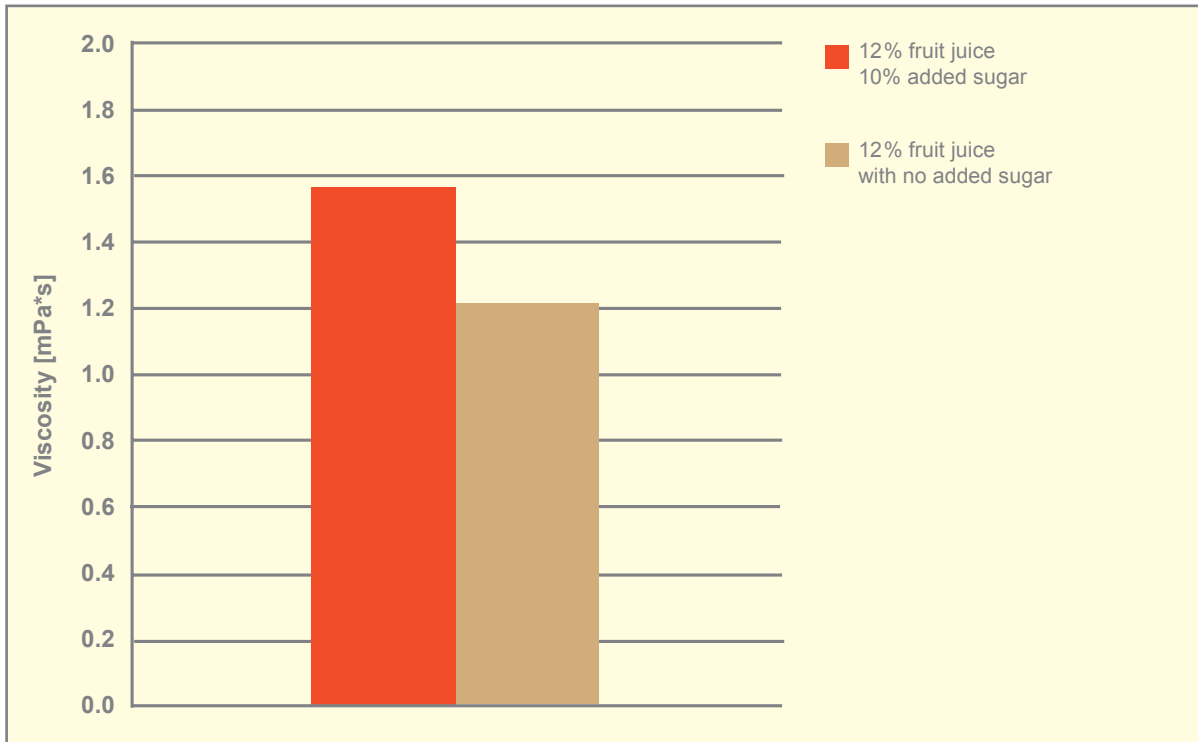
- **Pectin Combi Plus 210** (Herbstreith & Fox KG)
- **Herbaccel® AQ® Plus Citrus-N** (Citrus Fibre, Herbafood Ingredients GmbH; Herbstreith & Fox Corporate Group)

Orange juice drinks with 12% fruit juice content were studied. Beverages with 10% added sugar were compared to sugar-free drinks of equivalent sweetness made with artificial sweetener.

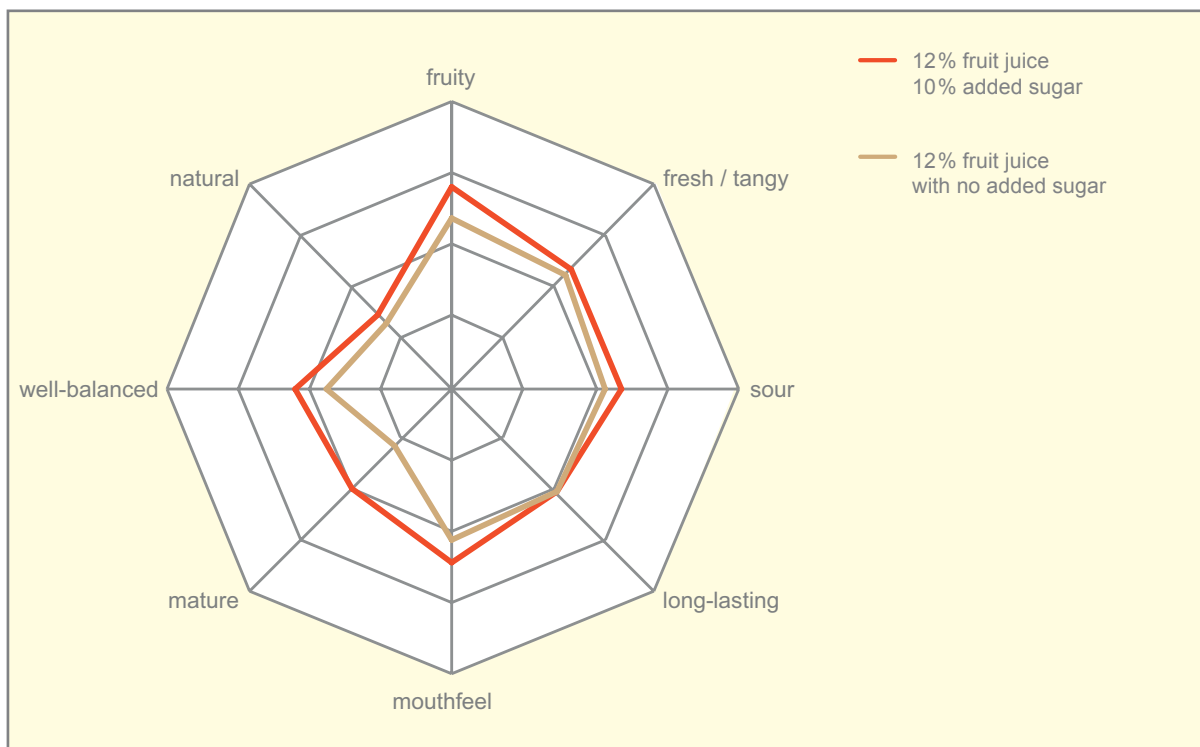
The viscosity of the drinks was measured, and the drinks were subjected to an intensity test by a panel of 21 participants.

When we replace the sugar in the tested beverage with artificial sweetener (sodium cyclamate/saccharin 10:1), the viscosity of the

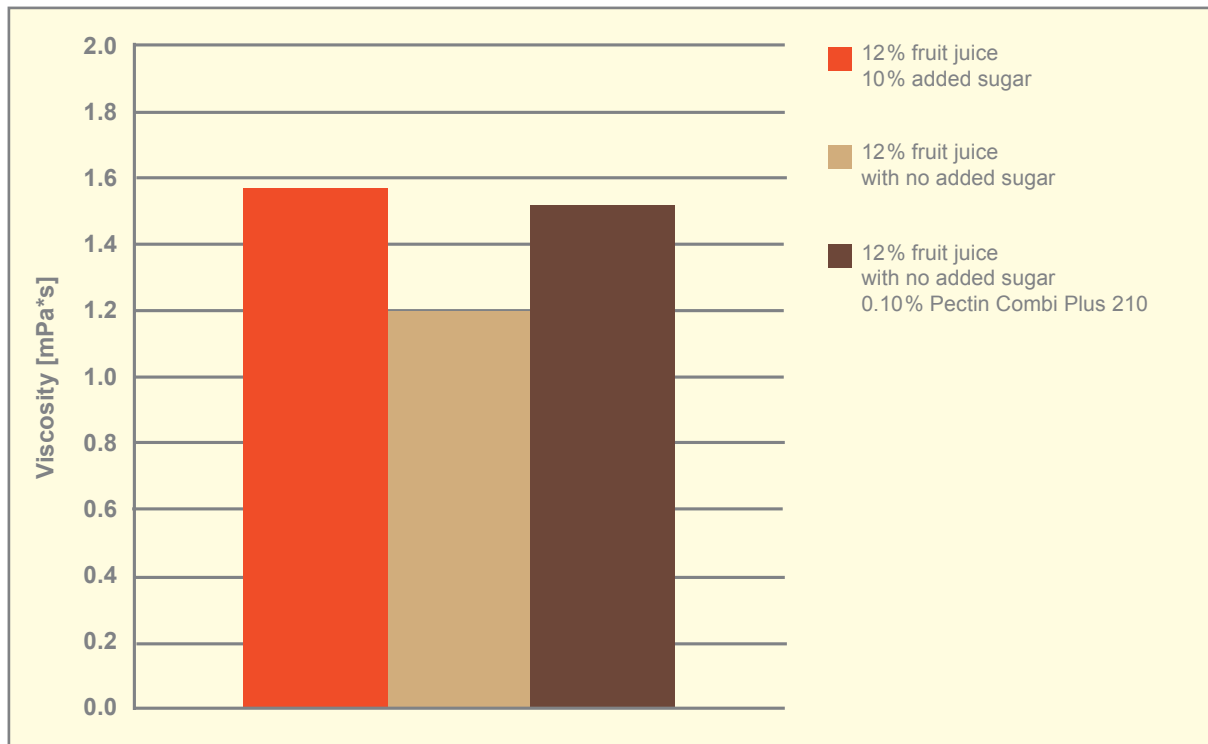
beverage decreases, causing the consumer to notice a loss of texture.



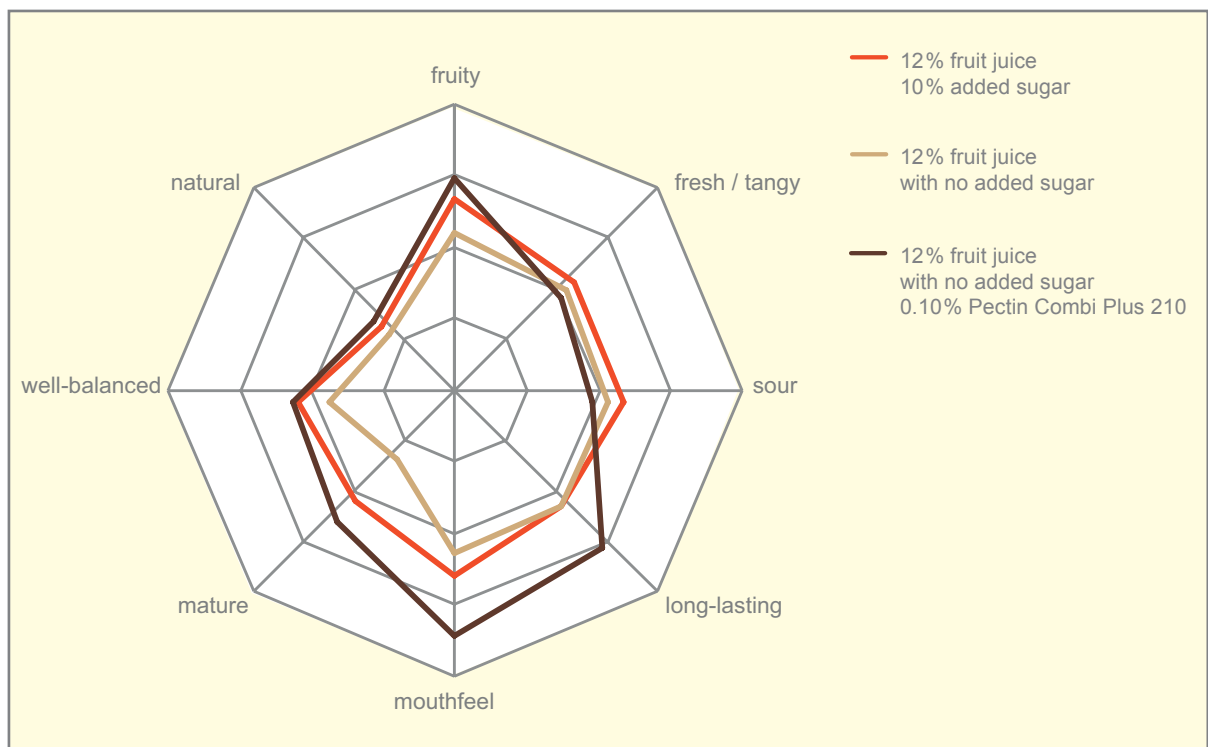
The consumer perceives a lower intensity for almost all of the characteristics identified in the sensory test:



The loss of viscosity from the elimination of sugar can be approximately offset with 0.1% Pectin Combi Plus 210:



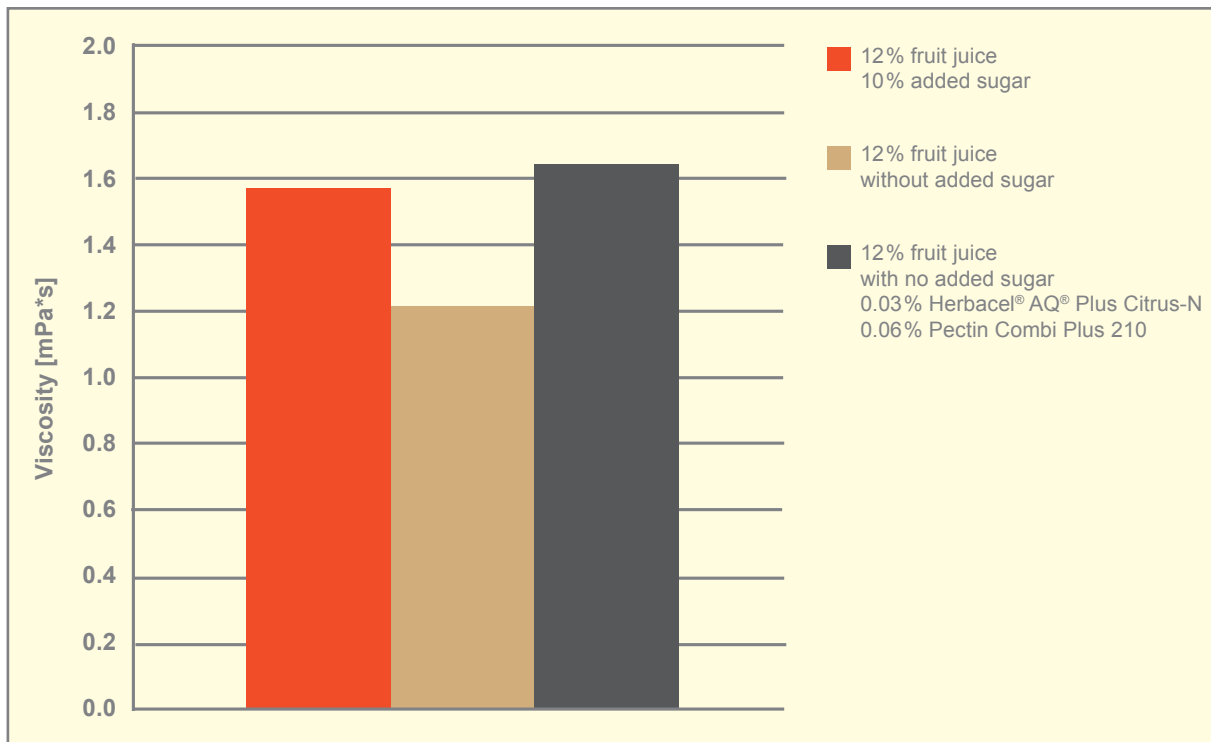
In the intensity test, a more intense flavour profile is determined vs. the orange juice drink with added sugar:



0.1% Pectin Combi Plus 210 causes the mouthfeel, fruitiness, the duration of flavour release, and the ripeness to appear stronger than in the sugar-containing drink of the same viscosity. The smoothness of the beverage was

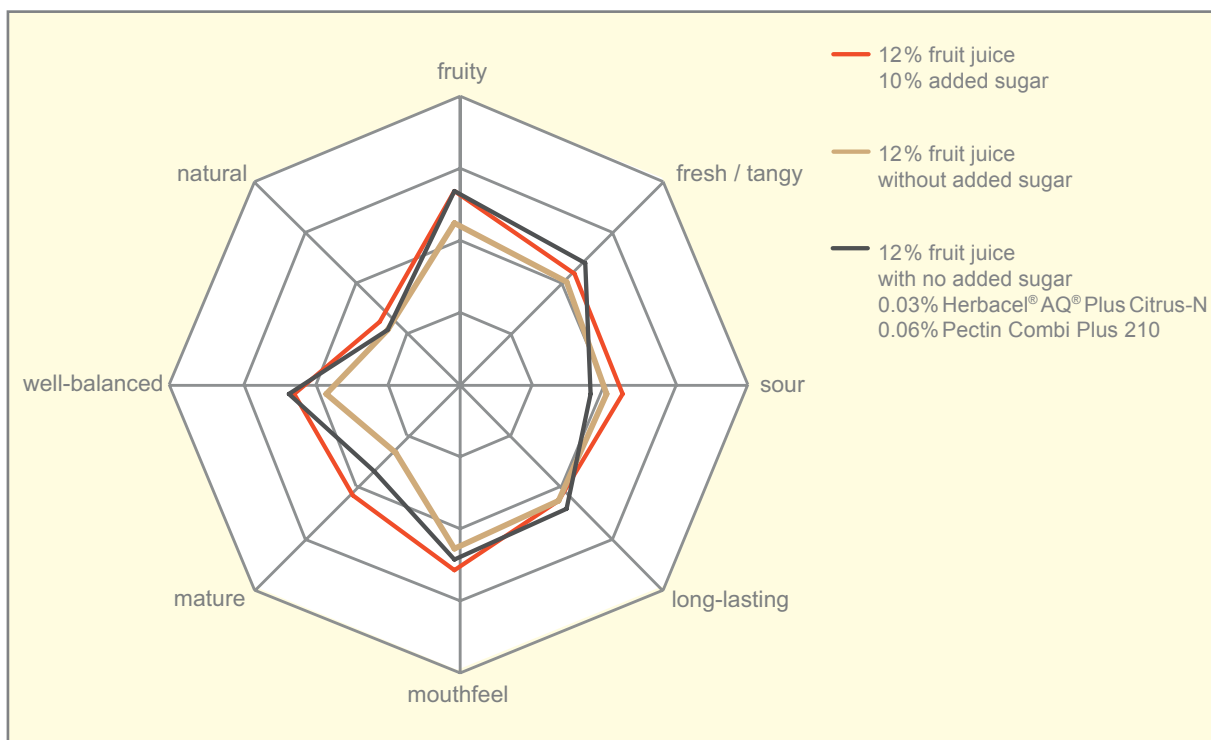
rated the same as the sugar-containing orange juice drink. The freshness and the acidity peak are somewhat mitigated by the addition of pectin. With the same viscosity, the pleasant impression of the ripe fruit is intensified.

The loss of viscosity from the elimination of sugar can be approximately offset with a combination of 0.06% Pectin Combi Plus 210 and 0.03% Herbacel AQ Plus Citrus-N:



This results in a profile that is nearly equivalent to the reference containing 10% sugar. Fruitness, naturalness, mouthfeel and smoothness were rated equally, and the duration of the flavour

release was also rated as comparable. The orange juice drink was perceived as less filmy, thus also more lively, but also less sour:



**Conclusion:**

By combining the Pectin Combi Plus 210, which is specially standardised for optimizing mouthfeel in reduced calorie drinks, and Herbacel AQ Plus Citrus, we can achieve a multi-sensory profile that corresponds very well to the standard sugary drink.

Both elements of the fruit's texture principle - the apple and citrus-derived Pectin Combi Plus 210 for improved mouthfeel and the highly functional citrus fibre Herbacel AQ Plus Citrus-N – can be

combined in such a way that the multi-sensory profile of a fruit juice drink can be individually adjusted. The products are ideal for modifying the mouthfeel and the sensory impression of reduced calorie fruit juice drinks. Even the use of low dosages has significant effects on the intensity of the sensory characteristics.

Precision elements from nature working together to enable full enjoyment in sugar-free fruit juice drinks: naturally, from the Herbstreith & Fox Corporate Group.

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