



# L-Arabinose

by EVOLVA™

Sensory pleasure from the taste of food has always been and remains a major part in driving consumer preference and choice. Foods that satisfy our taste buds through flavors and smell, or sensory perception, through a comforting texture and feel in the mouth contribute to the great eating experience that today's customers are looking for.

L-Arabinose by Evolva™ is a new-generation ingredient designed for use by fast growing market applications striving to meet the consumers demand for appetizing, tasty, but also more natural and "better-for-you" food, beverages and dietary supplements.



## What is L-Arabinose?

L-Arabinose is a pentose monosaccharide and the second most abundant pentose beside D-Xylose.

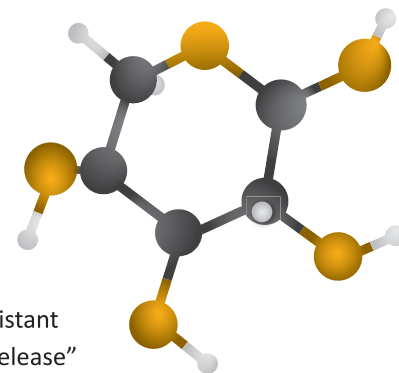
Although most saccharides are synthesized as D- form, for L-Arabinose the L-Form is more common.

L-Arabinose occurs in the hemicelluloses structure of most fruits and vegetables. It is a main component of cereal hemicellulose (such as corn, wheat, rye and rice) pectic substances of beet and apple pulps, and some plant gums like gum arabic, the latter of which is the origin of the name: L-Arabinose.

Humans have always consumed L-Arabinose both free as well as part of the hemicellulose structure. The highest concentrations

of L-Arabinose in food as monosaccharide can be found in instant coffee, wine and sake.

L-Arabinose is attached to the cell walls, which are very resistant structures. In order to “release” L-Arabinose from the cell walls, while preserving the natural character of the product, harsh processes such as acid hydrolysis are generally used. These processes are difficult and costly, and raise concerns among consumers, for whom safety is a key buying factor.



## L-Arabinose, a versatile ingredient for multiple applications\*

L-Arabinose is a rare sugar with a similar taste profile to sucrose. This versatile ingredient is used in a wide range of applications in diverse industries.

L-Arabinose, as a “bioactive sugar”, combines the functionality of a reducing sugar with potential health benefits particularly related to its sugar blocker properties (summary of clinical studies available upon request).



BAKERY



BEVERAGES



COSMETIC



DIETARY SUPPLEMENTS



SNACKS



PET FOOD

In the food and flavor industry, L-Arabinose is used as a flavoring agent. Due to its sugar reducing properties, it can be used in the Maillard reaction, resulting in appealing flavors in the bakery, confectionary and pet-food industries.

Commonly used in cosmetics as an excipient in topical applications, L-Arabinose is being studied in terms of its potential as an active ingredient, due to its possible skin anti-aging effect.

Considering its potential health benefits, L-Arabinose is currently present in Dietary Supplements. Research, including human clinical studies, has demonstrated that, because of its sugar-blocker properties, L-Arabinose is effective when combined with sucrose at lowering blood glucose levels.

Committed to science, Evolva is currently investing in ongoing studies that aim to provide science-based evidence on the use of L-Arabinose as a health ingredient and in cosmetic applications.

**Interested in knowing more, please get in touch with our scientific affairs experts.**

\* List of applications/countries where approved by regulation available upon request.



## L-Arabinose by Evolva™ is a new generation of functional rare sugar, sustainably produced at the highest level of purity

By producing its L-Arabinose via fermentation, rather than extracting it from wood pulp or arabic gum, Evolva's new-generation L-Arabinose is scalable and highly reproducible, thus unlocking the full potential of this ingredient while ensuring alignment with consumers demand for healthy functional nutrition.

### SET YOURSELF APART BY INCLUDING L-ARABINOSE BY EVOLVA™ IN YOUR FORMULATIONS

Developed by the Evolva R&D team in Switzerland, L-Arabinose by Evolva™ is a premium ingredient, produced in the EU in accordance with strict food-safety regulations.

L-Arabinose by Evolva™ has a pleasant profile with no off-note. It is 99% pure.

## Did you know that?

The trend towards safe and healthy food is closely connected to the consumer demand for an ethical lifestyle: a lifestyle that is not only good for consumers and their companion animals, but also for the planet.

Consumers are becoming much more aware of the positive difference they can make through their everyday shopping choices. They now expect companies to behave ethically and responsibly, reducing their products' environmental footprint throughout their life cycle food waste.\*

L-Arabinose by Evolva™ is produced sustainably using a fermentation process that limits the overuse of natural resources.

\*<https://www.euromonitor.com/voice-of-the-industry-consumer-lifestyles/report>

# Our Purpose: Sustain Nature

At Evolva we believe in applying technology platforms, such as fermentation, to help resolve sourcing bottlenecks in nature. This enables us to provide products that contribute to health, well-being and sensory enjoyment. We research, develop and commercialize high quality, affordable, ready-to-formulate ingredients that are nature-based and are available at all times, in any quantity.

A desired ingredient is often only present in minor or even minute amounts in a plant.

Our starting point is the biochemical pathways of nature, a series of conversion steps that enable the plant to convert water and sunlight (or nutrients) into a certain ingredient. Through biotechnology, these pathways can produce the desired ingredient in both a laboratory and large-scale production facility. At Evolva we have the scale-up expertise to transfer our fermentation processes up to the several-thousand-liter scale. When our ingredients have been sufficiently optimized, production is transferred to one of our contract manufacturers (CMOs) to be produced in large-scale fermenters.

## KEY SEGMENTS IN GROWING INDUSTRIES



### FLAVORS AND FRAGRANCES

We also provide nature-based ingredients for flavors and fragrance, such as [Nootkatone](#), [Valencene](#), L-Arabinose and vanillin.



### HEALTH INGREDIENTS

With interest in healthy living on the rise, we provide nature-based health ingredients such as [Veri-te™](#) Resveratrol.



### HEALTH PROTECTION

Tapping into the trend of health-conscious consumerism, we develop ingredients for such as [NootkaShield™](#), a new active ingredient for pest control.

## PARTNER WITH US

We are more than an ingredients provider, we are a reliable, end-to-end, innovative, partner powered by experts to deliver advanced nutrition and health products and quality customized solutions.

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QUOTE



SAMPLES



TECHNICAL DOCUMENTS

## ABOUT EVOLVA

Evolva is a Swiss biotech company focused on the research, development and commercialization of ingredients based on nature. We have leading businesses in Flavors and Fragrances, Health Ingredients and Health Protection. Evolva's employees, half of which are women, are dedicated to make the best products that can contribute to health, wellbeing and sensory enjoyment.

Find out more at [www.evolva.com](http://www.evolva.com).

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