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Biospringer adds dsm-firmenich's ModuMax to target reformulated food market

06 November 2026 | News

The acquisition combines yeast extract functionality with advanced taste modulation to address bitterness, off-notes and mouthfeel challenges in nutritionally reformulated products

dsm-firmenich

Reformulating food and beverages to improve their nutritional profile has become an increasingly complex exercise for manufacturers. Raising protein content, reducing sugar and fat, or replacing animal-derived ingredients can alter the taste, texture and overall sensory experience of finished products. For ingredient suppliers, the challenge is no longer simply to deliver functional or nutritional benefits, but to ensure that reformulated products retain the sensory characteristics consumers expect.

Against this backdrop, Biospringer by Lesaffre has acquired ModuMax, the natural taste modulation technology developed by dsm-firmenich, expanding its capabilities in flavour optimisation and nutritional reformulation. The acquisition brings a specialised sensory technology into Biospringer's existing yeast extract portfolio, targeting manufacturers working across high-protein beverages, plant-based milk alternatives, reduced-sugar drinks and low-fat dairy formulations.

ModuMax is designed to address multiple sensory limitations within a formulation, including bitterness, undesirable off-notes, weak mouthfeel and inadequate flavour delivery. Its integration with Biospringer's yeast-derived ingredients is expected to provide manufacturers with a broader range of solutions to improve taste, richness and texture without compromising their nutritional reformulation objectives.

Carmen Arruda, General Manager at Biospringer, said the technology complements the company's existing portfolio by combining the depth, umami and kokumi characteristics of yeast extracts with advanced taste modulation capabilities.

The combined offering, she said, would help customers develop nutritionally improved products without sacrificing sensory quality.

Closing the sensory gap in nutritional reformulation

The acquisition addresses a persistent challenge for food manufacturers: improving nutritional composition does not automatically translate into a better consumer experience.

High-protein formulations, for instance, can introduce bitterness, astringency and lingering off-notes, while sugar reduction can diminish flavour intensity and overall palatability. Reducing fat content can also compromise creaminess, richness and mouthfeel. Plant-based beverages face additional formulation challenges when manufacturers attempt to reproduce the sensory characteristics of conventional dairy products.

These limitations can affect repeat purchases, making sensory performance a critical consideration in the commercial success of reformulated foods.

ModuMax offers Biospringer an additional technology platform to address these challenges. Alongside bitterness reduction and off-note masking, the technology can enhance creaminess, improve mouthfeel and support more balanced flavour delivery.

The acquisition is particularly relevant to manufacturers developing protein-enriched beverages and plant-based dairy alternatives, where nutritional positioning must be supported by an acceptable taste and texture profile.

Esther de Graaf-Groenendijk of Biospringer highlighted taste as a major barrier to consumer acceptance of better-for-you products. The expanded portfolio is intended to address this gap through a combination of ingredient functionality and application-specific sensory optimisation.

From ingredient portfolios to integrated formulation support

An important aspect of the acquisition is the proposed integration of ModuMax across Biospringer's commercial organisation, global research and development operations, and application network.

Rather than positioning the technology as a standalone ingredient offering, Biospringer intends to combine it with its existing formulation expertise and customer development infrastructure. This includes rapid prototyping, sensory evaluation and technical support tailored to individual product applications.

The approach reflects a wider shift in the food ingredients business, where manufacturers increasingly expect suppliers to provide end-to-end formulation assistance rather than simply sell individual ingredients.

Biospringer's existing infrastructure includes research and development centres, flavour development teams, culinary centres and sensory analysis panels. These capabilities allow the company to assess ingredient performance in finished products and adapt formulations to specific market requirements.

With ModuMax incorporated into this network, the company expects to strengthen its ability to address formulation challenges across plant-based beverages, sports nutrition and functional wellness products.

A broader expansion of fermentation and ingredient technologies

The acquisition also fits into Lesaffre's wider strategy of expanding its capabilities in specialised food ingredients and fermentation-based technologies.

In October 2024, Lesaffre completed the acquisition of dsm-firmenich's yeast extract business, transferring yeast derivatives processing technologies, products and 46 employees into the group. The agreement, initially announced in June 2024, also included a technology partnership for developing yeast extracts and a supply arrangement supporting dsm-firmenich's savory business.

That transaction strengthened Biospringer's position in yeast extracts and savoury ingredients while extending its manufacturing and technical capabilities.

Biospringer subsequently expanded into bacterial fermentation technology through the acquisition of selected intellectual property and technology from US-based PTX Food Corp, a manufacturer specialising in bacterial fermentation products. The transaction included selected assets associated with the Bioenhance product line and was intended to strengthen the company's capabilities in developing fermentation-derived food ingredients.

Another significant development in Lesaffre's portfolio expansion was its 2025 joint venture with Zilor, through which Lesaffre acquired a majority stake in Biorigin.

Taken together, these developments point to a deliberate expansion beyond traditional yeast-derived ingredients towards a broader technology-led food ingredients business, combining fermentation, flavour development and specialised sensory solutions.

For Biospringer, the ModuMax acquisition adds a distinct dimension to this strategy. While its earlier transactions strengthened its yeast and bacterial fermentation capabilities, the latest deal directly addresses the sensory performance of reformulated foods.

The next frontier: nutrition without sensory compromise

As food manufacturers respond to changing nutritional expectations, the ability to manage taste and texture will increasingly influence the commercial viability of new product formulations.

Protein enrichment, sugar reduction, fat replacement and plant-based innovation are not isolated formulation challenges. They often overlap within the same product, requiring manufacturers to balance nutritional composition, ingredient functionality, stability and sensory acceptance.

Biospringer's expanded portfolio is positioned to address this convergence. The combination of yeast extracts and ModuMax could provide manufacturers with more flexibility in developing products that deliver nutritional benefits while retaining desirable flavour and mouthfeel.

The financial terms of the acquisition have not been disclosed. Its commercial impact will ultimately depend on the technology's performance across different formulations, its integration into customer development programmes and manufacturers' willingness to adopt the combined solutions.

Nevertheless, the transaction signals an important direction for the global food ingredients industry: as nutritional reformulation becomes more sophisticated, taste modulation is moving closer to the centre of product innovation.