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EU approves first whole-food mycelium ingredient, opening new chapter for alternative proteins

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The Protein Brewery's FermoteinÂ® becomes the first novel mycelium ingredient authorised under the EU's Novel Food framework, paving the way for broader adoption of biomass fermentation-derived ingredients across Europe



The European Union has authorised the sale of Fermotein, a whole-food mycelium ingredient developed by Dutch food technology company The Protein Brewery, marking the first approval of a novel mycelium ingredient under the bloc's Novel Food regulation.

The authorisation represents a significant milestone for the alternative protein industry and establishes a regulatory precedent for whole-food ingredients produced through biomass fermentation. The European Commission has adopted an implementing regulation permitting the commercialisation of *Rhizomucor pusillus* mycelium and adding the ingredient to the Union's list of authorised novel foods.

The decision follows a positive scientific opinion issued by the European Food Safety Authority (EFSA) in December 2025 and a favourable vote by the Standing Committee on Plants, Animals, Food and Feed in May this year. The regulation will come into force 20 days after its publication in the Official Journal of the European Union, after which The Protein Brewery will be permitted to market the ingredient across EU member states.

Under the authorisation, the company has secured exclusive rights to the scientific studies and safety data supporting the ingredient's approval for a period of five years, in addition to protections linked to its patented production process.

Fermotein is produced through the biomass fermentation of *Rhizomucor pusillus*, a non-fruiting fungal species related to microorganisms traditionally used in Asian fermented foods such as tempeh. The ingredient contains approximately 50 per cent complete protein, including all essential amino acids, along with around 30 per cent dietary fibre and naturally occurring micronutrients and bioactive compounds.

Industry observers view the approval as a landmark for European food innovation because it demonstrates that whole-food mycelium ingredients can be successfully evaluated and authorised within the existing EU regulatory framework for novel foods. The European Commission's decision to classify the ingredient specifically as "*Rhizomucor pusillus* mycelium" also provides greater clarity regarding its identity and intended use for both manufacturers and consumers.

The ingredient has been approved for use in a wide range of health and wellness-focused food and beverage applications, including protein powders, dietary supplements, nutrition bars, dairy alternatives and other better-for-you products. The authorisation is expected to enable food manufacturers to formulate products with higher protein and fibre content while meeting growing consumer demand for nutrient-dense and sustainable ingredients.

The regulatory approval concludes a process that began in May 2020 when The Protein Brewery first submitted its dossier to the European Commission. Over the subsequent years, the company worked closely with European regulators and scientific bodies to demonstrate the safety and nutritional profile of the ingredient.

Commercially, Fermotein® is already available in Singapore and the United States, and the company is now preparing to expand production to serve the European market. The Protein Brewery expects to supply around 600 metric tonnes of Fermotein in 2027 from its production facility in Breda, supported by customer commitments in Europe, the United States and Singapore. The company is also planning a substantial scale-up in manufacturing capacity, targeting production of more than 2,000 metric tonnes by 2029.

In parallel, the company is pursuing regulatory approvals in several other markets, including the United Kingdom, Canada and Australia and New Zealand, with the first additional authorisation expected in the UK later this year.

The ingredient has also received growing industry recognition. In May 2026, Fermotein won the Vitafoods Startup Challenge in the Most Innovative Sustainable Solution category, highlighting increasing confidence in whole-food mycelium as a next-generation ingredient platform for sustainable nutrition.

The EU approval is expected to accelerate the commercialisation of biomass fermentation technologies and strengthen Europe's position in the rapidly expanding alternative protein sector, where companies are increasingly seeking ingredients that combine nutritional value, sustainability and functionality in a single product.