

# Precision Fermentation Ingredients Market Opportunity, Growth Drivers, Industry Trend Analysis, and Forecast 2025 - 2034

https://marketpublishers.com/r/PC67B9216A3FEN.html

Date: December 2024

Pages: 235

Price: US\$ 4,850.00 (Single User License)

ID: PC67B9216A3FEN

### **Abstracts**

The Global Precision Fermentation Ingredients Market, valued at USD 2.4 billion in 2024, is set to exhibit a CAGR of 39.9% from 2025 to 2034. This surge is primarily fueled by a shift toward sustainable, high-quality ingredients that cater to the evolving demands of industries like food, beverages, and pharmaceuticals. As consumers become more eco-conscious and increasingly prioritize plant-based and microbederived products, industries are embracing precision fermentation as a solution.

The growing awareness of environmental concerns, the desire for more ethical food sources, and the shift toward more sustainable production methods are all contributing to the market's rapid expansion. Moreover, the continuous innovation in biotechnology, particularly in microbial strain engineering, is driving efficiencies that make precision fermentation more accessible and cost-effective, enabling its widespread adoption across various sectors. These factors make precision fermentation not just a trend but a fundamental shift in how industries are sourcing ingredients.

The protein segment of the precision fermentation market was valued at USD 739.6 million in 2024 and is expected to grow at an impressive CAGR of 37.5% during the forecast period. The rising demand for alternative proteins, driven by their sustainability and nutritional value, is a key factor behind this growth. Precision fermentation plays a pivotal role in producing animal-free proteins that replicate traditional proteins in taste and functionality, making them appealing to vegan and health-conscious consumers alike. Innovations in microbial strain engineering have improved production efficiency, lowered costs, and enhanced the versatility of these proteins for use in food, beverages, and pharmaceuticals. This has led to a notable increase in R&D investments to diversify and expand the range of protein solutions available, which is further accelerating the



growth of the market.

In 2024, the microbial-based segment dominated the precision fermentation ingredients market, holding a 70.6% share. This dominance can be attributed to the growing need for sustainable and versatile production methods. Microbial fermentation has become a cornerstone for producing essential ingredients, including proteins, enzymes, and vitamins, which are integral to health supplements. The rapid advancements in biotechnology, alongside continuous improvements in fermentation processes, have enhanced the affordability and scalability of microbial-based fermentation. These innovations have allowed the technique to penetrate a wide range of industries, such as food, agriculture, and pharmaceuticals, resulting in continuous market expansion and the emergence of novel applications.

The U.S. precision fermentation ingredients market, valued at USD 839.6 million in 2024, is expected to grow at a CAGR of 39.1% through 2034. A significant trend driving this growth is the increasing preference for plant-based fermentation ingredients. U.S. consumers are becoming more health-conscious and ethically driven, favoring products that align with sustainable and eco-friendly values. This shift is particularly evident in the food and beverage industries, where companies are incorporating plant-based, fermentation-derived ingredients into their products to meet consumer demand for healthier, more sustainable options.



### **Contents**

#### **CHAPTER 1 METHODOLOGY & SCOPE**

- 1.1 Market scope & definitions
- 1.2 Base estimates & calculations
- 1.3 Forecast calculations
- 1.4 Data sources
  - 1.4.1 Primary
  - 1.4.2 Secondary
    - 1.4.2.1 Paid sources
    - 1.4.2.2 Public sources

#### **CHAPTER 2 EXECUTIVE SUMMARY**

2.1 Industry synopsis, 2021-2034

#### **CHAPTER 3 INDUSTRY INSIGHTS**

- 3.1 Industry ecosystem analysis
  - 3.1.1 Factor affecting the value chain
  - 3.1.2 Profit margin analysis
  - 3.1.3 Disruptions
  - 3.1.4 Future outlook
  - 3.1.5 Manufacturers
  - 3.1.6 Distributors
- 3.2 Supplier landscape
- 3.3 Profit margin analysis
- 3.4 Key news & initiatives
- 3.5 Regulatory landscape
- 3.6 Impact forces
  - 3.6.1 Growth drivers
    - 3.6.1.1 Growing consumer demand for sustainable and ethically sourced ingredients
    - 3.6.1.2 Advancements in biotechnology and fermentation techniques
    - 3.6.1.3 Increasing awareness of health benefits associated with precision

### fermentation ingredients

- 3.6.2 Industry pitfalls & challenges
  - 3.6.2.1 Regulatory challenges
- 3.6.2.2 Uncertainties in approval processes



- 3.7 Growth potential analysis
- 3.8 Porter's analysis
- 3.9 PESTEL analysis

### **CHAPTER 4 COMPETITIVE LANDSCAPE, 2024**

- 4.1 Introduction
- 4.2 Company market share analysis
- 4.3 Competitive positioning matrix
- 4.4 Strategic outlook matrix

## CHAPTER 5 MARKET ESTIMATES & FORECAST, BY PRODUCT TYPE, 2021-2034 (USD BILLION) (KILO TONS)

- 5.1 Key trends
- 5.2 Yeast-based ingredients
- 5.3 Enzymes
- 5.4 Anti-bodies
- 5.5 Proteins

### CHAPTER 6 MARKET ESTIMATES & FORECAST, BY INGREDIENT SOURCE, 2021-2034 (USD BILLION) (KILO TONS)

- 6.1 Key trends
- 6.2 Microbial-based
- 6.3 Plant-based
- 6.4 Animal-based

### CHAPTER 7 MARKET ESTIMATES & FORECAST, BY APPLICATION, 2021-2034 (USD BILLION) (KILO TONS)

- 7.1 Key trends
- 7.2 Food & beverages
- 7.3 Pharmaceuticals
- 7.4 Agriculture
- 7.5 Industrial applications

### CHAPTER 8 MARKET ESTIMATES & FORECAST, BY REGION, 2021-2034 (USD BILLION) (KILO TONS)



- 8.1 Key trends
- 8.2 North America
  - 8.2.1 U.S.
  - 8.2.2 Canada
- 8.3 Europe
  - 8.3.1 UK
  - 8.3.2 Germany
  - 8.3.3 France
  - 8.3.4 Italy
  - 8.3.5 Spain
  - 8.3.6 Russia
- 8.4 Asia Pacific
  - 8.4.1 China
  - 8.4.2 India
  - 8.4.3 Japan
  - 8.4.4 South Korea
  - 8.4.5 Australia
- 8.5 Latin America
  - 8.5.1 Brazil
  - 8.5.2 Mexico
- 8.6 MEA
  - 8.6.1 South Africa
  - 8.6.2 Saudi Arabia
  - 8.6.3 UAE

#### **CHAPTER 9 COMPANY PROFILES**

- 9.1 Amyris
- 9.2 BlueNalu
- 9.3 Brightseed
- 9.4 Biomila
- 9.5 Bolt Threads
- 9.6 Ginkgo Bioworks
- 9.7 Clara Foods
- 9.8 Conagen
- 9.9 Enzymaster
- 9.10 Impossible Foods
- 9.11 KnipBio



- 9.12 Lygos
- 9.13 Motif FoodWorks
- 9.14 Novozymes
- 9.15 Perfect Day



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