+357 96 030922
info@marketpublishers.com

# Fermentation Chemicals Market - Global Industry Size, Share, Trends, Opportunity & Forecast, Segmented By Product (Alcohols, Enzymes, Organic Acids, Other), By Application (Industrial Application, Food & Beverages, Nutritional And Pharmaceutical, Plastics And Fibers, Other), By Region & Competition, 2020-2030F

https://marketpublishers.com/r/FA4A48D8A46CEN.html
Date: September 2025
Pages: 182
Price: US$ 4,500.00 (Single User License)
ID: FA4A48D8A46CEN

## Abstracts

Market Overview

The Fermentation Chemicals market was valued at USD 80.23 Billion in 2024 and is expected to reach USD 119.40 Billion by 2030 with a CAGR of 6.85%. The global fermentation chemicals market is undergoing accelerated expansion, driven by the growing transition from petrochemical-based inputs to bio-based, renewable solutions across core industrial sectors. Fermentation chemicals such as alcohols, organic acids, enzymes, and amino acids are produced via microbial processes utilizing sustainable feedstocks like corn, sugarcane, and agro-industrial residues. These compounds are essential for the formulation and manufacturing of a broad spectrum of products in food and beverage processing, pharmaceuticals, personal care formulations, advanced biofuels, agricultural solutions, and specialty industrial applications.

With increasing pressure on industries to decarbonize operations, reduce dependency on finite resources, and adopt climate-resilient technologies, fermentation-based manufacturing is gaining strategic importance. The market is set to maintain strong forward momentum, supported by widening commercial use cases, policy-driven sustainability mandates, and advancements in fermentation science and bioprocess engineering that enhance scalability, yield, and cost-efficiency.

+357 96 030922
info@marketpublishers.com

Key Market Drivers

Rising Demand for Bio-Based and Sustainable Chemicals

The rising demand for bio-based and sustainable chemicals is one of the most influential drivers accelerating the growth of the global fermentation chemicals market. As industries and consumers shift toward environmentally responsible practices, fermentation-derived chemicals produced from renewable feedstocks using biological processes are increasingly being recognized as a sustainable alternative to conventional petrochemical products. This demand is being driven by several interconnected factors, each reinforcing the value proposition of fermentation chemicals in a modern, eco-conscious economy. The accelerating impacts of climate change have intensified the global mandate to cut carbon emissions, with increasing pressure on governments and industries to take immediate action. Central to this urgency is the objective of limiting global temperature rise to 1.5°C, a threshold widely recognized as critical to avoiding the most disruptive and irreversible environmental, economic, and social consequences. Across industries, there is a growing imperative to reduce carbon emissions, minimize resource depletion, and transition to greener production processes. Fermentation chemicals derived from renewable raw materials such as corn, sugarcane, molasses, agricultural waste, and lignocellulosic biomass offer a lower carbon footprint and are generally biodegradable, making them attractive for companies looking to meet sustainability goals. Manufacturers in sectors such as plastics, textiles, personal care, and coatings are increasingly integrating bio-based chemicals into their product lines to align with environmental regulations and corporate ESG (Environmental, Social, and Governance) commitments. This transition is directly increasing the uptake of fermentation-derived products such as bioethanol, lactic acid, succinic acid, and enzymes.

Governments and regulatory bodies across the globe are actively promoting the adoption of bio-based and non-toxic chemical alternatives to mitigate the environmental impact of industrial operations. Policies that ban or restrict the use of certain synthetic chemicals and incentivize renewable or low-emission alternatives have made fermentation chemicals an attractive and often necessary choice for manufacturers.

The European Union’s Green Deal and REACH regulations are encouraging the substitution of petroleum-based chemicals with sustainable, bio-based inputs. In the United States, the BioPreferred Program by the USDA promotes the procurement of biobased products. Countries like India, Brazil, and China are also increasing their focus

+357 96 030922
info@marketpublishers.com

on bioeconomy development, fueling local production and consumption of fermentation chemicals. Such regulatory tailwinds are strengthening the global value chain for fermentation-based chemicals. Despite ongoing concerns around inflation and rising living costs, consumers are demonstrating a clear willingness to pay a premium averaging 9.7% for products that are sustainably produced or responsibly sourced. Today's consumers are more environmentally conscious and are increasingly opting for products made with natural, plant-based, and sustainably sourced ingredients. This trend is especially strong in the food & beverage, personal care, and healthcare sectors, where bio-based fermentation chemicals are being used to formulate Natural food preservatives and acidulants (e.g., citric acid, lactic acid), Non-toxic personal care ingredients (e.g., fermented hyaluronic acid, amino acids), Clean-label pharmaceuticals and dietary supplements. This consumer-led demand shift is forcing manufacturers and retailers to reformulate products with bio-based ingredients, further amplifying the use of fermentation chemicals in product development.

## Key Market Challenges

### High Production Costs and Price Competitiveness

One of the most significant challenges facing the fermentation chemicals market is the relatively high cost of production compared to synthetic alternatives derived from petrochemical processes. Fermentation involves the cultivation of microorganisms in controlled environments, requiring expensive infrastructure such as bioreactors, sterilization systems, and fermentation media. In addition: Raw materials (especially high-quality sugars and starches) used as feedstocks can be costly or price-volatile. Fermentation processes often have longer production cycles, lower yields, and require stringent quality control measures, which further drive up costs. Post-fermentation processes such as downstream separation and purification can be technically complex and energy-intensive, adding to the overall expense. As a result, many industrial users particularly in cost-sensitive markets prefer cheaper synthetic chemicals unless bio-based alternatives offer a strong value proposition or regulatory compulsion. This price gap continues to limit the competitiveness and scalability of fermentation-based solutions in certain segments.

## Key Market Trends

### Convergence of Synthetic Biology with Fermentation Technologies

A powerful emerging trend is the integration of synthetic biology with fermentation,

+357 96 030922
info@marketpublishers.com

which is revolutionizing the way fermentation chemicals are developed and produced. Synthetic biology enables scientists to engineer microorganisms with precision modifying metabolic pathways, enhancing substrate utilization, and enabling the biosynthesis of complex molecules that were previously difficult or impossible to produce through traditional fermentation.

This convergence is enabling The creation of novel high-value chemicals, specialty enzymes, and pharmaceutical ingredients. More efficient use of non-traditional and waste-derived feedstocks, improving cost competitiveness and sustainability. Custom fermentation platforms tailored for on-demand or decentralized production, especially for high-purity or personalized applications. The commercialization of next-generation fermentation using engineered microbes is expected to transform industrial biotechnology, attract cross-sector investments, and drive long-term value creation.

Key Market Players

BASF SE

Novonesis Group

DuPont de Nemours, Inc

dsm-firmenich

Amano Enzyme Inc.

AB Enzymes GmbH

The Dow Chemical Company

Evonik Industries AG

Cargill, Incorporated

Ajinomoto Co., Inc

Report Scope:

+357 96 030922
info@marketpublishers.com

In this report, the Global Fermentation Chemicals Market has been segmented into the following categories, in addition to the industry trends which have also been detailed below:

Fermentation Chemicals Market, By Product:

- Alcohols
- Enzymes
- Organic Acids
- Other

Fermentation Chemicals Market, By Application:

- Industrial Application
- Food & Beverages
- Nutritional And Pharmaceutical
- Plastics And Fibers
- Other

Fermentation Chemicals Market, By Region:

- North America
  - United States
  - Canada
  - Mexico
- Europe
  - France

+357 96 030922
info@marketpublishers.com

United Kingdom

Italy

Germany

Spain

Asia-Pacific

China

India

Japan

Australia

South Korea

South America

Brazil

Argentina

Colombia

Middle East & Africa

South Africa

Saudi Arabia

UAE

Competitive Landscape

+357 96 030922
info@marketpublishers.com

Company Profiles: Detailed analysis of the major companies present in the Global Fermentation Chemicals Market.

Available Customizations:

Global Fermentation Chemicals market report with the given market data, TechSci Research offers customizations according to a company's specific needs. The following customization options are available for the report:

Company Information

Detailed analysis and profiling of additional market players (up to five).

+357 96 030922
info@marketpublishers.com

# Contents

+357 96 030922
info@marketpublishers.com



## 6. NORTH AMERICA FERMENTATION CHEMICALS MARKET OUTLOOK



## 7. EUROPE FERMENTATION CHEMICALS MARKET OUTLOOK

+357 96 030922
info@marketpublishers.com



## 8. ASIA-PACIFIC FERMENTATION CHEMICALS MARKET OUTLOOK

+357 96 030922
info@marketpublishers.com



## 9. SOUTH AMERICA FERMENTATION CHEMICALS MARKET OUTLOOK

+357 96 030922
info@marketpublishers.com



## 10. MIDDLE EAST AND AFRICA FERMENTATION CHEMICALS MARKET OUTLOOK

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

## I would like to order

Product name: Fermentation Chemicals Market - Global Industry Size, Share, Trends, Opportunity & Forecast, Segmented By Product (Alcohols, Enzymes, Organic Acids, Other), By Application (Industrial Application, Food & Beverages, Nutritional And Pharmaceutical, Plastics And Fibers, Other), By Region & Competition, 2020-2030F

Product link: https://marketpublishers.com/r/FA4A48D8A46CEN.html

Price: US$ 4,500.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:
info@marketpublishers.com

## Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page https://marketpublishers.com/r/FA4A48D8A46CEN.html