

Engineering Enzyme for biosolution Global Market Insights 2025, Analysis and Forecast to 2030, by Market Participants, Regions, Technology, Application

<https://marketpublishers.com/r/E54035A0FB00EN.html>

Date: March 2025

Pages: 84

Price: US\$ 3,200.00 (Single User License)

ID: E54035A0FB00EN

Abstracts

Engineering Enzyme for Biosolution Market Summary

Introduction

Engineering enzymes for biosolutions are specialized biocatalysts designed through synthetic biology and protein engineering, used in pharmaceutical manufacturing, RNA manufacturing, and other applications. The market emphasizes specificity, efficiency, and sustainability, driven by demand for precision bioprocessing and eco-friendly production methods. These enzymes enable complex biochemical reactions, reflecting a sector shaped by biotechnological innovation and the shift toward green chemistry. Key drivers include rising biopharmaceutical demand, advancements in gene editing, and the push for sustainable industrial processes.

Market Size and Growth Forecast

The global engineering enzyme for biosolution market is estimated to reach USD 1.2 to 1.8 billion in 2025, with a projected compound annual growth rate (CAGR) of 6.0% to 7.0% from 2025 to 2030. This growth is propelled by expanding biotech applications and technological advancements in enzyme design.

Regional Analysis

North America: Holds 35-40% market share, with a growth rate of 5-6%. Growth is driven by biotech innovation, with the United States leading in pharmaceutical manufacturing and Canada focusing on RNA applications.

Europe: Accounts for 25-30% market share, with a growth rate of 5-6%. Demand from Germany, the UK, and Switzerland supports stability, driven by sustainable bioprocessing trends.

Asia Pacific: Represents 20-25% market share, with a growth rate of 7-8%. China and

Japan drive growth with biotech scale-up and RNA manufacturing.
Rest of the World: Holds 10-15% market share, growing at 6-7%, with Brazil leading due to emerging biopharma needs.
Trends in North America focus on R&D, while Asia Pacific emphasizes cost-effective production.

Application Analysis

Pharmaceutical manufacturing grows at 6-7%, driven by demand for biologics and small-molecule drugs, with trends toward customized enzymes optimizing synthesis efficiency and reducing costs. RNA manufacturing grows at 7-8%, fueled by mRNA vaccine and therapeutic production, with trends toward high-specificity enzymes enhancing RNA yield and purity. Others, including biofuels and specialty chemicals, grow at 5-6%, with steady demand for sustainable enzyme solutions in niche industrial applications.

Key Market Players

AB Enzymes: A leader in industrial enzymes, AB Enzymes offers engineered solutions for pharmaceutical applications. Known for its high-performance biocatalysts, it serves global biotech markets effectively.

Advanced Enzyme Technologies: Advanced Enzyme provides enzymes for bioprocessing. The company excels in delivering cost-effective, tailored solutions for pharmaceutical and RNA manufacturing.

BASF: BASF supplies engineered enzymes for sustainable applications. It focuses on scalable, efficient biocatalysts for industrial biotech processes.

Codexis: Codexis specializes in protein engineering for pharmaceuticals. Known for its innovative, high-specificity enzymes, it supports drug and RNA production globally.

Enzyme Supplies: Enzyme Supplies offers enzymes for niche biosolutions. It provides reliable, practical solutions for regional biotech needs.

logen Corporation: logen delivers enzymes for industrial applications. The company focuses on sustainable, high-efficiency solutions for bioprocessing.

DSM: DSM provides engineered enzymes for pharma and RNA uses. Known for its advanced biotech solutions, it serves global markets with precision products.

Novonesis: Novonesis offers enzymes for pharmaceutical manufacturing. It excels in delivering sustainable, high-quality biocatalysts for biotech industries.

Transbiodiesel: Transbiodiesel supplies enzymes for biofuel and specialty applications. It focuses on innovative, eco-friendly solutions for niche markets.

Allozymes: Allozymes provides engineered enzymes for RNA and pharma. Known for its cutting-edge technology, it supports high-throughput bioprocessing.

Zymtronix Catalytic Systems: Zymtronix offers enzymes for sustainable applications. It excels in scalable, efficient solutions for industrial biotech.

Arzeda Corp: Arzeda specializes in computational enzyme design. Known for its precision biocatalysts, it serves pharmaceutical and RNA markets.

Quantumzyme: Quantumzyme provides enzymes for bioprocessing. It focuses on innovative, high-performance solutions for Asia's biotech sector.

Invizyme: Invizyme offers engineered enzymes for specialty applications. Known for its tailored, efficient products, it supports emerging biotech needs.

These companies compete on specificity, sustainability, and cost, driving the market through R&D and partnerships.

Porter's Five Forces Analysis

The threat of new entrants is moderate due to high technical and R&D barriers.

Substitutes are low, with chemical catalysts less sustainable. Buyer power is medium, with biotech firms negotiating terms. Supplier power is moderate due to specialized inputs. Rivalry is high, pushing innovation and efficiency.

Market Opportunities and Challenges

Opportunities

Rising biopharmaceutical demand boosting enzyme use.

Advancements in gene editing and protein engineering.

Expansion into sustainable industrial applications.

Challenges

High R&D costs limiting adoption in smaller firms.

Regulatory complexities for biotech applications.

Market saturation in developed regions requiring differentiation.

Contents

CHAPTER 1 EXECUTIVE SUMMARY

CHAPTER 2 ABBREVIATION AND ACRONYMS

CHAPTER 3 PREFACE

3.1 Research Scope

3.2 Research Sources

3.2.1 Data Sources

3.2.2 Assumptions

3.3 Research Method

Chapter Four Market Landscape

4.1 Market Overview

4.2 Classification/Types

4.3 Application/End Users

CHAPTER 5 MARKET TREND ANALYSIS

5.1 Introduction

5.2 Drivers

5.3 Restraints

5.4 Opportunities

5.5 Threats

CHAPTER 6 INDUSTRY CHAIN ANALYSIS

6.1 Upstream/Suppliers Analysis

6.2 Engineering Enzyme For Biosolution Analysis

6.2.1 Technology Analysis

6.2.2 Cost Analysis

6.2.3 Market Channel Analysis

6.3 Downstream Buyers/End Users

CHAPTER 7 LATEST MARKET DYNAMICS

7.1 Latest News

7.2 Merger and Acquisition

7.3 Planned/Future Project

7.4 Policy Dynamics

CHAPTER 8 HISTORICAL AND FORECAST ENGINEERING ENZYME FOR BIOSOLUTION MARKET IN NORTH AMERICA (2020-2030)

8.1 Engineering Enzyme For Biosolution Market Size

8.2 Engineering Enzyme For Biosolution Market by End Use

8.3 Competition by Players/Suppliers

8.4 Engineering Enzyme For Biosolution Market Size by Type

8.5 Key Countries Analysis

8.5.1 United States

8.5.2 Canada

8.5.3 Mexico

CHAPTER 9 HISTORICAL AND FORECAST ENGINEERING ENZYME FOR BIOSOLUTION MARKET IN SOUTH AMERICA (2020-2030)

9.1 Engineering Enzyme For Biosolution Market Size

9.2 Engineering Enzyme For Biosolution Market by End Use

9.3 Competition by Players/Suppliers

9.4 Engineering Enzyme For Biosolution Market Size by Type

9.5 Key Countries Analysis

9.5.1 Brazil

9.5.2 Argentina

9.5.3 Chile

9.5.4 Peru

CHAPTER 10 HISTORICAL AND FORECAST ENGINEERING ENZYME FOR BIOSOLUTION MARKET IN ASIA & PACIFIC (2020-2030)

10.1 Engineering Enzyme For Biosolution Market Size

10.2 Engineering Enzyme For Biosolution Market by End Use

10.3 Competition by Players/Suppliers

10.4 Engineering Enzyme For Biosolution Market Size by Type

10.5 Key Countries Analysis

10.5.1 China

10.5.2 India

10.5.3 Japan

- 10.5.4 South Korea
- 10.5.5 Southeast Asia
- 10.5.6 Australia

CHAPTER 11 HISTORICAL AND FORECAST ENGINEERING ENZYME FOR BIOSOLUTION MARKET IN EUROPE (2020-2030)

- 11.1 Engineering Enzyme For Biosolution Market Size
- 11.2 Engineering Enzyme For Biosolution Market by End Use
- 11.3 Competition by Players/Suppliers
- 11.4 Engineering Enzyme For Biosolution Market Size by Type
- 11.5 Key Countries Analysis
 - 11.5.1 Germany
 - 11.5.2 France
 - 11.5.3 United Kingdom
 - 11.5.4 Italy
 - 11.5.5 Spain
 - 11.5.6 Belgium
 - 11.5.7 Netherlands
 - 11.5.8 Austria
 - 11.5.9 Poland
 - 11.5.10 Russia

CHAPTER 12 HISTORICAL AND FORECAST ENGINEERING ENZYME FOR BIOSOLUTION MARKET IN MEA (2020-2030)

- 12.1 Engineering Enzyme For Biosolution Market Size
- 12.2 Engineering Enzyme For Biosolution Market by End Use
- 12.3 Competition by Players/Suppliers
- 12.4 Engineering Enzyme For Biosolution Market Size by Type
- 12.5 Key Countries Analysis
 - 12.5.1 Egypt
 - 12.5.2 Israel
 - 12.5.3 South Africa
 - 12.5.4 Gulf Cooperation Council Countries
 - 12.5.5 Turkey

CHAPTER 13 SUMMARY FOR GLOBAL ENGINEERING ENZYME FOR BIOSOLUTION MARKET (2020-2025)

- 13.1 Engineering Enzyme For Biosolution Market Size
- 13.2 Engineering Enzyme For Biosolution Market by End Use
- 13.3 Competition by Players/Suppliers
- 13.4 Engineering Enzyme For Biosolution Market Size by Type

CHAPTER 14 GLOBAL ENGINEERING ENZYME FOR BIOSOLUTION MARKET FORECAST (2025-2030)

- 14.1 Engineering Enzyme For Biosolution Market Size Forecast
- 14.2 Engineering Enzyme For Biosolution Application Forecast
- 14.3 Competition by Players/Suppliers
- 14.4 Engineering Enzyme For Biosolution Type Forecast

CHAPTER 15 ANALYSIS OF GLOBAL KEY VENDORS

- 15.1 AB Enzymes
 - 15.1.1 Company Profile
 - 15.1.2 Main Business and Engineering Enzyme for biosolution Information
 - 15.1.3 SWOT Analysis of AB Enzymes
 - 15.1.4 AB Enzymes Engineering Enzyme for biosolution Revenue, Gross Margin and Market Share (2020-2025)
- 15.2 Advanced Enzyme Technologies
 - 15.2.1 Company Profile
 - 15.2.2 Main Business and Engineering Enzyme for biosolution Information
 - 15.2.3 SWOT Analysis of Advanced Enzyme Technologies
 - 15.2.4 Advanced Enzyme Technologies Engineering Enzyme for biosolution Revenue, Gross Margin and Market Share (2020-2025)
- 15.3 BASF
 - 15.3.1 Company Profile
 - 15.3.2 Main Business and Engineering Enzyme for biosolution Information
 - 15.3.3 SWOT Analysis of BASF
 - 15.3.4 BASF Engineering Enzyme for biosolution Revenue, Gross Margin and Market Share (2020-2025)
- 15.4 Codexis
 - 15.4.1 Company Profile
 - 15.4.2 Main Business and Engineering Enzyme for biosolution Information
 - 15.4.3 SWOT Analysis of Codexis
 - 15.4.4 Codexis Engineering Enzyme for biosolution Revenue, Gross Margin and

Market Share (2020-2025)

15.5 Enzyme Supplies

15.5.1 Company Profile

15.5.2 Main Business and Engineering Enzyme for biosolution Information

15.5.3 SWOT Analysis of Enzyme Supplies

15.5.4 Enzyme Supplies Engineering Enzyme for biosolution Revenue, Gross Margin and Market Share (2020-2025)

Please ask for sample pages for full companies list

Tables and Figures

Table Abbreviation and Acronyms

Table Research Scope of Engineering Enzyme For Biosolution Report

Table Data Sources of Engineering Enzyme For Biosolution Report

Table Major Assumptions of Engineering Enzyme For Biosolution Report

Figure Market Size Estimated Method

Figure Major Forecasting Factors

Figure Engineering Enzyme For Biosolution Picture

Table Engineering Enzyme For Biosolution Classification

Table Engineering Enzyme For Biosolution Applications

Table Drivers of Engineering Enzyme For Biosolution Market

Table Restraints of Engineering Enzyme For Biosolution Market

Table Opportunities of Engineering Enzyme For Biosolution Market

Table Threats of Engineering Enzyme For Biosolution Market

Table Covid-19 Impact For Engineering Enzyme For Biosolution Market

Table Raw Materials Suppliers

Table Different Production Methods of Engineering Enzyme For Biosolution

Table Cost Structure Analysis of Engineering Enzyme For Biosolution

Table Key End Users

Table Latest News of Engineering Enzyme For Biosolution Market

Table Merger and Acquisition

Table Planned/Future Project of Engineering Enzyme For Biosolution Market

Table Policy of Engineering Enzyme For Biosolution Market

Table 2020-2030 North America Engineering Enzyme For Biosolution Market Size

Figure 2020-2030 North America Engineering Enzyme For Biosolution Market Size and CAGR

Table 2020-2030 North America Engineering Enzyme For Biosolution Market Size by Application

Table 2020-2025 North America Engineering Enzyme For Biosolution Key Players Revenue

Table 2020-2025 North America Engineering Enzyme For Biosolution Key Players

Market Share

Table 2020-2030 North America Engineering Enzyme For Biosolution Market Size by Type

Table 2020-2030 United States Engineering Enzyme For Biosolution Market Size

Table 2020-2030 Canada Engineering Enzyme For Biosolution Market Size

Table 2020-2030 Mexico Engineering Enzyme For Biosolution Market Size

Table 2020-2030 South America Engineering Enzyme For Biosolution Market Size

Figure 2020-2030 South America Engineering Enzyme For Biosolution Market Size and CAGR

Table 2020-2030 South America Engineering Enzyme For Biosolution Market Size by Application

Table 2020-2025 South America Engineering Enzyme For Biosolution Key Players Revenue

Table 2020-2025 South America Engineering Enzyme For Biosolution Key Players Market Share

Table 2020-2030 South America Engineering Enzyme For Biosolution Market Size by Type

Table 2020-2030 Brazil Engineering Enzyme For Biosolution Market Size

Table 2020-2030 Argentina Engineering Enzyme For Biosolution Market Size

Table 2020-2030 Chile Engineering Enzyme For Biosolution Market Size

Table 2020-2030 Peru Engineering Enzyme For Biosolution Market Size

Table 2020-2030 Asia & Pacific Engineering Enzyme For Biosolution Market Size

Figure 2020-2030 Asia & Pacific Engineering Enzyme For Biosolution Market Size and CAGR

Table 2020-2030 Asia & Pacific Engineering Enzyme For Biosolution Market Size by Application

Table 2020-2025 Asia & Pacific Engineering Enzyme For Biosolution Key Players Revenue

Table 2020-2025 Asia & Pacific Engineering Enzyme For Biosolution Key Players Market Share

Table 2020-2030 Asia & Pacific Engineering Enzyme For Biosolution Market Size by Type

Table 2020-2030 China Engineering Enzyme For Biosolution Market Size

Table 2020-2030 India Engineering Enzyme For Biosolution Market Size

Table 2020-2030 Japan Engineering Enzyme For Biosolution Market Size

Table 2020-2030 South Korea Engineering Enzyme For Biosolution Market Size

Table 2020-2030 Southeast Asia Engineering Enzyme For Biosolution Market Size

Table 2020-2030 Australia Engineering Enzyme For Biosolution Market Size

Table 2020-2030 Europe Engineering Enzyme For Biosolution Market Size

Figure 2020-2030 Europe Engineering Enzyme For Biosolution Market Size and CAGR

Table 2020-2030 Europe Engineering Enzyme For Biosolution Market Size by Application

Table 2020-2025 Europe Engineering Enzyme For Biosolution Key Players Revenue

Table 2020-2025 Europe Engineering Enzyme For Biosolution Key Players Market Share

Table 2020-2030 Europe Engineering Enzyme For Biosolution Market Size by Type

Table 2020-2030 Germany Engineering Enzyme For Biosolution Market Size

Table 2020-2030 France Engineering Enzyme For Biosolution Market Size

Table 2020-2030 United Kingdom Engineering Enzyme For Biosolution Market Size

Table 2020-2030 Italy Engineering Enzyme For Biosolution Market Size

Table 2020-2030 Spain Engineering Enzyme For Biosolution Market Size

Table 2020-2030 Belgium Engineering Enzyme For Biosolution Market Size

Table 2020-2030 Netherlands Engineering Enzyme For Biosolution Market Size

Table 2020-2030 Austria Engineering Enzyme For Biosolution Market Size

Table 2020-2030 Poland Engineering Enzyme For Biosolution Market Size

Table 2020-2030 Russia Engineering Enzyme For Biosolution Market Size

Table 2020-2030 MEA Engineering Enzyme For Biosolution Market Size

Figure 2020-2030 MEA Engineering Enzyme For Biosolution Market Size and CAGR

Table 2020-2030 MEA Engineering Enzyme For Biosolution Market Size by Application

Table 2020-2025 MEA Engineering Enzyme For Biosolution Key Players Revenue

Table 2020-2025 MEA Engineering Enzyme For Biosolution Key Players Market Share

Table 2020-2030 MEA Engineering Enzyme For Biosolution Market Size by Type

Table 2020-2030 Egypt Engineering Enzyme For Biosolution Market Size

Table 2020-2030 Israel Engineering Enzyme For Biosolution Market Size

Table 2020-2030 South Africa Engineering Enzyme For Biosolution Market Size

Table 2020-2030 Gulf Cooperation Council Countries Engineering Enzyme For Biosolution Market Size

Table 2020-2030 Turkey Engineering Enzyme For Biosolution Market Size

Table 2020-2025 Global Engineering Enzyme For Biosolution Market Size by Region

Table 2020-2025 Global Engineering Enzyme For Biosolution Market Size Share by Region

Table 2020-2025 Global Engineering Enzyme For Biosolution Market Size by Application

Table 2020-2025 Global Engineering Enzyme For Biosolution Market Share by Application

Table 2020-2025 Global Engineering Enzyme For Biosolution Key Vendors Revenue

Figure 2020-2025 Global Engineering Enzyme For Biosolution Market Size and Growth Rate

Table 2020-2025 Global Engineering Enzyme For Biosolution Key Vendors Market Share

Table 2020-2025 Global Engineering Enzyme For Biosolution Market Size by Type

Table 2020-2025 Global Engineering Enzyme For Biosolution Market Share by Type

Table 2025-2030 Global Engineering Enzyme For Biosolution Market Size by Region

Table 2025-2030 Global Engineering Enzyme For Biosolution Market Size Share by Region

Table 2025-2030 Global Engineering Enzyme For Biosolution Market Size by Application

Table 2025-2030 Global Engineering Enzyme For Biosolution Market Share by Application

Table 2025-2030 Global Engineering Enzyme For Biosolution Key Vendors Revenue

Figure 2025-2030 Global Engineering Enzyme For Biosolution Market Size and Growth Rate

Table 2025-2030 Global Engineering Enzyme For Biosolution Key Vendors Market Share

Table 2025-2030 Global Engineering Enzyme For Biosolution Market Size by Type

Table 2025-2030 Engineering Enzyme For Biosolution Global Market Share by Type

I would like to order

Product name: Engineering Enzyme for biosolution Global Market Insights 2025, Analysis and Forecast to 2030, by Market Participants, Regions, Technology, Application

Product link: <https://marketpublishers.com/r/E54035A0FB00EN.html>

Price: US\$ 3,200.00 (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/E54035A0FB00EN.html>