

Global Biocatalyst Market Size Study, by Source (Plant, Animal, Micro-organism), by Type (Oxidoreductases, Transferases, Hydrolases, Others), by End-use Industry (Pharmaceutical, Food and Beverage, Water Treatment, Biofuel, Others) and Regional Forecasts 2022-2032

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Abstracts

The Global Biocatalyst Market is valued at approximately USD 1.17 billion in 2023 and is anticipated to grow with a healthy growth rate of more than 6.67% over the forecast period 2024-2032. Biocatalysts, derived primarily from enzymes and whole cells, facilitate a myriad of chemical reactions by expediting the conversion of substrates into products. Leveraging the specificity and efficiency of these biological catalysts, biocatalysis emerges as a pivotal process in the realm of sustainable chemical transformations. The mild reaction conditions under which biocatalysts operate render them highly advantageous, particularly from an environmental and energy efficiency perspective. Biocatalysts have garnered significant traction across various industries including pharmaceuticals, food and beverages, biofuels, and agriculture due to their superior selectivity, reduced energy requirements, and eco-friendly nature compared to traditional chemical catalysts.

The drive towards greener, more sustainable processes is further propelling the market growth. Advances in biotechnology and protein engineering are continually expanding the capabilities and applications of biocatalysts, allowing for the modification of existing enzymes and the discovery of novel ones from extremophilic organisms, thereby broadening their industrial utility. The burgeoning demand in the biopharmaceutical sector for efficient synthesis and modification of biologically active compounds underscores the crucial role of biocatalysts. Additionally, the heightened emphasis on

sustainable and environmentally friendly processes creates a favorable backdrop for the biocatalyst market's expansion. However, the high initial costs associated with the development and production of biocatalysts, coupled with challenges related to their stability and shelf life, particularly under harsh operating conditions, pose constraints to market growth.

The key region in the Global Biocatalyst Market includes North America, Europe, Asia Pacific, Latin America, and Middle East & Africa. In 2023, Asia-Pacific dominates the market and is projected as the fastest-growing region during the forecast period 2024-2032. This growth is driven by significant investments in biocatalyst research and development, coupled with the extensive application of biocatalysts in the region's burgeoning food and beverage sector. The region's focus on sustainable industrial practices and the integration of biocatalysis in various manufacturing processes further bolster market growth.

Major market players

Novozymes

DuPont

DSM

Codexis

BASF SE

Lonza

Amano Enzyme Inc.

Dyadic International Inc.

Biocatalysts Limited

Piramal Pharma Solutions

AB Enzymes

Prozomix Limited

Chr Hansen Holding A/S

Evoxx technologies GmbH

The detailed segments and sub-segments of the market are explained below:

By Source:

Plant

Animal

Micro-organism

By Type:

Oxidoreductases

Transferases

Hydrolases

Others

By End-use Industry:

Pharmaceutical

Food and Beverage

Water Treatment

Biofuel

Others

By Region:

North America

U.S.

Canada

Europe

UK

Germany

France

Spain

Italy

ROE

Asia Pacific

China

India

Japan

Australia

South Korea

RoAPAC

Latin America

Brazil

Mexico

Rest of Latin America

Middle East & Africa

Saudi Arabia

South Africa

RoMEA

Years considered for the study are as follows:

Historical year – 2022

Base year – 2023

Forecast period – 2024 to 2032

Key Takeaways:

Market Estimates & Forecast for 10 years from 2022 to 2032.

Annualized revenues and regional level analysis for each market segment.

Detailed analysis of geographical landscape with Country level analysis of major regions.

Competitive landscape with information on major players in the market.

Analysis of key business strategies and recommendations on future market approach.

Analysis of competitive structure of the market.

Demand side and supply side analysis of the market.

Contents

CHAPTER 1. GLOBAL BIOCATALYST MARKET EXECUTIVE SUMMARY

- 1.1. Global Biocatalyst Market Size & Forecast (2022-2032)
- 1.2. Regional Summary
- 1.3. Segmental Summary
 - 1.3.1. By Source
 - 1.3.2. By Type
 - 1.3.3. By End-use Industry
- 1.4. Key Trends
- 1.5. Recession Impact
- 1.6. Analyst Recommendation & Conclusion

CHAPTER 2. GLOBAL BIOCATALYST MARKET DEFINITION AND RESEARCH ASSUMPTIONS

- 2.1. Research Objective
- 2.2. Market Definition
- 2.3. Research Assumptions
 - 2.3.1. Inclusion & Exclusion
 - 2.3.2. Limitations
 - 2.3.3. Supply Side Analysis
 - 2.3.3.1. Availability
 - 2.3.3.2. Infrastructure
 - 2.3.3.3. Regulatory Environment
 - 2.3.3.4. Market Competition
 - 2.3.3.5. Economic Viability (Consumer's Perspective)
 - 2.3.4. Demand Side Analysis
 - 2.3.4.1. Regulatory frameworks
 - 2.3.4.2. Technological Advancements
 - 2.3.4.3. Environmental Considerations
 - 2.3.4.4. Consumer Awareness & Acceptance
- 2.4. Estimation Methodology
- 2.5. Years Considered for the Study
- 2.6. Currency Conversion Rates

CHAPTER 3. GLOBAL BIOCATALYST MARKET DYNAMICS

3.1. Market Drivers

- 3.1.1. Increasing Demand from the Pharmaceutical Industry
- 3.1.2. Advancements in Genetic Engineering and Biotechnology
- 3.1.3. Rising Emphasis on Sustainable and Green Chemistry Practices

3.2. Market Challenges

- 3.2.1. High Production Costs
- 3.2.2. Limited Stability and Shelf Life of Biocatalysts

3.3. Market Opportunities

- 3.3.1. Expanding Applications in Biofuels and Renewable Chemicals
- 3.3.2. Growing Demand in Food and Beverage Industry
- 3.3.3. Development of Novel Biocatalysts from Extremophilic Organisms

CHAPTER 4. GLOBAL BIOCATALYST MARKET INDUSTRY ANALYSIS

4.1. Porter's 5 Force Model

- 4.1.1. Bargaining Power of Suppliers
- 4.1.2. Bargaining Power of Buyers
- 4.1.3. Threat of New Entrants
- 4.1.4. Threat of Substitutes
- 4.1.5. Competitive Rivalry
- 4.1.6. Futuristic Approach to Porter's 5 Force Model
- 4.1.7. Porter's 5 Force Impact Analysis

4.2. PESTEL Analysis

- 4.2.1. Political
- 4.2.2. Economical
- 4.2.3. Social
- 4.2.4. Technological
- 4.2.5. Environmental
- 4.2.6. Legal

4.3. Top investment opportunity

4.4. Top winning strategies

4.5. Disruptive Trends

4.6. Industry Expert Perspective

4.7. Analyst Recommendation & Conclusion

CHAPTER 5. GLOBAL BIOCATALYST MARKET SIZE & FORECASTS BY SOURCE 2022-2032

5.1. Segment Dashboard

5.2. Global Biocatalyst Market: Source Revenue Trend Analysis, 2022 & 2032 (USD Billion)

- 5.2.1. Plant
- 5.2.2. Animal
- 5.2.3. Micro-organism

CHAPTER 6. GLOBAL BIOCATALYST MARKET SIZE & FORECASTS BY TYPE 2022-2032

6.1. Segment Dashboard

6.2. Global Biocatalyst Market: Type Revenue Trend Analysis, 2022 & 2032 (USD Billion)

- 6.2.1. Oxidoreductases
- 6.2.2. Transferases
- 6.2.3. Hydrolases
- 6.2.4. Others

CHAPTER 7. GLOBAL BIOCATALYST MARKET SIZE & FORECASTS BY END-USE INDUSTRY 2022-2032

7.1. Segment Dashboard

7.2. Global Biocatalyst Market: End-use Industry Revenue Trend Analysis, 2022 & 2032 (USD Billion)

- 7.2.1. Pharmaceutical
- 7.2.2. Food and Beverage
- 7.2.3. Water Treatment
- 7.2.4. Biofuel
- 7.2.5. Others

CHAPTER 8. GLOBAL BIOCATALYST MARKET SIZE & FORECASTS BY REGION 2022-2032

8.1. North America Biocatalyst Market

- 8.1.1. U.S. Biocatalyst Market
 - 8.1.1.1. Source breakdown size & forecasts, 2022-2032
 - 8.1.1.2. Type breakdown size & forecasts, 2022-2032
 - 8.1.1.3. End-use Industry breakdown size & forecasts, 2022-2032
- 8.1.2. Canada Biocatalyst Market
 - 8.1.2.1. Source breakdown size & forecasts, 2022-2032

- 8.1.2.2. Type breakdown size & forecasts, 2022-2032
- 8.1.2.3. End-use Industry breakdown size & forecasts, 2022-2032
- 8.2. Europe Biocatalyst Market
 - 8.2.1. U.K. Biocatalyst Market
 - 8.2.1.1. Source breakdown size & forecasts, 2022-2032
 - 8.2.1.2. Type breakdown size & forecasts, 2022-2032
 - 8.2.1.3. End-use Industry breakdown size & forecasts, 2022-2032
 - 8.2.2. Germany Biocatalyst Market
 - 8.2.3. France Biocatalyst Market
 - 8.2.4. Spain Biocatalyst Market
 - 8.2.5. Italy Biocatalyst Market
 - 8.2.6. Rest of Europe Biocatalyst Market
- 8.3. Asia-Pacific Biocatalyst Market
 - 8.3.1. China Biocatalyst Market
 - 8.3.1.1. Source breakdown size & forecasts, 2022-2032
 - 8.3.1.2. Type breakdown size & forecasts, 2022-2032
 - 8.3.1.3. End-use Industry breakdown size & forecasts, 2022-2032
 - 8.3.2. India Biocatalyst Market
 - 8.3.3. Japan Biocatalyst Market
 - 8.3.4. Australia Biocatalyst Market
 - 8.3.5. South Korea Biocatalyst Market
 - 8.3.6. Rest of Asia Pacific Biocatalyst Market
- 8.4. Latin America Biocatalyst Market
 - 8.4.1. Brazil Biocatalyst Market
 - 8.4.2. Mexico Biocatalyst Market
 - 8.4.3. Rest of Latin America Biocatalyst Market
- 8.5. Middle East & Africa Biocatalyst Market
 - 8.5.1. Saudi Arabia Biocatalyst Market
 - 8.5.2. South Africa Biocatalyst Market
 - 8.5.3. Rest of Middle East & Africa Biocatalyst Market

CHAPTER 9. COMPETITIVE INTELLIGENCE

- 9.1. Key Company SWOT Analysis
 - 9.1.1. Company
 - 9.1.2. Company
 - 9.1.3. Company
- 9.2. Top Market Strategies
- 9.3. Company Profiles

- 9.3.1. Codexis
 - 9.3.1.1. Key Information
 - 9.3.1.2. Overview
 - 9.3.1.3. Financial (Subject to Data Availability)
 - 9.3.1.4. Product Summary
 - 9.3.1.5. Market Strategies
- 9.3.2. BASF SE
- 9.3.3. Lonza
- 9.3.4. Amano Enzyme Inc.
- 9.3.5. Dyadic International Inc.
- 9.3.6. Biocatalysts Limited
- 9.3.7. Piramal Pharma Solutions
- 9.3.8. AB Enzymes
- 9.3.9. Prozomix Limited
- 9.3.10. Chr Hansen Holding A/S
- 9.3.11. evocx technologies GmbH
- 9.3.12. Novozymes
- 9.3.13. DuPont
- 9.3.14. DSM

CHAPTER 10. RESEARCH PROCESS

- 10.1. Research Process
 - 10.1.1. Data Mining
 - 10.1.2. Analysis
 - 10.1.3. Market Estimation
 - 10.1.4. Validation
 - 10.1.5. Publishing
- 10.2. Research Attributes

List Of Tables

LIST OF TABLES

TABLE 1. Global Biocatalyst market, report scope

TABLE 2. Global Biocatalyst market estimates & forecasts by Region 2022-2032 (USD Billion)

TABLE 3. Global Biocatalyst market estimates & forecasts by Source 2022-2032 (USD Billion)

TABLE 4. Global Biocatalyst market estimates & forecasts by Type 2022-2032 (USD Billion)

TABLE 5. Global Biocatalyst market estimates & forecasts by End-use Industry 2022-2032 (USD Billion)

TABLE 6. Global Biocatalyst market by segment, estimates & forecasts, 2022-2032 (USD Billion)

TABLE 7. Global Biocatalyst market by region, estimates & forecasts, 2022-2032 (USD Billion)

TABLE 8. Global Biocatalyst market by segment, estimates & forecasts, 2022-2032 (USD Billion)

TABLE 9. Global Biocatalyst market by region, estimates & forecasts, 2022-2032 (USD Billion)

TABLE 10. Global Biocatalyst market by segment, estimates & forecasts, 2022-2032 (USD Billion)

TABLE 11. Global Biocatalyst market by region, estimates & forecasts, 2022-2032 (USD Billion)

TABLE 12. Global Biocatalyst market by segment, estimates & forecasts, 2022-2032 (USD Billion)

TABLE 13. Global Biocatalyst market by region, estimates & forecasts, 2022-2032 (USD Billion)

TABLE 14. Global Biocatalyst market by segment, estimates & forecasts, 2022-2032 (USD Billion)

TABLE 15. U.S. Biocatalyst market estimates & forecasts, 2022-2032 (USD Billion)

TABLE 16. U.S. Biocatalyst market estimates & forecasts by segment 2022-2032 (USD Billion)

TABLE 17. U.S. Biocatalyst market estimates & forecasts by segment 2022-2032 (USD Billion)

TABLE 18. Canada Biocatalyst market estimates & forecasts, 2022-2032 (USD Billion)

TABLE 19. Canada Biocatalyst market estimates & forecasts by segment 2022-2032 (USD Billion)

TABLE 20. Canada Biocatalyst market estimates & forecasts by segment 2022-2032
(USD Billion)

.....

This list is not complete, final report does contain more than 100 tables. The list may be updated in the final deliverable.

List Of Figures

LIST OF FIGURES

- FIG 1. Global Biocatalyst market, research methodology
- FIG 2. Global Biocatalyst market, market estimation techniques
- FIG 3. Global market size estimates & forecast methods.
- FIG 4. Global Biocatalyst market, key trends 2023
- FIG 5. Global Biocatalyst market, growth prospects 2022-2032
- FIG 6. Global Biocatalyst market, porters 5 force model
- FIG 7. Global Biocatalyst market, PESTEL analysis
- FIG 8. Global Biocatalyst market, value chain analysis
- FIG 9. Global Biocatalyst market by segment, 2022 & 2032 (USD Billion)
- FIG 10. Global Biocatalyst market by segment, 2022 & 2032 (USD Billion)
- FIG 11. Global Biocatalyst market by segment, 2022 & 2032 (USD Billion)
- FIG 12. Global Biocatalyst market by segment, 2022 & 2032 (USD Billion)
- FIG 13. Global Biocatalyst market by segment, 2022 & 2032 (USD Billion)
- FIG 14. Global Biocatalyst market, regional snapshot 2022 & 2032
- FIG 15. North America Biocatalyst market 2022 & 2032 (USD Billion)
- FIG 16. Europe Biocatalyst market 2022 & 2032 (USD Billion)
- FIG 17. Asia Pacific Biocatalyst market 2022 & 2032 (USD Billion)
- FIG 18. Latin America Biocatalyst market 2022 & 2032 (USD Billion)
- FIG 19. Middle East & Africa Biocatalyst market 2022 & 2032 (USD Billion)
- FIG 20. Global Biocatalyst market, company market share analysis (2023)

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