

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:

Global Biocatalyst Market Size Study, by Source (Plant, Animal, Micro-organism), by Type (Oxidoreductases, Tra...

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.

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