

**Single Use Bioreactors Market (3rd Edition) – Distribution by Type of Bioreactor (Stirred Tank, Pneumatically Mixed, Rocker / Rotating, Wave-Induced, Paddle Sleeve, Fixed-Bed, Hollow Fibre, Diffusion, and Orbitally Shaken), Scale of Operation (Lab, Clinical and Commercial), Type of Cell Culture (Mammalian, Insect, Microbial, Viral, Plant and Bacterial), Type of Biologics Synthesized (Vaccine, Monoclonal Antibody, Recombinant Protein, Stem Cell, Cell Therapy, and Gene Therapy), Application Area (Cancer Research, Stem Cell Research, Tissue Engineering / Regenerative Medicine, Drug Discovery / Toxicity Testing and Others), End-users (Biopharmaceutical / Pharmaceutical Industries, Academic / Research Institutes), and Key Geographical Regions (North America, Europe, Asia-Pacific, Latin America, and Middle East and North Africa): Industry Trends and Global Forecasts, 2023-2035**

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## **Abstracts**

The global single use bioreactors market is expected to reach USD 6.60 billion by 2035

anticipated to grow at a CAGR of 17% during the forecast period 2023-2035.

In recent years, biopharmaceuticals have gained immense attention for their outstanding therapeutic effectiveness. The USFDA has approved over 170 biologics in the past 20 years, and more than 10,000 are currently in various stages of development. To manufacture these complex biomolecules, specialized bioprocessing equipment is crucial. While stainless steel bioreactors were once dominant, there's been a gradual shift toward single-use bioreactors. These use disposable bioreactor bags instead of steel vessels and are essential for producing high-quality antibodies, cell therapies, gene therapies, and other bio-therapeutics. This transition brings several advantages over traditional bioreactors. Single-use bioreactors are cost-efficient, saving about 40%, and can shorten production timelines by roughly 35%. They also reduce energy and water consumption by 45%-50%, improve product yield, and lower contamination risks. Consequently, stakeholders across the industry have embraced disposable bioreactors for biologics manufacturing. Moreover, manufacturers are incorporating advanced features like alert systems, electronic process logs, control sensors, touchscreens, remote monitoring, and enhanced safety measures into their offerings. These efforts aim to meet the rising demand for biologics by creating more efficient single-use bioreactors for global markets, encouraging their widespread adoption. The global market for single-use bioreactors is expected to grow significantly to meet the escalating demand for biologics in the forecast period.

## Report Coverage

The report examines the single-use bioreactors market across various dimensions such as type of bioreactor, scale of operation, type of cell culture, type of biologics synthesized, application area, end-users, and key geographical regions

It assesses the market's growth drivers, limitations, opportunities, and challenges while evaluating potential advantages and hurdles faced by stakeholders. Additionally, it offers insights into the competitive landscape among major market players.

Forecasting revenue for market segments across five major regions is a key component, alongside an in-depth analysis of the current state and anticipated future trends within the single-use bioreactors market. This encompasses technological specifications, industry comparisons with conventional stainless steel bioreactors, regulatory standards, challenges, advantages, market

landscapes, and insights into companies involved in developing these bioreactors.

The report provides an overview of single-use bioreactors, emphasizing technology specifications, current/future industry trends, and a comparative analysis with traditional stainless steel bioreactors. This section highlights regulatory standards, existing challenges, and various advantages linked with single-use bioreactors.

Detailed analysis of both commercialized and in-development single-use bioreactors is presented, focusing on parameters such as bioreactor type, operational scale, technology specifications, operational modes, cell culture types, biologics synthesized, end-users, and an overview of market players.

Market trends are thoroughly examined using various graphical representations, including hybrid charts, stacked bar charts, heat maps, and world maps displaying companies engaged in single-use bioreactors based on factors such as company size, bioreactor types, operational modes, biologics synthesized, operational scales, and geographical distribution.

A four-dimensional bubble chart is employed to evaluate the competitiveness of single-use bioreactor manufacturers, considering supplier strength, product portfolio diversity, and strength.

Tabulated profiles of key companies in North America, Europe, Asia-Pacific, and the Rest of the World involved in developing single-use bioreactors are included. Each profile covers an overview, financial information (if available), product portfolio, recent developments, and future outlook.

Analysis of partnerships and collaborations established from 2007 to January 2023 is presented, encompassing types, focus areas, involved biologics, bioreactor types, locations, capacities, and active players.

It evaluates the competitiveness of single-use bioreactors based on supplier strength and product competitiveness, categorized by bioreactor types for comparison.

It offers an opinion on the popularity and perception of key industry stakeholders' brands across various market segments, considering portfolio

strength, diversity, experience, patents, partnerships, and identifying areas for competitive advantage.

A detailed examination of patents filed/granted for single-use bioreactors is included, highlighting trends, leading players, patent valuation, and relative importance.

Exploration of technological advancements in single-use bioreactors, including automation, control sensors, alarm systems, electronic-logs, touch screens, real-time tracking, and their impact on bioprocess development, is discussed.

The report also delves into industry trends, drivers, challenges, and impacts using a SWOT framework, indicating the relative effect of each parameter on the single-use bioreactors industry.

Lastly, an overview of bioprocess controllers and automation systems, including operational scale, key features, compatibility, and details of companies involved in their development, is provided.

## Key Market Companies

Applikon Biotechnology

Biolinx Labsystems

Celartia

Cell Culture Company

Cellexus

Cercell

CESCO Bioengineering

Cytiva

Eppendorf

Merck Millipore

Pall Corporation

PBS Biotech

PerfuseCell

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