

# **U.S. Single-use Bioprocessing Market Size, Share & Trends Analysis Report By Product (Simple & Peripheral Elements, Apparatus & Plants), By Workflow (Upstream, Fermentation, Downstream), By End Use, And Segment Forecasts, 2025 - 2030**

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## **Abstracts**

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### **U.S. Single-use Bioprocessing Market Trends**

The U.S. single-use bioprocessing market size was estimated at USD 9.34 billion in 2024 and is projected to grow at a CAGR of 15.04% from 2025 to 2030. Due to the high demand for biopharmaceuticals, suppliers have made their disposable product offerings more robust and inclusive. Single-use equipment suppliers are trying to fulfill end users' growing and ever-changing expectations. Furthermore, significant technological advancements in bioreactor designs, mixing systems, fluid assemblies, and liner technologies are anticipated to drive the implementation of single-use technology for biopharmaceutical developments & advancements.

The U.S. single-use bioprocessing industry experienced a positive impact from the COVID-19 pandemic, particularly due to the increased demand for single-use products driven by the heightened need for vaccines, treatments, and assays. These products played an important role in facilitating the rapid scaling up of production by biopharmaceutical companies to meet the unprecedented global demand for vaccines. The pandemic underscored the importance of maintaining sterility and minimizing contamination risks in pharmaceutical and biologics production, highlighting the significance of single-use products in such scenarios.

Furthermore, the benefits of using SUT, such as significant cost reduction in capital, decreased time in operation & construction of a facility, and environmental sustainability, have supported the implementation of single-use systems in the bioprocessing market. The current industry trend of perfusion and continuous cell culture in bioprocessing has greatly enabled the use of single-use equipment. Single-use technologies offer enhanced mobility, ease of sampling, higher productivity, and faster product changeovers, further boosting their implementation in the biopharmaceutical industry. The following figure represents the usage of single-use disposables in biopharmaceutical manufacturing.

In addition, membrane adsorbers and columns for downstream chromatography have provided faster product output with decreased processing time and are now the single-use alternative resins. For instance, drug product-filling operations can be carried out in single-use systems. For instance, in August 2023, Trelleborg Healthcare and Medical launched the BioPharmaPrfamily of advanced products and services for fluid path single-use equipment to boost the development of advanced therapies. Similarly, in February 2021, Cytiva acquired Varnx Pharmsystems, a Canadian aseptic filling innovator, and brought single-use flow paths for drug product filling. Due to the growth in single-use trends, the single-use workstation for filling and sterile operations will pose a great opportunity for the players in this market.

With the continued demand for biopharmaceuticals, CMOs have adopted these single-use systems for highly dynamic and frequent changes in product portfolios. Some of the major factors for the adoption of this technology by the CMOs are ease of use, flexibility, energy & capital cost reduction features, and decreased turnaround time for product changeover. Due to the benefits above and process advantages like performance efficiency, SUS has allowed CMOs to transition between product campaigns quickly. The adoption of SUS has resulted in CMOs building multiproduct facilities and providing enhanced services for faster market penetration of commercial products. For instance, in October 2024, Lonza acquired Roche's Genentech facility in Vacaville for USD 1.2 billion. This strategic move significantly expanded its large-scale biological manufacturing capacity, catering to the growing demand for mammalian therapies.

## U.S. Single-use Bioprocessing Market Report Segmentation

This report forecasts revenue growth and provides an analysis of the latest trends in each of the sub-segments from 2018 to 2030. For this report, Grand View Research has segmented the U.S. Single-use bioprocessing market report based on product, workflow, and end use.

Product Outlook (Revenue, USD Million, 2018 - 2030)

Simple & Peripheral Elements

Tubing, Filters, Connectors, & Transfer Systems

Bags

Sampling Systems

Probes, Sensors, & Flow Meters

pH Sensor

Oxygen Sensor

Pressure Sensors

Temperature Sensors

Conductivity Sensors

Flow Meters & Sensors

Others

Others

Apparatus & Plants

Bioreactors

Upt1000L

Above 1000L t2000L

Above 2000L

Mixing, Storage, & Filling Systems

Filtration System

Chromatography Systems

Pumps

Others

Work Equipment

Cell Culture System

Syringes

Others

Workflow Outlook (Revenue, USD Million, 2018 - 2030)

Upstream

Fermentation

Downstream

End Use Outlook (Revenue, USD Million, 2018 - 2030)

Biopharmaceutical Manufacturer

CMOs & CROs

In-house Manufacturer

Academic & Clinical Research Institutes

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