

Downstream Processing Market - Global Industry Size, Share, Trends, Opportunity, and Forecast, Segmented By Product (Chromatography Systems, Filters, Evaporators, Centrifuges, Dryers, Others), By Application (Antibiotic Production, Hormone Production, Antibodies Production, Enzyme Production, Vaccine Production, Others), By Region and Competition, 2019-2029F

<https://marketpublishers.com/r/D67E6429C4DBEN.html>

Date: July 2024

Pages: 185

Price: US\$ 4,900.00 (Single User License)

ID: D67E6429C4DBEN

Abstracts

Global Downstream Processing Market was valued at USD 31.05 Billion in 2023 and is anticipated to project steady growth in the forecast period with a CAGR of 8.15% through 2029. The global downstream processing market is experiencing robust growth, propelled by the increasing demand for biopharmaceutical products, advancements in biotechnology, and the rising prevalence of chronic diseases. Downstream processing plays a pivotal role in the purification and isolation of biotherapeutics, ensuring their safety, efficacy, and compliance with stringent regulatory standards.

Advancements in downstream processing technologies have significantly enhanced productivity, efficiency, and scalability in biopharmaceutical production. Innovations such as high-performance chromatography resins, membrane filtration systems, and automated purification platforms have streamlined the purification process, reducing cycle times and operational costs. Additionally, continuous downstream processing techniques are gaining traction for their ability to improve process robustness, reduce variability, and enhance product quality consistency.

The global downstream processing market is characterized by increasing investments in

biopharmaceutical manufacturing infrastructure and technological innovations. Market players, including biotechnology companies, contract manufacturing organizations (CMOs), and academic research institutes, are investing in expanding their downstream processing capabilities to meet the growing demand for biopharmaceutical products globally. Moreover, strategic collaborations, partnerships, and mergers and acquisitions are reshaping the competitive landscape, fostering innovation and market growth.

Despite its promising growth trajectory, the downstream processing market faces challenges such as high capital costs, operational complexities, and the need for skilled personnel. Addressing these challenges requires ongoing advancements in technology, process optimization, and workforce training. Additionally, the emergence of biosimilars and the trend towards personalized medicine present opportunities for further market expansion, as downstream processing technologies evolve to meet diverse manufacturing requirements and regulatory expectations.

Key Market Drivers

Increasing Demand for Biopharmaceuticals

Biopharmaceuticals, including therapeutic proteins, monoclonal antibodies, vaccines, and nucleic acid-based drugs, are derived from biological sources such as living organisms or their components. Unlike traditional pharmaceuticals, which are chemically synthesized, biopharmaceuticals offer targeted therapies with fewer side effects, making them increasingly preferred for treating complex diseases like cancer, autoimmune disorders, and genetic conditions.

The global biopharmaceuticals market has witnessed significant expansion in recent years, driven by advancements in biotechnology, increasing healthcare expenditure, and growing patient demand for personalized medicine. This growth trajectory is expected to continue, fueled by ongoing research and development efforts in biologics and the expanding pipeline of innovative biopharmaceutical products.

Downstream processing plays a crucial role in the production of biopharmaceuticals by purifying and isolating the desired biomolecules from complex biological mixtures. This process involves a series of steps, including filtration, chromatography, centrifugation, and purification techniques, to achieve high-purity bioactive compounds suitable for therapeutic use. The efficiency and effectiveness of downstream processing directly impact the quality, yield, and cost-effectiveness of biopharmaceutical production.

In July 2024, Delix Therapeutics plans to commence two studies aimed at evaluating patients with major depression, focusing on its leading neuroplastogen candidate, DLX-001. Following the completion of an ongoing Phase I study, the biotech company based in Bedford, Massachusetts, intends to advance the small molecule into two scheduled trials—a Phase Ib study and a Phase II study. DLX-001, designed as a neuroplastogen to enhance neuroplasticity without the undesirable characteristics associated with earlier generations of psychedelics, is expected to exert its effects primarily through Cmax-driven receptor activation, initiating downstream therapeutic effects.

The increasing demand for biopharmaceuticals has created a favorable market environment for downstream processing technologies and services. Key market players, including equipment suppliers, contract manufacturers, and biotechnology companies, are investing in research and development to innovate new downstream processing solutions that cater to diverse biopharmaceutical production needs.

Moreover, the outsourcing trend in biopharmaceutical manufacturing has further bolstered the downstream processing market. Contract manufacturing organizations (CMOs) and contract development and manufacturing organizations (CDMOs) offer specialized expertise and infrastructure for downstream processing, enabling biopharmaceutical companies to focus on core competencies such as drug discovery and clinical development.

Expansion of Contract Manufacturing Organizations (CMOs)

The pharmaceutical landscape is characterized by increasing complexity in biopharmaceutical production and stringent regulatory requirements. CMOs offer expertise in downstream processing technologies, such as chromatography, filtration, and purification, necessary for isolating and refining biologics from biological sources. Their specialized capabilities enable pharmaceutical companies to scale up production efficiently, reduce time-to-market, and mitigate capital expenditures associated with in-house manufacturing.

Outsourcing downstream processing to CMOs provides cost-efficiency benefits, allowing pharmaceutical companies to optimize resource allocation and focus on core competencies, such as drug discovery and clinical development. CMOs leverage economies of scale, advanced manufacturing infrastructure, and regulatory compliance expertise to streamline production workflows and ensure product quality and

consistency. This operational flexibility enables biopharmaceutical firms to adapt to market fluctuations, demand variability, and manufacturing complexities effectively.

CMOs drive innovation in downstream processing through continuous investments in technology upgrades, process improvements, and automation solutions. Advanced technologies, such as single-use systems, continuous manufacturing platforms, and real-time analytics, enhance process efficiency, reduce production costs, and improve product quality attributes. Collaborations between CMOs and technology providers foster the development of next-generation bioprocessing techniques, positioning CMOs as leaders in biopharmaceutical manufacturing innovation.

Founded in August 2020 and located in Amsterdam Science Park, VectorY is a fully integrated gene therapy company specializing in the advancement of innovative therapeutics. With research and development facilities situated in Amsterdam, VectorY focuses on developing proprietary and collaborative programs utilizing its pioneering AAV-based vectorized antibody gene therapy platform. Leveraging next-generation vector technologies, VectorY aims to create product candidates that enable a proprietary and highly scalable manufacturing process. Central to VectorY's operations, the Process Development (PD) department spearheads the internal development, scale-up, and production of novel gene therapies. The downstream processing (DSP) team plays a critical role in recovering and purifying biopharmaceuticals from bioreactor harvests through a series of unit operations, including cell lysis, filtration, chromatography, and UF/DF. Additionally, the DSP team supports technology transfer to Contract Manufacturing Organizations (CMOs) for the production of AAV-based gene therapies intended for clinical trials.

Collaborative partnerships between CMOs, pharmaceutical companies, and biotechnology firms foster knowledge exchange, technology transfer, and joint research initiatives in downstream processing. Strategic alliances enable CMOs to expand service offerings, diversify client portfolios, and address evolving market needs effectively. These partnerships leverage complementary strengths, shared resources, and risk-sharing models to drive innovation, accelerate product development timelines, and capitalize on emerging market opportunities.

Key Market Challenges

Risk of Product Loss and Contamination

Downstream processing involves multiple steps aimed at purifying and isolating

biopharmaceutical products from cell culture or fermentation broth. Throughout these processes, various factors contribute to the risk of product loss and contamination. Product loss can occur during purification steps such as filtration, chromatography, and ultrafiltration/diafiltration (UF/DF). Inefficient recovery or incomplete binding of target molecules to chromatography resins can lead to lower yields and increased production costs.

Contamination poses a significant risk throughout downstream processing. Cross-contamination can occur from microbial agents, host cell proteins (HCPs), nucleic acids, or viral particles, compromising product purity and safety. Maintaining strict segregation and cleaning protocols is essential to mitigate these risks.

Maintaining sterility during downstream processing is critical to prevent microbial contamination. Even minor breaches in aseptic techniques or inadequate sterilization of equipment and facilities can result in microbial growth, leading to batch rejection or product recalls.

Improper handling, storage, or transportation of biopharmaceutical products and intermediates can result in physical degradation or chemical instability. These factors can reduce product efficacy and shelf life, impacting marketability and patient safety.

Product loss and contamination directly impact product quality attributes such as potency, purity, and stability. Deviations from specified quality standards jeopardize regulatory compliance and market approval, delaying product commercialization and increasing regulatory scrutiny. Maintaining consistent product quality is imperative for achieving regulatory approvals and ensuring patient safety in biopharmaceutical manufacturing.

Conducting comprehensive risk assessments to identify potential hazards and vulnerabilities in downstream processing workflows. Implementing robust process design controls, such as closed-system processing and single-use technologies, minimizes exposure to contamination risks.

Validating purification processes, equipment, and cleaning procedures to demonstrate their effectiveness in eliminating contaminants and maintaining product integrity. Qualifying suppliers and raw materials to ensure compliance with quality standards and specifications.

Implementing real-time monitoring and control systems to detect deviations from

process parameters promptly. Automated process monitoring technologies, including sensors and data analytics, enable proactive intervention and corrective actions.

Providing ongoing training and education for personnel on aseptic techniques, GMP (Good Manufacturing Practice) guidelines, and contamination control measures. Fostering a culture of compliance and accountability ensures adherence to regulatory requirements and industry best practices.

Key Market Trends

Regulatory Compliance and Quality Standards

The biopharmaceutical industry operates within a highly regulated environment governed by stringent guidelines and standards set forth by regulatory bodies such as the U.S. Food and Drug Administration (FDA), European Medicines Agency (EMA), and other global health authorities. These regulations are designed to safeguard patient safety, ensure product efficacy, and maintain consistent quality across biopharmaceutical manufacturing processes.

The emphasis on regulatory compliance influences various aspects of downstream processing market dynamics. Manufacturers must invest in state-of-the-art purification technologies, robust quality control systems, and comprehensive documentation practices to meet regulatory requirements. This investment not only ensures compliance but also enhances operational efficiency and product reliability, thereby bolstering market competitiveness.

Achieving and maintaining high-quality standards in downstream processing is not merely a regulatory obligation but also a strategic imperative for biopharmaceutical companies. Rigorous quality assurance practices, including validated purification protocols, in-process monitoring, and comprehensive risk management strategies, are essential to mitigate potential risks and deviations throughout the production lifecycle.

In an increasingly interconnected global marketplace, efforts towards harmonizing international regulatory standards and promoting mutual recognition agreements (MRAs) are gaining traction. These initiatives aim to streamline regulatory compliance across different geographical regions, thereby facilitating smoother market access for biopharmaceutical manufacturers and ensuring uniformity in quality standards worldwide.

Segmental Insights

Product Insights

Based on Product, Filters have emerged as the fastest growing segment in the Global Downstream Processing Market in 2023. Filtration is a critical step in downstream processing, essential for separating and purifying biomolecules such as proteins, antibodies, and vaccines from complex biological mixtures. This process involves the removal of particulates, microorganisms, and impurities to obtain high-purity bioactive compounds suitable for therapeutic applications. The efficiency, reliability, and scalability of filtration technologies significantly impact the quality and yield of biopharmaceutical products.

Continuous innovation in filter design, materials, and manufacturing processes has led to the development of advanced filtration systems with enhanced performance and efficiency. High-performance membranes, depth filters, and chromatography resins are among the innovations that cater to diverse biopharmaceutical purification needs.

Regulatory agencies impose stringent guidelines on biopharmaceutical manufacturers to ensure the safety, efficacy, and quality of therapeutic products. Filters play a crucial role in meeting these regulatory requirements by effectively removing contaminants and impurities, thereby safeguarding product integrity and patient safety.

Filtration technologies offer advantages such as scalability, flexibility, and ease of integration into existing manufacturing processes. Single-use filtration systems, in particular, have gained traction due to their cost-effectiveness, reduced cross-contamination risks, and accelerated turnaround times in biopharmaceutical production.

While initial investment costs for filtration systems can be significant, their operational efficiencies, improved process economics, and reduced resource consumption over the product lifecycle contribute to overall cost savings for biopharmaceutical manufacturers.

Application Insights

Based on Application, Antibiotic Production have emerged as the dominating segment in the Global Downstream Processing Market during the forecast period. Antibiotics are essential therapeutic agents used to treat bacterial infections and combat infectious diseases worldwide. The persistent prevalence of bacterial infections, coupled with emerging antibiotic-resistant strains, underscores the critical need for effective antibiotic

production. Downstream processing plays a crucial role in refining antibiotic compounds from fermentation or synthetic processes, ensuring purity, potency, and safety for clinical use. The high demand for antibiotics in healthcare settings drives market growth, prompting pharmaceutical companies to invest in advanced downstream processing technologies to meet global health challenges effectively.

Technological advancements in downstream processing have revolutionized antibiotic production, enhancing process efficiency, product yield, and quality control. Innovations in chromatography, filtration, and purification techniques enable pharmaceutical manufacturers to optimize production workflows, reduce production costs, and improve the scalability of antibiotic manufacturing. Single-use systems, continuous processing platforms, and real-time monitoring tools further streamline operations, ensuring consistent product quality and regulatory compliance throughout the manufacturing process.

Antibiotic production is subject to stringent regulatory standards and quality assurance requirements imposed by regulatory agencies worldwide, including the U.S. Food and Drug Administration (FDA) and the European Medicines Agency (EMA). Downstream processing technologies ensure compliance with Good Manufacturing Practices (GMP) and pharmacopeial standards, guaranteeing product safety, efficacy, and consistency. Regulatory expertise in managing process validation, batch release testing, and environmental monitoring is essential for pharmaceutical companies to obtain regulatory approvals and market antibiotics globally.

The global reach of antibiotic production is facilitated by pharmaceutical companies' strategic investments in manufacturing facilities, distribution networks, and regulatory approvals. Market expansion efforts focus on addressing regional healthcare needs, enhancing supply chain resilience, and leveraging economies of scale to optimize production efficiencies. Emerging markets in Asia-Pacific, Latin America, and Africa present growth opportunities for antibiotic manufacturers, driven by increasing healthcare infrastructure development, rising healthcare expenditure, and expanding access to essential medicines.

Regional Insights

Based on Region, North America have emerged as the dominating region in the Global Downstream Processing Market in 2023. North America boasts a robust biopharmaceutical ecosystem characterized by world-class research institutions, leading academic centers, and a dense network of biotechnology and pharmaceutical

companies. This ecosystem fosters continuous innovation in downstream processing technologies, from purification techniques to process automation and digitalization. The region's emphasis on research and development (R&D) investment and collaboration accelerates the pace of technological advancements, driving competitiveness in global markets.

North America is at the forefront of technological innovation in downstream processing. The region pioneers the adoption of advanced bioprocessing technologies such as single-use systems, continuous bioprocessing, and high-throughput purification platforms. These innovations enhance process efficiency, reduce production costs, and improve product quality, positioning North American companies as leaders in biopharmaceutical manufacturing.

North America benefits from a mature market environment with established distribution channels, robust intellectual property protection, and strong market access capabilities. Biopharmaceutical companies in the region leverage these advantages to commercialize innovative downstream processing technologies and biopharmaceutical products globally. Strategic partnerships with international distributors and collaborations with global pharmaceutical giants further expand market reach and penetration.

The region attracts and retains a highly skilled workforce comprising scientists, engineers, and technicians with specialized expertise in bioprocessing and downstream technologies. Academic institutions and vocational training programs across North America offer comprehensive education and training in biotechnology, ensuring a steady supply of qualified professionals to support the biopharmaceutical industry's growth and innovation needs.

Key Market Players

Merck KGaA

Sartorius AG

GE HealthCare Technologies Inc.

Thermo Fisher Scientific, Inc.

Danaher Corporation

3M Company

Boehringer Ingelheim International GmbH

Corning Incorporated

Lonza Group Ltd

Dover Corporation

Report Scope:

In this report, the Global Downstream Processing Market has been segmented into the following categories, in addition to the industry trends which have also been detailed below:

Downstream Processing Market, By Product:

- o Chromatography Systems
- o Filters
- o Evaporators
- o Centrifuges
- o Dryers
- o Others

Downstream Processing Market, By Application:

- o Antibiotic Production
- o Hormone Production

- o Antibodies Production
- o Enzyme Production
- o Vaccine Production
- o Others

Downstream Processing Market, By Region:

- o North America

- United States

- Canada

- Mexico

- o Europe

- France

- United Kingdom

- Italy

- Germany

- Spain

- o Asia Pacific

- China

- India

Japan

Australia

South Korea

o South America

Brazil

Argentina

Colombia

o Middle East & Africa

South Africa

Saudi Arabia

UAE

Competitive Landscape

Company Profiles: Detailed analysis of the major companies present in the Global Downstream Processing Market.

Available Customizations:

Global Downstream Processing Market report with the given market data, Tech Sci Research offers customizations according to a company's specific needs. The following customization options are available for the report:

Company Information

Detailed analysis and profiling of additional market players (up to five).

Contents

1. PRODUCT OVERVIEW

- 1.1. Market Definition
- 1.2. Scope of the Market
 - 1.2.1. Markets Covered
 - 1.2.2. Years Considered for Study
 - 1.2.3. Key Market Segmentations

2. RESEARCH METHODOLOGY

- 2.1. Objective of the Study
- 2.2. Baseline Methodology
- 2.3. Key Industry Partners
- 2.4. Major Association and Secondary Sources
- 2.5. Forecasting Methodology
- 2.6. Data Triangulation & Validation
- 2.7. Assumptions and Limitations

3. EXECUTIVE SUMMARY

- 3.1. Overview of the Market
- 3.2. Overview of Key Market Segmentations
- 3.3. Overview of Key Market Players
- 3.4. Overview of Key Regions/Countries
- 3.5. Overview of Market Drivers, Challenges, Trends

4. IMPACT OF COVID-19 ON GLOBAL DOWNSTREAM PROCESSING MARKET

5. GLOBAL DOWNSTREAM PROCESSING MARKET OUTLOOK

- 5.1. Market Size & Forecast
 - 5.1.1. By Value
- 5.2. Market Share & Forecast
 - 5.2.1. By Product (Chromatography Systems, Filters, Evaporators, Centrifuges, Dryers, Others)
 - 5.2.2. By Application (Antibiotic Production, Hormone Production, Antibodies Production, Enzyme Production, Vaccine Production, Others)

- 5.2.3. By Region
- 5.2.4. By Company (2023)
- 5.3. Market Map

6. ASIA PACIFIC DOWNSTREAM PROCESSING MARKET OUTLOOK

- 6.1. Market Size & Forecast
 - 6.1.1. By Value
- 6.2. Market Share & Forecast
 - 6.2.1. By Product
 - 6.2.2. By Application
 - 6.2.3. By Country
- 6.3. Asia Pacific: Country Analysis
 - 6.3.1. China Downstream Processing Market Outlook
 - 6.3.1.1. Market Size & Forecast
 - 6.3.1.1.1. By Value
 - 6.3.1.2. Market Share & Forecast
 - 6.3.1.2.1. By Product
 - 6.3.1.2.2. By Application
 - 6.3.2. India Downstream Processing Market Outlook
 - 6.3.2.1. Market Size & Forecast
 - 6.3.2.1.1. By Value
 - 6.3.2.2. Market Share & Forecast
 - 6.3.2.2.1. By Product
 - 6.3.2.2.2. By Application
 - 6.3.3. Australia Downstream Processing Market Outlook
 - 6.3.3.1. Market Size & Forecast
 - 6.3.3.1.1. By Value
 - 6.3.3.2. Market Share & Forecast
 - 6.3.3.2.1. By Product
 - 6.3.3.2.2. By Application
 - 6.3.4. Japan Downstream Processing Market Outlook
 - 6.3.4.1. Market Size & Forecast
 - 6.3.4.1.1. By Value
 - 6.3.4.2. Market Share & Forecast
 - 6.3.4.2.1. By Product
 - 6.3.4.2.2. By Application
 - 6.3.5. South Korea Downstream Processing Market Outlook
 - 6.3.5.1. Market Size & Forecast

6.3.5.1.1. By Value

6.3.5.2. Market Share & Forecast

6.3.5.2.1. By Product

6.3.5.2.2. By Application

7. EUROPE DOWNSTREAM PROCESSING MARKET OUTLOOK

7.1. Market Size & Forecast

7.1.1. By Value

7.2. Market Share & Forecast

7.2.1. By Product

7.2.2. By Application

7.2.3. By Country

7.3. Europe: Country Analysis

7.3.1. France Downstream Processing Market Outlook

7.3.1.1. Market Size & Forecast

7.3.1.1.1. By Value

7.3.1.2. Market Share & Forecast

7.3.1.2.1. By Product

7.3.1.2.2. By Application

7.3.2. Germany Downstream Processing Market Outlook

7.3.2.1. Market Size & Forecast

7.3.2.1.1. By Value

7.3.2.2. Market Share & Forecast

7.3.2.2.1. By Product

7.3.2.2.2. By Application

7.3.3. Spain Downstream Processing Market Outlook

7.3.3.1. Market Size & Forecast

7.3.3.1.1. By Value

7.3.3.2. Market Share & Forecast

7.3.3.2.1. By Product

7.3.3.2.2. By Application

7.3.4. Italy Downstream Processing Market Outlook

7.3.4.1. Market Size & Forecast

7.3.4.1.1. By Value

7.3.4.2. Market Share & Forecast

7.3.4.2.1. By Product

7.3.4.2.2. By Application

7.3.5. United Kingdom Downstream Processing Market Outlook

- 7.3.5.1. Market Size & Forecast
 - 7.3.5.1.1. By Value
- 7.3.5.2. Market Share & Forecast
 - 7.3.5.2.1. By Product
 - 7.3.5.2.2. By Application

8. NORTH AMERICA DOWNSTREAM PROCESSING MARKET OUTLOOK

- 8.1. Market Size & Forecast
 - 8.1.1. By Value
- 8.2. Market Share & Forecast
 - 8.2.1. By Product
 - 8.2.2. By Application
 - 8.2.3. By Country
- 8.3. North America: Country Analysis
 - 8.3.1. United States Downstream Processing Market Outlook
 - 8.3.1.1. Market Size & Forecast
 - 8.3.1.1.1. By Value
 - 8.3.1.2. Market Share & Forecast
 - 8.3.1.2.1. By Product
 - 8.3.1.2.2. By Application
 - 8.3.2. Mexico Downstream Processing Market Outlook
 - 8.3.2.1. Market Size & Forecast
 - 8.3.2.1.1. By Value
 - 8.3.2.2. Market Share & Forecast
 - 8.3.2.2.1. By Product
 - 8.3.2.2.2. By Application
 - 8.3.3. Canada Downstream Processing Market Outlook
 - 8.3.3.1. Market Size & Forecast
 - 8.3.3.1.1. By Value
 - 8.3.3.2. Market Share & Forecast
 - 8.3.3.2.1. By Product
 - 8.3.3.2.2. By Application

9. SOUTH AMERICA DOWNSTREAM PROCESSING MARKET OUTLOOK

- 9.1. Market Size & Forecast
 - 9.1.1. By Value
- 9.2. Market Share & Forecast

- 9.2.1. By Product
- 9.2.2. By Application
- 9.2.3. By Country
- 9.3. South America: Country Analysis
 - 9.3.1. Brazil Downstream Processing Market Outlook
 - 9.3.1.1. Market Size & Forecast
 - 9.3.1.1.1. By Value
 - 9.3.1.2. Market Share & Forecast
 - 9.3.1.2.1. By Product
 - 9.3.1.2.2. By Application
 - 9.3.2. Argentina Downstream Processing Market Outlook
 - 9.3.2.1. Market Size & Forecast
 - 9.3.2.1.1. By Value
 - 9.3.2.2. Market Share & Forecast
 - 9.3.2.2.1. By Product
 - 9.3.2.2.2. By Application
 - 9.3.3. Colombia Downstream Processing Market Outlook
 - 9.3.3.1. Market Size & Forecast
 - 9.3.3.1.1. By Value
 - 9.3.3.2. Market Share & Forecast
 - 9.3.3.2.1. By Product
 - 9.3.3.2.2. By Application

10. MIDDLE EAST AND AFRICA DOWNSTREAM PROCESSING MARKET OUTLOOK

- 10.1. Market Size & Forecast
 - 10.1.1. By Value
- 10.2. Market Share & Forecast
 - 10.2.1. By Product
 - 10.2.2. By Application
 - 10.2.3. By Country
- 10.3. MEA: Country Analysis
 - 10.3.1. South Africa Downstream Processing Market Outlook
 - 10.3.1.1. Market Size & Forecast
 - 10.3.1.1.1. By Value
 - 10.3.1.2. Market Share & Forecast
 - 10.3.1.2.1. By Product
 - 10.3.1.2.2. By Application

10.3.2. Saudi Arabia Downstream Processing Market Outlook

10.3.2.1. Market Size & Forecast

10.3.2.1.1. By Value

10.3.2.2. Market Share & Forecast

10.3.2.2.1. By Product

10.3.2.2.2. By Application

10.3.3. UAE Downstream Processing Market Outlook

10.3.3.1. Market Size & Forecast

10.3.3.1.1. By Value

10.3.3.2. Market Share & Forecast

10.3.3.2.1. By Product

10.3.3.2.2. By Application

11. MARKET DYNAMICS

11.1. Drivers

11.2. Challenges

12. MARKET TRENDS & DEVELOPMENTS

12.1. Recent Developments

12.2. Product Launches

12.3. Mergers & Acquisitions

13. GLOBAL DOWNSTREAM PROCESSING MARKET: SWOT ANALYSIS

14. PORTER'S FIVE FORCES ANALYSIS

14.1. Competition in the Industry

14.2. Potential of New Entrants

14.3. Power of Suppliers

14.4. Power of Customers

14.5. Threat of Substitute Product

15. COMPETITIVE LANDSCAPE

15.1. Merck KGaA

15.1.1. Business Overview

15.1.2. Company Snapshot

- 15.1.3. Products & Services
- 15.1.4. Financials (As Reported)
- 15.1.5. Recent Developments
- 15.2. Sartorius AG
- 15.3. GE HealthCare Technologies Inc.
- 15.4. Thermo Fisher Scientific, Inc.
- 15.5. Danaher Corporation
- 15.6. 3M Company
- 15.7. Boehringer Ingelheim International GmbH
- 15.8. Corning Incorporated
- 15.9. Lonza Group Ltd
- 15.10. Dover Corporation

16. STRATEGIC RECOMMENDATIONS

17. ABOUT US & DISCLAIMER

I would like to order

Product name: Downstream Processing Market - Global Industry Size, Share, Trends, Opportunity, and Forecast, Segmented By Product (Chromatography Systems, Filters, Evaporators, Centrifuges, Dryers, Others), By Application (Antibiotic Production, Hormone Production, Antibodies Production, Enzyme Production, Vaccine Production, Others), By Region and Competition, 2019-2029F

Product link: <https://marketpublishers.com/r/D67E6429C4DBEN.html>

Price: US\$ 4,900.00 (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/D67E6429C4DBEN.html>

To pay by Wire Transfer, please, fill in your contact details in the form below:

First name:
Last name:
Email:
Company:
Address:
City:
Zip code:
Country:
Tel:
Fax:
Your message:

****All fields are required**

Customer signature _____

Please, note that by ordering from marketpublishers.com you are agreeing to our Terms & Conditions at <https://marketpublishers.com/docs/terms.html>

To place an order via fax simply print this form, fill in the information below
and fax the completed form to +44 20 7900 3970