

# Bioprocess Optimization and Digital Bio-manufacturing: Global Markets

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## Abstracts

### Report Scope

The biggest challenge for a biopharmaceutical company is to produce a high-quality product in a cost-effective manner. The need to harness the first-to-market advantage as well as meet the growing pressure to control costs from consumers, insurance companies and governments has led many biopharmaceutical manufacturers to resort to innovative methods of production. Implementation of process intensification (continuous manufacturing) and use of disposable technologies has significantly boosted the production productivities. Integration of statistical modeling with standard bioprocess optimization methods has also been a positive strategy in achieving the goals of faster production time and better process design.

There is a growing demand from the FDA and other regulatory authorities to comply with the stringent regulatory guidelines of quality and traceability. There is humongous amount of data generated at every step of pharmaceutical manufacturing, including research and development, pilot plant and commercial manufacturing. Various automation systems at the company and at the contract manufacturing sites also generate large amounts of information. The resulting non-standard nomenclature and varying data structures complicate the communication systems, thereby delaying product release. Digital manufacturing (DM) is coming to transform pharmaceutical manufacturing in a big way. The connection between equipment, materials and people brought about by IIoT as well as data analytics platforms are leading to more efficient and faster processes.

The new report for BCC Research on the topic “Bioprocess Optimization and Digital Biomanufacturing: Global Markets” provides a comprehensive analysis of the

bioprocess optimization and digital biomanufacturing market in a global context, including market forecasts and sales through the year 2023. The report will analyze the market by segmenting it into the technologies and solutions that matter the most, namely Manufacturing Technologies, Analytical and Process Control Technologies, and Software. Each of these segments have been sub-divided into different types (as detailed later). This study surveys the bioprocess optimization and digital biomanufacturing market in all the geographic regions, including North America, Europe and emerging markets. The emerging markets segment includes regions like India, China, Korea, Taiwan, Africa, Australia, New Zealand, Canada, Latin America, and more. The applications of digital biomanufacturing in bioprocess optimization, biomanufacturing, and flexible manufacturing have also been dealt with.

The report discusses the critical issues impacting the adoption of DM in pharmaceuticals, as well as emerging trends in DM technologies. It also features the new developments and new product launches in the global market.

The report provides relevant patent analysis and comprehensive profiles of market players in the industry. The industry structure chapter focuses on changing market trends, important manufacturers and suppliers, and their market shares and product offerings. The chapter also covers mergers and acquisitions and any other collaborations or partnerships that happened during the evaluation period of this report that are expected to shape the industry.

BCC Research's new report elaborates on the strengths, weaknesses, threats and opportunities of the global bioprocess optimization and DM market. Any regulatory changes or new initiatives are highlighted.

Excluded from this report are applications of digital manufacturing in other aspects of technology that are not related to pharmaceuticals. Additionally, the focus is on the biopharmaceutical market and not on small molecule drugs.

## Report Includes

91 data tables and 30 additional tables

An overview of the global markets for bioprocess optimization and digital bio-manufacturing (DM)

Evaluation of role of process analytical technologies (PAT) in DM

A look into the new developments, new product launches and regulatory aspects in the global market

Discussion about critical issues impacting the adoption of DM in pharmaceuticals as well as emerging trends in DM technologies

Detailed analysis of industry 4.0 in DM

Comprehensive profiles of market players in the industry, including Agilent Technologies, Thermo Fisher Scientific Inc., Waters Corp., Shimadzu Corp., Sartorius Stedium Biotech GmbH, GE Healthcare, and ABB Ltd.

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BRUKER CORP.  
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EMERSON ELECTRIC CO.  
EPPENDORF AG  
ENDRESS+HAUSER AG  
GEA GROUP  
GE Healthcare Life Sciences  
HAMILTON CO.

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