

Freeze-Drying/ Lyophilization Market by Type (Tray, Shell, Manifold), Scale of operation (Industrial, Lab, Pilot), Application (Food, Pharma & Biotech), Accessories (Loading & Unloading, Monitoring, Vacuum Systems, Drying Chambers) - Global Forecast to 2025

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Abstracts

The global freeze-drying/lyophilization equipment market is projected to reach USD 7.3 billion by 2025 from USD 4.9 billion in 2020, at a CAGR of 8.2% from 2020 to 2025. The increasing demand for food preservation, rapid growth in contract manufacturing and lyophilization services across the world, rising demand for lyophilized products (especially for the manufacturing of new biologic drugs and injectable formulations), and the technological advancements in lyophilization methods are the major factors driving the growth of this market. On the other hand, the increasing utilization of alternative drying techniques in the pharmaceutical and biotechnology industries and failure to meet the cGMP regulatory guidelines set by regulatory bodies (resulting in recalls of lyophilized products) are expected to restrain the growth of this market during the forecast period

“The tray-style freeze dryers segment accounted for the largest market share in 2019.”

Based on type, the freeze-drying/lyophilization equipment market is classified into tray-style freeze dryers, manifold freeze dryers, and shell (rotary) freeze dryers. In 2019, the tray-style freeze dryers segment accounted for the largest share. This segment is also estimated to grow at the highest CAGR during the forecast period. Growth in this market is largely driven by factors such as the increasing demand for contract manufacturing and contract lyophilization services in the pharmaceutical industry, the growing

commercialization of labile drugs, and the rising demand for freeze-dried food products. Tray-style freeze dryers are also larger than manifold and rotary freeze dryers, enabling them to dry products in bulk.

“The industrial-scale lyophilization equipment segment accounted for the largest market share in 2019.”

Based on scale of operation, the freeze-drying/lyophilization equipment market is segmented into industrial-scale lyophilization equipment, pilot-scale lyophilization equipment, and laboratory-scale lyophilization equipment. In 2019, the industrial-scale lyophilization equipment segment accounted for the largest share of the market. The large share of this market segment can be attributed to the high standard of quality provided by industrial-scale lyophilization equipment. Industrial-scale lyophilization equipment can also be customized as per process requirements.

“The food processing and packaging segment accounted for the largest market share in 2019.”

Based on application, the freeze-drying/lyophilization equipment market is segmented into food processing and packaging, pharmaceutical and biotechnology manufacturing, medical applications, and other applications. The food processing and packaging segment accounted for the largest share in 2019. Lyophilization is widely used as a preservation technique for food products, as it retains the nutritional value and flavor of the food. This is a major factor driving market growth. Food ingredients are also freeze-dried to increase their shelf life, which is further propelling the use of this technology in food processing.

“The loading & unloading segment accounted for the largest market share in 2019”

Based on accessories, the freeze-drying/lyophilization equipment market is segmented into vacuum systems, loading & unloading systems, clean-in-place (CIP) systems, drying chambers, controlling & monitoring systems, freeze-drying trays & shelves, manifolds, and other accessories. In 2019, loading & unloading systems held the largest share, this segment is also expected to grow at the highest CAGR during the forecast period. The high growth of this segment can be attributed to technological advancements in lyophilization equipment, reduced cycle times, and improved productivity and fulfillment of aseptic conditions to meet cGMP regulations.

“Asia –Pacific was the largest regional market for freeze drying / lyophilization

equipment market in 2019 “

The freeze-drying/lyophilization equipment market is segmented into five major regions, namely, North America, Europe, the Asia Pacific, Latin America, and the Middle East & Africa. In 2019, the Asia Pacific accounted for the largest share of the market and is projected to register the highest CAGR of during the forecast period. The large share of the Asia Pacific regional segment can be attributed to the rising number of investments in this region, growth in R&D expenditure, and geographic expansion of lyophilization equipment companies in this region. Moreover, the presence of major players in the lyophilization market in the APAC region and the expansion of the manufacturing units of leading pharma companies in this region is expected to boost the market growth in this region in the forecast period.

Some of the prominent players in this market are GEA Group (Germany), Azbil Corporation (Japan), Shanghai Tofflon Science Technology Co., Ltd. (China), IMA S.p.A. (Italy), SP Industries, Inc. (US), HOF Enterprise Group (Germany), Labconco Corporation (US), Martin Christ Gefriertrocknungsanlagen GmbH (Germany), Millrock Technology, Inc. (US), and OPTIMA Packaging Group GmbH (Germany).

The break-down of primary participants is as mentioned below:

By Company Type - Tier 1: 40%, Tier 2: 35%, and Tier 3: 25%

By Designation - C-level: 25%, Director-level: 55%, and Others: 20%

By Region - North America: 40%, Europe: 25%, Asia Pacific: 20%, Latin America: 10%, and the Middle East & Africa: 5%

Research Coverage:

The report analyzes the freeze-drying/lyophilization equipment market and aims at estimating the market size and future growth potential of various market segments, based on by type of lyophilization equipment, scale of operation, application, accessories, and region.

The report also provides a competitive analysis of the key players operating in this market, along with their company profiles, product offerings, recent developments, and key market strategies.

Reasons to Buy the Report

This report will enrich established firms as well as new entrants/smaller firms to gauge the pulse of the market, which, in turn, would help them garner a greater share of the market. Firms purchasing the report could use one or a combination of the below-mentioned strategies to strengthen their positions in the market.

This report provides insights on:

Market Penetration: Comprehensive information on the product portfolios of the top players in the freeze-drying/lyophilization equipment market. The report analyzes this market by type of lyophilization equipment, scale of operation, application, accessories, and region.

Market Development: Comprehensive information on the lucrative emerging markets, by type of lyophilization equipment, scale of operation, application, accessories, and region.

Market Diversification: Exhaustive information about the product portfolios, growing geographies, recent developments, and investments in the freeze-drying/lyophilization equipment market

Competitive Assessment: In-depth assessment of market shares, growth strategies, product offerings, and capabilities of the leading players in the freeze-drying/lyophilization equipment market

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13.16 MECHATECH SYSTEMS LTD.

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13.18 FREEZE DRYING SYSTEMS PVT. LTD.

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13.20 CRYOTEC FR.

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*Details on Business Overview, Products & Services offered, Recent Developments, Inorganic Strategies, MnM View might not be captured in case of unlisted companies.

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About

Freeze drying is an efficient method for drying various unstable, heat sensitive, aqueous products in various industries. Freeze drying provides a prolonged storage by removing about XX–XX% of the moisture from these products. In healthcare industry, freeze drying is mostly used in pharmaceutical and biotech industries. Rapidly evolving pharmaceutical and biotech industries across the globe is the key driver for the growth of this market.

Rising investments in lyophilization of biopharmaceuticals by leading market players, robust growth of contract manufacturing and contract lyophilization services in pharmaceuticals industry are some of the key factors expected to play a vital role in growth of the freeze drying market during the forecast period of 2014 to 2019.

In addition, growing adoption of automated loading and unloading systems, clean-in-place (CIP) systems, and controlling and monitoring systems in freeze drying systems in order to minimize manual errors, improve processing time, and reduce operating costs are expected to promote greater uptake of technologically advanced freeze drying systems in the global healthcare industry.

In this report, the freeze drying market is broadly segmented into equipment market and accessories market. The equipment market is further segmented based on the scale of operations and technology. Based on the scale of operations the freeze drying equipment market is segmented as lab scale, pilot scale, and industrial scale freeze dryers; whereas, based on the technology, the freeze drying market is segmented as manifold freeze dryers, rotary freeze dryers, and tray-style freeze dryers. On the other hand, the freeze drying accessories market is classified as vacuum systems, loading and unloading systems, control and monitor facilities, clean-in-place (CIP) systems, drying chambers, freeze drying trays/shelves, manifolds, and other freeze drying accessories such as valves, filters, adapters, and glassware.

In 2013, the freeze drying equipment accounted for the largest share of XX% of the global freeze drying market; whereas, freeze drying accessories accounted for the remaining XX% share of this market. Based on the scale of operations, the industrial-scale freeze dryers held the largest share—XX%—of the freeze drying equipment market in 2013. However, pilot-scale freeze dryers market is expected to grow at a fastest CAGR of XX% during the forecast period.

As in 2013, Asia-Pacific region accounted for the largest share—XX%—of the global freeze drying market, followed by North America (XX%) and Europe (XX%). Furthermore, in the forthcoming years, developing regions such as Asia-Pacific (China and India) and Latin America (Brazil, Mexico, Argentina) are expected to provide strong revenue growth opportunities for the market players. Economic developments, rising shift of pharmaceutical and biotech industries from developed countries to Asia-Pacific and Latin American regions, growing investments of foreign freeze drying market players in these regions, and increasing private investments and venture funding to support new biopharmaceutical product developments in these regions are the key factors driving the growth of the freeze drying market in developing regions.

The freeze drying market is fragmented with top XX players accounting for less than XX% share of the global freeze drying market. GEA Group (Germany), Azbil Corporation (Japan), IMA S.p.A. (Italy), Tofflon Science and Technology Co., Ltd. (China), SP Industries Inc. (U.S.), Labconco Corporation (U.S.), Optima Packaging Group GmbH (Germany), HOF Enterprise Group (Germany), Martin Christ Gefriertrocknungsanlagen GmbH (Germany), and Millrock Technology, Inc. (U.S.) are some of the major players in the freeze drying market. New product launches and partnerships, agreements, and collaborations are the key strategies adopted by leading market players in the past three years to ensure their growth in the market.

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Product name: Freeze-Drying/ Lyophilization Market by Type (Tray, Shell, Manifold), Scale of operation (Industrial, Lab, Pilot), Application (Food, Pharma & Biotech), Accessories (Loading & Unloading, Monitoring, Vacuum Systems, Drying Chambers) - Global Forecast to 2025

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