

## Demand for freeze dryers to increase

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The sale of freeze dryers to the biotech industry has seen a steady growth in the last few years. It is expected to pick up as companies like the Serum Institute of India are soon to launch lyophilized biotech products.

Freeze-drying is a method of preserving products, ideal for preserving the properties of active ingredients (proteins, enzymes), microorganisms, chemical and natural products.

In the bio industry, freeze dryers are used to preserve living cells, vaccines, whole blood and biological specimens. They find application in specimen preparation for scanning electron microscopy and transmission electron microscopy.

Some of the global players who are manufacturing and supplying freeze dryers include Warwick Manufacturing & Equipment Co, Niro, and LTE Scientific, BOC Edwards, Girovac, Labconco, Thermo Electron, Elliott Bay Laboratory, Angler Web Services, The Pump Works, Kinetics Thermal Systems, Cole-Parmer Instrument, Pharos Consultancy, VirTis, TGR, Hull Company, Global Medical Instrumentation, American Lyophilizer, Freeze Dry Co and Martin Christ.

In India, both local and multinational players sell freeze dryers. Some of the key players in this space include Martin Christ, Lyophilization Systems, Thermo Electron, Labconco, VirTis, Operon and LTE Scientific. Most of the multinationals have distributors to offer a range of freeze dryers in the country. Biodigital India represents Martin Christ for its range of freeze dryers in the country and offers laboratory, pilot and also production scale dryers. Sunjay Technologies Pvt Ltd represents

LTE Scientific UK, Raj International represents a Chinese company called Shanghai Tofflon Science & Technology Co Ltd; Care Biomedicals represents Labconco; JH Bio Innovations Pvt Ltd represents a Korean company Operon; and Spinco Biotech represents R&D freeze dryers from VirTis, USA. Other companies who are into the manufacture of production scale freeze dryers in India include Rattan Sales Corporation and Lyophilization Systems.

Lyophilization Systems, a US-based multinational company is amongst the key manufacturers and suppliers of lyophilizer, freeze drying equipment and freeze dryers for the pharmaceutical, food and research industries. Freeze dryer machines are manufactured in India. Rattan Sales Corporation, a group company of Rattan Group of Industries, which is engaged in providing total solutions in lab equipment, has also been manufacturing freeze dryers for the last 10 years. It has been offering its freeze dryers under the brand name Spencers.

### **Market scenario**

"The overall market for freeze dryers is growing at a rate of 20 percent. A major user of freeze dryers is the food processing industry. It is followed by pharma and biotechnology. Freeze dryers are available in the price range of Rs 10 lakh to Rs 2.5 crore. The high- cost dryers are mainly used in the production houses," said Narendar D, manager, Lyophilization Systems India Pvt Ltd.

Manoj Shiltri, product manager, Care Biomedicals, which represents Labconco in India said, "There are two types of freeze dryers available. One for laboratory level and other one for the production level. We offer lab scale freeze dryers. There has been a steady growth for freeze dryers in the last three to four years. On an average about 100 units of lab scale freeze dryers are sold per year. In the lab scale category, freeze dryers are available from one liter to a maximum of 25 liters. Each unit will cost anywhere between \$5,000 and \$40,000. Although there are few local manufacturers, they find it difficult to match the imported units in terms of quality."

Akshay Mehta, director, sales and marketing, Sunjay Technologies Pvt Ltd, that represents LTE Scientific said, "Freeze dryers have wider applications and are used in different sectors like food processing, fisheries, biotechnology and blood sampling. On an average about 20-30 units costing Rs 4-18 lakh are being sold to the companies and institutes involved in biotechnology. Since quality is the key factor in biotechnology, companies prefer imported products."

Sharing his views, Pratul Kumar, manager, sales and technical services, Rattan Sales Corporation said, "The market for freeze dryers has been opening up in the biotechnology space in the last few years. We are receiving about 10-12 enquiries every month from pharma and biotech companies. The situation was not similar a few years back. In spite of this, it is difficult to predict the growth of the market for any equipment."

Realizing the applications of freeze dryers, biotech companies like the Serum Institute of India are now working on lyophilized biotech products. Once this becomes a reality, the demand for freeze dryers will increase in the coming years. And in addition, if the companies who are supplying the freeze dryers get some kind of relief from the government in the form of duty reduction, there is every possibility that it will be passed on to the biotech industry. The market for freeze dryers is expected to grow in the coming years with the growth of biotech industry.

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