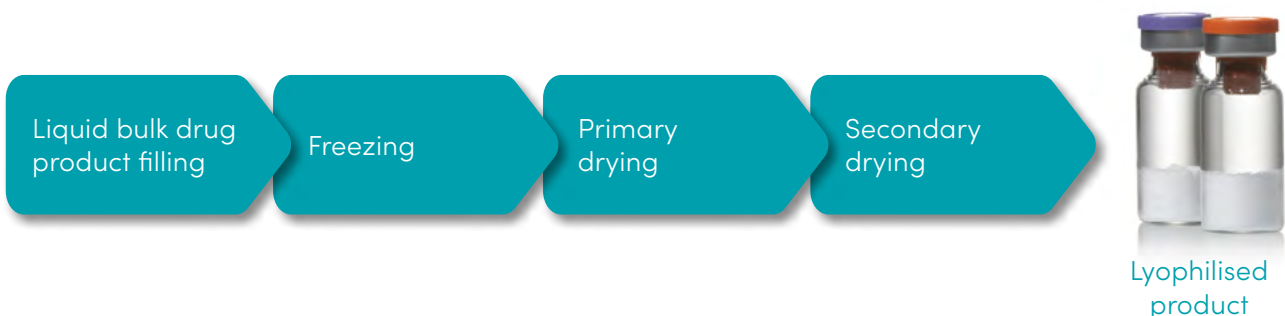


Centre of excellence for lyophilisation of products in vials with highly automated, state-of-the-art equipment



Lyophilisation refers to the process of freeze-drying a solution under a vacuum and drying the resulting product, transforming a liquid product into a powder that is more stable at more moderate, noncryogenic temperatures. This process extends the shelf life of unstable solutions, including biologics in aqueous solutions. It also offers other benefits such as simplifying the formulation process – as preservatives or specialist techniques are no longer required – and the logistical requirements of the treatment.



Recipharm has the expertise and capabilities to provide rapid, high-capacity aseptic lyophilisation of pharmaceuticals to support a wide range of sterile fill and finish projects. With over 50 years of experience handling lyophilisation and aseptic filling, our sites adhere to the highest regulatory standards and have been certified by all major regulatory bodies, including the US FDA, Anvisa, Russian MoH, KFDA, Japan, and Turkey.

Our lyophilisation services include:

- ▶ World-class scientific expertise
- ▶ Disposable (single-use system) manufacturing options
- ▶ Extensive range of vial sizes, including ISO standards.

To meet all your unique project needs, whatever the stage you are at in your development journey, as a leading lyophilisation CDMO, we are well-equipped to deliver sterile pharmaceutical freeze-drying services to our clients. We have extensive in-house capability to develop and optimise lyophilisation cycles in our R&D lab and can support you to seamlessly scale up to commercial production.

- ▶ Transfer of developed programmes for production scale
- ▶ Lyo cycle development and optimisation
- ▶ Performing technical trials for testing of packaging materials.

Whether you're an industry giant or an ambitious start-up, we have the flexibility to tailor our support to the specific needs of your product through manufacture and commercialisation. To ensure success we house high speed filling line and advanced lyophilisation systems.

- ▶ Laser optic-controlled transfer system
- ▶ CIP/SIP program
- ▶ Automatic loading and unloading.

Unique Crimping equipment

- ▶ Automatic Movable Crimping Station for all freeze dryers
- ▶ The set-up enables us to operate with the freeze dryers in parallel with no impact on the planning and maximising operational efficiency.

At Recipharm, we have an excellent track record and a long-standing relationship with our multinational customers due to our consistent on-time delivery.

Ready to meet your lyophilisation project needs with our market leading services? Contact us today!



About us

Established in 1995, Recipharm's manufacturing, fill & finish, and delivery-device services encompass a wide variety of drug dosage forms and modalities. Recipharm is an industry leading CDMO with over 30 facilities and 7,400 employees globally – supporting companies that are developing small molecules, biologics, and drug-device combinations. The company operates development and manufacturing facilities in France, Germany, India, Israel, Italy, Portugal, Spain, Sweden, the UK and the US.

Introducing ReciBioPharm, Recipharm's biologics business combining the capabilities of recently acquired CDMOs Arranta Bio, Genlbet and Vibalogics. Our expanded biologics drug development and manufacturing services encompass technologies based on live viruses and viral vectors, live-microbial biopharmaceutical products, recombinant proteins, nucleic acid-based mRNA and plasmid DNA production.