

FREEZE DRYING TECHNOLOGY: PRODUCT, PROCESS & SYSTEMS

17-19 FEBRUARY, 2026

WINCHESTER, UNITED KINGDOM



Course overview

This course provides a comprehensive insight into a wide range of elements in freeze drying, including details on the concepts and practical aspects of each step of the process, principles and methodologies for formulation development and characterization. Additionally, it covers approaches to cycle development and scale-up including Quality by Design, fundamental equipment features of refrigeration, vacuum and control systems i.e. PAT tools, and aspects of troubleshooting, maintenance and qualification.

Suitable for industries including:

- ✓ Pharma R&D to Production
- ✓ Diagnostics
- ✓ Lyo Processing & Production
- ✓ Biotechnology
- ✓ Cytotoxics

What is covered in the price?



Over 18h of freeze drying content



Printed learning materials (full lectures notes)



Lunch & Refreshments



Joint dinner with training participants



Course schedule

Day 1: Foundations of Freeze Drying Technology



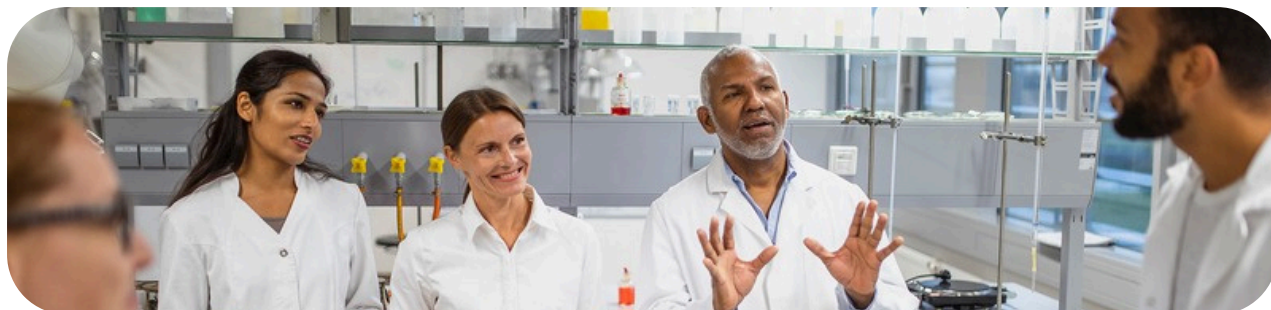
Start with a solid grounding in freeze drying, covering the essentials of freezing, annealing, and drying phases, plus key system components like refrigeration, stoppering, and condensers. Participants will gain insights into foundational concepts and formulation strategies for effective and consistent freeze drying results.

Day 2: Advanced Techniques & Process Control



Dive deeper into formulation characterization, vacuum and temperature calibration, and cycle development. This day covers the essentials of scale-up, validation, and innovative SMART & ControlLyo technologies, capped off with a hands-on workshop to apply the day's learning in a practical context.

Day 3: Maintenance, Quality & Compliance



Focus on the long-term reliability of freeze drying operations with sessions on maintenance strategy, Quality by Design (QbD), and sterilization. Explore CIP systems and critical product analysis techniques. The day concludes with an interactive workshop, equipping participants with practical tools for robust and compliant freeze drying processes.

****Course agenda available upon request****

About our instructors **Andrew Ray**



Andrew has been part of Biopharma Group's Engineering Department for five years, specialising in the service, repair, and installation of SP freeze dryers and analytical instruments. In recent years, he has expanded his role to include equipment validation and engineering training. Before joining Biopharma, Andrew served in the Royal Navy Submarine Service and spent two decades in the Oil & Gas sector, gaining extensive technical and training experience.

Mervyn Middleton



After earning a BSc (Hons) in Biochemistry from the University of Portsmouth in 2009, Mervyn joined Biopharma Group where he worked through to 2015, gaining expertise in product analysis and lyo cycle development. Returning in 2021 as a Senior Scientist, Mervyn has worked on over 50 projects, including pre-lyophilised and lyophilised product characterisation, formulation development, freeze drying cycle optimisation, process auditing, and consultancy across all stages of lyo development and scale-up.

Venue information

Biopharma House, Winnall Valley Road
Winchester, SO23 0LD, United Kingdom

Registration

Use our online form to register for this training courses. We will contact you to confirm payment details, number of attendees and course choice.

Please note that multiple bookings from the same organisation can qualify for a discount, contact us for more details.

[Book Your Spot](#)

Accomodation

Please note that the cost of accommodation is not included in the course fee and that bedroom bookings must be made by the participants. A list of local hotels will be provided with the registration confirmation.

Cost: £3,220

[Pay Now](#)

Contact us

Email: btl@biopharma.co.uk
Telephone: +44 (0)1962 841092
Website: biopharmagroupcdmo.com