

FREEZE DRYING TECHNOLOGY: PROCESS DEVELOPMENT IN PRACTICE HANDS-ON

16-18 JUNE, 2026
CORK, IRELAND



biopharma
group



UCC

University College Cork, Ireland
Colaiste na hOllscoile Corcaigh

Course overview

This three-day lyophilization training course provides a comprehensive blend of theory and hands-on experience, covering freeze-drying fundamentals, formulation strategies, cycle development, process monitoring, and product analysis techniques. Participants will gain practical expertise in freeze-dryer programming, equipment functionality, lyophile evaluation, and optimization methods, ensuring they can develop, monitor, and refine lyophilization processes for pharmaceutical, biotech, and research applications.



What is covered in the price?



18h of freeze drying
content



Printed learning materials
(full lectures notes)



Lunch & Refreshments



Joint dinner with training
participants

Suitable for industries including:

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

Course schedule

Day 1: Fundamentals & Formulation in Freeze Drying



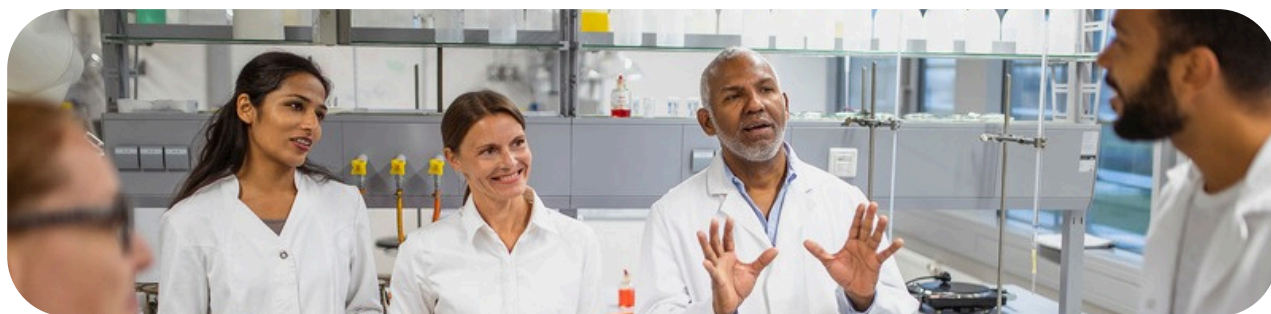
The course begins with an introduction to freeze-drying technology, covering product freezing, formulation concepts, and drying processes. The afternoon focuses on formulation characterization methods, followed by a hands-on session where participants gain practical experience in characterization techniques.

Day 2: Cycle Development & Process Monitoring



Day 2 covers process monitoring, cycle development, and hands-on freeze-drying execution. Participants will prepare formulations, program the freeze-dryer, and analyze equipment functionality. The day concludes with advanced cycle strategies, group analysis of lyophile appearance, and a final cycle review.

Day 3: Advanced Product Analysis & Cycle Termination



On the final day, we focus on secondary drying, cycle scale-up, and robustness testing, followed by product analysis techniques like moisture determination, thermal analysis, and CCIT. The afternoon includes hands-on lyophile analysis and concludes with a Q&A and wrap-up session, ensuring a comprehensive learning experience.

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

About our instructors **Dr. Bhaskar Pandya**



Bhaskar joined Biopharma Group in 2021 as a Senior Scientist after earning a PhD on single-vial freeze drying monitoring using vial impedance spectroscopy (TVIS) at De Montfort University, UK. At Biopharma's Winchester lab, Bhaskar manages collaborative pharma and diagnostics projects and provides consultancy for new and existing products. He also holds a Master's by Research (MRes) from University College London, enhancing his expertise in the field.

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

College Rd, University College, Cork, Ireland

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](#)

[Pay Now](#)

Accommodation

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: €3,715

Early Bird Rate: €3,135

Deadline: April 3rd 2026

Contact us

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