LYOPHILISATION TECHNOLOGY:
PROCESS DEVELOPMENT IN PRACTICE

biopharma group

intelligent freeze drying

2021
WINCHESTER, UK

COURSE SCHEDULE

DAY ONE- THREE

Course Overview

This course offers an opportunity to combine class-based learning with a significant practical element, where approximately 40% of the time will be spent carrying out hands-on freeze drying and related analytical techniques in the laboratory. The class-based element covers the journey from formulation design and characterisation, through the fundamentals of freezing and sublimation and related Process Analytical Technology (PAT), to aspects of product analysis and Quality by Design. The laboratory-based sessions will include freeze drying microscopy, differential scanning calorimetry and impedance analysis of a simple formulation - the data are then used to crate a freeze drying cycle, which is completed during the course.

+ Day One

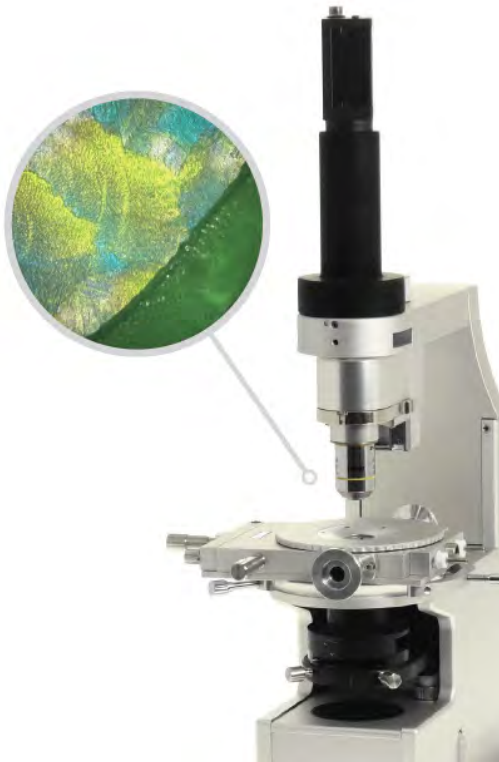
- Welcome & Course Opening
- Introduction to Freeze Drying Technology
- Characterisation methods &
- stages of Freeze Drying
- Lunch (included)
- Characterisation Techniques
- DTA/ Impedance Analysis
- mDSC; visual assessment of Freeze Dried Product
- Discussion of analysis results and conclusions

+ Day Two

- Theory of cycle development
- SMART & ControLyo Technology
- Preparation for Freeze Drying: filling and stoppering vials, loading and programming a freeze dryer
- Lunch (included)
- Secondary Drying and PAT
- Observation of 2 cycles in progress (the students' and the lecturers')
- Conclusions and discussions from results

+ Day Three

- Programming Secondary Drying
- Troubleshooting workshop: what goes wrong and how to identify and resolve issues
- Lunch
- Post-processing characterisation
- Post-processing characterisation techniques including Karl Fisher and mDSC
- Conclusions and course summary
- Course Ends



IS THIS COURSE RIGHT FOR YOU?

IF YOU'RE INTERESTED IN:

1) Biotechnology
2) Pharmaceutics
3) Freeze Drying Formulation and Cycle Development
4) Diagnostic industries

MEET THE EXPERTS

+ Dr. Kevin Ward

Kevin was awarded his PhD for studies in pharmaceutical freeze drying, focusing on the use of protective agents in formulations of proteins and liposomes for drug and vaccine delivery. He is R&D Director at BTL and regularly lectures on the freeze drying process.

+ Thomas Peacock

With an MSc in Pharmaceutical Analysis, Tom has managed many commercial freeze drying projects typically involving formulation development and characterisation, looking at key product factors and designing robust and efficient cycles.

£1,980
PRICE

£1,760
EARLY BIRD

BIOPHARMA HOUSE

WINNALL VALLEY ROAD, SO23 OLD

BOOK NOW

http://bit.ly/RegisterYourInterest

Tel:+44 (0) 1962 841092

Website: www.intelligentfreezedrying.com

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.

*fees include morning and afternoon breaks, lunch and full lecture notes

Early bird prices to be confirmed.

Payment must be made in full before the start of the course to guarantee a place. Payment by BACS or credit/debit card is acceptable - please note we cannot accept payment by cheque. An invoice will be issued on receipt of booking. Payments in credit/debit card will be charged in GBP at the prevailing exchange rate as set by xe.com. An invoice will be issued on receipt of booking. Discounts are also available for academia and multiple bookings from the same company, please contact Sally Potentier at spotentier@biopharma.co.uk for more information. Cancellation in writing more than 5 weeks before the course start date will incur a service charge of 30% of the applicable fee. No refunds can be made for cancellation after this date. Substitutes will be accepted at any time. Transfer to another scheduled course must be made in writing and a service charge will be incurred. Full T&Cs available on request.

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