



LYOPHILISATION FUNDAMENTALS:

HANDS-ON PRACTICAL TRAINING FOR
THE PHARMACEUTICAL INDUSTRY



**TECHNOLOGY
CENTRE**
ENTERPRISE IRELAND
IDA IRELAND SUPPORTED



**AUGUST 31ST,
SEPTEMBER 1ST & 2ND,
2021**



COURSE OVERVIEW

This special, hands-on course is useful for anyone in research or the pharma industry, involved in lyophilisation.

The programme has been constructed to satisfy those who are new to freeze drying by offering a one day overview but also adding the following two days for those wanting to experience the practical aspects of the theory.

Delegates run a freeze drying cycle, use the analytical equipment and critique the finished lyophilised product. There will be guest speakers from various areas of the lyo industry to deliver different points of view.

DAY ONE - AUG 31ST

WELCOME & COURSE OPENING

- Introduction to Freeze Drying Technology
- Fundamentals of Freezing and Drying
- Formulation Basics and Characterisation Methods

LUNCH (INCLUDED)

- Cycle Development approaches, including overview of Quality by Design
- Scaling up the process
- Analysing the product-moisture, thermal properties, physical

DAY TWO - SEPT 1ST

RECAP OF DAY ONE

- Hands-on experience of product characterisation: FDM/DSC
- Formulation preparation, filling, loading, programming the freeze-dryer, starting cycle

LUNCH (INCLUDED)

- Process monitoring and analytical technologies
- Review of cycle status in the lab
- Guest Speaker #1
- Guest Speaker #2

DINNER AS A GROUP (INCLUDED)

DAY THREE - SEPT 2ND

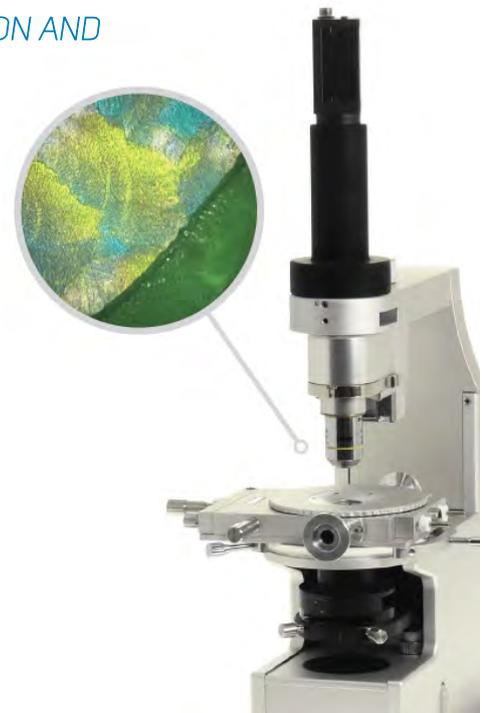
REVIEW OF ONGOING CYCLES: PRODUCT VISUAL ASSESSMENT EXERCISE

- Guest Speaker #3
- Terminate Cycles
- Analysis of lyo-cakes: TGA, SEM, mechanical properties, DSC

LUNCH (INCLUDED)

- Tour of the PMTC facility

FINAL Q&A SESSION AND WRAP-UP





IS THIS COURSE RIGHT FOR YOU?

IF YOU'RE INTERESTED IN:

- 1) Biotechnology
- 2) Pharmaceuticals
- 3) Freeze Drying Formulation and Cycle Development
- 4) Diagnostic Industries

MEET THE EXPERTS

+DR. DAVID EGAN



Dr. David Egan works as a Senior Research Fellow in the PMTC at the University of Limerick. His two main areas of research are Pharmaceutical OSD manufacture, power flow and compaction; and the Lyophilisation of Pharmaceutical liquid materials. He holds a Bachelors and Masters Degree in Masters Science from Limerick as well as his Doctorate. He also worked a decade in industry with ultra-hard materials. (Diamond & cBN); developing many innovative products and processes and is Inventor / co-Inventor on 21 patents based on his work during this time. In the last 6 years, he has been awarded over €1.3M in funding to undertake research to develop a deeper knowledge of and provide solutions for industrial processes.

+DR. KEVIN WARD



Dr Kevin Ward entered the world of freeze-drying in 1993 when he embarked on a PhD in the lyophilisation of proteins and liposomes. After working in the pharmaceutical industry and in vaccine development, he joined Biopharma in 2000. As R&D Director, he has built up a team of 9 dedicated freeze-drying scientists, worked on over 3000 projects for more than 500 client companies, developed 3 analytical instruments, run more than 200 training courses, and successfully secured funding for 15 collaborative research projects.

+ DR. EDMOND EKENLEBIE



Edmond joined Biopharma in 2014 as a Senior Scientist after receiving his a PhD from Aston University in Birmingham, UK. He also holds an MSc in Pharmaceutical Science with Management Studies from Kingston University in London. A Pharmacist since 2006, Edmond previously held managerial roles as both Locum and Superintendent Pharmacist alongside running a successful business in nutraceuticals. Dr Ekenlebie currently offers his expertise by way of consultancy, training courses and at conferences to our worldwide client base and remains heavily involved in research work.

THREE DAY EVENT: €1,995 PER PERSON

DATE:

August 31st - September 2nd 2021

LOCATION:

Bernal Research Institute
Analog Devices Building University of Limerick,
Castleroy, Limerick
V94 TQPX

BOOK NOW!

Contact **David Egan** on
David.Egan@ul.ie or call **+35361213364**

or

Sally Potentier via:
education@biopharma.co.uk

Due to the changing situation of COVID-19, should we have to reschedule, Biopharma Group will offer refunds for those who cannot accommodate the new dates.

For attendees' convenience we have reserved a block of hotel rooms which we will give details on after registration.

Please note that the cost of accommodation is not included in the course fee and that bedroom bookings must be made by the participants.

Fees include morning and afternoon breaks, lunch, one dinner and full lecture notes.

