



## In-service training course

# Powder Formulation:

## Design principles, Characterisation and Processes

October 27 - 29, 2021

Online course

Now as  
online course

## Outcome

Through presentations, exercises and plenum discussions participants will acquire solid knowledge of powder formulation - i.e. what are the challenges and possibilities and what you as formulator should be aware of regarding powder characterisation and process decisions.

## Main subjects taught in the course

(see also last pages of flyer for the detailed program)

- Particle technology basics relevant for powder properties
- Powder characterisation & powder sampling
- Design principles for powder handling
- Powder product formulation guidance and case stories
- Powder product stability and shelf life evaluation
- Powder processes and the influence of formulation:
- Spray and freeze drying
- Fluid bed drying, coating and agglomeration
- Powder blending and segregation issues



## Target group

The course addresses technicians as well as formulators and process engineers working in the chemical, pharmaceutical, biotech and/or food industry with manufacture or development of powder products.

## Form

The online course runs for three consecutive days with alternating presentations, exercises and plenum discussions. All course material is available for download in advance of the course.

The course is held online via an online conference tool in real-time allowing questions and discussions to be facilitated in real-time.

There will be sufficient amount of breaks and time to ask questions in between the different sessions.

The course is held in English.



**Registration and further information: Please see the next pages**

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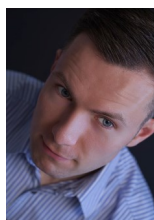
## Teachers

### Søren Vinter Søgård, M.Sc. (Pharm.), Ph.D.



- Pharmaceutical Formulation Scientist
- Speciality in flow-ability, segregation and compaction properties
- Teaching experience from School of Pharmaceutical Sciences, University of Copenhagen

### Peter Dybdahl Hede, M.Sc. (Chem. Eng.), Ph.D.



- Vice President R&D, previously Head of R&D in the biotech, ingredient and health & nutrition industry
- Teaching experience from The Danish Society of Engineers, Technical University of Denmark and numerous service training courses in particle technology
- Co-founder of seydlitz.dk. Provides in-house seminars and consultancy in powder technology

## (Guest speakers)



**HOSOKAWA**  
**MICRON B.V.**

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## Fee

The course fee is payable in advance either via direct deposit (details included in the invoice) or via credit card payment available upon online registration at our homepage.

The course fee includes all course presentations, calculation exercises and solutions, selected scientific papers as well as course diploma (all in PDF format).

All course material is available for download well in advance of the course.

Per delegate EUR 1975,- plus VAT. VAT is reclaimable.

## Registration

Binding registration at [www.seydlitz.dk](http://www.seydlitz.dk) under "Courses" no later than 1st of October 2021. In case of any questions please contact [Info@seydlitz.dk](mailto:Info@seydlitz.dk) or phone +45 29 49 30 40.

The course may be subject to cancellation in case of too few participants

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### Course contents

**CEST time  
zone**

#### Day 1: Subject

10.00 - 10.15	Course introduction
10.15 - 11.00	Particle size and particle shape, Particle size measurement - principles and equipment
12.00 - 13.00	Lunch break
13.00 - 13.30	Influence of particle size and shape on different powder product properties
13.30 - 14.45	Characterisation of powder flow properties
14.45 - 16.00	Design of equipment for powder handling

#### Day 2: Subject

9.00 – 10.30 Introduction to powder formulation, stability and powder product shelf life  
How can different industries learn from each other?

10.30 – 12.00 Powders and tableting, Process Analytical Technology - presented by

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12.00 – 13.00 Lunch break

13.00 – 14.00 Moisture in air - introduction to drying processes

14.00 – 16.00 Drying processes and drying process equipment - presented by



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MICRON B.V.**

# **Powder Formulation:**

## **Design principles, Characterisation and Processes**

**Online course**  
**October 27 - 29, 2021**

### **Course contents - continued**

<b>Day 3:</b>	<b>Subject</b>
9.00 - 11.00	Formulation and process development of tablets for the pharmaceutical industry
11.00 - 12.00	Powder sampling - theory and practice, Particle blending and segregation issues,
12.00 - 13.00	Lunch break
13.00 - 13.30	Equipment and processes for powder blending
13.30 - 14.30	Introduction to granulation processes; coating and agglomeration - influence on product properties
14.30 - 15.00	Discussion: Common problems in powder formulation development: When things are not as they should be...
	How can we help each other? Discussion in plenum of case examples and specific formulation problems raised by the course participants.
15.00 - 16.00	Plenum case: How can we rethink an existing powder platform?
	Group case : Instability of food product component: How to overcome a challenging stability issue
16.00	Final remarks, Course evaluation



**CEST time  
zone**

**Please see all of our courses at:**

**[www.seydilitz.dk/courses](http://www.seydilitz.dk/courses)**