

**In-service training course**

# **Powder Formulation:**

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

**October 25 - 27, 2023**

**At Hotel Phoenix Copenhagen  
in the Heart of Copenhagen, Denmark**

**Possibility to  
join online**

**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 course runs for three consecutive days with alternating presentations, exercises and plenum discussions. The course is held in English.

**Social event**

On the afternoon of the first day the participants are invited to dinner at a nearby restaurant in the heart of Copenhagen.



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

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### Teachers

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



- Pharmaceutical formulation specialist
- 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.



- Industrial particle technology and powder product formulation specialist
- Teaching experience from The Danish Society of Engineers, Technical University of Denmark and numerous training courses in powder technology
- Co-founder of seydlitz.dk. Provides in-house seminars and consultancy in powder technology

(Guest speakers)



**HOSOKAWA  
MICRON B.V.**



**AURORA<sup>®</sup>**  
N O R D I C

### Venue

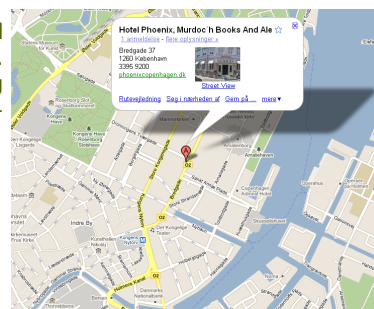


Hotel Phoenix Copenhagen is a 4-star deluxe hotel housed in one of Copenhagen's historic buildings. Situated in central Copenhagen, near Amalienborg Palace, just a few metres' walk from Nyhavn, Kongens Nytorv, Strøget and other sights.

Address: **Bredgade 37, DK-1260 Copenhagen K, Denmark**

Telephone: **+45 33 95 95 00**

Booking & service: **bookphoenix@arp-hansen.dk**



### Fee

The course fee is payable in advance and includes course materials in PDF, pocket calculator, coffee & refreshments, lunch all three days and dinner on the first evening.

**Physical presence:** Per person EUR 2345,- plus VAT. VAT is reclaimable.

**Online Presence:** Per person EUR 2075,- (No VAT is charged)

Overnight stay at the delegates own expense can be arranged at the course venue or elsewhere nearby. Please contact Hotel Phoenix Copenhagen at **+45 33 95 95 00** or **bookphoenix@arp-hansen.dk**.

Kindly note that Copenhagen is a very popular destination and that Copenhagen hotels may be fully booked well in advance.

### Registration

Binding registration at **www.seydlitz.dk** under "**Courses**" no later than 10th of October 2023. In case of any questions please contact **Info@seydlitz.dk** or phone **+45 44 10 87 00**.

**SEYDLITZ<sup>®</sup>**  
UNITED CONSULTANTS

Aalstrupvej 27  
DK - 2500 Valby  
Denmark

Tel + 45 44 10 87 00

CVR/VAT no. 34727082

contact@seydlitz.dk  
www.seydlitz.dk

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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
13.00 - 13.45	Influence of particle size and shape on different powder product properties
13.45 - 14.45	Characterisation of powder flow properties
14.45 - 16.30	Design of equipment for powder handling
18.00 - 21.30	Course dinner in Central Copenhagen

#### 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
12.00 – 13.00	Lunch
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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### Course contents - continued

**CEST**  
**time zone**

Day 3:	Subject
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
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

