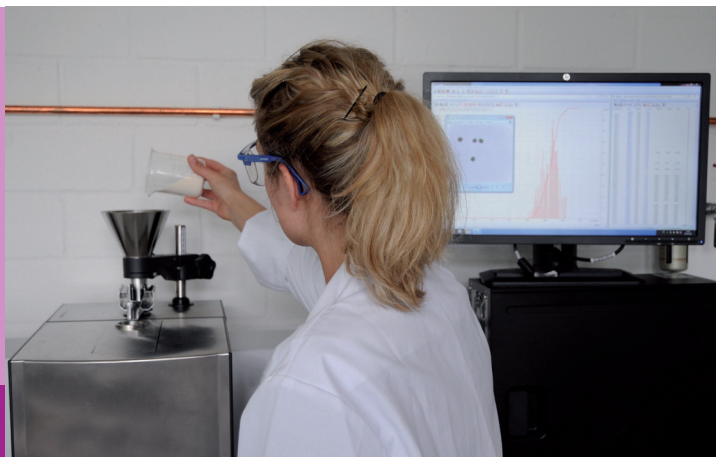


Powder Flow in Pharmaceuticals - fundamentals and applications



21 - 22 April 2021
Online Seminar

Course no. 6857

ONLINE SEMINAR

Research and Development

Target group

The course is designed for all scientists involved in the development and manufacture of solid dosage forms.



A seminar organised by the APV focus group Solid dosage forms

Objectives

The two day course will provide profound and essential knowledge on particle powder flow with special focus on fundamentals and applications necessary for daily work in development and manufacture of solid dosage forms. Day one gives an overview about fundamentals and analytical methods. In addition equipment manufacturers will present in the market place hands-on information on measurements and sample preparation. In an evaluation workshop the participants will work together in small groups on upfront provided tasks to use the theoretical knowledge on tasks from daily life. The second day is focused on applications of powder flow knowledge, e.g. tabletting, capsule filling and hopper discharge.

Moderators



Markus Thommes, PhD, Professor
Technical University Dortmund, Germany



Rok Dreu, PhD, Professor
University of Ljubljana, Slovenia

Programme

Wednesday, 21 April 2021

13:00 - 18:00 h (CET)

Welcome address

Markus Thommes, Technical University Dortmund, Germany
Rok Dreu, University of Ljubljana, Slovenia

Fundamentals of Particle Interaction

- particle boundary conditions
- fundamentals
- segregation of powders

Michael Bradley or Richard Farnish, University of Greenwich, Wolfson Centre, United Kingdom

Stresses in Powders

- normal and shear stresses
- powders at rest vs. Newtonian liquids at rest
- influence of shear rate
- Mohr's stress circle
- consequences on the behaviour of powders

Dietmar Schulze, Ostfalia University of Applied Sciences, Germany

Definition and determination of powder flow characteristics and their application for designing pharmaceutical processes

- different particle and powder characterization methods and related powder flow parameters
- application of powder flow characteristic values for process design and quality assurance
- use of powder element tests for calibration of DEM simulations

Arno Kwade, iPAT - Institut für Partikeltechnik, TU Braunschweig, Germany

Powder Flow Measurements - Market place part I

- Ring Shear cell
Dietmar Schulze, Schüttgutmesstechnik, Germany
- GranuDrum
Aurélien Neveu, GRANUTOOLS, Belgium
- Flow through orifice
Erweka, Germany

Powder Flow Measurements - Market place part II

- FT4 Power Rheometer – Powder Tester
Rajeev Dattani, Freeman Technology, UK
- Powdertester PT-X
Nadine Koch, HOSOKAWA ALPINE Aktiengesellschaft, Germany
- MCR with powder flow and powder shear cell
Timothy Aschl, Anton Paar GmbH, Austria

Discussion

Thursday, 22 April 2021

13:00 - 18:00 h (CET)

Welcome address

Markus Thommes, Technical University Dortmund, Germany
Rok Dreu, University of Ljubljana, Slovenia

Tabletting, powder flow and process stability

- Is predictive power of powder flow evaluation methods sufficient to predict process stability?
- Understanding the die fill dynamics.
- Influence of the die diameter and filling depth.

Rok Dreu, University of Ljubljana, Slovenia

Discussion

Challenges in assuring uniform capsule filling

- Diversity of Materials – Variety of Equipment
- From low dose small scale filling to continuous manufacturing
- Process Control/ PAT

Eva Faulhammer, RCPE, Austria

Discussion

Discharge from Hoppers

- Discharge flow regimes
- Addressing common flow issues
- Using powder flow measurements for hopper design

James K. Prescott, Jenike & Johanson, United States

Discussion

Workshop:

Evaluation of data (Office hour)

– Work on tasks in groups (tasks will be provided upfront)

Final discussion and remarks

Registration by fax +49 6131 97 69 69 or by email apv@apv-mainz.de



Date	Registration fee	21 April	22 April	21 & 22 April
Course no.: 6857				
21 April 2021	13:00 - 18:00 h			
22 April 2021	13:00 - 18:00 h			
Registration	Industry	<input type="checkbox"/> 500.00 €	<input type="checkbox"/> 500.00 €	<input type="checkbox"/> 900.00 €
APV-Geschäftsstelle Kurfürstenstraße 59 55118 Mainz/Germany Phone: 0049 6131 97 69 0 Fax: 0049 6131 97 69 69 E-mail: apv@apv-mainz.de Web: www.apv-mainz.de	Academia/ Government	<input type="checkbox"/> 250.00 €	<input type="checkbox"/> 250.00 €	<input type="checkbox"/> 450.00 €
	Students (full time, written evidence must be sub- mitted)	<input type="checkbox"/> 85.00 €	<input type="checkbox"/> 85.00 €	<input type="checkbox"/> 150.00 €
You will receive a confirmation of your registration with the invoice.	(please tick one)			

Powder Flow in Pharmaceuticals, 21 - 22 April 2021, Online Seminar, Course no.: 6857

Registration

As soon as you have found a seminar of your interest, it is very easy to register for it via fax, e-mail or online. We will process your registration promptly and certainly are available for any questions that may arise.

Registration confirmation

After your registration was successfully processed, you will receive a confirmation.

Before the event

A few days before the event starts, you will receive important information about the seminar, such as time, date, addresses etc.

After the event

You will receive a certificate confirming your participation. Furthermore, we would like to ask you to fill-in our evaluation sheet to make sure we get better every time.

Follow-up

After the event, we are open to receive any suggestions and critique that might arise during the seminar and will certainly help you with further questions you may have.

Declaration of consent in respect of data protection

☐ By registering for this seminar, I agree that the APV uses my data for the purpose of processing the order and provides me with all relevant information.

☐ I also agree that APV may contact me for the purpose of exchanging similar information by email or post.

Your data will not be shared with third parties. You have a right of withdrawal at any time without giving reasons.

All other information can be found in our privacy policy (www.apv-mainz.de/en/imprint/data-protection-statement/).

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Company name *

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Location

Zip-code and city *

Phone

E-mail-address participant *

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Verfahrenstechnik e.V.
Gemeinnütziger wissenschaftlicher Verein
International Association for Pharmaceutical Technology

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