

Introduction to Solo and FlowVPE technology

8th July 2019

10th October 2019

Course information :

Duration:	1 day, with 0.5 days hands-on practical
Net Price:	950 CHF, this includes lecture notes, 1x lunch, coffee and snacks
Location:	Biofactory Competence Center in Fribourg, Switzerland
No. of attendances:	A maximum number of 10 participants is accepted
Course-language:	English (for French or German, please contact us)
Registration:	Please register on our website , or contact info@bcc.ch for further information

What are the learning outcomes ?

This 1-day training course will provide an introduction in the technology and application of the Solo and FlowVPE devices, with hands-on practical and theory in the field.

The general aims of this course are to enable interested people in the field of bioprocessing (USP and DSP):

- ◆ To understand the principle and technology behind the Solo and FlowVPE device
- ◆ To define different application areas for the Solo and FlowVPE
- ◆ To be able to apply both technologies in your up- or downstream process

Program :

Day 1

Morning : Lectures : Introduction to spectroscopy, introduction to SoloVPE and FlowVPE, application of SoloVPE and application of FlowVPE

Afternoon : Comparison study between spectrophotometer, SoloVPE and FlowVPE during a TFF experiment, data analysis and discussion

This program may be subject to minor changes

Further information :

- ◆ Certification will be handed out to each participant at the end of course.
- ◆ Travel and accommodation are not included in the course fee. Flights can be booked to either Geneva or Zurich airport with a direct train connection from both airports to Fribourg.
- ◆ Accommodation can be booked in the Alpha-Hotel (www.alpha-hotel.ch), which is only a 5 minute walk from the Biofactory Competence Center.

“Critical Training for an Evolving Market”

Schedule for 1-day Training course for Solo & FlowVPE

Topic of training course: Introduction course to the Solo & FlowVPE technologies and their application in biopharma processing

Day 1:

8.30 am	Start
8.30 – 8.45	Tea/ Coffee on arrival
8.45 – 9.30	Lecture 1: <u>Introduction to spectroscopy</u> <ul style="list-style-type: none">- Beer's Law: Difference between UV and visible light- Application of spectroscopy in biopharma processes
9.30 – 10.00	Lecture 2: <u>Introduction to SoloVPE and FlowVPE</u> <ul style="list-style-type: none">- Principle of their measurement technology- Advantages and disadvantages- Integrated feed-back control software in FlowVPE
10.00 – 11.00	Lecture 3: <u>Application of SoloVPE:</u> <ul style="list-style-type: none">- A₂₈₀: total protein concentration/ titre determination- PS80 determination for development of pharmaceutical formulation- Analysis of Antibody drug conjugates (ADC)- Potential in USP for OD₆₀₀ in microbial fermentation
11.00 – 11.15	Tea/ Coffee break
11.15 – 12.15	Lecture 4: <u>Application of FlowVPE:</u> <ul style="list-style-type: none">- UF/DF in TFF systems- Continuous TFF (ILC)- Chromatography: DBC determination in real-time – BTC- DP compounding and mixing- Microbial fermentation: in-line cell growth monitoring- Continuous cell separation (AWS): monitoring of cell-removal and/ or product recovery
12.15 – 13.30	Lunch in the Alpha-Hotel (5min foot march)

13.30 – 17.00

Hands-on experiment in the laboratories

1) Comparison study between Spectrophotometer, SoloVPE and FlowVPE during a TFF experiment

- Short introduction to TFF principles, importance of TMP
- Set-up of FlowVPE:
 - Carry60
 - Light intensity
 - Flow Cell installation
- Set-up of SoloVPE
 - Software
 - Consumables
 - (to be specified)
- Start concentration experiment (roughly 90 minutes)
 - Take periodical samples (all 0.5L reduction), note down FlowVPE value and perform SoloVPE and spectrophotometer analysis
- TFF cleaning with water and NaOH

2) Comparison study of SoloVPE and spectrophotometer:

- (while concentration is running)
- compare 3 (or more) proteins and 3-4 concentrations and perform measurement with SoloVPE and spectrophotometer
 - Data analysis

3) Data analysis and discussion:

- (while TFF is cleaning)
- data analysis of TFF samples and discussion
 - data analysis and discussion of different proteins and concentration

17.00 – 17.30

Feedback forms and wrap-up

17.30

End of training course