

Optimise your TFF equipment!



Scale-Up, Design and Optimisation of Tangential Flow Filtration Systems

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Knowing how to design, optimise and scale-up a purification step using Tangential Flow Filtration (TFF) can help you avoid production problems, either in costs or ability to perform the task.



Who should attend?

This two-day training programme is designed for Research and Development Scientists and Engineers responsible for developing, optimising and scaling-up tangential flow filtration processes used for the manufacture of biopharmaceuticals.

What will you learn?

At the end of the training you will understand

The Theory

- The terminology used in TFF
- The basic concepts of TFF
- How to perform a trial for a new application

The Practice

- How to operate a TFF system
- How to measure, control and optimise the performance of TFF systems
- How to maintain TFF modules and membranes

Scale-Up

- The issues in scaling-up TFF systems
- How to get the most from every trial
- Data manipulation

What will you receive?

- A comprehensive set of course notes
- A fully worked case study
- A certificate of achievement

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Course Programme

Day 1

- 09.00 • Introduction
- 09.15 • Application Development Strategy
 - *TFF fundamentals*
 - *Optimisation of operating conditions*
 - *Optimisation of concentration/diafiltration*
 - *Choosing a membrane*
 - *Designing a trial*
 - *Data manipulation/How to interpret data*
- 11.15 • Coffee/Tea
- 11.30 • Examples from Industry
 - *Typical processes*
 - *R & D to production scale*
- 12.30 • Lunch
- 14.15 • Laboratory Practical
 - *Flush and water test*
 - *Integrity testing*
 - *Stabilisation*
 - *TMP optimisation*
- 16.00 • Coffee/Tea
- 16.15 • Laboratory Practical
 - *Concentration of a protein solution*
 - *Flushing*

Day 2

- 09.00 • Laboratory Practical
 - *Membrane cleaning*
 - *Water test*
- 11.15 • Coffee/Tea
- 11.30 • Data Analysis and Scale-Up
 - *Operating conditions*
 - *Concentration/Diafiltration*
 - *Process simulation - Scale-Up*
- 12.30 • Lunch
- 13.30 • Data Analysis and Scale-Up
 - *Yields, mass balance*
 - *Cleaning optimisation*
- 15.00 • Advanced TFF Applications
- 16.00 • Summary and Course Review



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Practical information

Scheduled courses:

- In order to maximise the knowledge transfer between the trainer and trainees as well as between the trainees themselves, the course is to be given for a minimum of 5 persons with a maximum of 10 persons.
- Please contact your local Millipore representative should you require to having this course be held at your premises.

Catalogue Number: **TRAVTFF**

For further details about our company profile and products, visit: www.millipore.com

On our website you will find a complete description of our services, as well as regularly updated training schedules.

Course program and calendar: <http://www.millipore.com/bioprocstraining>