

Pion Advanced Training Agenda

Day1: July 18th

9:00 – 9:15

Attendee Arrival and Coffee

9:15 – 9:30

Introduction to Pion and personnel

9:30 – 10:15

Method Development Part 1: Getting started with the technology and basic considerations (Hideo Takeda)

- Introduction to Pion Fiber Optic instruments
- Principles and challenges of *in situ* concentration measurements
- Pathlength selections
- Generating good standard curve, “Blue Standards”
- Baseline correction algorithms
- 2nd derivative spectroscopy
- Calculation settings
- Sample Blank

10:15– 10:30

Break

10:30 – 11:30

Method Development Part 2: Advanced considerations (Konstantin Tsinman)

- Spectral shape analysis
- Blank and Reference Channel
- Can standard curve be prepared in different media
- Supersaturation considerations
- Media conversion experiments

11:30 – 12:15

Interactive Group Discussion #1: Fiber Optic Method Development

Recognizing issues, understanding and troubleshooting the data

12:15 – 13:15

Lunch

13:15 – 14:00	Towards in vivo predictive dissolution – Flux Measurements (Konstantin Tsinman) <ul style="list-style-type: none"><input type="checkbox"/> Understanding the principles and driving forces of the flux<input type="checkbox"/> Flux configurations<input type="checkbox"/> Calculation and interpretation of flux data<input type="checkbox"/> In vivo predictions using flux data
14:00 – 14:45	Introduction of Configuration of uDiss, uFlux and Macro Flux (Hideo Takeda):
14:45 – 15:00	Break
15:00 – 15:45	Group Discussion #2: Practical aspects of flux measurements <p>Recognizing issues, understanding and troubleshooting the flux experiments and media change experiments</p>
15:45 – 16:15	Flux Measurements: Analytical work behind the scene (Konstantin Tsinman) <ul style="list-style-type: none"><input type="checkbox"/> Detecting artifacts<input type="checkbox"/> Membrane-excipient compatibility<input type="checkbox"/> Ensuring membrane integrity<input type="checkbox"/> Dual component flux<input type="checkbox"/> Potential limitation of the flux measurement
16:15 – 16:30	Break
16:30 – 17:00	Introduction of AuPRO Version 6: Recent Advances in Pion Technology (Konstantin Tsinman) <ul style="list-style-type: none"><input type="checkbox"/> Dealing with more than 2 components—multicomponent regression analysis<input type="checkbox"/> Scatter modelling—can we estimate

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particle size from the shape of baseline?

- Creating Reports
- Standards for nanoparticles and colloids
- Automating flux calculations

17:00 – 17:30

Q&A / Roundtable

18:00 – 20:00

Social hour