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## Advanced control strategies for the continuous production of monoclonal antibodies

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# SARTORIUS

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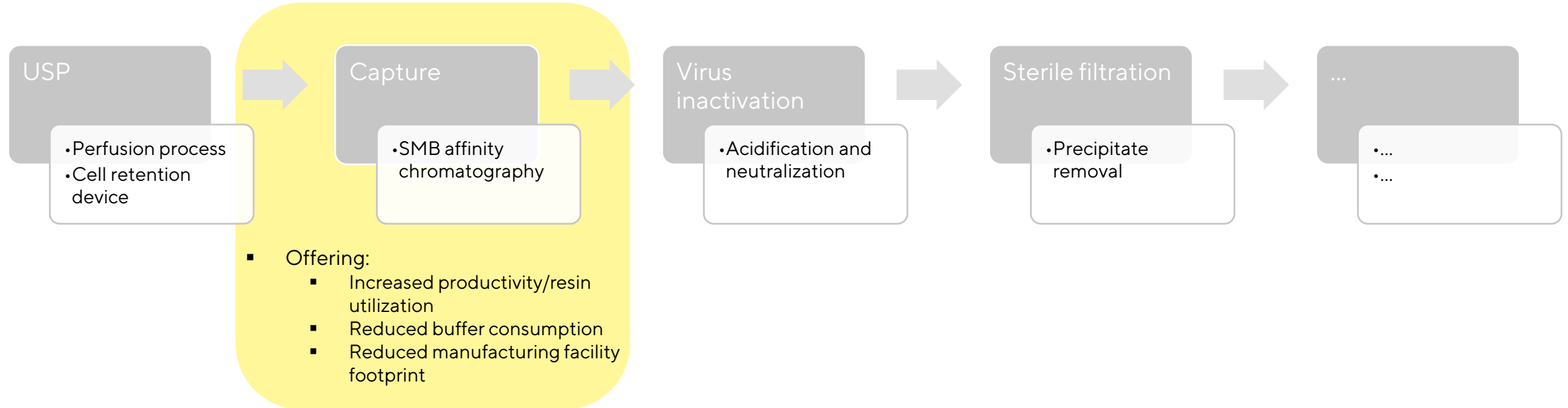


## Advanced control strategies for the continuous production of monoclonal antibodies (poster #12)

Thomas Kruse, Markus Kampmann, Jonas Austerjost, Johannes Lemke and David Pollard | Corporate Research

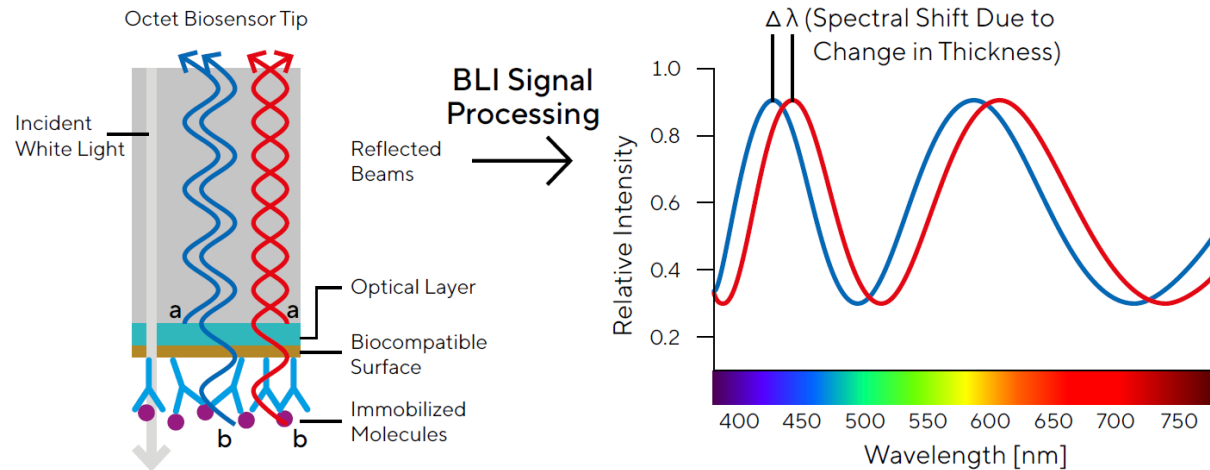
Integrated Continuous Biomanufacturing V | October 2022

# Continuous processing platform





# Bi-layer interferometry (BLI)



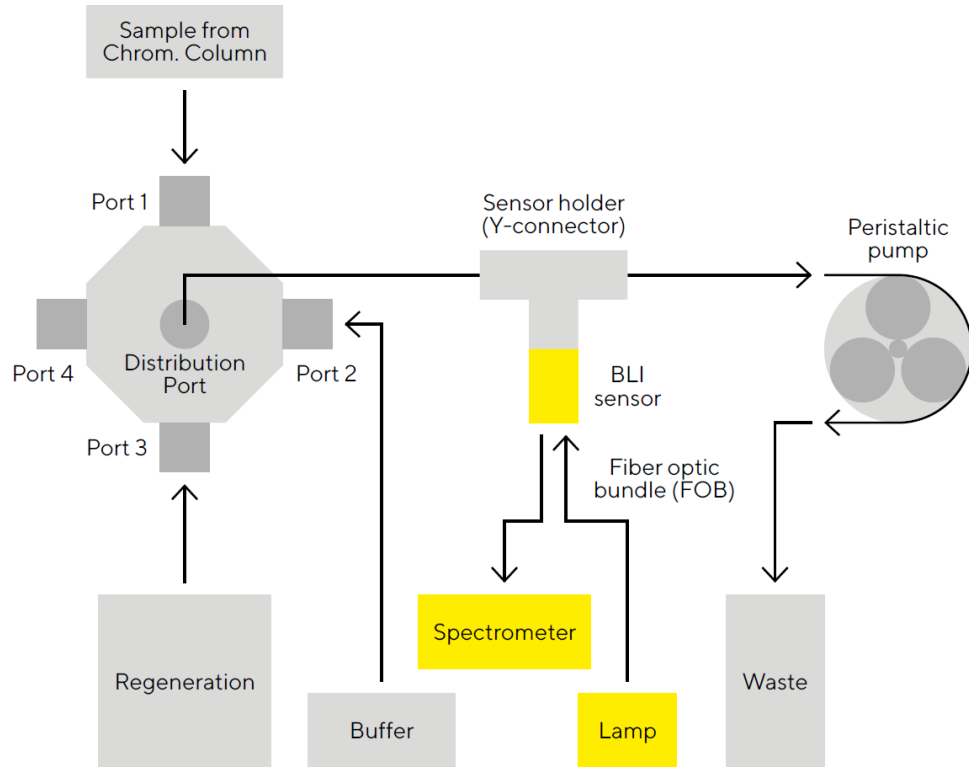
- Bio-Layer Interferometry (BLI) is a label-free technology for measuring biomolecular interactions
  - Analyzes the interference pattern of white light reflected from two surfaces: a layer of immobilized protein on the biosensor tip, and an internal reference layer
  - Binding between a ligand immobilized on the biosensor tip surface and an analyte in solution produces an increase in optical thickness at the biosensor tip
- Wavelength shift
- Proportional to the concentration of the analyte



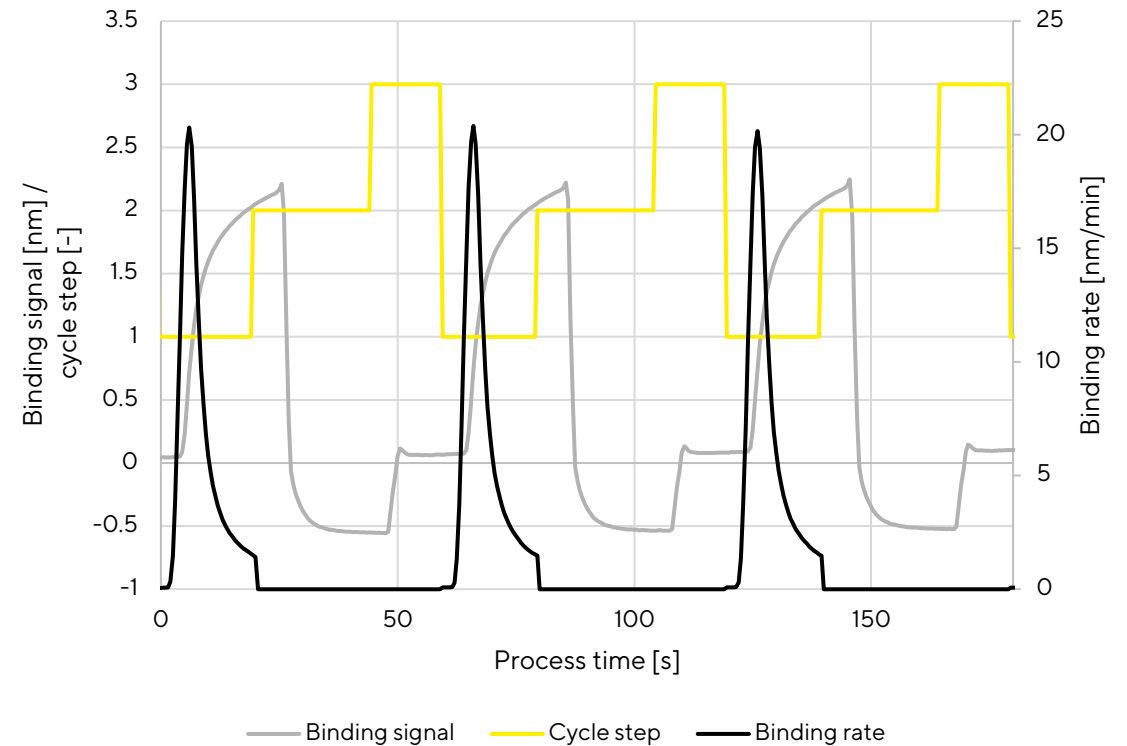
Octet® R Series (2-8 channel)

Until now BLI systems, like the Octet platform, consist exclusively of off-line analytic systems

# Continuous BLI measurement

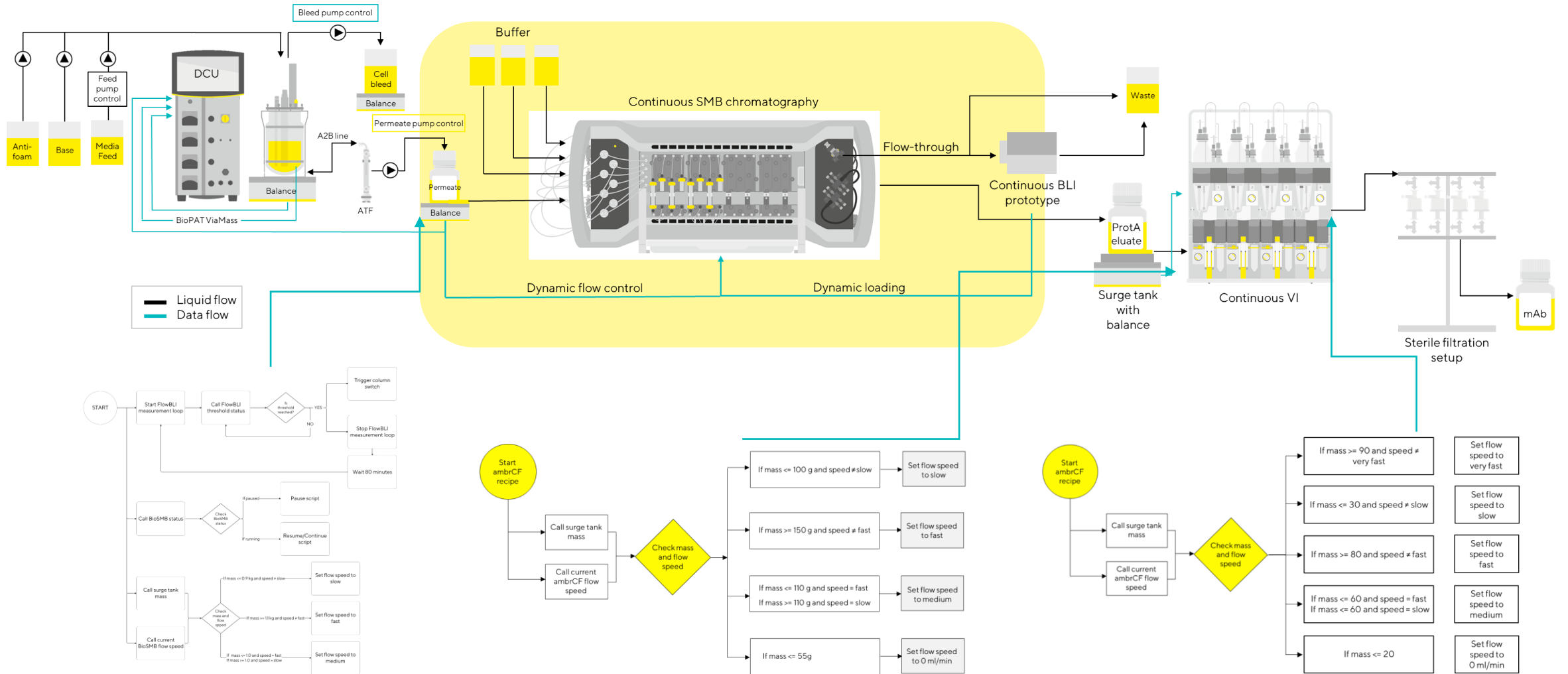


Schematic representation of the flow paths within the continuous BLI prototype



Exemplary binding signal and binding rate for 3 cycles of continuous BLI measurement of perfusion permeate.

# Setup continuous processing platform



# Thank you.

# Please visit poster #12

Special thanks to: Yuri Krasov, Vasiliy Popov, Tae Kang and Janina Kilian

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