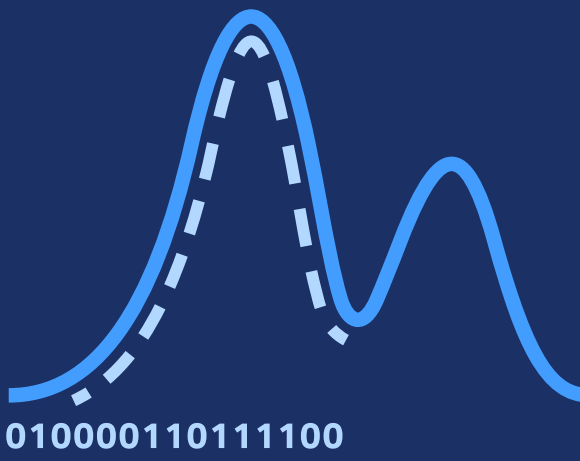
Software | Columns | Services

Mechanistic chromatography modeling

For smarter and faster process development



Replace lab experiments with computer simulations

Mechanistic models use computer simulations to decrease the number of experiments you need during process development. The simulations are based on known physiochemical phenomena involved in chromatography.

Feed your lab data into GoSilico™ Chromatography Modeling Software, and let the computer calibrate a model. Once calibrated, you can perform all further experiments *in silico* and generate thousands of purification options in a few hours (Fig. 1).

The typical mechanistic chromatography modeling workflow is an interplay of the tools that you currently use in the lab and the modeling software (Fig 2).

Benefits of mechanistic chromatography modeling

- Accelerates process development
- Improves process understanding and process robustness
- Supports regulatory decision making

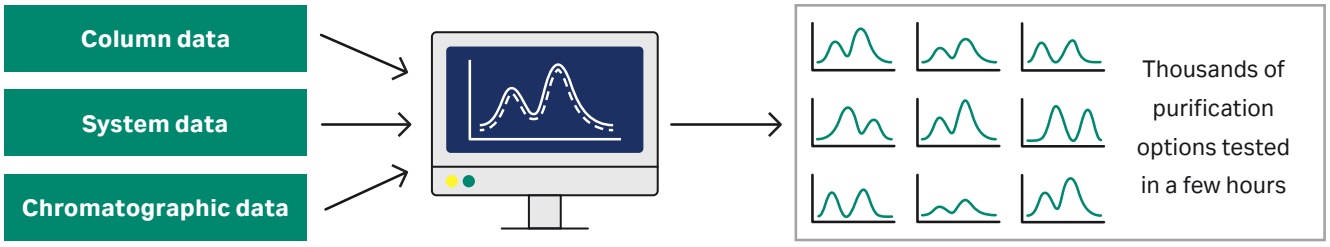


Fig 1. Mechanistic modeling creates computer-simulated chromatograms.

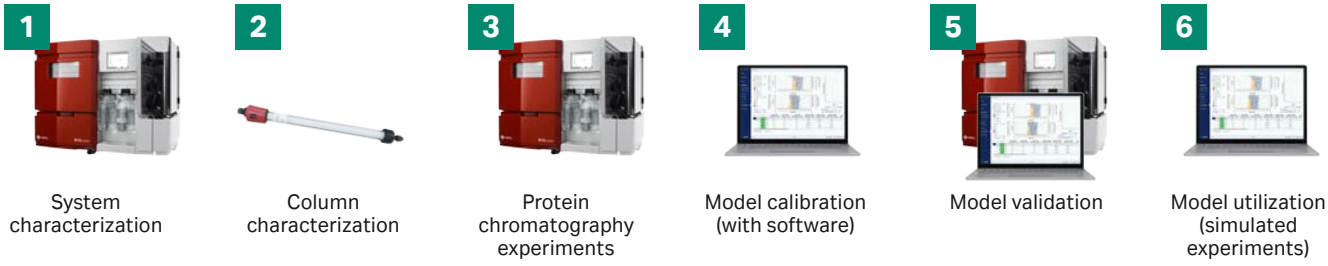


Fig 2. High-level workflow for mechanistic chromatography modeling.

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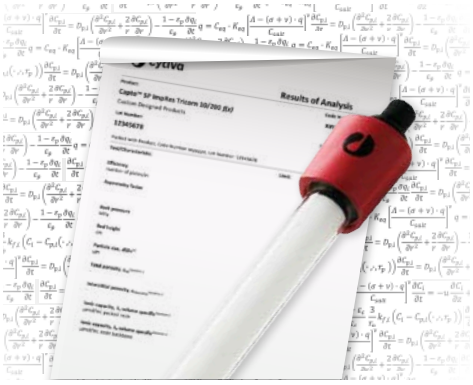
Cytiva solutions for mechanistic chromatography modeling

Benefit from our proven mechanistic modeling knowledge, which is supported by decades of experience in developing chromatography processes.

GoSilico™ Chromatography Modeling Software

- Mechanistic modeling software designed to create digital twins of your chromatography processes.
- Tailored for and used by many biopharma companies for chromatography process development.
- Seamless lab integration through optimal linking to ÄKTA™ systems and UNICORN™ software.

f(x) pre-characterized columns



- "Pre-characterized" means that the columns are supplied with column-specific data for use in mechanistic modeling workflows.
- They ensure accurate model parameter values and reduce the time you need for column characterization.

GoSilico™ Chromatography Modeling Services

- Services that enable a smooth transition to *in silico* process development.
- Includes training, consulting, and contract modeling.

Want to talk to a chromatography modeling expert?

Click here or scan the QR code

cytiva.com/modeling

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