



## Master thesis project - Mechanistic modelling of ion exchange chromatography

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Cytiva is proud to work alongside a community of nine fellow Danaher Life Sciences companies. Together, we're pioneering the future of science and medicine, developing products that enable researchers in the fight to save lives.

Master thesis: Sensitivity analysis of mechanistic modeling parameters describing ion exchange chromatography.

### What you'll do

You will use the GoSilico™ Chromatography Modeling Software to evaluate the parameter sensitivity of several calibrated mechanistic models describing ion exchange chromatography. Parameters refer to the description of system and column as well as the biomolecule itself but also to the fluid dynamic and mass transfer characteristics.

The goal is to understand the influence of each of those parameters and parameter combinations on model quality and transferability. Further, you will evaluate how parameters that change e.g. at different experimental scales can effect the model life cycle.

One part of this work is to define criteria for evaluation and another part is the visualization of the results.

## Who you are

We are looking for you that are in the end of your Master studies in engineering with focus on modeling. A background in biotechnology, specifically chromatography, can be an advantage but is not a requirement.

Further, you like to work independently with a structured approach.

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At Danaher, we value diversity and the existence of similarities and differences, both visible and not, found in our workforce, workplace and throughout the markets we serve. Our associates, customers and shareholders contribute unique and different perspectives as a result of these diverse attributes.

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