

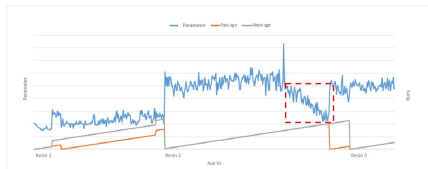
Introduction

Chromatography process often used as purification step in the pharmaceutical industry

Low lifetime of resin R in step X for production of Y

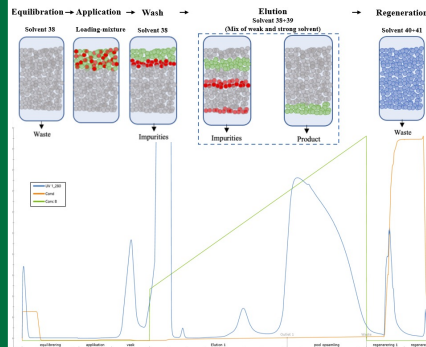
Several times lower than resin RR in step XX for production of YY

Decreased parameters during the production run at NN



Methods

Chromatography process experiments performed on ÄKTA pure in Helix Lab



Analysis exclusively performed on the resin

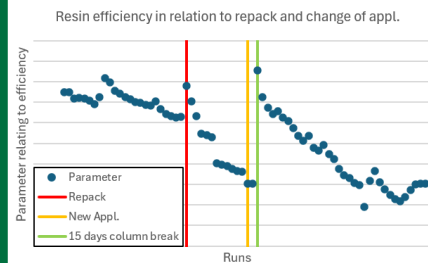
Inverted microscope images

Particle Size Distribution and Particle Size Analysis

Outcome

Different parameters are evaluated and compared:

- Collection volume
- Maximum pressure
- rHETP
- Retention time
- Area of main peak
- Loss after main peak (%)
- UV_Max for main peak
- OD/CV
- OD at run end



Perspectives

Decrease in resin and solvent usage for NN in their production

→ Lower price for consumers; hence expanding the market

Equipment limitations → the experiments must be performed in a more controlled environment

Package of columns impossible to replicate 100% → significant disturbance for observing trends

Further optimization in this area could lead to improved results in production