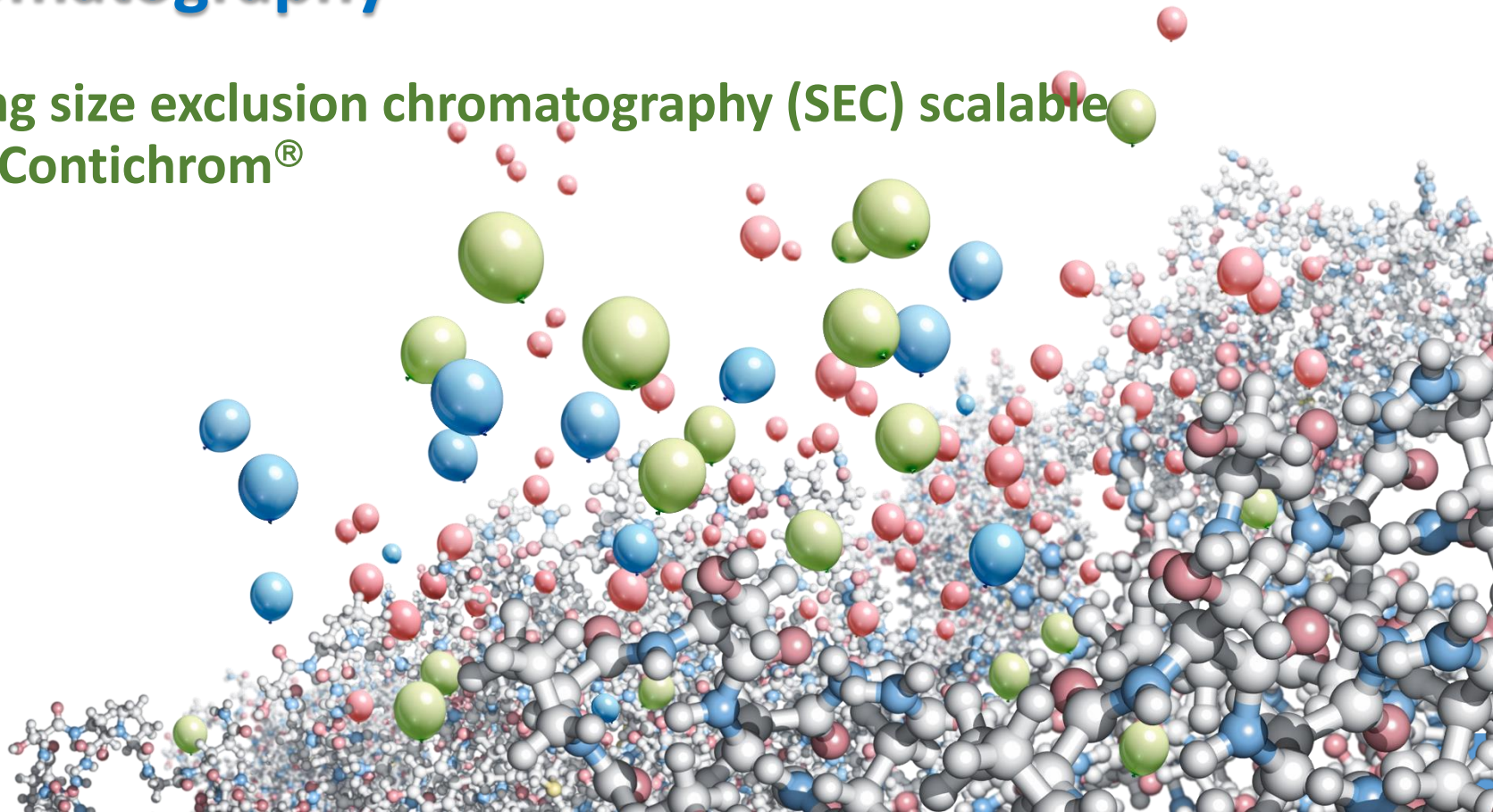
ChromaCon®
A new dimension in purification

Contichrom® Twin-column FPLC Chromatography

Making size exclusion chromatography (SEC) scalable using Contichrom®



Scalable SEC on Contichrom® equipment

- Size Exclusion Chromatography (SEC) being an orthogonal purification principle can be useful in combination with other bind-elute chromatographic separation steps
- However SEC is generally seen as not being scalable and is therefore only used for small scale applications, such as high-throughput purifications of proteins for discovery applications
- SEC would be very useful if it was scalable. The limitations of SEC column dimension in batch applications make a preparative throughput very difficult
- SEC does not allow high resolution separations, having an impact on yield
- Using Contichrom with MCSGP can address the weak points of SEC: productivity, scalability and resolution

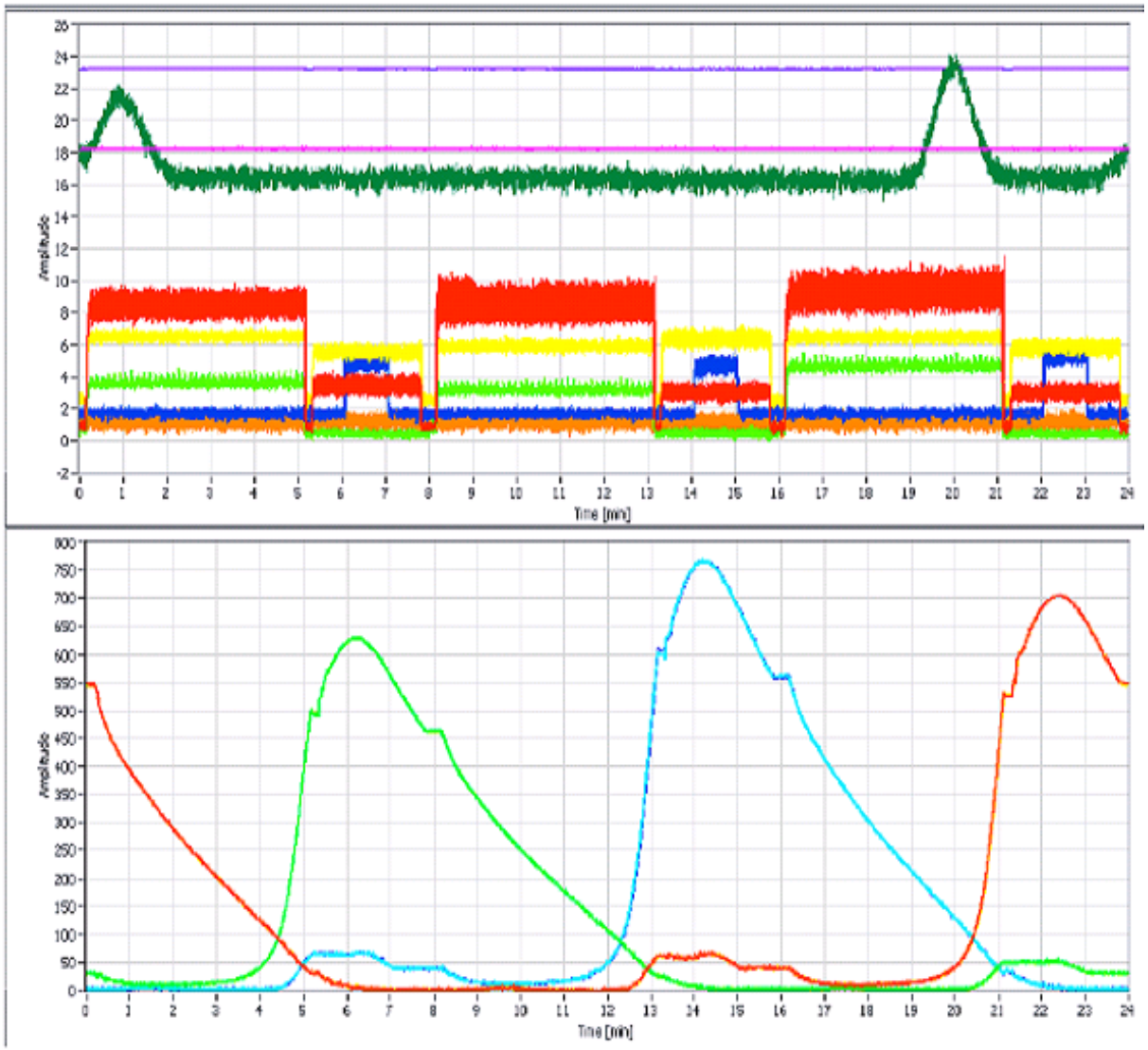
Scalable SEC on Contichrom® equipment

- Examples for application area:
  - removal of aggregates
  - reduce polydispersity of medical polymers (PEG)
  - any other SEC run in batch mode

- Aim:
  - overcome intrinsic low productivity of SEC with continuous chromatography
  - make SEC scalable

- Results (for aggregate removal):
  - 600% increase in throughput
  - simultaneous increase in yield by 10%

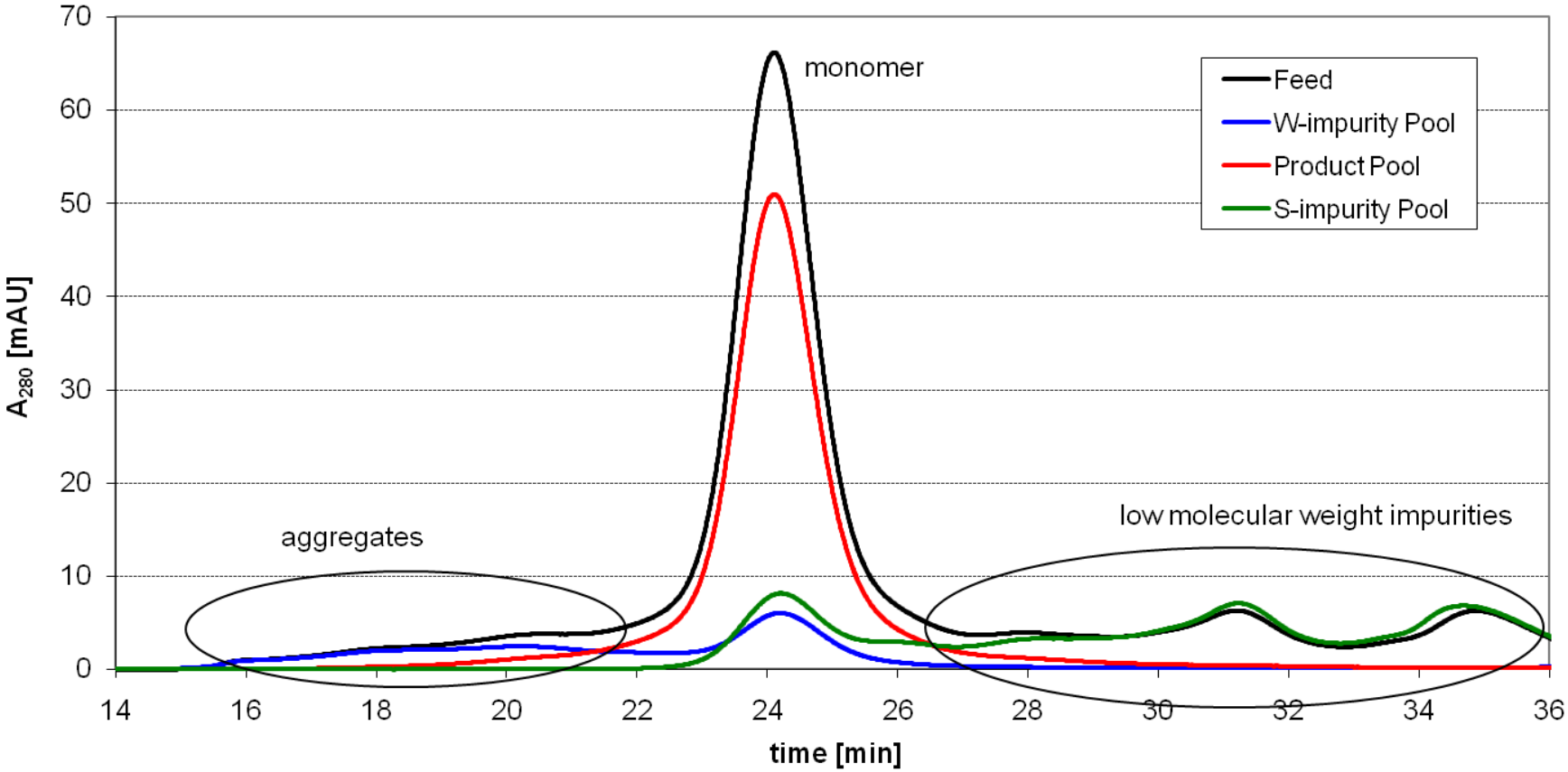
SEC on Contichrom® : High process stability



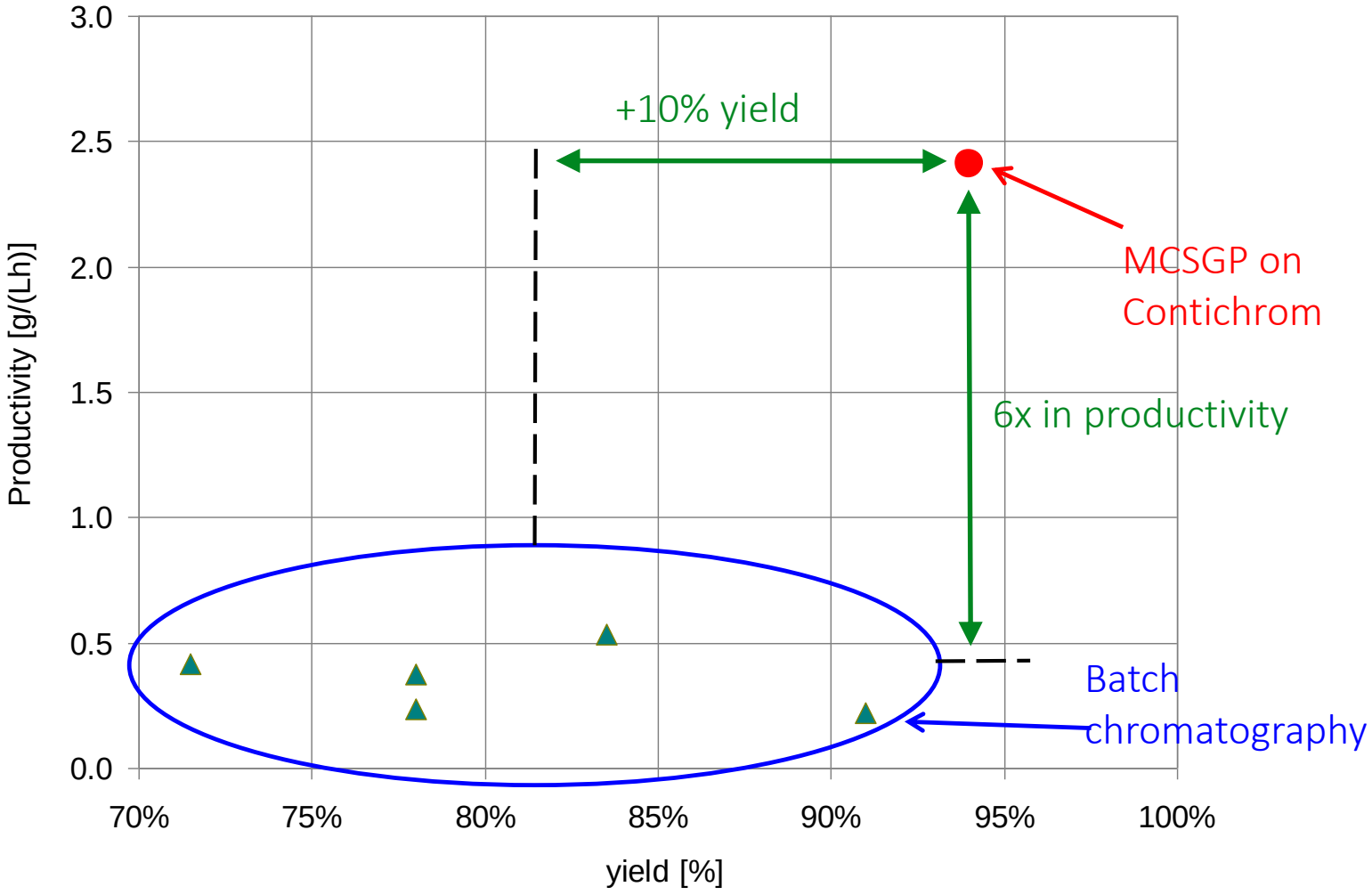
Overlay of 3 subsequent MCSGP cycles

⇨no visible difference in UV

SEC: feed vs. MCSGP product



Comparison process performance



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