ChromaCon®
A new dimension in purification

Contichrom® Twin-column FPLC Chromatography

Contichrom® CaptureSMB Economic Benefit Protein A

Economic Evaluation of CaptureSMB (2C-PCC)
CMO / CMC scenario

- Clinical manufacturing of small batches
- Scenario assumptions:
  - Production geared towards minimizing resin costs
  - Production of monoclonal antibody
  - 2000 L fermenters
  - 2 g/L titer
  - 4 kg mAb / batch
  - 20 batches per year
  - Protein A lifetime: 200 cycles but new resin has to be used for each batch
  - Process Performance:
    - Load CaptureSMB 40 g mAb/L resin
    - Load Batch 25 g mAb/L resin

Evaluation of CaptureSMB (2C-PCC), CMO / CMC scenario

- Minimizing Protein A resin costs and buffer consumption

Annual performance		CMO / CMC Scale Batch	CMO / CMC Scale CaptureSMB
Protein A resin volume	Liters	80	2 x 33
Column diameter	cm	72	2 x 47
Buffer consumption	Liters	90,900	57,000
Resin costs	US$	1.04 Mio	0.43 Mio
Resin cost savings	US$	/	0.6 Mio / 60%
Buffer Savings	Liters	/	35,000 / 40%

→ Significant OPEX reduction through use of CaptureSMB

Economic Evaluation of CaptureSMB (2C-PCC)
Commercial scale scenario

- After clinical manufacturing phase I-III and product registration material is produced at commercial scale for market supply.
- Scenario assumptions:
  - Production geared towards minimizing resin costs
  - Production of monoclonal antibody
  - 5000 L fermenters
  - 3 g/L titer
  - Annual product output: 300 kg monoclonal antibody
  - 20 harvests per year
  - Protein A lifetime: 200 cycles
  - Process Performance:
    - Load CaptureSMB 40 g mAb/L resin
    - Load Batch 25 g mAb/L resin

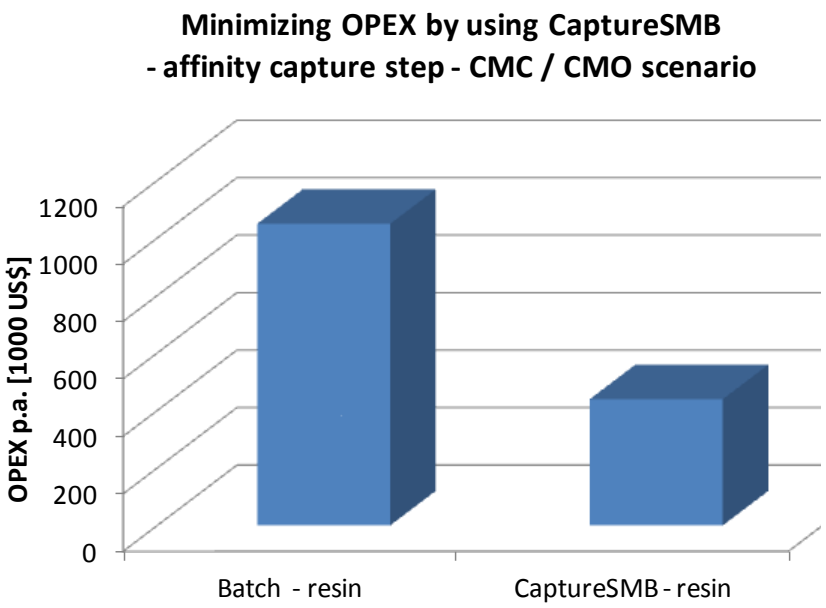
Evaluation of CaptureSMB (2C-PCC), Commercial scale

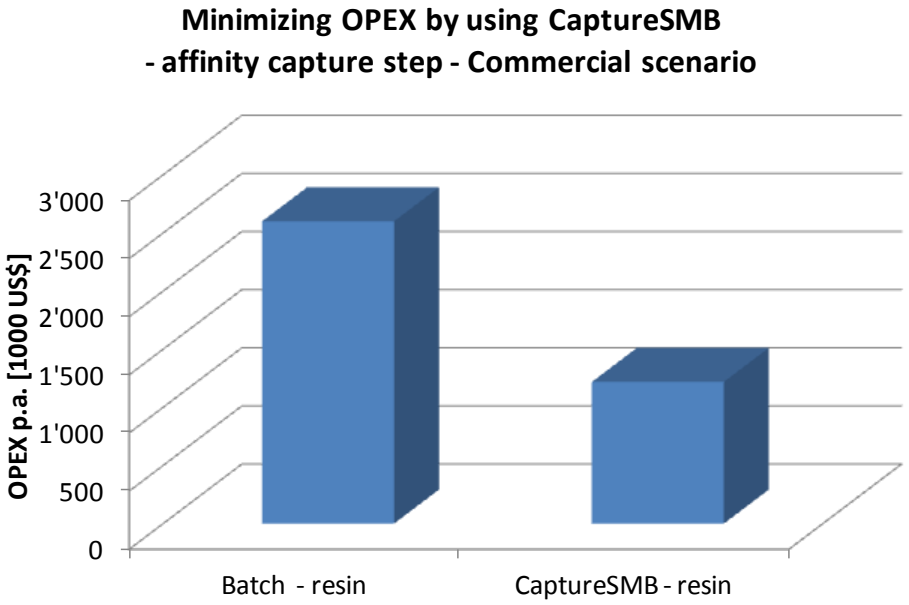
- Minimizing Protein A resin costs and buffer consumption

Annual performance		Commercial Scale Batch	Commercial Scale CaptureSMB
Protein A resin volume	Liters	200	2 x 47
Column diameter	cm	113	2 x 78
Buffer consumption	Liters	340,000	210,000
Resin costs	US$	2.6 Mio	1.2 Mio
Resin cost savings	US$	/	1.4 Mio / 54%
Buffer Savings	Liters	/	130,000 / 40%

→ Significant OPEX reduction through use of CaptureSMB

CaptureSMB (2C-PCC) Economic Benefit Protein A





Saving 60% Protein A annual resin costs of 0.6 mio USD p.a. for an output of 20 batches

Saving > 50% Protein A annual resin costs to more than 1 mio USD p.a. for a standard mAb process (200kg/p.a.)

Contact Info

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