

Supplementary Materials

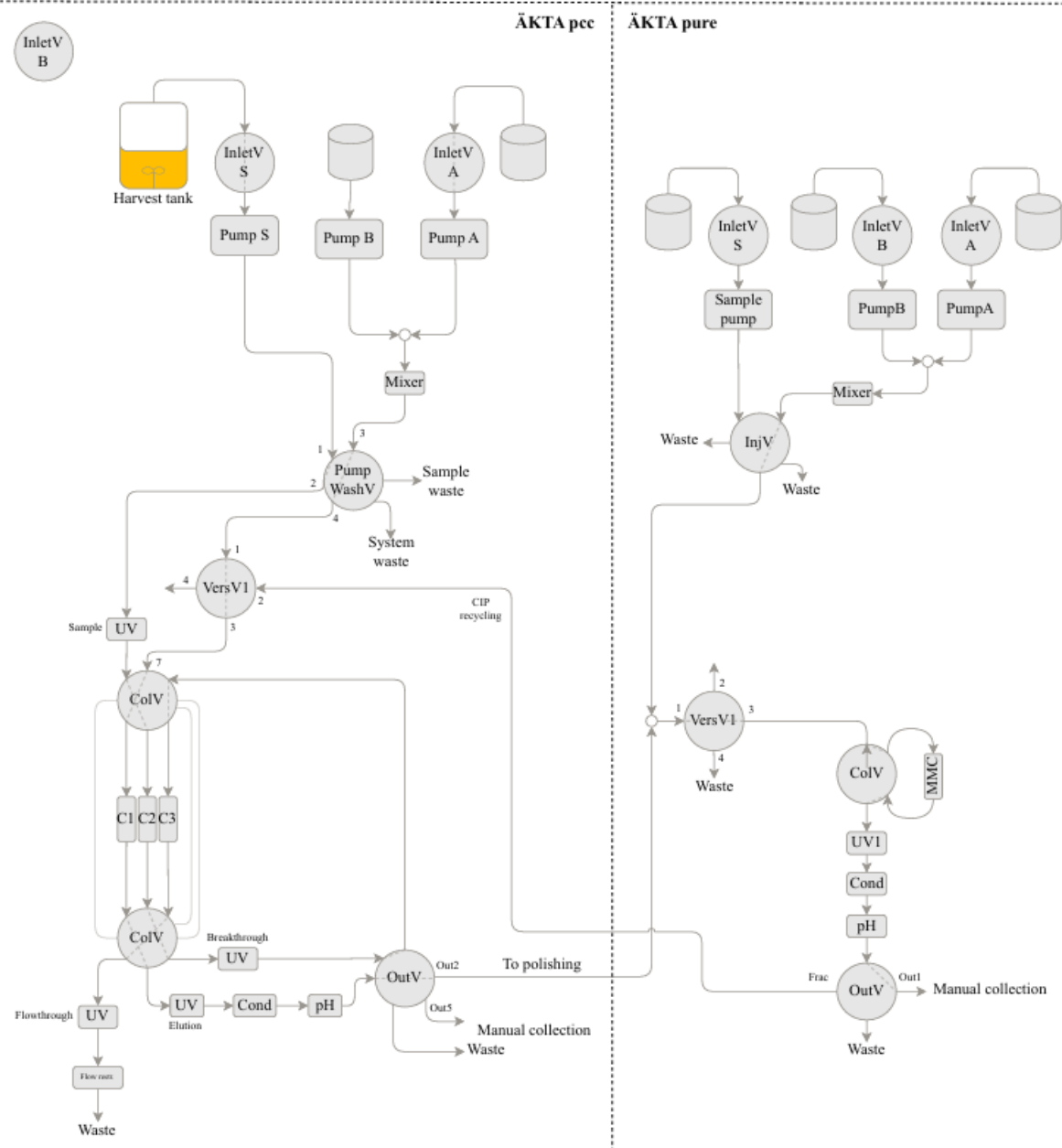


Figure S1: Detailed process diagram of integrated capture on Äkta pcc with polishing on Äkta pure systems.

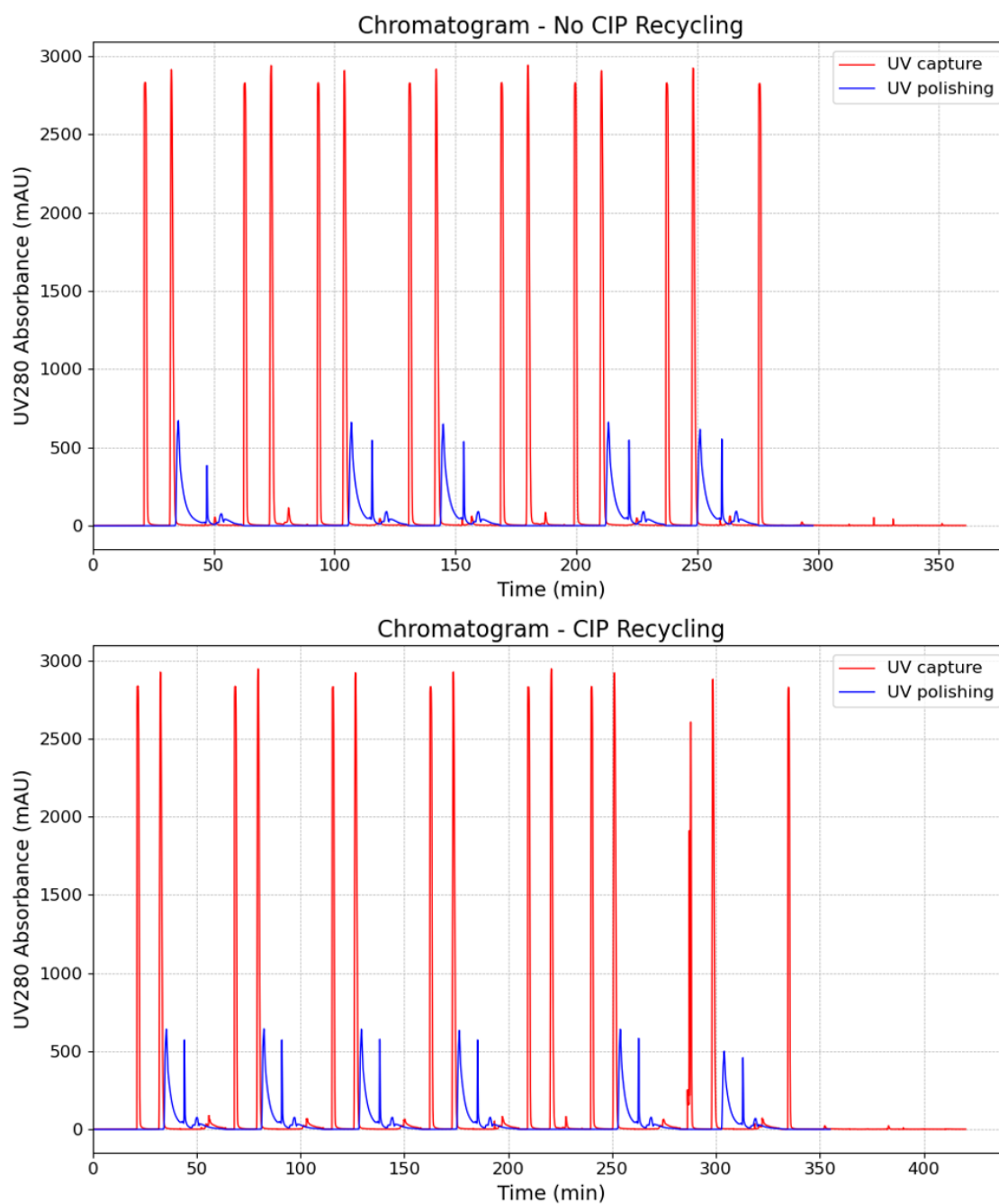


Figure S2: Chromatograms for the two integrated purification experiments (Top: No CIP Recycling (base case); Bottom: With CIP Recycling). Red and blue peaks indicate the UV280 signals after the capture and polishing columns, respectively.

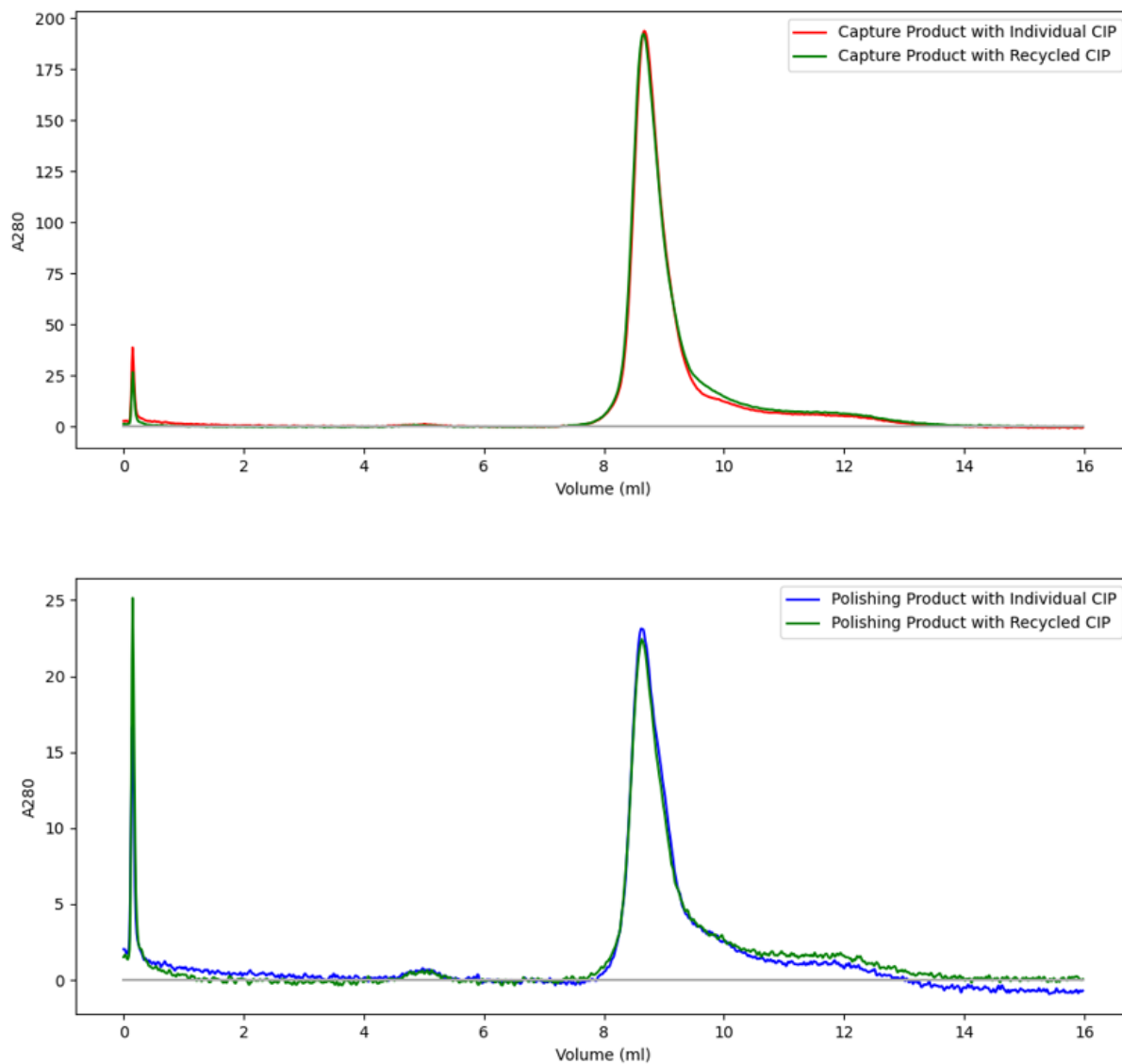


Figure S3: SE-HPLC chromatograms of product samples with and without recycled CIP, after capture (top) and after polishing (bottom). The UV spikes in the beginning of the analysis originate from a pressure pulse when injecting the sample via the autosampler.

Table S1: Sampling scheme for base case and CIP recycling experiments. The green and purple coloured samples were analyzed and results compared.

Base case (no CIP recycling)			
Capture		Polishing	
Cycle, column	Samples	Cycle	Samples
1, 1	CIP	1	CIP, Product
1, 2	CIP, Product	-	-
1, 3	CIP	2	CIP, Product
2, 1	CIP	3	CIP, Product
2, 2	CIP, Product	-	-
2, 3	CIP	4	CIP, Product
Shutdown 1	CIP	5	CIP, Product
Shutdown 2 (waste)	CIP	-	-
CIP Recycling			
Capture		Polishing	
Cycle, column	Samples	Cycle	Samples
1, 1	CIP	1	Product
1, 2	CIP	2	Product
1, 3	CIP	3	Product
2, 1	CIP	4	Product
2, 2	CIP, Product	-	-
2, 3	CIP	5	Product
Shutdown 1	CIP	6	Product
Shutdown 2 (waste)	CIP	-	-