

Success Story

Increased Productivity With Concentrated Fed-Batch

A large biopharma company wanted to establish a single-use multi-product facility by choosing appropriate upstream processes that can deliver more than 500 kg/year throughput. Consequently, a concentrated fed-batch process was established, enabling higher productivity and increasing the throughput (up to 4× higher titer than standard fed-batch), providing more flexibility for production runs.

Customer Challenge

- Manufacture multiple products at a time
- Wanted faster facility build-up
- Required high throughput
- Wanted maximum single-use implementation

Provided Solution

- Versatile, single-use, perfusion-enabled rockers and Biostat STR®s
- Highly productive, scalable, and stable cell line
- Development and storage for both master cell bank (MCB) and working cell bank (WCB)
- Fluid and facility management | design for automation

4-5×
productivity increase
due to higher titer
and faster throughput

Cutting time-to-build by
>50%
due to single-use, high
throughput facility

50%
footprint reduction
with similar throughput

Sustainability
goal met:
Intensification and higher facility
utilization resulted in reduction
in energy requirement

Case Profile

Company Type:
Large Biopharma

Related Molecule:
mAb



Before

- Standard fed-batch process that:
- Required 4-8 Biostat STR®s
 - Produced ~5 g/L titer
 - Averaged 35 upstream days



After

- Concentrated fed-batch process that:
- Reduced footprint by 50%, while maintaining throughput
 - Increased titer 3×, up to ~15 g/L with same cell line
 - Potential to decrease upstream days to 27 using high cell density vials, allowing more batches
 - Reduced energy requirement due to smaller footprint