

# AcuSyst-Maximizer<sup>®</sup>



## Flexible, pilot-scale bioreactor:

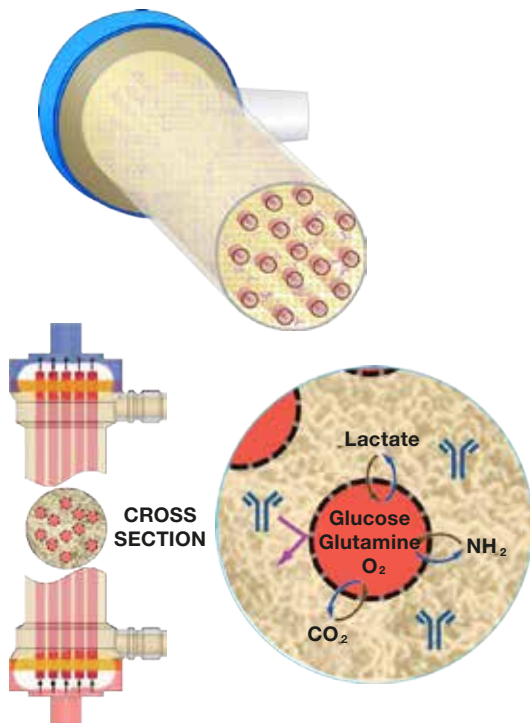
- 80L or 160L fed-batch bioreactor equivalent depending on disposable size in use
- Diagnostic and therapeutic uses
- Produce mAbs, recombinant proteins or virus
- Culture suspension or adherent cell lines

## Single-Use:

- Supplied sterile and ready to use
- No cleaning validation or expense
- Fast turnaround time

In use worldwide for many years producing regulated biologics with very high reliability

- Produces up to  $4 \times 10^{11}$  cells from routine cell lines
- Runs routinely—maximizing your production uptime



## Hollow Fiber Advantages

Mother Nature knows this already: Capillaries efficiently perfuse dense tissues. Hollow fiber capillaries are semipermeable membranes (<60KDa MWCO). Nutrients and wastes freely exchange. Cells, growth supplements and products are retained. Products are simultaneously produced and concentrated. Growth supplements are needed in very small amounts to save \$\$\$ and create purer supernatant than in other culture methods.

Protein Production  
and Concentration in  
the Bioreactor!

## Additional Features

### Maximizer automatically controls:

- pH
- Incubator temperature
- EC cycling (tissue perfusion rate)
- Continuous or batch harvesting

Cascading pH controller. Maximizer produces concentrated and optionally clarified supernatant. Go directly from bioreactor to purification.

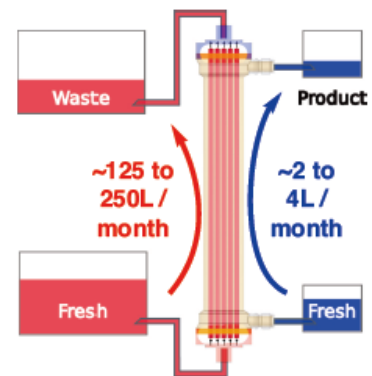
## Save Time & Money

Automation = Less labor

### Maximizer uses two feed media:

- e.g., DMEM:F12 (no supplement)
- e.g., DMEM:F12 with 5% FBS or various commercial serum-free media

### Use very little growth supplement!



	Maximizer	160L Fed Batch Reactor
<b>Facility</b>	Simple, bench-top, 100% CO <sub>2</sub> Standard electricity	Large skid, multiple gases, CIP, SIP, etc. Complexity
<b>Seed Train</b>	0.4L Inoculum Simple static culture methods	8L inoculum Complex, expensive, Time-consuming
<b>Media Costs Example</b>	\$66/gm mAb produced	\$300/gm mAb produced
<b>Downstream Process</b>	26L of supernatant Supernatant is ready for purification	160L of supernatant Concentration, Clarification ... Expense and time
<b>Turnaround Expense</b>	Runs last months Maximizes uptime Disposable = Rapid turnaround	10-day runs Frequent cleaning and startup costs Lower productivity



## Hollow Fiber Means High Cell Density!

~4x10<sup>11</sup> viable cells uniformly distributed throughout the bioreactor

## Specifications & Requirements

- 54.4 kg
- 18–26°C ambient 100% CO<sub>2</sub>, 14–16 psi
- 70 cm W x 66 cm D x 52 cm H
- 100–230 VAC, 50/60 Hz, 500 watts

## Support

You focus on the science. We'll focus on providing robust, easy-to-operate and low-maintenance bioreactors. Our bioreactors are successfully operated by technicians with routine cell culture experience, not chemical engineers. Our technical support assists customers with achieving their success. C3 provides training, IQ/OQ, field service and preventive maintenance for its bioreactors.