

Corning® CELLine™ Disposable Bioreactor for Scale-up and Protein Production

Application Note

CORNING

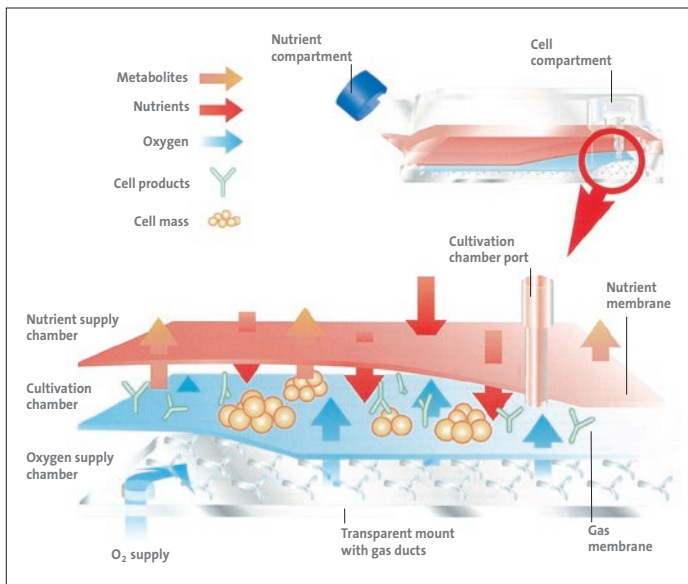
The Corning CELLine disposable bioreactor is a two-chamber cell cultivation vessel in which the chambers are separated by a 10 kD molecular weight cut-off membrane. This arrangement allows for high density cell culture and high yield monoclonal antibody (mAb) production while maintaining a concentrated product.

Benefits

- ▶ Two-chamber design yields highly concentrated mAb product
- ▶ Large nutrient compartment allows for extended culture period without media changes
- ▶ Silicone bottom offers large surface area for gas exchange
- ▶ Clear bottom allows for cell visualization

Application

Large quantities of mAb are often necessary for biochemistry, molecular biology, and cell culture applications. Traditional flask cultures often result in lower yields or a diluted final product that requires downstream processing. Here we show higher protein production efficiency (Figure 1) and cell yields (Figure 2) of mAb produced in the CELLine disposable bioreactor compared to traditional flask vessels.



CELLine disposable bioreactors or flasks were seeded with equal numbers of MH677 cells. Samples for IgG2a production were collected at every cell passage for 21 days.

For more details on this experiment, please refer to Corning document CLS-AN-309.

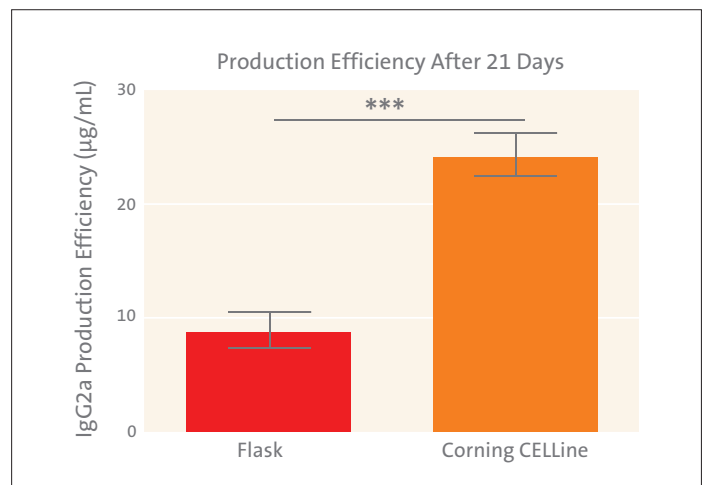


Figure 1. Production efficiency. Taking into account the higher volumes of medium required to fill the Corning CELLine bioreactor, the IgG2a production efficiency per volume of medium used was significantly greater than the T-75 flasks. Data shown with standard deviation. Unpaired T-test *** $p < 0.001$. $n = 6$ vessels from 3 independent studies.

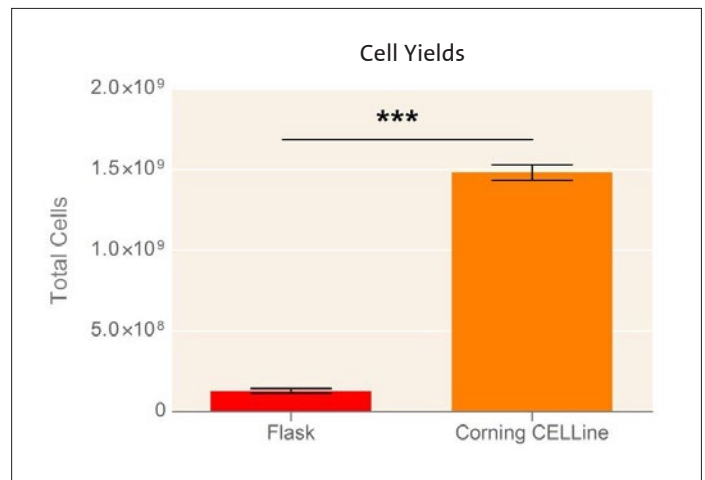


Figure 2. Total cells after 21 days

Ordering Information

Corning® CELLLine™ Disposable Bioreactor for Scale-up Protein Production

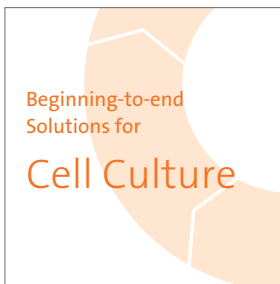
Cat. No.	Description	Sterile	Qty/Pk	Qty/Cs
353137	CL-1000 Corning CELLLine disposable bioreactor	Yes	1	3

Related Product

Cat. No.	Description	Qty/Pk
40-215-CV	Corning hybrigo™ SF medium, 500 mL	6

For more specific information on claims, visit the Certificates page at www.corning.com/lifesciences.

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At Corning, cells are in our culture. In our continuous efforts to improve efficiencies and develop new tools and technologies for life science researchers, we have scientists working in Corning R&D labs across the globe, doing what you do every day. From seeding starter cultures to expanding cells for assays, our technical experts understand your challenges and your increased need for more reliable cells and cellular material.

It is this expertise, plus a 160-year history of Corning innovation and manufacturing excellence, that puts us in a unique position to offer a beginning-to-end portfolio of high-quality, reliable cell culture consumables.

For additional product or technical information, visit www.corning.com/lifesciences or call 1.800.492.1110. Outside the United States, call +1.978.442.2200 or contact your local Corning sales office.

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