

WHEATON® CELLINE™ BIOREACTORS

Multiuse Bench-Top Cell Culture Flask for
Antibody and Protein Production



DWK LIFE SCIENCES
DURAN WHEATON KIMBLE

WHEATON®

CELLine™ Bioreactors

Increased Yield. Lower Costs.

The CELLine™ Bioreactor brings innovative bench-top technology to your antibody, viral, protein and cell culture applications. The unique multiple-harvest design of CELLine™ Bioreactors means greater yield, more control over labor resources, less consumables, and reduced risks. The final results show that overall experimental costs are dramatically lowered while improving your cell culture workflow.



- Separate culture from media: produces concentrated mass of cells and their end products in an easily accessible cell compartment, while reducing the likelihood of contamination and ensuring higher cell viability
- Higher yield from one flask and significant reduction in laboratory consumable and operational costs, when compared to traditional culture flasks
- Stackable for space savings on the bench-top, in storage cabinets and in stockrooms
- More sustainable and green option: lower plastic and media waste production. Lower usage of animal product such as media

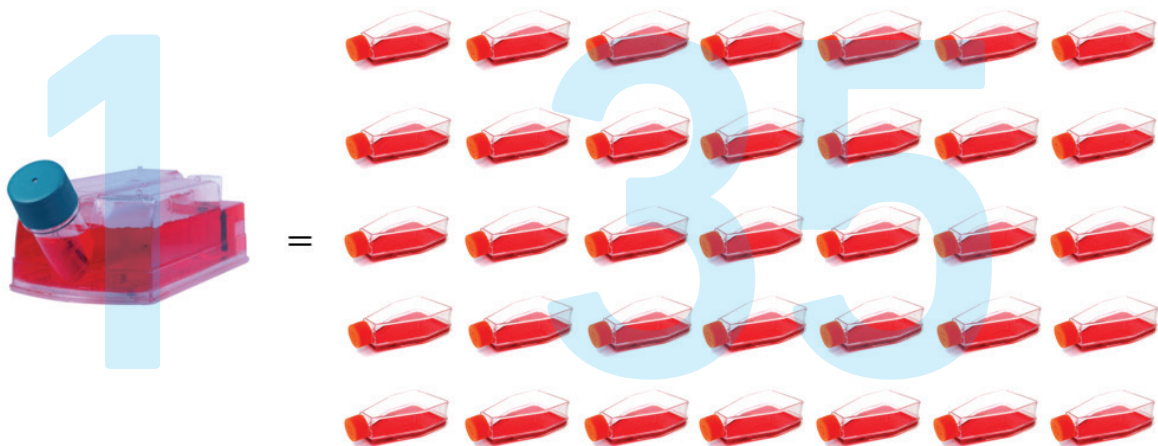
Technology Advantages	CL-1000	T-Flasks	Stacked Flasks	Roller Bottles	Shake Flasks
Separates culture from media	✓	✗	✗	✗	✗
Used for multiple harvests	✓	✗	✗	✗	✗
Saves space	✓	✗	✗	✗	✗

Overall higher yield per cost spent					
Cell production	600M	17M*	200M	500M	400M
Cost for 12 harvests to achieve 600M cells (USD)**	\$228.69	\$3,616.92	\$4,265.64	\$3,949.80	\$498.48

* One CELLine™ Bioreactor replaces 35 T-flasks when comparing the number of cells produced per harvest.

** Costs only include purchase of flasks at price listed – total cost savings in the laboratory cell culture workflow may be greater when considering the reduced need for consumables, media, waste disposal, labor and other associated lab costs based on customer application.

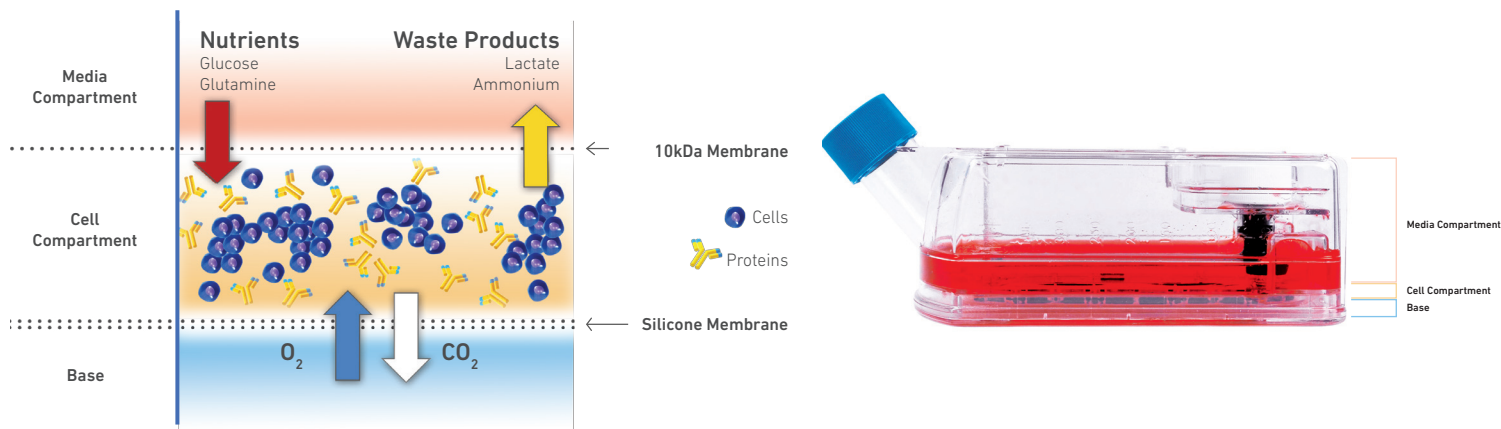
Comparison of Cell Production per harvest — CELLine Bioreactors vs. T-Flasks



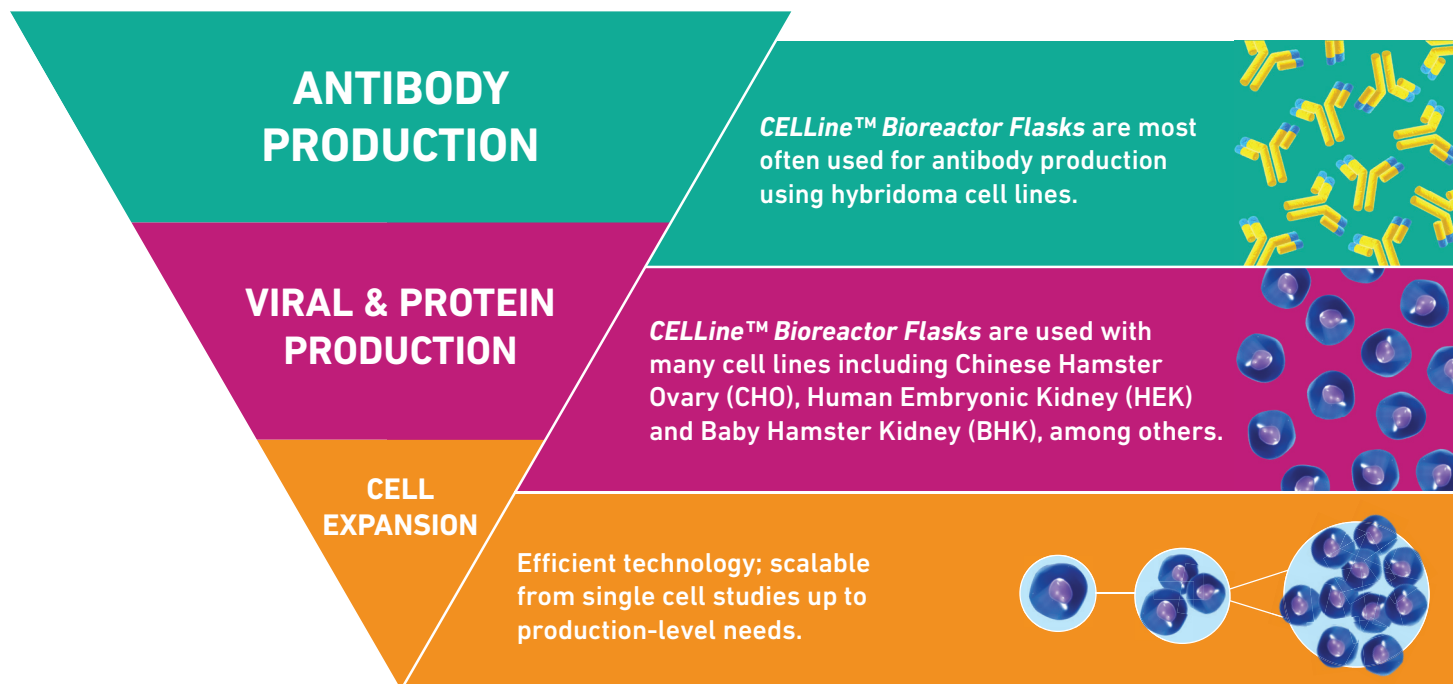
How does CELLine™ increase yield at lower costs?

► Innovative 3 compartment design: media, cell and base compartments

- Media compartment is 66 to 70 times the size of the cell compartment which reduces the media refreshment cycles and separates culture from waste
- Cell compartment positioned between a metabolite regulating upper membrane and lower membranes for gas exchange. The upper membrane provides nutrient flow which is highly regulated and consistent promoting greater cell growth. Results in highly dense and concentrated cultures
- Direct access to O_2 and CO_2 for maximum gas exchange. Places the gas permeable lower membrane directly next to the cells themselves to maintain optimum levels required for metabolism

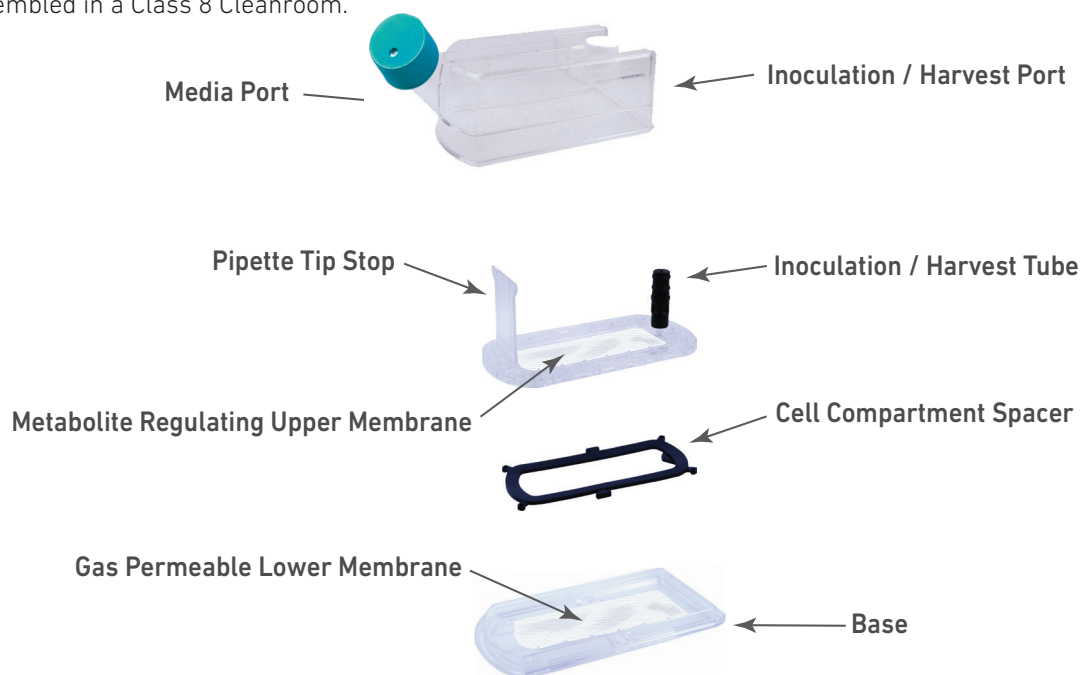


Applications



Exploded View of Device

Unit is packaged fully assembled in a Class 8 Cleanroom.



How-To Guide:



1. Warm nutrient medium and prepare upper membrane by adding a small amount of media to the media compartment.



4. Incubate in a CO₂ incubator for approximately 3-7 days depending on the optimum harvesting schedule.



2. Inoculate the cell compartment of the device.



5. Change media from the media compartment and/or harvest the cells from the cell compartment.
 - a. The higher the cell density, the more protein production. Higher cell densities will require more frequent media changes.
 - b. Recommended 3, 5 and 7 day feeding schedules are available. Schedules can be tailored to meet your production and timing requirements.



3. Fill the media compartment.



6. Incubate flask and repeat the media change/harvesting cycle until desired amount of protein is generated.

Ordering Information

Cat. No.	Flask Type	Culture Type	Media (mL) Compartment Size	Cell (mL) Compartment Size	Qty / Case
WCL1000-1	CELLine 1000	Suspension	1000	15	1
WCL1000-3	CELLine 1000	Suspension	1000	15	3
WCL1000AD-1	CELLine 1000-AD	Adherent	1000	15	1
WCL1000AD-3	CELLine 1000-AD	Adherent	1000	15	3
WCL0350-1	CELLine 350	Suspension	350	5	1
WCL0350-5	CELLine 350	Suspension	350	5	5

Additional Information

Seeding And Harvesting Densities	CELLine 350	CELLine 1000
Preculture (Viable Cells)	7.5×10^6	22.5×10^6
Inoculation Volume (mL)	5	15
Inoculation Concentration (Viable Cells/mL)	1.5×10^6	1.5×10^6
Harvesting Concentration (Viable Cells/mL)	$20-40 \times 10^6$	$20-40 \times 10^6$
Titer (mg/mL)	1 - 10	1 - 10
Antibody Yield per Month (mg)	20-200	60-600



DWK Life Sciences Cell Culture

From laboratory consumables to equipment, DWK Life Sciences is your trusted partner for cell culture. Why not take a look at the rest of our cell culture range...



WHEATON® PIPET-PAL™

The WHEATON PIPET-PAL Controller, is ergonomically designed to sit comfortably in your hand and allows your fingers to keep a natural position during lengthy hours of pipetting and dosing activities. In addition to ergonomics it offers accuracy, speed and long battery life. This helps to maximise lab efficiency combined with an ergonomic pipetting experience.

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WHEATON® CryoELITE®

Manufactured from low binding polypropylene that complies with USP Class VI, the WHEATON CryoELITE range is for those who require the ultimate in sample protection. Free of pyrogens, RNase, DNase and endotoxins and providing a seal that exceeds DOT and IATA classifications for diagnostic specimens and their transport, these cryovials are also capable of maintaining a secure closure during freeze/thaw procedures.

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DURAN® TILT

The DURAN TILT bottle range changes everything in your cell culture hood. This innovative bottle has two positions: upright for filter sterilization or storage, and tilted at 45° for pipetting. Take a look at cell culture media from a new angle and discover a bottle system that eases handling and turns usability into security.

[Click here to learn more >>](#)



WHEATON® Serological Pipets

The WHEATON serological pipette range provides today's cell culture scientist with the performance required to succeed at every stage of cell culture. Sterile and clean room manufactured, we deliver a product that you and your cells can trust. Our polystyrene serological pipettes are accurate, particle-free and traceable allowing you to progress your research with complete confidence.

[Click here to learn more >>](#)



DURAN® Filter Funnel

Designed for sterilization or clarification of aqueous cell culture media. Supplied as a filter funnel only unit for use with the DURAN® TILT bottle (with GL 45 thread adaptor) or 45 mm media bottles. Raised moulded graduation marks for easy volume reading. Manufactured in a Class 100,000 clean room from Class VI, non-cytotoxic materials. Supplied sterile.

[Click here to learn more >>](#)



WHEATON® Roller Apparatus

WHEATON Roller Bottle systems have long been appreciated for their excellent performance in laboratory, pilot plant and production cell culture installations. Designed to meet the highest expectations of our vaccine and biologics customers, our state-of-the-art roller systems have been built to support industry standard protocols and facilitate integration into new production facilities.

[Click here to learn more >>](#)



WHEATON® Polycarbonate Flasks

Wheaton Polycarbonate Shake Flasks are optically clear, sterile and come in variety of sizes from 125 to 3000mL. Unique features such as our patented DuoCAP™ for sterile air exchange and optional baffles help guard against pH shifts or oxidation. Flasks are reusable and autoclavable.

[Click here to learn more >>](#)



WHEATON® PETG Media Bottles

Wheaton PETG Media Bottles come with standard or tamper-evident caps. Sterile and square means a clean start and efficient storage! Volume between 30mL to 2000mL make these flasks a best in class choice for your valuable work, storage or transport.

[Click here to learn more >>](#)



Tissue Grinders

There are three basic types of tissue grinders: Dounce, DUALL® and Potter-Elvehjem.

Tissue grinders produce homogenates by a combination of shearing and compression actions. Conically shaped pestles homogenize better than pestles with a rounded shape. Ground glass to ground glass surfaces homogenize better than smooth glass to smooth glass or PTFE to smooth glass. In addition to the reusable glass tissue grinders, disposable plastic tissue grinders are offered in sterile and non-sterile versions from 0.5mL to 50mL.

[Click here to learn more >>](#)



WHEATON® Incubators

WHEATON CO₂ and Standard Incubators are designed for temperature uniformity and to be compatible with both production and modular spaced Standard Roller Apparatus'. These Incubators utilize a user configurable shelving system and roller apparatus guide tracks for easy loading and unloading of the Roller Apparatus (shelving sold separately). They come equipped with a USB port and analog 4-20mA jack included for data logging temperature levels and an optional dry contact alarm port for communicating alarm activation instances.

[Click here to learn more >>](#)



KIMBLE® KIMAX® Petri Dishes

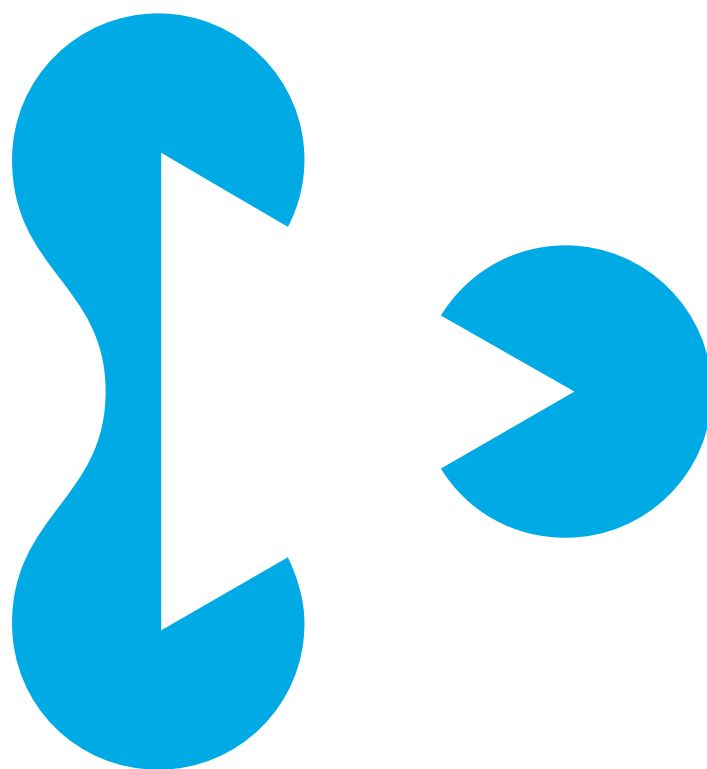
Borosilicate 33 petri dishes remain clear after repeated use in wet or dry sterilization cycles. Reinforced with beaded edges resist mechanical breakage and help in centering the bottom inside the cover. Bottom has a vertical arrow on the side to precisely locate serial dilution starting points.

[Click here to learn more >>](#)



WHEATON® Centrifuge Tubes

WHEATON centrifuge tubes are manufactured from virgin, medical grade polypropylene or polystyrene and can withstand centrifugation speeds of up to 9,500xg. Supplied sterile, our WHEATON centrifuge tubes are leakproof to provide maximum user safety and sample security.



Excellence in your hands

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