



Breez Bioreactor System

- Automated
- True Perfusion™
- High Performance

Enabling Rapid Bioprocess Innovation

The breez Bioreactor enables you to easily build larger, higher quality datasets in less time.

Erbi Biosystems

Intensified Bioprocesses Made Easy



erbi | breez™

Erbi brings the benefits of miniaturization and automation to cell culture. Scale-down high-cell density bioprocess development for N-1 or continuous perfusion cultures can deliver improved data quality, increased staff productivity, and shorter development timelines. Until now there were limited ways to perform perfusion cell cultures. The Erbi breez bioreactor solves that.

The Erbi Breez bioreactor system with 2 mL working volume performs high cell density True Perfusion™ cultures with fully integrated fluidics, online sensing and controls, and delivers stirred tank performance. The fully integrated single use microbioreactor makes setup a breeze and you can easily run sophisticated feeding strategies, cell concentration, and media exchanges with the intuitive software.

Meet Breez™

Smaller size, bigger capabilities



Our Breez™ bioreactor is the only mL-scale platform that offers a fully automated, continuous True Perfusion™ culture. So, you can do everything you're doing with a stirred-tank reactor and then some – because you'll get better control, the ability to easily run multiple experiments at once, and cost savings with every use.



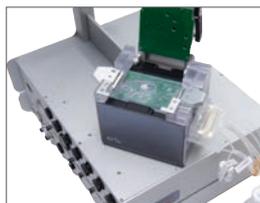
STERILIZED MICROREACTOR CONSUMABLE

Sterile, single-use True Perfusion™ microreactor cassettes with fully integrated fluidics that enables quick experiment set up and take down with reduced contamination risk



BASESTATION HUB AND CO₂ SENSOR BOX

The Basestation Hub and CO₂ Sensor Box supplies regulated gas pressure, electrical power, and communication to PODs



FULLY AUTOMATED CONTROLLER PODS

Each Pod operates independently and provides mixing and closed loop pH, DO, temperature, CO₂, and cell density control

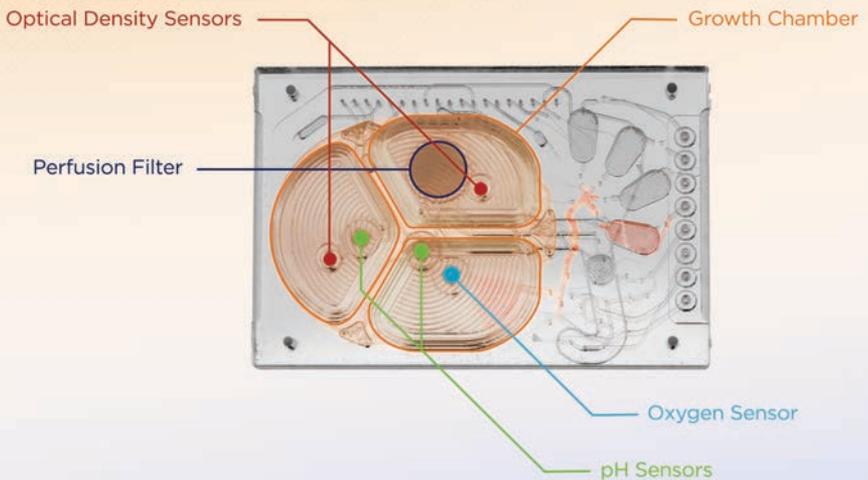


INTUITIVE AND POWERFUL SOFTWARE

Easy-to-use interface makes it easy to set up the experiment, monitor and control the PODs and microreactor consumable

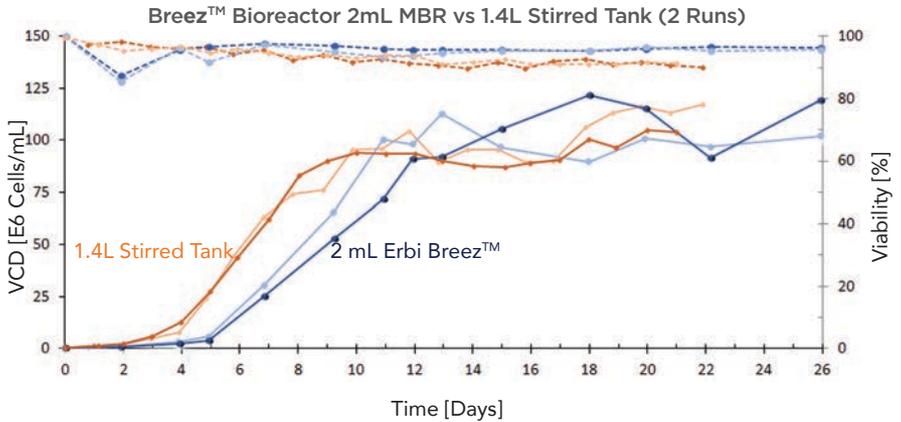
Smaller Size, Bigger Capabilities

- ✓ Continuous Processing
- ✓ Media Development
- ✓ Process Development and characterization
 - ✓ N-1 Perfusion
- ✓ Steady state performance exploration

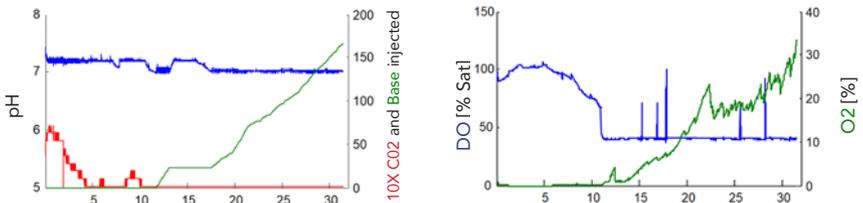


- Virtually eliminates media, filter, and labor costs
- Run experiments individually or in parallel
- Ease of set up with no assembly, sterilization, or tear down time.
- Powerful & easy to use software gives complete control and unmatched data

Performance



Breez™ Bioreactor Online Controller Data for pH and DO



Typical Specifications

Fluid Flow and Volume

Reactor Working Volume	2 mL
# Of Fluid Inputs	4
Flow Rate Range	0.1 - 10 VVD
Pump Accuracy, Resolution	+/- 2%, 600nL
Minimum Sample Volume	50uL

pH Measurement and Control

Measurement Range	5.5 - 8.5
Measurement & Control Accuracy @ pH 7	+/-0.05

Dissolved Oxygen

Range	0-200% air sat
Measurement & Control Accuracy	+/- 5%
Kla	up to 40/hr

Temperature

Measurement Accuracy	+/- 0.25 C
Control Range	Ambient - 50C
Control Resolution	0.01 C

Optical Density

Linear range (CHO)	0-50M cells/mL
Usable Range (CHO)	0-200M cells/mL
Auto cell bleed	+/- 10% setpoint



Get ready
to do more
with less

The Erbi Difference

Faster to deploy, easier to use, higher productivity and the same high-quality data

SPEED



Save time with pre-sterilized micro-bioreactor cassette and integrated fluid delivery system with automated setup & calibration.

PRODUCTIVITY



Run more perfusion cultures in parallel with less space for higher productivity in a smaller lab.

SCALE-DOWN MODEL



Mimic your large scale processes with 1000-fold reduction in media and reagent costs.

HIGH PERFORMANCE

Maintain high cell densities (>250M CHO cells / ml) over 30 days with integrated pH, DO, Temp and cell density control. Run multiple cell types.

FLEXIBLE AUTOMATION

Breez™ bioreactor can autonomously perform sophisticated control strategies, media exchanges, and cell concentration.

EASY TO DEPLOY

A 4-bioreactor perfusion setup only requires one sq. ft. (0.1 m²) of dry bench space. No hood required!