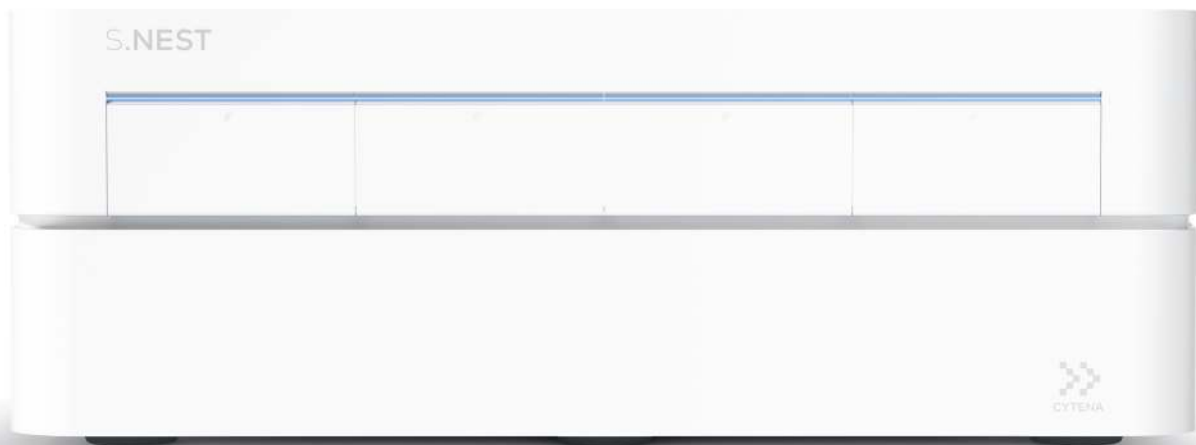


Microbioreactor System

S.NEST

Next-generation Microbioreactor for Cell Line Development

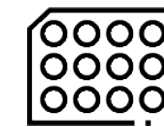




About the S.NEST

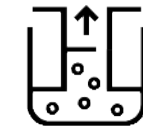
As the biopharmaceutical industry expands, companies are looking for competitive advantages in cell line development. The S.NEST, a high-throughput microbioreactor with CO₂ incubator functions, shortens the process time for cell upscaling, provides a better microscale environment for cell growth, and brings more efficiency to cell line selection.

A powerful, productive, compact system



Culture

High-throughput cultivation that enables the incubation of four 24-well or 96-well plates at once.



Optimize

Customizable mixing levels thanks to a unique fluid control system that increases cell growth.



Analyze

Intuitive software analytics transform data into insights.



Monitor

Real-time monitoring of pH and dissolved oxygen (DO) values during entire cell culturing process.



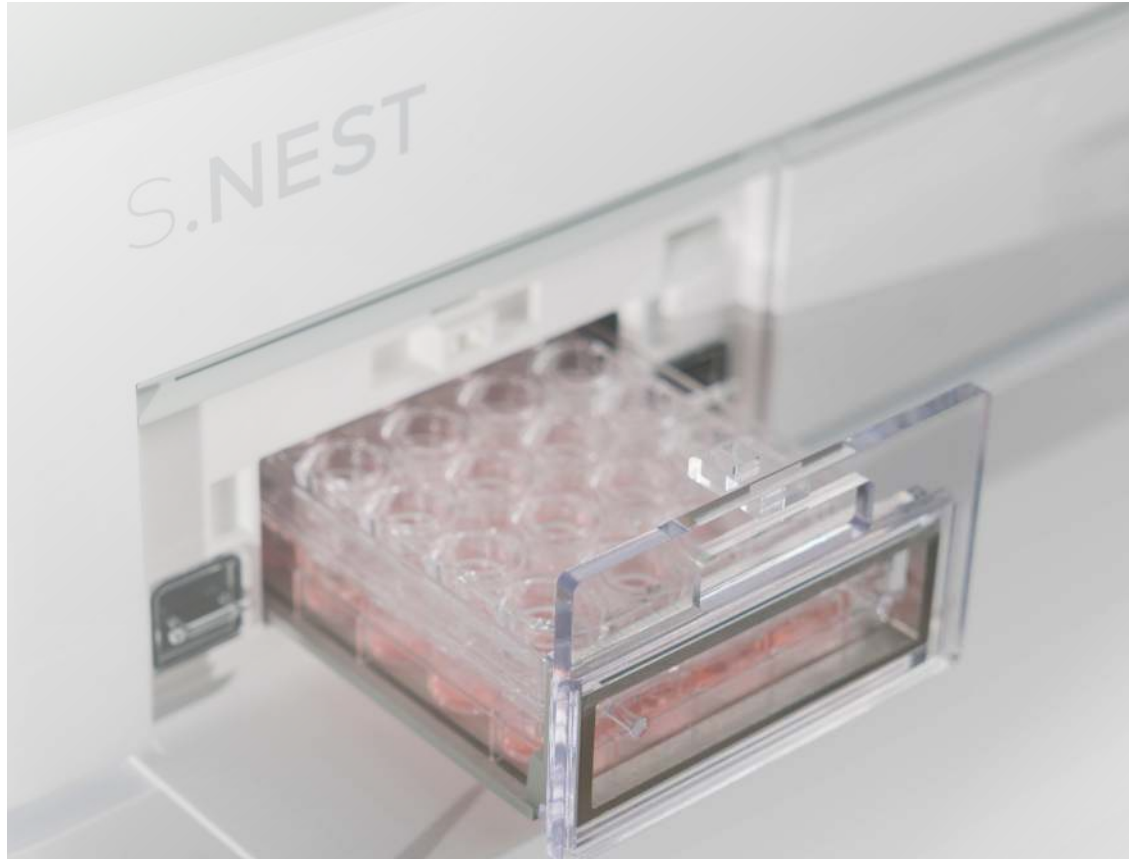
Sterilize

Independent UV light control ensures the sterility of each chamber



Trust

Reliable results allow you to improve your cell culture workflow.

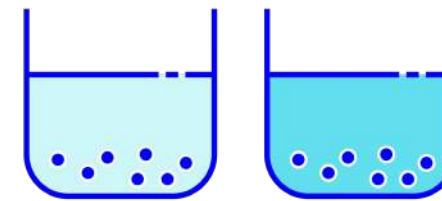


Maximum productivity with minimum effort

The S.NEST introduces suspension culture and late-stage bioreactor conditions to the early-stage cell line development pipeline, providing more growing space and oxygen than static cultures. When using the S.NEST, cells show higher density and viability compared to normal incubation, and weeks of cell expansion are no longer necessary.

The S.NEST increases efficiency and productivity for biologics production, drug screening and functional genomics.

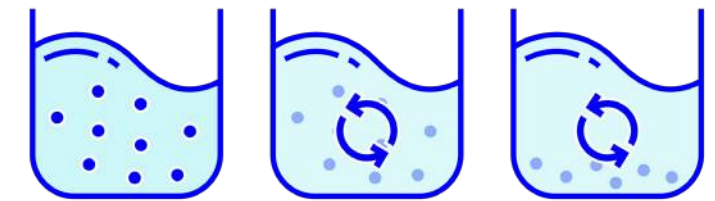
Static culture



Limited 2D Growing Space

Inhomogeneous Medium

Mixing culture



3D Growing Space

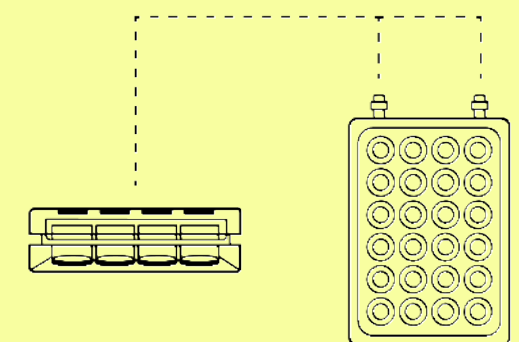
Equal Distribution
Suspension cell lines

Medium Refresh
Adherent cell lines

Increased oxygen transfer

The S.NEST exerts suction or expulsion pressure through the fluidic channels to enable homogenous reciprocating mixing.

Adjustable mixing control minimizes shear rate for different cell lines. The oxygen transfer tubes connecting to the lid offer the cells a continuous oxygen supply to maintain a healthy environment.



* Both 96-well and 24-well lids are available for mixing culture



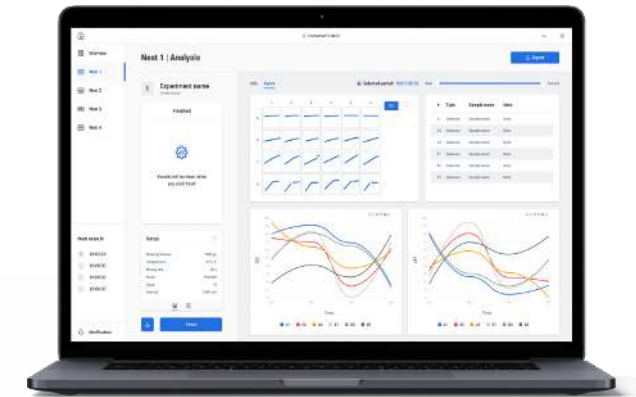
Designed for your needs

The upper section has four incubation chambers, and each includes a thermal module, water tray and air/CO2 inlet port and sensor. Each chamber also has individual environmental controls and can fit one 96- or 24-well culture plate, enabling the cell culturing of as many as 384 wells at once.



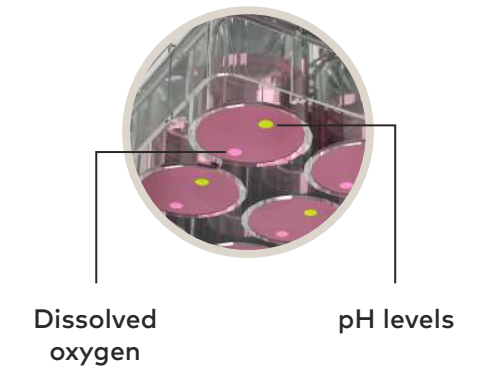
Real-time monitoring

The S.NEST software displays the sensor results and allows users to adjust environmental controls.



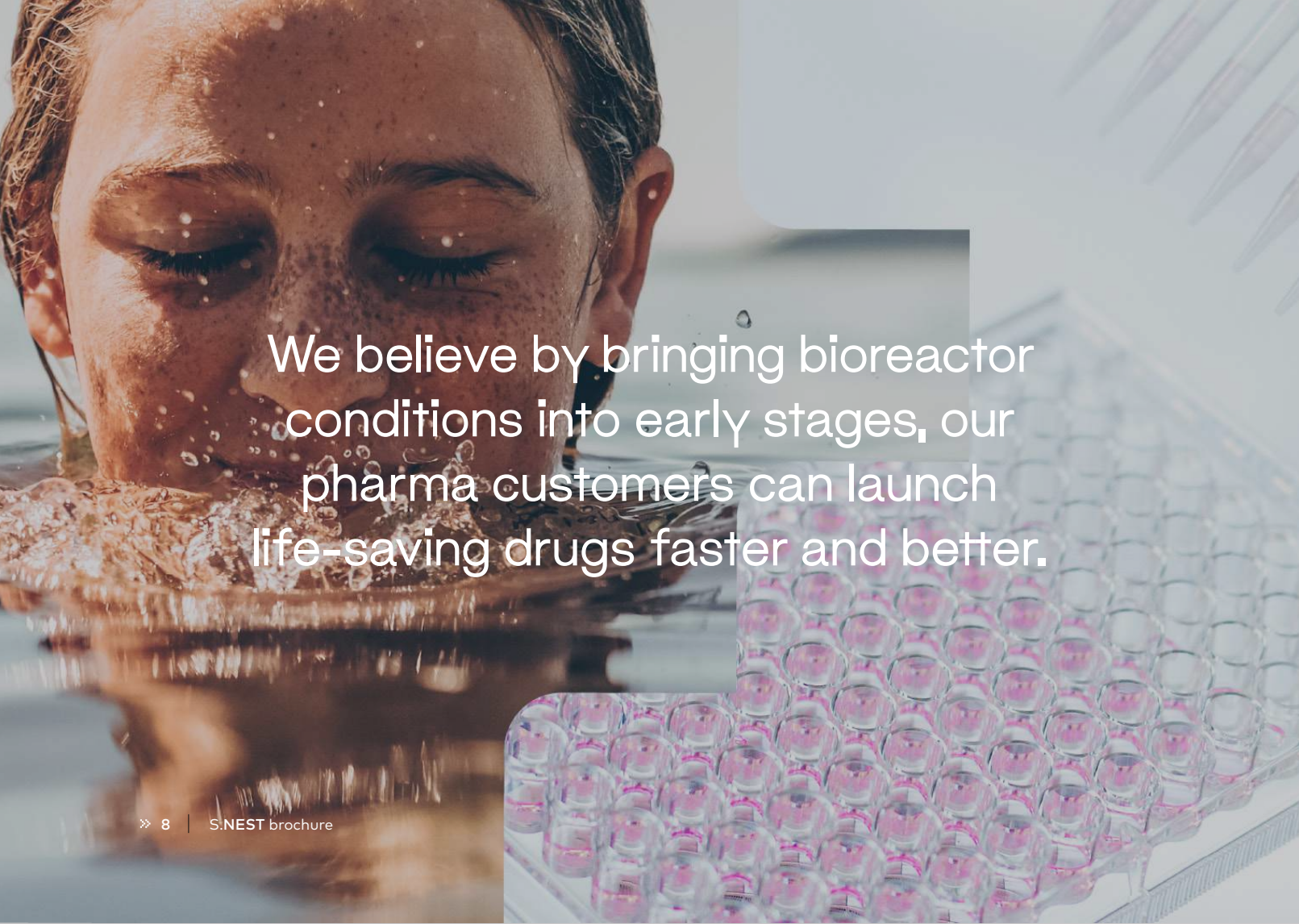
S.NEST 24-Well Plate

Optical sensors are attached to the bottom of each well to monitor the pH and DO value of all wells simultaneously.



The lower section is a motion camera module that detects the optical signals from the sensors of each plate within 5 minutes and displays real-time monitoring data on the S.NEST software.



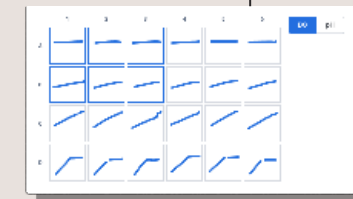
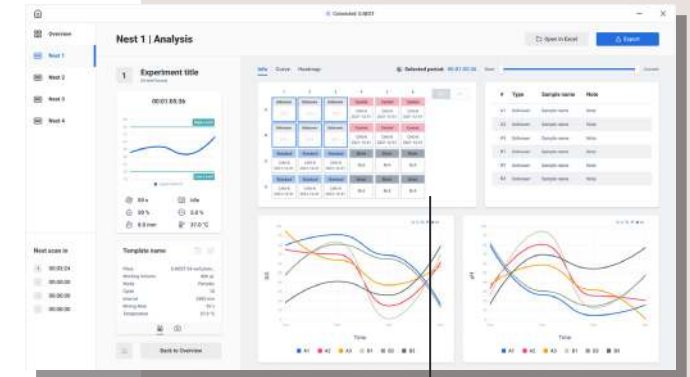


We believe by bringing bioreactor conditions into early stages, our pharma customers can launch life-saving drugs faster and better.

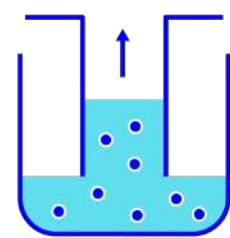
Intuitive software interface

The S.NEST software provides insightful graphs from the pH and DO sensor data:

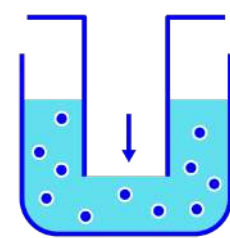
- Measurements for each well at each time interval
- Time curve table of data from selected wells



Consumables for optimal cell culture



Suction pressure

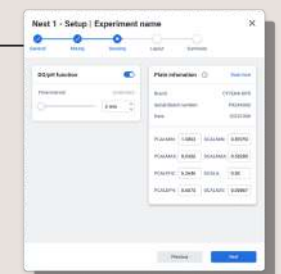
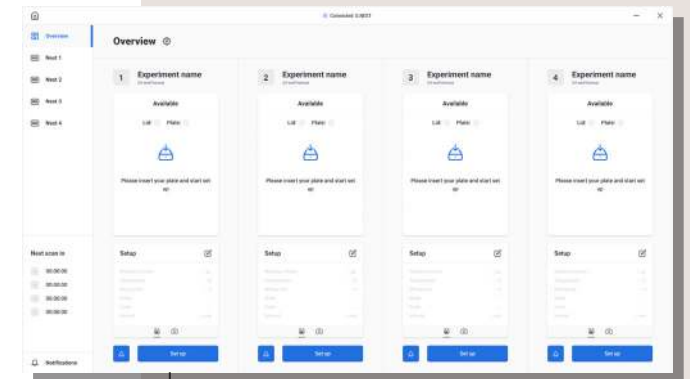


Expulsion pressure

The S.NEST lid comes in 96-luidic-channel or 24-luidic-channel formats, for respective well plates.

The S.NEST software provides intuitive settings for:

- Incubation chamber environment (temperature and CO₂ levels)
- Mixing system (mixing level and mixing mode)
- Motion camera (time interval)



Specifications

S.NEST Specifications		
Working Volume	96-well plate	150 - 200 µL
	24-well plate	1,000 - 1,600 µL
Mixing Control	Rate	10 - 50 s / period
	(available in 96-well and 24-well plates)	
	Accuracy	± 1 s
Temperature Control	Range	RT+5 °C to 45 °C
	Accuracy	± 0.2 °C
	Control accuracy	± 0.1 °C
CO ₂ Control	Range	1 - 20%
	Accuracy	± 0.2 %
	Control accuracy	± 0.1 %
Humidity Monitoring	Range	0 - 100% @ 37°C
	Accuracy	± 0.2 %
pH Measurement	Range	6.0-8.0
	Accuracy	<0.1 pH
	Sampling rate	>5 min
DO Measurement	Range	0%–100% (air saturation)
	Accuracy	<0.5% (@ 0% air saturation) <3% (@ 100% air saturation)
	Sampling rate	>5 min
Footprint	434 x 785 x 288 mm	
Weight	50 kg	
Input Voltage	100-240 VAC	
Power Consumption	500W	

Ordering Information

Product No.	Product Name	Information
S.NEST Microbioreactor System		
D16110024202	S.NEST (24-well format)	<ul style="list-style-type: none"> 4 S.NEST 24-well culture chambers DO/pH real-time sensing module S.NEST Software Standard warranty (12 months from date of installation) Installation & training included Origin: Taiwan
D16110024307	S.NEST (96-well format)	<ul style="list-style-type: none"> 4 S.NEST 96-well culture chambers DO/pH real-time sensing module S.NEST Software Standard warranty (12 months from date of installation) Installation & training included Origin: Taiwan
D16110024308	S.NEST (customized format)	<ul style="list-style-type: none"> 4 S.NEST culture chambers with customized format DO/pH real-time sensing module S.NEST Software Standard warranty (12 months from date of installation) Installation & training included Origin: Taiwan
Recommended Consumables		
D16110024309	S.NEST Cell Culture Kit- 24-well (10 sets / 1 box)	<ul style="list-style-type: none"> 10 single-packed Greiner CELLSTAR 24-well culture multiwell plates (No. 662102) with DO/pH sensor 10 single-packed S.NEST 24-well lids
Service and Warranty		
D16110024310	1-year extended warranty	<ul style="list-style-type: none"> Replacement parts (for non-negligent damages) 6 hours of technical support
D16110024311	2-year extended warranty	<ul style="list-style-type: none"> Replacement parts (for non-negligent damages) 12 hours of technical support
D16110024312	3-year extended warranty	<ul style="list-style-type: none"> Replacement parts (for non-negligent damages) 20 hours of technical support

Learn more



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