Microbioreactor System

C.NEST™

Streamline the path from culture to discovery

CYTENA BPS
A BICO COMPANY

The C.NEST designed to support superior cell growth and maintenance of a variety of cell lines and mammalian cells, even in single-cell and 3D cultures.

A robust, flexible & reliable system for everyday culturing

High-throughput Cultivation

- Four incubation chambers in one system
- Perform up to eight plates of static culture or up to four plates of mixing culture

Upscalable Design

- Enable customization of capacity and throughput for personalized solutions
- A multi-user system without interference from others while an experiment is carried out

Optimized Environment

- Compact plate holder design
- Independent control of temperature and CO_2 level in each chamber
- Humidity monitoring
- UV sterilization

Intuitive Software

- User-friendly interface
- Accessible for all levels of experience

Outstanding Flexibility

- Culture in multiple conditions by combining static and mixing environments in a single system
- Powerful mixing expands the range of application areas

Automation-friendly System

- Fully mechanized for easier operation
- Possible to integrate with robotic arms

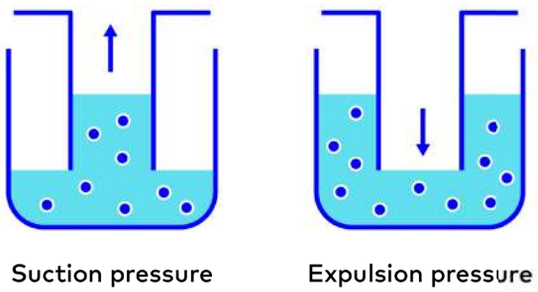
Innovative design

The compact plate holder is designed to offer a more optimized environment and reduce evaporation during cell culture while offering a superior user experience.

The height allows two microwell plates to be placed in one chamber.

Equipped with electromagnetic lock and linear guideways that makes automation procedure possible.

The power of mixing

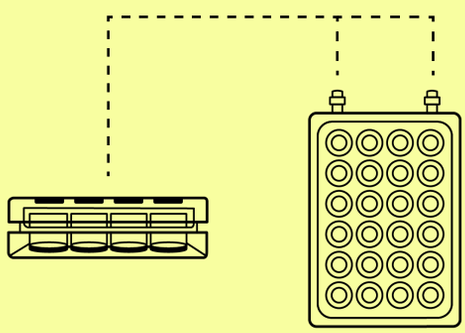


Suction pressure Expulsion pressure

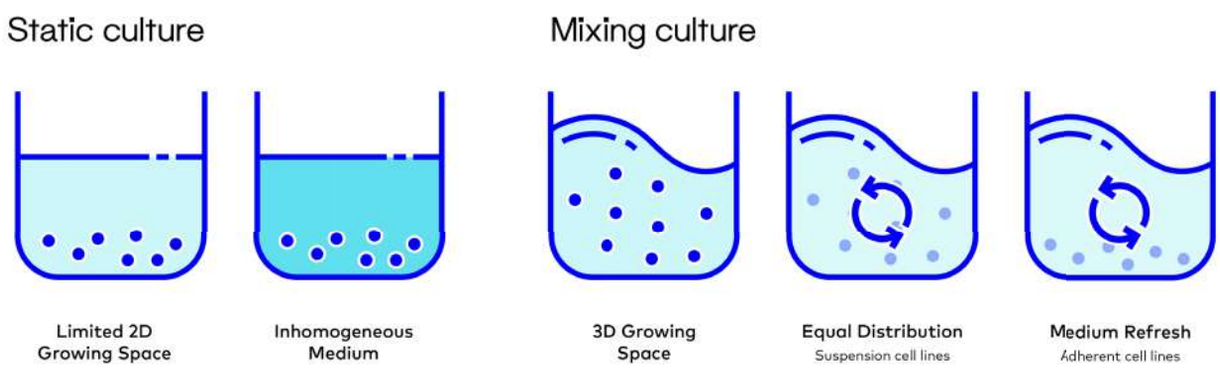
The C.NEST performs suction and expulsion pressure through the fluidic channels to enable continuous or periodic reciprocating mixing while the cell culture is carried out.

The oxygen transfer tubes connected to the lid offer the cells a continuous oxygen supply to maintain a healthy environment.

Reciprocating mixing creates optimized and variable conditions, expanding the system's range of application areas.



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



Both suspension and adherent culture are suitable for mixing conditions and can benefit from the homogeneous distribution of nutrition and oxygen.

Flexible solution

The C.NEST system can be used for static culture, mixing culture and a combination of the two all at once thanks to the ability to independently control both the hardware and software.

Each chamber can fit one 96- or 24-well plate and a corresponding lid to perform mixing culture. The system can also fit any plate format with its cover for static culture, including two 384-well and 96-well plates if they're placed vertically.

Unlimited possibilities

Other analysis kits like enzymatic assays, activity assessment and several steps in ELISA can be performed simultaneously.

Deliver reliability and performance for results you can count on every day

Your solution for optimized cell line development

Standard format

Customized
two-system setup

Upscalable design in capacity

Upscalable design enables customization of capacity and throughput for personalized solutions, and increases efficiency and productivity.

Customized
three-system setup

Customized
four-system setup

The C.NEST Microbioreactor System
is a powerful tool in many application areas

Cell Line Development

High-Throughput Screening

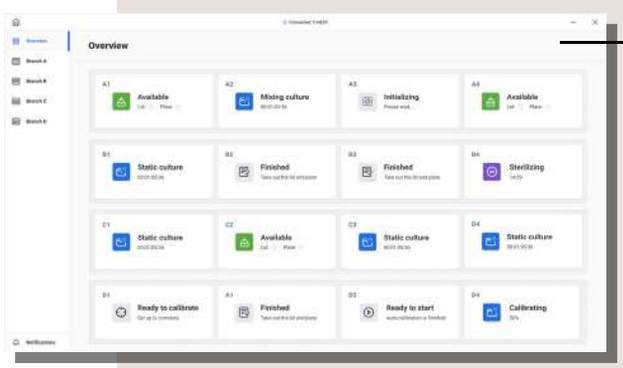
Drug Development

Cell Culture Research

3D Cell Models

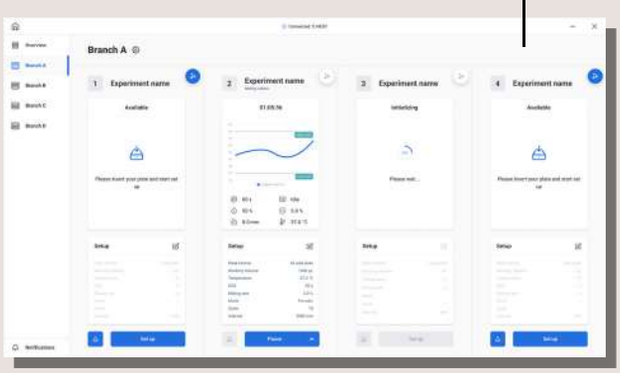
Single-Cell Workflow

Intuitive software interface



Overview page

Experiment page



- User-friendly design
- Robust model that controls up to 16 chambers with one laptop
- Easy-to-use with clear step-by-step instructions

Specifications

General characteristics		
Dimensions		
Width	750	[mm]
Depth	460	[mm]
Height	180	[mm]
Weight	25	[kg]
Electrical characteristics		
Input voltage	100-240	[Vac]
Input voltage net tolerance	±10	[%]
Input voltage frequency	50/60	[Hz]
Max. input current	3.53 - 1.45	[A]
Power mains supply voltage fluctuations	±10	[%]
Installation category	CAT II	-
Input fuse type	250VAC, 16A, time-lag	-
Ambient conditions		
Min. temperature	20	[°C]
Max. temperature	30	[°C]
Min. rel. humidity (non-condensing)	20	[%]
Max. rel. humidity (non-condensing)	60	[%]
Max. altitude above normally zero for operation	2,000	[m]
Indoor use	Yes	-
Outdoor use	No	-
Pollution degree	2	-
Minimum space between the surrounding walls and instrument	100	[mm]
Transportation/storage conditions		
Min. temperature	20	[°C]
Max. temperature	30	[°C]
Min. rel. humidity (non-condensing)	20	[%]
Max. rel. humidity (non-condensing)	60	[%]
Max. altitude above normally zero for operation	2,000	[m]

Basic configuration		
Incubation conditions		
Temperature control	RT+5 – 45 ± 0.2	[°C]
CO_2 level control	1 – 20 ± 0.3	[%]
Humidity monitoring	0 – 100 ± 5 (at 37°C)	[%]
Culture conditions		
Mixing rate (24-well format)	10 – 50 s ± 5	[%]
Mixing rate (96-well format)	10 – 50 s ± 5	[%]
Working volume (24-well format)	1,000 – 1,600	[µl]
Working volume (96-well format)	150-200	[µl]
Working volume (384-well format)	25-80	[µl]

** Each value above is specified with one standard deviation from its mean (M±1SD)*

Ordering Information

Product No.	Product Name	Information
C.NEST Microbioreactor System		
D16110025165	C.NEST Microbioreactor – Standard format	– 4 C.NEST cell culture chambers – C.NEST Software – Standard warranty (12 months from date of installation) – Installation & training included – Origin: Taiwan
CBS161101010	C.NEST Microbioreactor – Customized two-system	– 8 C.NEST cell culture chambers – C.NEST Software – Standard warranty (12 months from date of installation) – Installation & training included – Origin: Taiwan
CBS161101011	C.NEST Microbioreactor – Customized three-system	– 12 C.NEST cell culture chambers – C.NEST Software – Standard warranty (12 months from date of installation) – Installation & training included – Origin: Taiwan
D16110025166	C.NEST Microbioreactor – Customized four-system	– 16 C.NEST cell culture chambers – C.NEST Software – Standard warranty (12 months from date of installation) – Installation & training included – Origin: Taiwan
Recommended Consumables		
D16110025167	C.NEST Cell Culture Kit – 24-well (20 sets/box) (Applicable for S.NEST system when the pH/DO sensing function is deactivated)	– 20 Single Packed X.NEST 24-well Lid – 20 Single Packed Greiner CELLSTAR 24 Well Cell Culture Multiwell Plates (No.662102/662160) – Applicable for D16110024202 S.NEST module when the pH/DO sensing function is deactivated
D16110025168	C.NEST Cell Culture Kit – 96-well (20 sets/box)	– 20 Single Packed C.NEST 96-well Lid – 20 Single Packed Corning 96 Well Cell Culture Multiwell Plates (No. 3599)

Service and Warranty		
CBS10303	X.NEST System Qualification Protocol (Offsite)	– Document material and certificate included – Included X.NEST Installation and Operating Qualification
CBS10304	X.NEST System Qualification Protocol (EU onsite)	– Document material and certificate included – Included X.NEST Installation and Operating Qualification – On-site assistance (1 person) for qualification protocol (EU)
CBS10305	X.NEST System Qualification Protocol (Outside EU)	– Document material and certificate included – Included X.NEST Installation and Operating Qualification – On-site assistance (1 person) for qualification protocol (Outside EU)
CBS161101005	Premium Customer Care Package C.NEST – 1 year	– Repair and spare parts – Control software upgrade – Travel to site – Preventive maintenance – Application support – Priority support
D16110025356	C.NEST Warranty extension 1 year	– Parts replacement include (non-negligent damage) – Included 6 hours technical support
D16110025357	C.NEST Warranty extension 2 year	– Parts replacement include (non-negligent damage) – Included 12 hours technical support
D16110025358	C.NEST Warranty extension 3 year	– Parts replacement include (non-negligent damage) – Included 20 hours technical support

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