Nuaire In-VitroCell ES NU-5841 CO2 Incubator

The In-VitroCell ES NU-5841 provides an easy method to monitor and control humidity and oxygen levels in the chamber for hypoxic stress studies, stem cell culture, carcinogenic tumors, toxicity, and more.

Rating: Not Rated Yet
Ask a question about this product

ManufacturerNuaire

Description

Touch Screen Color Display Offers easy system operation and various menu/function selection

Password Protected Prevents unauthorized setting changes

Temperature Controller Controls overall temperature and environment

- Features

Features

Hypoxic *Zirconia Ceramic* O_2 Sensor Control

A maintenance-free Zirconia O_2 ceramic sensor provides improved accuracy and lower range hypoxic control by displacement with nitrogen.

Example Studies:

- Stem Cell Research Suppressed oxygen environment provides control in stem cell differentiation to maintain full pluripotency of cell lines.

O_2 Range: 0.5 to 21%

O_2 Accuracy: ± 0.25%

Relative Humidity (RH) Control

A RH sensor continuously samples chamber humidity levels to monitor and control the humidity set point. If the system senses any variation in humidity, vapor is injected into the chamber by a water reservoir located underneath the chamber.

Dual Sterilization Cycles

Easily accessible through the NuTouch Intelligent Interface, In-VitroCell offers 145°C high heat sterilization and a 95°C humidified decontamination cycles as a preventative measures and to eradicate contamination in the growth chamber. On screen instructions read users through the process. A timer function is available to delay the sterilization process for an overnight procedure.

NuTouch Intelligent Interface

NuTouch is a user-friendly 5 x 7 (127 x 178 mm) color touch screen designed for high user adoption. The electronic control system is a microcomputer designed to service the precise control requirement of the chamber environment for culture growth. The microcomputer is supported with Read Only Memory (ROM) containing executable software, Random Access Memory (RAM) for temporary storage, and Electronically Erasable Programmable Read Only Memory (EEPROM) for control set points and parameters. The EEPROM provides for indefinite storage of these values during periods of power off or power interruption (power fault tolerant). NuTouch features are:

- Temperature and Gas Monitor and Control
- Status Indicators Screen Identity; Run or Standby mode; Door Adjar; Air and CO_2 Inject; Air and CO_2 Chamber Sampling
- Date and Time Functions in International Format
- Password Protection
- Onscreen Icon Descriptions Pressing on any icon will provide a description of what the item is.
- Onscreen Directions Directions are available to perform calibrations.
- Step-by-Step directions (i.e. sterilization cycle procedure)
- Alarm Status Menu - A red Alarm Status text button will appear on the Main Screen to indicate a fault within the Incubator system.
- Maintenance Required Reminders Onscreen Icon MAINTENACE REQUIRED appears when a programmable reminder (0 to 48 months) hits set point to notify filter check.
- Historical Performance Monitor Temperature and CO_2 gas history is available to view onscreen in graphical form or can be downloaded via USB for alarms, control systems, events, and performance information.
- Service Settings and Complete Diagnostic Controls
- System Information
- Display Settings
- Available in English, French, German, and Spanish

Constant Contamination Control (C^3)

A unique blend of product features to promote cell growth while minimizing potential contamination creating the most intrinsic and reliable growth chamber.

Closed Loop HEPA Filtration

A maintenance free air pump continuously draws environmental samples from two locations inside the chamber and passes the sample through a 99.99% HEPA filter before entering the sensor bay to measure gas and oxygen levels. The sensor bay measures gas and humidity levels from the sample to monitor before injecting back into the growth chamber. The NuTouch Electronic Control system will then determine the appropriate course of action to maintain chamber set-point conditions by placing the system on standby or injecting 99.99% HEPA filtered CO_2 gas, air, nitrogen, or vapor into the growth environment.

ISO Class 5 Cleanroom Conditions

Based on clean room technology, In-VitroCell maintains the growth chamber at positive pressure similar to an ISO Class 5 Clean room to slow airflow to minimize desiccation. Anytime the chamber door is open to the laboratory environment, clean HEPA filtered will be forced out instead of contaminated lab air being drawn in.

Single Beam, Dual Wave Infrared (IR) Sensor

A microprocessor-based, non-dispersive, single source dual wave infrared (IR) sensor monitors and controls CO_2 levels inside the growth chamber. Wavelengths are only absorbed by CO_2 making measurement insensitive to other components, such as water vapor. The stable IR sensor has a controlled range of 0.1 to 20% accurate within 0.1%.

Temperature Uniformity

The chamber walls are surrounded by five (5) heating elements to control temperature. A door heater is separately controlled to minimize condensation on the inner chamber door. The heating elements are wrapped in a high density R5 insulation to maintain temperature integrity. Dual temperature sensor probes monitor and control temperature set points to ensure consistency and uniformity throughout the chamber.

Incubator Humidity

A relative humidity level of up to 90% is achieved in the Incubator by the use of a stainless steel pan placed on the bottom of the chamber. An air pump injects fresh air into the chamber at a preset duty cycle to reduce condensation forming on the chamber walls and front glass door.

Advanced Construction

The inner chamber is constructed of high grade 16 gauge, type 304L polished stainless steel using crevice-free construction that provides an easily cleanable inert surface that does NOT promote biological growth. Seamless coved interior corners are easily cleaned promoting a healthy growth chamber. A single piece gasket creates a liquid tight seal from incubator chamber to inner door to eliminate condensation build up and potential contamination. Inner chamber shelving and gasket may be removed and routinely autoclaved if desired.

Minimal Vibration Promotes Cell Growth

By minimizes moving parts, In-VitroCell ES utilizes an accurate air pump to inject air and gas to eliminate potential vibration.

Smaller Footprint with More Useable Space

A large 7 cubic foot (200 Litre) growth chamber comes standard with four incubator shelves with a maximum capacity of 23 shelves. By attaching heating elements directly to the chamber and insulating with High Density R5 insulation In-VitroCell was engineered as a compact design while maximizing chamber capacity.

CuVerro® Antimicrobial Copper Surfaces *(Optional Feature)*

Add CuVerro® Antimicrobial Copper Surfaces to the incubator growth chamber and/or shelving to kill bacteria* to minimize potential incubator contamination. CuVerro® is laboratory tested and EPA registered. CuVerro® Antimicrobial Copper Surfaces kill more than 99.9% of bacteria* within 2 hours, and continues to kill 99% of bacteria* even after repeated contamination, when cleaned regularly.

EPA Reg No 85353-5

EPA Est No 088257-MN-001

**Laboratory testing shows that, when cleaned regularly, CuVerro® antimicrobial copper surfaces kill greater than 99.9% of the following bacteria within 2 hours of exposure: MRSA, Staphylococcus aureus, Enterobacter aerogenes, Pseudomonas aeruginosa, and E. coli O157:H7. CuVerro® antimicrobial copper surfaces are a supplement to and not a substitute for standard infection control practices and have been shown to reduce microbial contamination, but do not necessarily prevent cross contamination; users must continue to follow all current infection control practices, including those practices related to cleaning and disinfection of environmental surfaces.*

Standard features

Four (4) Stainless Steel Shelves

Eight (8) Stainless Steel

Shelf Brackets

Shelf Guides

Right Hinge Door Swing

Remote Alarm Output Contacts

4 to 20 mA Analog Output

RS-485 Communication

USB Port

CO_2 Sample Port

Adjustable Leg Levelers

Access Port and plug with breather holes

One (1) Water Pan

One (1) 6.5 ft. / 2 m Electrical Cord

Optional Features

CuVerro® Antimicrobial Copper Surfaces

Automatic CO2 Tank Switch (External)

CO2 Tank Alarm

Left Hinge Door Swing

Additional Shelves with Slide Brackets

CO2 Analyzer Fyrite Kit (Dry) 0-20%

Replacement Fluid for CO2

Analyzer

Surge Protector

CO2 Regulator (2 Stage)

Custom Solutions

Reviews

There are yet no reviews for this product.