



Embrient Inc

Formerly known as



Product Catalog

2025

Empowering Reproducibility in Cell Culture

embrient.com

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Our Mission

Embrient's mission is to provide the most effective cell culture incubator solutions with the highest reproducibility that match physiological environments to advance scientific discovery.

There is variability in research that leads to irreproducibility because of artificial atmospheric cell culture.

Despite the growing understanding of physiological oxygen levels in tissues being far below that of atmospheric conditions (21% oxygen), the large majority of cell culturing continues to take place at atmospheric oxygen levels. We seek to drive optimal cell modeling by enabling environments for cell culture that more accurately reflect *in vivo* conditions by providing low-cost, simple to use solutions.

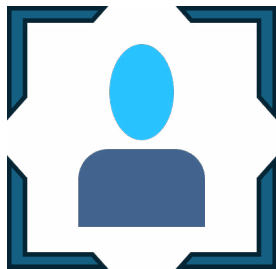


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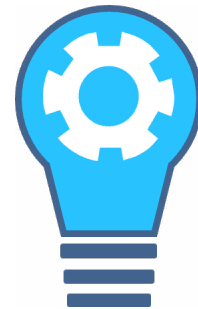


Our Values



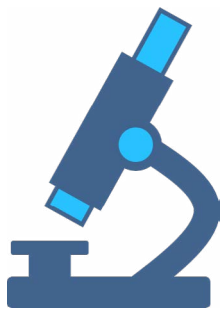
We are Customer Focused

We grow from customer feedback, we support our customers' needs, and we do the right things for our customers.



We Innovate

We seek to improve our systems and products, we develop new solutions to address key issues, and we keep our minds open to new ideas.



We Advance Science

We seek to improve scientific reproducibility, we promote change for the better, and we are a steadfast partner to researchers pursuing discovery.



We Deliver Quality

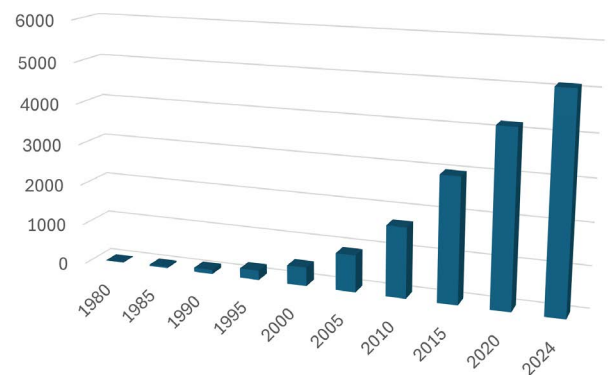
We manufacture consistent, quality products, we use the best quality raw materials from vetted suppliers, and we always follow our exacting standards.

A History of Citations

Over fifty years of enabling hypoxia/physioxia research and discovery

Since the establishment of Billups-Rothenberg, Inc. in 1973, the Modular Incubator Chamber and its accessory products have been cited in thousands of publications. Embrient continues to be cited in critical research publications since its acquisition of BRI in 2021.

Spanning many diverse research areas, Embrient products support a wide array of cell culture applications. Notably, the 2019 Nobel Prize Award-winning research on HIF-1 α was enabled by the Modular Incubator Chamber.



Total cumulative citations by year.

Customer Testimonial



“ We’ve used the Embrient modular incubator chambers now for 25 years for our work with *Plasmodium falciparum* parasites cultured in human red blood cells, at low oxygen delivered in a tri-gas mixture. They have been super to work with: service is excellent, cost is very reasonable, products are of excellent quality. This is a great company!

”

David Fidock, PhD, FAAM, FATMH

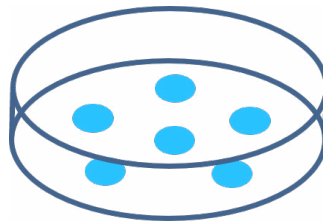
CS Hamish Young Professor of Microbiology and Immunology and Professor of Medical Sciences
Columbia University Irving Medical Center, New York, NY

Areas of Research

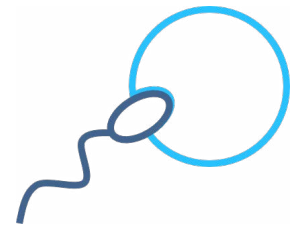
The Embrient portfolio of products has been used across an extensive array of research areas supporting important discoveries worldwide.



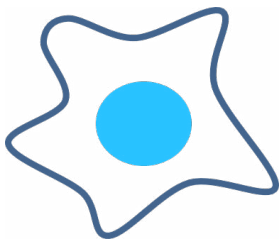
Hypoxia Research



Stem Cells



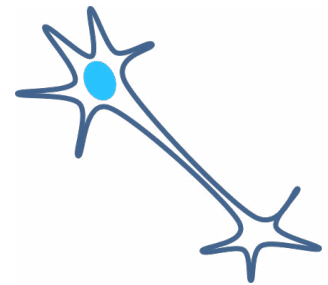
***In Vitro* Fertilization**



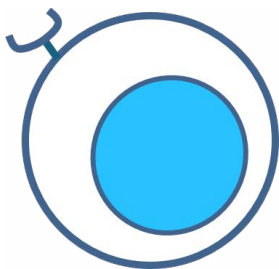
Tumor Biology



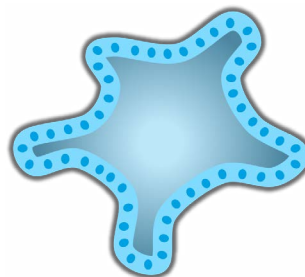
Malaria



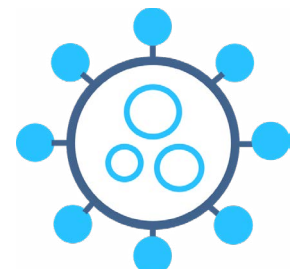
Neuroscience



Immunology



Organoids



Virology

Ordering Information

Telephone



(858) 535-0545

Toll-free: (877) 755-3309

Mon-Fri: 10 am – 8 pm, PST

Sat: 12 pm – 3 pm, PST

Online via Web

<https://embrient.com>



Email



info@embrient.com

<https://shop.embrient.com>



Fax



(858) 535-0546

Find detailed instructions for ordering at:

<https://embrient.com/ordering-support>

Terms & Conditions

Embrient products are for research use only and are not intended for diagnostic or therapeutic use. For more information regarding limitations on product use, pricing, and ordering, view our complete Terms and Conditions page: <https://embrient.com/terms-and-conditions>.

- **Request a Quote** – The following information is requested for a quote: Shipping and Billing information (provide separately if different) - name of recipient/billing contact, address (street, city, state/province, country, postal code), telephone number, email address, and VAT number or tax ID for international orders. Quotes will be valid for 30 days. After this period, we cannot guarantee the same shipping fees, and the quotes do not include any customs duties, fees, or taxes. The recipient will be responsible for all applicable customs duties and taxes upon arrival.
- **Payment** – We do not accept checks. Payments should be made via credit card or wire transfer/ACH. For international orders, please ensure that orders are prepaid and verified before we proceed with shipping.
- **Shipping** – We process online shopping cart, email, and phone orders between the hours of 10:00 a.m. and 8:00 p.m. Pacific Standard Time (PST), Monday through Friday. We make every effort to ship orders within 3-5 business days. Products are shipped to addresses in the USA by FedEx ground. International orders are processed within 5-7 business days and shipments are sent via FedEx International.

Products

Modular Incubator Chamber

Flow Meters

Gas Mixing System

Hot Box System

Accessories

Bundles

Modular Incubator Chamber

Catalog Number: **MIC-101**



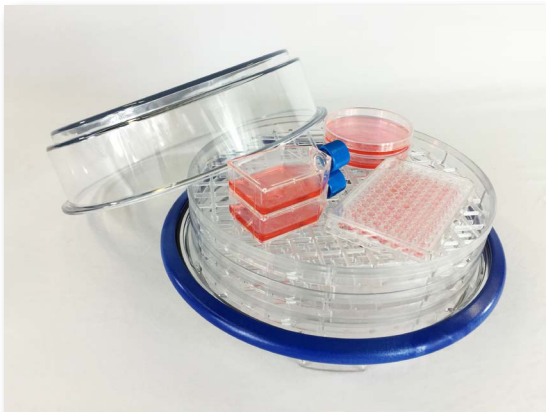
Description

The Modular Incubator Chamber (MIC-101) is a compact and versatile tool designed as a cost-effective system for maintaining cell cultures under stable hypoxic (physioxic) or hyperoxic conditions. It offers a straightforward approach to controlling oxygen levels using its closed system, preventing multi-well plate edge evaporation, and tailoring gas concentrations to your specific requirements.

The MIC-101 incubator utilizes a surface-type seal where all portions of the O-ring are uniformly compressed by a glass reinforced polycarbonate retaining clamp for a reliable air-tight seal. The cylindrical walls and semi-spherical top and bottom provide minimum gas flow resistance and no inherent dead space during initial purging. The chambers have an integrated stacking feature for storage during or after experimentation. All units are molded from high quality polycarbonate and will not break, crack or cloud with extended use.

Benefits

- **Simple to Use.**
- **Trustworthy Airtight Sealing:** Ensures a dependable and secure closure that reduces contamination.
- **Eliminates Evaporation:** Prevents multi-well plate “edge effect” evaporation.
- **Effortless Cleaning:** The seamless, crevice-free interior with rounded corners makes cleaning and decontamination a breeze.
- **Minimizes Consumption of Expensive Tri-Gas Mix.**
- **Uniform Gas Distribution:** The cylindrical chamber design guarantees consistent gas distribution.
- **Increased Environmental Stability-Zero Lag Time:** Once sealed, the MIC-101 maintains consistent gas levels for at least 72 hours, confidently offering extended experiment durations without environmental disturbance.
- **Versatile Multipurpose Trays:** Accommodates culture dishes, flasks, test tubes, and multi-well plates.
- **Space-Efficient Stackable Design:** Maximizes storage efficiency.



Flow Meters

Catalog Numbers:

SFM-3001

DFM-3002



Description

The Single Flow Meter (SFM-3001) and the Dual Flow Meter (DFM-3002) are affordable, simple to use devices that seamlessly integrate with the Modular Incubator Chamber (MIC-101) system allowing investigators to precisely gauge when they've achieved a full exchange of gases within their chamber, making experiments more accurate and reliable.

For those utilizing the MIC-101 to establish hypoxic or hyperoxic conditions with pre-mixed gases, the Single Flow Meter is designed to operate within the optimal range of 5 to 50 liters per minute.

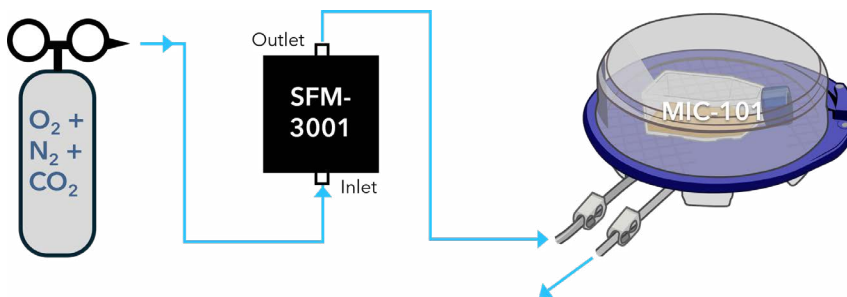
In addition to controlling the gas flow rate, the Dual Flow Meter is ideal for mixing custom O₂ and CO₂ concentrations for hypoxic or hyperoxic culture conditions or where special pre-mixed gases are expensive or unavailable.

The SFM-3001 comes with one air filter, while the DFM-3002 includes 2 air filters to prevent entry of particulates and contamination of your cell cultures. For instances where your gas source may be less than pristine or when flow rate variations occur unexpectedly, additional replacement filters are available. Additional tubing may be required and is available as an accessory product.

Features

- **Accurately Measures Gas Flow.**
- **Simple Operation.**
- **Effortless Cleaning.**
- **Durable and Reliable:** Constructed of metal and other durable parts.
- **Safety:** Includes a pressure release valve that will open if functional and safe flow rate is exceeded.

Workflow Setup for SFM-3001



(See the Gas Mixing System for the DFM-3002 workflow setup.)

Gas Mixing System

Catalog Number: **GMS-5003**



Description

The GMS-5003 is a state-of-the-art flow-through oxygen (O_2) sensor that delivers rapid and precise oxygen readings from 0% to 25%. It becomes the ultimate tool for achieving precise mixtures of custom O_2 concentrations when used with our Dual Flow Meter (DFM-3002). It is particularly beneficial for creating hypoxic culture conditions or when specialized pre-mixed gases are costly or unavailable.

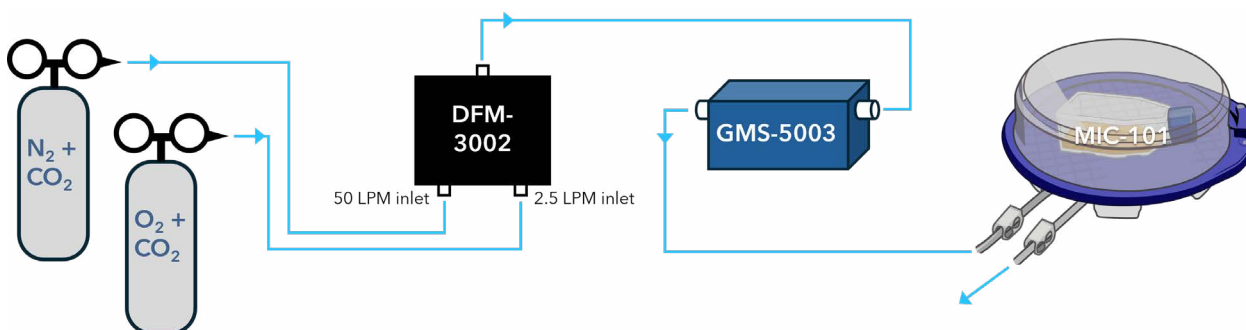
The GMS-5003 has an advanced (self-calibrating) oxygen sensor, which measures the oxygen partial pressure (pO_2). Furthermore, integrated internal pressure, temperature, and humidity sensors work in concert to provide a comprehensive dataset, converting pO_2 readings into accurate oxygen percentages.

Unlike traditional electrochemical or galvanic sensors, the GMS-5003 boasts integrated solid-state sensors that eliminate the need for replacements or recalibrations. These sensors are factory-calibrated to account for ambient temperature, pressure, and humidity variations, ensuring precise performance across a broad environmental spectrum. The system is user-friendly, stable, durable, devoid of hazardous materials, and exhibits negligible cross-sensitivity to other gases such as CO_2 and N_2 .

Benefits

- Easy-to-Use.
- Rechargeable, Long Battery Life
- Small and Compact
- Reliably Accurate: O_2 range 0-25%.
- Minimizes Consumption of Expensive Tri-Gas Mix.
- Low Cost.
- Maintenance-Free.
- Factory Calibrated: Ready-to-use out of the box.
- Also measures temperature, humidity, and barometric pressure.

Workflow Setup for GMS-5003 and DFM-3002



Hot Box System



Catalog Number: **HBS-2001S**



Catalog Number: **HBS-2002D**

Description

The Hot Box System eliminates the risk of personnel and equipment contamination from radioactive gases. It effectively isolates labeling experiments, enabling you to restore complete functionality to your CO₂ incubator. Traditional labeling experiments generate millions of contaminating counts, necessitating frequent incubator decontamination. Now, you can safely conduct [³⁵S]-Met/Cys labeling experiments with significantly reduced time and risk.

Use the Single Flow Meter version (HBS-2001S) with pre-mixed gases from a single source or select the Dual Flow Meter version (HBS-2002D) for on-site mixing from two gas sources.

If you already have a Modular Incubator Chamber (MIC-101) unit, you can use our Hot Box Conversion Kits (HMIC-3S, HMIC-3D) or purchase our Static and Exhaust Filter Set (HCS-2020) if you already have a flow meter as well as the MIC-101.

Accessory Products

Hot Box Conversion Kit (Single Flow Meter)

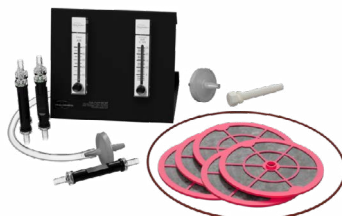
Catalog Number: **HMIC-3S**



Includes: Single Flow Meter (1), Static Filter Post (1), Exhaust Hot Filters (5), Static Hot Filters (5), Air Filter (1) and O-Ring (1)

Hot Box Conversion Kit (Dual Flow Meter)

Catalog Number: **HMIC-3D**



Includes: Dual Flow Meter (1), Static Filter Post (1), Exhaust Hot Filters (5), Static Hot Filters (5), Air Filters (2) and O-Ring (1)

Static and Exhaust Filter Pack

Catalog Number: **HCS-2020**



Includes: Exhaust Hot Filters (5) and Static Hot Filters (5)

Accessories

Replacement Lid (Modular Incubator Chamber)

Catalog Number: **MIC-102**



Made in the US, out of premium “high test” polycarbonate, this Modular Incubator Chamber Lid has been computer designed to support specialized cell culture environments. The optically clear lid allows visual inspection of cultures without having to open the incubator and breaking the incubator’s airtight seal.

Replacement Base (Modular Incubator Chamber)

Catalog Number: **MIC-103**



Made in the US, out of premium “high test” polycarbonate, this Modular Incubator Chamber Base has been computer designed to support specialized cell culture environments. The base has two ports which works with 5/16" tubing. MIC-103 will also ship with an O-ring and 2 white clamps with tubing (not pictured here).

Extra Tray (Modular Incubator Chamber)

Catalog Number: **MIC-104**



Made in the US, out of premium “high test” polycarbonate, this Modular Incubator Chamber Tray has been computer designed to promote rapid gas exchange within the chamber. This tray is compatible with both the standard Modular Incubator Chamber as well as the Hot Box System. Three trays can be stacked in each Modular Incubator Chamber.

Replacement Clamp (Modular Incubator Chamber)

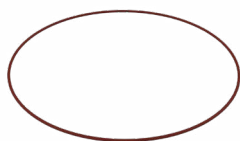
Catalog Number: **MIC-105N**



Made in the US, out of premium glass-fiber reinforced polycarbonate, this Modular Incubator Chamber Clamp is custom designed to ensure a precise air-tight seal. The chamber base and lid are forced together by the retaining clamp. As torque is applied to the adjustable bolt of the clamp handle, an inward radial force is created in the retaining clamp. This force compresses the O-ring and forms the seal.

Replacement O-Ring (Modular Incubator Chamber)

Catalog Number: **MIC-106**



Made in the US, out of a custom-formulated silicone elastomer, this Modular Incubator Chamber O-ring is custom designed to ensure a precise air-tight seal. Seated in a groove between the base and the lid, the elastic O-Ring provides an air-tight seal when pressure from the retaining clamp is applied.

Tubing Clamps (Modular Incubator Chamber)

Catalog Number: **MIC-107**



These sturdy plastic clamps provide a simple opening and closing/locking mechanism for the inlet and outlet ports of the Modular Incubator Chamber. The clamps are provided as a 10-pack.

Air Filters (Gas Flow Meters)

Catalog Number: **HFS-2021**



The disc air filter has a hydrophobic polytetrafluoroethylene (PTFE) membrane (pore size = 1.0 μm) and polypropylene (PP) housing suitable for drying and sterilizing gases for flushing the Modular Incubator Chamber. It has tapered hose barb connections that can accept 1/4" to 3/8" inner diameter tubing and is fully compatible with our clear tubing, TUB-516.

Tubing

Catalog Number: **TUB-516**

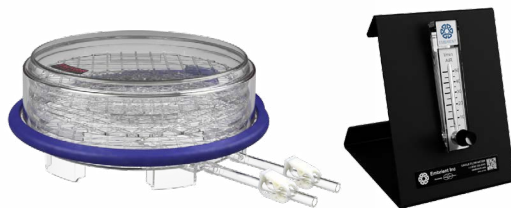


Length: 10 feet / 3 meter
Non-DEHP/Phthalate Free
Color: Clear
Durometer: 60 $\pm$ 5 Shore A scale
Dimensions: 0.438" O.D. $\pm$ 0.005" x 0.313" I.D. $\pm$ 0.005"

Bundles

Starter Bundle

Catalog Number: **BUN-110**



Includes: Modular Incubator Chamber and a Single Flow Meter

Recommended for use with pre-mixed gases.

Starter + Clamps Bundle

Catalog Number: **BUN-112**



Includes: Modular Incubator Chamber, a Single Flow Meter, and tubing clamps (10 pack)

Recommended for use with pre-mixed gases.

Inventor's Bundle

Catalog Number: **BUN-113**



Includes: Modular Incubator Chamber, Single Flow Meter (1), tubing clamps (10 pack), air filters (6 pack), and tubing (3 meters)

Recommended for use with pre-mixed gases.

Pioneer Bundle

Catalog Number: **BUN-114**



Includes: Modular Incubator Chamber, Dual Flow Meter (1), Gas Mixing System (1), tubing clamps (10 pack), air filters (6 pack), and tubing (3 meters)

Recommended for dual gas sources that require mixing.

Mixer Bundle

Catalog Number: **BUN-115**



Includes: Dual Flow Meter (1), Gas Mixing System (1), and air filters (6 pack)

Recommended for dual gas sources that require mixing.



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