

SCI-tive

Providing a continuous
cell culture environment



 Baker





SCI-tive physiological oxygen workstations for cell therapy and stem cell research

SCI-TIVE, SCI-TIVE DUAL
SYMMETRICAL & ASYMMETRICAL,
SCI-TIVE QUAD

Baker Physiological Oxygen Workstations

Baker physiological oxygen workstations have been the trusted choice for laboratories around the world since 1998. Our workstations are installed in more than 40 countries and more than 1,200 research publications feature experiments performed in the Baker technology.

Our physiological oxygen workstations precisely replicate low-oxygen 'in-vivo' physiology providing the ideal research platform for cell biologists and cancer researchers. The workstations provide accurate, stable, and user-defined oxygen, carbon dioxide, temperature and humidity control, providing the optimal environment for cell culture and translational research.

SCI-tive physoxia workstations

A range of closed, continuous cell culture systems providing stable 'in-vivo' conditions.

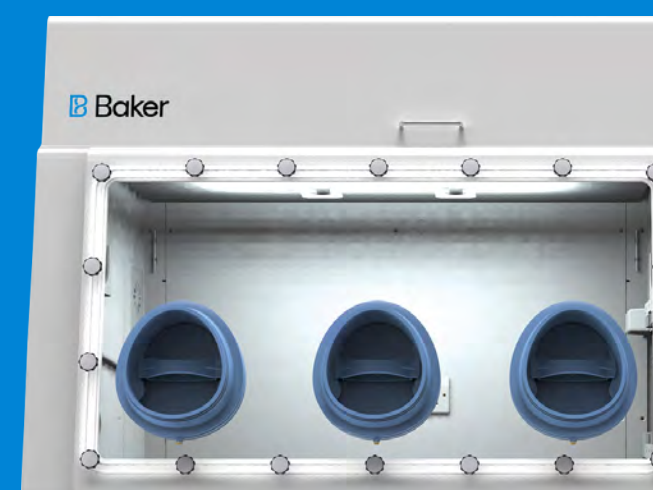
RESEARCH APPLICATIONS

- Physiological Oxygen Cell Culture
- Stem Cell and Regenerative Medicine Tools
- Cancer and Hypoxia Biology Platforms
- Extracellular Vesicle and Secretome Analysis
- Live Imaging and Integrated Assay Workflows
- Metabolic and Oxidative Stress Research
- Cell Therapy and Translational Research Environments
- Microbiome and Specialized Cell Culture Conditions
- Hypoxia-Driven Drug Development Models



PRODUCT OVERVIEW

- The SCI-tive range of advanced physiological workstations are designed to mimic 'in-vivo' conditions providing a continuous cell culture environment which eliminates cellular stress linked to variations in temperature, pH and oxidation. With the SCI-tive, you can study even the most complex cell interactions under mimicked physiological oxygen conditions. With more than a decade of customer feedback and experience, our workstations have been refined to meet your specific needs.
- The SCI-tive range of advanced physiological oxygen workstations are designed to mimic 'in-vivo' conditions.
- Optional HEPA filtration system installed in a SCI-tive workstation provides a Class 4 HEPA filtered atmosphere within the workstation.



GET BETTER RESULTS WITH
A BAKER PHYSOXIA
WORKSTATION

Maintaining ‘in-vivo’-like conditions using a hypoxia chamber reduces oxidative stress and gives you better results.

For example, expanding mesenchymal stem cells within one of our physiological oxygen workstations resulted in an increased frequency of colony forming units (CFU) isolation, increased number of cells per flask, and reduced variability across cells, when compared to a typical “open” culture environment using a CO₂ incubator and biosafety cabinet.

(BMP2 repression and optimized culture conditions promote human bone marrow-derived mesenchymal stem cell isolation. Regen. Med. (2015) 10(2), 109–125, Dr. Nicholas Forsyth et al)

1. A 50% increase in number of CFUs was shown when using a SCI-tive physiological oxygen workstation*.
2. A 15% increase in number of cells per flask was shown when using a SCI-tive physiological oxygen workstation**.
3. Results for mesenchymal stem cell expansion reveals:
 - Optimized frequency of CFU isolation
 - Optimized cell numbers (per flask)
 - Reduced variability across cells recovered
 - Reduced transcriptional alteration

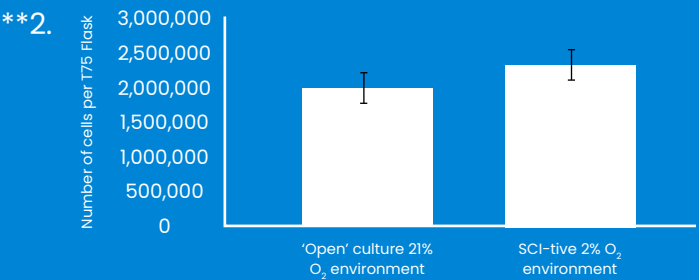
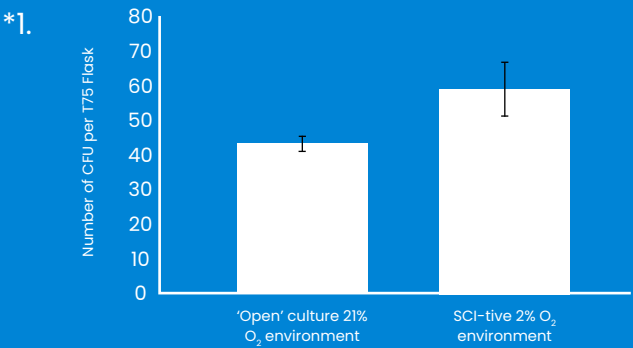


PHYSOXIC CELL CULTURE:
A GROWING TREND FOR
STEM CELL EXPANSION

Research interest in hypoxia has grown and gained momentum in the last decade because of its key role in controlling tumorigenesis, angiogenesis, diabetes, aging, and stem cell development. Human cells exist in a physiological environment of <15% oxygen – significantly lower than ambient or atmospheric conditions (21% oxygen).

Typical cell culture methods involve isolating cells from a physiological state and then analyzing them in “bench-top conditions”. This creates stress for the cell and introduces unknown outcomes in cell expression and morphology.

IMPROVE YOUR RESULTS



ACCURATE & STABLE ENVIRONMENTAL CONTROL

- O₂ stability from 0.1% (anoxia) to 20.9% (ambient) in 0.1% increments (can reach 23.0% using separate 25% O₂ cylinder).
- CO₂ stability from 0.1% to 30.0% in 0.1% increments.
- Temperature control from ambient +5° C to 45° C.
- Humidity control from ambient to 85% RH.
- One touch O₂ sensor calibration.

DIRECT ACCESS WITH MINIMAL DISRUPTION

Maintaining a stable environment can reduce stress in cells and help ensure that your cell or tissue culture is expressing correctly. In a CO₂ or CO₂/O₂ incubator, variability in temperature and CO₂ levels occur every time the door is opened.

With SCI-tive workstations, you can get in and out of the incubated work area with limited disruption to this atmosphere. This means less stress on your cells. Plus, unlike CO₂ or CO₂/O₂ incubators, you can control oxygen levels with the Baker workstation.



COMPLETE "LAB IN A BOX"

Large incubated working area allows incubation, passaging, media transfers and cell culture.

- External Dimensions: 1660 mm (W) x 826 mm (D) x 1077 mm (H).
- Interior Dimensions: 1200 mm (W) x 600 mm (D) x 620 mm (H).
- Up to 180 T75 Flasks working capacity.
- Large pass-through interlock easily holds a variety of flasks, dishes and tubes.
- Interlock Dimensions: 270 mm (W) x 200 mm (D) x 210 mm (H), >21.9L
- Interlock Capacity: 15 x T75 Flasks.

Optional built-in HEPA filtration system for main workstation.

ECONOMIC & RELIABLE FOR LONG-TERM SAVINGS

Minimal maintenance and downtime. Annual and biennial preventative maintenance kits available.

CONVENIENT & COMFORTABLE TO USE

▼

The SCI-tive physiological oxygen workstation is specifically suited for cell and translational research work with complex incubations and manipulations being performed under the most ideal physiological and hypoxic conditions.

- Quick and Easy Direct Hand Access with our new Ezeeyin Glove Ports offering a choice of entry methods to suit your experiments:
 1. Ezee Sleeves gloveless cuff system allowing access with less than 20 seconds.
 2. Ezee Sleeves/Ezee Plug gloveless cuff system allowing access within less than 5 seconds.
 3. Gloved Sleeve System allowing access within 30 seconds when requiring more user protection.
- Read plates easily without O₂ exposure – energy saving LED lighting for perfect illumination.
- Automatic and easy-to-access controls.
- Advanced integrated gas mixing system with touch screen simplifies calibration process, provides rapid equilibration, and facilitates the download of data.
- Cycle programming allows a user-defined timed sequence of up to 4 different O₂ and CO₂ concentrations.
- Removable front cover – allows easy access for cleaning or placing instrumentation into the unit.
- Three electrical power sockets within the work area.
- Optional HEPA filtration system providing a constant Class 4 HEPA filtered atmosphere within the work area to protect research from contaminants.
- Optional enhanced containment package provides added protection for user.
- Specially designed culture racks with light protective compartments as an option for individual T 75 or T 125 flasks.

EASILY ACCOMMODATES YOUR ANALYTICAL TOOLS

SCI-tive is designed to accommodate a variety of analytical instrumentation such as cell imaging systems, inverted microscopes, plate readers, cell based assay platforms, bioenergetics instrumentation, centrifuges, bioprinters and so on. There is ample space on the work tray for cell manipulation and cell culture.

All SCI-tive models have three internal power sockets and a universal multi-cable gland that can accept up to 6 different power cables through the side panel.

Supported Microscopes and Cell Imaging Systems

Please ask us for a list of supported microscopes, we can adapt the front cover to accept oculars.

We recommend Lumascope 420/560/620/720 range of ocular free inverted cell microscopes from Etaluma Inc.

SCI-tive

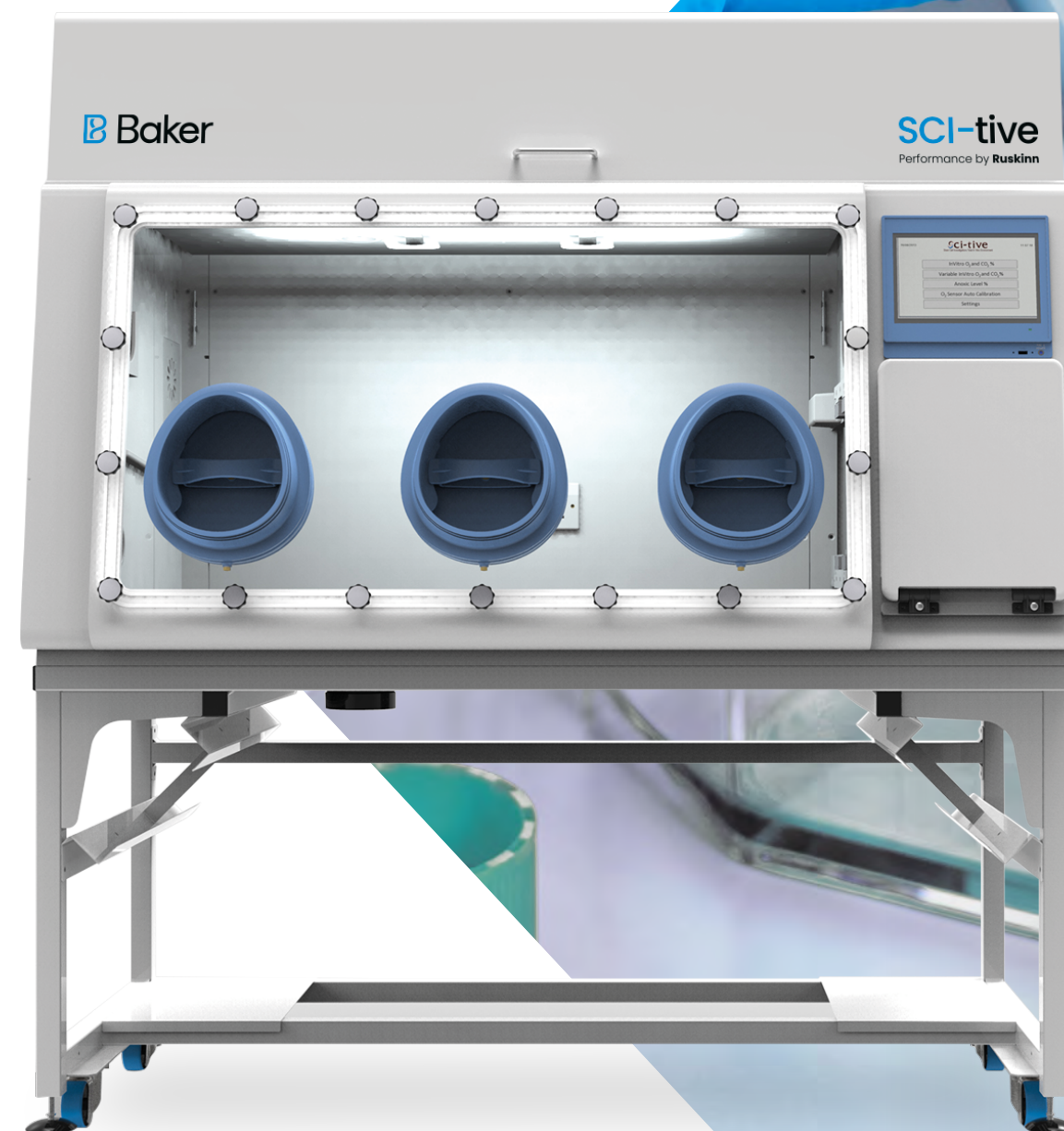
Closed, continuous cell culture systems

STANDARD FEATURES

- Internal HEPA filtration to Class 4 (ISO 14644-1)
- Removable front
- 420L usable chamber volume
- Interlock has O₂ control and heating
- Ezeeyin Glove ports for direct hand access
- Detox sachet (large)
- Internal power sockets x3
- One narrow and one wide culture rack
- Vacuum port connector
- Gas sample port
- Multi-cable gland (up to 6 individual cables)

TOUCHSCREEN CONTROL

- O₂ control (from 0.1% to 23.0% in 0.1% increments)
- CO₂ control (from 0.1% to 30.0% in 0.1% increments)
- Ultrasonic Humidity control (from ambient to 85% RH)
- Temperature control (5 °C above ambient to 45.0° C in 0.1° C increments)
- Data log (one data set per minute, each set comprises: time, date, O₂ (set/actual), CO₂ (set/actual) humidity, temperature)
- Light control (on/off, dimming function)
- Alarm settings

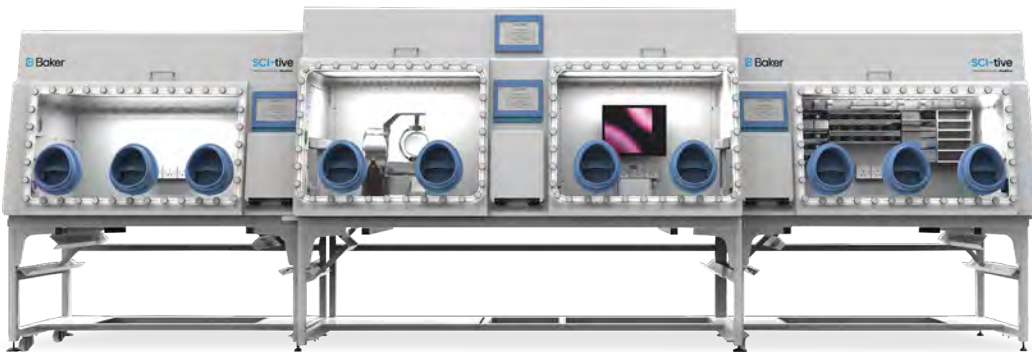


The SCI-tive Family

PHYSOXIA WORKSTATIONS

The SCI-tive family is designed to support cell culture and manipulation under defined physiological oxygen conditions that more closely reflect the in-vivo environment. Continuous control of oxygen, CO₂, temperature, and humidity allows researchers to minimize oxidative stress and maintain cellular phenotype throughout culture workflows.

With scalable single, dual, and quad configurations, SCI-tive workstations adapt to evolving research needs across stem cell biology, tumor microenvironment studies, metabolic research, and cell therapy applications.



SCI-tive Quad

The SCI-tive Quad scales physoxia culture across four independently controlled chambers. Ideal for stem cell expansion, tumor microenvironment studies, and cell therapy workflows.



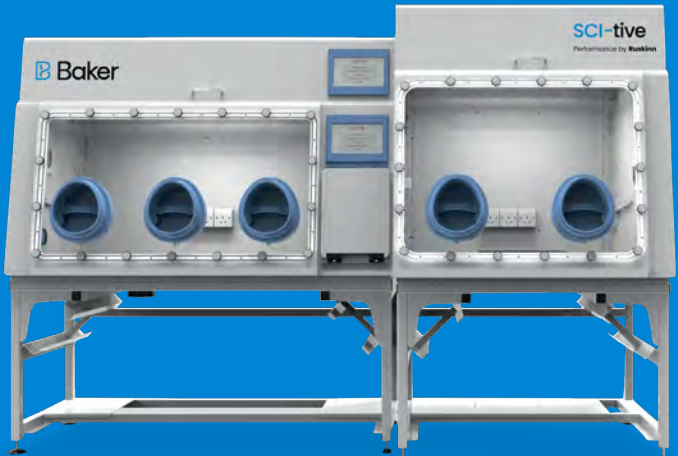
SCI-tive

The SCI-tive offers single-chamber control of oxygen, CO₂, and humidity. Ideal for defined physioxia research applications.



SCI-tive Dual Symmetrical

The SCI-tive Dual Symmetrical pairs two identical physoxia chambers. Each chamber offers independent oxygen, CO₂, and humidity control.



SCI-tive Dual Asymmetrical

The SCI-tive Dual Asymmetrical pairs two independently controlled chambers. The larger chamber accommodates inverted and atomic force microscopes.



BAKER BUILDS IT BETTER

The SCI-tive Dual workstation provides the same innovative features and benefits as the SCI-tive, except there are two chambers with individually controlled atmospheres.

The left-hand chamber is identical to the single SCI-tive chamber discussed on the previous pages, but the right-hand chamber varies depending on the specific model.

Additionally the stand (and gas tight waste port) are standard on all of the SCI-tive Dual models. The right-hand chamber of the Asymmetrical Dual is built to accommodate larger inverted and atomic force microscopes.

OPTIONAL ACCESSORIES

- Remote monitoring/remote control hardware module
 - Internal monitor to view digital microscope images
 - Stand (choice of static, manual/ electric adjustable)
 - Vacuum port connector (one supplied as standard)
 - Gas sample port
 - Multi-cable gland (up to 6 individual cables – one supplied as standard)
 - Single Plate Entry System
 - Ezee Cuff (Gloveless & Sleeveless Hand Entry)
- External HEPA containment package with rubber gloves
 - Cooling accessory
 - Light protective cover
 - Waste port (standard on some models)
 - RH meter
 - O2 meter
 - Culture rack (wide or narrow)
 - Culture rack (light protective)
 - Billups Modular Incubator chamber
 - USB port (Power only)

Gas Supply

- N₂, CO₂, Compressed Air (Use 25% O₂ instead of compressed air, if working between 18.0% to 23.0% O₂).

Technical Specifications – SCI-tive

Model	SCI-tive	SCI-tive Dual Symmetrical	SCI-tive Dual Asymmetrical
External Dimensions			
Width	1660 mm	2995 mm	2815 mm
Depth	826 mm	826 mm	975 mm
Height	1077 mm	1077 mm	1077 mm – 1195 mm
Internal Dimensions			
Width	1200 mm	1200 mm (L&R)	1200 mm (L) / 1020 mm (R)
Depth	600 mm	600 mm (L & R)	600 mm (L) / 800 mm (R)
Height	620 mm	620 mm (L)* / 620 mm (R)	620 mm (L)* / 808 mm (R)
Maximum Capacity			
T75 Flasks	180	180 (L) 180 (R)	180 (L) Varies (R)
Working Capacity			
T75 Flasks	180	180 (L) 180 (R)	180 (L) Varies (R)
Interlock Dimensions			
Width	270 mm	270 mm	270 mm
Depth	200 mm	200 mm	200 mm
Height	210 mm	210 mm	210 mm
Interlock Capacity			
T75 Flasks	15	15	15
Interlock Time Cycle	60 sec.	60 sec.	60 sec.
Weight	230 kg	355 kg	355 kg

SCI-tive Quad	
External Dimensions	5721mm (W) x 975mm (D) x 1077-1195mm (H)
Internal Workstation Dimensions	
Chamber 1	1200mm (W) x 600mm (D) x 620mm (H)
Chamber 2	1020mm (W) x 800mm (D) x 808mm (H)
Chamber 3	1020mm (W) x 800mm (D) x 808mm (H)
Chamber 4	1200mm (W) x 600mm (D) x 620mm (H)

Baker is a global leader and supplier of anaerobic and precision low oxygen culture systems for microbiology and tissue/cell culture applications. Its advanced line of anaerobic chambers,

physiological oxygen workstations and media conditioning solutions help improve research results by providing precisely controlled conditions for anoxic and low-oxygen studies.



93
Sales Professionals



675
Service Technicians



74
B2B Partners



3
Locations



No Minimum Anything

Our global headquarters houses our core operations: manufacturing, engineering and design, research, testing, quality control, technical support, and customer service.

No Shortcuts

The construction of Baker laboratory equipment is marked by a focus on function, user comfort, durability – and always safety. Testing is rigorous, setting us apart in the industry.

We take it Personally

Our employees, from our engineers to our customer service representatives, are motivated by the trust our customers have placed in us to protect life – your life, the life of your research, and ultimately the lives you save through discovery and healing.

Make the World a Better Place

In research and clinical care, you are dedicated to making the world a better place. We not only share your passion for your work, but the wider mission of dedication to principles of sustainability and responsibility.

A Passion for Real value

Baker products have earned a reputation for maximum return on investment through lower life cycle costs and more years of trouble-free operation than those of any other manufacturer.



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