



HYPOXYLAB™

A bench-top incubator and workstation for cell culture under physiological oxygen

- Maintains physiological oxygen, CO₂, humidity, and temperature
- Regulated using oxygen partial pressure (pO₂) for true 'physoxia'
- Compact form-factor / rapid equilibration / economical gas consumption
- Ergonomic design / simple to operate and maintain
- HEPA filtration built-in
- Intuitive touch-screen operation
- OxyLite™ ready

Rationale

Standard incubators expose cells to oxygen that is between 2 and 40-fold above that encountered physiologically, with potentially unwanted biochemical and metabolic side-effects. To reproduce the *in vivo* state, cells and tissues in culture must be maintained at below atmospheric oxygen, under controlled conditions of 'physoxia'.



True physiological oxygen

HypoxyLab regulates its oxygen environment using the partial pressure of oxygen (in mmHg or kPa), a scientifically rigorous approach which eliminates variability due to atmospheric pressure changes and laboratory altitude. HypoxyLab thereby sets the benchmark for the most faithfully accurate hypoxia workstation available.

OxyLite™ ready

A dedicated through-gland in the chamber wall supports our gold standard OxyLite™ oxygen sensors. These support highly accurate oxygen measurements directly from within cell cultures or culture media (OxyLite™ monitor required).



Performance

A considered design and digital gas flow controllers come together to allow HypoxyLab to respond rapidly to set-point changes, while minimizing gas consumption. A fully humidified, temperature and CO₂ controlled hypoxia environment is achieved in less than 30 minutes from switch-on.

Contamination control

A user replaceable HEPA filter continually scrubs the chamber atmosphere, minimizing contamination risk, while the humidification system features a built-in UV source.

Easy-entry system

A simple letter box hatch permits quick and convenient transfer of plates, media, and accessories without the need for a dedicated air lock. Sensors automatically detect operation of the hatch, responding in real time to maintain steady-state conditions, even under extreme hypoxia.



Touchscreen control

Chamber oxygen, CO₂, humidity, and temperature are all set and controlled from the intuitively designed, integrated touchscreen, which simultaneously displays the current levels of these parameters in both digital and trace formats.

Automated oxygen profiles

The touchscreen provides a fully programmable oxygen profile feature with which the HypoxyLab can be set to automatically subject cells to up to 8 sequentially defined oxygen concentrations.



Other design features

Relaxed operation via a simple cuff and sleeve system. Angled vision panel and adjustable LED illumination for excellent visibility. Adjustable internal shelf units for sample storage. Removable, lightweight cover for pre-loading of large consumables and routine cleaning or disinfection. Continuous logging of environmental parameters to memory, exportable to USB. Vacuum pass-thru waste port built-in.