

# HypoxyLab™

## Bench-top hypoxia workstation

All the functionality of a full-size hypoxia cell culture cabinet  
in a considered bench-top form-factor



- Accurately maintains hypoxic oxygen conditions
- Regulated using the *partial pressure* of oxygen
- Compact form-factor
- Economical gas consumption
- Simple to operate and maintain
- Continuous data logging
- Integrated HEPA filtration
- OxyLite™ ready
- Digital microscope ready
- Intuitive touch-screen controls



# HypoxyLab™ is a fully-enclosed incubator for continuous cell culture under hypoxic conditions

## Why the fuss?

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



## Authentic hypoxia

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

## Performance

A considered design that minimizes dead space and system volume, new generation gas flow controllers, and nebulizer humidification come together to allow HypoxyLab to respond rapidly to set-point changes, while minimizing gas consumption. A fully humidified, temperature and CO<sub>2</sub> controlled hypoxia environment is achieved in less than 15 minutes from switch-on.

## OxyLite™ ready

A connector within the chamber supports our gold-standard OxyLite™ oxygen sensor, a highly accurate, non oxygen consuming sensor, capable of directly measuring oxygen from within cell cultures or media (OxyLite™ monitor required).



## Live cell imaging

We have teamed with Lonza GmbH to offer the CytoSMART™, a highly compact USB digital microscope that can be deployed within the HypoxyLab to provide live and time-lapse cell imaging.

## Contamination control

A large built-in HEPA filter continually scrubs the entire internal chamber volume, all but eliminating the risk of contamination.

## Simplicity

An 'Easy-Entry' hatch provides 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 to maintain steady-state conditions, even under extreme hypoxia.



## Touch-screen control

HypoxyLab's integrated full colour touch-screen provides convenient control over all instrument settings, including an up to 8-step programmable oxygen profile, whilst simultaneously displaying real-time values for oxygen, CO<sub>2</sub> and humidity in digital and graphical trace formats.

## Data logging

All vital parameters are continuously recorded to internal memory and can be exported to a USB flash drive at any time. Data files can be analyzed and played back using the free LabChart® Reader by ADInstruments.

## 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 plate storage. Removable, lightweight cover for pre-loading of large consumables and simplified routine cleaning and disinfection.

