Coy O2 Controlled InVivo Cabinet System - Hypoxia Chamber

Perform short-term experiments, dynamic oxygen cycling experiments and more. The Coy InVivo Cabinet System is the only system of its type that is a hermetically sealed chamber and allows continuous control of oxygen.

Rating: Not Rated Yet
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ManufacturerCoy

Description

Description

O_2 Control Cabinet for InVivo Studies (Microaerophilic / Hypoxic)

For Animal Studies

The Coy InVivo Hypoxic Cabinet System is the only system of its type that is a hermetically sealed chamber and allows continuous control of oxygen. This hypoxic chamber allows animals to live at reduced or elevated O2 levels. The system features the ability to change the O2 levels between multiple set points in increments of 0.1%. Users need only to supply a gas source for nitrogen and oxygen. The System features an advance controller and sensor to precisely control your needs. Cabinet comes complete with fittings and pressure relief valve to make operation and set up easy.

Due to the wide variety of protocols on InVivo hypoxia studies Coy offers a complete line of options to ensure your animal care needs are met.

Coy O_2 Control InVivo Cabinets Options:

- **Animal filtration system (option)** — Long-term studies or high numbers of animals will require this filtration system to remove gaseous waste.
- **Dynamic O_2 cycling (upgrade)** — For studies requiring cycling O_2 levels for intermittent hypoxia, Coy offers a factory-installed option to ramp and cycle oxygen levels based on preset protocols in the O_2 control system.
- **Added capacity for animal filtration** — Additional filters to enhance the filtration system and adjust for the number of animals while easing maintenance time for lab personnel.
- **Heaters** — Internal heaters may be added if they are needed, available for Models 30 and 60.
- **Compact dehumidifier** — Easy-to-maintain unit provides a way to remove moisture without using a desiccant.
- **Recirculating atmosphere filtration system** — System filters the box atmosphere and controls contamination through a standard HEPA filter.

Humidity Consideration for InVivo Studies

Humidity from respiration should be controlled at least to non-condensing levels to provide an atmosphere that protects equipment and the sensors from condensation and is comfortable for the animals and users. The number of animals and the duration of hypoxic incubation will determine the appropriate humidity control solution for your study. Contact an expert at Coy Lab to discuss your options.

Periods of tissue hypoxia also develop in organs affected by atherosclerotic narrowing of nutritive arteries, during physical exercise and during acclimation to high altitude (Roels et al. 2007; Mounier et al. 2009).

Intermittent hypoxia has also been observed in rapidly growing tumors (Bhaskara et al. 2012), patients suffering from sickle cell anemia (Alexy et al. 2010) as well as in organs of premature infants (Poets et al. 1994; Stokowski 2005).

Details

O_2 Control InVivo Cabinet Details

Coy's InVivo cabinets are an excellent solution if you need to control multiple simultaneous O_2 levels or desire to add O_2 control to your existing CO_2 incubator.

All O_2 Control InVivo Cabinets are supplied with the following:

- Pressure relief valve
- Two sensor ports
- Circulation fan
- Gas Inlet
- Optional pullout shelf for Model 30 unit
- O_2 control range from 1-100%; factory calibrated for 0-20.9% (field calibration required)
- Adjustable leveling pads

Construction

With oxygen and nitrogen gas sources connected to the O2 controller, the microprocessor controls gas purges based on sensor readings and the user-adjustable setpoint. Unlike other systems, there is no continuous purge of gas into the cabinet. This hypoxic chamber’s hermetic seal ensures that even with the controller detached, you can maintain preset O2 levels for periods of time depending on experimental conditions. This translates into less gas consumption compared to a semi sealed cabinet.

Specifications

O_2 Control *In Vivo* Cabinet Specifications

O2 Control 0-20.9% +/- 0.1% Resolution

CO2 Control (option) 0-20% +/- 0.1% Resolution

NOTE: CO2 Control for in vivo units is through the Animal Filtration option which is designed to remove CO2 and other waste byproducts. However the same control mechanism can be configured for elevated (hypercapnia) studies.

Temperature Control (option) contact Coy for details

Humidity Control to 30 % RH or non-condensing levels

O2 Control In Vivo Cabinet Dimensions

Glove Box Description	Chamber Dimensions *(L x D x H)*
InVivo Cabinet Model 15	15 x 20 x 20 in *381 x 508 x 508 mm*
InVivo Cabinet Model 30	30 x 20 x 20 in

Glove Box Description	Chamber Dimensions *(L x D x H)*
	762 x 508 x 508 mm
InVivo Cabinet Model 60	60 x 20 x 20 in *1524 x 508 x 508 mm*

Reviews

There are yet no reviews for this product.