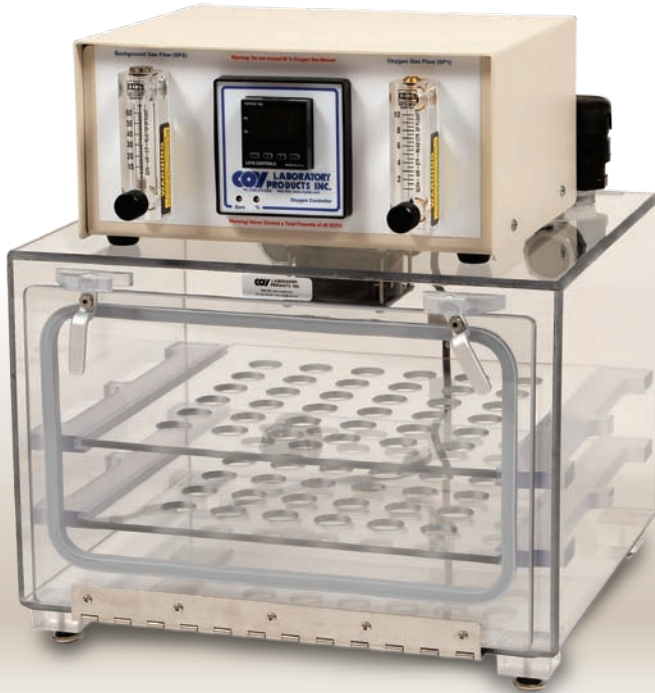


O₂ Control Cabinets for

InVitro Study



Perform short-term experiments, initial feasibility tests, multi-level oxygen studies and dynamic oxygen cycling experiments.

The Coy *InVitro* Cabinet System is the only system of its type that is a hermetically sealed container *and* allows continuous control of oxygen. The system features result in less gas consumption (lower operating cost) and more reproducible oxygen results when compared to tri-gas incubators and other cabinet systems.

- Hypoxic
- Normoxic
- Hyperoxic
- Physiologic
- Intermittent Hypoxia

InVitro Cabinet System standard features

- » O₂ controller and sensor
- » All tubing and fittings to connect gas source to cabinet and controller(s)
- » Pressure relief valve
- » Two sensor ports
- » Circulation fan
- » Gas inlet
- » Pull-out sliding shelves
- » Humidification tray

Though this cabinet comes in four standard-size units capable of holding one to 72 plates, we can make custom-sized units or configure an economical cabinet for your lab. With modular designs and accessories, and 40 years of in-house customization experience, Coy is flexible in its problem-solving approach.

How the Cabinet System Works

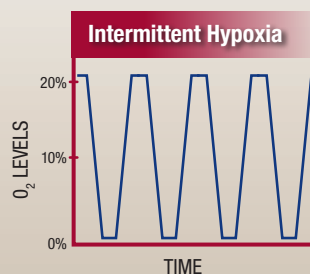
InVitro cabinets are designed to use existing lab incubators for temperature control while completely controlling oxygen levels (and optionally, CO₂) inside the cabinet. Pull-out shelves, spaced 1.5" apart, provide easy access to samples.

The Coy *InVitro* Cabinet System allows you to incubate samples quickly and conveniently at reduced or elevated O₂ levels. The system offers the ability to change the O₂ levels between multiple setpoints in increments of 0.1%. The microprocessor controls gas purges based on the sensor reading and user-adjustable setpoint. Depending on the application, you will need to supply one or all of the following gases: nitrogen, nitrogen with CO₂ mix, and O₂. (See chart on page 2.)

The cabinet's hermetic seal ensures that even with the controller detached, you can maintain preset O₂ levels for short periods depending on experimental conditions. This translates into less gas consumption compared to a semisealed cabinet.

Dynamic O₂ Cycling

A **ramp and soak upgrade** is available as a factory-installed option for timed oxygen profile/cycle needs. The upgrade includes automatic cycling between multiple O₂ setpoints plus voltage outputs that allow readings to transfer to a data logger, chart recorder or computer program. (Transfer is especially helpful when 24-hour documentation is required.)



Key Accessories



Coy Automatic CO₂ Control System

Do you need it?

Consider your research and your budget. You can deliver CO₂ to your experiment in two ways.

1. Purchase premixed tanks of N₂ and O₂ gas. The Coy O₂ controller can be set to spike gas into the system.

2. Coy Automatic CO₂ Control System. The Coy CO₂ Control System allows for precise control and constant digital monitoring of CO₂ gases inside the cabinet. A sensor relays information to the controller, which then opens the appropriate solenoid controlling a CO₂ or N₂ gas to equilibrate the CO₂ levels based on the user-adjustable setpoint. The digital display allows the user to monitor the CO₂ levels constantly for 0-20% control in 0.1% increments.

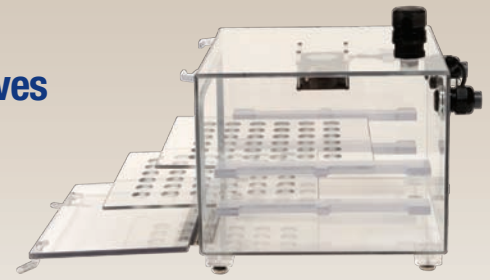
Decision Point: The Coy Automatic CO₂ Control System provides constant feedback (and automatic correction) of the CO₂ conditions inside the cabinet which premixed tanks do not. However, purchasing premixed gas tanks will lower the initial cost of the cabinet system but it may lead to higher operational cost depending on the gas demands of the experiments. See the chart below for the various gas sources required based on CO₂ control choice.

Gas Source Requirements

		N ₂	N ₂ & CO ₂ Mix	CO ₂	O ₂
InVivo					
with CO ₂ Controller	Hypoxic / Normoxic	X		X	
	Hyperoxic	X		X	X
without CO ₂ Controller	Hypoxic / Normoxic		X		
	Hyperoxic		X		X

Pull-out shelves

The shelves give easy access to the unit. Shelf spacing is 1.5".



O₂ Control Cabinet Sizes for InVivo Studies

O₂ Control Cabinet - Model 1: 9.5" H x 16" W x 15" D
241 x 406 x 381 mm

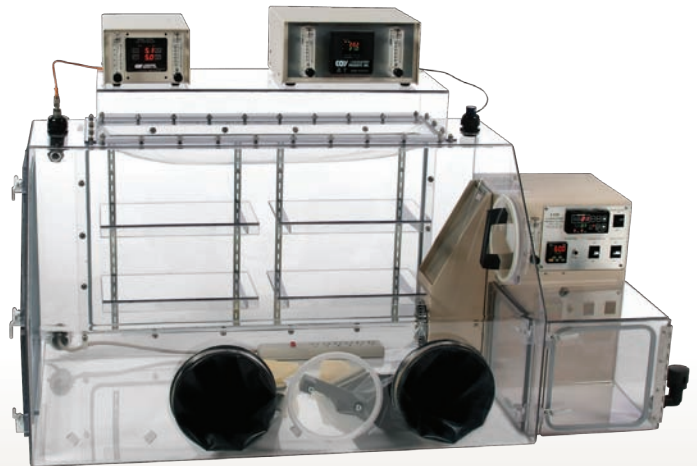
O₂ Control Cabinet - Model 2: 11.5" H x 16" W x 15" D
292 x 406 x 381 mm

O₂ Control Cabinet - Model 3: 14" H x 16" W x 15" D
356 x 406 x 381 mm

O₂ Control Cabinet - Model 4: 16.25" H x 16" W x 15" D
413 x 406 x 381 mm

What's The Next Step?

For long-term studies or research that requires sample manipulation, you may want to consider a Coy O₂ Control Glove Box for Cell and Tissue Culture with temperature, humidity and/or CO₂ controls.



Coy also makes a line of *InVivo* Cabinets. Ask your dealer or representative for information or visit www.coylab.com.

