Buxco® Inhalation Exposure System

An Inhalation Exposure System Designed by Respiratory Experts

The DSI Buxco inhalation exposure system is easy to use for researchers who are new to inhalation exposure studies, while providing the performance and flexibility required by the experts. Unique to DSI’s solution is the ability to perform accurate real-time respiration monitoring during exposure critical for animal welfare and determining accurate deposition levels.

With a high degree of port-to-port uniformity, this high efficiency system provides exceptional protocol repeatability, translating into high yield exposure studies. The inhalation tower utilizes an expandable yet compact, “flow-past” design, eliminating rebreathing concerns. The system can be outfitted with a variety of test article delivery devices and instrumentation options for monitoring the towers environment and test article properties.

Get More from Inhalation Exposure Studies

Inhalation Tower Features
- Flow-past design utilizes inner and outer cores in order to
  - eliminate rebreathing reducing CO2 levels
  - improve port-to-port uniformity
- Species Supported: mice, rats, guinea pigs, and ferrets
- Stainless steel construction (corrosion resistant, ultra-smooth finish)
- Scalable: stackable tower design for 1 to 6 levels, up to 42 subjects
- Easy to disassemble and clean for quick turnaround between experiments

Smart Controller Features
- Smart controller can operate with or without software utility
- Microprocessor manages tower environment - Air Flow, Pressure
- Push/Pull air flow design can create positive or negative pressure configuration
- Integrated support for collection of respiratory endpoints
- Software displays and records multiple tower parameters:
  - Pressure, Flow, Temperature, Humidity, O2/CO2, Test Article Concentration
Buxco® Allay™ Restraint Exposure Chamber & Plethysmographs

Driven by customer demand Buxco developed the patented Buxco Allay restraint system which secures the animal without compressing the thorax and keeps airways completely unobstructed. This restraint improves animal comfort and respiratory data collection since the animal can breathe more naturally.

**Allay Restraint Exposure Chamber**
- Subjects positioned for normal breathing in a non-stressed environment
- Does not compress thoracic cavity as with typical plunger style chambers
- Provides consistent placement of nose from subject to subject
- Restrainer provides better access to subject during exposure

**Allay Plethysmograph**
- Accurately measure respiratory parameters during exposure
- Record minute volume and rate, critical for determining amount of inhaled compound
- Ensure animal welfare with real-time respiratory monitoring

**Optional System Components**
- Measure respiratory end-point during exposure: MV, rate (f), etc.
- Wet or dry aerosol generation
- Aerosol conditioning
- Cigarette smoke integration
- Test article concentration measurement: inflow and port
- Particle size measurement – port
- Temperature and humidity – port
- O2/CO2 measurement - port and inner core

**The DSI Advantage**
- Over 30 years of experience partnering with researchers to provide proven technologies
- Global Technical Support – Installation / Training / Application Support
- Custom solutions available

Contact your local DSI representative today, or visit www.datasci.com/buxco to learn more.