

Alternative Health Monitoring Individually Ventilated Cage (IVC) Systems

Most research facilities employ the use of IVCs to house their animal models. Each cage on an IVC rack acts as an independent bioexclusion system and enables animals of varying health status to be housed on the same rack. Charles River offers both sentinel-free and hybrid programs for IVC-housed animal models.

Program Overview

Variations in IVC rack designs will influence the amount of dust which accumulates and, therefore, the compatibility with the Exhaust Air Dust (EAD™) test method. Factors such as air flow pattern, location of dust build up, filter types and location, and sampling access must all be considered. Our experts can help determine if a given IVC rack system is EAD™-compatible and advise on the optimal sampling sites. Example programs are outlined below.

Program Type	Annual Frequency			
	Month 3	Month 6	Month 9	Month 12
Sentinel-Free - Rack Level Monitoring	E	E	E	E
Sentinel-Free*- Sentinel Cage Level Filter Monitoring	C	C	C	C
Hybrid - Rack Level Monitoring	E	S	E	S

E= Exhaust Air Dust (EAD™) PCR testing on rack filter (if applicable) or plenum (swab) samples**

C=Exhaust Air Dust (EAD™) PCR testing on cage filter samples**

S= Sentinel monitoring via traditional methods (i.e., serology, PCR, whole animal screening) performed on either resident (immunocompetent only) or sentinel animals

*Cage level filter monitoring still requires bedding transfer into a sentinel cage. While a sentinel animal will not be submitted for health surveillance, a retired resident or sentinel rodent is required to agitate the cage dust.

**Non-invasive fecal samples can be collected from resident or sentinel rodents and pooled with EAD™ samples.

Program Development

Not all laboratory animal facilities are the same and, quite often, require health monitoring (HM) programs that are specifically designed around an institution's infectious agent exclusion list, study protocols or type of research animals being utilized. Charles River 360 Diagnostics™ experts will work directly with you to develop a customized HM program that meets your budgetary and surveillance requirements. Program development can include:

- consultation to assess biosecurity risk
- preventative training and education
- step-by-step assessment of current HM processes
- facility design consultation

To request a consultation, please go to www.criver.com/360consultation.

BASIC RESEARCH	DISCOVERY	SAFETY ASSESSMENT	CLINICAL SUPPORT	MANUFACTURING SUPPORT
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