



CM SOP #200 – Rodent Health Surveillance Program

Original release date: 10/03/2012 Version: 7 Date last revised: 02/11/2026

I. Purpose & Scope

To establish standardized procedures for the placement, collection, and processing of Tecniplast Interceptors® EAD devices (referred to as EADs) used for environmental monitoring of rodent pathogens in vivaria maintained by Comparative Medicine. Interceptors® are passive environmental samplers designed to capture airborne rodent pathogens, including agents of murine respiratory and enteric disease. This SOP applies to all Tecniplast Green Line and Emerald Line rack systems in Comparative Medicine–managed rodent facilities and to personnel responsible for environmental surveillance, sample collection, documentation, and submission to diagnostic laboratories.

II. Roles & Responsibilities

Comparative Medicine Staff

- Perform EAD placement and removal as trained
- Coordinates EAD distribution, placement, collection, labeling, and shipment
- Follow required health and safety protocols
- Report any unusual findings immediately

Research Staff, Students, Visitors

Not applicable

CM Assistant and Associate Directors

- Ensure racks are accessible for placement and retrieval
- Support corrective actions following positive or suspect findings

CM Director and AV

- Oversees the environmental pathogen monitoring program
- Reviews Interceptor® findings and determines follow-up actions
- Communicates pathogen detection results to leadership and veterinary staff

III. General Notes & Definitions

- Exhaust air dust device (EADs) are used to detect environmental rodent pathogens by capturing airborne particulates from rack ventilation. Devices do not diagnose animals directly but provide environmental surveillance data.
- Samples must be collected, labeled, handled, and shipped according to institutional and laboratory requirements to ensure diagnostic integrity
- Interceptor® (EAD): A passive environmental sampling device manufactured by Tecniplast, designed to capture airborne rodent pathogens within rack ventilation airflow.
- Green/Emerald Line Rack: individually ventilated rack system for rodent caging.
- Cycle: The period from EAD placement through collection.



IV. Materials & Equipment

- Tecniplast Interceptor® devices (EAD)
- Rack identification labels
- Permanent marker
- Personal protective equipment (PPE): gloves, lab coat, eye protection, mask
- Sample submission forms (as required by diagnostic laboratory)
- Chain of custody forms
- Facility tracking log or electronic monitoring database

V. Procedure

A. Placement

1. PPE and Preparation
 - a) Label in the space provided on the outside of the EAD:
 - (i) Sample ID
 - (ii) Rack ID
 - (iii) Room
 - (iv) Date/Time placed
 - (v) Planned time for collection
 - b) Don lab coat/CM-issued scrubs and gloves
2. Placement Steps
 - a) For rooms with a wall-mounted air handling unit (AHU):
 - (i) Identify exhaust plenum at the top of the rack.
 - (ii) Locate the designated Interceptor® holder (if present) or a secure mounting point adjacent to the exhaust pathway.
 - (iii) Place the Interceptor® so that:
 - The collection surface faces the exhaust airflow
 - The device is fully exposed to airflow
 - The unit does not block airflow or filter surfaces
 - b) For rooms with tower-style AHUs:
 - (i) Open the AHU prefilter access panel and ensure the Interceptor metal frame is in place below the prefilter. If metal frame is not already in place, remove the prefilter and insert the frame with the runners facing down.
 - (ii) Open the Interceptor and insert it into the metal frame.
 - (iii) Ensure there is a paper filter in each Interceptor and push the sliding section of the Interceptor to expose the filter medium and close the panel.
 - c) Avoid placing devices where they may be bumped or knocked off by routine work
3. Documentation:
 - a) Record placement information in the environmental monitoring log
 - b) Note rack location, device ID, date/time, and personnel initials

B. Collection

1. After the scheduled cycle outlined below, don all PPE (lab coat/CM issued scrubs, clean gloves), open the panel, and remove the prefilter
2. Reverse the install procedure by pulling the EAD sliding section to protect the filter before extracting the EAD.
3. Gently remove the EAD and fold to close.
4. Record "Date Out" on the EAD.



5. Place the EAD in the provided hermetically resealable bag and label the outside of the bag with the sample ID and initials of person collecting. Fill out corresponding *CM Form 042: Rodent Health Surveillance Sample Collection Log*.

C. Sample Handling and Submission

1. Before shipping, verify all samples are accounted for in the package and the Sample ID on the individual bags matches the information on the *Rodent Health Surveillance Sample Collection Log* form.
2. Once all EADs have been collected and individually bagged across both campuses and all buildings, they should be combined into a single package for shipment to a diagnostic laboratory. If two EADs come in direct contact with each other, a note should be made and reported to the AV to account for potential cross contamination.
3. Place all bagged samples and a printed, completed *Rodent Health Surveillance Sample Collection Log* in an appropriate box or large padded envelope and seal (if not already completed, ensure there is a digital copy of the completed *Rodent Health Surveillance Sample Collection Log* available for online submission).
4. Complete the shipping information on the outside of the package and coordinate with management for shipping and record the Tracking Number.

D. Response to Positive Environmental Results

Note: A positive EAD result indicates environmental detection of pathogen genetic material, not confirmed infection in animals.

1. The AV will conduct an initial risk assessment, considering:
 - a. Pathogen detected
 - b. Room(s) and rack(s) involved
 - c. Species affected (mouse vs rat)
 - d. Clinical signs (if any)
 - e. Recent sentinel, EAD, or diagnostic data
 - f. Recent events (animal imports, construction, equipment changes)
2. Based on AV assessment, one or more of the following may be implemented:
 - a. Enhanced biosecurity for affected room(s)
 - b. Restricted movement of personnel in and out of the room in question
 - c. Temporary restriction of animal movement
 - d. Increased sanitation frequency
 - e. Reinforcement of PPE and workflow controls
 - f. Communication to affected research groups (if warranted)
3. Confirmatory and follow-up testing
 - a. Request retesting of the apparently positive EAD sample.
 - b. Under the direction of the AV, collect a fresh swab of the exhaust plenum from each positive rack for retesting.
 - i. If both the EAD retest and the plenum swab come back negative, the room can be reopened and considered clean with the approval of the AV.
 - c. Rack exhaust plenums that are positive should be followed up testing of fecal pellets, pooled from each cage by row, with each cage noted as to row position.
 - d. If the fecal samples are negative, cages should be transferred to a new, clean rack and two fresh EADs placed, one to be tested in 6 weeks, the other in 12 weeks. A determination will be made by the AV as to how traffic in the room will be handled based on the pathogen in question.



- e. If a fecal sample tests positive for the pathogen, the next steps will be directed by the AV based on a number of factors, such as:
 - i. Pathogen in question
 - ii. Health status of the room
 - iii. Ongoing research affected
 - iv. Timeline of studies
 - v. Population of the room.
- f. This may include:
 - i. Depopulation of the affected animals
 - ii. Rederivation of affected colonies
 - iii. Decontamination of racks, AHUs, and equipment in the affected room
 - iv. Decontamination of the room
 - v. Follow-up retesting of the room and occupants.

VI. Health & Safety

- Always wear appropriate PPE when handling EAD devices and environmental samples.
- Treat environmental samples as potentially infectious.
- Dispose of gloves and other disposable PPE according to institutional biohazard waste procedures.
- Follow all institutional EH&S and biosafety guidelines for shipping and handling environmental samples.

VII. References & Attachments

- Tecniplast Interceptor® Product Information and Technical Guidance
- *Guide for the Care and Use of Laboratory Animals*
- Institutional Biosafety and EH&S policies
- CM Form 042: *Rodent Health Surveillance Sample Collection Log*

VIII. Revision History

Revision Date	Revision Number	Summary of Changes
07/15/2013	2	
07/26/2016	3	Title Change, updated regulatory references, added responsibilities, updated sample collection, changes to record maintenance and archiving
01/13/2017	4	Cellophane Tape Test now optional
12/23/2019	5	Addition of housing options of newly arrived sentinels before testing
07/10/2023	6	Added Charles River and VRL Panels
02/11/2026	7	Complete rewrite: changed from sentinel testing to EAD PCR testing, change in title (removed 'Sentinel'), updated pathogen testing schedule

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Table 1: Schedule of pathogen testing

PATHOGEN	FREQUENCY	Months
Parasites		
Fur mites: <i>Myobia</i> , <i>Myocoptes</i> , <i>Radfordia</i> , <i>Ornithonyssus</i>	Quarterly	March, June, Sept, Dec



Pinworms: <i>Aspicularis, Syphacia</i>	Quarterly	March, June, Sept, Dec
Lice: <i>Poloyplax</i> spp.	Annually	June
<i>Spiroucleus muris</i>	Annually	June
Tapeworms: <i>Hymenolepis, Rodentolepis</i>	Annually	June
Viruses		
Mouse Parvovirus (MPV)	Quarterly	March, June, Sept, Dec
Minute Virus of Mice (MVM)	Quarterly	March, June, Sept, Dec
Mouse Hepatitis Virus (MHV)	Quarterly	March, June, Sept, Dec
Mouse Rotavirus (EDIM)	Quarterly	March, June, Sept, Dec
Sendai Virus	Quarterly	March, June, Sept, Dec
Theilovirus (TMEV; GDVII)	Quarterly	March, June, Sept, Dec
Mouse Adenovirus (MAV-1, MAV-2)	Quarterly	March, June, Sept, Dec
Papovavirus (Poly and K virus)	Quarterly	March, June, Sept, Dec
Ectromelia Virus (Mousepox)	Annually	June
Reovirus Types 1&3 (Reo)	Annually	June
Lymphocytic Choriomeningitis Virus (LCMV)	Annually	June
Hantavirus	Annually	June
Lactate Dehydrogenase Elevating Virus (LDV; LDHV)	Annually	June
Mouse Cytomegalovirus (MCMV)	Annually	June
Mouse T Lymphocytic Virus (MTLV)	Annually	June
Pneumonia Virus of Mice (PVM)	Annually	June
Bacteria		
<i>Mycoplasma pulmonis</i>	Quarterly	March, June, Sept, Dec
<i>Filobacterium rodentium</i> (formerly CAR bacillus)	Annually	June
<i>Encephalitozoon cuniculi</i> (ECUN; <i>E. cuniculi</i>)	Annually	June