



University Animal Care Committee Standard Operating Procedure		
Document No: 14.4	Subject: Rodent Environmental Health Monitoring	
Date Issued: November 30, 2014	Revision: 3	Page No: 1

Location: Queen's University

Responsibility: Principal Investigators, Research Staff, Veterinary Staff

Purpose: The purpose of this Standard Operating Procedure (SOP) is to establish the proper guidelines for monitoring health status of rodent populations utilizing exhaust air dust. In addition to sampling automatic watering lines.

1. Introduction and Definitions: To define the microbial status of rodent colonies, surveillance is conducted for sub-clinical, clinical diseases and opportunistic agents that could jeopardize the validity and reproducibility of research data, complicating its interpretation.

2. Materials:

- Pink Sticky Swabs (Charles River)
- Sterile 50ml Conical tubes
- BD Culture swabs
- 5ml snap top vials
- Oral swabs (Charles River)

3. Procedures:

Exhaust Air Duct Sampling

- At the defined intervals established below, current rodent inventories are sampled by room using exhaust air dust (EAD) collection method and PCR testing.
- The exhaust hose is removed from the exhaust plenum of the rack and the inside of the hose swabbed with the Charles River "Pink Sticky Swab". A maximum of 6 exhaust hoses are swabbed with a single swab.
- The "Pink Sticky swab" is then placed in a sterile 50ml conical tube and submitted to Charles River for further analysis.

PCR Fecal Sample Collection

- For Helicobacter testing, fresh feces are collected into a sterile container using aseptic technique. A pooled sample may contain up to 10 fecal pellets. The pellets should be free of any contamination such as bedding or hair from the animal's cage. Mouse pellets are collected into a 2ml snap top vial and rat pellets into a 5ml snap top vial, ensuring the vial is no more than 75% full. The samples must be refrigerated or frozen. It is preferable to ship the fecal samples within 24 hours of collection on ice packs or dry ice.
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PRIA Testing Sample Collection

- Fecal samples. Are collected as for Helicobacter testing.
- Body swabs. Swabs with a pink sticky tip are used to swab the entire body of the rodent, going against the direction of their hair growth. The swab head is cut from the shaft and placed in a vial no more than 75% full. Up to 10 swabs can be pooled and submitted in one 5mL vial.
- Oral swab. Small dry swabs with no transport media are used to swab the oral cavity. One swab may be used for up to five animals or up to 10 individual swabs may be pooled for testing. The swab tip is removed from the shaft and placed in a vial no more than 75% full.

Entry and Quarantine of Rodents from Non-Commercial Sources

- Non-commercial sources include other universities, research facilities and medical institutes (national and international).
- Health reports of rodents from these sources must be sent prior to shipment of any animals. The University or Clinical Veterinarian will review these reports and decide whether to accept these rodents into the facility.
- If approved, a decision will be made on the animal use and length of time these rodents will remain in the facility.
- The housing location of these rodents will be decided.

Housing of Quarantined Animals

- Quarantined rodents should be housed in ventilated cages or closed micro-isolator boxes, away from colony animals.
- Rodents housed in 'Clean Quarantine' will be tested by means of 'PRIA' testing
- Mice in 'Dirty Quarantine' will be re-derived, but it is necessary to know what pathogens exist in case of positive results elsewhere in the facility.
- Personnel working in 'Dirty Quarantine' will not be allowed entry into clean rodent rooms without showering prior to entry.

Automatic Watering Microbiological Testing

- On a quarterly basis, following the schedule of EAD testing for mice and rats, collect a water sample from the most distant point on the RO circulating loop.
 - Water sample should be collected in a sterile 50ml conical
 - Once collected, place a sterile culture swab into the water sample.
 - Label the swab for the location of the sample and date
 - Submit the sample to the KHSC Microbiology Lab for aerobic and anaerobic culture.
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Positive Results

- A positive result will be reported to the University Veterinarian, Clinical Veterinarian and Associate Director immediately.
- The affected colony will be quarantined.
- A second sample will be collected and tested.
- The University Veterinarian will decide whether to send the second sample to the same testing facility or a different diagnostic testing laboratory.
- Once the outbreak is confirmed, the University Veterinarian will make the decision to either treat, euthanize or move the colony to 'Dirty Quarantine'.
- Steps will be taken to identify the source of the pathogen and eliminate/control the infectious agent.

Revised: February 28, 2019 / October 21, 2021
