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**1. PURPOSE**

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This Standard Operating Procedure (SOP) describes the basic procedures for routine care and husbandry of laboratory finches.

**2. RESPONSIBILITY**

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Animal care staff, facility manager.

**3. MATERIALS**

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- 3.1. Personal Protective equipment
  - 3.1.1. Fit-tested N95 respirator
  - 3.1.2. Lab coat
  - 3.1.3. Gloves
  - 3.1.4. Shoe cover
  - 3.1.5. Bonnet
- 3.2. Cage cards
- 3.3. Finch diet
- 3.4. Calcium block
- 3.5. Avian grit
- 3.6. Clean water bottles
- 3.7. Clean cages with pan, paper cage liner, pan bedding
- 3.8. Clean or sterilized environmental enrichment devices
- 3.9. Disinfecting solution

**4. PROCEDURES**

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- 4.1. Observation of animals and environment:
  - 4.1.1. Observe all birds daily for illness, injury, general condition, and abnormal behavior. Report any health or behavioral abnormalities to veterinary care staff.
  - 4.1.2. Ensure all cages have sufficient food and water.
  - 4.1.3. Observe environmental conditions at room and caging level (temperature, humidity, light, noise, hazard). Report any abnormal environmental conditions to the manager.
  - 4.1.4. Animals found dead are to be reported to veterinary care staff. Carcasses should be removed from the enclosure promptly, identified, and placed in the refrigerator.
  - 4.1.5. Maintain a daily log of observations, environmental parameters, husbandry and maintenance procedures.
- 4.2. Emergency and holiday care:
  - 4.2.1. Provide routine care and husbandry for all birds on weekends and holidays.
- 4.3. Animal identification methods:
  - 4.3.1. Identify all cages with a cage card.
  - 4.3.2. Include, at a minimum, the following information:
    - 4.3.2.1. Investigator

- 4.3.2.2. Protocol number
- 4.3.2.3. Species
- 4.3.2.4. Source
- 4.3.2.5. Strain
- 4.3.2.6. Sex
- 4.3.2.7. Number of animals in the cage
- 4.3.3. Individual animals are identified as described in protocol. Examples of individual identification methods include: coloring description, leg banding, micro-tattooing, or micro-chips.
- 4.4. Food and water:
  - 4.4.1. Feed animals to meet current National Research Council (USA) recommendations for bird nutrition.
  - 4.4.2. Food storage:
    - 4.4.2.1. Store feed on plastic pallets or shelves off the floor and 4-6 inches away from walls, in a vermin-proof storeroom.
    - 4.4.2.2. Store open feed bags in leak-proof containers with tightly fitting lids.
    - 4.4.2.3. Maintain temperature and humidity controls in the storeroom. Avoid temperatures above 21°C and extremes in humidity. Use feed before expiration date.
  - 4.4.3. Replace empty bottles with clean ones rather than refilling them.
  - 4.4.4. Monitor water quality routinely to ensure that it is free of contaminants. Refer to Microbiological Monitoring SOP.
  - 4.4.5. Provide avian grit and calcium block to all cages.
- 4.5. Breeding program:
  - 4.5.1. House breeders in monogamous pairs or trios.
  - 4.5.2. A nestbox must be available for all breeder cages. Precaution should be taken to not disturb the nest box.
- 4.6. Social and environmental enrichment:
  - 4.6.1. Group-house birds whenever possible.
  - 4.6.2. Provide water baths once a week, water depth no more than 1cm should not exceed 5 cm deep).
  - 4.6.3. Provide vegetable food enrichment at minimum three times per week.
  - 4.6.4. Provide environmental enrichment devices for all birds.
  - 4.6.5. Examples of enrichment include, but are not limited to, the following: loose paper strands such as Enviro-Dri®, perches in varying thickness and textures, ladders, swings, and nesting material such as burlap, cotton and coconut fibers.
  - 4.6.6. Refer to Avian Environmental Enrichment SOP.
- 4.7. Animal import procedures:
  - 4.7.1. Quarantine birds from vendors depending on the status of both the vendor and the facility where they will be housed. The veterinarian will determine the requirements for each shipment. Refer to Avian Quarantine SOP.
- 4.8. Euthanasia and disposal of dead animals:
  - 4.8.1. Euthanize birds by isoflurane/CO<sub>2</sub> inhalation or overdose of anesthetics. Refer to Avian Euthanasia SOP.
  - 4.8.2. Ensure that euthanasia is conducted by trained and experienced staff.
  - 4.8.3. Dispose of dead animals by incineration.
- 4.9. Vermin control
  - 4.9.1. Refer to Vermin Control Program SOP.
- 4.10. Environment and environmental control:

- 4.10.1. Maintain room temperatures between 21 and 27° C.
- 4.10.2. Maintain relative humidity between 30% and 70%.
- 4.10.3. Maintain a daily log of room temperature and humidity.
- 4.11. Bedding:
  - 4.11.1. Use paper liner as bedding material.
- 4.12. Lighting:
  - 4.12.1. Provide a regular diurnal lighting cycle.
  - 4.12.2. Lights are controlled by timers set at a photoperiod of 12 to 14 hours of light. Check the timer performance routinely.
- 4.13. Space requirements:
  - 4.13.1. Provide cages that are appropriate in size for the number of birds housed in them. Refer to BVA/WF/FRAME/RSPCA/UFAW Joint Working Group on Refinement recommendations.
- 4.14. Cleaning of cages:
  - 4.14.1. Change pan once every week, at a minimum. Change cage at minimum every 3 months.
  - 4.14.2. Change cages more frequently if needed to keep the animals clean and dry and provide a healthy environment.
  - 4.14.3. Supply fresh bedding with each cage change.
- 4.15. Cleaning and sanitation of housing room and equipment:
  - 4.15.1. Weekly:
    - 4.15.1.1. Check light timers.
    - 4.15.1.2. Mop floors.
    - 4.15.1.3. Wipe down all surfaces such as sinks, doors, doorjambes and doorknobs, windows, cart tops, shelves, etc. with the disinfectant solution.
  - 4.15.2. Monthly:
    - 4.15.2.1. Clean room exhaust grills.
  - 4.15.3. Bi-annually:
    - 4.15.3.1. Wash racks.
- 4.16. Transportation:
  - 4.16.1. Transport birds within McGill University in cages covered by opaque material. Refer to Animal Transport and Use Outside of Animal Facilities SOP.
- 4.17. Waste Management:
  - 4.17.1. Deposit non-regulated or non-infectious medical waste and soiled materials in dumpsters.
  - 4.17.2. Regulated or infectious medical waste is processed by McGill University's Waste Management program.

## **5. SAFETY**

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- 5.1. Working with birds can trigger related allergies. Check with the facility supervisor regarding requirements for personal protective equipment and refer to SOP.
- 5.2. Refer to Animal Related Injury SOP.
- 5.3. Preparation of disinfecting solution:
  - 5.3.1. Wear personal protective equipment when preparing and using disinfectant solution.
  - 5.3.2. Dilute according to manufacturer's recommendation.
  - 5.3.3. Clean surfaces prior to disinfection to remove any organic material.
  - 5.3.4. Apply disinfectant and allow for adequate contact time.

## 6. REFERENCES

- 6.1. Anderson L. C. Fox J. G. Otto G. M. Pritchett-Corning K. R. & Whary M. T. (2015). Laboratory animal medicine (Third), Chapter 23 - Zebra Finches in Biomedical Research.
- 6.2. Fifth report of the BVA/WF/FRAME/RSPCA/UFAW Joint Working Group on Refinement (JWGR), published in Laboratory Animals, 2001, Volume 35, [Supplement 1, Pages 1-181](#).

## SOP REVISION HISTORY

DATE	NEW VERSION
2023.07.19	AVIAN FINCH HUSBANDRY
2023.07.19	2. RESPONSIBILITY Animal care staff, facility supervisor, facilities manager
2023.07.19	<b>3.1. Personal Protective equipment</b> 3.1.1. Fit-tested N95 respirator 3.1.2. Lab coat 3.1.3. Gloves 3.1.4. Shoe cover 3.1.5. Bonnet
2023.07.19	3.2. <del>Darwin</del> Cage cards
2023.07.19	3.7. Clean cages with pan, <b>paper cage liner, pan bedding</b>
2023.07.19	4.1. Observation of animals <b>and environment:</b> 4.1.1. Observe all birds daily for illness, injury, <del>and</del> general condition, <b>and abnormal behavior. Report any health or behavioral abnormalities to veterinary care staff.</b> 4.1.2. Ensure <del>they</del> all cages have sufficient food and water, <del>including weekends and holidays.</del> 4.1.1. <b>Observe environmental conditions at room and caging level (temperature, humidity, light, noise, hazard). Report any abnormal environmental conditions to the manager.</b> 4.1.2. <b>Animals found dead are to be reported to veterinary care staff. Carcasses should be removed from the enclosure promptly, identified, and placed in the refrigerator.</b> 4.1.3. <b>Maintain a daily log of observations, environmental parameters, husbandry and maintenance procedures.</b>
2023.07.19	<del>4.2.2. Make provisions for emergency care by providing both work and after hours contact information for Principal Investigators (PI's) and their staff. Provide special requests or instructions if needed.</del>
2023.07.19	4.3.1. Identify all cages with a <del>Darwin</del> cage card.
2023.07.19	<b>4.3.2.4. Source</b>
2023.07.19	4.4.2.1. Store feed on plastic pallets <b>or shelves</b> off the floor and 4-6 inches away from walls, in a vermin-proof storeroom.
2023.07.19	4.4.4. Monitor water quality routinely to ensure that it is free of contaminants <del>that could potentially expose animals to chemical or infectious agents.</del> Refer to <b>Microbiological Monitoring SOP for water quality monitoring requirements.</b>
2023.07.19	4.4.5. Provide avian grit and <del>at minimum one</del> calcium block <del>per cage</del> to all cages.
2023.07.19	4.6.2. Provide water baths once a week, water depth <del>no more than 1cm</del> <b>should not exceed 5 cm</b> deep .
2023.07.19	4.6.3. Provide vegetable food enrichment at minimum <del>once a</del> <b>three times per week.</b>
2023.07.19	4.8.1. Euthanize birds <del>by isoflurane/CO2 inhalation or overdose of anesthetics. Refer to as per</del> Avian Euthanasia SOP.
2023.07.19	<del>4.15.3.1. Wash all walls with disinfectant solution.</del>
2023.07.19	4.10.1. Maintain room temperatures between <del>19 and 24</del> <b>21 and 27° C.</b>
2023.07.19	4.13.1. Provide cages that are appropriate in size for the number of birds housed in them. Refer to <del>CCAG</del> <b>BVA/WF/FRAME/RSPCA/UFAW Joint Working Group on Refinement</b> recommendations.
2023.07.19	<b>6. REFERENCES</b> 6.1. Anderson L. C. Fox J. G. Otto G. M. Pritchett-Corning K. R. & Whary M. T. (2015). Laboratory animal medicine (Third), Chapter 23 - Zebra Finches in Biomedical Research. 6.2. Fifth report of the BVA/WF/FRAME/RSPCA/UFAW Joint Working Group on Refinement (JWGR), published in Laboratory Animals, 2001, Volume 35, Supplement <b>1, Pages 1-181.</b>