

Maintenance and Use of Equipment for Decapitation of Animals

Background/Purposes:

Florida Atlantic University (FAU) is committed to the improvement of human and animal health through research and the advancement of science. It is FAU policy to meet or exceed all laws and regulations governing animal care and use in research, teaching, and testing. Humane treatment and well-being of laboratory animals are considered the highest priority. This SOP is intended to establish appropriate procedures for the maintenance and use of the equipment used for decapitation of animals.

Scope:

This SOP is applicable to all personnel involved in the use of decapitation equipment as a method for decapitation of neonate, adolescent, and adult animals.

Responsibilities:

1. Researcher/Investigator:
 - a. Ensure compliance with all relevant IACUC Policy, SOP, the Guide for the Care and Use of Laboratory Animals, PHS Policy, and the Animal Welfare Act/Regulations (as applicable).
 - b. Ensure appropriate training of personnel and documentation of procedures in accordance with this and other relevant IACUC SOPs and policies.
 - c. Ensure proper cleaning/disinfection of all equipment and sharpening or replacement of equipment.
 - d. Ensure adherence to the guidelines in this SOP.
 - e. Ensure that equipment is in working order PRIOR to use on animals.
Scissors/guillotines should be free of rust and gouges in cutting surfaces.
2. IACUC:
 - a. Review and approve protocols/amendments to protocols.
 - b. Assure adequate training of personnel.
 - c. Inspect animal facilities/laboratories at least semiannually to ensure records are maintained and approved procedures are followed.
 - d. Review/report animal welfare issues.
3. Research Integrity:
 - a. Serve as liaison between the IACUC and PIs to ensure procedures are consistent with the regulatory requirements.

4. Attending veterinarian and/or designee/Comparative Medicine:
 - a. Assist with training personnel to ensure animal health and well-being.
 - b. Provide support regarding proper maintenance of equipment.
 - c. Review /report animal welfare issues.

SOP Outline:

- A. Utilizing a guillotine or scissors for decapitation of animals must be described and approved in an animal care and use protocol prior to use. For guillotines, the use of plastic cones/plastic film cone tubes (e.g. Rodent Restraint Cone (Harvard Apparatus) or DecapiCones (Braintree Scientific)) is recommended to provide restraint, minimize distress, and improve positioning when used in unanesthetized animals. The use of scissors for decapitation is dependent on the size of the animal, e.g., mice, neonate rats, axolotls, salamanders.
- B. All new personnel performing decapitation of unanesthetized animals must be trained by Comparative Medicine (CM) prior to performing the procedure.
- C. Decapitation must be performed in a location that is separate from a housing room where live animals are kept, preferably in a necropsy room. Decapitation must also be performed out of view of other animals.
- D. Dedicated guillotine or scissors must be used for decapitation of animals and must be inspected before and during each use to ensure that the device is clean, sharp, and operates without resistance.
- E. All guillotine and scissors must be labeled with a unique identifying number.
- F. A minimum of 2 pairs of scissors must be maintained at all times.
- G. The guillotine should be placed on a clean and stable surface when in use.
- H. Guillotines and scissors must be cleaned after each use with soap and water, then disinfected with a disinfectant solution, e.g., Rescue, Peroxigard. Guillotines should also be lubricated as needed with a silicone lubricant. Scissors should be discarded if rust is present.
- I. Guillotine blades and scissors must be sharpened once every six months or more frequently if needed.
 - a. Scissor sharpness must be tested prior to use according to the Steris Animal Health procedure for sharpness using the “Sharpness Test Kit”.
 - b. Guillotine sharpness should be tested by using either a thick rubber band or polyethylene tubing. If the blade fails to cut the tubing/rubber band in one attempt, the blades should be replaced before using on a live animal.
 - c. Items can be sharpened by using vendors such as Henry Schein.
- J. Whereas it is expected that six months is a proper time for the regular, periodic sharpening, **without dulling of the blades in between maintenance**, guillotines and

scissors should be tested quarterly using the “Sharpness Test Kit” or rubber band/polyethylene tubing for guillotines. If the blades do not pass, then they must not be used and be sharpened. This is the most probable indicator that the blades do not decapitate rapidly.

- K. A log must be maintained and kept with the guillotine or scissors and should include the unique identifying number and the date sharpened. The log must be made available to the IACUC during semi-annual facility inspections.
- L. Laboratory personnel should monitor and note on the log if the guillotine or scissors do not decapitate rapidly. At this time, the equipment must be removed from the use area and transferred to a separate location to be sent for extra sharpening.
- M. Guillotines and scissors must be replaced at any point that is deemed necessary (unable to further sharpen the blades; rusted devices; damaged blade surfaces; cutting surfaces of blades do not adequately appose each other).