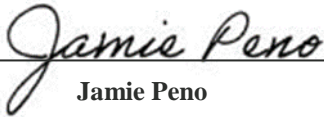
 <b>DIVISION OF RESEARCH &amp; INNOVATION</b> Research Integrity & Compliance		<b>Institutional Animal Care and Use Committee</b> <b>Standard Operating Procedures</b>	
<b>Title: Anesthetic and Research Equipment Maintenance and Calibration Requirements</b>			
<b>Effective Date:</b>	December 22, 2020	<b>Document Number:</b>	IACUC-SOP-02-15.00
<b>Approval/Date:</b>  <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">   <hr style="width: 100%;"/> <b>Jamie Peno</b>            Director, Research Integrity and Compliance         </div> <div style="text-align: center;"> <hr style="width: 100%;"/>           12/22/2020  <b>Date</b> </div> </div>			
<b>REVISION HISTORY</b>			
<b>Date</b>	<b>Section</b>	<b>Author</b>	

**PURPOSE**

Anesthetic and research equipment used for research animals should ensure the safety of the animal and user. Anesthesia machines and vaporizers must be in good working conditions to reduce anesthetic gas leaks, to ensure the best performance of scavenging equipment, and to provide the appropriate percentage of anesthetic delivery. Equipment monitoring animals and providing data should be in good working order to identify any problems or risks to the animal and personnel. Anesthetic vaporizers should be registered with UNT Biosafety. Records of appropriate maintenance and calibration should be retained for the life of the equipment and available to IACUC upon request.

**SCOPE**

It is the responsibility of the Principal Investigator to ensure personnel are trained in the proper use of anesthetic machines and vaporizers prior to operations. It is the responsibility of the Principal Investigator to register the use of vaporizers and scavenging systems used outside of the UNT Lab Animal Facility with UNT Biosafety in Risk Management Services. It is the responsibility of the Principal Investigator to ensure that equipment used outside of the UNT Lab Animal Facility is appropriately maintained according to vendor specifications and annually calibrated by qualified resources using validated and certified equipment.

**DEFINITIONS AND ABBREVIATIONS**

UNT- University of North Texas, Denton

IACUC- Institutional Animal Care and Use Committee

SOP/SOP's- Standard Operating Procedure(s)

PI- Principal Investigator

LAF- Laboratory Animal Facility at UNT in the Science Research Building

## **PROCEDURES**

- I.** Use of anesthetic vaporizers outside of the UNT LAF should be registered with UNT Biosafety.
  - A.** To ensure appropriate scavenging systems and lab amenities are in place, Biosafety may request to inspect machines and documentation.
  - B.** Lab procedures for maintenance and use should be maintained and readily available in the lab safety manual.
  - C.** All personnel administering anesthetic agents or performing routine maintenance of anesthetic equipment should have appropriate and documented training to do so.
  - D.** All use of inhalants should be approved by the UNT IACUC in an approved Animal Use Protocol (AUP).
    1. Specific agents used and dosing ranges must be within the approved AUP.
- II.** Maintenance and Calibration
  - A.** Routine maintenance for anesthetic equipment should be documented and maintained with the equipment according to manufacturer guidelines and lab-specific SOP's.
  - B.** Annual calibration of vaporizers should be performed by a qualified individual or vendor using validated and certified equipment.
    1. Documentation of calibration should be maintained and available upon request.
    2. Documentation should include:
      - a) Date of Calibration
      - b) Date of Calibration Expiration
      - c) Certificate information for equipment used to perform calibration
      - d) Name and contact information of qualified individual performing the calibration
      - e) Calibration results including the target values used and the actual values measured
      - f) A label or sticker should be placed on the unit itself indicating the dates of the most recent calibration.
        - i.** Personnel should verify in-date calibration prior to the use of any anesthetic vaporizer equipment.
  - C.** Equipment that is used to monitor patients and/or provide data should be routinely calibrated and maintained according to manufacturer and lab-specific procedures.
  - D.** Any equipment that is not maintained or appropriately calibrated should be visibly labeled and stored with "DO NOT USE".

## **REFERENCES**

1. The Guide for the Care and Use of Laboratory Animals
2. AVMA Guidelines for Small Animal Anesthesia
3. AWA Regulations for Animal Welfare

## **APPENDICES**

IACUC Standard Operating Procedures