

IACUC - Housing Chamber – Standard Operating Procedures

PI NAME:

Protocol Number(s):

Individual Completing this SOP (Name and email):

Directions: Please fill out the following questions and attach this document to the chamber or in a binder with verification documents near the chamber.

1. Chamber Function:

- a. Type of chamber (hypoxia, temperature controlled, hyperoxia, behavior, etc.). This should include acceptable ranges. **A separate SOP should be provided for each type of chamber.**
- b. Where is/are the chamber(s) located (building and room number)?
- c. Provide the manufacturer, model, and contact information. Include an electronic copy of the equipment user's manual or link to the manufacturers' website covering that model.
- d. What type of power supply is the chamber connected to? I.e., building standard or emergency power.
- e. What is the air exchange rate/air flow through the chamber? Please provide verification in the form of letter from manufacturer, user's manual (page number included), or independent testing.
- f. What is used to control the lighting, temperature, humidity, and oxygen to the chamber? How does the chamber function?

2. Animal Monitoring

- a. How often are animals health checked? What is the procedure for observing animals for any concerns?
- b. What is the procedure for opening the chamber if LARC staff need to check the animals for any reason?
- c. What is the planned cage change frequency? (static cages should be changed, at least, once a week).
- d. What is the maximum cage capacity for the chamber per manufacturer's recommendations or IACUC approval? How many adults and pups will occupy each cage?
- e. What is the IACUC-approved acclimation period for abrupt changes in environmental parameters?

3. Chamber Monitoring and Maintenance:

- a. Describe the monitoring procedures and frequency for the following environmental parameters: temperature, humidity, air exchange rate and ammonia levels. If oxygen or carbon dioxide are manipulated, describe monitoring procedures for those as well.

- b. Describe standard chamber maintenance procedures. How will the chambers be cleaned?
- c. How frequently will cleaning be performed?
- d. Submit as a separate attachment the template that will be used for [daily chamber parameter monitoring](#).
- e. Also complete and post in room routine [chamber maintenance checklist](#)

4. Ammonia Monitoring and Reduction: If intra-cage ammonia level is over 300 ppm, you must develop a plan to evaluate the impact of ammonia levels on the animals and outline steps to reduce ammonia levels.

- a. Describe how ammonia levels will be tested in the cage and in the chamber and the frequency of testing. Required frequency is at least every 3 years or more if parameters have changed (i.e., fan is nonfunctional, increased odor, increased number of cages, changes in maximum occupancy, duration, extending cage change interval). Contact LARC to coordinate testing.
- b. Describe the plan to reduce ammonia levels if they are over 300 ppm in the chamber. For example, adding an absorbent material to the chamber, increased cage change frequency or limiting cage number within the chamber.

5. Emergency Plan for a system failure:

- a. Please provide emergency contact information for at least 2 individuals from the lab.
- b. How would a power or fan failure be detected?
- c. How would a system failure impact environmental parameters including temperature, humidity, ammonia, oxygen, or carbon dioxide levels inside the chamber.
- d. Would a system failure impact environmental parameters in a way that would pose an immediate risk to animal welfare?

6. Training lab members on chamber function and procedures:

- a. How will all chamber users be trained to use the chamber and follow procedures listed in this document?

7. Documents and Signs

- a. Post a sign with acceptable ranges for (oxygen, carbon dioxide, temperature, and humidity). If you are only manipulating temperature – you only need to post acceptable ranges for temperature and humidity.
- b. Post a sign with emergency contacts including phone numbers that can be used 24/7, including nights and weekends.
- c. Maintain a [daily check sheet for animal assessments and environmental parameters](#)
- d. Maintain [a maintenance log](#) including daily, monthly, and yearly requirements per manufacturer's recommendations.

- e. Print this document and keep it near the chamber

8. Please provide current date of SOP submission:

Environmental parameters should follow standard animal holding rooms unless otherwise described in the Chamber SOP. Action should be taken if any standard parameters below are out of range for 1 day and noted. Humidity should be tracked for 3 days before action is required to be taken.

Normal Values for rodents are listed below:

Environmental Parameter	Acceptable
Temperature	68 F -76 F
Humidity	30 % -70%
Air Exchange Rate	At least 10-15 air changes per hour
Ammonia	< 300 ppm