

Shock Center Protocol

Protocol: Promethion Metabolic Cage – Starting a Run

Date of revision: 2/8/17

Revised by: J. Neal

Originator: L. Robinson

Computer Setup:

1. Before starting a Promethion run, close all programs and restart computer.
2. Create a new folder where your data will be stored. The new folder will be located under:

Create a new folder with the date YYYYMMDD-calorie restriction cohort-and mouse ID's (ie 20160420-AL-1-16). This folder will store the raw data files, the Expedata files, and the excel files.
3. Open Metascreen.
4. Sign In using First Initial and Last Name (ie. J. Doe).
5. Make sure Gas analyzer GA3m2 is selected.
6. Click “Check” on the home screen tab to run a check of the boxes. **(note: if the check comes back as ‘failed’, most likely a box is lacking a power source. Check the plugs that are zip tied to the back of the metro rack, ensure all boxes have a power source plugged into them, and finally, check the plug to the UPS).**
7. On the ‘Home Page’ tab, Click “Load Setup”, and load the Calico setup titles “Calico.atpx”. **(note: it should automatically direct you to the folder this setup is saved under. If not, click on to reach this document.**
8. Go to the diagnostics tab, and start a diagnostics run. Make sure everything comes up green, which means it is ready to run.
9. On the ‘Home Page’ tab, click “Save Run As” and save in the calico folder. Save with the date (YYYYMMDD) – your initials – the calorie restriction cohort – and the numbers of mice in that run. **(ie. 20160418-LLR-AL-1-16, here we can tell the date it is started, the person, we know they are Ad Lib mice and mouse ID 1-16 was tested.)**
10. Save in the new folder that was created in step 1.
11. Under “Auto Rollover” on the bottom left corner, use the drop down menu to select “4 days”.

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Mouse/Box Setup:

12. Disconnect the box from the power source (bottom right chord connected to the CC-1), disconnect data port 1 and 4 (the top and bottom chords connected to the CC-1), and disconnect the air tube.
13. Put a large handful of shavings inside the box.
14. Put the food, water, and body mass sensors on the MM-1's. Make sure the water bottle is full, and ensure the marking showing the water levels will be visible to the box welfare checkers! Some mice may be calorie restriction mice, so make sure they get the appropriate amount of food. Remember: food ALWAYS goes on the MM-1-1, water on the MM-1-2, and body mass sensors ALWAYS on the MM-1-3.
15. Make sure to check all the water bottles as you put them in the box to ensure no leaks.
16. Add mice to the cage **and ensure all the lids are closed and no gaps are showing.**
17. Put the cage back on the shelf, reconnect the data ports 1 and 4 (for the running wheel and MM-1's), reconnect the air tube, and finally, reconnect the power. **(note: Make sure the boxes are pushed to the back of the beam break sensor, ensuring that ample space is available from the front of the box to the front of the beam break sensor).**
18. Put a lid on the box and ensure it fits properly over the wires.
19. Take the diet tags and place one diet tag on a tag holder for each box. Your options are as followed:
 - a. "unlimited food access" for ad lib mice, and for the fasting mice while in their ad lib cycle
 - b. "restricted food access - do not feed" for the 20% and 40% restriction mice
 - c. "Fasting: date ___ time ___" for the 24 hour and 48 hour fast mice during a fasting cycle. **PLEASE FILL OUT THE DATES AND TIMES THE FOOD WAS REMOVED AND WHEN THE FOOD WILL BE RETURNED.**
20. If mice are in a treatment plan, add a yellow tag to the tag holder with the case number pertaining to that mouse.
21. Go to the diagnostics tab, and start a diagnostics run. Make sure everything comes up green which means it is ready to run.

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22. Click "Record", your run has now started.

Pausing A Run To Add Food For Calorie Restricted Mice:

1. Go to the Acquisition Monitor tab.
2. Click Utilities.
3. Under 'Freeze Mass Readings' (on the left hand column), click the boxes you wish to freeze and press 'Apply'
4. Refill hopper or give weighed amounts of food.
5. Unclick the boxes when done and click 'Apply'.
6. Ensure you write in the log that boxes were frozen in order to add food. The "Notes" log is located in this book.