

## Biocontainment Procedures

The Spectral Lago imaging room is a common use area where there is potential for animals to become infected with pathogenic agents. The following procedures will be followed to prevent the dissemination of infectious agents.

1. Only Biosafety Level 2 pathogens or lower will be permitted in this facility.
2. All animals will be handled using Animal Biosafety Level 2 procedures.
3. Work surfaces and equipment such as counter tops, anesthetic equipment, nose cone, divider etc. must be disinfected before and after each imaging session.

**NOTE:** Disinfectant should never be sprayed directly into the imaging chamber of the Lago system as this may damage the camera.

4. Any spills will be handled as potential biohazardous and must be decontaminated using the Office for Research Safety's recommended procedure for decontaminating spills of agents used at BSL-2.
5. Disinfectants will be available in the procedure area.
6. All personnel involved with the must wear standard Barrier PPE (gloves, gown, and face mask).
7. Wash hands after handling animals. Personnel may not eat, drink or store food intended for human consumption in this area

**The following procedure is recommended for decontaminating spills of agents used at BSL-2:**

- a. Wear gloves and a laboratory coat or gown. Heavyweight, puncture-resistant utility gloves, such as those used for housecleaning and dishwashing, are recommended.
- b. Do not handle sharps with the hands. Clean up broken glass or other sharp objects with sheets of cardboard or other rigid, disposable material. If a broom and dustpan are used, they must be decontaminated later.
- c. Avoid generating aerosols by sweeping.
- d. Absorb the spill. Most disinfectants are less effective in the presence of high concentrations of protein, so absorb the bulk of the liquid before applying disinfectants. Use disposable absorbent material such as paper towels. After absorption of the liquid, dispose of all contaminated materials as waste.
- e. Clean the spill site of all visible spilled material using an aqueous detergent solution (e.g., any household detergent). Absorb the bulk of the liquid to prevent dilution of the disinfectant.
- f. Disinfect the spill site using an appropriate disinfectant, such as a household bleach solution. Flood the spill site or wipe it down with disposable towels soaked in the disinfectant.
- g. Absorb the disinfectant or allow it to dry.
- h. Rinse the spill site with water.

Dispose of all contaminated materials properly. Place them in a biohazard bag or other leak proof, labeled biohazard container for sterilization

# **Standard Operating Procedures (SOPs) of Microbiological Sanitization Procedures in Spectral Lago Room**

**Location:** room B-307, Lurie building.

**Equipment:** Spectral Lago, isoflurane anesthesia machine, procedure bench top.

**Disinfectant:** C-DOX (Chlorine Dioxide) 500 PPM stored on bench top in the room B-307 supplied by CCM

## **Cleaning method:**

### **Spectral Lago:**

1. Spray generous amount disinfectant on clean paper towel.
2. Use the disinfectant-soaked paper towel to wipe nose cones and divider
3. Repeat above steps after you are done.

Note: Disinfectant should never be sprayed directly into the imaging chamber of the Spectral Lago as this may damage the camera and cable etc.

### **Isoflurane anesthesia machine:**

1. Spray generous amount disinfectant on clean paper towel
2. Use disinfectant-soaked paper towel to wipe the inside of the induction chamber thoroughly
3. Repeat above steps after you are done.

Note: Disinfectant should never be sprayed directly into the induction chamber as this may damage the rubber seal.

### **Procedure bench top:**

1. Directly spray the disinfectant on the bench top.
2. Wipe disinfectant covered surface thoroughly with a clean, dry paper towel.
3. Repeat above steps after you are done.

**Centre for Advanced Microscopy**

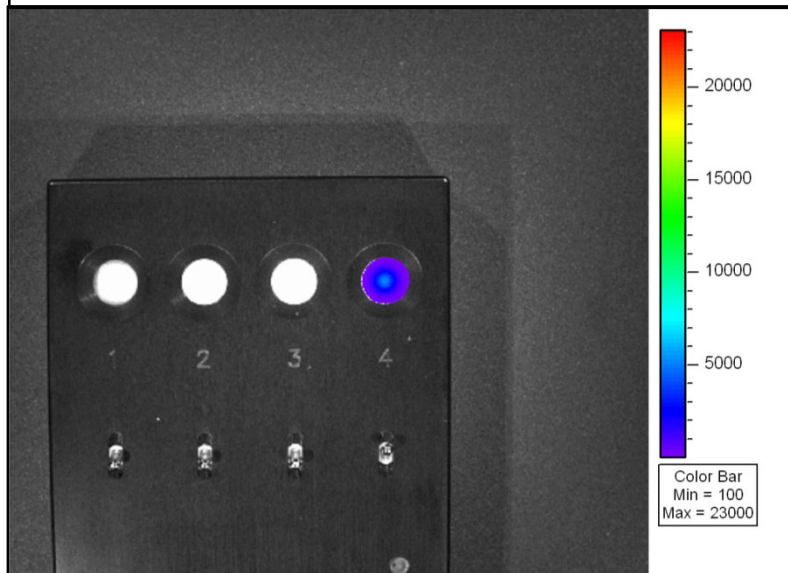
# Tech Tips

## Total Emission

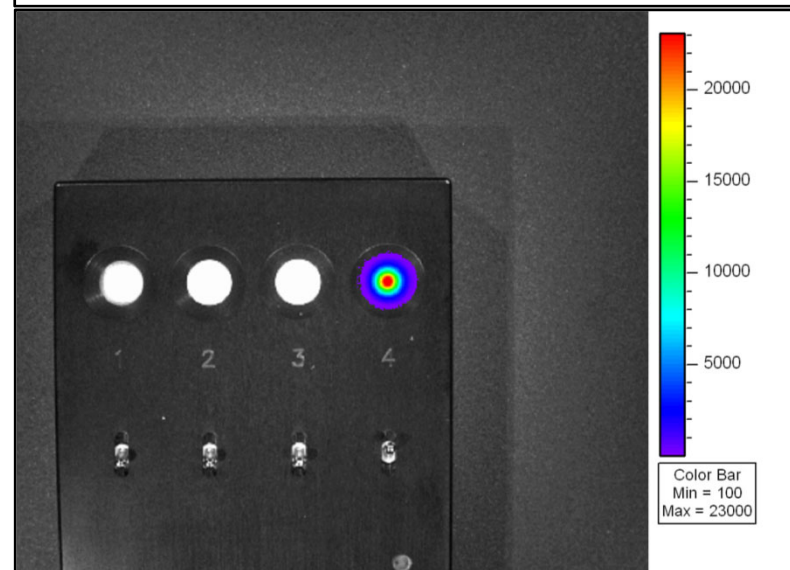
Aura automatically compensates for device settings: Exposure time, f/stop, binning and field of View.

Calibrated units are Photons per Second, representing the flux radiating omni-directionally from a user-defined region

2 sec exposure, f/stop 1, Small binning  
~5000 counts peak  
 $2.82 \times 10^8$  photons/sec

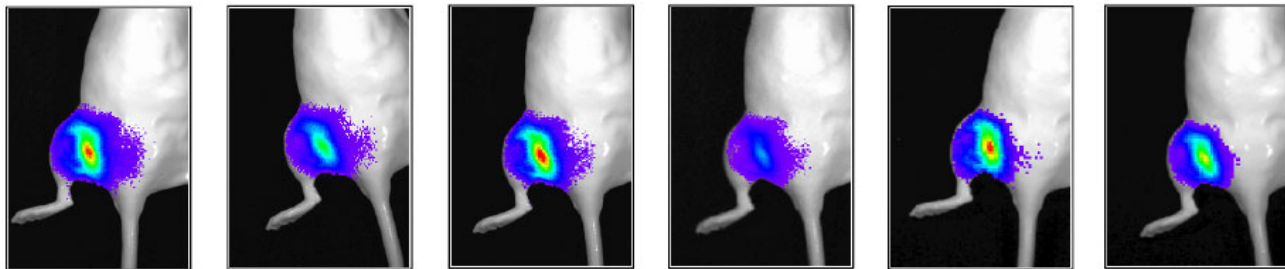


10 sec exposure, f/stop 1, Small binning  
~25000 counts peak  
 $2.82 \times 10^8$  photons/sec



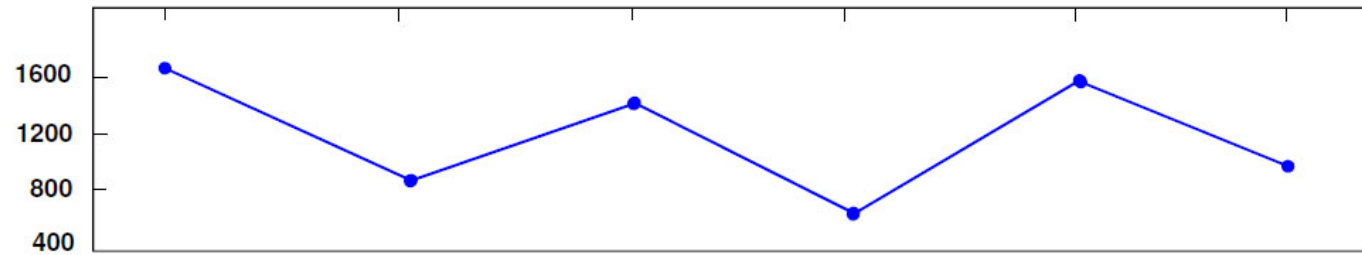
## Raw Signal (counts)

Raw Signal  
(Counts)



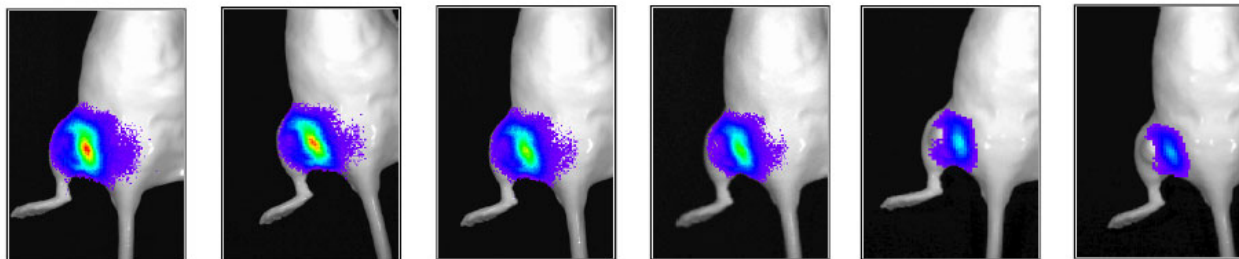
Exp time:	30 sec	30 sec	60 sec	60 sec	60 sec	60 sec
Binning:	small	small	small	small	medium	medium
Day:	1	2	3	4	5	6

Peak  
Counts



## Calibrated Signal (radiance / efficiency)

Calibrated  
Signal  
(Photons per  
second)



Exp time:

30 sec

30 sec

60 sec

60 sec

60 sec

60 sec

Binning:

small

small

small

small

medium

medium

Day:

1

2

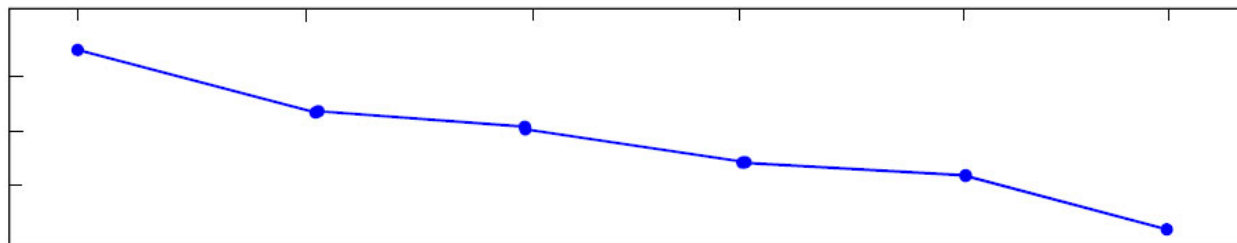
3

4

5

6

Radiance:  
Photons per  
second

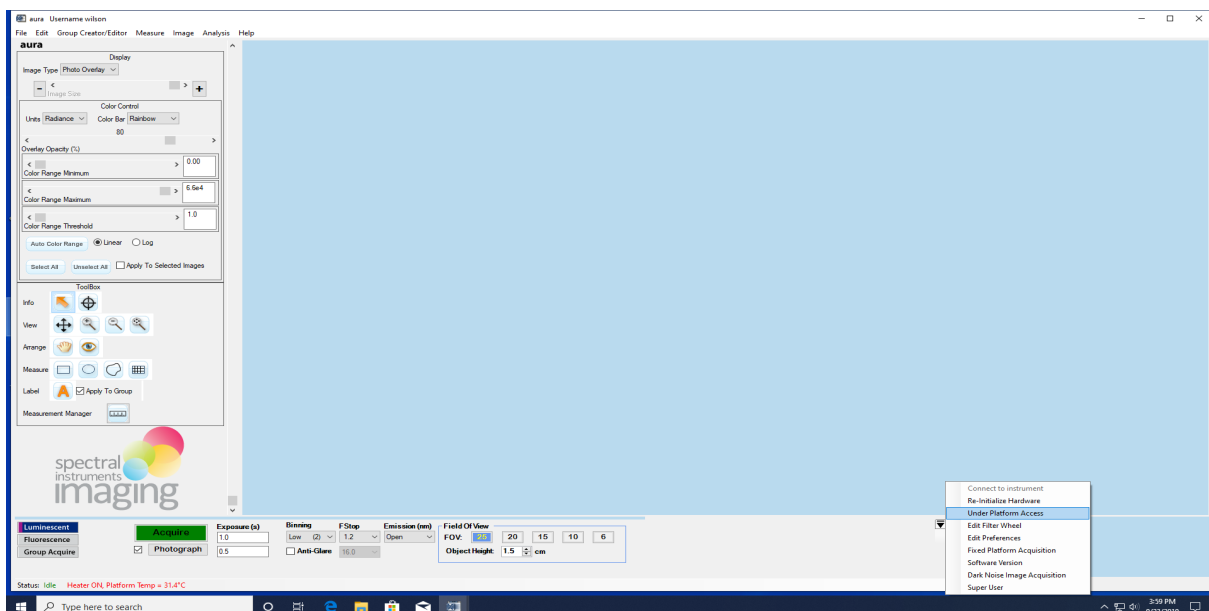
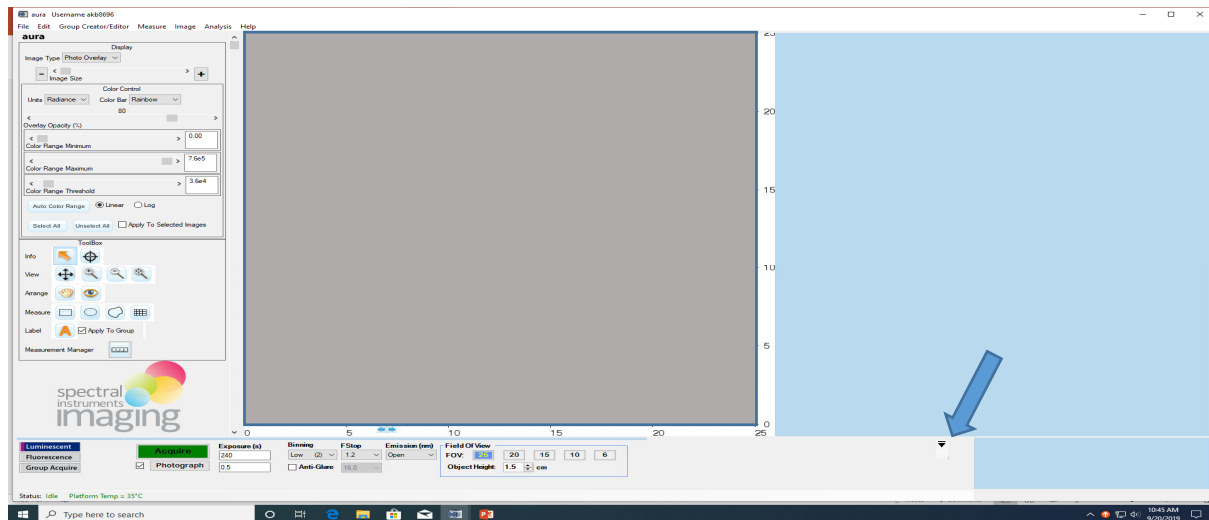


# Lago common problem and trouble shooting

## 1. Mouse lost in the imaging chamber

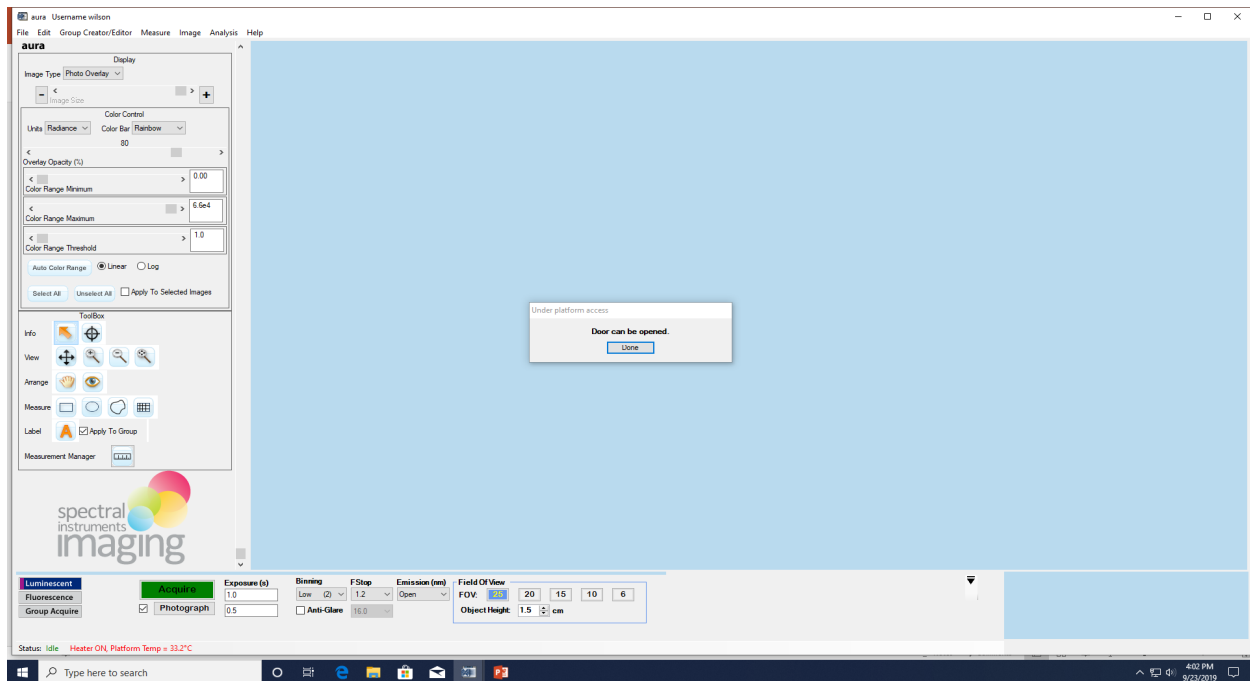
**A:** Open the front door, stick hand into the chamber and up to the back side of the door. At door's lower edge, there is a groove about 2 inch wide and full door length. Please check this area by move hand left and right to retrieve mouse. If there is no mouse found, go to next step.

**B:** If you mouse trap under the platform. First of all, remove all mice on the platform and close the Lago door. Go to the Aura software, click the arrow as show in the image to special option:



In the menu which appear, click “Under Platform Access”. The platform will raise. Wait for a window to appear saying that door can be open. Open the door and retrieve mouse.

Close door and click “done”. The platform will then move back down to the load position.



**2. Accidentally push the “Emergency Stop Button” and it blinks.**

Turn the “Emergency Stop Button” clockwise to reset.

**3. Computer is power off.** All users require to log off after their done and don't shutdown computer. For some unexpected reason, eg. power outage etc. Put the “CUP” button on the Lago to start the computer.

**4. Lago door can't open** after push green button. Push the green button and at the time lift up the door, it should open. Afterwards, it should be functional proper.



## Lago

