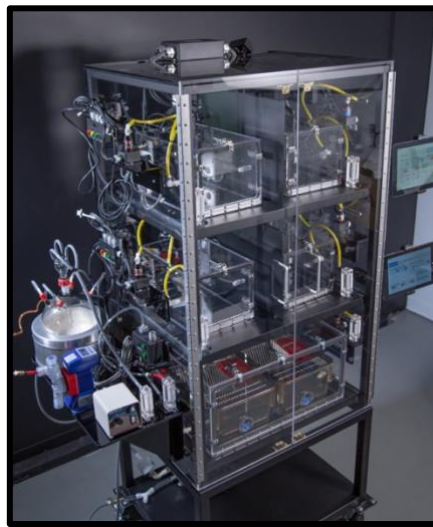


# Vape Chamber Graphical Protocol: Passive Administration

## LJARI E-Vape Chamber

Date: Sep 29, 2023  
Author: Rebecca Przy

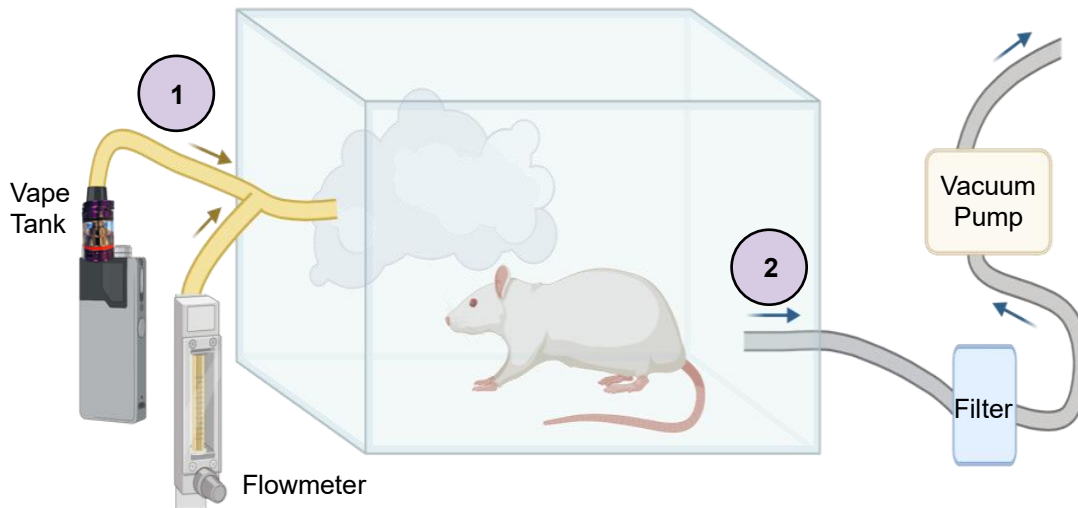


### Vape Chamber System:

1. Atomized vapour combines with ambient air and flows into the vape chamber.
2. Vapour is evacuated from the vape chamber, via the vacuum pump, and is filtered prior to entering the facility's exhaust system.

### What is a flowmeter?

The flowmeter measures & adjusts the rate of ambient airflow into the vape chamber.

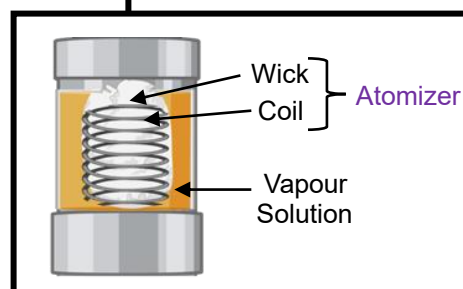


## Vape Tank Preparation



1. Assemble vape tank.
2. Dispense ~ 2 mL solution into the **outer port**.

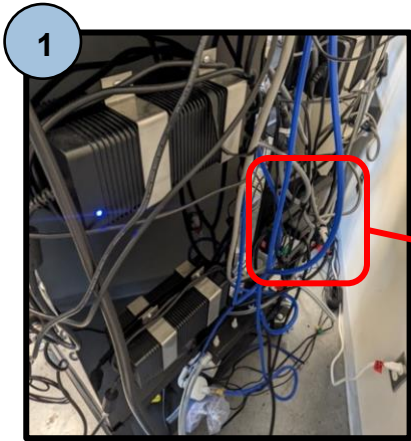
The **atomizer** contains a wick & coil. The wick supplies the solution to the coil, which will heat & vaporize the solution.



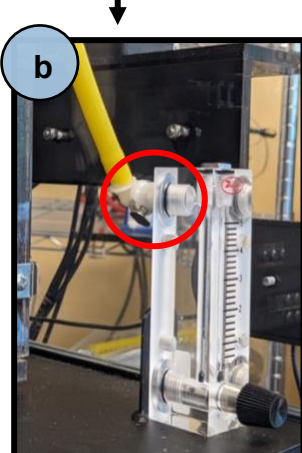
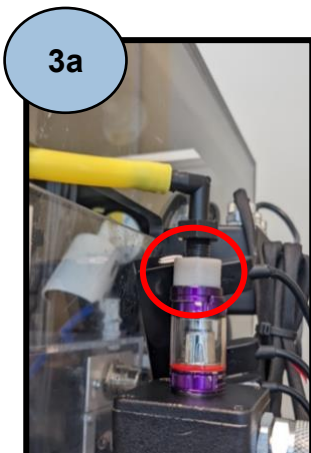
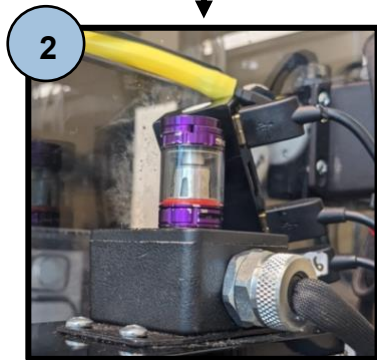


If you are using a THC solution: cover with tin foil. THC is light-sensitive!

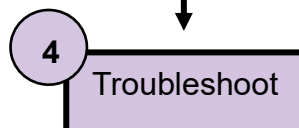
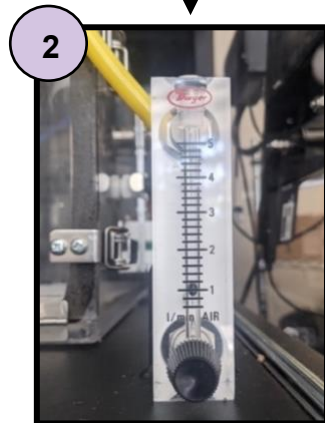
## Vape Chamber Set-Up



1. Turn on master switch.
2. Attach vape tank to the vape chamber connection site.
3. Ensure air lines are attached:
  - a. vape tank
  - b. flowmeter
  - c. vape chamber



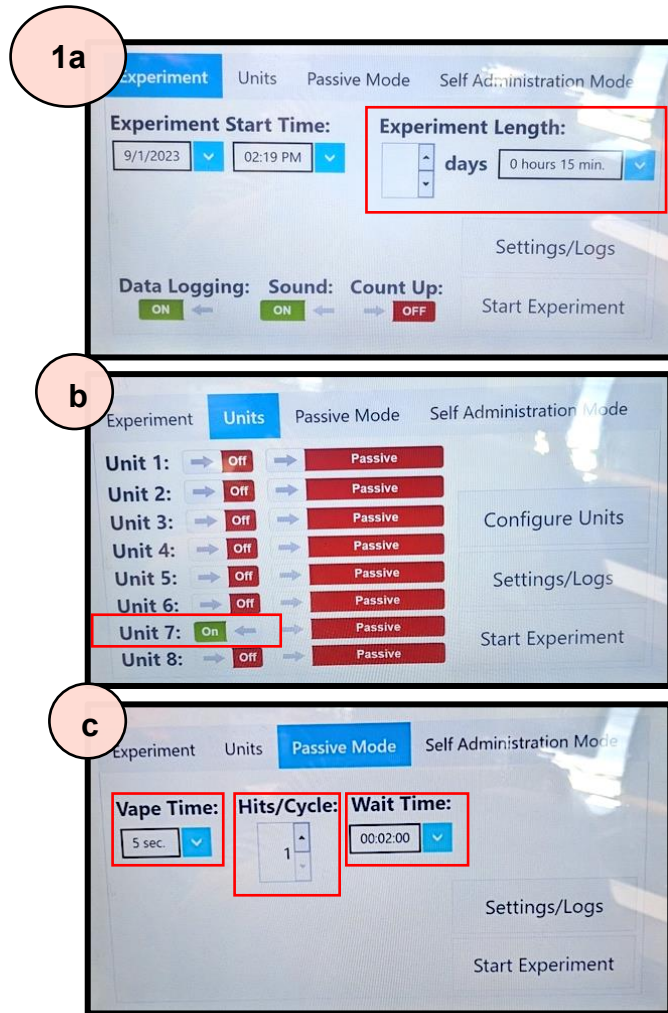
## Troubleshoot Vapour Release



1. Close **airflow ring** on the vape tank.
2. Set flowmeter to ~1 L/min.
  - a. Clockwise:  
↓ airflow rate
  - b. Counter-clockwise:  
↑ airflow rate
3. FIRE → vapour release
4. Adjust airflow ring & flowmeter until there is sufficient vapour release.
5. Wait 10 min for vapour evacuation before transferring the animal into the vape chamber.

Note: Airflow rate will vary by protocol.

## Experiment Set-Up



1. Set experimental parameters on digital monitor:
  - a. Experiment Length
  - b. Unit
  - c. Vape time, hits/cycle, wait time
2. Start experiment!
3. Wait 10 min for vapour evacuation before removing the animal from the vape chamber.

Note: The experimental parameters used in this protocol is from Baglot et al. (2021).

**Vape time:** duration of vapour release

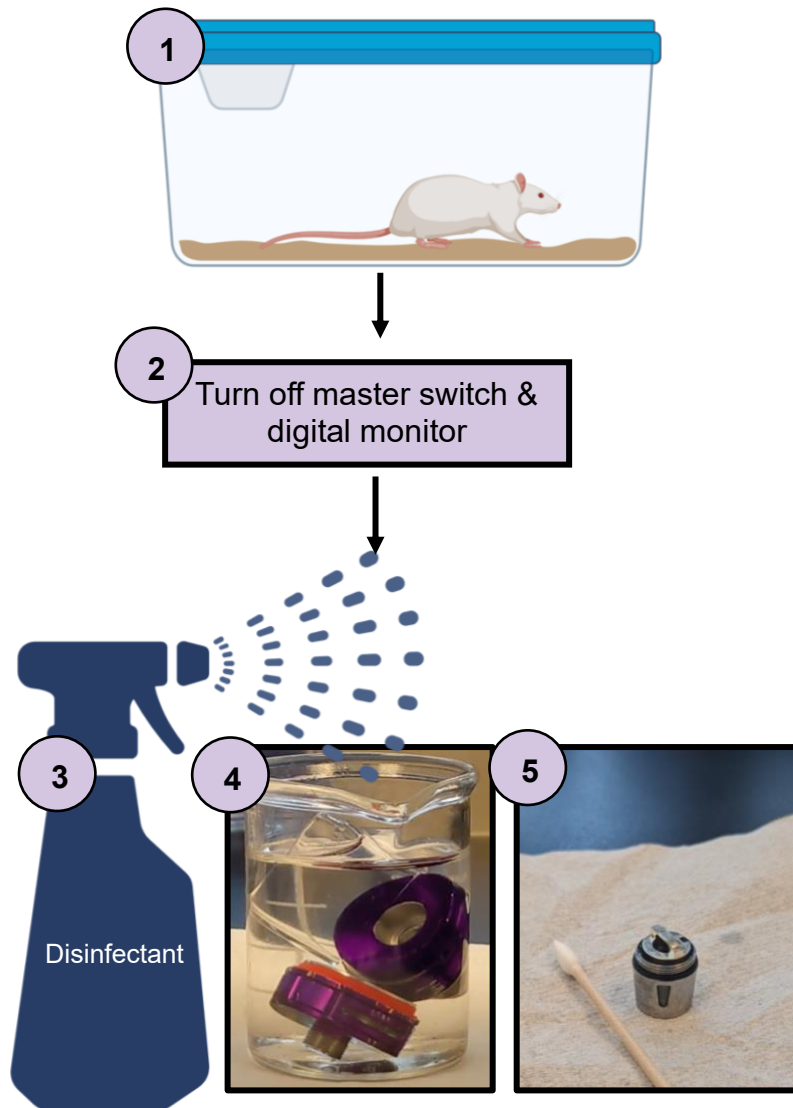
**Hits/cycle:** number of vapour release events per cycle

**Wait time:** duration between cycles


2  
Start Experiment!



## Vape Chamber/Tank Clean-Up



1. Return animal to home cage.
2. Turn off master switch & digital monitor.
3. Disinfect vape chamber.
4. Immerse vape tank pieces in disinfectant.
  - a. Lay on paper towel to dry.

 Do not wet the atomizer. The wick must remain dry!
5. Use paper towel & swab to absorb excess solution on the atomizer.

### References:

Baglot, S. L., VanRyzin, J. W., Marquardt, A. E., Aukema, R. J., Petrie, G. N., Hume, C., Reinl, E. L., Bieber, J. B., McLaughlin, R. J., McCarthy, M. M., & Hill, M. N. (2021). Maternal-fetal transmission of delta-9-tetrahydrocannabinol (THC) and its metabolites following inhalation and injection exposure during pregnancy in rats. *Journal of Neuroscience Research*, 100(3), 713–730. <https://doi.org/10.1002/jnr.24992>

Vape Chamber Image from <https://www.ljari.tech/>.

Graphics were created with BioRender.