

Everything that happens to a rat during its stay in the lab needs to be logged. In particular, each rat has a **physical binder** (or part of a binder, with a separate tab), in the associated experiment room, which contains all information about this rat.

This binder is the “gold standard” record that includes:

- 1) a cover sheet with the rat’s ID (Rxxx), strain, sex, date of birth, date of arrival
- 2) weight sheets, updated daily if on yellow tag, weekly otherwise
- 3) written comments for every day something happened to this rat, such as handling, tag status change, behavioral session, surgery, etc.
- 4) records for every procedure (e.g. surgery, gliosis, perfusion) and associated monitoring sheets

Update the binder every day after interacting with a rat.

In addition, on any day with interaction with a rat, a **status e-mail** needs to be sent to the lab mailing list. This e-mail provides both a secondary record, and a way for everyone in the lab to be aware of what is happening.

This status e-mail has a very specific format that enables efficient archiving and search. It should contain:

- 1) subject line of the form:

Rxxx-yyyy-mm-dd [tag]

...where xxx is the rat’s ID, and yyyy-mm-dd is the date.

Each rat gets a separate e-mail. The only exceptions to this are when *weighing* or *handling* multiple rats; then, the subject line can be condensed to R{xxx-zzz}-yyyy-mm-dd [tag] or R{xxx, zzz}-yyyy-mm-dd [tag] so that there is one e-mail for all weighed/handled rats.

[tag] is one of the following:

[weighing], when weighing rats (on Monday)

[handling], when preparing to start an experiment, and on Monday and Thursday for young rats

[tag change], when switching between yellow/red/no tag, remember to copy Nancy in on this

[rats fed], if somehow you have rats on yellow tag but are not running/handling them

[training], behavior without recording

[surgery], surgery

[recording], behavior with recording

[gliosis], gliosis

[perfusion], perfusion

What to include in the e-mail for each of these categories is described below.

If you need two tags to describe what happened, send two separate e-mails, e.g. [training] followed by [tag change]. Note however that certain tags subsume others, e.g. [recording] and [training] cannot happen without [weighing] so there is no need for sending a separate e-mail to report weighing.

[weighing]

State that rats have been weighed, and report any unusual weight changes. No need to report weights that are normal. Of course, do log them in the holding room weight log.

[handling]

State for how long rats have been handled, along with a short characterization of their behavior (e.g. calm, stressed, defecating, eating pellets, biting, etc.)

If this is handling in preparation for training, state what day of handling this is (e.g. Day 1). Remember to familiarize the rats with white pellets and the backpack (if you will be using it) over the course of handling. Typical is to place a few white pellets in the rat's cage until they start eating from your lap. If using the backpack, have at least 2 days of handling with the backpack on.

[tag change]

State old status and new status, e.g. "from no tag to red tag". Remember to cc Nancy <ngibson@uwaterloo.ca> in on this.

[rats fed]

To indicate that yellow tag rats have been fed. If you are running or handling such a rat, you can indicate that he was fed in the e-mail; no need to send a separate one. This category is only if you somehow have a rat on yellow tag but are not doing anything with them (should be avoided).

[training]

1) State what day of training this is, what task, and what stage (e.g. Day 9 of training, linear track, Day 2 with cues)

Note, "Day" resets after surgery, to something like "Day 5 post-surgery, linear track")

- 2) State pre-training weight, weight change from the previous day, and percentage of maximum weight (e.g. 403g, +2g, 94%)
- 3) State all parameters appropriate for your task (e.g. delay 500ms, rewards 0/2/2/4)
- 4) Report performance (laps run, nosepokes made) and relevant associated variables (%correct etc.)
- 5) report amount of food eaten (e.g. 13.8g eaten on task)
- 6) report additional food given (e.g. 4g white pellets given in cage)
- 7) anything else that's noteworthy (unusual behavior, ideas for improvement, etc)

[surgery]

- 1) State what was done
- 2) Give a short narrative of how the surgery went: any challenges?
- 3) Report disposition of rat when returned to holding room (e.g. sternal, active but groggy, seen eating and drinking) and time returned to holding room

[recording]

as for [training] but in addition report

- 8) quality of signals (e.g. cells on tt4, 7, 8; CSC31 noisy)
- 9) turning of electrodes (e.g. all tt's turned ¼ except reference, not turned)
- 10) anything notable on the status of the recording system

[gliosis]

State which channels were gliosed, including duration and current

[perfusion]

Include brief comments on perfusion quality and confirm location of carcass and brain (e.g. carcass placed in kitchen freezer; brain in lab fridge).