Andersen Lab Strain Intake

R. Tanny (May 2019)

1. Unpack all strains.

2. Look through each plate and note any damage (e.g. - not parafilmed, cracked lid, cracked bottom). If plates are damaged in any way that could allow worms to cross contaminate, remove the offensive strains and request them again from the original lab. It might be useful to point out shipping procedures (padded envelopes, flat layers of plates) to the contributor.

3. Arrange the strains alphanumerically in labeled cardboard boxes. Box labels should include: Lab code from the person sending (e.g. NIC for Christian Braendle), date received/unpacked, and box number. If it is appropriate, you can add the species type. If multiple species were sent, write "Wild Isolates from ____"

    - Each shipment of strains should get their own set of boxes. For example, if you received 30 strains from Marie Anne-Felix, there should be two boxes labeled. If you received 110 strains from Christian Braendle, there should be five boxes labeled.

4. Enter each strain into the Strain Intake Google sheet. Print out the rows for your shipment. **Make sure to note all dates/comments on the master list while moving through each of the steps below.**

5. Enter each strain into Labguru. If it is easier, you can do a bulk upload. For every submission, we make sure we have a flat file (csv or tsv) from the contributor.

6. Make labels for each shipment:

    - A set of clear plate labels for each shipment. There should eight labels for each strain: initial chunk, two L4 plates, one bleach plate, one clean plate, one plate for freezing, two plates for DNA prep (label type: ol1930). The label should just have the strain name.

    - Freezing Labels: There should be five labels for each strain. Each label should indicate the strain name, the approximate date frozen, and your initials (label type: 15930A).

    - DNA Prep Tube Labels: Use the Dymo label printer with 3/8" circular labels (cat#9138-4000). Print four labels for each strain.

7. Follow the schedule below for preparing the strains:

    - **Day One:** Chunk strains.

    - **Day Two:** Pick one L4 hermaphrodite to each of two labeled plates. Use the label prepared in Step 6 and write "L4 #1" or "L4 #2" on the sticker/plate.

    - **Day 4-6:** Monitor the L4 plates. When there are gravid animals in the next generation, choose ONE of the two L4 plates from which to pick gravid adults. Discard the L4 plate you do not use. Bleach 5-15 gravid animals:

        - Place 16 µl of bleach (recipe below) on a labeled 6 cm plate, away from the bacterial lawn. Use the label prepared in Step 6 and write "bl".

        - Pick 5-15 gravid animals into the bleach. You have to pick quickly before the bleach absorbs into the plate.

        - Leave the bleach plate lid-side up at room temperature for 24 hours.

- **Day One-post bleach:** Pick 15-20 L1s from the bacterial lawn of the bleach plate to a new, labeled 6 cm plate. Parafilm both the bleach plate and the clean plate. Discard the initial chunk plate and the remaining L4 plate.

- **Day 7-8 post pick**: Once the strain is starved, chunk the strain to three labeled 10 cm plates. parafiml these three plates. Put the chunked plates at 20ºC.

- **Storage:** Store the parafilmed bleach and clean plates at 15ºC.

8. Monitor the 10 cm plates. When the plates are freshly starved (*i.e.* - a maximum of L1s), follow the steps for DNA isolation using the two DNA isolation plates. Use the third plate to freeze the strain according to the Soft Agar freezing protocol.

9. Transfer your data from the printout to the master Strain Intake Google sheet.

Bleach Solution (store at 4°C)

Reagent	Amount Needed
NaOCl (from Fisher, cat #SS290-1)	2 ml
10 M NaOH	0.5 ml
dH_2O	up to 10 ml