Biol 322 Some NOTES on Worm picking and handling:

Transferring worms from one plate to another: *C. elegans* is cultured on small petri dishes that have a lawn of *E. coli* growing on a solid agar surface; the *E. coli* is the food source for the worms and the growth medium contains nutrients for the E. coli (as well as some cholesterol for the worms).

The agar plates are also a great growth medium for spurious bacteria and fungi.

- First, wipe down work area with 70% alcohol
- Organize your work area; position and adjust your microscope
- Place your alcohol burner in a convenient spot and light it
- Move worm plates that you are transferring to and from to the microscope stage. Keep the lids on these plates until you are ready to transfer a worm and be sure to keep the lids on any plates that you are not working with.
- Briefly hold the tip of the platinum wire of your worm-picker in the flame
- Pick up a dollop of *E. coli* (it is sticky) from a clean (no worms) plate or from the plate that you are transferring to —the edge of the lawn is thickest
- While viewing the worms with the stereomicroscope, touch the tip of the worm picker to the worm that you want to transfer-- it should stick (see awesome drawing on the next page)
- Lower the tip of the worm-picker to the lawn on the new plate and brush the worm off – or allow it to wiggle off. ***Use your microscope here – DON'T try to lower the worm onto the plate without watching under the scope.*** Try not to break the surface of the agar. Worms like to dive into holes in the agar and they may or may not surface and mate in a timely fashion.
- Flame your worm picker again before you transfer another worm
- Check for eggs and larvae that you may have inadvertently carried along with your adult worm and think about whether their presence will cause problems later on; if so, remove them by picking them up in a gob of bacteria
- Flame your worm-picker again before you place it on your lab bench

Plate labeling and incubating Issues

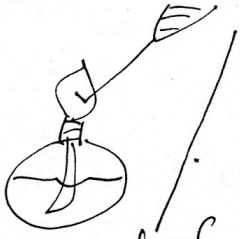
- Label the side of the plate with a fine tip labeling pen. ***Don't label the top and don't write across the bottom of the plate as it will make viewing the worms difficult***
- The Label should include your initials and the date and the identity of the worms on the plate.
- You can identify the worms with a simple code, but be sure to record what your code means in your lab notebook
- Incubate plates upside down

Work area clean-up

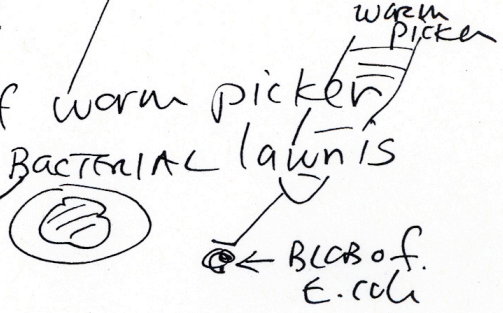
- Place plates in designated boxes or bags
- return fiber optic lamp to cabinet & return microscope to cabinet and lock
- return worm picker to your drawer
- wipe down work area with 70% ethanol
- wash hands

Steps in WORM PICKING

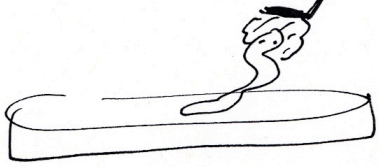
(1) Sterilize end of WORM PICKER in flame of alcohol burner



(2) Let cool. Dab end of worm picker in lawn of E. coli → BACTERIAL lawn is thickest at edge

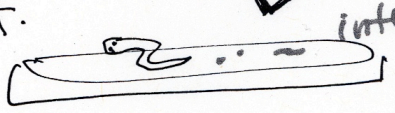


(3)



slower Lower worm picker and pick up targeted worm in the blob of sticky E. coli

(4) Reverse process: transfer worm to fresh plate by slowly lowering worm picker to surface of agar. Let worm crawl off or BRUSH off.



(5) STERILIZE WORM PICKER AGAIN