Independent Laboratory: Materials List

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1 Glassware & Non-Disposables

- 1 pair of tweezers: for picking up worms.

2 Disposables

- 40 skewers: for depositing dye at the correct city locations.
- Box of qtips: to aid in depositing dye.
- 20 sheets of absorbent paper or tissue: provides the terrain on which dye will diffuse. Size approximately 20 cm by 10 cm.

3 Chemicals

- NaCl solution: sufficient to create at least 6 agar plates at NaCl concentration 50 mM.
- 6 agar plates: we only actually need 3, but would like to leave some room for error. We will come in before lab to make these plates at 50 mM NaCl with radial concentration gradients about the cities. We will create the gradient by creating a pillar at each city, filling it with agar of 0 NaCl, and allowing it to diffuse. If the chemotaxis portion of our experiment carries over more than one day, we will need to remake these plates.
- Dye: to add to NaCl-free agar, so that cities are visible. Dye should not attract *C. elegans* worms.
- Dye or ink: for diffusing out on paper. This dye could be the same as the previous dye.

4 Biologicals

- 100 *C. elegans* worms: provided in the same way they were in the chemotaxis lab. We would like them grown in 50 mM NaCl solution.

5 Instruments

- 2 cameras: image sequence acquisition.
- 1 ruler: for scale conversion.

6 Miscellaneous

- 2 glass slabs or rigid sheets of transparent plastic: platform for placing our diffusion terrain (tissue). Should be slightly larger than size of terrain. We touch dye to the terrain from the top. Camera positioned from bottom. Must be transparent.
- 2 stands for supporting the above.
- 2 thin needles: creating holes in agar plates in the location of cities.

- 2 retort stands: for holding camera.
- 2 LED rings: for imaging *C. elegans*. Our optics set up for this part of the lab should be similar to that in the chemotaxis lab.
- 3 stiff boards (balsa wood, many sheets of cardboard?): for fixing skewers in the positions corresponding to cities. This should provide a durable and stable frame so that the positions of the skewers do not move between trials. Ideally we would make this before the day of the lab. *Could we drill small holes in the wood to fit the skewers?*

NOTE: We have requested 2 of many items because we hope to work simultaneously on the same tasks.