

## Isolating Chlamydomonas from Soil Samples

From Cliff Zeyl in Graham Bell's lab at McGill:

The following is the method developed in Graham's lab for isolating potential Chlamy from soil samples. It can also be used to clean up contaminated cultures. Place cotton plugs in the wide ends of 9" Pasteur pipettes, and autoclave them. Using a rubber bulb, under sterile conditions, draw up into the pipettes an autoclaved solution of 0.15% agarose in Bold's medium (we usually let the autoclaved solution cool at room temp for a couple of hours so it's sufficiently viscous to stay in the pipettes). Flame the tips of the pipettes to seal them. Remove the cotton plug at the wide end of a pipette, and using a sterile micropipette tip introduce 500 ul of sample (we prepare these from soil samples by incubating soil samples in equal volumes of water under fluorescent illumination for 48 h to allow any Chlamy cells to multiply) to the end of the pipette. Plug the top of the pipette with autoclaved agar. Wrap the pipette in foil, leaving only 5 cm at the tip (the end opposite to that at which the sample was introduced), and illuminate the tip strongly. Initially we left the pipettes for 24h to allow phototactic microbes to swim to the other end, but recently Hans Kollwijn has found that Chlamy can reach the end in only 3-4 h, which probably leaves more contaminants behind. Break the tip of the pipette, and spread the contents on agar plates to see what you've caught.

Cliff Zeyl

[B7JM@MUSICB.MCGILL.CA](mailto:B7JM@MUSICB.MCGILL.CA)

An additional step may be added at the beginning. If the soil sample is shaken in acetone for a few minutes and then added to liquid growth medium most organisms will be killed, unless they can form a spore. One added advantage is that the resulting culture should contain both mating types.