Hawaii – Extracting Algae from Coral
Time: ~2-2.5 hrs

Materials/Reagents

0.25µm filtered seawater (fsw)

Lg. Ziploc bags

Waterpik
  Benchtop pik: pro – use finite amount of water, con – re-circulating water clogs pik
  Handheld pik: pro – don’t clog, con – have to track water level and refill, hard to
  maintain angle of spray w/o dumping water
  Airbrush: pro – minimal mucus from Fungia, con – difficult to locate all of the parts on
  Coconut Isl. Best to bring your own!

50ml glass non-rough tissue homogenizer (Ask Dave or Lea, they are usually hidden)

50ml conical tubes

Respirator mask – optional, used to prevent allergies to nematocyst cloud

Procedure

A. Extraction of algae
  1. Obtain medium sized Fungia scutaria or fragment of coral of interest
  2. Place into ziploc, seal all but one corner
  3. Fill waterpik with fsw, insert pik into open corner of ziploc and place close to coral
  4. Turn on waterpik, rapidly move over surface of coral (should begin to lighten in color)
  5. Pik until coral is clean or you are out of water
  6. Refill and repeat if necessary
  7. Pour extracted gimish (host tissue, mucus and algae) into tissue homogenizer
  8. Homogenize until smooth in texture – careful to NOT let homogenizer slam to the bottom
  9. Pour into 50ml conical tube
  10. Spin 3min, ~6,000xg
  11. Pour off supernatant – sometimes there is a mucus on top, pipette back into the
      homogenizer
  12. Add fresh fsw to 40ml, mix well to re-suspend algae
  13. Pour back into homogenizer
  14. Repeat (4-5x) until a thick brown color, combining tube volumes as you go
  15. Keep at room temp in low light, use/titer within 2h – don’t let sit for too long at high
      concentrations

Comments: