

Protocol for Weighing Gametophyte Biomass

1. Ensure your work area is clean and sterilize any surfaces that will be used with a generous amount of ethanol.

2. Gather supplies:

- ☐ Gloves
- ☐ Ethanol spray bottle
- ☐ Paper towels or kimwipes
- ☐ 35 um sieve
- ☐ Pasteur pipettes
- ☐ Cell scraper
- ☐ Pasteurized seawater
- ☐ Media vessel
- ☐ F/2
- ☐ Microscale
- ☐ Weigh boats



3. Note: If you are weighing gametophytes for seeding purposes, you should grind them first. Refer to the Protocol for Grinding Gametophyte Biomass (page X) for more detailed steps.

4. Ensure all supplies are sterile.

- Spray ethanol on the surface of the sieve and allow it to sit until the ethanol evaporates.

5. Prepare some media with F/2 and pasteurized seawater.

6. Remove the culture from red light.

7. Remove the lid of the culture.

- If you are weighing an entire culture, pour the excess water out before continuing.

8. Use a scraper or pipette to remove all of the biomass from the sides of the container.

9. Prepare a sterile sieve by pouring sterile seawater through it.

- While the water is draining, swirl the sieve to make sure the water is draining from the entire surface area.

10. Dump the culture or use a pasteur pipette to move biomass to the sieve.

11. Allow the excess water to drain from the sieve.

12. Use a few kimwipes to dab the bottom of the sieve and draw the excess water out.

- Dab the biomass until it starts to pull away from the sides.

13. Zero the scale with a weigh boat.

14. Use the cell scraper to gently scrape the clump of gametophytes from the sieve and into the weigh boat.

15. Weigh the biomass on the microscale.

16. Record the weight.

17. Move the biomass back into a container with media.

18. Use a pipette or a cell scraper to break up the chunks of gametophytes.

19. Fill the culture the rest of the way and move it back to red light.

20. Rinse and sterilize sieves between uses.