

Making Cultures

Obtaining a Starter Culture

Starter cultures can be obtained from ZIRC or other commercial retailers. Commercial cultures almost always contain other organisms that should be removed before using them in your facility. Cultures obtained from ZIRC have already been “cleaned up” but it is still a good idea to carefully examine each culture under a microscope before using them.

Preparation

Before working with paramecia it is a good idea to start with a sterilized work surface, which will reduce the chance of contaminating the cultures.

- First, a small amount of autoclaved whole-wheat kernels (1tbs) are boiled in autoclaved water (autoclaved fish or de-chlorinated tap water, depending on what is available to you) for 10-15 minutes.
- While the kernels are boiling, set out seven large Petri dishes. Fill each dish half full of autoclaved water. To each dish add one small piece of brewer’s yeast tablet. The pieces are approximately .01 grams each and are about 2x2x2mm in size.
- Add 4-5 kernels of the boiled wheat to each Petri dish.
- Now you are ready to add the paramecia starter culture. The paramecia starter culture obtained from ZIRC should be divided up equally between the seven plates. If you are not using ZIRC cultures than add approximately 15ml of dense culture to each Petri dish.
- Cover each Petri dish and label it with the date that it was made. The ideal temperature for growing paramecia cultures is between 75-80 degrees Fahrenheit.

Refreshing Cultures

Culture sets (each set of seven cultures made from one petri-dish) need to be refreshed every 7 to 14 days.

- Take your set of cultures, which should be 7-14 days old and examine each dish under a microscope to check for high density and any possible contamination.
- Choose the culture with the highest density and use this to make the new set of cultures.
- Pick out the 2nd and 3rd best cultures and set these aside to make subcultures.
- The remaining culture plates should be checked to make sure they are healthy and kept until the next culture production day as back up.