Long Island Sound Microzooplankton Standard Operating Procedure:

>64 μm Samples: Nauplii & Copepodites

Microscope Calibration

- Measurements are done at 40x zoom on the dissecting microscope (Olympus SZX12) in the lab. *Note: For easy calibration line up the grease marks on the zoom adjustment and the microscope.*
- For any other microscope, calibrate so that there are 35 Ocular Units/mm.

Sample Preparation

- Invert the sample several times to suspend all matter.
- Measure the sample volume in a graduated cylinder and record.
- Bring the sample up to 100 ml with filtered seawater (FSW).
- Mark two 100x15 mm petri dishes with 17 lines of equal height.
- Pour sample into a small beaker.
- Before the copepodites and nauplii begin to settle, use a stempel pipette to transfer 20 ml (two 10 ml sub-samples) of the sample into each petri dish.
- Let the sub-samples settle on the dissecting microscope for 5 to 10 minutes.

Quantitative Measures

- Systematically move through each dish counting all copepodites and nauplii.
- Copepodites: measure only the prosome length (the forward part of the copepodite, excluding the antennae and tail)
- Nauplii: Measure entire length (no distinction between prosome and urosome)
- Count both sub-samples unless the first one has >100 nauplii, in which case it is not necessary to count the second sub-sample.

Note: If there are a lot of nauplii or diatoms that will make the sample more difficult to count, it is possible to dilute the sub-sample.

Sub-sample Dilution

- Use only 10 ml of the sample per dish instead of 20 ml. Add to each sub-sample 10 ml of FSW.
- If a total of 100 nauplii have been counted before finishing the second diluted sub-sample no further counting is necessary. If not, then two additional diluted sub-samples will need to be prepared and counted.