Zooplankton Sample Collection Protocol

Setting up the net for sampling

1. Attach the cod-end to the collar of the net, ensure that the mesh size of the cod-end corresponds to that of the net.
2. Connect the cod-ends to the center line, taking care that the nets are not twisted.
3. Clip the flowmeter into the mouth of the net. Ensure that flowmeter cables are taught and the flowmeter is in the middle of the net ring.
4. Record the “before” flowmeter reading along with the flowmeter ID.
5. Using a locking carabiner attach two ten pound cannon balls to the center line between the two nets (for bongo net only).
6. Attach the zooplankton net via the top ring to the rope with a figure-of-eight knot and locking carabiner. Ensure the rope is fed through the block.

Collecting Samples by Vertical Net Tow

1. Lower the net carefully over the side of the boat, making sure that the net and line are not tangled or near the propellers.
2. Lower the net to approximately 10m above bottom or to the desired depth.
3. Haul up the net using the hauler, this should ideally be done at approximately 1 meter/second, keeping the line perpendicular to the side of the boat.
4. Once the net is up, pull the canon balls and net onto the deck of the boat.
5. Record the “after” flowmeter reading.
6. Unclip the cannon balls and cod-ends from the center line and let the net hang over the side of the boat for rinsing.
7. Using a washdown pump (or buckets of seawater) rinse the net beginning at the top and working down. Do not allow water to go in through the mouth of the net.
8. Once all of the sample is in the cod end, unscrew it from the collar and check for any remaining sample on the collar of the net. Spray the remaining sample into the cod end using a filtered seawater sprayer (filtered seawater is seawater that has passed through a GF/F filter).
9. Using filtered seawater, spray the contents of the cod end into the appropriate sample container (see below for instructions).

Sample Storage Based on Method of Analyses

Sample for splitting, size-fractioning, or species picking:

1. Collect the sample in a clean bucket with a secure water-tight lid.
2. Label bucket with sample station, date, and net mesh size.
3. Store in a cooler for transport to the lab.

Sample for formalin preservation (taxonomy):

Work only on the back deck in the open air under safe sea conditions and wearing gloves. Ensure adequate training and education has been received, in addition to reading the Formaldehyde ECP.docx, prior to working with formalin. Maintain open communication for the duration of sample preservation.

1. Label clean 330mL PET jar lid with sample station, date, net mesh size, net ID, sample fraction, sample ID, and preservation type.
2. Fill out a waterproof label with sample date, station, cruise, time, flowmeter, net, depth, collector initials and sample ID, and place inside the jar.

3. Rinse the cod-end into a sieve of the appropriate mesh size.
4. Transfer the sample with ~300mL filtered seawater to the PET jar.
5. Preserve with 33mL of buffered 100% formalin for a total formalin concentration of 10%.
6. Reseal the pet jar.
7. Return the formalin twin neck bottle to the secondary container.
8. At the end of the survey, return the formalin in the secondary container and the sample to the laboratory for processing and storage.