Standard Operating Procedure for Decontamination and Disinfection

Vers. 1.0

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Scope and Application

1. This standard operating procedure (SOP) outlines the method to decontaminate and disinfect equipment used to sample for Dreissenid species veligers.

Decontamination

1. Veligers easily stick to the walls of the plankton net. Decontamination (and disinfection) is critical to avoid cross contamination from one sample location or event to another and possibly the spread of mussels to new waters. It is recommended that each sampling location has a dedicated collection net. Each time the net is used at a new sample site, the procedure will require a soak treatment in a 5% v/v acetic acid bath. A 5% acetic acid solution may be purchased as white vinegar, or a 5% solution may be prepared with concentrated (glacial) acetic acid and water.

2. The recommended treatment for the plankton net following sample collection is to first rinse the net with clean water to wash as many veligers from the net as possible, and then totally immerse the net in the 5% acetic acid bath. The ideal soak time is overnight; however, if it is necessary to use the net at the next sampling location during the same day, a one hour soak followed up with a rinse prior to the next sampling should be the minimum.

3. The same acetic acid bath may be used repeatedly for all sample sites. The vinegar can be reused multiple times. It's recommended that vinegar should be checked periodically to make sure the value is approximately 2 to 3.

4. Following the acetic acid soak, rinse the net with a large volume of clean water.

Disinfection

1. Rinse the net and cod end with water to remove all vinegar.

2. Spray net and cod end with 10% bleach solution to disinfect for 10 minutes contact time. Prolonged exposure to the bleach will shorten life of the net.

3. Rinse all bleach off of net and cod end with DI or Tap water.

4. Allow net and cod end to air dry before using again.

Preparation of a 10% bleach (sodium hypochlorite) solution

1. Use the fallowing formula to prepare a 10% bleach solution

   0.1 x total volume of solution desired = volume of bleach to add

Example: Add 50 milliliters of bleach to 450 milliliters to prepare a 10% bleach solution (V/V). A measuring cup can be used to measure the bleach and water at a 1:10 proportion. It's recommended that the bleach solution be prepared in a 32oz. spray bottle.

Dispose of a 10% bleach (sodium hypochlorite) solution

1. Flush down the toilet if you have less than 5 gallons of bleach.