

AQUARIUM DECONTAMINATION

FOR POTENTIAL ZEBRA MUSSEL EXPOSURE FROM MOSS BALLS OR OTHER PRODUCTS

IMPORTANT:

Do not dispose of untreated water down the drain or into any residential water system or waterway.

ADDITIONAL NOTES:

Post treatment water should be disposed of through your wastewater system.

While this method is considered safe for most finfish and plants, it may not be safe for invertebrates.

Do not flush moss balls down the toilet or dispose of them in the compost. It is illegal to introduce any aquatic organism into any region or Canadian waterbody where it is not indigenous unless authorized by federal or provincial law.



NOVA SCOTIA
invasive
SPECIES COUNCIL



Method 1: HEAT TREATMENT FOR TANKS WITHOUT PLANTS OR ANIMALS

This method offers a treatment option for tanks without plants or animals, as it is not safe for living organisms.

- 1 To remove and kill ALL Zebra mussels, raise the water temperature using an aquarium heater or by adding boiling water and consult the table below for times and minimum temperature.

Min. Temperature	Min. Time
40° C	30 MINUTES
45° C	15 MINUTES
50° C	5 MINUTES

- 2 Decontaminate all tank accessories and equipment (e.g., nets) used for removing fish or organisms from the contaminated aquarium immediately after use with heat treatment.

Method 2: POTASSIUM CHLORIDE (KCL) FOR TANKS WITH PLANTS OR ANIMALS

This method is used when plants and animals cannot be removed, or if Method 1 is not possible. This treatment requires using potassium chloride (KCl), a sodium-free table salt substitute sold at grocery and nutritional stores. The highest available purity of KCl available should be used. Do not use "Half-Salt" products.

- 1 Determine the volume of water in your aquarium and the corresponding amount of KCl required to achieve the required treatment concentration using the table below.

Volume of Water in Aquarium (Litres)	3.8	38	76	208	284	341	473
Amount of KCl required (100% solubility) (Grams)	1	8	15	40	54	65	90

- 2 Decontaminate all tank accessories and equipment (e.g., nets) used for removing fish or organisms from the contaminated aquarium immediately after use with heat treatment.
- 3 Add the required amount of KCl based on your aquarium size, to the separate container of water and mix thoroughly.
- 4 Pour this solution back into your aquarium and leave it in for at least two weeks at a minimum temperature of 17°C.

- 5 Water changes should be avoided during the 14-day treatment period. If it cannot be avoided, treat the removed water using:

- a. Method 1 Heat Treatment before disposal, or if that is not possible,
- b. A filter and chlorine bleach before disposal
 - i. Filter the removed water with a filter size of up to 50 microns.
 - ii. Treat the filtered water with 25 ml/L of chlorine bleach (minimum 5% sodium hypochlorite) for 15 minutes.
 - iii. If a disposable filter is used, treat the filter with a solution of KCl for 14 days and dispose of it in the garbage.

- 6 Evaporated water can be replaced as long as the replacement water does not exceed the volume of evaporated water.

- 7 To ensure consistent treatment conditions, all make-up water must be prepared using water from an uncontaminated source, warmed to a minimum of 17°C and pre-treated using KCl to ensure a constant concentration of KCl during the 14-day treatment.

- 8 Ensure all tank accessories and equipment (e.g., nets) used to remove fish or other organisms/plants from the contaminated aquarium are properly decontaminated immediately after use by using Method 1 or 2.