

FREQUENCY: DAILY

Zebrafish Euthanasia

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University of Minnesota Zebrafish Core Facility

Zebrafish (*Danio rerio*) are ectothermic tropical freshwater fish and are native to waters ranging from 24-38°C (Engeszer *et al*, 2007). Euthanasia of zebrafish by means of rapid cooling in 4°C water is humane, quick and effective. Fish transferred with a net to water at this temperature succumb within seconds.

Protocol adapted from University of Pennsylvania IACUC approved Protocol, “Rapid Cooling To Induce Euthanasia Of Zebrafish.” October 28, 2008.

Protocol

1. Fill the black bin with 2L of fish water and cool it to 1-4°C by placing it in a refrigerator overnight.
2. With a net, transfer the fish to be euthanized into the cooled water. Minimize the amount of warm water transferred to the cold water tank. Do not exceed a density of more than 40 fish per liter of water.
3. Let fish sit in the cooled water for 10 minutes. (Death is confirmed by cessation of eye movement, gill movement, and swimming)
4. Place carcasses in freezer to await disposal.

References

Engeszer, Raymond E., Larissa B. Patterson, Andrew A. Rao, and David M. Parichy. "Zebrafish in the Wild: A Review of Natural History and New Notes from the Field." *Zebrafish* 4 (2007).

University of Pennsylvania IACUC Protocol, “Rapid Cooling To Induce Euthanasia Of Zebrafish.” October 28, 2008.