

Standard Operating Procedure Fish Health Surveillance Program

1.0 Scope and Application

A comprehensive health surveillance program is an integral component of contemporary laboratory animal programs. Successful health surveillance programs are designed to identify potential human zoonoses, as well as identify, control, and eliminate disease variables that affect research animals and thus compromise research. Fish from established colonies will be submitted for diagnostic testing to determine overall colony health.

2.0 Sampling Frequency and Responsibility

Each year in July, Principal Investigators will be contacted and requested to submit fish and environmental samples for diagnostic testing. Samples must be submitted for each species, protocol, and housing location. If fish racks are maintained on separate water systems, samples must be collected from each rack individually to ensure comprehensive surveillance of all aquatic systems.

- **Animal Selection Criteria**
 - Approximately five fish should be submitted for each species, per room, and per rack on a separate water filter system within the room. The fish must be at least three months old and must have been maintained in the colony for a minimum of three months. Fish selected for submission may be clinically ill, surplus, or retired breeders. Fish that are found dead are not acceptable for diagnostic testing.
- **Approved Euthanasia Methods**
 - Fish must be euthanized using methods approved by the American Veterinary Medical Association (AVMA). Acceptable methods include rapid chilling (for appropriate species and life stages), immersion in benzocaine hydrochloride, or immersion in tricaine methanesulfonate (MS-222).
- **Sample Collection and Shipping**
 - Whole Fish (PCR Testing): Euthanized fish should be placed in a labeled conical tube, with approximately five fish per tube. These samples must be stored in the freezer until they are ready for shipment. When packaging the samples, sufficient ice packs must be included to ensure the fish remain frozen during transit. The use of dry ice is not required.
 - Environmental Samples (Filter Media): To collect environmental samples, 2 mL of detritus from the used filter material should be placed into a labeled conical tube. These samples should be frozen and stored until they are ready to be shipped. When shipping, the samples must be packaged with enough ice packs to remain frozen during transit.

Revision History: November 1, 2022

July 18, 2025

August 1, 2025

- **Diagnostic Testing Panels**

- All samples will be submitted to IDEXX BioAnalytics for diagnostic testing. The following panels will be used:
- For zebrafish, the Zebrafish Comprehensive PCR Panel will be performed on both the environmental sample and the whole (non-live) animal sample.
- For cavefish, the Fish Comprehensive PCR Panel will be used for both the environmental sample and the whole (non-live) animal sample.